Ras Al Khaimah 2018 seepage study

As a world-leading satellite remote sensing service provider, **NPA Satellite Mapping (NPA)** detects, interprets, classifies and monitors natural seepage and pollution slicks occurring in offshore environments.

**Ras Al Khaimah seepage study**

*NPA’s* satellite seepage detection project offers extensive coverage across offshore Ras Al Khaimah, the northmost emirate of the United Arab Emirates. Seepage detection by SAR (Synthetic Aperture Radar) is a proven technique for mapping surface oil seeps which could provide the first indication of petroleum systems in these basins:

- Over 40 interpreted SAR scenes over contract blocks in Ras Al Khaimah’s 2018 offshore petroleum licensing round
- 16 new SAR scenes have recently been added
- New data is being sourced over areas of sparser coverage

**Background**

The five blocks offered in the 2018 offshore petroleum licensing round include undeveloped oil, mature-gas condensate redevelopment and near-field exploration opportunities.

These shallow water blocks contain proven working and active petroleum systems, such as the United Arab Emirates Cretaceous play, with established pre-existing infrastructure and links to mature markets, with much remaining potential for development.

*NPA’s* seepage detection project is an ideal tool for screening new, undeveloped offshore regions, such as Ras Al Khaimah, and derisking any potential plays.

*NPA* is currently increasing coverage levels of satellite data offshore the United Arab Emirates, which could potentially uncover temporal repetition over existing slicks or discover new sites of possible seepage. This key information for offshore Ras Al Khaimah is now available from **NPA**.
NPA offers the Global Offshore Seeps Database (GOSD) as the main component of its Seep Explorer onshore and offshore seeps product suite. Hydrocarbon seep detection from satellite imaging maps the location and repeatability of naturally occurring oil seepage offshore. GOSD is a recognized and valuable tool for New Ventures & Exploration teams and has been adopted by the majority of the major international oil companies.

**Global offshore seep database**
- ~32,000 satellite radar images interpreted for natural oil seepage, >200,000 slicks recorded
- Optimal satellite SAR data selected from weather screening of the world’s SAR archives
- Multiple coverage - up to 10x coverage becoming standard
- Data integrated and interpreted with supporting Robertson geological, geophysical and geochemical data, where available
- New high-resolution data from TerraSAR-X, Radarsat-2 and Cosmo Skymed satellites used for license studies

**Deliverables**
- Full ArcGIS** deliverables and custom ArcGIS toolbar enhancing results visualization
- Results overlaid and compared to collateral data layers including: bathymetry, gravity, sedimentary thickness, magnetics, shipping lanes and shipwrecks
- Online webserving enables content to be viewed by all approved users

**Additional unique features**
- Seepage intensity maps - related to basin leakiness parameters
- Seep data accessible via the Robertson Basins & Plays geological database
- Complete CGG validation chain - Seeps - Multibeam - Drop Cores - Geochemistry

NPA provides global satellite coverage of offshore basins.

An explanation of how seeps form and are detected by satellite.