

## ***Canadian Annual Energy Survey, 2011 Edition & Survey of 2010 Results***

**Special Feature: Energy Visions update;  
Shifting Landscapes**



Developing an integrated strategy to develop  
Western Canada's unconventional oil and gas resources

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## Leader's message

The massive wedge of sedimentary rock that underlies Western Canada is the source of its oil, gas and bitumen resources. But there continues to be a shift in the production mix tapped from the Western Canadian Sedimentary Basin due to new technologies such as horizontal drilling and multistage fracking, commodity price fluctuations and the influx of foreign investment.

Foreign-based companies acquired more than \$17 billion in Canadian oil and gas assets in companies in 2010, with 6 deals valued at more than \$1 billion. Canada — with its lower geological and geopolitical risk — is viewed as the stable jurisdiction for oil and gas investment.

The country's oil sands assets have been a target for investment for some time. Advancing technology is helping industry develop northern Alberta's vast oil sands resource in a more efficient and responsible manner.

Shale gas plays have also benefited from an influx of investment. During the first quarter of 2011, foreign interest was dominated by **PetroChina International Investment Company Limited's** plan to invest \$5.4 billion to earn a 50% interest in **Encana Corporation's** Cutbank Ridge gas assets and South African-based **Sasol Ltd.'s** plan to spend \$1.05 billion to earn a 50% interest in **Talisman Energy Inc.'s** Cypress A assets (following a similar transaction in December involving Talisman's Farrell Creek assets).

Regulatory and policy directives associated with resource plays often lag development, which creates barriers that increase costs and give rise to uncertainty.

We believe the Western Canadian oil and gas sector requires an integrated technology, policy and regulatory response to deal with the environmental, political and socio-economic impacts of unconventional resource development. Some have called for the creation of a national energy strategy to help deal with the historic reshaping of North America's energy landscape.

Against the backdrop of an energy sector in transition, Canada's oil and gas producers saw a return to more stable footings in 2010 after the turmoil of the previous 2 years. The positive trend is reflected in the key financial/operational data and analysis found within this publication.

As part of this year's Canadian Annual Energy Survey, we also polled industry to gauge sentiment across a number of key areas — financial, operational, regulatory, investment, as well as innovation and technology.

PwC Canada's Energy practice has more than 150 partners and members that deliver industry-specific solutions to more than 1,600 energy companies of all sizes.

This document is published by PwC as part of our Energy program, a series of publications and events that provide context around issues affecting the oil and gas sector.



Scott Bolton

A handwritten signature in red ink, appearing to read 'Scott Bolton', written in a cursive style.

**Scott Bolton**  
*Canadian Energy Practice Leader*  
PwC

# Energy Visions report

## Unconventional response

### Introduction

The increase in unconventional oil and gas resources has significantly altered global energy supply assessments during the past decade.

In only a few years we've gone from preparing for the day when we run out of conventional gas in North America — planning liquefied natural gas import facilities and arctic gas pipelines — to trying to deal with a wave of shale gas production that will be flowing to market possibly for decades to come.

Meanwhile, new oil production is coming from tighter portions of reservoirs that were once uneconomic to produce using vertical well technology.

In addition, development of Canada's oil sands is back on track after the economic downturn of late 2008 and 2009. As production volumes continue to rise over the next decade the calls for environmental action will persist.

Technology has played a key role in unlocking gas-bearing shale, tight oil reservoirs and the oil sands of north-east Alberta. The development of these unconventional resources raises new policy, regulatory, legal and environmental questions.

For instance:

### Shale gas:

- Does hydraulic fracturing (fracking) impact water supplies?
- What markets will use Canadian shale gas?
- Will abundant shale gas be the bridge fuel to a 21st-century energy economy?

### Shale/tight oil:

- How will future regulations regarding well spacing affect tight oil operators?
- As with shale gas development, does fracking technology used for shale/tight oil development affect groundwater?
- How can royalty regimes benefit tight oil operators?

### Oil sands:

- Can producers decrease the amount of energy used to develop oil sands resources, thereby reducing greenhouse gas emissions?
- Is there accurate and robust monitoring of air, water and land?
- Can producers diversify their markets?
- Will pipeline companies be able to overcome environmental, regulatory and political hurdles to build new lines to the U.S. Gulf (e.g. TransCanada's Keystone XL project) or to Canada's west coast (e.g. Enbridge's Northern Gateway project)?

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## Technology

The world looks to Canada's oil and gas industry for the development of new technologies that increase production, boost efficiency and push the envelope of environmental sustainability.

Canadian companies have garnered worldwide reputations as technology innovators in areas such as drilling and completions, sour gas, heavy oil and oil sands, remote location logistics and environmental management.

## Shale/Tight oil & shale gas

Unconventional reservoirs require the application of advanced technology to extract their natural gas and oil resources.

Drilling the tighter portions of reservoirs has not made economic sense in the past. But modern technology — horizontal drilling and multistage fracking — is breathing new life into old plays, allowing companies to boost recovery and profitability.

Many believe Canadian shale oil will emerge as a significant trend over the next 5 to 10 years. New and emerging plays include the Mississippian Alberta Bakken/Exshaw shales in southern Alberta, as well as the Cretaceous Second White Specks in the Deep Basin, Jurassic Nordegg shales in the Peace River area of Alberta and the Devonian Muskwa/Duvernay shales in northwest Alberta's Deep Basin.

(There is a difference between “shale oil” and “oil shale.” Shale oil falls in the category of conventional oil in unconventional reservoir rocks, while oil shale is considered unconventional oil in unconventional rock. Oil shale, which is degraded oil found in tight reservoirs, is likely years away from full commerciality given the significant R&D and capital commitments required.)

Technically, some of these shale oil reservoirs have a significant component of coarser grains — silt or sand-sized grains — that typically give the rock a higher matrix permeability. As such, they could be labelled hybrid-play types, where the oil source rock is proximal to coarser-grained and more porous/permeable rock.

As for shale gas, the potential across the Western Canadian Sedimentary Basin (WCSB) appears enormous considering only the Montney and Horn River plays in British Columbia. Although the Energy Resources Conservation Board (ERCB) does not yet know how productive individual shale horizons might be in Alberta, the board is currently undertaking an assessment of 15 shale horizons, including the Duvernay, Muskwa, Exshaw, Lower Banff, Montney, Fernie, Reardon, Wilrich and Colorado formations.

The National Energy Board (NEB) says the next few years represent a new reality for natural gas in Canada. There has been a shift in the type of gas that is being extracted, where the gas is coming from and the impact of that gas on the Canadian market. The board says this all marks a new phase for Canadian natural gas — a period that will see prices stabilize, shifts in gas drilling activity and economic changes to the gas market.

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*From 2010 to 2015, Canadian infrastructure will grow at more than 2 and a half times the growth rate seen over the previous 5 years, a new PwC-sponsored report by Global Construction Perspectives and Oxford Economics found. By 2020, Canada is expected to be the fifth largest construction market behind India and Japan — a jump from its current position in seventh place. Responsible for this huge growth are a number of oil sands projects starting in Alberta. Twenty potential new oil sands projects starting over the next 5 years will increase non-residential construction in Alberta by 21% in 2011. Spending on capital construction and machinery and equipment in the province is projected to rise by 4.3% this year, to \$73.5 billion. The story is no different over the longer term. Alberta's Capital Plan calls for a \$17.6 billion spend on infrastructure to support oil sands development over the next 3 years, while major industry players like Suncor Energy Inc. will spend in excess of \$15 billion within the next 5 years and Imperial Oil Limited and Canadian Natural Resources Limited with \$8 billion and \$4 billion in spend, respectively, by 2012.*

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In the NEB's energy market assessment report *Short-term Canadian Natural Gas Deliverability 2010-2012*, it said natural gas production will grow in B.C. as producers advance development of tight gas and shale gas resources, but output will continue to fall in Alberta.

The NEB report stated Alberta's gas production is expected to decline sharply to 8.5 billion cubic feet (bcf) per day from 12.7 bcf, while B.C. will see deliverability rise to 3.7 bcf per day from about 2.7 bcf per day.

At present, many shale gas players are currently focusing on liquids-rich shale gas plays due to continued strength in oil prices.

Moreover, the decline in production of natural gas liquids (NGLs) in Alberta of the past few years appears to be slowing down as a result of this new focus on liquids-rich gas pools. According to the ERCB's tracking of field supply, the decline of NGLs (propane, butanes, or pentanes plus, or a combination of them, obtained from the processing of raw gas or condensate) output in Alberta is moderating, having fallen just 1.6% in 2010 to 86.95 million barrels from 88.41 million barrels in 2009. That compares to a decline of 6.48% in 2009 from 2008 when NGL supply totalled 94.53 million bbls.

## **Oil sands**

The role that technology has played in developing the oil sands is well known. Simply put, technology allowed their transformation from a pipe dream to a mammoth business that has put Alberta on the world oil map.

Pioneering research efforts by Karl Clark and Roger Butler have led some to refer to the oil sands as "technology oil".

Clark doggedly pursued a commercially viable separation method during most of his career. His hot water separation process opened up for production the 10% of oil sands deposits that lie close enough to the surface to be mined using open pits. Butler's thermal in-situ process, called steam assisted gravity drainage (SAGD), facilitated feasible extraction of reserves out of reach of surface producers.

Due to the research and perseverance of people like Clark and Butler, some 175 billion barrels of otherwise valueless oil sands have become widely acknowledged to be economically recoverable.

And the creation of new technologies and processes to aid in oil sands development is still occurring. Today's oil sands mining research centres on advances such as tailings management, mobile crushing units, heat integration and paraffinic froth

treatment. In-situ advances include hybrid steam-solvent production, warm solvents, blowdown boilers, electrical heating technology, hybrid solvent-electricity processes as well as in-situ combustion.

These new technologies will cut greenhouse gas emissions, reduce the environmental footprint of developments (including tailing ponds) and increase water recycling. Reducing the footprint of resource development and increasing dialogue with various stakeholders are essential components of earning and maintaining a social licence to operate.

## **Regulatory action**

Acknowledging that the future of Alberta's resource development lies in unconventional resources, the **Energy Resources Conservation Board** is developing a new regulatory framework for unconventional natural gas and oil. The ERCB has set a goal of becoming the best regulator in world for the unconventional sector.

The board hopes to have the new model in place by 2013 when it celebrates its 75th anniversary. It will be seeking stakeholder comment on a discussion paper to be released this spring.

In its preliminary work on the potential risks associated with unconventional gas or oil, the ERCB identified 3 main categories. These are related to the impacts to water, large-scale fracking operations and development density. The board, however, believes these risks in all 3 categories can be successfully managed and mitigated.

## **New framework**

The ERCB's proposed new framework is expected to be built on 2 pillars. One is a risk-based regulatory approach while the second, which represents a more significant new development, is play based.

Unconventional reservoirs and associated risks may vary considerably across Alberta and development strategies and technologies are likely to change rapidly. This prompts the need for a risk-based regulatory model that is more flexible and adaptable than the traditional oil and gas model.

Under a risk-based approach, regulations are streamlined when risks are low, while, conversely, a stronger regulatory response can target developments with higher risk profiles. This is the model of a fit-for-purpose requirement, not a one size fits all. It also recognizes that risks can change as developments mature.

The play-based approach can accommodate all types of resources, both conventional and unconventional and align surface and subsurface regulatory oversight.

A play-based regulatory framework provides a science-based approach to organizing the risks of development around a play type. Key defining factors of a play-based model include geology, geographic location, reservoir properties, the fluids being produced and the technology, all of which point to the level and type of risk.

In addition, the ERCB says a play-based approval process would prove an effective mechanism to assess cumulative effects, water management and mitigation strategies. Regulations provide a regional perspective and offer opportunities for project approvals.

## **Increasing competitiveness**

In the final quarter of 2010, the ERCB issued several bulletins to streamline the province's regulatory system.

Incremental layers of regulation over many years and across many Alberta government departments have created an inefficient and complicated web of processes that are hard to navigate. This has resulted in greater complexity and higher compliance costs for industry.

There is growing and increasingly stiff competition for investment (from neighbouring provinces and globally), and these amendments are expected to improve Alberta's competitive position in terms of attracting and enabling energy investment.

In December 2010, the ERCB issued *Bulletin 2010-44: Enhancing the ERCB Role in Energy Technology Development*, which will see innovative technology reviewed, deployed and integrated into the board's regulations in a streamlined manner.

While the board does not prescribe or mandate which technology should be used, it will continue to assess and, if appropriate, approve applications that might include new and/or innovative technologies as long as the application meets the ERCB's guidelines related to public safety, environmental stewardship and resource conservation.

Also in December, the ERCB announced it has designed new rules to streamline the amendment application process for all commercial in-situ oil sands projects.

As technology changes and operational experience grows, the ERCB anticipates receiving multiple amendment applications from each in-situ project. Directive 78 employs one of 3 regulatory categories, depending on the nature and complexity of the amendment.

The directive also clarifies stakeholder engagement by requiring companies to conduct appropriate consultation on amendment applications that have the potential for adverse public impact.

In November, the ERCB sought stakeholder feedback on proposed changes to its well-spacing framework, involving removal of well density controls for shale gas and coalbed methane and increased baseline well densities for conventional gas reservoirs throughout the province.

