

# **PRUDHOE BAY, NIAKUK OIL**

## **Reference List**

Alaska Oil and Gas Conservation Commission, 1994, Conservation Order No. 329, Prudhoe Bay Field, Niakuk Oil Pool; available on line at [http://www.aogcc.alaska.gov/orders/co/co300\\_399/co329.htm](http://www.aogcc.alaska.gov/orders/co/co300_399/co329.htm)

Alaska Oil and Gas Conservation Commission, 2005, Well and Production Information Database

# Niakuk Oil Pool

## Summary

The Niakuk Oil Pool is defined as the accumulation of oil and gas in the Kuparuk River Formation ("Kuparuk") that correlates with the interval between 12,318 feet and 12,942 feet measured depth (9351 feet and 9842 feet true vertical depth subsea).<sup>1</sup> Regular production began from the pool in April 1994, and peaked at 37,172 barrels of oil per day in September 1996. Since 2000, Niakuk oil production has declined at an average rate of about 15% per year. During December 2004, Niakuk averaged 7,239 barrels of oil per day, 36,565 barrels of water per day, and 6,861 MCF of gas per day.<sup>2</sup>

Lateral heterogeneity and abrupt facies change characterize the Kuparuk in the area. The Niakuk reservoir contains two elongated, oil-bearing segments that do not appear to be in hydraulic communication. Normal faults bound the two segments on the north and south, and numerous moderate-displacement normal faults cut the reservoir. The western segment ("Segment 1") contains approximately 545 acres. The eastern segment ("Segment 2") contains approximately 1,310 acres. Porosity in Segment 1 varies from 15.2% to 24.4%, permeability varies from 6 to 1,250 millidarcies, and oil saturation ranges from 66% to 75%. In Segment 2, porosity ranges from 19.5% to 23.0%, permeability varies from 1 to 3,008 millidarcies, and oil saturation ranges from 67% to 79%. Oil gravity measures 24.0 degrees API. A gas-oil-contact has not been identified in the Niakuk wells. Estimated original oil in place ("OOIP") for the Niakuk reservoir is 137.4 MMSTB (56.1 MMSTB in Segment 1 and 81.3 MMSTB in Segment 2) and original gas in place ("OGIP") is 90.9 BSCF.<sup>3</sup>

SFD

Revised May 31, 2005

---

<sup>1</sup> Alaska Oil and Gas Conservation Commission, 1994, Conservation Order No. 329, Prudhoe Bay Field, Niakuk Oil Pool; available on line at [http://www.aogcc.alaska.gov/orders/co/co300\\_399/co329.htm](http://www.aogcc.alaska.gov/orders/co/co300_399/co329.htm)

<sup>2</sup> Alaska Oil and Gas Conservation Commission, 2005, Well and Production Information Database

<sup>3</sup> Alaska Oil and Gas Conservation Commission, 1994, Conservation Order No. 329, Prudhoe Bay Field, Niakuk Oil Pool; available on line at [http://www.aogcc.alaska.gov/orders/co/co300\\_399/co329.htm](http://www.aogcc.alaska.gov/orders/co/co300_399/co329.htm)