Highlights of the 2009 Petroleum Survey

Manitoba is now the most attractive place in Canada for investment

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lberta is now the least attractive Canadian province for petroleum investment, according to the Fraser Institute's 2009 Global Petroleum Survey. Alberta's fall from favour is mainly due to the province's new royalty framework.1 Across the border, Colorado, California, and Alaska are the least attractive US states, largely because of relatively onerous environmental regulations. Of all North American jurisdictions, however, Canada's three northern territories received the lowest marks. This is mainly because of commercial issues (such as taxation, labour availability, and the inadequacy of required infrastructure) and regulatory issues (such as the high cost of complying with existing regulations and uncertainty regarding possible changes to the legal framework).

The petroleum survey identifies the provinces, states, and countries with the greatest barriers to investment in oil and gas exploration and production. This allows policy makers to consider reforms that would improve the investment environment of their jurisdictions.

Petroleum companies also use the information to corroborate their own assessments and to identify jurisdictions where new investment may be attractive.

The survey results are based on the responses of 577 managers and executives in the "upstream" petroleum industry,2 representing 276 companies. The exploration and development budgets of the participating companies totalled about \$200 billion in 2008. That represents more than 50% of global upstream expenditures last year, according to the International Energy Agency's 2008 World Energy Outlook.

All of these jurisdictions have been assigned scores for each of 16 factors that affect investment decisions. These factors include items such as taxation, the availability of transportation infrastructure, political stability, security of personnel and equipment, environmental regulations, the cost of meeting regulatory requirements, and labour availability. The scores are based on the proportion of negative responses a jurisdiction received; the greater the proportion of negative responses, the greater the perceived investment barriers and, therefore, the lower the jurisdiction's ranking.

This year, 143 jurisdictions were rated, compared to 81 jurisdictions in 2008 and 54 in 2007. An All-Inclusive Composite Index derived from the un-weighted scores of each jurisdiction on all 16 factors is the most comprehensive measure of investment barriers.

How Canada and the **US** performed

Since 2008, some shifts have occurred in the relative attractiveness of Canadian jurisdictions (table 1).

Since last year, Saskatchewan and Manitoba-the two most attractive jurisdictions in Canadahave switched positions as Manitoba has taken the lead. Nova Scotia has moved ahead of Ontario, British Columbia, and the Yukon, which fell to 9th place (out of 11 Canadian jurisdictions) from third place (out of nine jurisdictions) in 2008. Alberta, once quite popular for petroleum investment, is now seen as the

least attractive Canadian province. This low ranking is largely due to Alberta's very poor performance on the survey question pertaining to fiscal terms which, essentially, refers to the portion of the value of the oil and gas produced that producers must pay to the province.

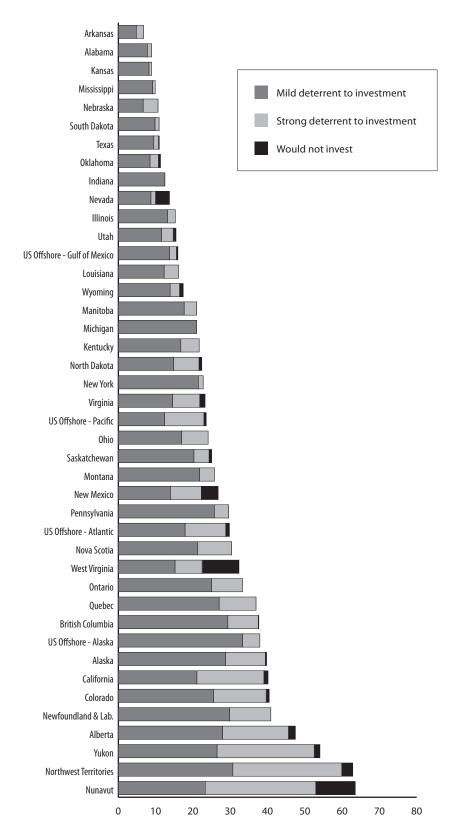
Canada's Northwest Territories and Nunavut were the least attractive jurisdictions in Canada for petroleum investment (figure 1). Each ranked relatively poorly on the All-Inclusive Composite Index alongside countries such as Pakistan, Algeria, Paraguay, and Cambodia. These two Canadian jurisdictions were also considered less attractive for investment than any of the 31 US jurisdictions rated this year.

As in 2008, investors' negative perceptions of the Northwest Territories related to concerns over the potential costs of aboriginal land claims, the availability of labour, and the high costs associated with regulatory compliance, regulatory uncertainty, and environmental regulations. Nunavut suffers from the same issues, although, in most cases, not to the same extent. The lack of a geological data base is of greater concern in Nunavut, where little exploration has taken place. Overall, Nunavut is seen as the least attractive Canadian jurisdiction.

The relatively low ratings received by Alberta, Newfoundland and Labrador, and the Yukon indicate that these jurisdictions are perceived as less attractive for investment than Manitoba, Saskatchewan, Nova Scotia, Ontario, Quebec, and British Columbia.

Across the border, California and Colorado received the worst overall scores among the US jurisdictions rated in this year's survey. Both states received poor scores because of issues pertaining to petroleum production taxation, taxation levels generally, and concerns about the cost of compliance with environmental regulations. Alaska was

Figure 1: All-Inclusive Composite Index scores, Canada and US



Source: Angevine et al., 2009.

