



Sable Island Gas - the Ten Year Wonder

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Sable Island lies about 150 km off the coast of Nova Scotia. In its vicinity lie the natural gas fields of the Sable Offshore Energy Project. Production from these fields began in 1999, and there was initially considerable optimism about the potential of the area. Since then, a number of [dry holes](#) have been drilled and [exploration licences abandoned](#). There are some [optimistic voices](#) still to be heard, but the future of the area merits a closer look.

Canada's National Energy Board issues an annual report on the short-term outlook for natural gas in Canada. The most recent was issued this October: [Short-term Canadian Natural Gas Deliverability 2006-2008](#). Canada has two areas from which gas is currently produced; the Western Canada Sedimentary Basin (WCSB) and the Nova Scotia off-shore area. The latter produces only a small fraction of Canada's total natural gas, but rates its own section in the report.

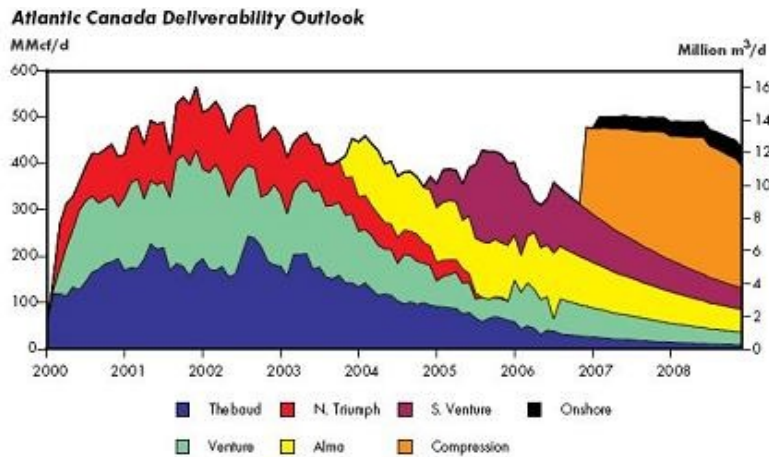
Gas production in the region consists of output from the Sable Offshore Energy Project (SOEP) since 1999 and a minor contribution from the onshore McCully field in New Brunswick since 2003. These sources currently account for roughly 9.9 million m³/d (350 MMcf/d) or about two percent of Canadian natural gas deliverability.

The Sable Island project has four reservoirs (Thebaud, Venture, South Venture and Alma) that are now producing and one that has been shut in (North Triumph).

The SOEP has benefited from the addition of three new wells since mid-2005 that are enhancing access to the Venture, South Venture and Alma reservoirs. Pressure declines in some other fields have required that wells be operated in a cycling mode (shut in briefly to rebuild pressure and then restarted) resulting in monthly deliverability from the project varying by almost 25 percent since late 2005. As a result of pressure decline, the North Triumph field has not been producing since November 2005.

Production from the project has never been very steady, is now well down from its 2001 peak of about 15 million cubic metres per day and is still declining. To counteract this decline, offshore compression of the gas will shortly be started.

To enhance deliverability, the SOEP is in the process of adding compression at the inlet of the pipeline that delivers the gas to shore. The offshore platform and compression unit was installed in mid-2006 and is expected to be hooked up and operational by December. The added compression will allow the existing wells to operate at lower pressures thereby significantly increasing overall project deliverability and potentially enabling the North Triumph field to resume production. Uncertainty exists regarding individual well performance at the new lower pressures, and cycling of some wells may continue.



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The curious thing about this diagram is the use of a new colour to show the effect of compression. No new field is involved, so all that compression should do is increase deliverability, at the expense of more rapid depletion of the reservoirs. It cannot delay output decline indefinitely, and the diagram shows beginnings of decline in late 2008. One would expect that the total output (over all time) would scarcely be affected by compression, so a very rapid decline would be expected after 2008. It is difficult to see how a decline of the output to a very low level can be avoided by the end of the decade or shortly after. In spite of this, [one report](#) on Rolls Royce's involvement in the project implies that 25 years' further output is expected.

The Sable Tier II project will develop six gas fields: Venture, South Venture, Thebaud, North Triumph, Glenelg and Alma. Combined, the fields contain nearly 85 billion cubic meters of recoverable gas reserves, one of the largest natural gas deposits remaining to be developed in North America. Sable is projected to produce a 25-year supply.

This view may have been encouraged by [a 2005 report](#) from the Canadian Association of Petroleum Producers, which contains the following:

Sable Offshore Energy Project Development CAPP

- The Sable Offshore Energy Project is in water depths ranging between 20 and 80m
- It consists of the six gas fields Venture, South Venture, Thebaud, North Triumph, Glenelg and Alma
- These fields contain about 85 billion m³ of recoverable gas reserves and is projected to remain in production until 2025
- In 2003, Shell downgraded the reserve base of the Sable Offshore Energy Project by 11%, to 700 bcf. The field is currently in a production decline

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In this diagram, the "85 billion cubic metres" is mentioned in point 3 as "recoverable gas reserves", but apparently is now only a 20 year supply. If one then considers point 4, some new things become apparent. The first is the use of different units, bcf (billion cubic feet) instead of billion cubic metres. This makes comparison with point 3 more difficult. Translated, it means that the Sable Offshore Energy Project had only 20 billion cubic metres of reserve base in 2003 - more like a six year supply, assuming a production rate of ten million cubic metres per day. This is consistent with the implications of the National Energy Board's production diagram above.

There is [some possibility](#) that a pipeline built to transport Sable Island gas to the mainland will be used for the nearby [Deep Panuke](#) project as the Sable fields wind down. This is in contrast to the [original plans](#), in which dedicated pipelines were to have been used because it was thought that the Sable pipeline would have no spare capacity.

Barring unexpected developments, it seems that the Sable Island gas project will indeed prove to be a ten year wonder. Gas users in Maritime Canada, who have watched the bulk of the Sable gas pass them by on its way to the U.S., will then become dependent on imported LNG - that is, [if it is available](#).



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