Attachment B:

Supplement to the 2003 Susitna Basin Exploration Licenses Final Finding of the Director

February 8, 2011

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The following new information is added:

Deepwater Horizon Incident in the Gulf of Mexico

The Deepwater Horizon was a semi-submersible drilling unit (Transocean 2010a) operating on Mississippi Canyon Block 252 (MC252) (BP 2010a) in federal Outer Continental Shelf (OCS) waters located in the United States Gulf of Mexico, about 41 miles offshore of Louisiana (Transocean 2010c; Transocean 2010b; Transocean 2010e). BP Exploration & Production, Inc. was the lease operator (Transocean 2010e).

According to official reports, on April 20, 2010, approximately 10:00 p.m. Central Time, a fire and explosion were reported on the Deepwater Horizon (Transocean 2010b; Transocean 2010e). The rig sank on April 22, 2010 (Transocean 2010e), coming to rest on the sea floor in about 5,000 feet of water, about 1,500 feet from the well center and away from subsea pipelines (Transocean 2010d). At the time of the incident, 126 crew members were onboard; 115 were evacuated and 11 died (Transocean 2010b; Transocean 2010e).

Before the rig sank, the response team was not able to stop the flow of oil and gas (Transocean 2010e), the blowout preventer failed (BP 2010c), and a large release of hydrocarbons into the water occurred. Various well control efforts were attempted, including drilling of relief wells (BP 2010b). The well was shut-in on July 15, 2010, a relief well successfully intercepted the annulus of the MC252 well on September 15, 2010, and cement was successfully pumped into the annulus on September 17, 2010 (BP 2010a).

The U.S. Bureau of Ocean Energy Management, Regulation and Enforcement (BOEMRE; formerly Minerals Management Service, or MMS) and the U.S. Coast Guard (USCG) have Congressionally-delegated jurisdiction over the Deepwater Horizon incident, and have a joint, ongoing investigation into the incident (USCG and MMS 2010a). The investigation is tasked with identifying the factors leading to the incident, and developing conclusions and recommendations regarding the incident (USCG and MMS 2010a). So far, the joint investigation has conducted six hearings on the incident (USCG and MMS 2010b).

On May 11-12, 2010, the circumstances surrounding the fire, explosion, pollution and sinking of the Deepwater Horizon were investigated. On May 26-29, 2010, the focus was on gathering information on the rig's materiel condition, crew qualifications, emergency preparedness, and casualty timeline. On July 19-23, 2010, the focus was on the technical verification phase. On August 23-27, 2010, the hearings dealt with the recovery, analysis, and evaluation of the critical drilling equipment. The fifth hearing was held on October 4-8, 2010, and a sixth session of hearings took place December 7-9, 2010 (USCG and MMS 2010b).

Analysis and conclusions are not being presented during the hearings (USCG and BOEMRE 2010b). Evidence, facts, conclusions, and recommendations of the investigation team must be approved by both the USCG and BOEMRE, after which a final investigative report will be made available to the public (USCG and MMS 2010a). A final report is scheduled to be released by March 27, 2011, an extension of the original deadline which was January 27, 2011 (USCG and BOEMRE 2010a).

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The National Commission on the BP Deepwater Horizon Oil Spill and Offshore Drilling (also called the Oil Spill Commission, or OSC) was established by presidential executive order on May 21, 2010. The objective of the OSC is to (DOE 2010):

> ...examine the relevant facts and circumstances concerning the root causes of the Deepwater Horizon explosion, fire and oil spill and develop options to guard against, and mitigate the impact of, any oil spills associated with offshore drilling in the future. In developing options, the Commission shall take into consideration the environmental, public health, and economic effects of such options, including those options that involve: improvements to Federal laws, regulations, and industry practices applicable to offshore drilling that would ensure effective oversight, monitoring, and response capabilities; protecting public health and safety, occupational health and safety, and the environment and natural resources; addressing affected communities; and organizational or other reforms of Federal agencies or processes necessary to ensure such improvements are implemented and maintained.

Key areas of OSC inquiry include: the Macondo well explosion and drilling safety; the role of offshore oil drilling in domestic energy policy; regulatory oversight of offshore drilling; oil spill response; spill impacts and assessment; and restoration approaches and options (OSC 2010).

The OSC released its final report to the president on January 11, 2011 (OSC 2011). The report presents the history of offshore oil and gas development in the United States, discusses current regulatory oversight and corporate culture regarding human safety and risk management, and examines the causes and consequences associated with the Deepwater Horizon incident.

