

**An Ill Wind is Blowing Some Good:
Dispute over Development of the Hebron Oilfield off Newfoundland**



Offshore Newfoundland: courtesy Petro-Canada

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The planet is bending before an ill wind that carries climate change from the excessive burning of fossil fuels, soon to be followed by the social and economic consequences of declining production. In the long run, a successful strategy of adaptation will mean improved living conditions for most people after a difficult period of transition. This is the optimistic scenario. In the short-term, constrained supply of petroleum at the global level provides opportunity for local states that control supplies to influence terms of extraction that are in the interests of local people and local development.

This paper outlines and explains the dispute between the provincial government of Newfoundland and Labrador, on the one hand, and a Chevron-led consortium, on the other, about the conditions under which development of the Hebron oilfield would proceed. By grasping how and why this dispute unfolded, the conditions for successful local action become evident. The context is vital to the process. There are two key dimensions: the long-term struggle of Newfoundland and Labrador to control development of the offshore oilfields and the impending global scarcity of supply. After providing short accounts of this context, I move to the specific dispute about the Hebron field.

Global Supply of Crude Petroleum – the Peak Oil Issue

It is unlikely that the provincial government could have reached an agreement so favourable to the province were major oil companies not anxious about supply on a global scale. At first glance, data on oil production and consumption do not indicate a critical supply situation. As reflected in figure 1, overall growth in oil production and supply was interrupted somewhat in 1974-75 (following the OPEC embargo on sales to the US) and more substantially in the second oil crisis that followed the Iranian revolution of 1979. From the mid-1980s, production increased again with only minor interruptions. For the world as a whole, average daily production of crude oil expanded dramatically from 45,886,000 barrels daily in 1970 to a peak of 73,807,000 barrels in 2005 (figure 1).¹

¹ The term oil supply refers to crude oil plus natural gas plant liquids, other liquids and additions (or losses) in the refining process (U.S. Department of Environment 2007). Crude oil is increasingly supplemented by these additions, but the critical point is that a decline occurred in 2006, despite high demand and high prices. Oil production refers to crude oil.

