

A MEMORANDUM OF AGREEMENT

**PURSUANT TO THE
COAST AND GEODETIC SURVEY ACT
33 U.S.C. 883e**

among the

**NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
U.S. DEPARTMENT OF COMMERCE**

and

SHELL EXPLORATION & PRODUCTION COMPANY

and

CONOCOPHILLIPS COMPANY

and

STATOIL USA E&P Inc.

**FOR THE PURPOSE OF SUPPORTING
COLLABORATIVE ARCTIC COASTAL and OCEAN SCIENCE**

in

U.S. ARCTIC WATERS

NOS Agreement Code: MOA-2011-80/8400



I. PARTIES AND PURPOSE

- A. This Memorandum of Agreement (“Agreement”) is entered into by and among the National Oceanic and Atmospheric Administration (NOAA), U.S. Department of Commerce, and Shell Exploration & Production Company, ConocoPhillips Company, and Statoil USA E&P Inc. (hereafter “Industry Parties”), individually and collectively referred to herein as Party or Parties.
- B. The purpose of this Agreement is to provide a framework for collaboration, communication and information-sharing between NOAA and the Industry Parties. The Agreement is intended to build upon existing strong relationships based on common interests, to assist in devising company and agency strategy, and to help manage critical environmental issues efficiently and effectively.
- C. This Agreement will serve as a basis for coordination between NOAA and the Industry Parties to maximize skills, knowledge and resources directed at studies and observations of physical and biological sciences in U.S. Arctic waters, and for sharing the resulting information produced from such studies and observations with the public, in accordance with applicable laws, regulations, and procedures, including Office of Management and Budget and NOAA guidelines implementing the Information Quality Act (Section 515 of Public Law 106-554).
- D. This Agreement shall not create legally enforceable rights and cannot be the basis of any legal claim between the Parties.

II. BACKGROUND

- A. Changes are occurring in the Arctic, both in terms of the ecosystem and in human use. With reduction in sea ice, critical new environmental, economic, and national security issues are emerging that have immediate and long-term impacts for human lives, livelihoods, and coastal communities and the environment. At the same time, the diminishing sea ice presents opportunities for increased commerce and transportation, including the sustainable development of living resources and environmentally sound extraction of non-living resources. It is estimated that the Arctic holds roughly 30% of the world’s undiscovered natural gas resource and 13% of its undiscovered oil resource.
- B. To further inform effective societal, economic and environmental decision-making regarding Arctic resource utilization, federal agencies, the private sector, and the public will benefit from a better understanding of the physical processes governing sea ice, the atmosphere, and the ecological character of the coastal and ocean Arctic region.

- C. This better understanding can be achieved through actions such as robust field observations, data synthesis, and environmental modeling. Recognizing that no single agency or entity has adequate resources to meet the task, collaborative efforts and data sharing are essential. Such collaboration between NOAA and the Industry Parties will leverage complementary strengths: NOAA's scientific expertise and the Industry Parties' significant offshore experience, and science initiatives and expertise.
- D. The Industry Parties to this Agreement hold oil and gas leases in the Arctic for which they are conducting scientific research, and developing exploration drilling and production plans. For Industry Party interests, products of this collaboration will contribute to the protection of employees working in harsh Arctic conditions, assist in engineering and protecting industry assets for increased survivability, and contribute to corporate policies for sustainable development and protection of biodiversity.
- E. NOAA's mission is to understand and predict changes in climate, weather, oceans, and coasts, to share that knowledge and information with others, and to conserve and manage coastal and marine ecosystems and resources. This Agreement will assist the agency in realizing progress on its *Arctic Vision and Strategy*, which outlines six priority goals:
1. Forecast Sea Ice
 2. Strengthen Foundational Science to Understand and Detect Arctic Climate and Ecosystem Changes
 3. Improve Weather and Water Forecasts and Warnings
 4. Enhance International and National Partnerships
 5. Improve Stewardship and Management of Ocean and Coastal Resources in the Arctic
 6. Advance Resilient and Healthy Arctic Communities and Economies
- F. Products of this collaboration will help NOAA achieve its goals as listed above, enhance public and scientific understanding of remote Arctic ecosystems, inform agency permitting decisions, and identify requirements for expanded NOAA products and services in the Arctic.
- G. For purposes of this Agreement, the Arctic is defined in accordance with the Arctic Research and Policy Act of 1984 as all United States and foreign territory north of the Arctic Circle and all United States territory north and west of the boundary formed by the Porcupine, Yukon, and Kuskokwim Rivers; all contiguous seas, including the Arctic Ocean and the Beaufort, Bering and Chukchi Seas; and the Aleutian Chain.