The report includes the following conclusions (OSC 2011):

- The explosive loss of the Macondo well could have been prevented.
- The immediate causes of the Macondo well blowout can be traced to a series of identifiable mistakes made by BP, Halliburton, and Transocean that reveal such systematic failures in risk management that they place in doubt the safety culture of the entire industry.
- Deepwater energy exploration and production, particularly at the frontiers of experience, involve risks for which neither industry nor government has been adequately prepared, but for which they can and must be prepared in the future.
- To assure human safety and environmental protection, regulatory oversight of leasing, energy exploration, and production require reforms even beyond those significant reforms already initiated since the Deepwater Horizon disaster. Fundamental reform will be needed in both the structure of those in charge of regulatory oversight and their internal decisionmaking process to ensure their political autonomy, technical expertise, and their full consideration of environmental protection concerns.
- Because regulatory oversight alone will not be sufficient to ensure adequate safety, the oil and gas industry will need to take its own, unilateral steps to increase dramatically safety throughout the industry, including self-policing mechanisms that supplement governmental enforcement.
- The technology, laws and regulations, and practices for containing, responding to, and cleaning up spills lag behind the real risks associated with deepwater drilling into large, high-pressure reservoirs of oil and gas located far offshore and thousands of feet below the ocean's surface. Government must close the existing gap and industry must support rather than resist that effort.
- Scientific understanding of environmental conditions in sensitive environments in deep Gulf waters, along the region's coastal habitats, and in areas proposed for more drilling, such as the Arctic, is inadequate. The same is true of the human and natural impacts of oil spills.

The report includes 31 specific recommendations divided into the following seven categories (OSC 2011):

A) Improving the safety of offshore operations;

B) Safeguarding the environment;

C) Strengthening oil spill response, planning and capacity;

D) Advancing well-containment capabilities;

E) Overcoming the impacts of the Deepwater Horizon spill and restoring the Gulf;

F) Ensuring financial responsibility; and,

G) Promoting congressional engagement to ensure responsible offshore drilling.

Most of the report and recommendations are specific to the Deepwater Horizon incident, federal government oversight (namely the former MMS), and Congress. However, many discussions in the report regarding industry and government not keeping pace with the rapid changes in technology and the general structure of the oil and gas industry have some applicability to oil and gas operations in Alaska and State of Alaska oversight.

Drilling a well in Alaska requires a permit from the Alaska Oil and Gas Conservation Commission (AOGCC) under 20 AAC 25.005. The AOGCC has a codified, technically comprehensive well permitting process and a rigorous, interactive well operations inspection program (Seamount et al. 2010). The AOGCC's staff geologists and engineers thoroughly review all technical aspects of the well and rock formations that may be encountered during drilling, and ensure that drilling fluids, well construction, and oil field practices are appropriate and safe. Inspections are performed before rigs are brought into service, after drilling is finished and wells are ready to produce, and regularly on safety valve systems. Blowout preventers and other safety equipment are tested every 14 days, or every seven days for exploratory wells (Seamount et al. 2010).

It is also important to note that a license or lease only gives the licensee or lessee the right to conduct activities such as exploration, development, and production, but the license or lease does not authorize these activities. A plan of operations or a unit plan of operations must be approved before any operations may be undertaken on or in the license or lease area. In addition, all oil and gas activities are subject to other numerous federal, state, and local laws, regulations, policies, and ordinances with which the licensee or lessee is obligated to comply.

The investigation by the federal agencies that have Congressionally-delegated joint jurisdiction over the incident, the USCG and BOEMRE, have not completed their investigation yet, and their final report and recommendations are not scheduled to be released until March 27, 2011.

The State of Alaska also has an ongoing inquiry concerning information that is becoming available from the Deepwater Horizon incident. On June 24, 2010, the AOGCC began accepting comments on an inquiry into whether changes or additions are needed to AOGCC regulations governing drilling, rig workover, and well control in offshore and ultra-extended reach wells in areas of Alaska under AOGCC jurisdiction (AOGCC 2010). The AOGCC will review its offshore and ultra-extended reach drilling operations regulations to ensure sufficient safeguards are in place to prevent well control loss or facilitate immediate reestablishment of well control (AOGCC 2010). A date for completion of the inquiry has not been set yet.

The Alaska Risk Assessment Project of Oil and Gas Infrastructure

The Alaska Risk Assessment (ARA) Project of oil and gas infrastructure was initiated in 2007 "to provide a baseline risk assessment of the oil and gas infrastructure in Alaska. The purpose of the ARA Project was to conduct a system-wide risk assessment that evaluates the safety, environmental, and operational

risks associated with the system and to assess the reliability of the existing infrastructure to operate for another generation" (ADEC 2010b). Initially, the ARA Project was to be conducted in three phases: Phase 1 would focus on designing a methodology for the risk assessment; Phase 2 would implement the methodology; and Phase 3 would analyze the data and report on the results. The ADEC 2010b report (or Phase 1 Report) documents the initiation, public comment, and review of the original project.

