

The Fiscal Pulse of Canada's Oil and Gas Industry

First Quarter 2015



ARC

financialcorp

energy capital partners

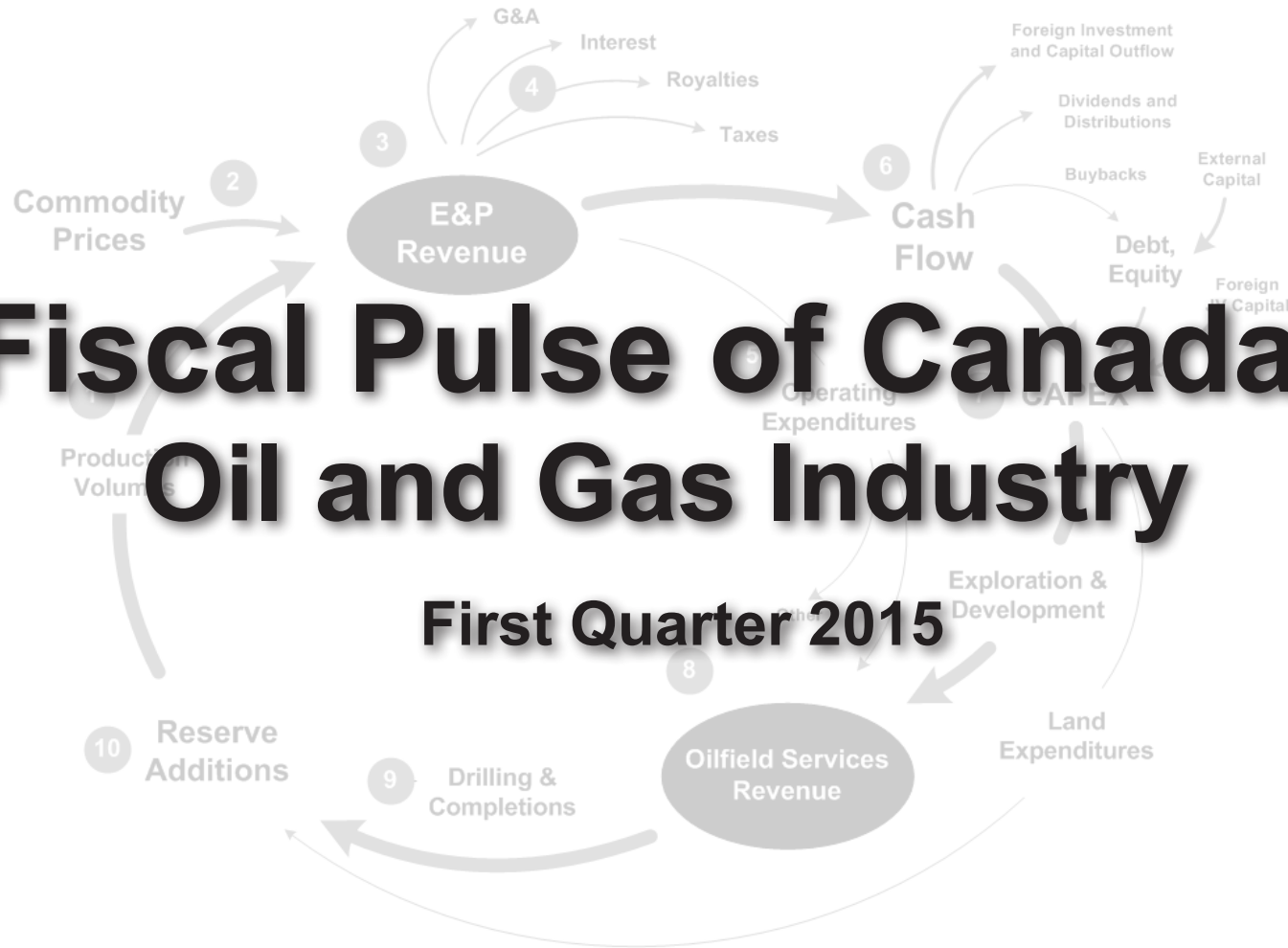
April 2015

Table of Contents

Acknowledgements and Disclaimer	5	Cash Flow, Capital Spending and Financings.	20
Executive Summary	6	2015 Capital Spending Cuts	21
The Fiscal Pulse of the Economy	8	Canadian Drilling Activity.	22
The Fiscal Pulse by the Numbers	9	Major Project Delays and Cancellations	23
Canadian Hydrocarbon Production	10	The Fiscal Pulse with Varying Oil and Gas Prices	24
Commodity Prices	12	Sensitivity of 2015 Metrics to Prices	25
Canadian Upstream Industry Revenue	16	Canadian Industry Metrics Compared to 2014	26
Royalties and Land Bonuses	18	Industry Income Statement	28

Fiscal Pulse of Canada's Oil and Gas Industry

First Quarter 2015



About ARC Financial Corp. and the Authors

ARC Financial Corp.

ARC Financial Corp. (“ARC”) is an energy-focused private equity firm based in Calgary, Alberta Canada, with \$4.8 billion of capital across eight ARC Energy Funds. Leveraging off the experience, expertise, and the industry relationships of more than 25 investment professionals, ARC invests in upstream oil and gas, oilfield services and energy infrastructure.

ARC offers world-class research, analysis and assessment established through technical and operating industry experience. Through this deep domain knowledge and energy capital markets expertise, ARC plays a valuable role in the companies we finance and in the Canadian oil and gas industry as a whole. Employing best practices in corporate governance and business processes, ARC builds successful companies through transactional advice, deal sourcing and evaluation support.

Contact

ARC Financial Corp.
4300, 400 - 3 Avenue SW
Calgary, Alberta
CANADA T2P 4H2

Phone: (403) 292-0680

www.arcfinancial.com



The Authors

Peter Tertzakian, Chief Energy Economist and Managing Director, ARC Financial Corp.

Peter Tertzakian is the Chief Energy Economist and a Managing Director of ARC Financial Corp. Best selling author of *A Thousand Barrels A Second* (McGraw-Hill, 2006) and *The End of Energy Obesity* (John Wiley & Sons, 2009), Peter is responsible for ARC's strategic investment research and oversees the publication of the *ARC Energy Charts*, a weekly journal of energy trends. He is often quoted in high-profile media outlets. Peter's 34 years of experience in geophysics, economics and finance have established him as an internationally recognized expert in energy matters. A highly sought after guest speaker, Peter routinely advises corporate leaders, investors, government officials and has lectured at many leading universities and conferences around the world.

Kara Jakeman, Manager, Energy Research, ARC Financial Corp.

Kara Jakeman is the Manager of Energy Research at ARC Financial Corp. where she is responsible for analyzing energy commodity prices, business cycle timing, technological trends and capital markets. She has followed the upstream Canadian oil and gas industry for almost 20 years, with specialty in constructing and maintaining the economic models of capital flow underpinning this report. Kara joined ARC in 2002 after having spent more than five years researching energy equities in the investment banking business. She has a B.Comm in Finance from the University of Calgary, and holds a CFA charter.

Acknowledgements and Disclaimer

Author's Note

ARC Financial has been publishing economic data and analysis of the Canadian oil and gas industry for over 25 years. This summary report is an adjunct to ARC's weekly publication, the *ARC Energy Charts*. As well, the analysis contained within is a continuation of a less periodic series of industry reports published by ARC over the years.

The Authors wish to thank the many industry contributors to this ongoing effort of providing an objective characterization of the fiscal variables that make the Canadian oil and gas industry go around. In particular, thanks go to the partners of ARC Financial who support the effort, and specifically to Megan Lancashire, Marcus Rocque and Jackie Forrest who help assemble, edit and publish this material. Special thanks to staff at the Canadian Association of Petroleum Producers who help collect and provide raw data.

Peter Tertzakian

Kara Jakeman

Disclaimer

The content of this document is the property of ARC Financial Corp. ("ARC") and may not be reproduced, republished, posted, transmitted, distributed, copied, publicly displayed, modified or otherwise used in whole or in part without the express written consent of ARC.

Certain information contained herein constitutes forward-looking information and statements and financial outlooks (collectively, "forward looking statements") under the meaning of applicable securities laws. Forward looking statements include estimates, plans, expectations, opinions, forecasts, projections, guidance or other statements that are not statements of fact including but not limited to production levels, commodity prices, drilling activity, and capital expenditures. In some cases you can identify forward looking information by an "e" annotation next to the date. Although ARC believes that the assumptions underlying, and expectations reflected in, such forward looking statements are reasonable, it can give no assurance that such assumptions and expectations will prove to have been correct. Such statements involve known and unknown risks, uncertainties and other factors outside of ARC's control that may cause actual results to differ materially from those expressed in the forward looking statements.

Performance histories are not indicative of future performance.

This document is provided for informational purposes only and shall not constitute an offer to sell or the solicitation of an offer to buy securities. None of the information contained herein is intended to provide investment, financial, legal, accounting or tax advice and should not be relied upon in any regard.

In connection with the preparation of this information, ARC may have relied upon data provided by external parties. ARC does not audit or otherwise verify such data and disclaims any and all responsibility or liability

Executive Summary

The mettle of the Canadian oil and gas industry has been stressed on numerous occasions over its 155-year history. But the oil price war of 2015 ranks among the most challenging from many business dimensions. In this report we examine the financial impact of the sudden, \$50/B drop in world oil prices that has coincided with weak North American natural gas prices.

We have assessed the financial health of the industry through a model we call the *fiscal pulse*. Trends in product volumes, prices, costs, money flows, profitability and capital efficiencies have all been tracked and analyzed. Data comes from many sources, but dominantly from information published by the Canadian Association of Petroleum Producers (CAPP).

With the first quarter behind us, the highlights of our 2015 diagnosis are summarized below; details are to be found in the subsequent pages.

- **Cash flow at a 15-year low** - At \$90 billion, the expected upstream revenue for this year will mimic the depths of the Financial Crisis in 2009. But it's the industry's cash flow - how much money is left over after expenses - that will take the award for drama. Down a projected 68% from last year, only \$22 billion of cash flow is expected in 2015, less than it was in 2000 (*page 20*).
- **Weak revenue, weak royalties** - Royalties are mostly a function of production volume

and price. Blended oil and natural gas prices have been hammered down 40% in 2015.



There will be some offset over the period: Canadian oil and gas production is expected to rise 3%. Numbers that fall out of the formulae point to a big hole in provincial pockets this year: an expected drop of \$7 billion in total royalties relative to 2014 (*page 18*).

- **No earnings, no taxes** - Collectively, companies in the industry are on track to report a profit puncture through the bottom line. An overall net loss means that federal and provincial tax collectors, in theory, should not expect any big cheques from oil and gas companies in 2015. Profitability in peripheral businesses will also be impaired. The public purse could be short a few billion dollars.
- **Belt tightening, by two notches** - On a four-notch belt, the industry's capital investment is forecast to be down by two, almost 50%, or \$36 billion relative to 2014. That's why field activity is quiet and layoffs

are a weekly occurrence. Cash flow impairment suggests there should be even more tightening in spending, up to another notch. However some big oil sands projects are near completion. Money is still being spent on finishing up near-term projects like Imperial Oil's Kearl Oil Sands Project.

- **A falling axe on future oil sands projects** - Board of directors have been quick to slash budgets for 2015 by 25%-30%, but it's the delay and cancellation of long-term oil sands projects - those scheduled for later this decade and into next - that's more significant. Since oil prices started falling in the latter half of 2014, at least a dozen early-stage oil sands projects have been delayed or cancelled (*page 23*). That means slower growth of the heavier Alberta oils into the latter of half of this decade and into next.
- **Parking lots full of oilfield equipment** - The classic barometers of traditional (non-oil-sands) oilfield activity are the rig and well counts. Although process innovations are progressively diminishing the relevance of these measures, sudden changes are still reflective of economic conditions. What's happening is sudden. Drilling activity is down 44% in the first quarter of 2015 compared to the same period last year. As in 2009, the 2014/15 winter drilling season was forfeited. The summer will be eerily quiet and the industry may drill as few as 5,300 wells in all of

Executive Summary

2015, half of last year's numbers (*page 22*).



