Shell Beaufort and Chukchi Sea Program Update

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Beaufort Sea Leaseholders
Alaska OCS - Benefits To Alaska and the Nation

- 35,000 jobs each year for 50 years of project life*

- Amounts to $72 billion in payroll*

- Extends the life of Trans-Alaska Pipeline (now two thirds empty)

- Opens up “stranded” resources in National Petroleum Reserve – Alaska (NPRA)

- Gas reserves for gas line to Lower 48 states

- Domestic energy security

* 2009-Northern Economics & Institute for Social and Economic Research, Univ. of Alaska
The Future of TAPS
2011 Proposed Program
Shell In Alaska Today

- 137 Beaufort leases - $84M
- 275 Chukchi leases - $2.1 Billion
- Total investment to date: $3.75 billion
- Hundreds of millions with Alaskans/offshore service providers
- Conservative estimates: 25 billion barrels of oil and 120 TCF of gas in Alaska Arctic (mean estimate)
- Most material OCS hydrocarbon outside of Deepwater GOM OCS
- Exceeds east/west coast OCS resources combined
2011 Proposed Operations

- Drill offshore wells in Beaufort Sea during open water drilling season (July-October)
- Shallow hazards surveying (future drill site clearance)
- Ecological science data gathering (offshore and onshore)
- Offshore ice gouge surveying & geotech soil sampling to support needed infrastructure technology
- Marine mammal monitoring supporting operations

The Noble Discoverer anchored in Dutch Harbor, Alaska in 2007
Issues for 2011 Drilling – Regulatory/Litigation Hurdles

- Shell Application for Permit to Drill (APD) Before BOEM
  - Arctic “suspension” lifted on Dec. 1st when Administration allows Shell to pursue limited program

- Dec. 30th EAB Remands Shell Air Permits Back to EPA
  - 5 years and $50 million invested to date
  - Shell emissions will have no “practical impact” onshore
  - Delay and new regulations a serious threat to 2011 drilling

- Lawsuits Based on ESA

- Shell 2011 Go/No-Go Decision Forthcoming
Oil Spill Contingency Planning
Shell Three-Tier Oil Spill Response

**Offshore**
- **Vessels**
  - OSRV (Nanuq)
  - Arctic Tanker
  - Work boats
  - Vessel of Opportunity

**Nearshore**
- **Vessels**
  - Barge
  - Work boats
  - Skimming vessel
  - Mini barges
- **Skimmers & Pumps**
- **Booms**

**Onshore**
- **Vessels**
  - landing craft and utility vessels
- **Booms**
- **Misc Equipment**
  - Decon connex
  - Workshop/Tool connex

**Misc Equipment**
- Storage and tools
Oil Spill Contingency Plan Support

- State and Federal Standards reviewed and approved
- World class Contingency Plan reviewed by BOEM, EPA, US Coast Guard, FWS, NMFS, North Slope Borough
- Worst Case Discharge Scenario for 2011 significantly lower than required Response Planning Standard
- Shell response capabilities exceed required Response Planning Standard
- SINTEF (oil in ice research) study and trials
Changes to Shell’s Arctic Program
Commitments

- BOP – testing and enhancements
  - Testing every 7 days instead of every 14 days
  - Use of second set of shear rams
  - Sub-sea remote operating panel relocation
  - ROV/Diver options on and near site

- Second rig relief well capability
Proposed Sub-sea containment system development

- System to capture and recover hydrocarbons from well control incident
- Will be ready for 2011 Season
Considerations for Path Forward

- **2011 Drilling:** Timelines remain critical. Investment won’t continue beyond January 2011 without high drilling confidence.

- **Lease Sale 193 Alaska Federal Court Remand:** Supplemental Environmental Assessment rests with BOEM awaiting submittal to Court.
Stakeholder Solutions
Finding common ground with the people of the North Slope

Over 400 meetings with stakeholders since 2006

Incorporating feedback: air permit, discharge, drilling blackouts during whaling in Beaufort Sea

Revised program reflects our social performance goal:

“Minimize impacts to people and the environment where we work”
Baseline Science Supports Exploration In Alaska

- $500 Million and growing (Shell $50M)
  - 5000 independent scientific studies since 1973
  - 5 years of marine mammal monitoring
  - Tagging studies – walrus and seals
  - First air quality station in OCS – Beaufort
  - Ongoing offshore, nearshore, and onshore ecological characterization studies
  - Traditional knowledge studies
  - Health impact assessments

- Up to $5 million annual science initiative with North Slope Borough