After review of the proposed methodology by the public, state and federal agencies, industry, and the National Academy of Sciences, the scope of the ARA Project was narrowed significantly and reconfigured to the North Slope Spills Analysis (NSSA) (ADEC 2010a). The purpose of the NSSA is to compile and analyze causal information associated with specific North Slope pipelines and provide recommendations on mitigation measures to reduce future spills (ADEC 2010a). Results from this study have been published (NSSA Report), including seven specific recommendations for reducing the risk of future loss-of-integrity spills from North Slope infrastructure (Robertson et al. 2010).

A third report (Oversight Report) was produced as a result of the Alaska Risk Assessment project, with the purpose of providing the State of Alaska with practical recommendations for future oversight activities for oil transportation (Cycla Corporation 2010). The report provides an overview of risk management and oversight systems used by other jurisdictions, and provides recommendations designed to enhance risk management practices of ADEC and to strengthen risk management practice across Alaska oversight agencies (Cycla Corporation 2010). Key findings from this report are that the primary job of regulators is to require practices that reinforce the operators' responsibility to ensure safe operation of their facilities; the State should not undertake a risk assessment without significant cooperation from the operators; the existing system should be refined rather than implementing radical changes; and operator reporting should be expanded to improve the understanding of the effectiveness of management systems (Cycla Corporation 2010). Specific recommendations were divided into two categories: recommended future Alaska oversight agency risk management activities, and recommended ADEC activities (Cycla Corporation 2010).

The State of Alaska is in the process of reviewing the reports, determining which of the recommendations to implement, and the next steps for implementing them. Not all recommendations in the reports are within the jurisdiction of DO&G, and many of the recommendations are outside the scope of mitigation measures for state oil and gas licenses and leases.

However, although review of the reports is ongoing, some of the recommendations are both within the jurisdiction of DO&G and within the scope of mitigation measures for state oil and gas licenses and leases. For the NSSA Report, although it focuses on pipelines regulated by ADEC on the North Slope, the recommendations from the expert panel have some applicability to all agencies that provide oversight of the oil and gas industry in Alaska. Broadly, the recommendations suggest that the state engage industry more proactively by requiring industry to provide information on how systems integrity is being managed, reviewing that information for understanding and completeness, collecting appropriate data that can be used to determine root cause, and increasing enforcement.

Overall, the Oversight Report suggests that it is the primary responsibility of regulators to encourage industry to act responsibly by establishing appropriate regulation and to knowledgeably oversee the implementation of those regulations. The report suggests that this can be accomplished by requiring more information from industry on their management systems in general and risk management specifically. This information can then be used to provide oversight agencies with information regarding how an operator is maintaining safe operating conditions.

Specific recommendations from the two reports that may be applicable to mitigation measures for state oil and gas licenses and leases are: move to an integrated Integrity Management Program that focuses on leading indicators (Robertson et al. 2010); conduct regular and ongoing proactive risk analyses to maintain systems at a prescribed level of safety, and share information from risk analyses among operators and with regulators (Robertson et al. 2010); strengthen regulatory oversight by evolution not

revolution (Cycla Corporation 2010); and require operator strategic management process (Cycla Corporation 2010).

References Cited

ADEC (Alaska Department of Environmental Conservation). 2010a. Alaska risk assessment (ARA) of oil & gas infrastructure: Project history. Division of Spill Prevention and Response. Updated November 22, 2010. http://www.dec.state.ak.us/spar/ipp/ara/history.htm Accessed January 20, 2011.

ADEC (Alaska Department of Environmental Conservation). 2010b. Alaska risk assessment of oil and gas infrastructure: Summary of phase 1 Alaska Risk Assessment accomplishments and challenges. Final Report, November 2010. http://www.dec.state.ak.us/spar/ipp/ara/documents/101123NSSAPhase1reportSCREEN.pdf

AOGCC (Alaska Oil and Gas Conservation Commission). 2010. Notice of inquiry by the State of Alaska, Alaska Oil and Gas Conservation Commission. By order of the Commission, June 24, 2010. http://doa.alaska.gov/ogc/AOGCCInquiryOTH-10-16.pdf

BP. 2010a. BP confirms successful completion of well kill operations in Gulf of Mexico. Press release, September 19, 2010. http://www.bp.com/genericarticle.do?categoryId=2012968&contentId=7065079 Accessed November 18, 2010.

BP. 2010b. BP forges ahead with Gulf of Mexico oil spill response. Press release, April 25, 2010. http://www.bp.com/genericarticle.do?categoryId=2012968&contentId=7061518 Accessed June 24, 2010.

BP. 2010c. Update on Gulf of Mexico oil spill - 29 May. Press release, May 29, 2010. http://www.bp.com/genericarticle.do?categoryId=2012968&contentId=7062487 Accessed June 24, 2010.