- **Narrower oil price discounts** - Oil price discounts relative to global prices have been afflicting the US and Canadian industries since 2010, ever since rising production in North America began clogging up pipelines. In Canada, the widest light oil discounts were experienced in 2012, occasionally over \$30/B (*page 14*). Today, equivalent discounts have retreated to \$15/B, however the fiscal pain is still there: \$15/B on \$50/B is more painful than \$30/B on \$100/B, because operating costs have not fallen proportionately.

- **Lower costs** - There is a pewter lining in this downturn. Declining activity is freeing up labour and services. Producing companies are focusing hard on improving logistics and innovating for operational efficiencies. The result is a lowering of costs. Existing production is now costing approximately 10% less than before. Some wages are

reportedly down 20%. More operating cost reductions are likely. In some instances, services for finding and developing new reserves are being offered for 25% less than last year.

- **Investment defies gravity** - Despite the calamitous situation in the oil patch, investors are pouring money into the industry at almost the same record pace as in 2014 (*page 20*). Already in 2015, investors have put \$5 billion of debt and equity into the space. Part of the buy-low-sell-high investor psyche is the recognition that such dire, bottom-of-the-market industry conditions can't last. Another factor is the safe, politically-stable investment opportunity Canada offers. For now, companies are husbanding their newly raised debt and equity to weather the weak *fiscal pulse*. Over the course of the year we may see some of the first quarter proceeds loosen up for acquisitions or for a gradual return to drilling.

This year, 2015, is reminiscent of other price shock years, notably 1998 and 2009 in recent memory. If history is a guide to 2016, we can expect gradual price recovery going forward, though the present circumstances suggest volatility on the path back to viable economics. At time of writing, forward markets for oil and gas are indicating prices that are about 10% to 15% higher in 2016. If such prices materialize, the industry's *fiscal pulse* will beat with more strength, though not with full health.

The grids on pages 25 through 27 give an indication of the sensitivity of key fiscal metrics—Revenue, Cash Flow, CAPEX and Well Count—as a function of both oil and gas prices. At the moment, commodity prices are indicating the lowest case scenario. However, because the industry's production is 64% oily by volume, the metrics are more sensitive to oil price than natural gas. In other words, recovery of the industry as a whole is biased more to the behaviour of oil prices than to natural gas.

At the end of our report we have included an income statement for the industry. Consider this an accounting statement for a fictitious company called Canada Oil and Gas Limited, a financial consolidation of all the oil and gas companies operating across the country, from British Columbia to Newfoundland and Labrador.

The numbers expected for 2015 are weak; the industry is forecast to see its first accounting loss position since 1998, another indication of the severity of the current situation. However, as bad as the aggregated numbers may seem, not all companies are performing poorly. In fact, those with strong balance sheets, superior low-cost assets, hedged production, and an innovative mindset are finding opportunity in the turmoil.

As we've seen before, this 155-year-old industry has always come out stronger after every downturn.

The Fiscal Pulse of the Upstream Oil and Gas Economy

On the following page we show a simple model diagram of how capital flows cyclically into and out of the Canadian upstream oil and gas economy, or as we term it the *fiscal pulse*. The industry is segmented into two broad sectors: Exploration and Production (E&P) and Oilfield Services. Each sector is depicted as a black oval.

E&P companies determine where to explore for oil and gas. Oilfield service companies are contracted to do the physical prospecting, drilling and delivery to market. Once additional reserves are found, E&P companies manage the production and sale of their oil and gas from their newly added reserves. Capital flows through both the E&P and the Oilfield Service sectors, which work closely together to create value for stakeholders.

The mechanics of the accompanying capital flow diagrams represent an accounting of the dollars and product volumes flowing through the industry. *Production Volumes* ❶ are multiplied by *Commodity Prices* ❷ to yield gross *E&P Revenue* ❸. *Interest* and *General and Administrative (G&A)* expenses are deducted, as are *Royalties* and *Taxes* ❹. Royalties are mostly dependent on commodity prices, but well type, depth and production output are also major determinants. Taxes are mostly a function of net income, owed both federally and provincially.

Managing and operating the base of production is labour, capital and energy intensive. *Operating Expenditures* ❺ have fixed and variable

components that adapt to commodity prices.

A large portion of *Cash Flow* ❻ is typically allocated to reinvestment; this is the *CAPEX* pool ❼. To leverage capital and gain cycle momentum, the *CAPEX* pool is supplemented with *Debt and Equity*. During periods of healthy cash flow, debt may be paid down and equity repurchased through *Buybacks*. *Dividends and Distributions*, and changes to working capital account for any remaining cash flow.

A certain amount of capital also ‘leaks’ out of the system as multi-national companies seek to repatriate their Canadian-earned cash flow or reinvest it abroad. This dynamic is difficult to capture and is represented in *Foreign Investment and Capital Outflow*. Counterbalancing leakage, *Foreign Joint Venture (JV) Capital* is another stream of funding that emerged in 2009, primarily from Asian investors.

Capital in the domestic CAPEX pool can be rationed a number of different ways: oil versus natural gas drilling, exploration versus development, oil and liquids versus oil sands, and so on.

In our chart, we broadly segment capital spending into two: *Exploration and Development* and *Land*.

Oilfield Services Revenue ❽ is largely dependent on domestic E&P spending, over 50% of which is typically allocated to drilling. Note that not all E&P capital spending goes to the oilfield service sector. There are many *Other*

peripheral expenditures for goods and services that percolate into the Canadian economy.

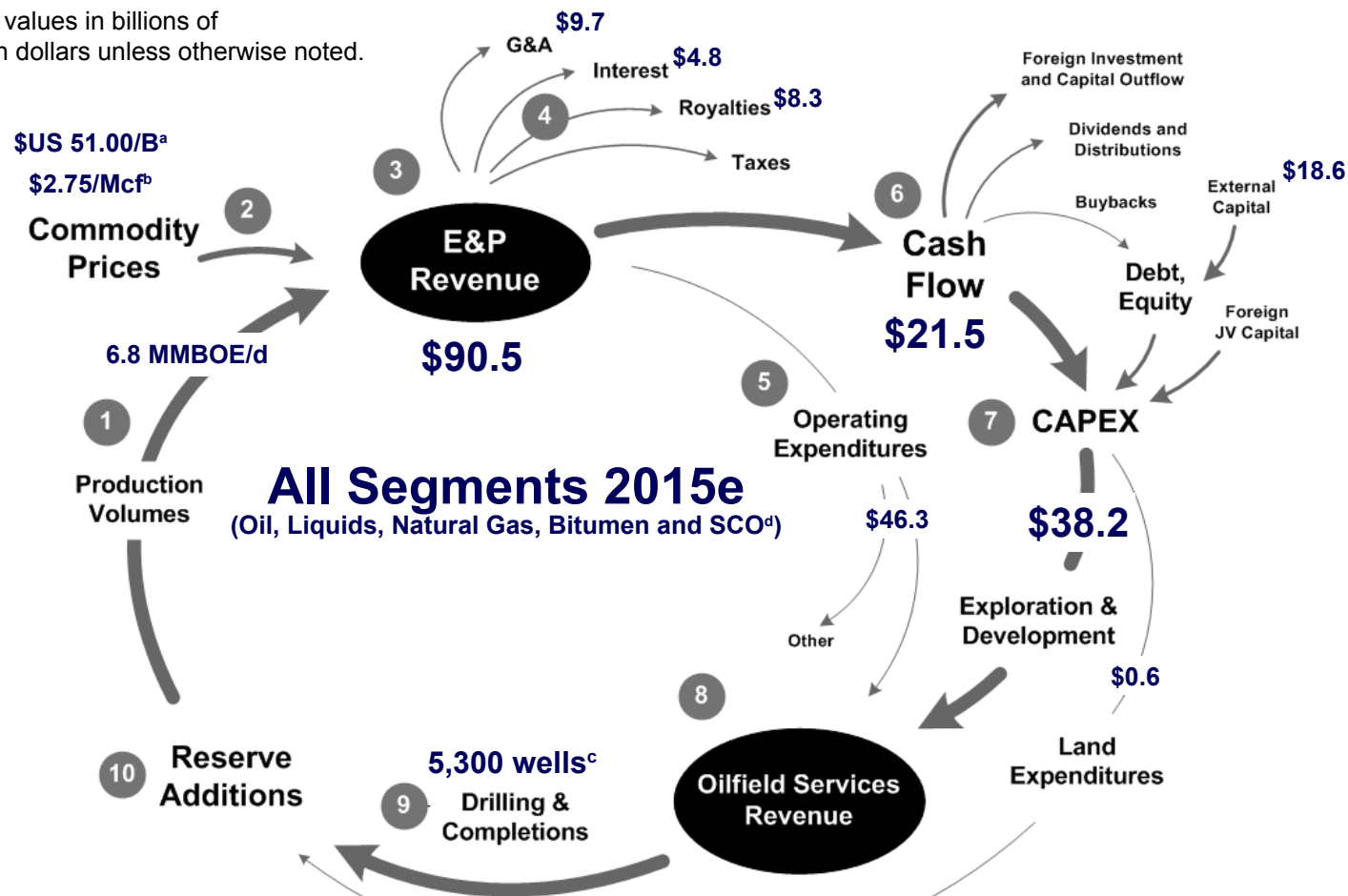
Drilling and Completions ❾ yield oil and gas *Reserve Additions* ❿, which are often placed into production as soon as is technically and financially feasible. Productive capacity – the ability of a reservoir to produce hydrocarbons – declines over time, similar to diminishing product inventory. To replenish depleting reserves, the entire cycle of capital flow starts over again.

How well Canada’s oil and gas capital cycle performs in the face of many internal and external forces determines profitability of the industry. Delivering stable, long-term financial returns has always been challenging amidst a backdrop of volatile commodity prices, competitive challenges, constrained labour pools, geologic risk, and cost considerations. Offsetting negative forces, oilfield technology and innovation has been a strong positive across the industry.

Availability of high quality statistics at points around our diagram enable us to model capital flows with a reasonable degree of confidence; enough to determine the magnitude and direction of the most important economic trends and financial measures.

The Fiscal Pulse by the Numbers

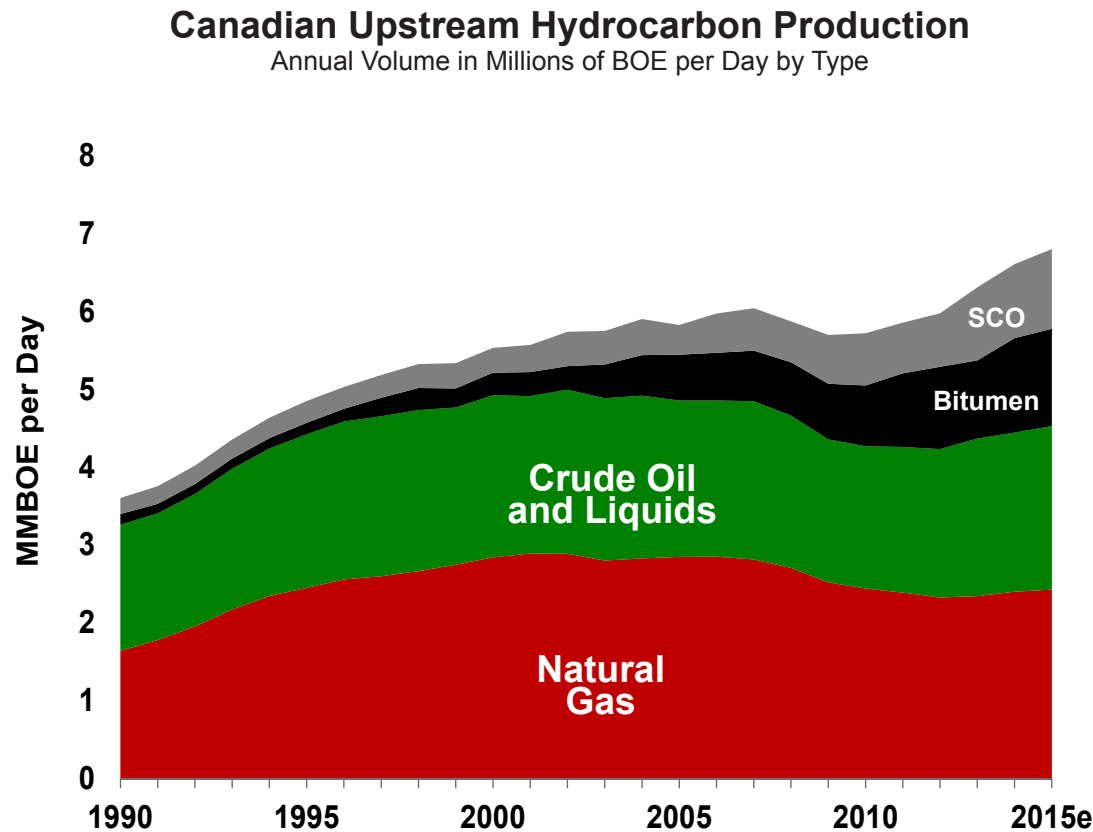
All dollar values in billions of Canadian dollars unless otherwise noted.