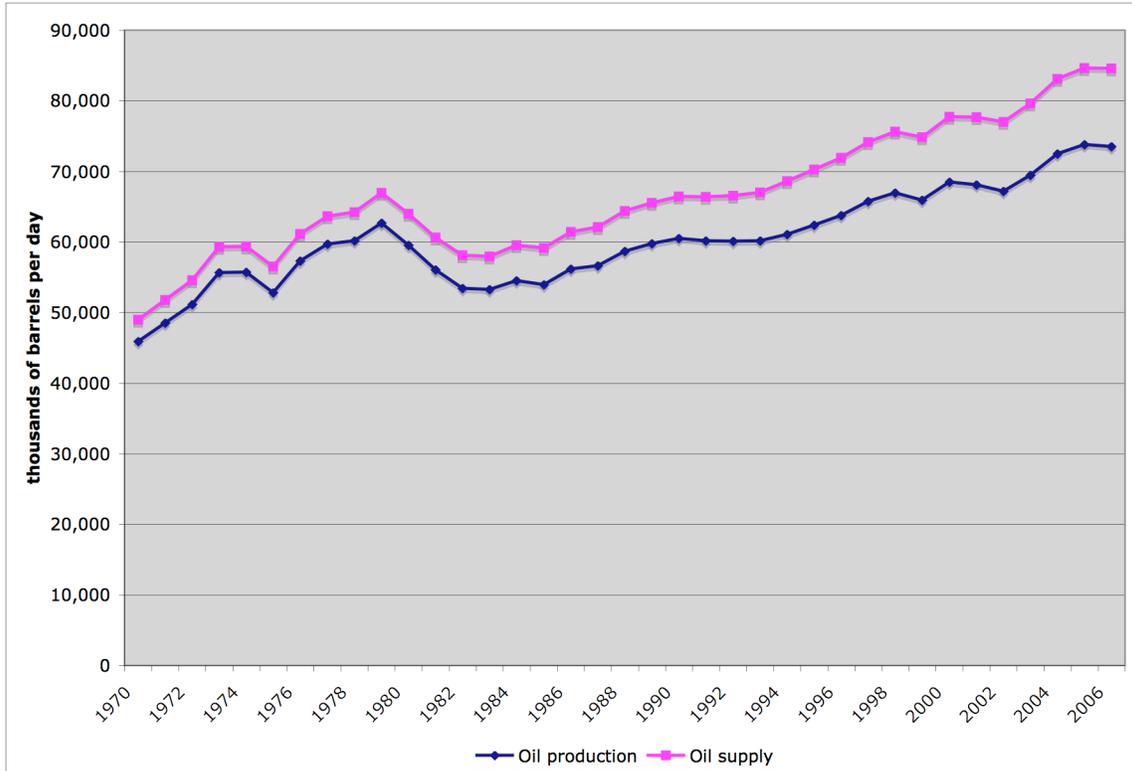


Figure 1: World Oil Production and Supply (thousand barrels daily).
 Source: U.S. Department of Environment (2007).

The overall expansion of oil production masks several important changes in the structure of the industry. Allowing for substantial yearly fluctuations, it is still clear that OPEC production reached a peak in the 1970s and then plummeted in the 1980s to a trough from which it gradually recovered. However, the 1979 volume was not reached again until 2003-4. By the early 1980s, oil from non-OPEC sources (excluding Russia) accounted for more of the world total and by 2005 still exceeded OPEC production. The former Soviet Union was already a major world source of oil in 1965, but experienced a serious decline associated with the upheaval involved in the overthrow of the Communist Party and the introduction of a more extensive internal market economy after 1990 (figure 2). By the early 21st century, Russian production was again on the rise and Russia, indeed, was second only to Saudi Arabia as a source of crude oil.

