

# The Arctic Frontiers Gateway

Infield Systems have developed a unique online GIS and mapping tool for the offshore oil, gas, renewable energy and associated marine industries - The Offshore EnergyGateway. The Offshore EnergyGateway enables Infield Systems to offer its clients a geographic tool to view critical data covering infrastructure and assets. Infield Systems have also developed a database and geographic layers showing all of the licence blocks, licence block operators, coastlines, national boundaries, median lines and bathymetry which overlay the infrastructure and asset layers.

**The Arctic Frontiers** is the 14th region to be developed on the Offshore EnergyGateway where the complete package provides comprehenive data and mapping for the entire Arctic region.

The Offshore EnergyGateway can be accessed through any Internet browser where the user can utilise a series of tools to search, download and export maps and data as well upload their own GIS company specific data to integrate and overlay with the EnergyGateway mapping system.

### The Arctic Frontier - the end of easy oil?

With increasing global consumption and depleting reserves, oil companies are looking to frontier areas to meet future demand. The Arctic holds the world's largest remaining untapped gas reserves and some of its largest undeveloped oil reserves. A significant proportion of these reserves lie offshore, in the Arctic's shallow and biologically productive shelf seas. According to the oil industry, the Arctic is the "final frontier" for petroleum development.

The Arctic, however, holds new and unique challenges for oil companies and offshore service companies. The environment alone poses risks for safety, technologies and infrastructure, while the remoteness of the area will make getting Arctic reserves to market challenging.

The N62 degree region has long been viewed as a huge resource for oil and gas but the harsh unforgiving conditions and tricky economics have made it unappealing, but this viewpoint is now changing.

The world's established regions of the Gulf of Mexico to the North Sea, Middle East, West Africa, Latin America, South East Asia and Australasia and more recently China and India, are fulfilling our thirst for oil, but demand grows and traditional reserves are being expended. Attention is now turning to the Arctic Circle, which covers about 6 per cent of the earth's total surface and is one of the last regions of any significant size to be explored for oil and gas.

More specifically, the focus now is upon offshore resources in the Arctic Circle, in continental shelves under less than 500m of water. Onshore areas in the region have already been explored, with some 40 billion barrels of oil, 1,136 trillion cubic feet of natural gas, and 8 billion barrels of natural gas liquids having been developed, primarily in the West Siberian Basin of Russia and on the North Slope of Alaska.

But the real dilemma is "Exactly how much untapped oil is there in the region?"

The area north of the Arctic Circle has an estimated 90 billion barrels of undiscovered, technically recoverable oil, 1,670 trillion cubic feet of technically recoverable natural gas, and 44 billion barrels of technically recoverable natural gas liquids in 25 geologically-defined areas thought to have potential for petroleum.

According to the latest 2009 USGS report, these resources account for about 22 per cent of the undiscovered, technically recoverable resources in the world. The Arctic accounts for about 13 per cent of undiscovered oil, 30 per cent of undiscovered natural gas, and 20 per cent of the undiscovered natural gas liquids in the world. About 84 per cent of these estimated resources are expected to occur offshore.

Exploration for petroleum has already resulted in the discovery of more than 400 oil and gas fields north of the Arctic Circle. The Arctic is a frontier region and oil and gas development will require the building of massive infrastructure.



Full extension view of the Arctic Frontiers Map

# **Arctic Frontiers Oil & Gas Mapping & Data Gateway**

The Arctic Frontiers Oil & Gas Online Data & Mapping Gateway is designed to give visual and full data access to the challenging Arctic region of the offshore oil and gas industry. Full details about each field, platform and pipeline shown on the map is listed behind each symbol and can be searched, downloaded or exported from the EnergyGateway or through Infield Systems' data portal, InfieldLive.

## **Regions covered:**

- Alaska
- Northern Canada
- Greenland
- Iceland
- Northern Norway & Spitsbergen
- Northern Russia
- The Baltic & Barents Seas

#### **Arctic Frontiers Gateway Map Layers:**

## **EnergyGateway Geographic Layers:**

- Country Median Lines
- Coastlines
- Country boundaries
- Geographic longitude & latitude grid
- Licence blocks
- Bathymetry
- Major ports & cities

## **Arctic Frontiers Additional Geographic Layers**

- Shipping lanes
- Supply, support & research bases
- Areas of high radiation & nuclear test zones
- Seasonal minimum & maximum ice flows
- Helicopter bases and aircraft landing locations

#### Offshore Energy Database Layers:

- Fields
- Pipelines
- Fixed platforms
- Floating production systems
- Onshore terminals

Behind each visible symbol full data sets are available and details are listed below. Please note that the visual access to pipelines only includes those that start or terminate at a platform or on shore facility or reference.