Table 1: All-Inclusive Composite Index scores and rankings, Canadian jurisdictions, 2009 [2008 rankings (out of 9) in parentheses]

Rank	Province/Territory	Score
1	Manitoba (2)	21.0
2	Saskatchewan (1)	25.0
3	Nova Scotia (5)	30.4
4	Ontario (3)	33.3
5	Quebec (N/A)	36.9
6	British Columbia (4)	37.7
7	Newfoundland & Labrador (7)	40.9
8	Alberta (6)	47.5
9	Yukon (3)	54.1
10	Northwest Territories (8)	62.8
11	Nunavut (N/A)	63.5

Source: Angevine et al., 2009.

the third lowest-ranked state overall, mostly because of investment barriers associated with environmental regulations. In fact, Alaska was seen as the least attractive US jurisdiction in this regard and the third-worst jurisdiction worldwide.

All of the other US states and the four US offshore territories that were rated achieved much better scores, indicating that they are more favourably regarded for investment than Colorado, California, or Alaska. Of the 19 most attractive jurisdictions worldwide, as reflected by the All-Inclusive Composite Index, 15 are US states or offshore regions. Of the 59 next most attractive jurisdictions for investment (with scores between 20 to 39.9), 14 are US states or offshore areas.

Global results

This year, the 10 least attractive jurisdictions for investment were Bolivia, Niger, Venezuela, Ecuador, Sudan, Russia, Bangladesh, Nigeria, Kazakhstan, and Ethiopia. Of these, all but Niger, Ethiopia,

and Bangladesh were among the 10 least attractive jurisdictions for upstream investment in 2008 as well. Niger and Ethiopia were not ranked in 2008; Bangladesh tumbled from 45th (of 81) in 2008 to 137th (of 143) this year. Bangladesh lost ground mainly because of investors' increasing concerns with fiscal terms, taxation, the local price of natural gas, and security issues.

The next 10 least attractive countries were Myanmar, Chad, Argentina, Democratic Republic of Congo (Kinshasa), Iraq, Cote d'Ivoire, Iran, Ukraine, Guyana, and Equatorial Guinea. Two of the five countries in this group that were also rated in 2008 experienced considerable drops in their relative positions this year: Cote d'Ivoire and Ukraine. Cote d'Ivoire's fall from 41st (of 81) in 2008 to 128th (of 143) this year reflects a deterioration in the commercial investment environment of that country, including changes in fiscal terms, the local price of natural gas, labour availability, and the availability of infrastructure. Ukraine's slide from 50th (of 81) in 2008 to 126th (of 143) this year reflects investors' concerns about political instability, labour issues, the cost of regulatory compliance, and geological data.

The 10 most attractive jurisdictions for investment were Arkansas. Alabama, Kansas, Austria, Mississippi, Nebraska, South Dakota, Texas, Oklahoma, and Indiana. Of these, Arkansas, Alabama, Texas, and Oklahoma were also among the 10 most attractive jurisdictions in 2008. Kansas rose to third (of 143) this year from 16th (of 81) last year, while Mississippi jumped from 27th (of 81) to 5th (of 143).3 After the top 10, the next highest-rated jurisdictions were Nevada, Illinois, Utah, US Offshore - Gulf of Mexico, Louisiana, Wyoming, South Australia, the Netherlands - North Sea, and Namibia.

Most other US jurisdictions, most Canadian provinces, all of the Australian jurisdictions, New Zealand, several European countries, and a number of countries scattered throughout the world had relatively attractive values on the All-Inclusive Composite Index. All of the Canadian provinces except Alberta and Newfoundland and Labrador had scores in the relatively attractive 20.0 to 39.9 zone. Sixty-five jurisdictions, including those two provinces and Canada's three northern territories, had scores greater than 40, which indicate greater barriers to investment.

Conclusion

Changes in the rankings since the survey was first conducted in 2007 underscore the fact that jurisdictions that increase barriers to investment can expect to be regarded as less attractive targets for petroleum exploration and development. Alberta and Alaska have dropped

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from favour mainly because of increased royalties and production taxes. Colorado's fall in the rankings largely reflects the rising cost of complying with environmental regulations and the uncertainty created by these changes. Given the competition for petroleum investment worldwide, jurisdictions that fail to contemplate the impacts of policy changes may well experience reductions in employment, labour income, and overall economic activity.

Notes

1 Effective January 1, 2009, the royalty percentage applicable to crude oil was raised about 80% (for wells with average daily production of 150 barrels or more, with crude oil priced at \$65 per barrel). The royalty on natural gas was increased about 40% (for wells with average daily production of 600,000 cubic feet or more, at a price of \$7 per gigajoule). The government said that total energy royalties would be about \$1.4 billion or 20% greater in 2010 as a result.

2 The "upstream" petroleum industry includes exploration for oil and gas reserves, and the production of crude oil, bitumen, and both conventional and non-conventional forms of natural gas. "Conventional" sources include production from gas or oil reservoirs that employ regular drilling methods and rely on natural pressure to bring the gas to the surface. "Unconventional" sources of natural gas include methane from coal seams and gas produced from shale formations. In the United States, gas embedded in tight sandstone formations is also considered an unconventional supply source. Bitumen from oil sands is an unconventional source of oil.

3 Austria, Nebraska, South Dakota, and Indiana were not assessed in 2008.

Reference

Angevine, Gerry, Matthew Brown, and Miguel Cervantes (2009). Fraser Institute Global Petroleum Survey 2009. Fraser Institute.