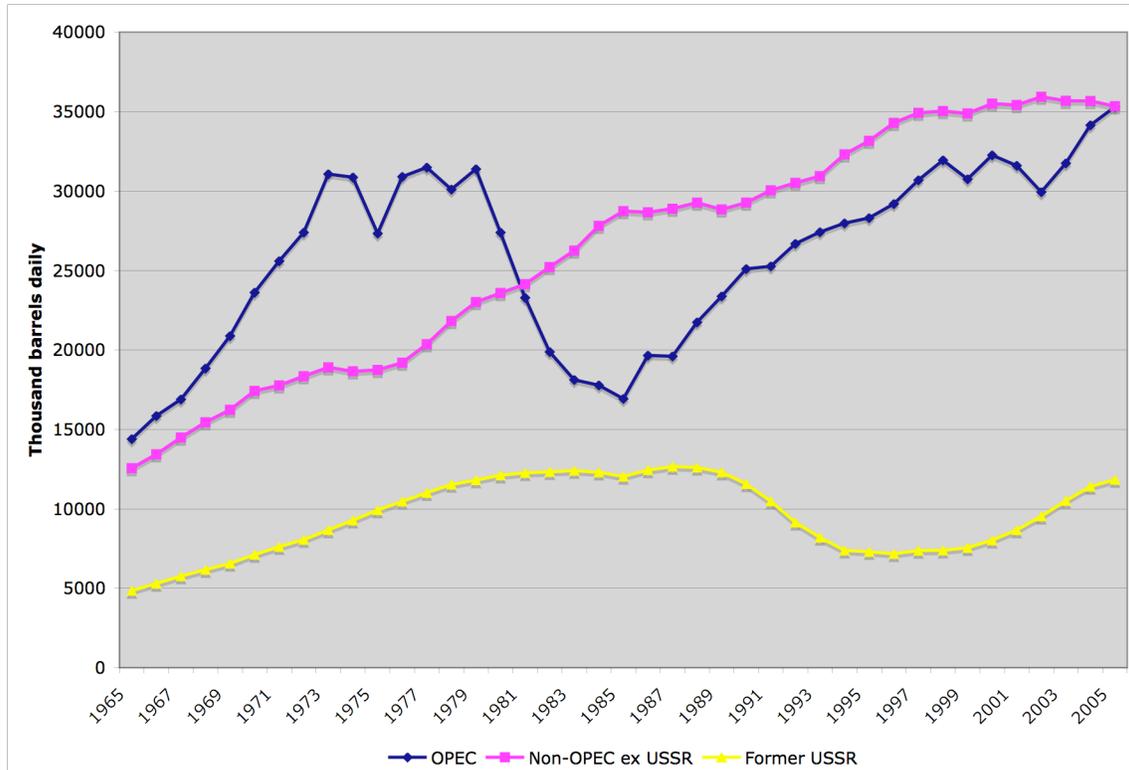


Figure 2: Oil Production for OPEC, non-OPEC and former USSR
Source: BP (2007).

Looking at the distribution of world production in more detail, several trends with important socio-political implications are evident. Extraction of crude oil in the USA reached its historical maximum in 1970. Even the opening of the north Alaskan fields failed to reverse the subsequent decline with the result that the volume in 2006 was only 60.3 percent of the 1970 figure (BP 2007). Despite increases in Canadian and Mexican production in recent years, the overall North American total has been declining (figure 3). The Middle East took a long time to recover from the Iranian revolution and later the Iran-Iraq war. However, by the 1990s, this region was again in a dominating position as a contributor to world supply, with Saudi Arabia alone accounting for 13.5 percent. Recent declines in extraction from North Sea fields have been counteracted by increases in Russia and several former Soviet states. In addition to well established production in Nigeria, Algeria and Libya, Angola now contributes an increasing amount to the African total. Venezuela remains dominant in South America, while China and Indonesia are the largest Asia-Pacific producers (BP 2007).