Current technologies such as horizontal and lateral drilling allow companies to expand well density without any additional surface disturbance. The intent of the new well spacing framework is to increase subsurface well density and to ensure that companies are freed up to safely use the downhole technologies that they have developed.

All of the existing rules and regulations related to surface impact remain in place.

Recently, the Alberta government announced plans to establish a “one window” regulator for upstream oil and gas activities that should result in a more efficient regulatory system that could save companies both time and money.

A single regulator is an important step in eliminating the duplication and overlap that companies encounter in dealing with different departments. The regulator would be empowered to make all decisions required to issue an oil and gas approval that are currently shared between the ERCB, Alberta Environment and Alberta Sustainable Resource Development (SRD).

Alberta Environment and SRD would continue to be responsible for policy development and monitoring while the regulator, which could take the form of an expanded ERCB or a new body entirely, would be responsible for approvals and enforcement.

## **Policy**

Oil prices continue to be supported by geopolitical supply risks. Protests and regime changes in countries across the Middle East and North Africa have led to turbulent oil markets during 2011.

World energy markets are also being reshaped by environmental and technological forces.

Producers and governments across North America are dealing with shifting expectations from a variety of stakeholders regarding the sustainable development of energy resources. Last year’s BP Macondo disaster in the U.S. Gulf of Mexico, the continued characterization of the oil sands as “dirty oil,” ongoing concerns about the environmental effects of fracking operations in plays such as the Marcellus, have heightened the public’s concern about oil and gas development.

Opposition from landowners, communities and interest groups has grown substantially, and increased the time and cost of regulatory processes.

## **Oil sands**

The Alberta government says it is committed to demonstrating that the province is a leader in responsible energy production and environmental stewardship.

The province recently created a panel to help develop a world-class monitoring, evaluation and reporting system for air, land, water and biodiversity. The panel will report back to government by June 2011 with recommendations.

In April 2011, the provincial government released the draft Lower Athabasca Regional Plan, which provides a blueprint for conservation and economic development in northeast Alberta. It is the first regional plan developed under Alberta’s Land-use Framework.

With oil sands production expected to double within the decade, the draft regional plan will conserve more than 2 million hectares of habitat for native species. It will increase recreation and tourism opportunities, plan for infrastructure and put strict environmental limits in place for air, land disturbance and water.

The draft regional plan for the Lower Athabasca would revoke some existing oil sands land tenures. A total of 10 oil sands leases and 14 mineral leases would be affected in the draft plan.

Meanwhile, Canadian oil sands are crucial to improving United States energy security and meeting energy demand and the U.S. government needs to support the approval of key pipeline and refining infrastructure projects that will help create jobs in both countries, says the American Petroleum Institute.



“Canada is our nation’s top supplier of imported oil and offers a close, reliable, safe and readily available supply of secure energy that can be transported into the U.S. via pipeline,” said the **American Petroleum Institute** in its report, *The State of American Energy*, released in January 2011. “There are economic and national security benefits to importing oil from a friendly, nearby neighbour like Canada.”

Yet the U.S. State Department has yet to rule on an application from **TransCanada** requesting a presidential permit for the American segment of its proposed Keystone XL pipeline. The project has been delayed since July 2010.

The U.S. Environmental Protection Agency asked the State Department to conduct a supplemental environmental impact statement (SEIS) to address concerns about pipeline safety and the impact on climate change of oil sands development.

Released on April 15, 2011, the SEIS “does not alter” the conclusions in an earlier draft, the Department of State said. (In April 2010, the department had concluded that the proposed pipeline would result in limited adverse environmental impacts both during construction and operation.)

However, the department has decided to seek further comment on the portions of the draft EIS that were revised and on new and additional information. The

SEIS will be open for comment between April 22 and June 6 of this year. After receipt of comments and subsequent publication of a final EIS, the State Department will begin a 90-day period for consultations with other federal agencies to determine if issuing a permit for the proposed project is in the national interest. The department expects to issue a decision by the end of 2011.

### ***Diversifying markets***

The Alberta government is aiming to expand its trade and investment with Asia to lessen dependence on the U.S. market.

The province relies heavily on a single customer — the United States — to buy about 85% of its exports. The provincial government has indicated that the first bill of the new legislative session will be dedicated to enhancing Alberta’s linkages with Asia, including priority markets such as India, China, Japan and Korea.

The Asia Advisory Council Act, if passed, will create a council that will make recommendations to government on ways to expand business, education and cultural relationships between Alberta and Asia.

In addition, Alberta Energy is presently studying ways to expand markets for Alberta’s energy exports beyond North America, whether natural gas, crude oil or bitumen. This would include more pipeline options to the West Coast.

### ***Increasing gas demand***

Unlocking shale gas through the use of new technologies has resulted in a flood of gas onto North American markets.

**Canadian Natural Gas** — an industry group that includes upstream and processing, pipeline transmission and downstream sectors of the industry — has been formed to raise understanding of the role natural gas can play in achieving Canada’s energy, environmental and economic objectives.

Members of the initiative include the Canadian Association of Petroleum Producers, the **Canadian Gas Association** and the **Canadian Energy Pipeline Association**, along with the **Canadian Natural Gas Vehicle Alliance** and the **Canadian Society for Unconventional Gas**.

Members say natural gas is a clean, affordable and abundant resource that could be smart foundation for Canada’s future energy mix. The initiative believes small businesses, large industry and power generators would benefit from widespread use of natural gas.

Using natural gas as a fuel source for transportation brings additional benefits including reducing the lifecycle GHG emissions of heavy duty trucks and buses by an estimated 20 to 25% compared to diesel trucks and buses.

## **National energy strategy**

Canadian governments are facing growing pressure to co-operate in the development of a national energy strategy to ensure a prosperous and sustainable future, meet CO2 reduction obligations, remain competitive within the global economy and assume a leadership role in innovation and technology.

Without a coherent and over-arching vision on energy development, Canada will not fully capitalize on its vast energy potential, say groups from outside government that are leading the charge.

In recent months, the **Canada West Foundation**, a Calgary-based think tank, and the **Canadian Council of Chief Executives** have issued reports citing the need for a Canadian energy strategy.

(The word “strategy” has been chosen deliberately — even after all these years the phrase “national energy policy” carries such negative baggage from the Liberal government’s National Energy Program (NEP) that it now appears verboten.)

Many energy industry stakeholders want a Canadian energy strategy to ensure certainty and predictability in energy policy, which are vitally needed to support investment decisions.

Among those stakeholders is the **Energy Policy Institute of Canada**, a high-powered group of 39 energy industry players (both associations and companies) dedicated to drafting an energy strategy and policy recommendations for consideration by government policymakers.

Those policy recommendations would be based on a set of principles that includes ensuring that “energy and environmental imperatives go hand in hand in ways that will result in the most innovative and positive outcomes” and helping to design regulatory processes that “aid, rather than impede, responsible energy development.” The group is expected to release its recommendations this spring.

For some, the lack of a national energy strategy has led to lost opportunities. There’s also the risk that Canada’s energy policy may simply become an environmental policy by default.

Alberta Energy Minister **Ron Liepert** supports the idea of a Canadian energy strategy and this July he is scheduled to co-chair a meeting of federal, provincial and territorial energy ministers in Kananaskis. At last year’s meeting, ministers mandated their officials to “identify areas of common interest as well as goals and objectives related to energy that will lead to greater pan-Canadian collaboration.”

A national energy strategy could also result in a better understanding of Alberta’s place in Canada and its role in energy production, while the province would benefit from a real thrust to increase markets and develop new ones. These include markets for our commodities and the technologies used to exploit them.

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# Canadian Annual Energy Survey, 2011 Edition

## Formal Survey

### Methodology

This report contains results from an online survey, conducted by PwC during March 2011, to better understand issues currently impacting industry. About 91% of the respondents fill senior roles within the energy sector (54% in a leadership role; 37% in a managerial role), with the balance comprising employees and consultants.

### Demographics

The majority of respondents (70%) work for exploration and production companies that produce a mix of natural gas and crude oil.

Close to 53% of respondents reported their company's annual revenues at more than \$500 million, with about 21% listing revenues at \$100 million to \$500 million per year, and about 9% said annual revenues were \$10 million to \$100 million. About 17% of respondents said revenues were \$5 million or less per year.

When asked about the number of employees who work in Canada for their company, about 30% of respondents said fewer than 100; 24% indicated between 100 and 500; 22% said between 500 and 2,500; and 24% of respondents specified over 2,500 Canadian employees.

### Industry outlook

In late April, the **Petroleum Services Association of Canada (PSAC)** raised its drilling forecast for 2011, which is now expected to reach 12,950 wells drilled (rig released) across Canada, representing a 5.7% increase in total wells drilled.

The number is up from PSAC's initial release of the *Canadian Drilling Activity Forecast*, issued in November 2010.

The *PSAC Canadian Drilling Activity Forecast* update's slight increase was attributed to a few key trends, including the fact that fewer wells are being drilled because of the use of horizontal drilling techniques as well as new technologies being deployed for deeper drilling and more complex completions.

Additionally, the time and cost commitment are increasing and the depressed price of natural gas means a continuing decline in the number of productive natural gas wells.

PSAC is basing its updated 2011 forecast on average natural gas prices of C\$3.85 per mcf (AECO) and crude oil prices of US\$100 per bbl (WTI).

## Natural gas prices

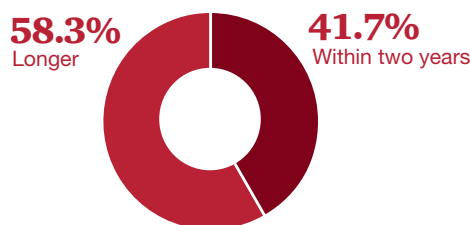
Overall, respondents to our Energy Survey believe the price of natural gas has the most bearing on their companies' potential growth in 2011 when looking at a range of threats to their business. Close to 38% of respondents said it was the most critical threat, with about 24% saying oil prices were most critical (multiple answers were permitted).

The price of natural gas was also ranked by respondents as the top threat to their business growth in 2012 (40%) and 2013 (35%).

As a result of the downturn in gas prices, about 56% of respondents said they had reduced gas-directed drilling. 50% of respondents have altered their energy mix to produce more liquids-rich gas. Other strategies include shutting in gas production (37.5%) and producing more crude oil (also 37.5%).

When asked how long it might take for gas prices to increase sufficiently to lead to an increase in gas-directed drilling, 41.7% of respondents said within 2 years, with 58.3% believing it will take longer than 2 years.

**When do you expect natural gas prices to increase sufficiently to increase your gas-directed drilling program?**



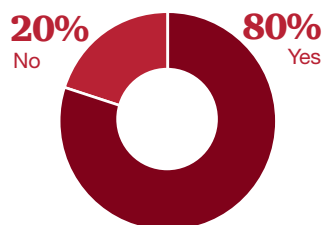
## Threats to growth

Besides natural gas prices, other top critical threats identified by respondents for 2011 included over-regulation, energy input costs, scarcity of natural resources and the availability of key skills.

Close to 38% of respondents said over-regulation was a “very important” or “critical” threat to the potential growth of their business in 2011. That figure rose to 40% in 2012.

About two-thirds of respondents believe availability of key skills is a very important threat to their business in 2011.

**Is your company using new technology such as horizontal drilling and multistage fracking to revisit or revitalize light oil plays that were once exploited with vertical wells?**



## A focus on technology

Drilling the tighter portions of reservoirs did not make economic sense in the past. But modern technology — horizontal drilling and multistage fracking — is breathing new life into old plays and opening up new ones, allowing companies to boost recovery and profitability.

In our survey, 64.3% of industry respondents said they plan to increase the number of horizontal wells drilled in 2011 compared to prior-year levels. In addition, 80% of respondents said their companies are using new technologies such as advanced horizontal drilling and multistage fracking to revisit or revitalize light oil plays that were once exploited with vertical wells.

That intent is being borne out in drilling trends. Despite the efficiencies gained from modern drilling rigs, the amount of time it takes to drill a well is rising because of more complex drilling, the move to horizontal wells and the greater lengths/depths being pursued by operators.

It took about 12.6 days to drill a well in the first 3 months of 2011, with the deeper parts of the Western Canadian Sedimentary Basin (Alberta west of the sixth meridian and northeast British Columbia) averaging more than 25 days per well.

The 12.6 days per well is the highest first-quarter average since the *Daily Oil Bulletin* began tracking drilling days in 1990, and is 31% more than last year's Western Canada January-to-March average of 9.59 days.

About 38% of respondents also said they plan to increase the level of investment into research and development during 2011, with 57% saying their R&D spend will remain the same as 2010.

## Capital spending trends

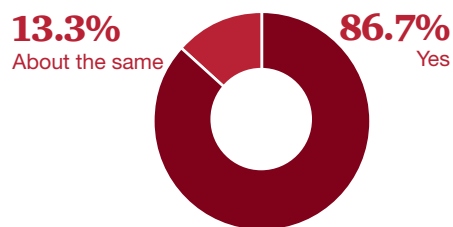
Producers are displaying a renewed sense of optimism, with strong crude oil prices and the assurance of a stable fiscal regime in Alberta giving them the confidence to spend more than cash flow.

Capital spending rose throughout 2010 and the trend seems to be continuing in 2011.

Close to three-quarters of survey respondents said their company's 2011 capital budget will be greater than their 2010 spend.

