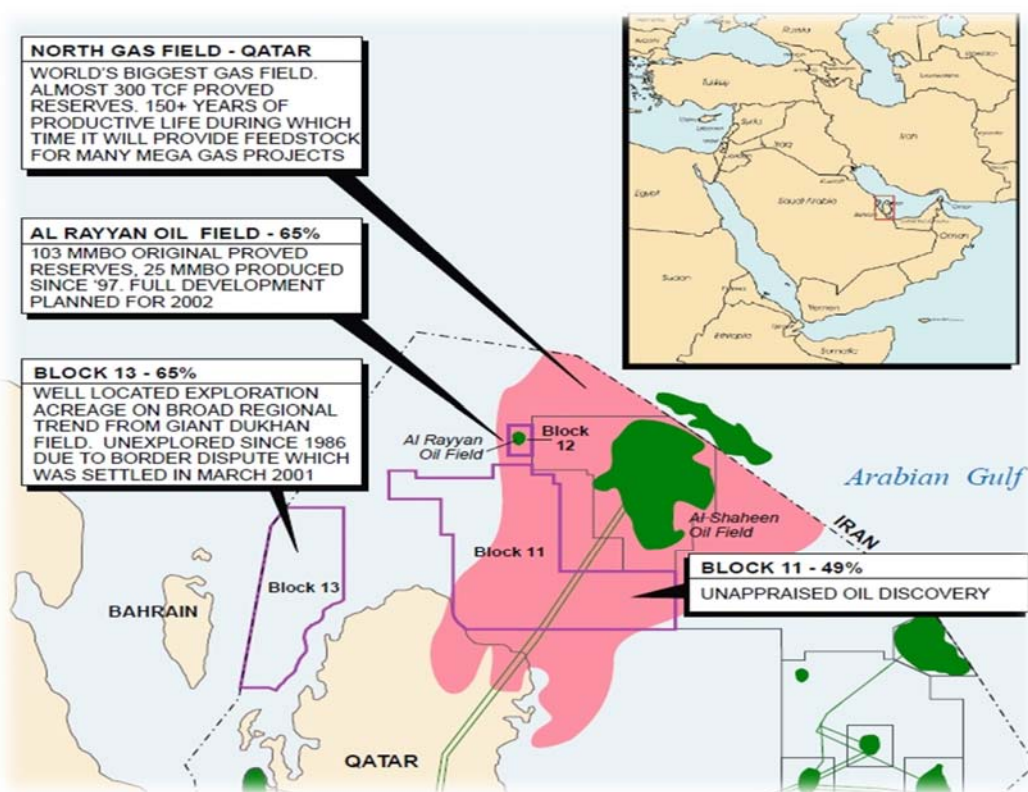


Al Shaheen Oil Field, Qatar

(Reference: Offshore-Technology, Maersk Oil & Other Sources)

The Al Shaheen Oil Field is a production oil and gas field off the north east coast of Qatar in the Persian Gulf, 80 kilometers (50 mi) north of Doha. The oil field lies over the North Gas Field, one of the largest oil fields in the world. The field is operated by Maersk Oil Qatar as of Denmark under a production sharing agreement with Qatar Petroleum, on behalf of the state of Qatar



Key Data

Name: Al Shaheen

Location: 180km north of Doha, Qatar peninsular

Block: 5

Discovered: 1992

Geology: Khuff formation, including north field: 6,000km²

Drawbacks: Low permeability, limited thickness, geological complexity

Iran Oil Industry

Area: Qatar Arch, 2,214km²



The largest producing oil field on the west coast of the Qatar peninsula is the Dukhan field, operated by Qatar Petroleum (QP). Offshore production is mainly via Exploration and Production Sharing Agreements (EPSA) with foreign oil companies in partnership with QP on behalf of the Government of Qatar. Qatar has proven recoverable oil reserves of 15.2 billion barrels.

Qatar Petroleum operates two offshore fields, Mydan Mahzam and Bul Hanine, the other four being Id al-Shargi North Dome, al-Shaheen, al-Rayyan and al-Khalij.

The block 5, Al Shaheen oil field lies 180km north of Doha and is operated by Maersk Oil Qatar AS (Qatar Arch, 2,214km²), producing 300,000 barrels per day. Maersk invested \$2.5bn in the development of the field.

In January 2010, Overseas Shipholding Group (OSG) delivered the floating storage and offloading (FSO) unit Asia to the Al Shaheen field. The 432,023dwt FSO Asia is owned by OSG and Euronav.



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Maersk had placed an order for another vessel with OSG, FSO Africa, to operate on the field but cancelled the contract in January 2010 due to delays in the delivery of the vessel.

"Block 5's production in the first quarter of 2006 amounted to 240,000 barrels a day."

Offshore Qatar block 5

The 3,500km² block 5 was discovered by Maersk in 1992 off the coast of Qatar. It received \$2bn in funding as the company explored the possibilities of establishing commercial oil production.

The exploration and exploitation rights included block 5 geological formations above the Khuff Formation, containing the 'north field', 6,000km² northwest of the Qatari peninsula, the world's largest non-associated natural gas field.

Initially it was questionable whether the oilfield was sustainable, despite being hydrocarbon, due to low permeability, limited thickness and geological complexity. It has since been successfully developed, mainly due to cutting-edge technology.

Al Shaheen early developments

Appraisal wells in the field were completed in 1994, along with the acquisition, processing and interpretation of 2D and 3D seismic data. Maersk Oil's horizontal well technology has been utilized since 1994, drilling wells up to 31,000ft in length.

Production facilities were extended in 1995-96 with new subsea export pipelines, an additional single-point mooring loading buoy, new process facilities and a STAR-type wellhead platform.

2003 figures estimated reserves of about 780 million barrels of oil. The facilities were expanded in 2004, following further development plans in 1996 and 2001, with three additional platform locations.



Iran Oil Industry

A 2004 EPSA with QP covered the 139km² block 5 extension area, northwest of the Al Shaheen field. \$5bn was scheduled to be invested in the region in late 2005. The agreement comprised a work programme of geological and geophysical studies and well drilling.

In 2005, a Maersk-QP Field Development Plan (2005 FDP) called for the drilling of more than 160 production and water injection wells during a six-year period from 2006, plus three offshore platform locations with production and accommodation facilities; 18 new platforms in total.

In March 2010, Maersk completed installation of 15 new platforms and related offshore facilities at the field under the Al Shaheen 2005 FDP. Installation of 131 of the 160 production and water injection wells were also completed. The remaining wells were completed by May 2010.

"The Al Shaheen oil field lies 180km north of Doha and is operated by Maersk Oil Qatar AS."

The platforms are interconnected by 18 subsea pipelines, 120km long, with power distributed via five subsea cables, about 40km long.

Maersk Oil also agreed to build and operate facilities for the delivery of associated gas to QP for use at their onshore plants.

Block 5's production in the first quarter of 2006 amounted to 240,000bpd, with 450,000bpd of water injection capacity. In 2009, oil production was around 300,000 barrels per day.

The field today

As many as 20 pipelines currently connect six production installations, plus export pipelines for oil and gas. Besides multiphase, water injection, produced water and gas pipelines include four low pressure wet gas pipelines.



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There are 18 permanent platforms, and 160 operational production and water injection wells; 26 exploration and appraisal wells have been completed in block 5 and the block 5 extension area.



Power and automation technology group ABB, received an order worth \$26m as the Main Electrical and Instrumentation Vendor (MEIV) for two Maersk Oil Qatar oil platforms.