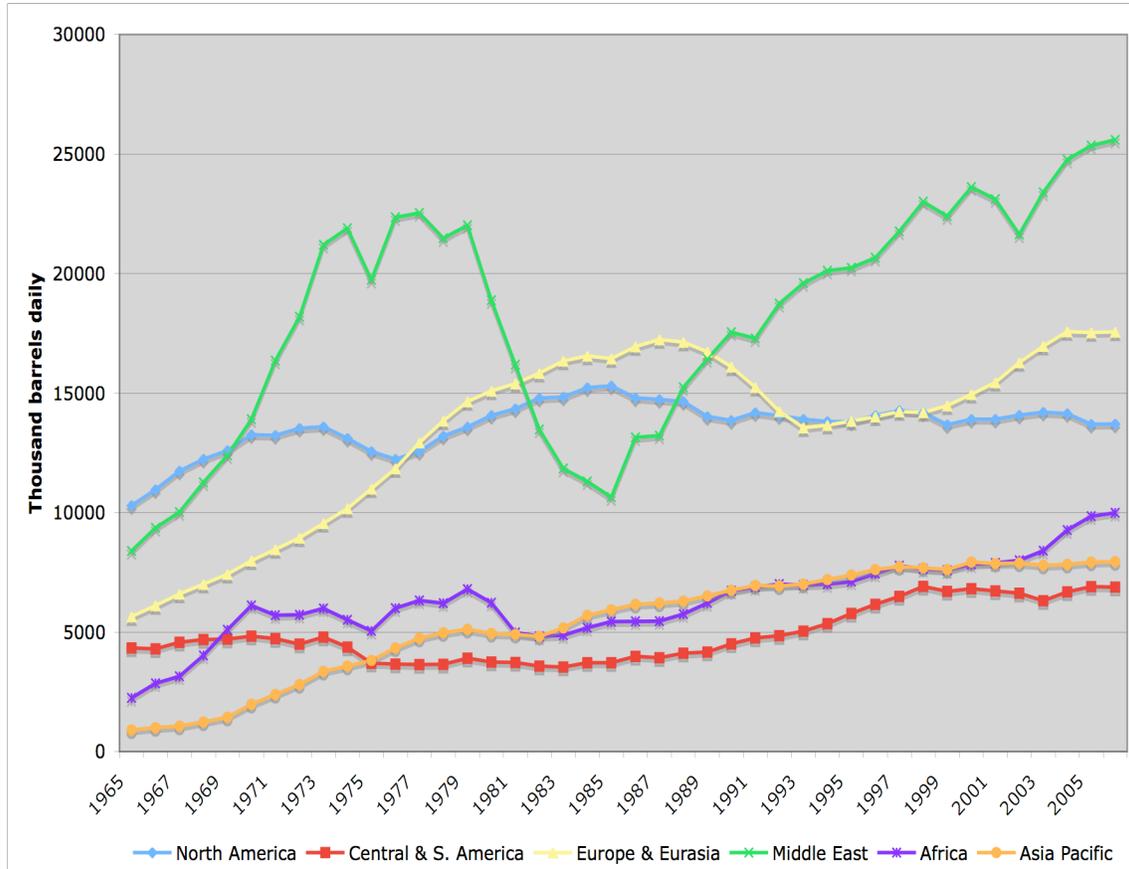


Figure 3: Oil Production by Region, 1965-2007.
Source: BP (2007).

Estimates of reserves should be treated with scepticism, as there is a tendency to exaggerate for various reasons, such as OPEC's allocation of quota to members according to their share of proven reserves. That said, BP's data give rise for concern. The ratio of reserves to annual production indicates the number of years at current production levels until no more oil can be extracted unless new discoveries are made. Of course, we should anticipate some discoveries, but also increased demand. For the world as a whole, there remain 40.5 years of supply on this basis. For North America and the European Union, the estimate is 12.0 and 8.0 years respectively, while for the Middle East countries another 79.5 years are available. Moreover, for the period 2003-6, consumption appears to have exceeded production (BP 2007).

In 1956, King Hubbert observed that discovery and production of oil in the U.S. followed a bell-shaped curve, with production about 20 years behind discovery.² Thus knowledge of the rate of discovery allows reasonably accurate prediction of future extraction; and discoveries are hypothesized to decrease as a

² For a clear description of Hubbert's method, see Deffeyes (2005:35-51).

function of the total amount of oil that remains to be discovered.³ Hubbert estimated that oil production in the mainland USA would peak between 1965 and 1972, which indeed it did – in 1970.

Building on this pioneering work, Hubbert and others (quite often geologists formerly employed by oil companies) turned to calculating the future of global oil production. This is a more daunting task because geo-political factors interfere with production and estimates of reserves from critical producing areas are unreliable. Although there is disagreement about the quality of data on reserves and technological advances have made it possible to extract more oil from a given field than in the past, peak oil proponents note that production is exceeding new discoveries, and that these discoveries become smaller on average as time passes. Despite great investment in exploration, no super-giant fields, capable of producing 600,000 barrels per day, have been discovered since 1968 (Hirsch et al. 2005:11).

In 2005, the BBC reported widespread interest in peak oil analysis, which received powerful support from a French government investigation that predicted the peak in 2013; and late in 2005, the Swedish government was the first formally to accept the validity of the theory (Olofsson 2005). A cautiously worded report sponsored by the US government (Hirsch et al. 2005) favours 2016 as the likely peak rather than the more optimistic assessment of the US Geological Survey, which selected 1936 (Deffeyes 2005:4). One of the best known advocates of the peak oil approach, Matthew Simmons, drawing on U.S. government data sources, claimed in 2007 that the peak has already been reached – in May 2005:

...the facts point to the glaring and inconvenient reality that the May 3 2005 crude production represented an all-time high, even though it barely exceeded 74 million barrels a day – 74,298,000/day according to the EIA. April, May and December 2005 were the first three months in the 150-year history of oil when the world ever produced this much oil. In July 2006, global crude once more inched above the 74 million barrel a day high-water mark. No other monthly report before or since shows oil produced at or above the 74 million barrel per day mark.