III. AUTHORITIES

- A. The authorities for NOAA to participate in this Agreement include, but are not limited to:
1. the Coast and Geodetic Survey Act, 33 U.S.C. §§ 883a *et seq.*, including but not limited to:
 - a. 33 U.S.C. § 883d, which authorizes NOAA to increase engineering and scientific knowledge by conducting development work for the improvement of surveying and cartographic methods, instruments, and equipment; and to conduct investigations and research in geophysical sciences (including geodesy, oceanography, seismology, and geomagnetism);and
 - b. 33 U.S.C. § 883e, which authorizes NOAA to enter into cooperative agreements, or any other agreements, with, and to receive and expend funds made available by, any State or subdivision thereof, any Federal agency, or an public or private organization, or individual, for surveys or investigations authorized herein, or for performing related surveying and mapping activities, including special-purpose maps, and for the preparation and publication of the results thereof, and to establish the terms of any agreement entered into under this section, including the amount of funds to be received, and may contribute that portion of the costs incurred by NOAA, including shiptime and personnel expenses, which NOAA determines represents the amount of benefits derived by the Administration from the agreement;
 2. the Marine Mammal Protection Act (MMPA), 16 U.S.C. § 1361 *et seq.*, which provides for the protection of marine mammals, with the primary objective of maintaining the health and stability of the marine ecosystem and which authorizes the Secretary of Commerce to enter into such contracts, leases, cooperative agreements, or other transactions as may be necessary to carry out the purposes of subchapter II or subchapter V of the MMPA and on such terms as he deems appropriate with any Federal or State agency, public or private institution, or other person;
 3. the National Weather Service Organic Act, 15 U.S.C. § 313, which authorizes the Secretary of Commerce to have charge of, among other duties, the forecasting of weather, the issue of storm warnings, the display of weather and flood signals, the collection and transmission of marine intelligence for the benefit of commerce and navigation, the

distribution of meteorological information in the interests of agriculture and commerce, and the taking of such meteorological observations as may be necessary to establish and record the climatic conditions of the United States;

4. the Oil Pollution Act of 1990, 33 U.S.C. §§ 2701 et seq., which authorizes the Interagency Coordinating Committee on Oil Pollution Research, which shall coordinate a comprehensive program of oil pollution research, technology development, and demonstration among Federal agencies, in cooperation and coordination with industry, university, research institutions, and shall foster cost-effective research mechanisms, including the joint funding of research.
5. the Ocean and Coastal Mapping Integration Act, 33 U.S.C. §§ 3501 et seq., which authorizes NOAA, as a member of the Interagency Committee on Ocean and Coastal Mapping, to establish a program to develop a coordinated and comprehensive Federal ocean and coastal mapping plan for coastal state waters, the territorial sea, the exclusive economic zone, and the continental shelf of the U.S.
6. the Integrated Coastal and Ocean Observation System Act of 2009, 33 U.S.C. §§ 3601 et seq., which establishes NOAA as the Federal lead agency for the implementation and administration of the Integrated Ocean Observing System (IOOS®).

IV. TERMS AND CONDITIONS

- A. To meet the purposes of this Agreement, subject to agreement by the Parties on an annex or annexes, the Parties hereby agree to engage in collaborative data sharing activities under the following themes:
 1. Meteorology
 2. Coastal and Ocean Currents, Circulation, and Waves
 3. Sea Ice Studies
 4. Biological Science
 5. Hydrographic Services and mapping
- B. In addition to collaborative data sharing activities related to the foregoing themes, the Parties shall agree upon the methodology and procedure by which data received by NOAA under this Agreement will be synthesized and stored in a mutually agreed upon repository.
- C. The Parties agree to work collaboratively to develop, execute and implement Annexes to this Agreement. Each Annex shall, at minimum, be structured according to Section IV.D. plus include the following detail on each theme noted above:

1. Description of the data to be disclosed to NOAA;
 2. Ownership of the data;
 3. Actions to be taken by NOAA, and by each of the Industry Parties related to such data;
 4. Timing of data disclosure to NOAA;
 5. Terms of Confidentiality
 6. Data Maintenance
 - a. Location of data repository for storing data
 - b. Data access terms and conditions
 - c. Data protection and security, as necessary.
- D. Party representatives will work together to develop each of the Annexes under this Agreement. Each Annex will follow the outline below to incorporate information:
1. Parties and Purpose
 2. Authorities
 3. Terms and Conditions
 4. A Statement of Work, if appropriate
 5. Transfer of Funds information, if appropriate
 6. Contact information
 7. Duration of Annex, including procedures for amending or terminating the Annex
 8. Claims and Liabilities
 9. Dispute Resolution section; and
 10. Appropriate approval/signature blocks for each Party's respective signatory officials.
- E. NOAA's National Ocean Service (NOS), as the lead NOAA line office for this Agreement, will be responsible for tracking/assigning the control numbers for all subsequent annexes and modifications thereto. Therefore, prior to annexes and modifications thereto, the responsible NOAA official will coordinate with NOS Policy, Planning, and Analysis division for tracking purposes.
- F. Annexes to this Agreement may be entered into between and among NOAA in combination with any or all of the Industry Parties, for the purpose of establishing the details, actions, outcomes, terms and conditions for collaborative activities under any of the agreed-upon themes. Additional Parties may be included in an Annex if agreed to by all Parties executing the Annex.
- G. Subject to mutual agreement of the Parties, such Annexes may also provide for transfer of funds (if any) from the Industry Parties to NOAA, if appropriate.
- H. Nothing in this Agreement requires any Party to execute an Annex.