Over the next 3 years, about 43% of respondents said they plan to devote the majority of their capital spending to conventional oil and gas. Shale gas (38.1%), oil sands (33.3%) and tight oil (28.6%) were other areas mentioned by respondents as areas of focus (multiple answers allowed).

**Will your company's 2011 capital budget be greater than your 2010 spend?**



## Climate Change

On March 10, 2008, the federal government published additional details on its "Turning the Corner" regulatory framework that outlines the government's commitment to reduce Canada's absolute GHG emissions by 20% from 2006 levels by 2020. The additional details specify how the targets will apply to each industry sector, how the offsets and trading systems will work and how credit will be provided to those companies that take early action to reduce their GHG emissions.

While waiting for the federal government's regulations to emerge, several provinces have established their own approaches, from climate change regulations based on a "baseline and trade" system in Alberta to a carbon tax in Québec. Additionally, other provinces are entering into agreements with cross-border approaches to limit greenhouse gas emissions. When the federal regulations are finalized, they will be complicated by an equivalency clause that will allow some of the provincial systems to coexist with the new federal system. This complex approach adds additional pressure on organizations.

For more information please to to [www.pwc.com/ca/en/sustainability/climate-change-services.jhtml](http://www.pwc.com/ca/en/sustainability/climate-change-services.jhtml)

## Financing

About 91% of respondents expect cash flow to be primary source of financing for their business operations in 2011, with 81% saying debt will be a major source (multiple answers were allowed).

Close to 43% said equity will be a primary source of financing for their operations.

A little more than 52% of respondents said it will not be challenging to secure debt over the next 3 years, with about 14% saying it will be "somewhat challenging."

Close to 47% of respondents also believe it will be somewhat challenging to secure equity financing over the next 3 years, with about 26% saying it will not be challenging.

## Response to climate change

The majority of respondents to the survey said they are "in progress" with a number of initiatives in response to the challenges posed by climate change.

This included compliance with government regulations (71.4% of respondents), as well as attraction and retention of talent (61.9%).

In addition, 55% of respondents say they are in progress with adopting more rigorous risk management processes as well as engaging and communicating with stakeholders.

About 43% of respondents said they are in progress with deploying new technologies.

# Survey of 2010 results

## 2010 perspective

The global economy slowly emerged during 2010 from the financial crisis of 2008 and 2009. Modest economic growth was experienced in many countries, including Canada.

Rising demand for commodities — led by China's continued growth — contributed to a dramatic climb in West Texas Intermediate (WTI) crude oil prices. Globally, WTI rose 27% to an average of US\$79.14 per bbl for the year from \$62.17 per bbl in 2009, while North Sea Brent soared nearly 29% to \$80.01 per bbl from \$62.10 a bbl. Canadian price increases were dampened somewhat by the rising value of the Canadian dollar.

Light crude prices continued to gain strength in December, rising \$5.10 per bbl (6%) to average \$85.83 per bbl, up from \$80.73 a bbl in November, for a fourth-quarter average of \$80.55 per bbl.

The natural gas market painted a contrasting picture. The average price of C\$3.79 per gigajoule at AECO, virtually identical to 2009, was the lowest since 1999 when gas fetched only \$2.77 per gigajoule.

It was the second consecutive year that the annual average was below \$4 per gigajoule as prices languished in that range for all except the first 2 months of 2010. Nor did there appear to be any relief in sight to the shale gas influx, which has resulted in record storage levels and driven down gas prices across North America. Within the past 2 years, aggressive development of shale gas plays using new drilling and completion technology has resulted in an oversupply of natural gas.

December spot gas prices in Canada, at an average of \$3.72 per gigajoule, were the lowest for that month since 2001.

With depressed natural gas prices, many Canadian producers refocused their investments towards crude oil or natural

gas with a high liquids content. This resulted in the Canadian commodity mix moving towards more oil and natural gas liquids for many producers.

Well permitting across Canada took a big leap forward in 2010, but the final tally for the year was still the second lowest of the past decade, a period that featured several record years of drilling for natural gas.

Producers licensed 18,241 wells, a gain of 43% (or 5,474 permits) from 2009.

A decade-high 8,780 licences targeted oil or bitumen in 2010, a remarkable 74% surge from 5,024 permits in 2009. The previous decade high was 7,476 in 2000.

The 2010 licence count included 4,965 wells chasing natural gas or coalbed methane (CBM). The gas well count was down 10% from already low levels in 2009 and was only a quarter of the peak years in 2004 and 2005 when over 20,000 licences were approved for gas and CBM drilling.



## **PwC Top 100 highlights**

### **Financial**

Rising crude oil prices and the assurance of a stable fiscal regime in Alberta gave producers the confidence to spend more than cash flow in 2010.

Cash flow for the Top 100 oil and gas producers rose to \$53.11 billion in 2010, up almost 15% from \$46.40 billion the prior year.

Capital spending lifted to \$56.51 billion from \$39.39 billion in 2009.

Gas producers suffered another rough year. Prices remained flat with 2009, as the tsunami of shale gas production in the United States kept a lid on North American prices.

Of the companies that reported more than \$1 billion in cash flow, only two were gas weighted: Encana Corporation and Talisman Energy Inc.

Gross revenue for the Top 100 oil and gas companies rose about 26% in 2010 to \$167.65 billion from \$132.73 billion the prior year, as rebounding light and heavy oil prices lifted overall revenues.

In 2010, revenue from the Top 20 oil and gas operators accounted for about 92% of total revenues.

The 100 top producers booked a combined profit of \$17.93 billion, up 113% from \$8.41 billion in 2009.

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## **IFRS**

*The oil and gas sector is characterized by the need for big upfront investment, often with great uncertainty about outcomes over the long-term. The geopolitical, environmental, energy and natural resource supply and trading challenges, combined with complex stakeholder and business relationships, mean the transition to International Financial Reporting Standards (IFRS) requires complex analysis on how best to implement the new standards.*

*Some of the significant accounting differences for the oil and gas sector resulting from the transition are particularly acute for those companies in Canada that currently follow the full-cost method of accounting. The impact of IFRS is felt all along the oil and gas value chain, but many of the key challenges are greatest during the exploration and production stage.*

*At the very start of the value chain, the practice of full-cost accounting is limited under IFRS 6: “Exploration and Evaluation of Mineral Resources,” to exploration and evaluation activities. Most global integrated oil and gas companies, as well as many smaller upstream companies, use the successful efforts method of accounting for oil and gas activities. Many of these companies in Canada have historically used the full-cost method of accounting, whereby all costs incurred in searching for, acquiring and developing the reserves in a large geographic cost centre, as opposed to individual fields, are capitalized. Full-cost accounting as applied under Canadian Generally Accepted Accounting Principles (GAAP) in the past is not allowed beyond the exploration and evaluation phase under IFRS.*

*Other challenging business issues for Canada’s oil and gas companies that will make IFRS conversion a complex task include:*

- *The undertaking of high-risk, capital-intensive projects with long lead time — the future success of which is difficult for many companies to determine*
  - *The use of various kinds of risk-sharing arrangements, such as joint ventures, production sharing contracts, undivided interests and co-located assets*
  - *Industry-specific taxes*
  - *Co-operation in operating patterns leading to overlift and underlift*
  - *Significant environmental obligations, such as decommissioning requirements*
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### **Operational**

Total production in 2010 for the Top 100 producers rose just over 11% to an average 6.51 million barrels of oil equivalent (boe) per day from 5.85 million boe per day in 2009.

Proved reserves for the producers grew about 4.5% to 31.93 billion boe in 2010 from 30.55 billion boe the prior year.

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### **PwC FAIT**

*For companies still looking for a new model after the Federal government shut down the income trust industry, the choices of incorporating or going private may not be advantageous. PwC has developed a structure called the foreign asset investment trust structure (FAIT) that allows companies to go public as a publicly traded mutual fund trust within the existing tax rules. FAIT's key benefit is easier access to public capital markets as an alternative to conventional financing.*

*FAIT is effective as the legislation that effectively removed income trust activity has a specific exception for foreign assets from which earnings flow into Canada. Canadian unitholders invest in a mutual fund that indirectly benefits from income produced by assets in a foreign country by setting up a wholly owned subsidiary trust or commercial trust. The mutual fund trust capitalizes the commercial trust through a combination of debt and equity. Canadian investors can then invest in a US business without having to pay US tax or complete a US tax return. Under the old income trust system, US citizens were coming to Canada and pulling out money. This is the reverse, where Canadians are making money abroad and are being taxed for those gains in Canada.*

*This model works best for investors who are looking for a stable, low risk cash flow. The type of assets would generally be within the \$15-25 million of adjusted EBITDA with a US operational team and a Canadian executive. PwC has already assisted two different oil and gas companies go public using this model — the only two income trusts of this kind created in Canada since October 2006.*

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## **EPAP**

*Oil and gas companies in Alberta will face a new measurement and compliance program, the Enhanced Production Audit Program (EPAP). Declarations must be completed by December 2011. EPAP applies to all operators of record which are subject to Energy Resources Conservation Board (ERCB) measurement and reporting requirements for conventional and heavy oil, crude bitumen, and natural gas facilities.*

*In essence, oil and gas operators in Alberta must prepare an annual declaration by one or more senior officers confirming their internal controls over volumetric reporting and measurement. EPAP will affect oil and gas production accounting, engineering operations and measurement, including field level facility reporting.*

*There are about 600 public and private oil and gas operators with 30,000 facilities in the province that will be affected by EPAP. For private companies who may not have undertaken a Sarbanes-Oxley and/or Canadian Sarbanes-Oxley certification, this is unfamiliar territory, and EPAP is more complicated than these other compliance projects, making junior and mid-sized companies the most vulnerable.*

*To start the process, organizations need to take a few steps. Effective project management must be established, including required skills evaluation and setting up a cross-functional team, developing and identifying responsibilities, assessing knowledge of the applicable ERCB directives for EPAP, and preparing a resource plan and budget.*

*Organizations must also conduct a risk assessment for the portfolio of facilities that they currently own and identify the business processes that will be impacted by the ERCB measurement and reporting themes. Companies must design and document these key processes via acceptable documentation standards (e.g., flowcharts and control matrices). To properly complete the declaration, companies will be required to map each control to the ERCB's 15 EPAP reporting themes.*

