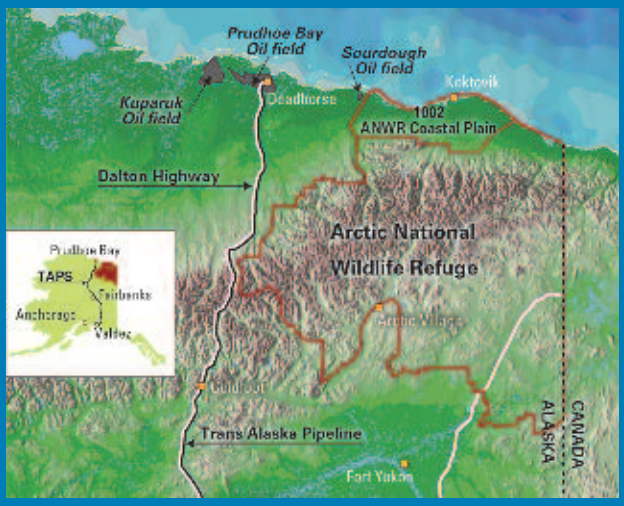
Huge volumes left in the ground

The coastal plain of the Arctic National Wildlife Refuge in Alaska is not likely to be exploited for hydrocarbons in the near future. Nevertheless, this geological province is referred to as the "nation's single greatest onshore prospect for oil".



The coastal plain ("1002 area") of the Arctic National Wildlife Refuge in Alaska, bounded to the south by the Brooks Range, is by USGS believed to contain billions of barrels of oil. The 1998 USGS petroleum assessment concluded that up to 16 billion barrels remain unexploited.

The question of whether or not to allow drilling in the Arctic National Wildlife Refuge (ANWR) has been an unresolved political topic for more than 25 years. In 1980, President Jimmy Carter and the Congress set aside an area on the coastal plain for potential exploration and development: the 1002 area. They did so because of initial indications of the area's hydrocarbon potential. Opponents of petroleum exploration in the ANWR 1002 area celebrated a victory at the end of 2005 when the US Senate blocked an attempt to initiate drilling this year.

The Arctic National Wildlife Refuge, located just east of the giant Prudhoe Bay oil field, was established in 1980 to preserve unique wildlife, wilderness and recreational values. The refuge is said "to support a greater variety of plant and animal life than any other protected area in the circumpolar arctic". The future of the coastal plain (referred to as the "1002 area") was, however, left in limbo because of the area's potentially enormous oil and gas resources and its importance as a wildlife habitat. Congressional authorization is now required before drilling may proceed in this area.

The coastal plain, covering approximately 6000 km^2 (the equivalent of a North Sea quadrant, 30 UK blocks or 12 Norwegian blocks), stretches southward from the coast to the foothills of the Brooks Range. This area of rolling hills, small lakes, and braided rivers is dominated by tundra vegetation consisting of low shrubs, sedges, and mosses.

In 1998, the US Geological Survey (USGS) re-examined the geology of the ANWR 1002 area and prepared a comprehensive petroleum resource assessment that involved 3 years study by 40 USGS scientists.

The total quantity of technically recoverable oil within the entire assessment area (including the offshore within the 3-mile boundary) was estimated to 10.3 billion barrels (mean value), with 30% located in the offshore basin. The study also indicated that at least 5.7 billion (95% probability) and possibly **as much as 16.0 billion (5% probability) barrels of oil** exists in ANWR.

Altogether almost 40 oil fields have been discovered in Alaska's "North Slope" to date. Recoverable reserves are probably close to 20 billion barrels of oil and 8 billion barrels of gas (o.e.). The Prudhoe Bay oil field, situated on the coastal plain less than 100 km from the western boundary of ANWR, was soon recognized as the largest oil field in the United States when discovered in 1968. Initial recoverable reserves have been estimated to more than 13 billion barrels of oil. The most prolific reservoirs occur within sandstones and conglomerates of the Permian-Triassic section, with deltaic sandstones of the Sadlerochit Group being the principal productive unit.

The 800-mile-long Trans Alaska Pipeline System (TAPS) is one of the largest pipeline systems in the world. It stretches from Prudhoe Bay on Alaska's North Slope to Valdez, the northernmost ice-free port in North America. Since pipeline startup in 1977, the pipeline has successfully transported over 15 billion barrels of oil.