

Arctic Oil And Gas Resources Energy Resources Map Circum-Pacific Region, Arctic Sheet

Kenneth J. Drummond
Drummond Consulting, Calgary, Alberta
ken@drummondconsulting.com

The Arctic Energy-Resources Map published in 2000 covers the North Pacific Ocean, the Arctic Ocean, part of the North Atlantic Ocean and surrounding land. The map shows oil and gas fields, oil sand, oil shale, coal deposits, geothermal energy sites, onshore and offshore thickness of sedimentary rocks, and active tectonic plate boundaries.

Background data on land are from the Arctic geologic map (Moore, 1995). Chief tectonic features of the Arctic are: (1) parts of the Canadian and Russian shields, (2) broad belts of undeformed, younger sedimentary platform, and (3) fold belts of sedimentary, extrusive and intrusive igneous rocks that extends along the entire margin of the continents facing the Pacific and Arctic oceans. Sedimentary basins are shown by sediment isopachs, colored to indicate the age of the oldest major sedimentary unit. Age and lithology of the basement is generally indicated by the surrounding bedrock geology. Basic background for oceanic regions is bathymetry printed in a light blue tint. Overprinted on this are sediment isopachs, colored to indicate the age of the underlying oceanic crust.

Major productive basins of the Arctic include; Cook Inlet, Colville, Canada Territories Mainland, West Siberian, Timan-Pechora, Vilyuy, Anabar-Khatanga, and Mid-Norway. Areas with significant discoveries, with no production include, Beaufort-Mackenzie Basin, Sverdrup Basin, Labrador Shelf, and Barents Sea (Norway and Russia). Areas with minor oil and gas discoveries include Eagle Plains and Anadyr basins. A number of the Arctic basins are relatively unexplored, and many of these have significant hydrocarbon potential.