

ENDICOTT, EIDER OIL

Reference List

Alaska Oil and Gas Conservation Commission, 2000, Conservation Order No. 449, available online at:
http://www.state.ak.us/local/akpages/ADMIN/ogc/orders/co/co400_499/co449.htm

Alaska Oil and Gas Conservation Commission, 2005, Production Database

Rathke, W., 2000, Testimony before the Alaska Oil and Gas Conservation Commission in support of the Application of BP Exploration (Alaska) Inc. to Define the Eider Oil Pool, May 25, 2000, AOGCC Conservation Order No. 449 file.

Endicott, Eider Oil Pool

Summary

The Eider oil pool was discovered in 1998¹ by the Duck Island Unit MPI 2-56/EID well. This pool is located 1-1/2 miles offshore in the westernmost portion of the Duck Island Unit, and it consists of oil below a gas cap within the Ivishak Formation. The pool delineated by two wells, DIU MPI 2-56A/EID and DIU MPI 2-30A, which have 5 additional sidetracks or plugbacks.²

Two development wells are located within the pool, DIU MPI 2-56A/EID and DIU MPI 2-30A/E12. Initial production began from 2-56A/EID in June 1998, and averaged 1,850 bopd through December 1998. In January 1999, 2-30A/E12 was brought online. Production immediately jumped to 6,244 bopd in February 1999, but then declined rapidly to 1,189 bopd by September 1999, and the pool was shut in from October 1999 through May 2000. In June of 2000, 2-56A/EID was converted to a water injector, and production was restarted, relying on a single producer, 2-30A/E12. Production peaked in July 2001 at 2,254 bopd, and then declined to about 600 bopd in May 2004. During July 2004, 2-56A/EID was converted to production again, but during the last half of 2004, production from both wells averaged less than 100 bopd.³

Geology

The Eider oil pool is situated in a fault-controlled anticline that is truncated by the Lower Cretaceous unconformity. The accumulation occupies about 300 acres.⁴

Within the pool, the Ivishak Formation consists of three regressive, stratigraphic units: the Lower Sand comprising upper shoreface or marine influenced fluvial and distributary sands, the Middle Shale comprises floodplain or bay fill, and Upper Sand that consisting of mostly fluvial sediments. The Lower Sand ranges from 80' to 125' thick, and averages 21% porosity and 30 md permeability. The Middle Shale is 75' to 90' thick and has average porosity and permeability values of 20% and 300 md, respectively. The Upper Sand ranges from 60' to 125' in thickness, has average porosity of 20%, and average permeability of 300 md. Faulting and fracturing causes these three stratigraphic units to be in pressure communication. API oil gravity ranges from 23.1 to 23.8 degrees, and original oil-in-place (OOIP) is estimated at 13.2 million barrels.⁵

SFD

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¹ Rathke, W., 2000, Testimony before the Alaska Oil and Gas Conservation Commission in support of the Application of BP Exploration (Alaska) Inc. to Define the Eider Oil Pool, May 25, 2000; Alaska Oil and Gas Conservation Commission Conservation Order No. 449 file.

² Rathke, W., 2000, Testimony before the Alaska Oil and Gas Conservation Commission in support of the Application of BP Exploration (Alaska) Inc. to Define the Eider Oil Pool, May 25, 2000; Alaska Oil and Gas Conservation Commission Conservation Order No. 449 file.

³ Alaska Oil and Gas Conservation Commission, 2004, Production Database

⁴ Rathke, W., 2000, Testimony before the Alaska Oil and Gas Conservation Commission in support of the Application of BP Exploration (Alaska) Inc. to Define the Eider Oil Pool, May 25, 2000

⁵ Alaska Oil and Gas Conservation Commission, 2000, Conservation Order No. 449, available online at:
http://www.state.ak.us/local/akpages/ADMIN/ogc/orders/co/co400_499/co449.htm