^a West Texas Intermediate
^b AECO Hub
^c Wells drilled (rig-released)
^d Synthetic crude oil

Source: ARC Financial Corp.

Canadian Hydrocarbon Production



Source: CAPP, ARC Financial Corp.

Canadian upstream oil and gas production will continue to grow despite low prices in 2015

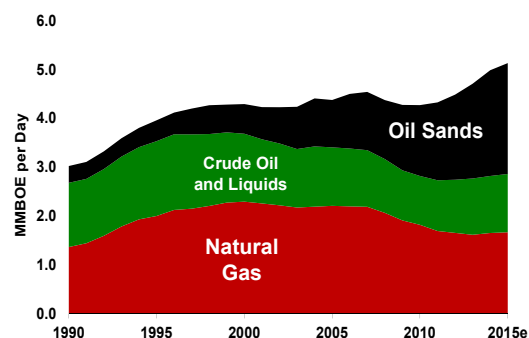
The first thing that is noticeable about Canada's hydrocarbon production is that overall output fell appreciably, by about 6% from 2007 to 2009. In fact, the production rollover that started in 2008 was the first major dip since the energy crisis in the early 1970s. Since then, volume growth has returned mostly on the shoulders of increasing oil sands output but also due to new technology such as hydraulic fracturing unlocking new resources of light tight oil (LTO) and shale gas.

Another observation that heralds big change in the industry: a shifting product mix. From 1995 to 2005, natural gas represented about 50% of the country's hydrocarbon production. Natural gas production began to rise in 2013, reversing a six year decline that began in 2006. Despite the continued growth profile, natural gas is expected to compose only 36% of the mix in 2015.

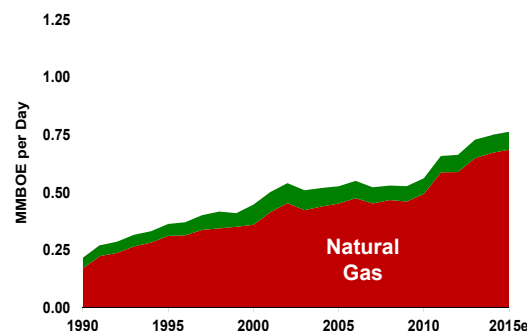
For now, notwithstanding future consequences of the recent oil price drop, the Canadian upstream oil and gas business continues to become progressively "oilier." By 2015, oil and liquids *plus* oil sands are expected to contribute 64%. Within the oil sands, bitumen will constitute an increasing fraction, Synthetic Crude Oil (SCO) less, due to challenging upgrading economics.

Canada's Hydrocarbon Production by Province

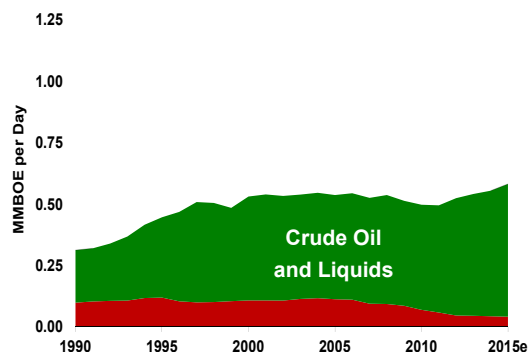
Alberta
Annual Volume in MMBOE per Day by Type



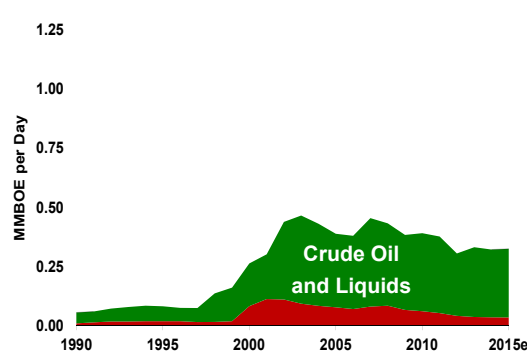
British Columbia
Annual Volume in MMBOE per Day by Type



Saskatchewan
Annual Volume in MMBOE per Day by Type



Rest of Canada
Annual Volume in MMBOE per Day by Type



Source: CAPP, ARC Financial Corp.
Note: Vertical scale difference.

Alberta remains the dominant hydrocarbon producer representing 75% of the country's output. Growth has been dominated by the oil sands segment.

Since about 2009, the industry launched into British Columbia's Montney and Horn River resource plays, and positioned them for expansion. Ongoing investment into these regions is expected to ramp up growth. BC is prone to natural gas, so its revenue, royalty and tax potential will be muted until higher production rates can be realized through the construction of prospective liquefied natural gas (LNG) export facilities, sometime in the next 10 years.

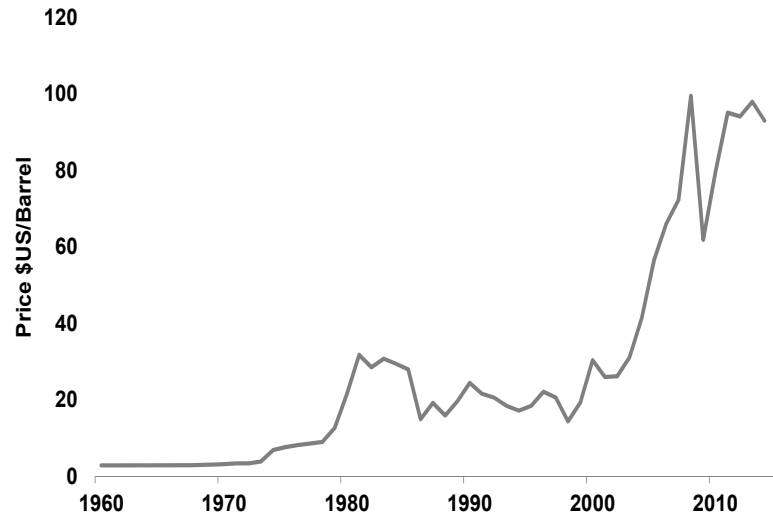
Saskatchewan is oil-weighted with a potentially understated upside in resource plays like the Viking. Growth of its oil output will depend on the timing and magnitude of oil price recovery. LTO plays in Manitoba and the Territories (included in Rest of Canada) also have room to grow, but are also contingent on future oil prices.

Production from the Rest of Canada mostly comes from Atlantic Canada. Newfoundland produces most of the oil, which is in decline, though some offset is expected in 2017, when Hebron comes on-line. Nova Scotia composes the bulk of non-WCSB gas production.

Commodity Prices

Historical WTI Crude Oil Price

Annual Average; 1960 to 2014



Source: EIA, Bloomberg, ARC Financial Corp.
Note: 1960-1982 US average; 1983-2014 WTI

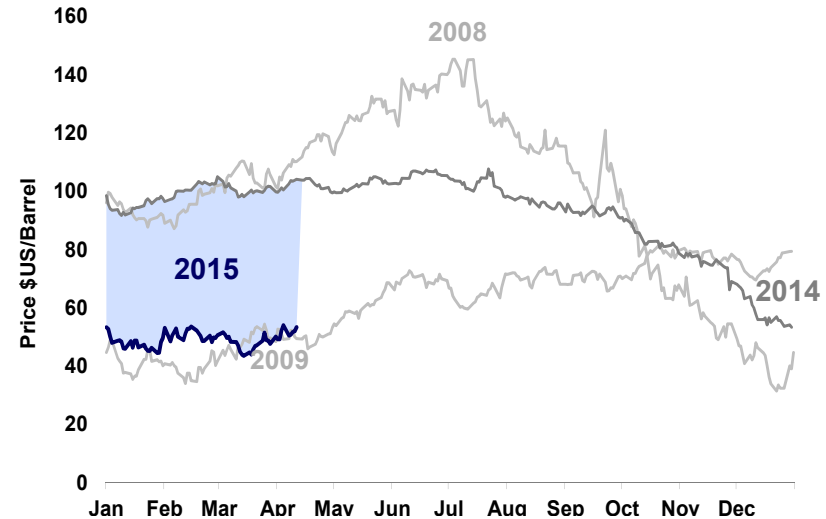
Oil prices tend to be volatile and are influenced by many factors such as the global economy, currency fluctuations, inventory levels, supply and demand trends, and geopolitical forces.

West Texas Intermediate (WTI), priced at Cushing, Oklahoma, is the benchmark grade for North American oils. This chart shows the average price for each year going back to 1960. The rapid rise to \$US 100 in 2008 was punctuated by the Financial Crisis in 2009. A rapid recovery brought prices back to a relatively stable, average price level of \$US 95 up to 2014.

Market indicators at the end of Q1, 2015 were suggesting an annual average this year in the mid-\$US 50 range.

Near-Term WTI Crude Oil Price

Select Calendar Years



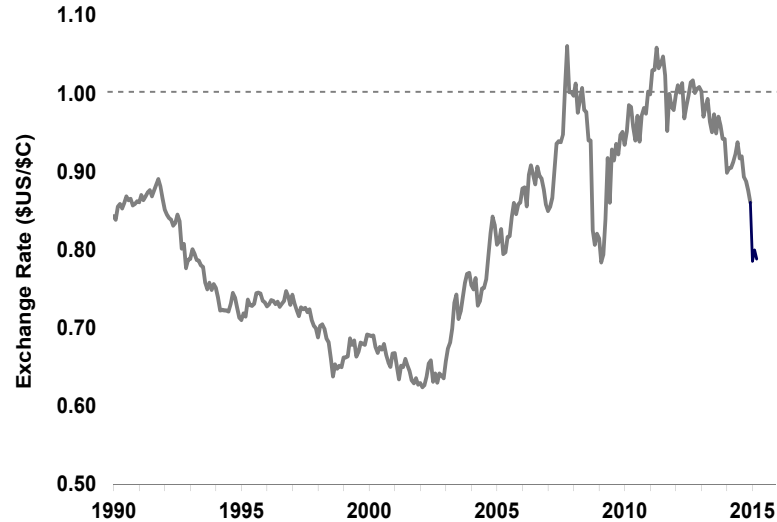
Source: Bloomberg, ARC Financial Corp.

It's no secret that oil prices have fallen precipitously since the summer of 2014. After four years of trading above \$US 100/B, market forces cut the price of a barrel of WTI crude by half. The first quarter of 2015 has seen some stabilization between \$US 40 and \$US 50/B; prices that are not that different than immediately after the Financial Crisis in 2009.