- I. Under this Agreement, as implemented pursuant to its Annexes as noted above, NOAA may provide:
1. Scientific or technical expertise;
 2. Data stewardship and archival expertise through its national data centers, in particular the National Oceanographic Data Center and the National Geophysical Data Center, or other suitable and accessible data stewardship/ repository site(s);
 3. In-kind and personnel assistance;
 4. Notification of planned scientific projects or studies relevant to outer continental shelf (Arctic ocean and coastal) or related activities; and/or
 5. Existing physical and biological datasets for analysis.
- J. Under this Agreement, as executed pursuant to its Annexes, the Industry Parties may provide:
1. Existing physical and biological datasets for data analysis and archive at NOAA Data Centers or other suitable and accessible data stewardship/ repository site(s);
 2. Notification of planned scientific projects or studies relevant to OCS (Arctic ocean and coastal) or related activities; and/or
 3. In-kind and personnel assistance.
- K. To the extent legally permissible, and in accordance with the terms of confidentiality established under section IV.C.5 of this Agreement, any information derived from data analysis and reporting and/or resulting from collaboration under this Agreement will be made publicly available in accordance with the timing of disclosure as set forth in each of the annexes. NOAA will ensure compliance with OMB and NOAA guidelines implementing the Information Quality Act prior to the dissemination of such information to the public, as well as any Scientific Integrity Policy adopted by the agency, which must be specified as applicable in the relevant annex.
- L. Each Party agrees, as determined appropriate by that Party in its sole discretion, to provide its knowledge, experience, and authority to add value to the projects conducted under any Annex to this Agreement. Nothing in the foregoing requires any Party to participate in any Annex pursuant to this Agreement for which it is not a signatory party.
- M. The Parties also recognize that this is a nonexclusive agreement and that NOAA and the Industry Parties may enter into similar agreements with other entities without the consent or approval of the other. This Agreement does not affect the rights and obligations the Parties have under any other agreement nor does it preclude other arrangements between the Parties.

- N. NOAA's participation in any activities under this Agreement or subsequent Annexes is subject to the availability of appropriated funds.

V. CONTACTS

- A. The contacts of each Party to this Agreement are:

1. Ashley Chappell
NOAA Arctic Team Co-Lead
SSMC3 rm 6116
1315 EastWest Highway, Silver Spring, MD 20910
phone:- 301-713-2780 x148
fax : 301-713-4019
E-mail: Ashley.chappell@noaa.gov
2. Amy Holman
NOAA Alaska Regional Coordinator
222 West 7th Avenue Suite: 203
Anchorage, AK 99513-7575
phone: 907-271-5334
fax: 907-271-3711
E-mail: amy.holman@noaa.gov
3. A. Michael Macrander
Science Team Lead
Shell Exploration & Production Company
3601 C Street; Suite 1314
Anchorage, Alaska 99503
phone:907-646-7123
fax : 907-646-7135
E-mail: a.macrander@shell.com
4. Caryn Rea
Senior Staff Biologist
ConocoPhillips Company
700 G. Street, ATO 1966
Anchorage, Alaska 99510
phone: 907 265-6515
fax: 907-265-6216
E-mail: Caryn.Rea@conocophillips.com
5. Ahmed Osman
HSE Manager
Statoil USA E&P Inc.
3800 Centerpoint Drive

Suite 920
Anchorage, AK 99503
phone: 907-433-5713
E-mail: aosm@statoil.com

- B. The Parties agree that if there is a change regarding the information in this section, the Party making the change will notify each of the other Parties in writing of such change.