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# Financial Statistics

## Exploration and Production Companies

### Financial Statistics – PwC's Top 100

Company	Gross Revenues (\$ 000's) 2010	Gross Revenues (\$ 000's) 2009	Change (%)	Net Income/ (Loss) (\$ 000's) 2010	Net Income/ (Loss) (\$ 000's) 2009	Change (%)	EPS 2010 <sup>4</sup>	EPS 2009 <sup>4</sup>	Cash Flow from Ops. (\$ 000's) 2010 <sup>5</sup>	Cash Flow from Ops. (\$ 000's) 2009 <sup>5</sup>	CFPS 2010 <sup>6</sup>	CFPS 2009 <sup>6</sup>
Suncor Energy Inc. <sup>(1)</sup>	33,198,000	17,977,000	84.67%	3,571,000	1,146,000	211.61%	2.29	0.96	6,716,000	2,812,000	4.31	2.36
Husky Energy Inc. <sup>(1)*</sup>	25,250,000	21,713,000	16.29%	1,173,000	1,416,000	(17.16%)	1.38	1.67	3,489,000	2,466,000	4.10	2.91
Imperial Oil Limited *	24,946,000	21,292,000	17.16%	2,210,000	1,579,000	39.96%	2.61	1.86	3,014,000	2,254,000	3.56	2.66
Canadian Natural Resources Limited <sup>(1)</sup>	14,322,000	11,100,000	29.03%	1,697,000	1,580,000	7.41%	1.56	1.46	6,135,000	6,047,000	5.64	5.59
Genovus Energy Inc.	13,422,000	11,790,000	13.84%	993,000	818,000	21.39%	1.32	1.09	2,415,000	2,845,000	3.21	3.79
EnCana Corporation <sup>(1)</sup>	9,135,213	12,566,600	(27.31%)	1,543,820	2,405,836	(35.83%)	2.10	2.81	4,584,903	7,669,834	6.24	8.96
Talisman Energy Inc. <sup>(1)</sup>	8,076,000	7,011,000	15.19%	648,000	437,000	48.28%	0.64	0.43	3,058,000	3,961,000	3.02	3.90
Nexen Inc. <sup>(1)</sup>	5,411,000	4,203,000	28.74%	1,197,000	536,000	123.32%	2.28	1.03	2,011,000	1,911,000	3.83	3.67
Canadian Oil Sands Limited	3,460,000	2,779,000	24.51%	886,000	432,000	105.09%	1.83	0.89	1,156,000	754,000	2.39	1.55
Penn West Petroleum Ltd.	3,054,000	2,859,000	6.82%	226,000	(144,000)	(256.94%)	0.51	(0.35)	1,132,000	1,428,000	2.55	3.47
Denbury Resources Inc. <sup>(1)</sup>	1,846,911	989,695	86.61%	279,847	(85,820)	(426.09%)	0.75	(0.34)	797,450	570,632	2.15	2.26
Pacific Rubiales Energy Corp.	1,711,289	729,966	134.43%	224,758	(143,652)	(256.46%)	0.86	(0.67)	681,812	257,956	2.60	1.20
Crescent Point Energy Corp	1,535,764	981,865	56.41%	20,021	(31,075)	(164.43%)	0.09	(0.19)	870,803	671,058	3.91	4.10
Pengrowth Energy Corporation	1,353,283	1,343,167	0.75%	230,257	84,853	171.36%	0.76	0.32	595,996	583,972	1.97	2.20
Enerplus Corporation <sup>(1)</sup>	1,327,140	1,259,146	5.40%	127,112	89,117	42.63%	0.72	0.53	718,771	749,566	4.07	4.46
ARC Resources Ltd.	1,211,600	975,800	24.16%	260,800	222,800	17.06%	1.00	0.96	672,800	509,300	2.58	2.19
Petrominerales Ltd. <sup>(1)</sup>	1,081,086	529,891	104.02%	246,862	114,367	115.85%	2.49	1.15	600,591	318,635	6.06	3.22
Ultra Petroleum Corporation <sup>(1)</sup>	1,011,577	754,382	34.09%	479,725	(510,326)	(194.00%)	3.15	(3.37)	772,288	706,416	5.07	4.67
PetroBakken Energy Ltd.	1,008,556	1,093,674	(7.78%)	115,785	145,079	(20.19%)	1.11	1.64	1,238,869	697,437	11.88	7.88
Petrobank Energy and Resources Ltd. <sup>(1)</sup>	1,008,556	575,588	75.22%	47,985	43,397	10.57%	0.26	0.35	646,316	394,819	3.50	3.18
Harvest Operations Corp.	1,007,005	886,308	13.62%	(44,561)	(935,634)	(95.24%)	INA	(5.38)	407,657	475,494	INA	2.73
Bonavista Energy Corporation	938,726	759,423	23.61%	201,581	106,606	89.09%	1.32	0.82	511,156	435,707	3.35	3.35
Baytex Energy Corp.	863,688	678,185	27.35%	177,631	87,574	102.84%	1.59	0.83	451,405	331,040	4.04	3.14
Vermilion Energy Inc. <sup>(1)</sup>	727,805	639,751	13.76%	111,263	185,498	(40.02%)	1.34	2.56	356,626	307,098	4.30	4.24
MEG Energy Corp.	717,610	21,380	3256.45%	40,097	51,176	(21.65%)	0.23	0.37	125,748	(62,226)	0.72	(0.45)
Daylight Energy Ltd.	656,440	361,337	81.67%	(45,050)	(23,574)	91.10%	(0.23)	(0.19)	292,694	209,635	1.49	1.69
NAL Energy Corporation	497,538	365,760	36.03%	32,410	9,200	252.28%	0.23	0.09	257,894	230,741	1.83	2.26
Progress Energy Resources Corp.	442,592	330,257	34.01%	(62,438)	(72,561)	(13.95%)	(0.31)	(0.45)	204,283	153,254	1.01	0.95
NuVista Energy Ltd.	373,327	345,272	8.13%	(13,989)	2,476	(664.98%)	(0.16)	0.03	162,217	187,524	1.86	2.27
Advantage Oil & Gas Ltd.	319,368	343,005	(6.89%)	(44,208)	(86,426)	(48.85%)	(0.27)	(0.56)	168,864	193,605	1.03	1.25
Trilogy Energy Corp.	290,841	236,079	23.20%	9,432	(33,362)	(128.27%)	0.08	(0.33)	151,394	112,477	1.28	1.11
Connacher Oil and Gas Limited	281,358	199,942	40.72%	(38,798)	26,158	(248.32%)	(0.09)	0.08	35,720	12,146	0.08	0.04
TransGlobe Energy Corporation <sup>(1)</sup>	277,739	189,848	46.30%	39,112	(9,523)	(510.70%)	0.59	(0.15)	77,020	51,204	1.16	0.79
Peyto Exploration & Development Corp.	275,081	210,530	30.66%	121,838	152,774	(20.25%)	1.01	1.38	200,235	194,577	1.66	1.76
Perpetual Energy Inc.	252,135	246,243	2.39%	(28,546)	14,393	(298.33%)	(0.20)	0.12	224,898	216,092	1.58	1.80
OPTI Canada Inc.	249,609	140,780	77.30%	(273,816)	(306,156)	(10.56%)	(0.97)	(1.28)	(386,581)	(255,685)	(1.37)	(1.07)
Fairborne Energy Ltd.	224,002	220,218	1.72%	(16,284)	(25,645)	(36.50%)	(0.16)	(0.28)	121,186	142,401	1.19	1.55
Celtic Exploration Ltd.	222,041	172,613	28.64%	6,583	(23,258)	(128.30%)	0.07	(0.27)	128,896	116,982	1.37	1.36
Compton Petroleum Corporation	216,069	227,876	(5.18%)	(330,854)	(8,330)	3871.84%	(1.26)	(0.05)	32,913	45,439	0.13	0.27
Legacy Oil + Gas Inc.	215,385	47,457	353.85%	(4,656)	(10,053)	(53.69%)	(0.05)	(0.41)	119,611	23,013	1.28	0.94
Galleon Energy Inc.	207,831	213,144	(2.49%)	(38,947)	(34,572)	12.65%	(0.46)	(0.43)	99,987	96,112	1.18	1.20
Crew Energy Inc.	206,343	181,829	13.48%	(17,161)	(37,815)	(54.62%)	(0.22)	(0.50)	99,180	81,550	1.27	1.08
Coastal Energy Company <sup>(1)</sup>	199,972	97,695	104.69%	5,014	(130)	(3953.25%)	0.04	—	125,749	41,757	1.04	INA
Tourmaline Oil Corp	194,928	36,927	427.87%	14,552	(2,121)	(786.09%)	0.12	-0.03	135,340	21,722	1.12	0.31
Birchcliff Energy Ltd.	189,978	150,669	26.09%	5,902	(24,252)	(124.34%)	0.05	(0.21)	99,449	66,870	0.84	0.58
Paramount Resources Ltd. <sup>(1)</sup>	184,395	161,671	14.06%	(122,468)	(97,884)	25.12%	(1.68)	(1.46)	86,850	60,268	1.19	0.90
Zargon Oil & Gas Ltd. <sup>(1)</sup>	179,472	155,985	15.06%	8,922	2,719	228.14%	0.38	0.13	73,702	86,352	3.14	4.13
Bankers Petroleum Ltd <sup>(1)</sup>	175,976	97,996	79.57%	14,734	(170)	(8781.71%)	0.06	—	75,571	28,763	0.32	0.19
Pace Oil & Gas Ltd.	172,962	145,692	18.72%	(397,213)	(58,642)	577.35%	(10.85)	(1.80)	49,761	45,309	1.36	1.39
C&C Energia Ltd.	160,930	81,161	98.28%	31,494	(5,703)	(652.24%)	0.63	(0.14)	82,572	38,882	1.66	0.90
BlackPearl Resources Inc.	142,867	89,637	59.38%	(31,272)	(47,315)	(33.91%)	(0.12)	(0.19)	62,584	29,004	0.24	0.12
Freehold Royalties Ltd.	138,155	119,965	15.16%	36,273	31,741	14.28%	0.62	0.63	106,971	95,085	1.83	1.89
Equal Energy Ltd. <sup>(1)</sup>	137,675	140,506	(2.01%)	(34,536)	(41,282)	(16.34%)	(1.40)	(0.65)	45,051	46,222	1.83	0.73
Chinook Energy Inc. <sup>(1)</sup>	132,010	1,734	7513.03%	(45,492)	(19,617)	131.90%	(0.28)	(0.27)	51,728	673	0.32	0.01
Angle Energy Inc.	119,355	79,998	49.20%	(5,098)	(3,032)	68.14%	(0.08)	(0.07)	62,003	40,154	0.97	0.93

Capital Expenditures (\$ 000's) 2010	Capital Expenditures (\$ 000's) 2009	Change (%)	Total Assets (\$ 000's) 2010	Total Assets (\$ 000's) 2009	Change (%)	Market Capitalization (\$ 000's) 2010	Market Capitalization (\$ 000's) 2009	Change (%)	Working Capital Ratio 2010	Working Capital Ratio 2009	Total Debt as a % of Equity 2010	Total Debt as a % of Equity 2009	Debt to Capital Ratio (%) 2010	Debt to Capital Ratio (%) 2009
5,833,000	4,020,000	45.10%	70,169,000	69,746,000	0.61%	59,942,574	58,039,339	3.28%	1,987,000	483,000	33.2%	40.7%	24.9%	28.9%
3,852,000	2,762,000	39.46%	29,133,000	26,295,000	10.79%	23,648,319	25,563,817	(7.49%)	1,256,000	726,000	27.0%	22.4%	21.3%	18.3%
3,856,000	2,285,000	68.75%	20,580,000	17,473,000	17.78%	34,344,711	34,463,416	(0.34%)	(1,039,000)	(263,000)	6.8%	1.5%	6.3%	1.5%
5,335,000	2,985,000	78.73%	42,669,000	41,024,000	4.01%	48,379,109	41,216,852	17.38%	(984,000)	(514,000)	43.9%	49.7%	28.8%	33.2%
2,208,000	2,165,000	1.99%	22,095,000	21,755,000	1.56%	25,049,024	20,049,149	24.94%	290,000	469,000	34.2%	38.1%	25.5%	27.6%
4,929,881	5,503,182	(10.42%)	34,017,959	35,488,244	(4.14%)	21,418,967	25,626,843	(16.42%)	77,995	1,626,121	44.0%	46.8%	30.6%	31.9%
5,398,000	4,039,000	33.65%	24,193,000	23,618,000	2.43%	22,546,716	19,982,920	12.83%	(193,000)	553,000	39.9%	34.3%	28.5%	25.6%
2,392,000	3,222,000	(25.76%)	21,907,000	22,900,000	(4.34%)	11,986,106	13,187,938	(9.11%)	1,228,000	2,398,000	58.8%	96.4%	36.8%	48.9%
506,000	409,000	23.72%	7,016,000	6,953,000	0.91%	12,812,380	14,491,395	(11.59%)	138,000	315,000	31.6%	29.3%	24.0%	22.7%
1,824,000	720,000	153.33%	13,368,000	13,876,000	(3.66%)	10,958,825	7,821,399	40.11%	(356,000)	(199,000)	33.6%	44.1%	25.1%	30.6%
718,093	909,119	(21.01%)	9,016,111	4,468,958	101.75%	7,041,790	3,824,665	84.12%	283,434	144,460	55.3%	66.2%	35.6%	39.8%
744,705	444,277	67.62%	3,834,268	2,950,480	29.95%	9,033,149	3,598,377	151.03%	181,694	424,247	34.5%	40.6%	25.9%	28.9%
1,612,124	967,311	66.66%	7,866,102	5,439,430	44.61%	11,794,804	8,268,808	42.64%	(237,261)	(99,970)	18.2%	13.0%	15.4%	11.5%
354,013	243,106	45.62%	5,042,766	4,693,604	7.44%	4,192,669	2,941,823	42.52%	(91,629)	(217,007)	32.8%	41.2%	24.7%	29.2%
1,564,751	577,842	170.79%	5,835,172	5,905,516	(1.19%)	5,479,134	4,286,647	27.82%	(232,086)	(117,491)	18.8%	13.4%	15.8%	11.8%
598,000	371,200	61.10%	4,946,500	3,914,500	26.36%	7,226,070	4,718,103	53.16%	(30,400)	(56,200)	25.2%	36.2%	20.1%	26.3%
521,575	320,764	62.60%	1,755,352	753,673	132.91%	3,428,475	1,853,885	84.93%	577,080	(66,430)	49.2%	15.5%	33.0%	13.4%
1,619,739	762,026	112.56%	3,595,399	2,161,172	66.36%	7,287,727	7,938,323	(8.20%)	(56,964)	(144,200)	137.0%	122.6%	57.8%	55.1%
933,363	790,857	18.02%	6,402,586	5,766,568	11.03%	2,682,467	4,794,124	(44.05%)	(191,648)	(203,513)	56.8%	51.4%	25.8%	24.9%
811,871	394,023	106.05%	5,768,795	4,480,604	28.75%	4,062,818	5,556,114	(26.88%)	(193,590)	(156,976)	40.3%	25.3%	28.7%	20.2%
668,110	232,786	187.01%	5,367,227	4,404,912	21.85%	INA	INA	N/A	1,950	(582,420)	38.1%	64.4%	27.6%	39.2%
634,890	940,962	(32.53%)	3,342,988	3,092,129	8.11%	3,858,480	2,778,669	38.86%	(70,012)	(87,124)	50.7%	50.5%	33.6%	33.6%
261,742	297,171	(11.92%)	2,047,212	1,884,005	8.66%	5,300,116	3,246,180	63.27%	(53,084)	(306,785)	44.1%	41.8%	30.6%	29.5%
438,837	354,202	23.89%	2,581,716	2,084,676	23.84%	4,113,499	2,578,137	59.55%	2,165	39,323	23.3%	14.0%	18.9%	12.3%
484,595	343,875	40.92%	5,017,631	4,269,493	17.52%	8,637,421	INA	N/A	1,340,254	989,493	25.4%	33.6%	20.3%	25.1%
335,381	162,757	106.06%	2,193,568	1,727,814	26.96%	2,170,234	1,775,263	22.25%	(138,903)	(101,343)	39.1%	34.7%	28.1%	25.8%
271,645	135,828	99.99%	1,612,864	1,609,450	0.21%	1,906,862	1,888,852	0.95%	(44,464)	(55,092)	50.3%	45.7%	33.5%	31.3%
755,551	190,025	297.61%	2,932,459	2,458,390	19.28%	2,728,932	2,338,762	16.68%	(91,055)	(62,313)	25.7%	33.5%	20.5%	25.1%
225,050	309,910	(27.38%)	1,597,068	1,555,743	2.66%	821,028	1,102,742	(25.55%)	(6,190)	15,619	48.7%	41.8%	32.8%	29.5%
223,308	170,868	30.69%	1,842,571	1,927,241	(4.39%)	1,109,262	1,122,944	(1.22%)	(109,108)	(104,992)	35.1%	36.4%	26.0%	26.7%
166,093	89,915	84.72%	1,012,036	893,193	13.31%	1,414,955	949,112	49.08%	(32,536)	(9,636)	64.3%	54.5%	39.2%	35.3%
236,687	313,894	(24.60%)	1,683,998	1,739,518	(3.19%)	594,733	546,600	8.81%	65,375	245,067	129.7%	130.5%	56.5%	56.6%
69,132	40,217	71.90%	341,880	240,122	42.38%	1,073,783	231,161	364.52%	91,647	(12,366)	40.4%	30.4%	28.8%	23.3%
260,581	70,624	268.97%	1,454,575	1,254,113	15.98%	2,438,376	1,615,778	50.91%	(30,264)	1,822	42.3%	71.0%	29.7%	41.5%
311,371	80,301	287.75%	1,038,206	1,065,305	(2.54%)	582,757	658,887	(11.55%)	(28,466)	(17,569)	158.9%	193.1%	61.4%	65.7%
96,118	158,145	(39.22%)	3,792,568	3,824,023	(0.82%)	188,773	571,953	(67.00%)	63,651	168,293	246.7%	175.0%	71.2%	63.6%
238,670	115,585	106.49%	1,036,377	940,443	10.20%	432,575	488,744	(11.49%)	(116,140)	(6,370)	53.1%	34.0%	34.7%	25.4%
237,412	149,136	59.19%	723,025	678,770	6.52%	1,610,323	930,921	72.98%	(202,683)	(168,417)	39.4%	44.9%	28.3%	31.0%
46,309	68,621	(32.51%)	1,382,514	1,996,761	(30.76%)	115,975	247,759	(53.19%)	(216,799)	(119,020)	57.6%	57.3%	36.4%	36.3%
468,371	184,967	153.22%	1,766,510	714,574	147.21%	1,979,768	712,638	177.81%	(20,995)	(29,370)	19.9%	4.5%	16.6%	4.3%
154,361	106,095	45.49%	993,375	1,136,732	(12.61%)	345,158	448,429	(23.03%)	(142,087)	(233,523)	20.3%	30.7%	16.8%	23.5%
249,316	128,567	93.92%	998,070	963,248	3.62%	1,535,029	1,147,271	33.80%	(40,068)	(48,259)	22.5%	22.4%	18.4%	18.3%
137,759	87,878	56.76%	413,065	341,600	20.92%	664,888	554,337	19.94%	(55,811)	(34,392)	34.7%	17.7%	25.2%	14.7%
837,386	507,913	64.87%	1,786,849	1,003,882	77.99%	2,968,965	INA	N/A	(37,589)	161,514	N/A	N/A	-	-
237,545	101,690	133.60%	995,391	837,108	18.91%	1,193,733	1,170,052	2.02%	(3,956)	(20,291)	57.8%	36.3%	36.6%	26.6%
298,141	117,510	153.72%	1,377,224	1,101,975	24.98%	2,377,077	1,059,253	124.41%	(41,100)	34,231	40.9%	15.9%	29.0%	13.7%
93,550	48,382	93.36%	471,648	464,378	1.57%	607,453	444,617	36.62%	(16,950)	(12,676)	46.6%	30.8%	31.8%	21.8%
126,022	43,360	190.64%	467,386	319,790	46.15%	1,860,442	1,429,816	30.12%	130,912	79,118	7.5%	13.1%	7.0%	11.6%
59,280	71,050	(16.57%)	720,045	1,035,047	(30.43%)	392,354	32,493	N/A	(4,649)	(8,284)	33.3%	N/A	25.0%	N/A
75,542	29,379	157.13%	278,856	169,569	64.45%	678,719	INA	1107.50%	74,917	7,439	0.5%	N/A	0.5%	N/A
95,829	27,878	243.74%	543,826	468,309	16.13%	1,665,306	665,380	150.28%	144,032	57,995	N/A	N/A	N/A	N/A
56,654	25,030	126.34%	407,460	418,540	(2.65%)	1,212,625	867,719	39.75%	(6,479)	(3,082)	24.4%	15.1%	19.6%	13.1%
77,678	22,206	249.81%	427,754	462,272	(7.47%)	169,584	141,273	20.04%	(14,279)	28,723	66.5%	84.4%	39.9%	45.8%
249,472	3,418	7198.77%	805,732	394,200	104.40%	458,362	INA	N/A	(2,733)	13,332	35.2%	5.9%	26.0%	5.6%
308,923	64,575	378.39%	558,969	246,465	126.79%	597,341	366,113	63.16%	(13,989)	38,481	40.5%	N/A	28.8%	N/A