The blue shaded area shows the daily price gap between 2015 and 2014. Price changes directly influence the revenue of oil producers, their cash flow, and their ability to access capital markets. Ultimately, commodity price is the dominant factor influencing a company's propensity to invest back into maintaining (and growing) its production.

Commodity Prices

Canadian Dollar Currency Exchange
Relative to the US Dollar

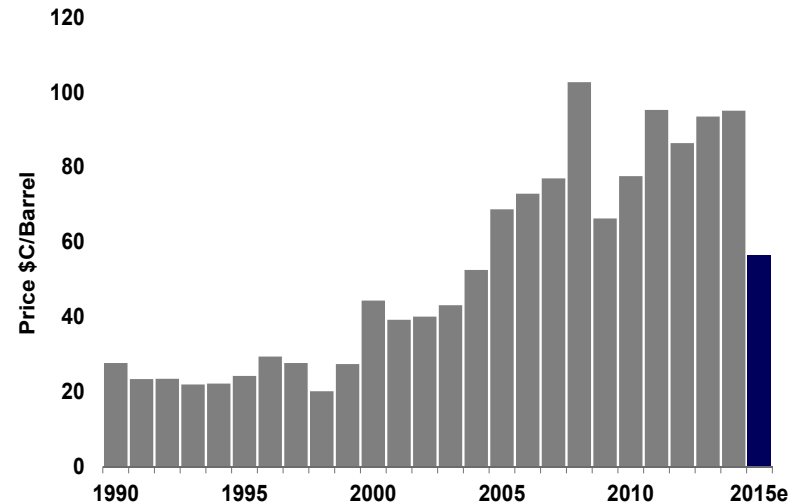


Source: Bloomberg, ARC Financial Corp.

Back in the early 2000s, some economists were projecting a fifty-cent Canadian dollar as the Loonie skied down a 10-year slope. However by 2003, the commodities boom favoured countries endowed with natural resources, hence the ascent of the Canadian dollar above US parity. Post 2011, the currency's erosion was a consequence of a retreating commodity boom and a strengthening of the US economy after the Financial Crisis.

Oil and gas are priced in US dollars, therefore the 15% drop in the Canadian dollar since the highs of last summer has helped to partially shield Canadian producers from the global oil price drop. Currency markets were suggesting a 78 cent Canadian dollar at time of writing.

Edmonton Light Crude Oil Price
Annual Average; 1990 to 2015e



Source: Bloomberg, ARC Financial Corp.

Edmonton Light is the benchmark Canadian light sweet crude oil price that has similar quality characteristic to WTI. Because of the close proximity to the US market, the price of Edmonton Light has historically closely shadowed that of WTI.

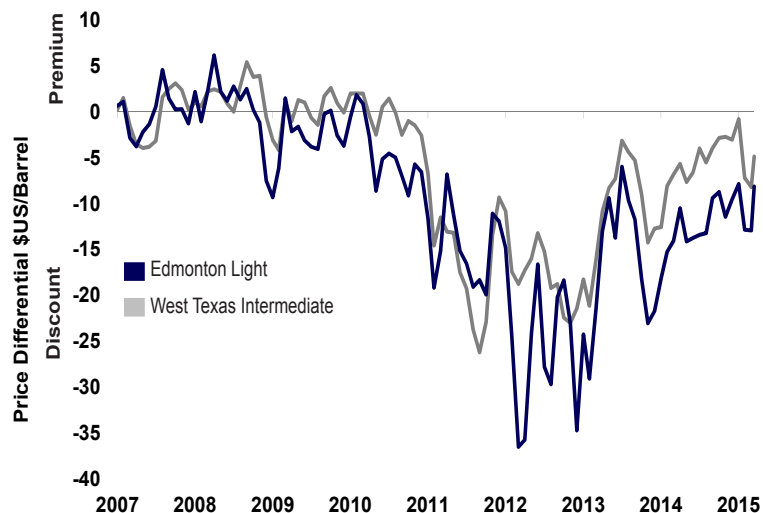
Oil supply growth coupled with a lag in infrastructure expansion created transportation bottlenecks resulting in significant price discounts to WTI and international prices beginning in 2010 (*page 14*).

Market indicators for Edmonton Light oil at the end of Q1, 2015 were suggesting an annual average this year in the \$55 to \$60 range.

Commodity Prices

North American Light Oil Differentials

Relative to the World Oil Price (Brent)



Source: Bloomberg, ARC Financial Corp.

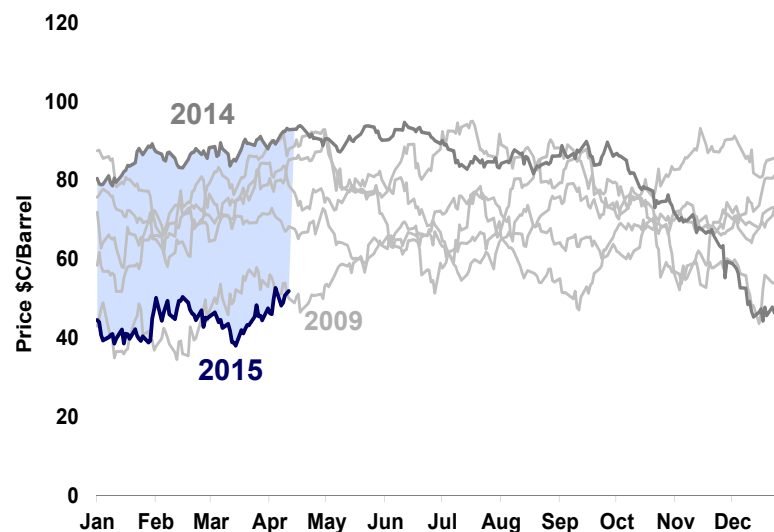
Up until early 2010, WTI and Edmonton Light oil prices were trading tightly with international prices. In other words, as the chart above shows, the price differential to Brent of these two grades was close to zero.

Post 2010, production growth in both the US and Canada exceeded the capacity of continental infrastructure to transport and refine the oils. US legal barriers also constrained the flow of oil from the field to global markets. As such, domestic prices began to diverge relative to Brent.

Since 2013, light oil price discounts to Brent have narrowed in absolute dollars. But on a percentage-to-price basis they are still wide. Today's \$15 discount on \$50 per barrel is more painful than \$30 on \$100.

Canadian Heavy Oil Price

Western Canadian Select (WCS); Select Calendar Years



Source: Bloomberg, ARC Financial Corp.

When light oil prices like Brent, WTI and Edmonton Light fall, the impact trickles down to all grades. That's why Canadian heavy oil prices have fallen in sympathy with the lighter grades.

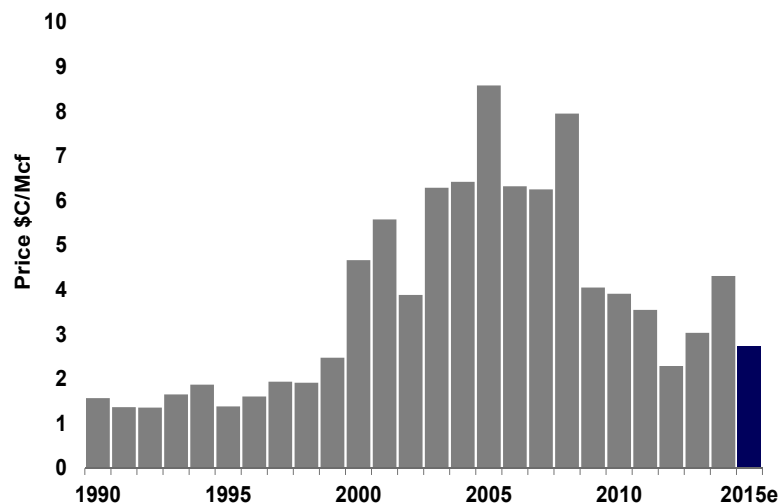
Over the past year Canadian heavy oils, as benchmarked by the Western Canadian Select (WCS) blend, have strengthened in price relative to the lighter oils due to extra demand for heavies from US Gulf Coast refineries. Nevertheless, the 50% drop in light oil over the past nine months has collapsed the whole oil price complex, including the heavier grades.

Market indicators at the end of Q1, 2015, were suggesting an annual WCS price average around \$50/B for this year.

Commodity Prices

Long-Term Alberta Natural Gas Prices

Annual Average; 1990 to 2015e



Source: Government of Alberta, Bloomberg, ARC Financial Corp.

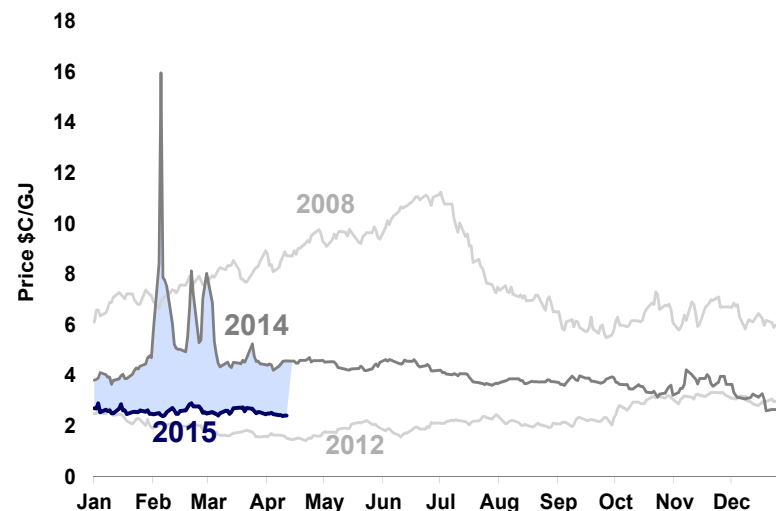
In the absence of regional supply and demand imbalances, Canadian natural gas prices traded at the AECO hub in Alberta are closely correlated to the US Henry Hub benchmark, after adjusting for currency exchange and pipeline transportation costs.

Natural gas prices peaked in 2005. The shale gas revolution created a supply surge that depressed prices starting in 2008. Unlike oil, North American natural gas prices did not rebound after the Financial Crisis. Prices were relatively robust last year due to cold weather. A relentless rise in northeast US production has brought prices down again in 2015.

This report assumes an average AECO price of \$2.75/Mcf for 2015.

Near-Term Alberta Natural Gas Prices

AECO; Select Calendar Years



Source: Bloomberg, ARC Financial Corp.

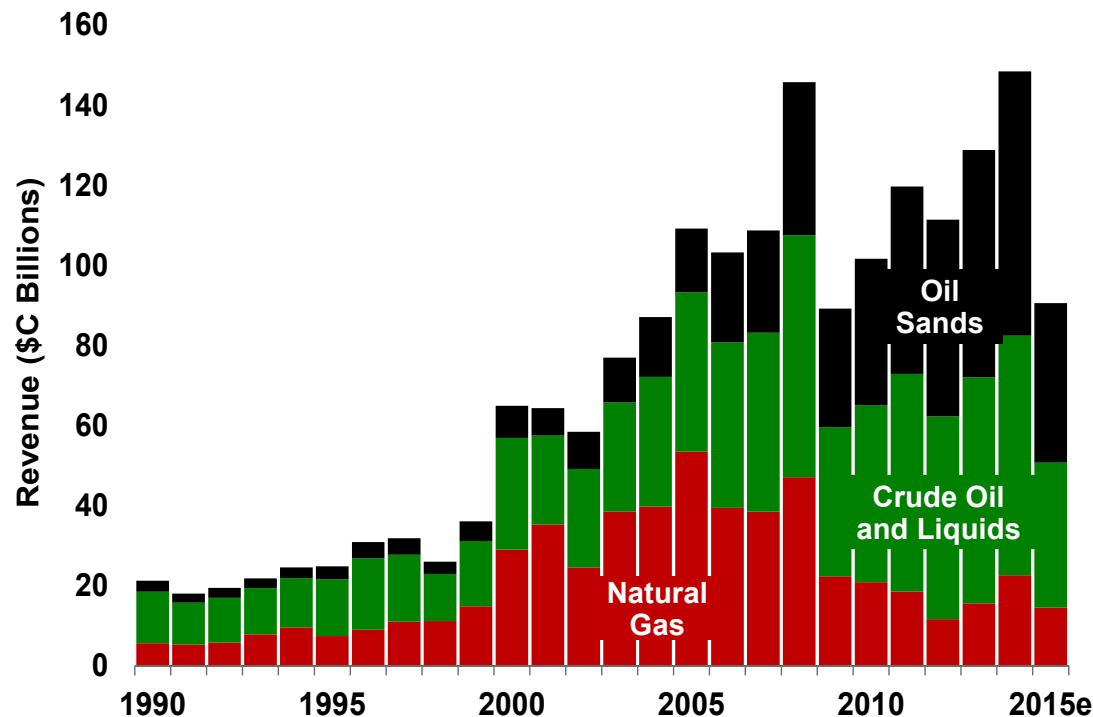
Price spikes during the winter of 2014 were responsible for a relatively strong year, at AECO. However, rapidly growing output from US shale plays, notably the Marcellus in Pennsylvania, was responsible for price erosion in the latter half of the year. Even a cold winter in the US North-east this year was unable to lift stubbornly low natural gas prices.

