Arctic Oil and Gas Development: Key Legal Issues

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“The most extensive oil resource can be found comfortably within the United States and the vast majority of hydrocarbon resources are currently found within the territory of each of the states. Nonetheless, the framework must be developed for some resources provinces.”

-Gaps in the Ice: Maritime Boundaries and Hydrocarbon Field Development in the Arctic by Timothy J. Tyler, James L Loftis, and Emilie Hawker
Arctic Knowledge: Tip of the Iceberg

“[T]he challenge of working in the Arctic, unlike virtually any other part of the globe, is that so little information is available that almost any new bit of data can change perspectives regarding oil and gas resources.”

-Scientist, U.S. Geological Survey
Two Main Issues

• Technical unknowns concerning the location of oil fields that underlie the Arctic

• Expansion of continental shelf claims yet to be submitted to and resolved by the CLCS
Circum-Arctic Resource Appraisal (CARA): USGS Probability Map of Arctic Oil or Gas

Probability Map of YTF Oil or Gas
CARA: Gas Provinces
Exploration Intensity

Figure 2-5. Assessment units of the Circum-Arctic Resource Appraisal, color-coded according to Exploration Intensity, as given by the highest level of petroleum exploration or development activity attained within an assessment unit. The open rectangle denotes the approximate location of the Alaska North Slope and Beaufort and Chukchi Seas Outer Continental Shelf areas. Modified from Gautier and others (in press).
IBRU Map of Maritime Jurisdiction and Boundaries in the Arctic Region
Expansion of the Arctic Continental Shelves

2 hypothetical approaches to partitioning the combined continental shelf.
1-Canada
2-Denmark
3-Norway
4-Russia
5-United States
Denmark’s Fieldwork Focusing on Acquisition of Bathymetric and Seismic Data
Ultimate Recoverable Oil and Gas

Beaufort-Mackenzie
- 8.2 billion barrels of oil
- 60.5 trillion cubic feet of gas

Arctic Islands
- 3.9 billion barrels of oil
- 58.3 trillion cubic feet of gas

Mackenzie Valley
- 0.6 billion barrels of oil
- 12.6 trillion cubic feet of gas

Eastern Arctic Offshore
- 1.5 billion barrels of oil
- 16.7 trillion cubic feet of gas

Drummond compilation March 2009: numbers represent means of probability distributions and are presented to illustrate the relative magnitude of the resource. Estimate of ultimate potential are based on inference and subject to many uncertainties.
Arctic Hydrocarbon Resources

Sources:
United States Geological Survey (USGS); AMAP 1997, 1998 and 2002; CAFF. 2001; UNEP World Conservation Monitoring Centre (WCMC); United States Energy Information Administration (EIA); International Energy Agency (IEA); Barents Euro-Arctic Council (EEAC); Comité professionnel du pétrole (CPDP), Paris; Institut français du pétrole (IFP), Paris; National Oceanic and Atmospheric Administration (NOAA); The World Bank; Alaska Department of Environmental Conservation, Division of Spill Prevention and Response; United States Coast Guard (USCG).
### Existing Delimitation Treaties

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Precedents for a Unitization Framework

• 2010 Barents Sea Agreement (Nor.-Rus.)
  – Annex II – Transboundary Hydrocarbon Deposits
• North Sea Agreements (Nor.-UK)
  – Frigg and Statfjord Agreements
• Other bilateral international agreements
  – 2012 US-Mexico Agreement
  – Australia/Timor L’Este; Trinidad and Tobago-Venezuela
• Examples of commercial parties providing solutions
  – Brunei/Malaysia
Speaker Biography – Timothy Tyler

Tim’s 15-year litigation practice emphasizes both international commercial and investor-state arbitration and U.S. litigation with a non-U.S. element. His work involving contracts with state parties has a strong focus on the oil and gas industry. In practice, he regularly advises on and drafts international arbitration clauses in contracts as well as structuring transactions to gain investment treaty protection.

He has been involved in ad hoc arbitrations under the UNCITRAL Rules, as well as institutional arbitrations under the rules of ICC, ICDR, ICSID, AAA, Singapore International Arbitration Centre, and Cairo Regional International Arbitration Centre. In these and other proceedings, his international work encompasses particular experience with clients in Canada, Mexico, the Commonwealth of Independent States, the Middle East, and Europe.

Tim has taught international commercial and investor-state arbitration at The University of Texas School of Law, where he has served as an Adjunct Professor. Since Fall 2009, he has been the director of the international arbitration section of The University of Texas School of Law Center on Global Energy, International Arbitration, and the Environment.
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