# Financial Statistics

## Exploration and Production Companies

### Financial Statistics – PwC's Top 100

Company	Gross Revenues (\$ 000's) 2010	Gross Revenues (\$ 000's) 2009	Change (%)	Net Income/(Loss) (\$ 000's) 2010	Net Income/(Loss) (\$ 000's) 2009	Change (%)	EPS 2010 <sup>4</sup>	EPS 2009 <sup>4</sup>	Cash Flow from Ops. (\$ 000's) 2010 <sup>5</sup>	Cash Flow from Ops. (\$ 000's) 2009 <sup>5</sup>	CFPS 2010 <sup>6</sup>	CFPS 2009 <sup>6</sup>
Bonterra Energy Corp.	118,980	85,712	38.81%	49,864	68,563	(27.27%)	2.65	3.81	68,588	42,172	3.65	2.34
Bellatrix Exploration Ltd.	115,676	106,778	8.33%	(27,533)	(126,620)	(78.26%)	(0.30)	(1.61)	46,619	34,515	0.51	0.44
Emerge Oil & Gas Inc.	109,976	24,870	342.20%	(26,658)	(6,475)	(311.71%)	(0.31)	(0.14)	30,442	4,966	0.35	0.11
Vero Energy Inc.	108,874	78,144	39.32%	(3,789)	(20,056)	(81.11%)	(0.09)	(0.50)	56,431	26,979	1.34	0.67
Pan Orient Energy Corp. <sup>Ⓢ</sup>	103,019	98,236	4.87%	20,574	15,145	35.85%	0.43	0.33	59,014	52,950	1.23	1.15
Twin Butte Energy Ltd.	101,876	48,425	110.38%	(1,148)	(12,688)	(90.96%)	(0.01)	(0.20)	40,401	17,094	0.35	0.27
Delphi Energy Corp.	101,067	74,705	35.29%	(844)	(8,029)	(89.49%)	(0.01)	(0.10)	60,987	49,074	0.72	0.61
Anderson Energy Ltd.	85,155	76,993	10.60%	(35,631)	(36,458)	(2.27%)	(0.21)	(0.29)	35,631	29,776	0.21	0.24
Terra Energy Corp.	79,857	62,869	27.02%	(8,712)	16	(54550.00%)	(0.09)	INA	24,130	25,814	0.25	INA
Orion Oil & Gas Corporation	75,667	8,118	832.06%	(917)	(3,260)	(71.87%)	(0.00)	(0.02)	36,541	4,723	0.00	0.02
AvenEx Energy Corp.	69,282	54,758	26.52%	(1,759)	25,500	(106.90%)	(0.04)	0.61	43,807	26,373	1.00	0.63
Calvalley Petroleum Inc. <sup>Ⓢ</sup>	65,966	57,520	14.68%	11,301	3,339	238.46%	0.11	0.03	22,635	15,387	0.23	0.16
Rock Energy Inc.	63,354	50,025	26.64%	(3,627)	(6,274)	(42.19%)	(0.12)	(0.23)	25,700	19,532	0.85	0.72
Petrolifera Petroleum Ltd.	63,090	83,752	(24.67%)	(9,592)	(10,825)	(11.39%)	(0.07)	(0.14)	20,852	32,407	0.15	0.42
Southern Pacific Resource Corp.	62,043	391	15765.35%	8,197	(3,232)	(353.62%)	0.04	(0.03)	35,724	(1,771)	0.17	(0.02)
Painted Pony Petroleum Ltd.	58,283	28,895	101.71%	1,894	(3,656)	(151.81%)	0.04	(0.10)	36,179	15,160	0.76	0.41
Surge Energy Inc.	57,714	43,720	32.01%	(10,326)	(2,112)	388.89%	(0.28)	(0.13)	20,279	17,492	0.55	1.08
Arcan Resources Ltd	55,575	27,290	103.65%	(5,068)	(5,743)	(11.75%)	(0.07)	(0.15)	22,739	5,345	0.31	0.14
Winstar Resources Ltd. <sup>Ⓢ</sup>	53,837	38,513	39.79%	1,648	(6,596)	(124.98%)	0.05	(0.19)	29,396	19,580	0.89	0.56
Cequence Energy Ltd.	50,614	18,664	171.19%	(14,518)	(8,654)	67.76%	(0.21)	(0.41)	22,325	3,852	0.32	0.18
Wild Stream Exploration Inc.	45,447	11,264	303.47%	3,636	(2,638)	(237.83%)	0.10	(0.41)	27,494	4,858	0.76	0.76
Orleans Energy Ltd.	44,668	43,161	3.49%	(4,913)	(18,016)	(72.73%)	(0.08)	(0.32)	27,374	15,095	0.46	0.27
Arsenal Energy Inc. <sup>Ⓢ</sup>	43,666	37,905	15.20%	(7,675)	(11,051)	(30.55%)	(0.06)	(0.11)	17,212	18,148	0.13	0.18
WestFire Energy Ltd.	43,432	20,229	114.70%	(6,355)	6,636	(195.76%)	(0.17)	0.27	19,747	7,396	0.53	0.30
Open Range Energy Corp.	40,700	25,458	59.87%	(3,529)	(6,137)	(42.50%)	(0.06)	(0.20)	30,007	14,866	0.51	0.48
Midway Energy Ltd.	39,627	11,271	251.58%	(3,626)	(7,116)	(49.04%)	(0.06)	(0.27)	20,204	(567)	0.33	(0.02)
Insignia Energy Ltd.	38,006	16,264	133.68%	(14,299)	(11,656)	22.68%	(0.47)	(0.57)	13,160	5,339	0.43	0.26
Bellamont Exploration Ltd.	36,936	10,246	260.51%	(6,526)	(4,569)	42.84%	(0.05)	(0.08)	15,408	2,478	0.12	0.04
Sonde Resources Corp.	36,880	34,582	6.65%	(98,000)	(53,321)	83.79%	(1.60)	(0.30)	4,009	645	0.07	0.00
Prosper Resources Ltd.	36,273	31,370	15.63%	(2,165)	(10,437)	(79.26%)	(0.04)	(0.18)	17,269	12,705	0.32	0.22
Crocotta Energy Inc.	34,530	34,199	0.97%	(7,414)	(7,141)	3.82%	(0.11)	(0.14)	13,511	9,162	0.20	0.18
Ember Resources Inc.	34,152	36,872	(7.38%)	(20,467)	(19,006)	7.69%	(0.27)	(0.35)	11,751	13,199	0.16	0.24
Seaview Energy Inc.	33,386	27,107	23.16%	(4,701)	(9,607)	(51.07%)	(0.07)	(0.16)	17,577	15,010	0.26	0.25
Corridor Resources Inc.	27,694	46,105	(39.93%)	(8,605)	1,667	(616.20%)	(0.10)	0.02	13,707	27,829	0.16	0.32
Spry Energy Ltd.	27,256	28,662	(4.91%)	(749)	3,212	(123.32%)	(0.04)	0.16	14,136	17,821	0.75	0.89
Cinch Energy Corp.	27,237	23,646	15.19%	(6,710)	(8,904)	(24.64%)	(0.08)	(0.16)	11,705	9,479	0.14	0.17
Artek Exploration Ltd.	26,889	19,222	39.89%	(4,594)	(4,756)	(3.41%)	(0.16)	(1.27)	9,484	5,858	0.33	1.56
Whitecap Resources Inc.	25,991	4,799	441.60%	(9,623)	1,224	(886.19%)	(0.42)	(0.26)	11,706	997	0.51	(0.21)
Cirrus Energy Corp. <sup>7</sup>	25,630	—	N/A	(24,720)	(5,117)	383.10%	(0.29)	(0.07)	11,062	(2,478)	0.13	(0.03)
Yoho Resources Inc.	25,523	25,707	(0.72%)	(2,718)	(4,892)	(44.43%)	(0.11)	(0.24)	12,577	10,969	0.51	0.54
Second Wave Petroleum Inc.	25,504	15,652	62.95%	(6,859)	(6,582)	4.21%	(0.09)	(0.15)	8,780	1,225	0.12	0.03
Waldron Energy Corporation	24,615	8,300	196.57%	(4,552)	(5,258)	(13.42%)	(0.17)	(0.13)	9,168	502	0.34	0.01
Exall Energy Corporation	22,332	7,934	181.49%	3,054	(2,133)	(243.21%)	0.06	(0.05)	11,264	2,053	0.22	0.05
Spartan Exploration Ltd.	22,275	4,983	347.04%	4,550	411	1007.37%	0.16	0.02	15,171	2,664	0.53	0.13
Culane Energy Corp.	20,337	24,471	(16.89%)	(2,677)	(4,840)	(44.69%)	(0.11)	(0.21)	5,977	9,950	0.25	0.43