The decline in continental natural gas prices in the latter half of 2014, stretching into 2015, mimics a similar pattern of weakness to oil. Simultaneously weak prices for both commodities has hardened the impact on the industry. On many measures, this dual oil-gas price hit is why the industry's *fiscal pulse* right now is the weakest it's been since 1998.

Canadian Upstream Industry Revenue

Canadian Upstream Hydrocarbon Revenue

Annual Dollar Amount by Product Type



Source: CAPP, ARC Financial Corp.

Canadian upstream revenues have evolved to be mostly dependent on oil prices.

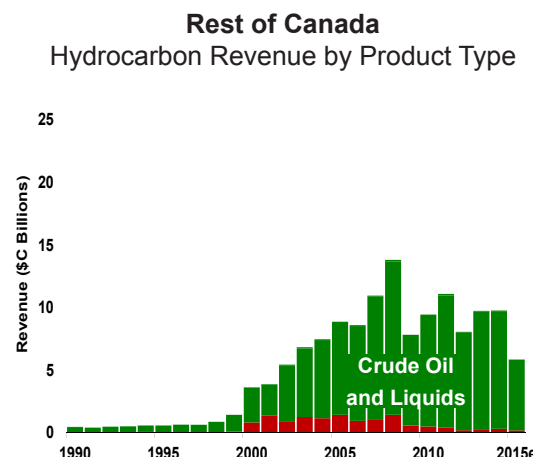
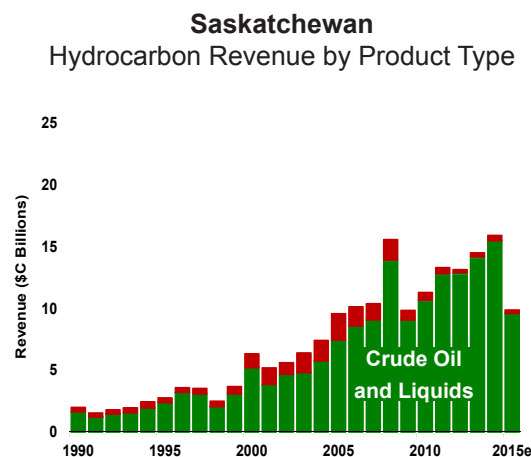
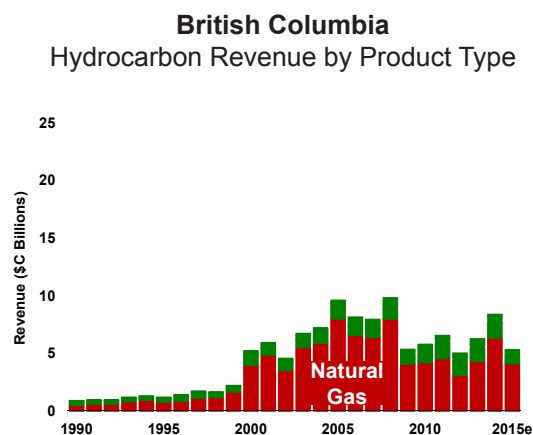
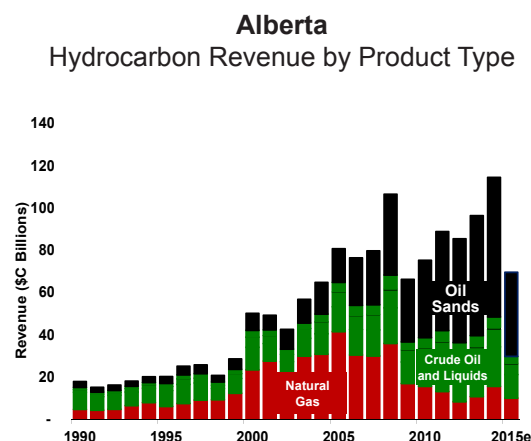
Oil and gas companies produce many different hydrocarbon products of varying type and quality. Eight different product classifications are used to estimate the aggregate upstream revenue: light and medium oil, heavy oil, bitumen, synthetic crude oil (SCO), natural gas liquids (NGLs), pentanes, condensates and natural gas. To derive this chart, each commodity's production volume is multiplied by the average annual price that was, or is expected to be realized by all producers.

The sharp rise in commodity prices beginning in 2000 catapulted upstream revenue to over \$60 billion per year – over twice what was being realized for most of the 1990s. By 2008, total revenue breached the \$140 billion mark.

Revenue collapsed to \$90 billion during the Financial Crisis in 2009. The circumstances in 2015 are different, but the year-over-year revenue fall is almost the same. Relative revenue loss would be much worse if not for over 1.0 million barrels per day of oil production growth since 2009.

Canadian upstream revenues are dominantly dependent on oil prices. In 2000, oil-based revenues accounted for 50% of total revenues. Today, 15 years later, that number has increased to 84%.

Canadian Upstream Industry Revenue by Province



Source: CAPP, ARC Financial Corp.
Note: Vertical scale difference.

Industry revenue is dominantly generated in Alberta where three-quarters of 2015 product sales will originate.

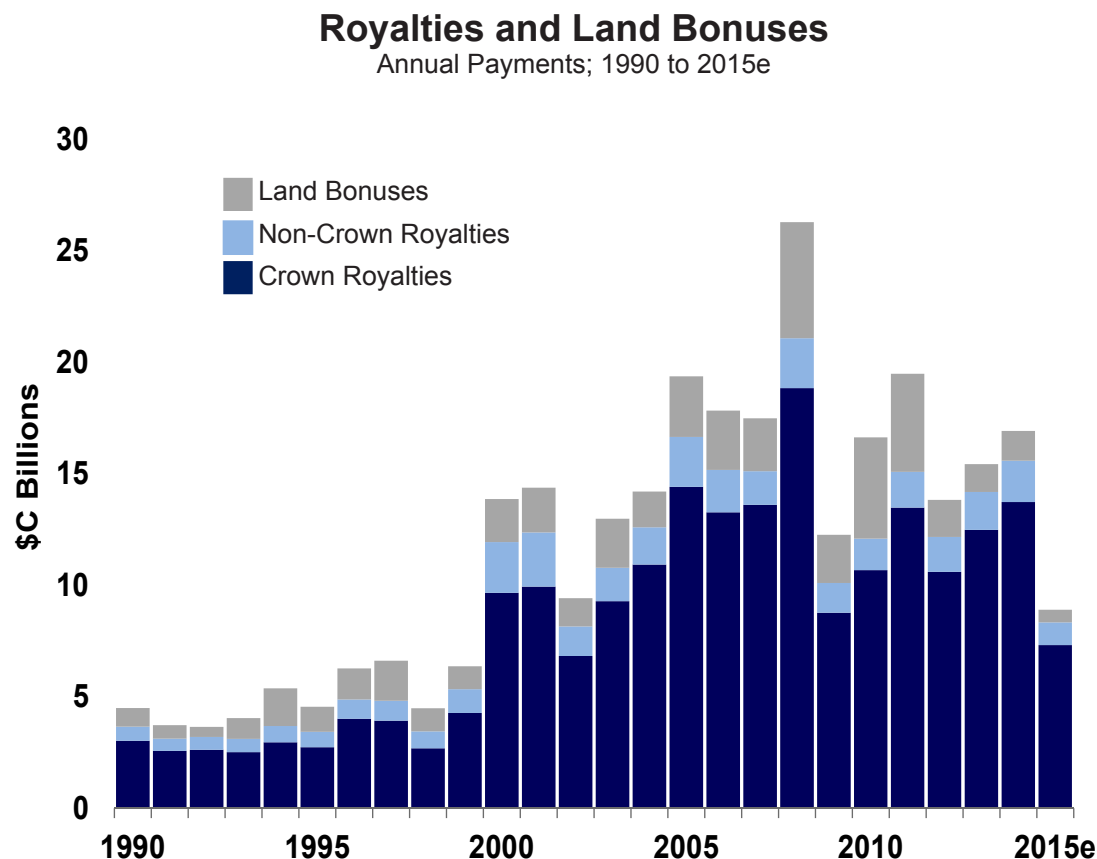
Going forward, hydrocarbon sales originating from Alberta and British Columbia are expected to grow the fastest. Most noticeable will continue to be Alberta, where still rising oil sands output and a stronger forward price curve will combine to grow the top line.

Revenue growth in British Columbia will piggyback on rising natural gas production in anticipation of future LNG exports, and a gas price forward curve that is mildly trending upward.

Saskatchewan will derive the overwhelming majority of its hydrocarbon revenue from crude oil. Prolific exploration and development of tight oil plays like the Viking may yield higher-than-expected production volumes. However, the province's revenue for this year and next will mostly be a function of price.

In the rest of Canada, oil revenue from Newfoundland is expected to increase moderately into 2016 with price improvement somewhat offset by production declines. Natural gas revenue from offshore Nova Scotia will contribute relatively minimal dollars.

Royalties and Land Bonuses



Source: CAPP, Statistics Canada, ARC Financial Corp.

Royalties are expected to be down to \$8.3 billion in 2015, the lowest level since 2002.

Land bonuses are thinning out to levels not seen since the early 1990s.

Provincial government royalties are mostly a function of commodity price and volume produced. As such, there is a strong correlation between royalties and oil and gas revenue. Land bonuses are indicative of the industry's appetite to lease more prospective acreage from the provinces.