...As we near the end of 2007, May 2005 is still the magical “moment in time” when global crude oil peaked at 74.3 million barrels a day. Some miracle series of new oil fields could suddenly be found and quickly brought on to production, but the more time that passes, the less likely this is (Simmons 2007:2-3).

The prospect of running out of oil creates alarm because the world remains heavily dependent on oil, which supplies over 40 percent of total energy (IEA

³ Deffeyes (2005:39) argues that this simple explanation is robust and has not changed substantially despite new technologies, deep-water drilling, and higher prices.

2007:29). There is no quick, economical substitute for this oil in the key transportation sector, and past disruptions of supply have had serious economic (and social) effects, although events such as the OPEC crisis of 1973-74 were short-lived and did not imply that long-term supply was in danger due to natural scarcity. Critics sometimes insist that peak oil analysis should be discounted because some claims in the past did not materialize and because the world will not run out of oil in the foreseeable future. However, supporters of the peak oil position recognize that predictions depend on unreliable data and are affected by both economic and geo-political events. Nor do they believe oil will run out soon, only that maximum possible production is no more than a few years away at most, and that decline must inevitably follow (ASPO no date; Deffeyes 2005; Heinberg 2005; Hirsch et al. 2005; Robelius 2007). In a careful analysis, using variable assumptions and including non-conventional oil sources, Robelius (2007:136-137) projects a decline starting somewhere between 2008 and 2018. The latter figure assumes a decline in the growth of consumption to 1.4 per cent per annum.

Even a gradual decline of global oil supply, however, will have far-reaching effects. Massive social disruption and wars over access to remaining oilfields are not out of the question unless effective planning and quick actions are taken to reduce dramatically the consumption of oil products. This might lead to greater reliance on coal (with serious consequences for global warming), gas hydrates (also with serious global warming implications) and nuclear power (with potential problems of radiation and long-term waste disposal) as well as renewable energy sources.

Those who challenge the peak oil analysis, apart from company officials, tend to be economists or representatives of international organizations. Opponents have to accept that oil is a limited resource, but argue that there is no need to be concerned in the next few decades because new discoveries and more efficient technologies, as well as conservation, will allow the expected increase in world demand to be met. Critics do correctly point to doomsday predictions, which have been offered since mid-nineteenth century but have failed to materialize (Bailey 2006), with the implication that the current concern is just another of these pessimistic projections based on inadequate information. Among the most prominent opponents is consultant Michael Lynch of Cambridge Energy Research Associates (CERA) who treats peak oil forecasts with disdain. He foresees an undulating plateau of production rather than a peak followed by decline, and this plateau should not arrive for several decades (quoted in Bailey 2006:3). Indeed, CERA expects oil production at 108,000 barrel per day by 2015 with more growth to follow until at least 2020 (as quoted in King 2006:2)). Lynch and other spokespersons for CERA defend their position in part by expanding the definition of conventional oil to include tar sands, shale and even liquified coal. They do not consider the modest net energy gains, the environmental impacts and the consequences of the high prices at which energy from these sources have to be sold.

The United States Geological Survey's report (USGS World Energy Assessment Team 2000) gets many favourable references from opponents of peak oil. The core argument is that reserve growth and new discoveries have been outpacing consumption; moreover, reserves are usually underestimated. However, the USGS data come from 1995 and the report does not backdate revised reserve estimates to the year of discovery (Karbuz 2008:3). Estimates in the key producing areas of Saudi Arabia (believed to have about 30 percent of reserves) and the rest of the Middle East surely cannot be trusted. It may be argued (e.g., by Economides in Bailey 2006:3) that the Saudis would not invest \$100 billion in new production projects if they thought oil was running out. However, this investment might be made based on optimistic assessments that are not well grounded. Simmons (2005) is more compelling when, drawing on geological engineering reports and interviews, he argues that Saudi production is at or past its peak. Moreover, if there is no problem with Saudi reserve estimates, then why do the Saudis prevent independent evaluation?