#### Note:

1. INA: Information not available
2. Data obtained from Canoil. For companies not updated in the database as at April 28, 2011 were not included in the list.
3. All USD balances were translated at 1.0299 per Canoil. All USD transactional accounts were translated at 1.0299 per Canoil.
4. EPS is basic.
5. Cash flow from Ops excludes non-cash working capital.
6. Calculated by PwC based on weighted average number of shares (basic) and cash flow from Ops excluding non-cash working capital
7. For the 12 months ended Aug 31, 2010

\* Reported under US GAAP

Ⓢ Canadian companies with international operations

Capital Expenditures (\$ 000's) 2010	Capital Expenditures (\$ 000's) 2009	Change (%)	Total Assets (\$ 000's) 2010	Total Assets (\$ 000's) 2009	Change (%)	Market Capitalization (\$ 000's) 2010	Market Capitalization (\$ 000's) 2009	Change (%)	Working Capital Ratio 2010	Working Capital Ratio 2009	Total Debt as a % of Equity 2010	Total Debt as a % of Equity 2009	Debt to Capital Ratio (%) 2010	Debt to Capital Ratio (%) 2009
76,914	28,726	167.75%	335,144	293,987	14.00%	992,305	645,357	53.76%	(14,602)	(10,162)	61.7%	50.3%	38.2%	33.5%
106,748	16,487	547.47%	487,156	440,970	10.47%	467,837	208,844	124.01%	(1,562)	4,731	28.0%	38.9%	21.9%	28.0%
97,765	95,595	2.27%	198,855	141,147	40.89%	333,221	INA	N/A	(56,950)	(15,725)	34.5%	9.8%	25.7%	8.9%
132,433	53,857	145.90%	409,807	343,954	19.15%	280,312	191,301	46.53%	(125,236)	(90,043)	40.6%	39.5%	28.9%	28.3%
61,328	63,495	(3.41%)	286,151	241,781	18.35%	324,127	351,982	(7.91%)	31,396	32,738	N/A	N/A	N/A	N/A
67,438	16,309	313.51%	337,685	308,864	9.33%	261,523	100,937	159.10%	(95,018)	(103,339)	52.1%	58.1%	34.2%	36.7%
105,809	64,819	63.24%	412,329	361,698	14.00%	244,830	172,994	41.53%	(1,525)	(11,707)	43.8%	38.4%	30.4%	27.8%
114,380	33,612	240.30%	535,115	497,169	7.63%	181,110	174,580	3.74%	(20,198)	(10,120)	28.8%	18.8%	22.4%	15.8%
88,410	102,230	(13.52%)	281,493	222,481	26.52%	126,435	136,383	(7.29%)	(14,235)	(2,601)	67.6%	50.2%	40.3%	33.4%
66,027	13,513	388.61%	207,406	153,054	35.51%	284,859	INA	N/A	(12,625)	(4,630)	25.8%	1.5%	20.5%	1.5%
29,778	20,170	47.64%	430,369	367,115	17.23%	325,148	206,293	57.61%	(34,529)	36,719	22.0%	15.9%	18.0%	13.7%
21,770	13,354	63.02%	190,699	181,487	5.08%	488,571	268,038	82.28%	69,679	74,177	N/A	N/A	N/A	N/A
41,817	20,492	104.07%	159,278	145,732	9.30%	159,183	98,394	61.78%	(33,297)	(25,332)	23.3%	23.4%	18.9%	18.9%
50,506	71,623	(29.48%)	329,067	349,065	(5.73%)	90,196	118,106	(23.63%)	13,038	(2,508)	23.6%	34.4%	19.1%	25.6%
45,842	5,302	764.59%	349,197	125,431	178.40%	325,922	102,153	219.05%	59,929	4,633	N/A	1.5%	N/A	1.4%
120,160	54,151	121.90%	234,197	164,907	42.02%	457,622	267,410	219.05%	(1,205)	40,679	INA	INA	—	—
118,770	17,888	563.95%	377,577	132,360	185.27%	408,368	56,719	619.98%	(18,129)	(46,903)	11.3%	73.3%	10.1%	42.3%
148,334	11,495	1190.41%	289,775	151,251	91.59%	497,968	69,513	616.37%	(27,770)	(34,779)	10.0%	29.9%	9.1%	23.0%
38,311	18,150	111.08%	122,761	97,641	25.73%	183,456	101,985	79.89%	7,333	8,135	N/A	N/A	N/A	N/A
148,988	46,593	219.76%	456,636	208,111	119.42%	252,350	143,889	75.38%	(73,125)	7,006	16.4%	11.1%	14.1%	10.0%
125,307	34,596	262.20%	234,904	107,793	117.92%	410,986	114,900	257.69%	(29,183)	13,735	3.3%	N/A	3.2%	N/A
52,343	45,681	14.58%	197,668	242,306	(18.42%)	163,145	153,815	6.07%	(6,162)	11,766	1.3%	20.0%	1.3%	16.6%
30,302	10,950	176.72%	113,613	116,880	(2.80%)	152,077	84,323	80.35%	(19,493)	(28,649)	17.1%	38.6%	14.6%	27.8%
72,007	56,191	28.15%	233,453	179,927	29.75%	275,554	244,348	12.77%	(3,048)	6,592	4.2%	N/A	4.1%	N/A
53,663	85,778	(37.44%)	217,697	209,009	4.16%	115,803	132,836	(12.82%)	(49,663)	(37,879)	35.0%	26.9%	25.9%	21.2%
61,718	45,986	34.21%	175,389	111,211	57.71%	300,756	182,493	64.80%	(42,516)	(12,538)	30.9%	4.7%	23.6%	4.5%
31,821	12,132	162.29%	156,650	150,714	3.94%	55,188	66,839	(17.43%)	(35,777)	(18,051)	31.1%	10.0%	23.7%	9.1%
39,535	30,399	30.06%	156,551	71,640	118.52%	89,036	65,307	36.33%	(32,574)	(3,490)	30.0%	N/A	23.1%	N/A
85,517	104,597	(18.24%)	268,421	291,832	(8.02%)	224,907	126,116	78.33%	34,432	(9,345)	11.7%	18.7%	10.5%	15.8%
29,015	19,189	51.21%	160,118	154,155	3.87%	79,298	69,436	14.20%	(1,264)	(4,702)	15.1%	15.2%	13.2%	13.2%
28,714	15,644	83.55%	213,816	254,156	(15.87%)	114,650	68,338	67.77%	(35,200)	(71,698)	22.4%	44.3%	18.3%	30.7%
13,734	17,432	(21.21%)	342,864	365,539	(6.20%)	37,449	60,667	(38.27%)	(83,914)	(770)	37.2%	32.7%	27.1%	24.6%
30,672	47,022	(34.77%)	146,003	166,410	(12.26%)	89,778	82,512	8.81%	(19,431)	(40,667)	18.1%	40.1%	15.3%	28.6%
21,869	38,361	(42.99%)	289,748	300,605	(3.61%)	521,621	474,819	9.86%	4,002	10,882	0.1%	0.1%	0.1%	0.1%
41,873	17,605	137.85%	135,182	104,061	29.91%	private	private	N/A	(21,286)	(9,779)	19.4%	10.7%	16.3%	9.6%
51,019	10,971	365.02%	159,210	124,872	27.50%	117,889	103,594	13.80%	(12,485)	(29,444)	N/A	33.7%	N/A	25.2%
28,396	18,190	56.11%	147,732	132,226	11.73%	43,670	2,428	1698.58%	(50,714)	(42,488)	48.9%	49.9%	32.9%	33.3%
41,579	429	9592.07%	207,424	59,060	251.21%	146,615	944	15431.25%	(31,522)	(10,291)	11.8%	56.8%	10.5%	36.2%
50,874	61,409	(17.16%)	168,304	164,381	2.39%	45,892	160,463	(71.40%)	27,711	33,909	N/A	4.3%	N/A	4.1%
22,600	15,524	45.58%	124,119	89,598	38.53%	82,721	39,966	106.98%	(22,878)	(24,471)	23.6%	46.1%	19.1%	31.6%
94,072	24,297	287.18%	167,352	91,640	82.62%	211,393	100,078	111.23%	(42,569)	(12,027)	29.5%	12.7%	22.8%	11.3%
69,411	7,752	795.41%	92,293	38,773	138.03%	74,650	44,345	68.34%	(17,266)	(239)	14.6%	N/A	12.7%	N/A
21,688	4,543	377.36%	46,442	28,254	64.37%	123,910	29,849	315.12%	(14,174)	(8,564)	54.4%	51.2%	35.2%	33.9%
57,723	12,358	367.08%	86,546	27,722	212.19%	165,770	INA	N/A	(15,367)	(3,567)	3.7%	11.2%	3.6%	10.1%
14,197	13,105	8.33%	79,991	73,979	8.13%	44,863	82,141	(45.38%)	(18,691)	(13,745)	36.0%	27.1%	27.0%	21.3%