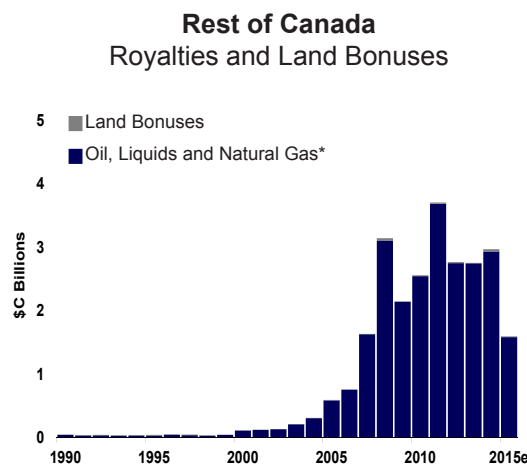
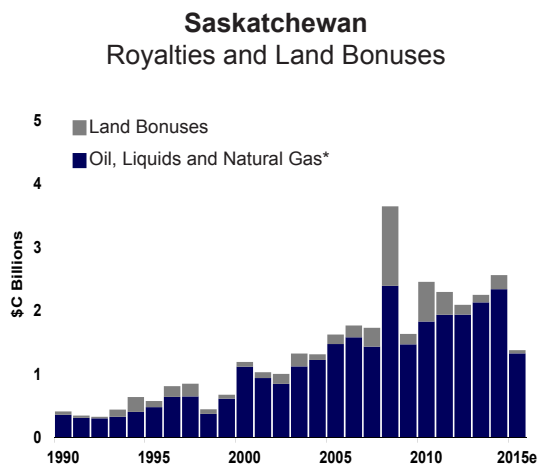
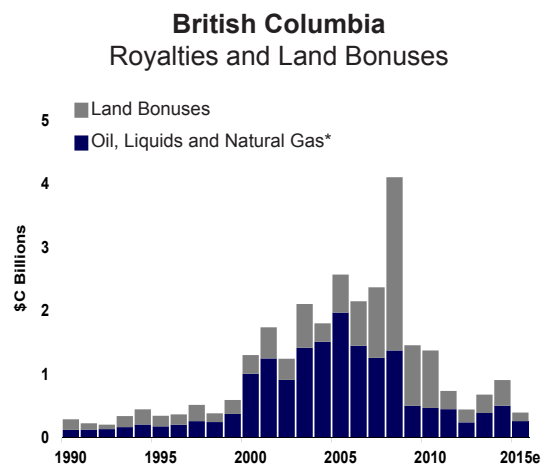
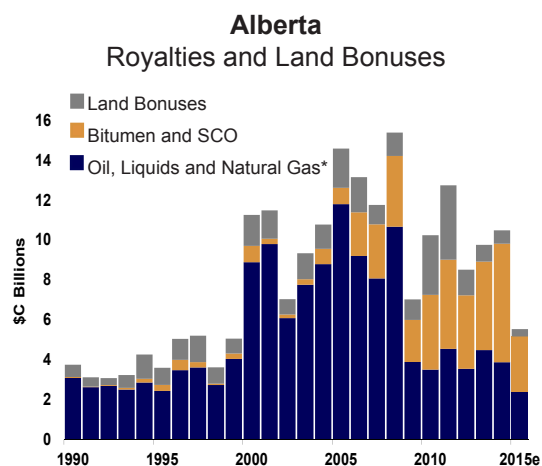
Like most other indicators, the high watermark for royalties and bonuses was in 2008, when over \$25 billion was paid by the industry.

In general, royalty rates slide with commodity prices. Lower rates accompany lower prices and vice versa.

Across all oil and gas producing provinces, total royalties collected are forecast to be down 47% or \$7.3 billion. At an expected \$8.3 billion, the take will be below what was collected during the Financial Crisis, and the lowest level since 2002.

Land bonuses are expected to be very thin in 2015, only \$567 million - a level not seen since the early 1990s. Part of this low level reflects the downturn, but a bigger factor is that larger companies have accumulated plenty of prospective acreage that has yet to be exploited with new horizontal drilling and hydraulic fracturing technologies. Well capitalized early-stage companies are still buyers of land, but in a less competitive market.

Royalties and Land Bonuses by Province



Source: CAPP, ARC Financial Corp.

Note: Vertical scale difference

*Includes crown and non-crown royalties

Alberta's take from royalties and land bonuses peaked at \$15.4 billion in 2008. Starting around 2010, the drop in natural gas royalties was offset with growing oil sands production and rebounding oil prices. But in 2015 there won't be any more offsets. In absolute dollars, Alberta will experience the most dramatic drop of all provinces, about \$5 billion.

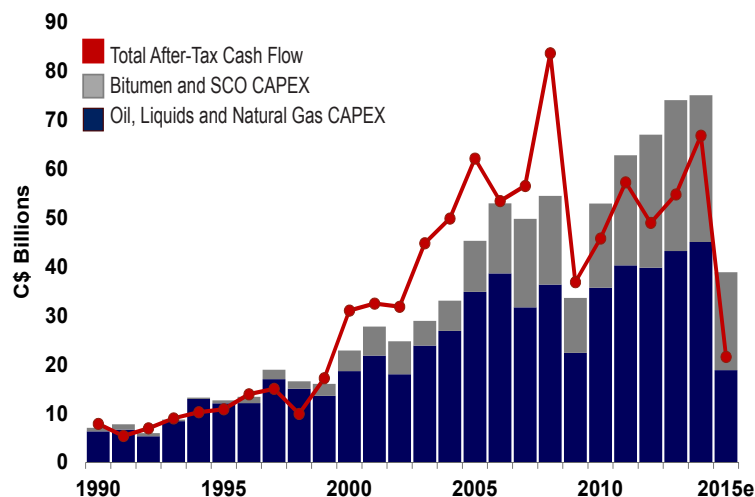
British Columbia experienced a royalty boom between 2000 and 2008, but quickly deflated due to depressed natural gas prices. The shale gas revolution drove a surge in land accumulation, hence bonuses, in the latter half of the last decade. Today, natural gas focused companies are well positioned in British Columbia with their land inventories and are now focused on drilling and development. Consequently, the decline in both royalties and land bonuses is most acute in British Columbia.

Oil-biased Saskatchewan has seen its royalties rise over the past 20 years, in tandem with output growth and price appreciation. But like Alberta, the recent oil price downturn will cut the provincial take in half. The same will be true for Newfoundland and Labrador.

Cash Flow, Capital Spending and Financings

Cash Flow *versus* Capital Expenditures

CAPEX Stacked by Industry Segment

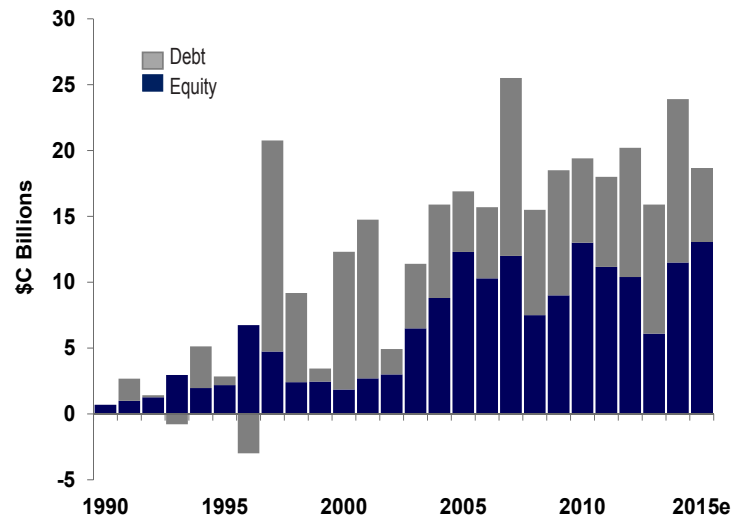


Source: CAPP, ARC Financial Corp.

Between 2000 to 2009, cash ‘leaked’ out of the oil and gas economy (i.e. the industry did not invest all of its cash flow back into the business). Constrained investment opportunity in ‘mature’ oil and gas fields was a primary cause. Large oil sands projects and conventional oilfield innovation has led to a major expansion of opportunity that has attracted capital above cash flow. Since 2010 the industry has been reinvesting all of its cashflow, plus additional capital raised from debt and equity markets. Although revenue (*page 16*) in 2015 is expected to be as low as 2009, cash flow this year will be the lowest since 1999. Upon price recovery, we should expect to see cash flow and expenditures recover.

Canadian Oil and Gas Financings

Debt and Equity



Source: Sayer Energy Advisors, CanOils, ARC Financial Corp.

New resource plays in North America have an attractive risk-return profile relative to elsewhere in the world. The near record capital infusion into the Canadian oil and gas industry in 2014 of \$24.0 billion validates that sentiment, which was prevalent before the oil price fall.

Despite the seemingly dire *fiscal pulse* this year, debt and equity financings in Q1 2015 totaled approximately \$5.3 billion, which matches the early pace set in 2014, when commodity prices were much higher. This new capital is mostly for fortifying balance sheets, but may also be used for acquisitions and drilling. Financings for the rest of 2015 should continue to be robust especially if oil prices begin to show hints of recovery.

2015 Capital Spending Cuts

Capital Expenditure Cuts 2015 Over 2014 Oil and Gas Producers Outside the Oil Sands

Company		CAPEX (\$C MM)		YOY Change	
		2014	2015e	\$	%
Advantage Energy	18-Feb-15	237.0	160.0	-77.0	-32.5%
Apache Canada	21-Nov-14	600.0	400.0	-200.0	-33.3%
ARC Resources	8-Jan-15	975.0	750.0	-225.0	-23.1%
Athabasca Oil Sands	12-Mar-15	199.9	203.0	3.1	1.5%
Baytex Energy	2-Feb-15	700.0	112.5	-587.5	-83.9%
Bonterra Energy	30-Jan-15	140.0	58.0	-82.0	-58.6%
Bellatrix	29-Jan-15	740.0	200.0	-540.0	-73.0%
BlackPearl Resources	12-Jan-15	240.0	71.0	-169.0	-70.4%
Bonavista Energy	26-Feb-15	639.6	310.0	-329.6	-51.5%
Cdn Natural Res.	12-Jan-15	2,960.0	1,470.0	-1,490.0	-50.3%
Cenovus	28-Jan-15	870.0	235.0	-635.0	-73.0%
Cequence	21-Jan-15	120.0	88.0	-32.0	-26.7%
Chinook	19-Jan-15	79.0	45.0	-34.0	-43.0%
Crescent Point	6-Jan-15	2,000.0	1,450.0	-550.0	-27.5%
Crew Energy	6-Jan-15	305.0	185.0	-120.0	-39.3%
DeeThree Exploration	13-Jan-15	270.0	160.0	-110.0	-40.7%
Encana	25-Feb-15	1,104.0	475.0	-629.0	-57.0%
Enerplus	20-Feb-15	308.0	168.0	-140.0	-45.5%
Freehold Royalty Trust	5-Mar-15	33.7	25.0	-8.7	-25.8%
Husky Energy	12-Feb-15	3,200.0	1,900.0	-1,300.0	-40.6%
Kelt Exploration	20-Jan-15	266.0	152.0	-114.0	-42.9%
Legacy Oil and Gas	26-Mar-15	370.0	182.0	-188.0	-50.8%
Lightstream	6-Mar-15	472.0	110.0	-362.0	-76.7%
Northern Blizard	16-Mar-15	262.8	86.0	-176.8	-67.3%
Nuvista	19-Jan-15	315.0	280.0	-35.0	-11.1%
Painted Pony	4-Mar-15	270.5	104.0	-166.5	-61.6%
Paramount Resources	4-Mar-15	900.0	400.0	-500.0	-55.6%
Pengrowth	21-Jan-15	769.0	200.0	-569.0	-74.0%
PennWest	12-Mar-15	732.0	625.0	-107.0	-14.6%
Peyto Energy	11-Mar-15	690.0	600.0	-90.0	-13.0%
Raging River	9-Mar-15	278.6	175.0	-103.6	-37.2%
Rock Energy	20-Nov-14	118.9	25.0	-93.9	-79.0%
Tourmaline	15-Dec-14	1,563.6	1,200.0	-363.6	-23.3%
Whitecap	19-Mar-15	482.0	242.0	-240.0	-49.8%
Surge	8-Jan-15	136.0	44.0	-92.0	-67.6%
Trilogy Energy	16-Jan-15	430.4	100.0	-330.4	-76.8%
Twin Butte	1-Mar-15	140.0	120.0	-20.0	-14.3%
Vermilion Energy	8-Dec-14	337.0	210.0	-127.0	-37.7%
Sum of Released Budgets		24,254.9	13,320.5	-10,934.4	-45.1%

Source: Company Reports, ARC Financial Corp.