## **Access To InfieldLive**

As part of the Arctic Frontiers Gateway, subscribers get access to Infield Systems' data portal, InfieldLive, where they can run searches, export results and download complete data sets for all of the information relating to the Arctic on the Infield Offshore Energy Database for both operational and future projects. The data sets subscribers get access to are as follows:

#### **Fields**

Region, Country, Operator Name, Field Name, Date/Year Discovered, Date/Year On Stream, Depletion Date/Year, Field Life, Location, Project Status, Reserves Oil, Gas & Condensate, Production Rates Oil, Gas & Condensate, Water Depth, Development Type, High Temperature High Pressure, Surface & Subsea Completed Wells; Numbers by Type & Project Status

#### Platforms:

Region, Country, Operator Name, Platform Name, Product, Location, Date/Year Installed, Decommissioning Date/Year, Platform Type, Construction Material, New Build Hull, Project Status, Manufacturer, FPSO Operator, Water Depth, Function, Surface Completed Production Wells, Surface Completed Injection Wells, Well Slots on the Deck, Jacket Weight (Tonnes), Total Weight (Tonnes), Topside Weight (Tonnes), Evacuation or Access Means, Normally Manned or Unmanned.

## Pipelines:

Region, Country, Operator Name, Pipeline Route, Project Status, Diameter (Inches), Length (Metres), Buried, Surface or Trench Lay, Product, Date/Year Laid, Water Depth (Metres), Type, Tube Type, Weight Coat, Lay Vessel Type, From Structure, To Structure.

#### **Subsea Completions:**

Region, Country, Operator Name, Manufacturer, Date/ Year of Order, Subsea Unit Name, Purpose, Water Depth (Metres), Product, Type, Well Type, Tree Type, Template, Number of Well Slots, Number of Wells, Start-Up Date/ Year, Work-Over, Project Status.

#### **Control Lines:**

Region, Country, Operator Name, Control Line Route, Project Status, Length (Metres), Buried, Surface or Trench Lay, Date/Year Laid, Water Depth (Metres), Type, Line Type, From Structure, To Structure.

#### **Single Point Moorings:**

Region, Country, Operator Name, Single Point Mooring Name, Type, Water Depth (Metres), Date/Year Installed, Storage, Currently Functioning, Project Status.

#### **Onshore Terminals:**

Region, Country, Operator Name, Onshore Terminal Name, Date/Year on Stream, Product Range, Potential Capacity (MTOE), Potential Capacity (MMBOE), LNG/GTL, LNG Capacity (Mt/Yr), Project Status.

### **Subscription Costs:**

Costs for 12 months subscription to this complete Arctic Frontier package are as follows:

Single site, three user licence: UK£4,750
Additional site licence: UK£1,295
Corporate licence: UK£6,925

This fee covers unlimited access to the EnergyGateway mapping system and background data through InfieldLive, export of data, export of map images and all updates.

## **Advertising Opportunities:**

Limited advertising Offshore EnergyGateway and the Arctic Frontiers Gateway is available through banner display linked to both the full EnergyGateway Demo Site and within the full Arctic Frontiers Mapping & Data Gateway.

All banner adverts will have direct URL link to the advertiser web site.

All advertisers will have email 'hits' notifications, as to those companies who have shown interest in the site.

Advertising will be for a 12 month period

#### Arctic Frontiers Banner Advertisement Costs (p/a):

Full Column (200 x 700 pixel): UK£4,500
Half Column (200 x 340): UK£3,000
Third Column (200 x 225): UK£2,500
Quarter Column (200 x 225): UK£2,000

A full column is 200 pixels wide by 700 pixels high.

All advertisers will receive a voucher for 25% of their online advertising investment to be redeemed against full subscriptions to the Arctic Frontiers Mapping & Data Gateway.