# Financial statistics

## Exploration and production companies

### Operating statistics – PwC's top 100

Company	Oil & Liquid Production (bbls/d) 2010	NG Production (mmcf/d) 2010	Total Production (boe/d) 2010	Total Production (boe/d) 2009	Change (%)	Liquids Price (per bbl) 2010 <sup>4</sup>	NG Price (per mcf) 2010 <sup>4</sup>	Proved Reserves (mBOE) 2010 <sup>5</sup>	Proved Reserves (mBOE) 2009 <sup>5</sup>	Change (%)
Suncor Energy Inc.	528,100	522.00	615,100	456,121	(34.85%)	77.37	3.99	3,276,333	4,181,830	21.65%
Husky Energy Inc.  *	202,600	506.80	287,067	306,483	6.34%	9.66	3.86	1,081,000	1,004,000	(7.67%)
Imperial Oil Limited *	247,000	280.00	293,667	293,167	(0.17%)	69.32	4.04	2,549,000	2,513,333	(1.42%)
Canadian Natural Resources Limited	424,985	1,243.00	632,152	574,630	(10.01%)	65.81	4.08	3,823,833	3,556,833	(7.51%)
Cenovus Energy Inc.	129,187	737.00	252,020	261,338	3.57%	62.60	5.16	1,665,667	1,415,167	(17.70%)
EnCana Corporation	22,787	3,184.00	553,454	500,530	(10.57%)	66.12	5.48	2,784,967	2,477,800	(12.40%)
Talisman Energy Inc.	186,000	1,225.00	390,167	424,833	8.16%	80.52	5.76	1,382,517	1,410,683	2.00%
Nexen Inc.	202,800	260.00	246,133	242,600	(1.46%)	78.94	4.54	987,000	1,011,000	2.37%
Canadian Oil Sands Limited	107,280	—	107,280	103,129	(4.03%)	80.53	—	889,000	962,000	7.59%
Penn West Petroleum Ltd. <sup>10</sup>	38,143	219.30	74,693	79,518	6.07%	67.85	5.00	220,316	234,036	5.86%
Denbury Resources Inc. *	59,918	78.06	72,928	48,299	(50.99%)	71.30	6.41	397,925	207,542	(91.73%)
Pacific Rubiales Energy Corp.	58,055	60.13	68,076	35,374	(92.45%)	72.96	5.00	318,132	228,616	(39.16%)
Crescent Point Energy Corp.	55,070	39.32	61,623	44,883	(37.30%)	73.46	4.12	225,420	185,689	(21.40%)
Pengrowth Energy Corporation	38,143	219.30	74,693	79,518	6.07%	67.85	5.00	220,316	234,036	5.86%
Enerplus Corporation	35,024	288.69	83,139	91,569	9.21%	68.27	4.05	184,442	251,277	26.60%
ARC Resources Ltd.	31,586	254.20	73,953	63,531	(16.40%)	71.18	4.21	283,616	225,705	(25.66%)
Petrominerales Ltd.	37,027	—	37,027	22,360	(65.59%)	69.04	—	38,875	32,401	(19.98%)
Ultra Petroleum Corporation *	3,656	563.32	97,543	82,242	(18.61%)	71.98	5.04	731,710	651,952	(12.23%)
PetroBakken Energy Ltd.	35,109	39.47	41,688	26,333	(58.31%)	72.77	4.22	90,227	79,528	(13.45%)
Petrobank Energy and Resources Ltd.	72,136	39.47	78,715	26,333	(198.92%)	71.77	4.27	43,986	89,470	50.84%
Harvest Operations Corp.	35,917	80.88	49,397	51,646	4.35%	67.33	4.21	INA	122,541	INA
Bonavista Energy Corporation	26,182	240.00	66,182	55,299	(19.68%)	69.28	4.50	190,706	161,248	(18.27%)
Baytex Energy Corp.	35,124	55.30	44,341	41,382	(7.15%)	60.61	4.32	116,449	107,310	(8.52%)
Vermilion Energy Inc.	19,941	73.14	32,132	31,395	(2.35%)	79.54	5.58	89,375	87,864	(1.72%)
MEG Energy Corp.	21,257	—	21,257	3,467	(513.12%)	51.76	—	605,900	548,707	(10.42%)
Daylight Energy Ltd.	17,017	144.87	41,161	26,922	(52.89%)	70.21	4.17	77,709	60,955	(27.49%)
NAL Energy Corporation	14,045	92.40	29,446	24,017	(22.61%)	69.58	3.98	60,881	59,762	(1.87%)
Progress Energy Resources Corp.	5,322	213.66	40,932	32,115	(27.45%)	61.77	4.13	131,553	82,916	(58.66%)
NuVista Energy Ltd.	7,700	123.86	28,343	26,958	(5.14%)	61.14	4.49	62,756	56,843	(10.40%)
Advantage Oil & Gas Ltd.	7,202	101.56	24,129	26,929	10.40%	61.85	5.45	143,371	107,868	(32.91%)
Trilogy Energy Corp.	4,642	108.87	22,788	19,780	(15.21%)	69.51	4.79	54,502	49,667	(9.73%)
Connacher Oil and Gas Limited	9,182	9.10	10,699	9,216	(16.09%)	47.57	3.90	153,557	147,077	(4.41%)
TransGlobe Energy Corporation	9,960	—	9,960	8,981	(10.90%)	76.40	—	11,251	10,372	(8.47%)
Peyto Exploration & Development Corp.	3,389	122.03	23,728	18,481	(28.39%)	65.31	5.36	158,113	123,601	(27.92%)
Perpetual Energy Inc.	1,245	145.10	25,428	26,283	3.25%	68.29	7.10	36,743	34,791	(5.61%)
OPTI Canada Inc.	8,600	—	8,600	4,359	(97.29%)	74.88	—	159,561	159,478	(0.05%)
Fairborne Energy Ltd.	3,968	67.15	15,160	14,383	(5.40%)	68.72	5.04	43,024	33,981	(26.61%)
Celtic Exploration Ltd.	4,070	79.40	17,304	14,192	(21.93%)	67.80	4.37	38,651	35,455	(9.01%)
Compton Petroleum Corporation	2,791	88.00	17,458	21,002	16.87%	65.71	4.43	46,409	75,646	38.65%
Legacy Oil + Gas Inc.	7,533	7.39	8,765	1,882	(365.81%)	3.80	3.89	48,060	9,738	(393.51%)
Galleon Energy Inc.	4,450	62.10	14,800	15,976	7.36%	69.00	4.23	31,841	39,243	18.86%
Crew Energy Inc.	5,410	49.67	13,689	14,002	2.24%	63.65	4.45	36,036	31,349	(14.95%)
Coastal Energy Company	7,653	11.80	9,620	7,423	(29.59%)	72.79	7.31	20,489	21,024	2.54%
Tourmaline Oil Corp.	1,922	95.61	17,856	3455	(416.81%)	74.62	4.52	93,014	34,849	(166.91%)
Birchcliff Energy Ltd.	3,583	56.97	13,078	11,216	(16.61%)	78.02	4.21	100,465	69,787	(43.96%)
Paramount Resources Ltd.	3,417	57.70	13,034	12,213	(6.72%)	71.83	4.50	22,813	18,196	(25.37%)
Zargon Oil & Gas Ltd.	5,645	25.40	9,879	9,856	(0.24%)	69.69	3.87	19,347	19,228	(0.62%)
Bankers Petroleum Ltd	9,597	—	9,597	6,438	(49.07%)	50.24	—	100,753	81,042	(24.32%)
Pace Oil & Gas Ltd.	4,289	42.69	11,405	11,251	(1.37%)	69.77	4.09	41,816	30,388	(37.61%)
C&C Energia Ltd.	5,842	—	5,842	INA	N/A	77.24	—	7,934	INA	N/A
BlackPearl Resources Inc.	6,375	3.46	6,951	5,254	(32.29%)	58.86	4.14	8,876	8,758	(1.34%)
Freehold Royalties Ltd.	4,704	17.47	7,615	7,302	(4.29%)	65.40	3.64	14,800	15,236	2.86%
Equal Energy Ltd.	4,972	24.88	9,118	9,878	7.69%	56.32	4.57	20,902	17,570	(18.97%)
Chinook Energy Inc.	3,080	40.28	9,795	68	(14304.41%)	49.00	3.75	37,416	3,819	(879.73%)
Angle Energy Inc.	3,535	34.25	9,243	7,528	(22.78%)	50.87	4.47	25,882	8,809	(193.81%)

Gas Leverage on Reserves (%) 2010	Gas Leverage on Reserves (%) 2009	Op. Costs (per boe) 2010	Op. Costs (per boe) 2009	Change (%)	Royalties (per boe) 2010	Royalties (per boe) 2009	G&A Costs (per boe) 2010 <sup>6</sup>	G&A Costs (per boe) 2009 <sup>6</sup>	Depletion Costs (per boe) 2010 <sup>7</sup>	Depletion Costs (per boe) 2009 <sup>7</sup>	Cash Flow per boe 2010 <sup>8</sup>	Cash Flow per boe 2009 <sup>8</sup>
6%	8%	23.59	28.07	15.96%	(8.63)	(6.91)	0.56	1.08	16.98	11.17	29.91	16.89
37%	35%	12.33	11.00	(12.15%)	(9.33)	(7.70)	2.91	2.37	14.50	12.06	33.30	22.04
4%	4%	22.16	22.29	0.59%	INA	INA	9.98	10.34	6.97	7.30	28.12	21.06
16%	15%	14.89	14.24	(4.57%)	(6.16)	(4.46)	0.91	0.86	17.49	13.44	26.59	28.83
14%	20%	8.81	7.84	(12.29%)	(4.88)	(2.86)	2.73	2.21	10.83	13.10	26.25	29.83
96%	96%	5.26	9.61	45.26%	INA	INA	1.84	2.95	16.58	22.94	22.70	41.98
63%	62%	13.11	12.00	(9.24%)	8.95	(6.87)	2.75	2.15	14.31	14.46	21.47	25.54
8%	7%	14.70	10.03	(46.60%)	INA	INA	4.73	4.83	17.77	17.36	22.38	21.58
N/A	N/A	36.75	35.28	(4.17%)	(7.81)	(6.06)	0.87	0.88	9.07	11.24	29.52	20.03
47%	45%	13.63	13.24	(2.98%)	(9.27)	(7.15)	1.70	1.86	19.42	20.37	41.52	49.20
15%	7%	18.89	20.93	9.73%	INA	INA	5.40	6.97	16.60	15.08	30.04	34.66
32%	30%	25.27	25.76	1.91%	INA	INA	4.38	5.56	11.69	15.19	27.44	19.98
8%	9%	11.03	8.92	(23.56%)	(11.34)	(10.54)	1.82	2.22	31.87	25.83	38.72	40.96
47%	45%	13.63	13.24	(2.98%)	(9.27)	(7.15)	1.70	1.86	19.42	20.37	21.86	20.12
45%	49%	9.54	9.79	2.54%	(7.36)	(6.21)	2.60	2.64	20.80	19.08	23.69	22.43
63%	57%	9.70	10.19	4.74%	(7.14)	(6.37)	2.89	2.23	16.72	16.26	24.93	21.96
N/A	N/A	8.36	8.07	(3.57%)	(8.67)	(5.84)	1.86	1.68	20.64	22.06	44.44	39.04
96%	96%	5.57	5.76	3.30%	INA	INA	0.33	0.33	7.01	7.61	21.69	23.53
15%	16%	8.18	7.38	(10.88%)	(9.34)	(8.55)	2.18	1.59	34.23	31.40	81.42	72.56
—	16%	8.42	8.10	(3.95%)	(8.74)	(5.87)	1.88	1.68	20.80	22.20	22.50	41.08
N/A	24%	14.73	13.72	(7.35%)	(8.58)	(6.84)	2.59	2.29	28.06	26.67	22.61	25.22
65%	64%	8.06	9.80	17.73%	(5.94)	(5.81)	0.87	0.89	14.19	14.03	21.16	21.59
10%	11%	10.61	10.81	1.82%	(10.03)	(8.65)	2.46	2.32	16.47	15.43	27.89	21.92
44%	46%	12.33	12.18	(1.20%)	(7.12)	(8.52)	3.65	2.72	23.15	19.94	30.41	26.80
N/A	N/A	20.90	11.12	(87.93%)	(2.13)	(0.45)	4.69	19.20	15.95	1.74	16.21	(49.17)
69%	71%	10.26	11.71	12.36%	(11.88)	(7.94)	2.00	2.85	23.70	21.37	19.48	21.33
51%	51%	10.93	11.09	1.42%	(8.25)	(7.52)	1.53	1.84	23.39	20.87	24.00	26.32
90%	89%	6.08	6.82	10.79%	(4.57)	(3.62)	0.95	1.16	17.61	18.90	13.67	13.07
73%	76%	9.11	8.49	(7.23%)	(5.54)	(4.38)	1.85	1.45	16.92	17.08	15.68	19.06
87%	79%	10.66	12.11	11.97%	(5.07)	(4.99)	2.80	2.82	23.99	25.60	19.17	19.70
74%	80%	8.48	11.24	24.58%	(5.37)	(3.73)	2.09	2.39	15.17	17.31	18.20	15.58
2%	3%	41.15	32.72	(25.75%)	(2.90)	(2.37)	5.10	4.39	19.63	19.13	9.15	3.61
N/A	N/A	7.63	8.55	10.75%	(31.73)	(22.43)	3.36	3.25	9.64	16.42	21.19	15.62
89%	88%	2.13	2.48	14.30%	(3.86)	(3.81)	0.75	1.08	10.79	10.77	23.12	28.85
93%	95%	9.82	10.95	10.34%	(2.38)	(1.81)	3.70	3.35	22.54	19.17	24.23	22.53
N/A	N/A	69.32	91.97	24.62%	(2.35)	(1.20)	4.18	10.90	16.96	16.13	(123.15)	(160.70)
77%	73%	9.48	10.30	8.03%	(4.48)	(3.29)	2.88	2.57	24.43	26.39	21.90	27.13
79%	78%	8.13	10.26	20.73%	(4.05)	(4.43)	0.73	0.76	18.11	19.55	20.41	22.58
89%	89%	10.38	11.24	7.70%	(4.71)	(3.61)	3.56	3.73	78.92	17.57	5.17	5.93
22%	5%	11.28	14.14	20.21%	(11.34)	(10.27)	2.68	7.23	39.06	47.76	37.39	33.51
66%	58%	9.52	9.73	2.16%	(5.81)	(5.61)	2.73	2.73	23.75	21.94	18.51	16.48
66%	73%	10.80	11.22	3.72%	(8.37)	(7.05)	1.30	1.12	22.13	25.21	19.85	15.96
33%	32%	15.70	13.98	(12.30%)	(4.82)	(2.45)	3.66	4.83	16.47	9.84	35.81	15.41
89%	88%	6.34	6.5	2.39%	(2.40)	(3.78)	1.05	2.46	19.31	18.25	20.77	17.22
82%	76%	7.70	8.89	13.40%	(3.55)	(3.75)	2.12	2.77	15.64	20.40	20.83	16.34
75%	72%	10.70	12.71	15.85%	(4.46)	(4.63)	3.24	3.86	35.50	29.83	18.26	13.52
34%	36%	13.09	13.22	1.03%	(8.86)	(7.62)	4.23	3.83	18.42	17.99	20.44	24.00
N/A	N/A	10.83	11.93	9.20%	(9.93)	(9.85)	2.43	3.11	7.99	7.66	21.57	12.24
51%	60%	16.21	15.23	(6.43%)	(6.81)	(3.44)	3.18	3.71	23.54	31.14	11.95	11.03
N/A	INA	14.37	INA	N/A	(10.49)	INA	1.93	INA	20.06	INA	38.72	INA
4%	9%	14.51	15.36	5.51%	(14.50)	(11.09)	2.68	3.60	35.34	41.49	24.67	15.12
40%	39%	4.16	4.37	4.82%	(1.47)	(1.03)	2.81	2.71	24.25	23.66	38.49	35.68
48%	50%	10.76	11.00	2.14%	(8.81)	(7.37)	5.78	4.36	22.14	23.61	13.54	12.82
58%	N/A	12.63	29.70	57.47%	4.86	INA	6.55	246.06	21.23	69.70	14.47	27.12
66%	61%	6.17	4.49	(37.45%)	(7.03)	(7.24)	2.35	2.31	18.81	15.33	18.38	14.61