Perhaps the virulence of the debate in recent years is related to the fact that peak oil analysts favour various forms of public intervention in order to plan effectively for the end of "easy oil," whereas opponents typically embrace an unregulated market perspective and fight to deny positions that suggest that the market has failed to produce public good or that it must now be constrained. Nevertheless, even sceptics on the peak oil issue favour developing resources in politically stable areas. That alone provides a strong bargaining chip to places like Newfoundland and Labrador.

Offshore Newfoundland and Labrador⁴

The second component of the context for the Hebron dispute is the structure of state-corporate relations that emerged as the first oilfield moved to commercial production. Following its entry into confederation with Canada in 1949, Newfoundland (later changed officially to Newfoundland and Labrador) was perennially Canada's poorest province with its relatively low educated population dependent on resource extraction industries, especially the seasonal cod fishery. Unemployment stuck persistently at double the Canadian rate in good times and bad. The discovery of oil offshore opened up the prospect of pulling the local economy and society much closer to national standards of material affluence and removing a deeply seated sense of dependency.

Although some drilling took place in the North Atlantic off the coast of Newfoundland in the 1960s, the OPEC embargo and subsequent supply crisis in 1973-74 stimulated exploration. The provincial government was concerned to maximize the benefits from any discovery, but faced the problem that the federal government claimed jurisdiction. This became a pressing issue in 1979 when commercial quantities of oil were identified in the Hibernia area. Development was slowed until six years later by difficult federal-provincial negotiations. With

⁴ The historical summary is based on Leah Fusco's research assistance (Fusco 2007) except where other sources are referenced. Until 1985, see especially House (1985).

the signing of the Atlantic Accord by the two governments, the Hibernia project could move forward. Newfoundland and Labrador succeeded in negotiating a management system that regulated development through the Canada-Newfoundland Offshore Petroleum Board. Each government selected three members plus a chair, on whom both had to agree. Oil from the ocean was to be treated as if it were on land. This new Petroleum Board was charged with deciding on the merit of any proposal for extraction of the oil and was obliged to ensure appropriate local benefits, such as employment and provision of supplies, as well as matters of technology.

Several factors delayed the flow of oil despite this agreement. Oil prices were depressed at the time and thus expensive offshore development was less attractive to Mobil and the rest of the Hibernia group. Moreover, the province preferred a gravity-based fixed platform because it could be built locally and provide much needed employment. It took five more years to reach a practical agreement and that only after the province agreed to provide \$1 billion as a grant and to guarantee a further \$1.7 billion out of a total estimated investment of \$5.2 billion. Gulf Oil, with a 25 percent stake, withdrew in 1992, and was replaced in part by the federal government. The Gulf decision stalled the project for over a year and later engineering problems created more delays. Finally, in 1997, the first oil was pumped, but under a royalty regime that would produce little revenue for the province. Anxious to obtain employment concessions, the government agreed to royalties that would start at 1 percent and rise only to a maximum of 5 percent by 2004.

Within the same general area, other exploration led to the discovery of several new fields. However, the provincial government now left the method of extraction up to the companies because it was no longer willing to subsidize the development. By 1998, after three years of planning and negotiation, Petro-Canada secured agreement to construct a floating platform for use on the Terra Nova oil field, close to the Hibernia site. This decision meant considerably less local construction and employment. The compensation for the province was that an improved royalty structure would likely double the income to the treasury in comparison with the Hibernia arrangement. Delayed about one year by technical problems, the first oil flowed from Terra Nova in 2002. In subsequent years, production was slowed at times by technical problems, including a major oil spill in November, 2002, for which Petro-Canada was fined \$290,000.

