



OTC 20207

Sakhalin-1—Managing a World Class Project in a Frontier Arctic Environment

James K. Flood and Stephen J. Harding, ExxonMobil Development Company

Copyright 2009, Offshore Technology Conference

This paper was prepared for presentation at the 2009 Offshore Technology Conference held in Houston, Texas, USA, 4–7 May 2009.

This paper was selected for presentation by an OTC program committee following review of information contained in an abstract submitted by the author(s). Contents of the paper have not been reviewed by the Offshore Technology Conference and are subject to correction by the author(s). The material does not necessarily reflect any position of the Offshore Technology Conference, its officers, or members. Electronic reproduction, distribution, or storage of any part of this paper without the written consent of the Offshore Technology Conference is prohibited. Permission to reproduce in print is restricted to an abstract of not more than 300 words; illustrations may not be copied. The abstract must contain conspicuous acknowledgment of OTC copyright.

Abstract

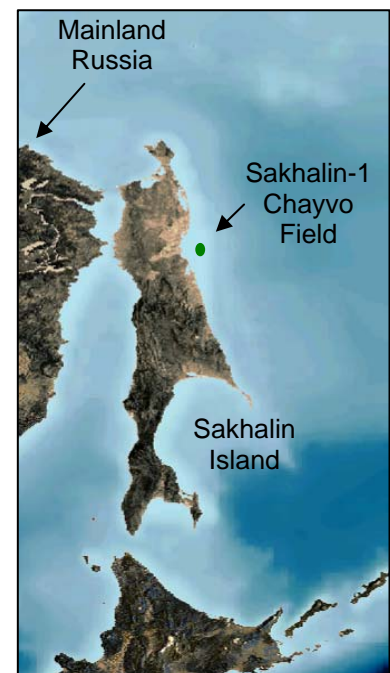
The Sakhalin-1 Project is a world-class development located in a remote, harsh environment off the east coast of Sakhalin Island, Russia. The first phase of the development was the Chayvo field, which has been successfully executed with full production achieved in late 2006. The Project presented multiple challenges, including the harsh sub-arctic climate, a remote location with minimal existing infrastructure, limited availability of skilled labor, and a complex and extensive regulatory regime. This paper provides an overview of the Project with an emphasis on the Phase-1 development of Chayvo field and describes the challenges, presents some of the key project management steps implemented to successfully address these challenges, and summarizes some of the benefits to Russia and the local community. This paper also serves as an introduction to the following Sakhalin-1 papers that address specific topics in greater detail.

Sakhalin-1 Background

The Sakhalin-1 Project is a world-class development opportunity, one of the largest single foreign direct investments in Russia, and an excellent example of how advanced technological solutions and front-end execution planning can be applied to meet the challenges of growing worldwide energy demands. The development consists of multiple offshore fields off the east coast of Sakhalin Island, Russia. Development of these fields is challenged by the presence of seasonal thick ice, gale-force winds, and the year-round potential for severe waves and seismic activity. The successful completion of the Project required the use of innovative technologies, disciplined management processes, and high levels of environmental and safety protection.

Exxon Neftegas Limited (ENL), an ExxonMobil affiliate, holds a 30% interest in Sakhalin-1 and operates the multi-billion dollar project on behalf of the Sakhalin-1 Consortium, which is comprised of multi-national co-venturers including SODECO, a Japanese consortium with 30% interest, ONGC Videsh Limited, the Indian national oil company with 20% interest, and two affiliates of Rosneft, the Russian national oil company, with a combined 20% interest.¹

Sakhalin-1 oil was discovered in the 1970s, but technical and financial hurdles prevented development until 1995, when ENL joined and reached agreement with SODECO and Rosneft to develop Sakhalin-1 (ONGC joined the Consortium in 2001). The Sakhalin-1 Production Sharing Agreement (PSA) was signed in 1995. The Project was declared commercial at the end of 2001, and full-scale construction commenced in 2004. Production via an early production system began in the fall of 2005, with oil production sold to Russian domestic customers. Full production began in late 2006, with oil sold on the international market via ice-strengthened tankers specifically



¹ Exxon Mobil Corporation has numerous affiliates, many with names that include ExxonMobil and Exxon. For convenience and simplicity in this presentation, those terms and terms like corporation, company, our, we and its are sometimes used as abbreviated references to specific affiliates or affiliate groups. Abbreviated references describing global or regional operational organizations and global or regional business lines are also sometimes used for convenience and simplicity.