Fugro NPA's 2007/8 Circum Arctic SAR Seep Study

Rationale

Industry interest in the exploration of the circum Arctic basins is gathering pace in all the countries that border it: USA (Alaska), Canada, Greenland, Norway and Russia with new areas now being released for exploration (such as the Chukchi Sea). In many of these areas, geological data, especially source rock data, is at a premium. To address this key risk, Fugro NPA are now releasing a new Circum Arctic SAR Seep Study (fig 1) that now covers almost all of the circum Arctic basins, including:

- Chukchi Sea, Alaska
- Beaufort Sea (including the North Slope and Mackenzie Delta)
- West Greenland – Baffin Bay
- East Greenland
- Barents Sea (Norwegian and Russian sectors)
- Kara Sea and Timan-Pechora Basin
- Laptev Sea
- East Siberian Sea

Fig 1: Fugro NPA's Arctic coverage. ***Red*** *= NPA's current coverage.* ***Yellow*** *= in progress.* ***White =*** *ice coverage in height of summer, 2006*

SAR (Synthetic Aperture Radar) seep detection is a proven technique for mapping surface oil seeps and can provide the first indication of the existence of black oil petroleum systems. This method is particularly valuable in undrilled deep water frontier areas such as the Arctic.

This study incorporates comprehensive weather screening of archive data plus the accurate delineation of present day ice limits (fig 1).

Components of Fugro NPA Circum Arctic Study

- 955 SAR scenes have already been interpreted providing at least single coverage over much of the Arctic waters (see fig 1)
- More than 1825 slicks mapped, including more than 165 higher confidence seepage slicks, indicating presence of oil petroleum systems in certain basins
- Slick density and slick repeat data
- Fully digital data available in modular USID format for large or small areas

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