Capital Expenditure Cuts 2015 Over 2014 Producers Dominantly in the Oil Sands Region

Company		Oil Sands CAPEX (\$C MM)		YOY Change	
		2014	2015e	\$	%
Canadian Natural	12-Jan-15	4,275.0	3,485.0	-790.0	-18.5%
Cenovus	28-Jan-15	2,022.5	1,380.0	-642.5	-31.8%
Canadian Oil Sands	29-Jan-15	938.0	564.0	-374.0	-39.9%
Devon Energy	17-Feb-15	1,046.7	875.0	-171.7	-16.4%
Imperial Oil	4-Mar-15	5,650.0	4,000.0	-1,650.0	-29.2%
Husky Energy	12-Feb-15	600.0	200.0	-400.0	-66.7%
Athabasca Oil Sands	12-Mar-15	417.0	96.0	-321.0	-77.0%
Suncor Energy	13-Jan-15	3,845.0	4,050.0	205.0	5.3%
MEG Energy	5-Dec-14	1,200.0	305.0	-895.0	-74.6%
Sum of Released Budgets		19,994.2	14,955.0	-5,039.2	-25.2%

The Canadian oil and gas industry is divided into two distinct sectors: companies primarily operating in the oil sands, and those in conventional oil, liquids and natural gas. Capital expenditure cuts in 2015, relative to 2014, are considerably different in each of the two sectors. We have tabled a select group of publicly-traded Canadian oil and gas companies' 2015 budgets compared to 2014. Oil sands producers (above) have announced budget cuts of about 25% relative to last year, while those outside the region have taken a sharper, 45% knife to their proposed 2015 investment.

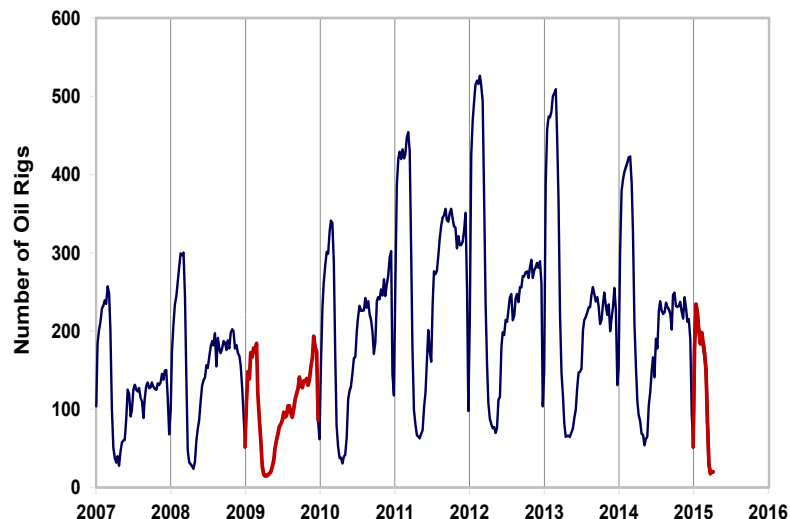
Several oil sands producers will continue to invest in their later-stage projects that are expected to start up over the next couple of years. That is a big reason why the oil sands budget cuts are not as severe as the conventional side of the business.

The 45% average cut that conventional oil and gas producers are indicating is less than the 58% that our *fiscal pulse* model predicts. The gap is explainable: Many of these public corporate announcements were made early in the year when the effect of sustained low oil prices was not fully visible. Notwithstanding a sudden rise in commodity prices, we expect to see more budget cut announcements through the year.

Canadian Drilling Activity

Canadian Oil Rig Count

Rigs Drilled per Year; 2007-2015



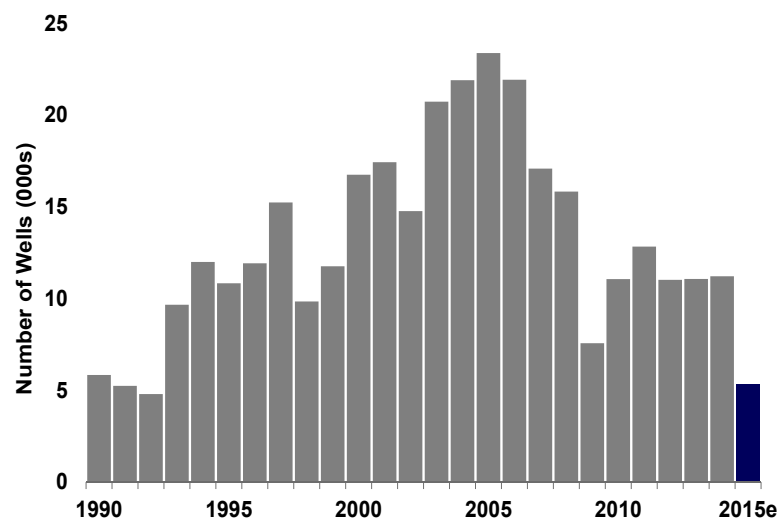
Source: Baker Hughes, ARC Financial Corp.

Oil drilling rig activity has “skipped a beat” this winter as a consequence of the capital budget cuts tabulated on the previous page. The customary winter drilling activity spike seen every January and February was noticeably absent in Q1 2015, much as it was in 2009, the last time such a severe drop off in cash flow and expenditures were recorded.

Based on the commodity price assumptions of this report and how much debt and equity is injected into the industry, we expect the number of wells drilled could be as low as 5,300 in 2015. This is a 50% drop in activity compared to the 11,222 wells drilled in 2014. Summer drilling will be eerily quiet.

Wells Drilled Per Year

Rig-Release Basis



Source: Nickles, ARC Financial Corp.

Based on Q1 2015 commodity prices, the well count this year is estimated be cut in half relative to 2014, and will be at a similar level to numbers recorded in the early 1990s. Yet the latter statistic is deceiving.

Process innovations are diminishing the clarity of both rig and well counts; for example, a lower rig count is not as correlated to well count as in the past. Although rig activity is down, the rigs that are working are drilling multiple, deeper and longer horizontal wells on pads. Nevertheless, sudden changes in either measure are still reflective of changing economic conditions.

Major Oil and Gas Project Delays and Cancellations

Announcement	Country	Project	Type	Cost \$US Bln (est.)
2012, August	Russia	Shtokman Energy	Natural gas & LNG	15.0
2013, March	Canada	Voyageur Upgrader	Oil sands	11.6
2013	Australia	Browse LNG	Onshore LNG	45.0
2013	USA	Mad Dog Platform Phase II	Offshore oil	10.0
2013	Norway	Bressay	Heavy oil	7.0
2013	USA	US Gulf Coast GTL	Gas-to-liquids	20.0
2014, January	Norway	Ormen Lange	Natural gas	n/a
2014	Canada	Joslyn	Oil sands	11.0
2014	Australia	Bonaparte LNG	Floating LNG	n/a
2014	Canada	Kitimat LNG	LNG	n/a
2014	Australia	Wheatstone	LNG	27.0
2014	Canada	Corner Project ¹	Oil sands	n/a
2014	Canada	Pacific Northwest LNG	LNG	11.4
2014	Canada	White Rose Extension	Offshore oil	n/a
2015, January	Norway	Johan Castberg	Offshore oil	15.0
2015	Norway	Snorre Field	Offshore oil	4.0
2015	Saudi Arabia	Ras Tanura Clean Fuels	Clean fuels	2.0
2015	Falkland Islands	Sea Lion Project	Offshore oil	2.0
2015	USA	Lavaca Bay LNG	Floating LNG	2.5
2015	Indonesia	Abadi Project	Floating LNG	n/a
2015	Canada	MacKay River 2	Oil sands	n/a
2015	Mexico	Round One Bidding	Unconventional oil	n/a
2015	USA	Lake Charles, LA, GTL	Gas-to-liquids	14.0
2015	Canada	Sunrise 2A Expansion	Oil sands	1.6
2015	Canada	Pierre River Mine	Oil sands	n/a
2015	Canada	Carmon Creek Phase 3 & 4	Oil sands	n/a
2015	Canada	Germain	Oil sands	n/a
2015	North Sea	Stella Field	Offshore oil	n/a
2015	North Sea	Tommeliten Alpha	Offshore gas	2.1
2015	USA	Lake Charles LNG Export	LNG	9.6
2015	Angola	Mafumeira Sul	Offshore oil	5.6
2015	Angola	Cameia Subsalt Field	Offshore oil	6.0
2015	Canada	Christina Lake Exp. Phase G	Oil sands	n/a
2015	Canada	Telephone Lake	Oil sands	n/a
2015	Canada	Grand Rapids	Oil sands	n/a
2015	Canada	Foster Creek Phase H	Oil sands	n/a
2015	Canada	Narrows Lake	Oil sands	n/a
2015	Canada	Lindbergh SAGD Phase II	Oil sands	n/a
2015	Canada	Kirby North SAGD Project	Oil sands	n/a
2015	Canada	BlackGold SAGD Project	Oil Sands	1.0

¹ Delayed for 3 years

Global Project Delays and Cancellations

Oil, Gas and Related Infrastructure

The oil price downturn that began in mid-2014 has resulted in oil and gas companies making significant capital expenditure budget cuts in 2015. In addition to this year's cuts, many global companies have also been delaying and cancelling some of their multi-billion dollar megaprojects. The list to the left tabulates such projects that have been publicly announced.

Back in 2012, when commodity prices were robust over \$US 100/B, there was only one cancellation, a high-cost Russian natural gas project. Project delays and cancellations began increasing in 2013 and 2014, well before the oil price drop. This was mostly a reflection of industry-wide cost inflation.

Announcements of delays and cancellations continued into late 2014 and accelerated in 2015, mostly as a consequence of the 50% drop in oil prices. Ten announcements happened in March of this year alone.

Many of the project delays/cancellations that have been announced are by companies that are active in the Canadian oil sands region; accounting for about one-third of the list since January 2014. Oil sands developments have the uncertainty of high costs and long payback periods, so it is not surprising that several are on the list as a consequence of the recent oil price drop.

The list to the left only shows delays and cancellations by companies that are required or inclined to make public announcements or that we are aware of. For sure, there are more delays and cancellations of projects that have happened in private and have not been publicly announced. In this regard, the number of oil sands cancellations would appear to be disproportionately high relative to what is happening in other, less transparent jurisdictions of the oil and gas world.

Source: Company Reports, ARC Financial Corp.

The Fiscal Pulse with Varying Oil and Gas Prices

A Sensitive Industry

Five years from now, hindsight will assuredly prove that any single price forecast in these volatile times will be wrong. If nothing else, violent and uncertain events in large oil producing regions such as North Africa and the Middle East as at time of writing, will induce theatrical ups and downs in key metrics like price, revenue, cash flow and therefore capital expenditures.

To be sure, commodity prices are the most influential factor in determining the *fiscal pulse* of the business. To see the effect of oil and gas price volatility on key capital metrics for 2015, we have constructed sensitivity tables that are displayed on the following three pages.

We took the mid-point of \$US 60/B oil and \$3.00/Mcf natural gas as a *Notional Case* (highlighted in the centre, dark blue boxes) to pivot prices around. In the Table on page 25, each offsetting box from the centre adds or subtracts \$US 10.00/B off the oil price, and plus or minus \$0.50/Mcf off natural gas. In this way we can see the effect of price variations as a function of either one or both commodities.

At time of writing, at the end of Q1 2015, the *Notional Case* for the balance of the year seems high, given that prices in the futures markets at the end of March were indicating closer to the upper left, low case of \$US 50.00/B and \$2.50/Mcf. That's fine, because none of the nine boxes are meant to be a forecast; the point of the

tables is to show sensitivity to an extreme downside, as well as to future price recovery.

The Table on page 26 illustrates the same concept, except the values recorded in each box represent the *differences* from what happened in 2014 (we do the subtractions for you). And the Table on page 27 is the same, except the deviations from 2014 are reported on a percentage basis.

The extreme corners offer the best insights into, "what if?" The most optimistic box is at the bottom right with oil at \$US 70.00/B and natural gas at \$3.50/Mcf. In such a case, revenue rises to \$124.1 billion and cash flow jumps to \$51.1 billion. Both these numbers fall short of the peaks registered in 2014, but they constitute a healthier *fiscal pulse* than what is being realized now, and are at a level that would avoid the labour shortages and cost inflation that plagued the extremes of 2008 and 2014.

