

KUPARUK RIVER, WEST SAK OIL

Reference List

Alaska Oil and Gas Conservation Commission, 2003, Conservation Order No. 406, available online at:
http://www.state.ak.us/local/akpages/ADMIN/ogc/orders/co/co400_449/co406.htm

Alaska Oil and Gas Conservation Commission, 2003, Conservation Order No. 406a, available online at:
http://www.state.ak.us/local/akpages/ADMIN/ogc/orders/co/co400_449/co406a.htm

Alaska Oil and Gas Conservation Commission, 2005, Production Database

Nelson, K., 2005, Technology Driving West Sak Viscous Development: Petroleum News Alaska, Volume 10, No. 2, Week of January 9, 2005; available online at
<http://www.petroleumnews.com/pnads/985090053.shtml>

West Sak Oil Pool

Summary

The West Sak Oil Pool is located largely within the boundaries of the Kuparuk River Unit ("KRU"), but it laps over into the Milne Point Unit to the NE and extends to the south, beyond the boundary of the KRU. The West Sak Oil Pool is currently developed from four pads (KRU 1B, 1C, 1D, and 1E), and it has produced continuously since December 1997. West Sak oil production within the KRU has climbed steadily from the initial monthly average of 19 barrels of oil per day ("BOPD") to approximately 9,300 BOPD during the first 8 months of 2004. During September 2004, West Sak oil production abruptly jumped to its current level of 17,000 BOPD when several new wells were brought on line. In December 2004, production from the West Sak Pool averaged 17,072 BOPD from 31 wells.¹

This tremendous pool occurs within the Late Cretaceous-aged Schrader Bluff Formation ("Schrader Bluff"). It is defined as the accumulation of hydrocarbons common to and correlating with the interval between 3,742' and 4,156' measured depths in the West Sak No. 1 well.² It lies at depths ranging from about 3,000' to 4,500' true vertical depth subsea.³ West Sak oil is characterized by biodegradation, with API gravities that vary from 22 degrees in the deeper, eastern part of the KRU to 10 degrees in the shallower western side of the Kuparuk River Unit.⁴

ARCO Alaska Inc. conducted a pilot production test of the West Sak sands from September 1983 to December of 1986. A total of 16 wells were drilled and completed: 9 producers and 7 injectors. The test ultimately produced 755,062 barrels of oil, 326 MCF of gas and 2.12 million barrels of water. During 1986, the pilot test produced at an average daily rate of 821 barrels of oil, 297 MCF gas and 2,966 barrels of water from between 8 and 9 production wells. Original oil in place ("OOIP") within the Kuparuk River Unit is estimated to be is about 15 to 16 billion barrels.⁵

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¹ Alaska Oil and Gas Conservation Commission, 2005, Production Database

² Alaska Oil and Gas Conservation Commission, 1997, Conservation Order No. 406, available online at: http://www.state.ak.us/local/akpages/ADMIN/ogc/orders/co/co400_449/co406.htm

³ Nelson, K., 2005, Technology driving West Sak viscous development, Petroleum News Alaska, V. 10, No. 2, January 9, 2005; <http://www.petroleumnews.com/pnads/985090053.shtml>

⁴ Alaska Oil and Gas Conservation Commission, 2003, Conservation Order No. 406a, available online at: http://www.state.ak.us/local/akpages/ADMIN/ogc/orders/co/co400_449/co406a.htm

⁵ Nelson, K., 2005, Technology driving West Sak viscous development, Petroleum News Alaska, V. 10, No. 2, January 9, 2005; <http://www.petroleumnews.com/pnads/985090053.shtml>