Cycla Corporation. 2010. Alaska risk assessment of oil and gas infrastructure. Under contract to the Alaska Department of Environmental Conservation, Final Report, November 2010. http://www.dec.state.ak.us/spar/ipp/ara/documents/101123NSSA_CyclareportSCREEN.pdf

DOE (Department of Energy). 2010. Charter for the National Commission on the BP Deepwater Horizon Oil Spill and Offshore Drilling. (Oil Spill Commission). June 15, 2010. http://www.oilspillcommission.gov/sites/default/files/documents/osc_charter.pdf

OSC (Oil Spill Commission). 2010. About the Commission. National Commission on the BP Deepwater Horizon Oil Spill and Offshore Drilling. http://www.oilspillcommission.gov/page/about-commission Accessed November 18, 2010.

OSC (Oil Spill Commission). 2011. Deepwater: The Gulf oil disaster and the future of offshore drilling. Report to the President, National Commission on the BP Deepwater Horizon Oil Spill and Offshore Drilling. January 11, 2011. https://s3.amazonaws.com/pdf_final/DEEPWATER_ReporttothePresident_FINAL.pdf

Robertson, T., E. DeCola, L. Pearson, T. Miller, B. Higman and L. K. Campbell. 2010. Alaska North Slope spills analysis: Final report on North Slope spills analysis and expert panel recommendations on mitigation measures. Prepared by Nuka Research & Planning Group, LLC. for the Alaska Department of Environmental Conservation. November 2010. http://www.dec.state.ak.us/spar/ipp/ara/documents/101123NSSAReportvSCREEN.pdf

Seamount, D., J. Norman and C. Foerster. 2010. Alaska careful about blowout prevention. Anchorage Daily News. July 13, 2010. http://doa.alaska.gov/ogc/Compass100713.pdf Accessed November 22, 2010.

Transocean. 2010a. Deepwater Horizon. Fleet specifications. http://www.deepwater.com/fw/main/Deepwater-Horizon-56C17.html?LayoutID=17 Accessed June 24, 2010.

Transocean. 2010b. A message from the CEO. Transocean response site. http://www.deepwater.com/fw/main/Home-910.html Accessed June 3, 2010.

Transocean. 2010c. Our rigs: list by location. http://www.deepwater.com/fw/main/List-by-location-17.html Accessed June 24, 2010.

Transocean. 2010d. Transocean Ltd. provides Deepwater Horizon. Transocean news release, April 26, 2010. http://phx.corporate-ir.net/phoenix.zhtml?c=113031&p=irol-newsArticle_print&ID=1417958&highlight= Accessed June 24, 2010.

Transocean. 2010e. Transocean Ltd. provides update on semisubmersible drilling rig Deepwater Horizon. Transocean news release, April 22, 2010. http://phx.corporate-ir.net/phoenix.zhtml?c=113031&p=irol-newsArticle_print&ID=1416100&highlight= Accessed June 24, 2010.

USCG and BOEMRE (U.S. Coast Guard and Bureau of Ocean Energy Management, Regulation and Enforcement). 2010a. Deepwater joint investigation team announces extended deadline for final report. Deepwater Horizon Joint Investigation: Press release, October 22, 2010. http://www.deepwaterinvestigation.com/go/doc/3043/926899/ Accessed November 22, 2010.

USCG and BOEMRE (U.S. Coast Guard and Bureau of Ocean Energy Management, Regulation and Enforcement). 2010b. Joint investigation board concludes 5th day of 5th session of hearings. Deepwater Horizon Joint Investigation: Press release, October 22, 2010. http://www.deepwaterinvestigation.com/go/doc/3043/917871/ Accessed November 22, 2010.

USCG and MMS (U.S. Coast Guard and Minerals Management Service). 2010a. Coast Guard, Minerals Management Service co-chair investigation into Deepwater Horizon mobile offshore drilling unit incident. Deepwater Horizon Joint Investigation: Press release, May 10, 2010. http://www.deepwaterinvestigation.com/go/doc/3043/542459 Accessed June 24, 2010.

USCG and MMS (U.S. Coast Guard and Minerals Management Service). 2010b. Deepwater joint investigation board concludes 3rd day in 6th session of hearings. Deepwater Horizon Joint Investigation Team. Released December 9, 2010. http://www.deepwaterinvestigation.com/go/doc/3043/947135/ Accessed January 6, 2011.

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Changes to Licensee Advisories

The following licensee advisory is added (added text is italicized and underlined):

B. Licensee Advisory

DNR/DO&G

6*a*) *The State of Alaska is in the process of reviewing and evaluating information from the Deepwater Horizon investigations and the Alaska Risk Assessment reports, and is determining which of the information and recommendations are applicable to Alaska, which recommendations to implement, and the next steps for implementing them. As this process develops, new or modified mitigation measures, lessee advisories, or other statutory or regulatory requirements addressing issues such as safety, environmental safeguards, risk management, and reporting standards may be forthcoming.*