Recall that commodity price strength and production volumes are now heavily skewed toward oil. Therefore, at an industry level, our matrices show that what happens to oil prices is far more impactful to the Canadian industry than what happens to natural gas. Importantly, at prices below the *Notional Case* the industry is broadly unprofitable and doesn't generate sufficient long-term returns to entice reinvestment of cash flow. This last point stresses the need for vigorous innovation to boost the industry's productivity as an antidote to the potential trauma

of ongoing commodity prices that linger at or below *Notional Case*.

A Healthier Pulse Through Turmoil and Renewal

In today's context, the centre box, the *Notional Case*, represents metrics afforded to a mostly marginal global oil and gas industry that would be unable to grow.

Yet even if oil and gas prices were to recover to levels beyond the upper limits of our sensitivity tables that follow, we know that fiscal stability in the industry will always be fleeting. As with most oil and gas jurisdictions, other forces, like competition, substitution, environmental regulations and technological change, will relentlessly pose challenges - and of course opportunities too.

Canada's upstream oil and gas industry has been around for over 155 years. During that time there have been many extreme ups and downs leading to turmoil and renewal. Following each downturn and recovery, fiscal health and competitiveness was reserved for progressive companies that remained flexible, innovative and proactive amidst volatile and changing circumstances. Strong companies can find opportunity at any price.

Sensitivity of 2015 Canadian Oil and Gas Metrics to Prices

2015 Oil Price Annual Average (WTI \$US)

2015 Natural Gas Price Annual Average
(AECO \$C)

		\$50.00/B			\$60.00/B			\$70.00/B		
		Non OS	Oil Sands	Total	Non OS	Oil Sands	Total	Non OS	Oil Sands	Total
\$2.50/Mcf	Revenue (\$ Billions)	\$48.6	\$38.8	\$87.4	\$56.1	\$47.8	\$103.9	\$64.4	\$57.7	\$122.1
	Cash Flow (\$ Billions)	\$13.7	\$5.1	\$18.8	\$20.2	\$13.5	\$33.7	\$27.6	\$22.8	\$50.4
	CAPEX (\$ Billions)	\$16.4	\$20.0	\$36.4	\$24.3	\$22.5	\$46.8	\$33.1	\$22.5	\$55.6
	Wells	4,000	1,000	5,000	5,250	1,500	6,750	6,600	1,500	8,100
\$3.00/Mcf	Revenue (\$ Billions)	\$51.3	\$38.8	\$90.1	\$58.7	\$47.8	\$106.5	\$67.1	\$57.7	\$124.8
	Cash Flow (\$ Billions)	\$16.2	\$5.1	\$21.3	\$22.7	\$13.5	\$36.2	\$30.0	\$22.8	\$52.8
	CAPEX (\$ Billions)	\$19.4	\$20.0	\$39.4	\$27.2	\$22.5	\$49.7	\$36.0	\$22.5	\$58.5
	Wells	4,500	1,000	5,500	6,000	1,500	7,500	7,200	1,500	8,700
\$3.50/Mcf	Revenue (\$ Billions)	\$53.9	\$38.8	\$92.7	\$61.4	\$47.8	\$109.2	\$69.7	\$57.7	\$127.4
	Cash Flow (\$ Billions)	\$18.6	\$5.1	\$23.7	\$25.2	\$13.5	\$38.7	\$32.5	\$22.8	\$55.3
	CAPEX (\$ Billions)	\$22.3	\$20.0	\$42.3	\$30.2	\$22.5	\$52.7	\$39.0	\$22.5	\$61.5
	Wells	5,250	1,000	6,250	6,800	1,500	8,300	7,900	1,500	9,400

Canadian Oil and Gas Industry Metrics Compared to 2014

2015 Oil Price Annual Average (WTI \$US)

2015 Natural Gas Price Annual Average (AECO \$C)

	\$50.00/B				\$60.00/B			\$70.00/B		
\$2.50/Mcf		Non OS	Oil Sands	Total	Non OS	Oil Sands	Total	Non OS	Oil Sands	Total
	Revenue (\$ Billions)	-\$33.8	-\$27.2	-\$61.0	-\$26.3	-\$18.2	-\$44.5	-\$18.0	-\$8.3	-\$26.3
	Cash Flow (\$ Billions)	-\$28.0	-\$22.5	-\$50.4	-\$21.5	-\$14.1	-\$35.5	-\$14.1	-\$4.8	-\$18.8
	CAPEX (\$ Billions)	-\$28.6	-\$10.0	-\$38.6	-\$20.7	-\$7.5	-\$28.2	-\$11.9	-\$7.5	-\$19.4
	Wells	-5,272	-950	-6,222	-4,022	-450	-4,472	-2,672	-450	-3,122
\$3.00/Mcf	Revenue (\$ Billions)	-\$31.1	-\$27.2	-\$58.3	-\$23.7	-\$18.2	-\$41.9	-\$15.3	-\$8.3	-\$23.6
	Cash Flow (\$ Billions)	-\$25.5	-\$22.5	-\$47.9	-\$19.0	-\$14.1	-\$33.0	-\$11.7	-\$4.8	-\$16.4
	CAPEX (\$ Billions)	-\$25.6	-\$10.0	-\$35.6	-\$17.8	-\$7.5	-\$25.3	-\$9.0	-\$7.5	-\$16.5
	Wells	-4,772	-950	-5,722	-3,272	-450	-3,722	-2,072	-450	-2,522
\$3.50/Mcf	Revenue (\$ Billions)	-\$28.5	-\$27.2	-\$55.7	-\$21.0	-\$18.2	-\$39.2	-\$12.7	-\$8.3	-\$21.0
	Cash Flow (\$ Billions)	-\$23.1	-\$22.5	-\$45.5	-\$16.5	-\$14.1	-\$30.5	-\$9.2	-\$4.8	-\$13.9
	CAPEX (\$ Billions)	-\$22.7	-\$10.0	-\$32.7	-\$14.8	-\$7.5	-\$22.3	-\$6.0	-\$7.5	-\$13.5
	Wells	-4,022	-950	-4,972	-2,472	-450	-2,922	-1,372	-450	-1,822

Canadian Oil and Gas Industry Metrics Compared to 2014

2015 Oil Price Annual Average (WTI \$US)

2015 Natural Gas Price Annual Average (AECO \$C)

		\$50.00/B			\$60.00/B			\$70.00/B		
		Non OS	Oil Sands	Total	Non OS	Oil Sands	Total	Non OS	Oil Sands	Total
\$2.50/Mcf	Revenue	-41.0%	-41.2%	-41.1%	-31.9%	-27.6%	-30.0%	-21.9%	-12.6%	-17.7%
	Cash Flow	-67.1%	-81.5%	-72.8%	-51.5%	-51.0%	-51.3%	-33.7%	-17.3%	-27.2%
	CAPEX	-63.6%	-33.3%	-51.5%	-46.0%	-24.9%	-37.6%	-26.4%	-24.9%	-25.8%
	Wells	-56.9%	-48.7%	-55.4%	-43.4%	-23.1%	-39.9%	-28.8%	-23.1%	-27.8%
\$3.00/Mcf	Revenue	-37.7%	-41.2%	-39.3%	-28.8%	-27.6%	-28.2%	-18.6%	-12.6%	-15.9%
	Cash Flow	-61.1%	-81.5%	-69.2%	-45.5%	-51.0%	-47.7%	-28.0%	-17.3%	-23.7%
	CAPEX	-56.9%	-33.3%	-47.5%	-39.6%	-24.9%	-33.7%	-20.0%	-24.9%	-22.0%
	Wells	-51.5%	-48.7%	-51.0%	-35.3%	-23.1%	-33.2%	-22.3%	-23.1%	-22.5%
\$3.50/Mcf	Revenue	-34.6%	-41.2%	-37.5%	-25.5%	-27.6%	-26.4%	-15.4%	-12.6%	-14.2%
	Cash Flow	-55.3%	-81.5%	-65.8%	-39.5%	-51.0%	-44.1%	-22.0%	-17.3%	-20.1%
	CAPEX	-50.4%	-33.3%	-43.6%	-32.9%	-24.9%	-29.7%	-13.3%	-24.9%	-18.0%
	Wells	-43.4%	-48.7%	-44.3%	-26.7%	-23.1%	-26.0%	-14.8%	-23.1%	-16.2%

Industry Income Statement

Canada Oil and Gas Limited Consolidated Income Statement

\$C Millions	1998	2009	2010	2011	2012	2013	2014e	2015e
Conventional Operations								
Oil and Liquids Sales	11,731	37,242	44,207	54,320	50,633	56,443	59,768	36,171
Natural Gas Sales	11,185	22,343	20,897	18,572	11,668	15,582	22,638	14,556
Oil and Gas Sales	22,916	59,585	65,104	72,892	62,301	72,025	82,406	50,726
Royalties	(3,376)	(7,991)	(8,336)	(10,607)	(8,468)	(9,744)	(9,642)	(5,540)
Net Revenues	19,540	51,594	56,768	62,285	53,833	62,281	72,764	45,186
Operating Expense	6,559	15,899	17,127	17,228	18,001	20,600	21,726	19,930
Gross Margin	12,980	35,695	39,642	45,058	35,832	41,681	51,038	25,256
Oil Sands Operations								
Bitumen & SCO Sales	3,073	29,583	36,540	46,762	49,088	56,762	66,001	39,824
Royalties	(67)	(2,110)	(3,747)	(4,467)	(3,683)	(4,429)	(5,940)	(2,788)
Net Revenues	3,005	27,473	32,793	42,295	45,405	52,333	60,061	37,036
Operating Expense	1,654	11,781	13,275	18,183	20,089	24,053	27,913	26,361
Gross Margin	1,351	15,691	19,518	24,111	25,317	28,280	32,149	10,675
Expenses:								
G&A	1,520	5,689	6,442	5,710	6,896	8,796	9,400	9,672
Interest	1,905	5,213	4,460	4,507	4,667	4,944	4,555	4,724
DD&A	8,831	26,251	29,885	30,020	34,838	35,943	37,655	35,980
Other	3,068	2,783	4,409	3,739	8,607	5,022	4,917	4,143
Total Expenses	15,324	39,936	45,196	43,975	55,008	54,705	56,527	54,519
Earnings Before Taxes	(992)	11,450	13,964	25,194	6,141	15,256	26,660	(18,588)
Current Income Tax	1,006	3,693	2,537	1,740	678	1,509	2,500	-
Deferred Income Tax	(578)	(3,525)	(88)	1,902	134	764	500	*
Total Taxes	428	168	2,449	3,642	811	2,273	3,000	-
Net Earnings (Loss)	(1,420)	11,282	11,515	21,552	5,330	12,983	23,660	(18,588)

* Due to the severe change in net income, deferred tax is indeterminable at time of writing

Consider this a consolidated Income Statement for a fictitious company called *Canada Oil and Gas Limited*, a financial aggregation of all the oil and gas companies operating across the country, from British Columbia to Newfoundland and Labrador.

The numbers expected for 2015 demonstrate a weak pulse relative to anything seen since the Financial Crisis in 2009. Costs have risen since then, which is a big reason why the profitability metrics are poorer now. One positive consequence of this downturn is a necessary retreat in costs and greater emphasis on operating efficiency.

On the bottom line, the industry is forecast to see its first accounting loss position since 1998, another indication of the severity of the current situation. Indeed, 1998 is probably the closest analog to the current situation. Back then an oil price war sent the industry into distress - an event that reshaped the industry and positioned it for the 21st century.

The numbers on this page can be analysed in great depth, with many possible conclusions. But there is one conclusion that has endured decades of performance: *Canada Oil and Gas Limited* has a track record of surviving downturns with ingenuity and renewal.



This publication is available electronically at
www.arcfinancial.com/research/