LAW OF THE SEA RESOURCE FRONTIERS

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COLP
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The Greenland Ice Sheet holds about 2.85 million cubic kilometers of ice - 10% of the world’s ice mass. About 81% of the surface is covered by ice and helps to preserve the global energy balance. The ice sheets reflect incoming solar energy and, thus, influence Earth’s temperature.
### Resource estimate for the arctic

<table>
<thead>
<tr>
<th>Region</th>
<th>Resource estimate</th>
<th>Source</th>
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<tbody>
<tr>
<td>Beaufort Sea</td>
<td>16.8 Bbbl oil</td>
<td>Chen, et al. 2007¹</td>
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<td>Arctic basins with discoveries</td>
<td>47.1 Bboe recoverable</td>
<td>IHS 2005</td>
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<td>ANWR</td>
<td>7.7 Bboe</td>
<td>US Geological Survey 1996</td>
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<tr>
<td>25% of arctic basins</td>
<td>901 Bbbl liquids and 4,949 tcf gas</td>
<td>US Geological Survey 1996</td>
</tr>
<tr>
<td>Greenland</td>
<td>1 Bboe</td>
<td>Gautier, et al, 2007²</td>
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The seas inside the Arctic Circle contain 14% - and potentially more - of the world's undiscovered oil and gas reserves.

Source: World Expro 2008
Fig. 1. Eight regions (in red) adjacent to the US and its dependences, identified by Mayer et al. (2002), where there likely exists extended continental shelf (ECS) beyond 200 nautical mi (in blue), where bathymetric, seismic and geophysical data need to be collected. Regions in this figure result from academic study and do not represent a formal position of the US, and are without prejudice to any rights that the US has with respect to its continental shelf.
February 6, 2008

- MMS OCS Sale 193 breaks record with $2.6 billion in high bids

- 7 companies bid on 488 blocks

- Highest bid $105,304,581 submitted by Shell
ARCTIC TECHNOLOGY CHALLENGES

- Working in extreme conditions – the cold
- Ice severity – crushing uncertainty
- Water depth – floating systems may be required
- Access to seasonal open water windows
- Protection against ice ridges and icebergs
- Subsea technology – autonomous underwater vehicles and robotics in some areas
- Environmental and social sensitivity to play a larger role in design considerations
The Orlan platform, with work areas enclosed and heated for winter, is surrounded by packed ice 3-5 ft (1-1.5 m) thick. (Photo courtesy of ExxonMobil Corp.)
In Norsk Hydro’s ice-strengthened spar concept for Shtokman, the mooring lines act as a defense against ice.
Reindeer watch the process barge for the Snøhvit LNG plant arrive by heavy-lift ship in 2005. This is the first LNG facility within the Arctic Circle. (Photo: Markus Johansson/Statoil)
Political Will

United States Must Accede to the Law of the Sea Convention…

…or risk losing out to claims by other countries
The U.S. Stands to Gain 1.2 million Nautical Square Kilometers By Acceding to the Law of the Sea Treaty

The United States could gain almost as much land as it did when purchasing Alaska in 1867.

Light blue - Areas of potential national claims to the continental shelf beyond 200 n.m. (potential US claims comprise all or part of areas 1,4,5 & 14 with total area of 1.2 million sq. km.)