PETROLEUM GEOLOGY AND PROSPECTIVITY OF THE RUSSIAN CHUKCHI SEA

EXECUTIVE SUMMARY

PART I:	Geology of the Chukchi Sea and Surrounding Areas;
	Structure, Stratigraphy and Palaeogeographic Development

- I.1. Overview of the Chukchi Sea; its Geography and Climate.
 - I.1.1 Description of the report
 - I.1.2 Brief description of the Chukchi Sea and its coastal belt; geography and climate.
 - I.1.3 Brief introduction to the petroleum geology of the Chukchi Sea.

I.2. The Tectonic Development of the Russian Sector of the Chukchi Sea and Surrounding Areas

- I.2.1 Early development
- I.2.2 Mid-Palaeozoic to Early Triassic development
- I.2.3 Middle Triassic to Early Cretaceous development
- I.2.4 Early Cretaceous to Cenozoic development

I.3. Stratigraphic Development of the Chukchi Sea and Surrounding Areas

- I.3.1 Franklinian
- I.3.2 Ellesmerian

Lower Ellesmerian

Upper Ellesmerian

- I.3.3 Rift (or Beaufort) Sequence
- I.3.4 Brookian Sequence

Colville Basin

North Alaska and the US Chukchi shelf

North Chukchi Basin

South Chukchi Basin

PART II: Petroleum Geology and Prospectivity of the Russian Sector of the Chukchi Sea

II.1 Review of Known Hydrocarbons and Prospectivity in Northern Alaska and the US Chukchi Sea

II.1.1 Northern Alaska

Reservoirs and traps

Source rocks

II.1.2 US Chukchi shelf

II.2 Prospectivity of the Russian Chukchi Shelf

- II.2.1 Exploration history of the Russian Chukchi shelf
- II.2.2 Kuvaeva Trough
- II.2.3 North Chukchi Basin

Structure

Stratigraphy

Reservoirs and traps

Source rocks

- II.2.4 Chukchi Horst-and-Graben System
- II.2.5 Wrangel-Herald Arch
- II.2.6 South Chukchi Basin

Structure

Stratigraphy

Reservoirs and traps

Source rocks

II.2.7 Summary of the hydrocarbon prospectivity of the Russian sector of the Chukch Sea

BIBLIOGRAPHY

ENCLOSURES

Contents - 3

LIST OF FIGURES AND ENCLOSURES

- Figure I.2.1 General topographic and location map of the Chukchi Sea and surrounding land areas.
- Figure I.2.1 Present position of the Chukchi-Arctic Alaska Block (CAAB) in the Siberia-Alaska-North America sector, showing major tectonic elements.
- Figure I.2.2 Palinspastic cartoon illustrating the tectonic setting of the Bennet-Barrovia block in the late Ordovician.
- Figure I.2.3 Palinspastic cartoon illustrating (a) the tectonic setting of the Bennet-Barrovia block in the Middle Triassic, and (b) its Palaeozoic-early Mesozoic tectonic evolution.
- Figure I.3.1 Seismic section across the South Chukchi Basin with some elements of interpretation.
- Figure II.1.1 Characteristics of source rocks and reservoirs penetrated in US Chukchi shelf wells.

ENCLOSURE 1 Chukchi Sea: Regional Structure and Location Map

ENCLOSURE 2 Chukchi Sea: Structure Map of the Russian Sector

ENCLOSURE 3 Chukchi Sea: Seismic Grid over the Russian Sector

ENCLOSURE 4 Chukchi Sea: Illustrative Seismic Lines from the Russian Chukchi Shelf

ENCLOSURE 5 Chukchi Sea: Summary Stratigraphic Columns of the Main Basins of the Shelf and Alaskan North Slope and their relationships with hydrocarbon accumulations and major tectonic events