# Financial statistics

## Exploration and production companies

### Operating statistics – PwC's top 100

Company	Oil & Liquid Production (bbls/d) 2010	NG Production (mmcf/d) 2010	Total Production (boe/d) 2010	Total Production (boe/d) 2009	Change (%)	Liquids Price (per bbl) 2010 <sup>4</sup>	NG Price (per mcf) 2010 <sup>4</sup>	Proved Reserves (mBOE) 2010 <sup>5</sup>	Proved Reserves (mBOE) 2009 <sup>5</sup>	Change (%)
Bonterra Energy Corp.	3,875	10.52	5,628	4,994	(12.69%)	72.69	4.14	25,076	21,844	(14.80%)
Bellatrix Exploration Ltd.	2,550	35.81	8,519	8,426	(1.10%)	66.59	5.28	19,903	13,291	(49.75%)
Emerge Oil & Gas Inc.	4,805	0.70	4,922	1,244	(295.75%)	62.14	3.87	6,017	3,825	(57.30%)
Vero Energy Inc.	1,866	39.93	8,521	6,941	(22.76%)	93.86	4.39	20,052	18,081	(10.90%)
Pan Orient Energy Corp. <sup>6</sup>	3,884	—	3,884	4,496	13.61%	72.66	—	INA	8,938	N/A
Twin Butte Energy Ltd.	2,899	22.03	6,571	3,604	(82.32%)	63.82	4.27	22,922	18,923	(21.14%)
Delphi Energy Corp.	1,617	38.82	8,086	6,808	(18.77%)	67.16	5.45	18,804	14,528	(29.43%)
Anderson Energy Ltd.	1,379	37.12	7,566	7,604	0.49%	62.98	3.96	17,414	20,454	14.86%
Terra Energy Corp.	1,496	32.08	6,842	5,946	(15.08%)	56.70	4.14	15,301	12,554	(21.88%)
Orion Oil & Gas Corporation	2,152	13.27	4,364	2,342	(86.38%)	70.84	4.61	16,299	13,864	(17.56%)
AvenEx Energy Corp.	1,647	13.91	3,965	3,405	(16.45%)	69.88	5.29	9,141	6,365	(43.62%)
Calvalley Petroleum Inc. <sup>6</sup>	2,256	0.00	2,256	2,160	(4.44%)	82.66	—	7,507	5,963	(25.89%)
Rock Energy Inc.	2,376	7.43	3,615	3,435	(5.22%)	59.55	4.19	7,346	4,905	(49.77%)
Petrolifera Petroleum Ltd.	3,072	3.67	3,683	5215	29.38%	53.15	2.62	10,852	9,040	(20.04%)
Southern Pacific Resource Corp.	2,855	0.61	2,956	40	(7290.42%)	58.70	3.97	143,421	496	(28794.12%)
Painted Pony Petroleum Ltd.	1,729	6.72	2,849	1,553	(83.47%)	77.06	3.94	INA	3,303	N/A
Surge Energy Inc.	1,871	6.93	3,026	2,643	(14.49%)	69.83	3.96	11,921	5,550	(114.80%)
Arcan Resources Ltd	1,983	1.56	2,243	1,375	(63.09%)	72.97	4.84	10,311	4,675	(120.54%)
Winstar Resources Ltd. <sup>6</sup> <sup>10</sup>	1,559	1.39	1,791	1,738	(3.05%)	82.52	10.68	3,583	4,289	16.44%
Cequence Energy Ltd.	625	22.96	4,451	1,627	(173.51%)	41.65	4.63	23,591	6,547	(260.36%)
Wild Stream Exploration Inc.	1,809	1.13	1,997	542	(268.34%)	66.36	3.96	8,834	2,903	(204.28%)
Orleans Energy Ltd.	681	18.23	3,720	3,925	5.22%	64.42	4.75	9,273	9,219	(0.58%)
Arsenal Energy Inc. <sup>6</sup>	1,587	3.03	2,092	2,119	1.27%	67.90	3.91	5,795	4,632	(25.10%)
WestFire Energy Ltd.	1,228	7.71	2,513	1,480	(69.73%)	69.87	4.30	8,185	5,363	(52.61%)
Open Range Energy Corp.	349	20.61	3,783	2,456	(54.04%)	65.52	4.58	11,355	8,733	(30.03%)
Midway Energy Ltd.	1,184	5.64	2,124	962	(120.88%)	71.40	4.21	9,815	5,259	(86.66%)
Insignia Energy Ltd.	696	13.25	2,904	1,468	(97.79%)	68.49	4.26	5,584	4,837	(15.44%)
Bellamont Exploration Ltd.	913	8.58	2,342	820	(185.71%)	71.68	4.17	5,353	2,410	(122.08%)
Sonde Resources Corp.	648	13.32	2,869	3,020	5.01%	67.55	4.69	5,309	5,327	0.33%
ProspEx Resources Ltd.	558	15.00	3,058	2,832	(7.97%)	57.53	4.89	10,211	6,107	(67.21%)
Crocotta Energy Inc.	746	10.49	2,494	2,487	(0.26%)	62.79	4.56	8,172	6,949	(17.59%)
Ember Resources Inc.	—	23.63	3,939	4,220	6.67%	—	3.96	16,137	14,572	(10.74%)
Seaview Energy Inc.	370	15.22	2,907	2,321	(25.27%)	69.16	4.65	5,346	5,479	2.44%
Corridor Resources Inc.	15	13.20	2,215	2,859	22.54%	76.90	5.66	9,735	11,583	15.95%
Spry Energy Ltd. (private)	801	4.19	1,499	1,672	10.33%	70.99	4.25	4,173	2,755	(51.44%)
Cinch Energy Corp.	217	14.18	2,580	2,374	(8.68%)	66.07	3.94	8,455	6,069	(39.32%)
Artek Exploration Ltd.	585	7.34	1,808	1,805	(0.20%)	73.06	4.72	7,555	6,446	(17.21%)
Whitecap Resources Inc.	743	4.14	1,433	275	(421.15%)	72.20	4.24	8,257	INA	N/A
Cirrus Energy Corp. <sup>9</sup>	23	9.18	1,552	—	N/A	69.66	7.48	2,676	1,634	(63.83%)
Yoho Resources Inc.	398	11.22	2,269	2,428	6.54%	58.80	4.14	4,885	2,888	(69.16%)
Second Wave Petroleum Inc.	871	3.15	1,396	990	(41.09%)	65.53	4.05	3,189	2,397	(33.06%)
Waldron Energy Corporation	466	9.85	2,107	867	(143.11%)	58.44	4.08	5,628	912	(516.97%)
Exall Energy Corporation	759	0.70	876	412	(112.75%)	76.57	4.29	1,431	719	(99.01%)
Spartan Exploration Ltd.	793	0.83	931	237	(293.31%)	72.39	4.36	4,867	2,660	(82.98%)
Culane Energy Corp.	717	1.48	963	1,370	29.68%	68.31	4.69	2,649	1,984	(33.54%)

#### Note:

1. INA: Information not available
2. Data obtained from Canoil. For companies not updated in the database as at April 28, 2010 were not included in the list.
3. All USD balances were translated at 1.0299 per Canoil. All USD transactional accounts were translated at 1.0299 per Canoil.
4. Prices are presented post-hedge
5. Reserves are gross.
6. G&A Costs per boe excludes stock-based compensation.
7. Depletion Costs per boe are net of accretion.
8. Calculated by PwC based on cash fro Ops. Excluding non-cash working capital and total production.
9. Figures are for the 12 month period ending August 31, 2010.
10. Included both continuing and discontinued operation.

\* Reported under US GAAP

<sup>6</sup> Canadian companies with international operations



Gas Leverage on Reserves (%) 2010	Gas Leverage on Reserves (%) 2009	Op. Costs (per boe) 2010	Op. Costs (per boe) 2009	Change (%)	Royalties (per boe) 2010	Royalties (per boe) 2009	G&A Costs (per boe) 2010 <sup>6</sup>	G&A Costs (per boe) 2009 <sup>6</sup>	Depletion Costs (per boe) 2010 <sup>7</sup>	Depletion Costs (per boe) 2009 <sup>7</sup>	Cash Flow per boe 2010 <sup>8</sup>	Cash Flow per boe 2009 <sup>8</sup>
24%	25%	14.82	15.28	2.97%	(5.57)	(4.07)	2.63	2.45	10.84	10.07	33.39	23.13
63%	72%	12.21	14.64	16.58%	(7.37)	(5.71)	3.03	3.33	23.38	28.76	14.99	11.22
2%	1%	24.34	23.60	(3.13%)	(12.28)	(10.94)	4.22	6.64	28.08	23.68	16.95	10.94
73%	80%	8.02	9.18	12.60%	(3.72)	(4.39)	1.98	2.31	18.77	18.75	18.14	10.65
N/A	N/A	6.73	4.60	(46.09%)	(4.66)	(4.17)	2.50	3.04	13.38	10.01	41.63	32.27
55%	71%	13.64	13.19	(3.41%)	(8.64)	(4.72)	2.38	3.95	16.18	22.59	16.84	12.99
81%	88%	7.46	9.07	17.82%	(4.89)	(3.61)	1.87	2.33	20.24	23.30	20.66	19.75
82%	92%	10.55	9.69	(8.87%)	(3.26)	(2.97)	2.80	2.52	28.51	28.32	12.90	10.73
81%	74%	11.42	8.99	(27.05%)	(5.18)	(5.09)	3.61	3.33	14.26	12.70	9.66	11.90
52%	55%	12.16	12.79	4.93%	(6.36)	6.24	6.26	9.43	16.11	16.89	22.94	5.53
58%	57%	15.98	16.33	2.14%	(6.55)	(5.26)	12.13	17.63	17.94	20.27	30.27	21.22
N/A	N/A	12.74	16.27	21.70%	(30.57)	(27.96)	5.46	6.33	11.84	14.14	27.49	19.52
52%	40%	16.54	12.77	(29.51%)	(7.11)	(7.29)	3.24	2.53	20.43	21.88	19.48	15.58
38%	15%	15.66	12.05	(29.96%)	(6.73)	(6.31)	5.78	4.35	-21.54	-17.62	15.51	17.03
0%	85%	9.80	14.88	34.16%	(8.94)	1.99	3.77	162.44	26.11	25.28	33.11	(121.28)
N/A	31%	7.28	8.72	16.45%	(7.24)	(6.07)	2.43	3.60	25.91	29.19	34.80	26.75
43%	38%	15.25	13.52	(12.78%)	(7.35)	(5.23)	5.60	4.03	20.89	19.30	18.36	18.13
5%	11%	13.57	16.10	15.71%	(17.96)	(14.18)	6.26	7.32	26.27	22.50	27.78	10.65
29%	28%	13.99	12.27	(14.02%)	(10.91)	(8.07)	9.47	8.66	25.23	25.64	44.97	30.87
89%	90%	10.89	16.51	34.03%	(3.55)	(5.33)	3.41	13.40	19.96	24.16	13.74	6.49
3%	4%	12.52	17.93	30.20%	(7.91)	(5.64)	2.18	5.89	27.70	33.95	37.72	24.55
86%	87%	8.21	11.01	25.42%	(2.67)	(4.48)	2.09	2.32	25.17	24.33	20.16	10.54
12%	14%	18.39	17.69	(3.93%)	(10.25)	(10.02)	4.70	5.21	36.05	32.31	22.54	23.46
30%	41%	17.75	18.23	2.63%	(5.16)	(4.17)	3.20	3.84	25.81	23.23	21.53	13.69
93%	93%	5.15	5.59	7.83%	(2.78)	(3.08)	2.43	3.09	24.12	24.36	21.73	16.58
32%	43%	13.13	15.60	15.81%	(5.03)	(2.53)	5.78	13.35	22.96	23.34	26.06	(1.62)
76%	87%	13.28	13.99	5.10%	(4.18)	(2.53)	2.94	5.52	25.69	26.06	12.42	9.96
61%	53%	13.47	12.27	(9.79%)	(5.92)	(4.93)	3.48	4.93	25.89	29.00	18.02	8.28
81%	82%	12.45	12.29	(1.31%)	(4.43)	(2.43)	11.47	12.25	26.49	29.68	3.83	(0.59)
83%	81%	7.33	8.30	11.65%	(5.76)	(4.12)	2.84	4.17	17.26	25.74	15.47	12.29
74%	74%	9.32	10.37	10.11%	(5.93)	(7.74)	3.58	4.86	24.56	26.58	14.85	10.09
100%	100%	8.31	8.65	3.91%	(1.16)	(1.04)	2.39	2.36	24.61	23.55	8.17	8.57
77%	78%	7.65	11.58	33.93%	(4.12)	(4.90)	2.50	2.56	21.26	24.13	16.56	17.72
98%	99%	4.49	3.35	(34.13%)	(0.75)	(1.90)	6.01	4.69	27.56	26.45	16.96	26.67
30%	45%	13.29	13.44	1.18%	(6.21)	(6.94)	3.65	4.17	27.70	26.14	25.84	29.21
90%	89%	4.44	3.49	(27.44%)	(4.90)	(5.02)	5.37	4.93	20.29	24.11	12.43	10.94
80%	84%	12.62	11.05	(14.19%)	(7.02)	(3.39)	3.73	2.54	20.11	17.51	14.37	8.89
36%	N/A	12.73	11.95	(6.53%)	(7.44)	(9.29)	14.71	13.08	29.13	22.25	22.38	9.93
59%	35%	12.84	INA	N/A	(4.32)	INA	6.48	INA	61.12	INA	19.52	INA
79%	85%	5.40	4.65	(15.99%)	(3.90)	(4.65)	2.36	2.00	18.93	19.46	15.19	12.38
34%	40%	19.11	23.87	19.94%	(5.83)	(4.87)	5.77	6.37	28.07	26.01	17.23	3.39
81%	94%	10.11	9.11	(10.94%)	(3.69)	(4.27)	3.85	4.94	18.47	23.32	11.92	1.59
13%	25%	6.52	9.11	28.46%	(23.99)	(18.66)	6.52	8.91	20.16	27.82	35.22	13.66
15%	5%	9.40	9.46	0.64%	(7.76)	(5.55)	2.37	9.78	25.21	23.10	44.65	30.85
5%	7%	INA	14.18	N/A	INA	(9.80)	INA	4.19	INA	32.25	17.00	19.90

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