The third field, White Rose, moved forward with Husky Oil as the operator. Despite opposition from some quarters in Newfoundland, Husky would only proceed if the cheaper floating platform were adopted. The Petroleum Board approved the plan in December 2001 with conditions that included expenditure on research and training. About one-third of construction expenditures would take place within the province, including more engineering, fabrication, assembly and integration work than on earlier projects (MacDonald 2001; Newfoundland and Labrador 2003). November 2005 saw the first of an estimated 250 million barrels extracted from the White Rose field. Two years later Husky, Petro-Canada

and the provincial government agreed on terms for extension of the White Rose field, a deal giving a 5 percent equity share to the state. By the summer of 2007, an equity position in all future projects was proclaimed as part of the province's energy policy. This time there was no controversy because the ground had been broken in the earlier Hebron dispute. The agreement also called for a super royalty of an additional 6.5 percent when the price of West Texas crude exceeds \$50 per barrel. Almost all development expenditure, amounting to an estimated \$3.5 billion, will take place within Newfoundland and Labrador (Newfoundland and Labrador 2007).

The Hebron Dispute

The development of the first three offshore oilfields was a terrain of struggle between the provincial state and the oil companies with the latter generally coming out best, although forced to make concessions on technology, employment or royalties according to the case. Discovered as long ago as 1981, Hebron has not yet been developed. In part, this is because the early estimate of its potential was relatively low, at 195 million barrels, but probably more important is the heavier quality of its oil. This makes it more expensive to extract and leads to a final product of lower value. However, with the size of recoverable oil estimated at 731 million barrels (in 2006) and the high prices in recent years, this field is now attractive as new fields become ever more difficult to find.

By 2000, Chevron had undertaken sufficient exploratory drilling and evaluation of costs to take the lead in a consortium to bring the field to commercial production. Partners in the Hebron project were Chevron (28 percent), ExxonMobil (37.9 percent), Petro-Canada (23.9 percent) and Norsk Hydro (10.2 percent). However, two years of further study led to shelving plans due to the high costs.

By 2005, with higher oil prices and growing concerns about supply, Hebron appeared more attractive. However, a new provincial government pushed for changes. In April, negotiations started with the government, now led by Danny Williams and the Conservative Party. Mr. Williams was and remains more a Newfoundland nationalist and populist than a conventional conservative politician, although he is also one of the richest people in the province. His approach is captured in this statement:

The biggest thing that we had to change when we came into government was the psyche of Newfoundlanders and Labradorians. We wanted to make sure that they felt very positive about themselves and had self-confidence, that we're as good as the rest of Canadians. Because I think there was a little bit of a negative attitude toward Newfoundland and Labrador. Not that people degraded us, but we always felt that we were somewhat treated as second-class citizens. It's about earning respect and I think we're getting that (Gray 2008).

In pursuit of this respect, Mr. Williams refused to be overawed by

corporations or other governments. Nevertheless, agreement looked possible until a year later when Chevron announced that it was abandoning the project and dismantling its development team. The province was blamed for failing to agree on reasonable terms:

We have worked tirelessly with the Government of Newfoundland and Labrador, especially during the past year, to find ways to move the Hebron project forward, but significant and fundamental gaps remain on fiscal terms and benefits that would enable the project to proceed in a viable manner. We are disappointed that we have not been able to reach an agreement with the government (Chevron 2006).

With Chevron also claiming that it would take two years to restart the project, this move put great pressure on the provincial government. What appeared to rankle the companies was the province's request for an equity stake in Hebron. An initial request for 8.5 to 10 percent was reduced to 4.9 percent. The objective here was to give the state some direct input to key decisions, although clearly not a veto position. The second key demand was the introduction of a super royalty level for times when oil prices were exceptionally high. Additionally, the province wanted the construction of a new refinery, but this was later withdrawn before Chevron abandoned the project.

Williams' response to the situation was that the province's demands were reasonable and that the real stumbling block was Chevron's request for up to \$500 million in tax concessions. In fact, he identified ExxonMobil as the difficult partner. Believing that the project would move forward without ExxonMobil, Williams offered to buy out its share. Otherwise, the companies could expect to face fallow field legislation that would limit the amount of time a lease could be held without production.⁵

The situation looked bleak for the maintenance of output offshore Newfoundland as the established fields reached maturity. In 2007, with a provincial election coming up, there was some public concern that the government had erred in pushing Chevron to the limit, because now there could be a major slowdown in the area's economy (especially Memorial economist Wade Locke's comments – CBC News 2007a). Several of our key informants expressed concern about the premier's handling of the situation (get quotes). Perhaps the strongest was the following statement:

The problem that we're having in the offshore today, in my view, is Danny Williams... He's pulling the plug on the one industry we've got, which could bring us into real prosperity... He drew a line in the sand, which I

⁵ This required federal support, which was not forthcoming. Williams was furious: "The fact that the prime minister is not supporting me on the whole fallow field exercise and legislation, the only explanation I can see is obviously he's a supporter of big oil... And if he wants to be a big buddy to big oil, that's for him to decide" (CBC 2006: par 9).

don't believe in doing in negotiation. If you draw too big a line and if you can't get the guy to back up, you're screwed. You've got to stop. And that's not good. And he stopped over what I consider to be a frivolous thing, which is five percent equity. Now five percent equity in a five billion dollar investment is roughly 250 million dollars... But you don't turn down a multi-billion dollar deal for 250 million dollars in equity.... Chevron and them will not come back as long as Danny Williams is Premier (Interview).

Despite private and public opposition, Williams remained firm, prices rose, and by June 2007, if not earlier, informal talks were underway (CBC 2007b). Later in the summer, Williams announced an agreement that included an investment by Newfoundland and Labrador to secure 4.9 percent of the equity (CTV.ca News Staff 2007). Instead of the tax break, the province added \$10 million to its equity stake and reduced the super royalty rate by 0.5 percent. Nevertheless, the project should produce about \$16 billion for the province over a 25-year period (Newfoundland and Labrador 2007). What had been insurmountable obstacles, according to Chevron, melted away. As Williams put it:

Determination and strength of conviction has been our government's guide and today we are proud to present a tremendous agreement for the people of the province, with a fair and reasonable return for our industry partners” (CTV.ca News Staff 2007).

Interpretation

Considering the Hebron dispute, a respondent familiar with both companies and government reflected at some length when asked why the companies decided to come back:

I think that, in the case of Hebron, it's a known deposit. The price of oil is sufficiently high to make it attractive from a financial perspective. The technology is not ground-breaking technology anymore... So I think companies are always motivated by their ability to make a profit on a project and I think they believe that they can make a good profit from Hebron while still meeting the demands that the province has. So it's basically sort of a regular business decision for them I think.

Interviewer: How do you think that the government's decision to ask for equity stake in future projects, how do you think that will impact the oil company's decisions?

I think it's just another factor that they'll take into consideration. A lot of other jurisdictions have similar requirements and there are some jurisdictions, such as Venezuela, that are moving toward total government control of the industry. So I can't say whether it will influence people away from here. I don't believe that it will... ExxonMobil, Norsk Hydro, and

Chevron all operate multi-nationally, as in fact does Petro-Canada now. So the fact that they've chosen to participate and bring the project forward indicates to me that, generally speaking, the industry will understand the province's request as being reasonable.

Indeed, corporations do what their managers believe is necessary to make profit. They may bargain hard, but will eventually reach agreements when failure to do so would harm their interests. This appears to have been the situation with Hebron. Had the world been awash with potential oil fields, Hebron might have remained on the backburner for decades, but we have seen that supply is tight and likely in a state of inevitable decline. Moreover, Canada is considered stable, friendly to capitalism, and thus ideal for investment. The equity stake and increased royalties are not unusual on a world scale, although outside the preference of neo-liberal ideologists. Mr. Williams' determined, populist style may have irritated some company executives (although I have no evidence that this was the case), but would surely have been largely irrelevant to the decision to revive the Hebron project.

The arrangement reached is advantageous for the people of the province, although long-term benefits depend on an astute combination of reducing the huge per capita provincial debt and investment in long-term, environmentally friendly development. Fears that the province may lose out due to the possibility of long-term decline in the price of oil are misplaced. The era of 'easy' and thus cheap oil is over, even if recessions may produce temporary declines in revenue from oil.

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