VI. DURATION OF AGREEMENT, AMENDMENTS, AND TERMINATION

- A. This Agreement will become effective when signed by all Parties and will expire on September 30, 2016.
- B. The Agreement may be amended within its scope and prior to its expiration by mutual written agreement of all of the Parties.
- C. Any Party may terminate its participation in this Agreement by (1) providing thirty days written notice to all other Parties; or (2) mutual written agreement of the Parties.
- D. The Parties will review this Agreement at least once prior to March 2014 (midway through its execution) to determine whether it should be revised, renewed, or terminated.
- E. Upon termination of this Agreement for any reason, data made available among the Parties pursuant to an Annex to this Agreement shall continue to be available to all the Parties to the Agreement and (to the extent legally permissible and subject to the confidentiality terms of this Agreement) to the public.
- F. Each Party shall be solely responsible for the payment of any expenses it incurs in implementing this Agreement and the Annexes hereto.
- G. In the event this Agreement is terminated, each Party shall be solely responsible for the payment of any expenses it has incurred.

VII. DISCLAIMER OF WARRANTIES

- A. The Industry Parties hereby represent and warrant that they have the right and authority to disclose the information and data to NOAA (or its representatives) required by any Annex hereto. The Industry Parties make no

representations and extend no warranties, express or implied, and assume no responsibilities whatsoever with respect to:

1. The completeness, utility, or accuracy of any information or data provided to NOAA;
 2. Merchantability or fitness for a particular purpose of any information, data or technology provided by the Industry Parties pursuant to this Agreement; and
 3. The freedom from infringement of any patent, trade secret and/or copyright by NOAA's use of information, data, or technology provided by the Industry Parties.
- B. No provision of this Agreement shall be interpreted as, or constitute, a commitment or requirement that NOAA take action in contravention of the Administrative Procedure Act, or any other law or regulation, either substantive or procedural, with respect to any final agency action.
- C. Nothing in this Agreement shall be construed to limit or modify the discretion accorded to NOAA by the Administrative Procedure Act or any substantive authority, or general principles of administrative law, with respect to the procedures to be followed in making any determination regarding any license or permit, or as to the substance of any final determination.

VIII. CLAIMS


NOAA shall promptly consider and adjudicate any and all claims which may arise out of this Agreement resulting from the actions of NOAA, duly authorized representatives, or contractors of the NOAA, and to pay for any damage or injury as may be required by Federal law. Such adjudication will be pursued under the Federal Tort Claims Act, 28 U.S.C. § 2671 et seq., the Federal Employees Compensation Act, 5 U.S.C. § 8101 et seq., or such other legal authority as may be pertinent.

IX. RESOLUTION OF DISAGREEMENTS

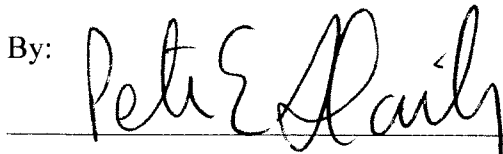
In the event of a disagreement among the Parties concerning the interpretation or performance of any aspect of this Agreement, any Party may provide the other Parties with written notice of the ground for the dispute and a request for discussions. Within fourteen (14) days of written notice from the Party to the other Parties, the Parties shall meet and attempt to reach agreement by negotiation. If the dispute is not resolved within fourteen (14) days of such meeting, or such time thereafter as is mutually agreed upon, any Party may refer the dispute to the signatory representatives in Section X of this Agreement for appropriate resolution.

X. APPROVALS

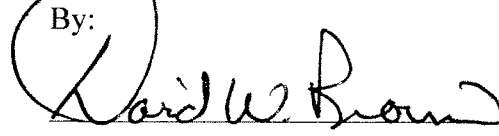
- A. ACCEPTED AND APPROVED FOR
U.S. DEPARTMENT OF COMMERCE
NATIONAL OCEANIC and ATMOSPHERIC ADMINISTRATION

By:  _____ Date: 23 Aug 2011
 Dr. Jane Lubchenco
 Under Secretary of Commerce
 for Oceans and Atmosphere
 and NOAA Administrator

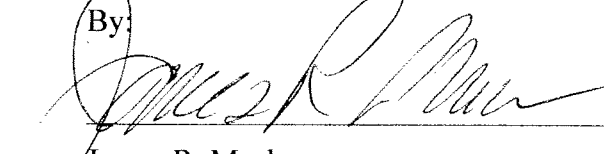
- B. ACCEPTED AND APPROVED FOR
SHELL EXPLORATION & PRODUCTION COMPANY

By:  _____ Date: 23 August 2011
 Peter E. Slaiby
 Vice President Shell Alaska / Attorney-in-Fact

- C. ACCEPTED AND APPROVED FOR
CONOCOPHILLIPS COMPANY

By:  _____ Date: Aug 23, 2011
 David W. Brown
 Attorney-in-fact

- D. ACCEPTED AND APPROVED FOR
STATOIL USA E&P INC.

By:  _____ Date: Aug 19, 2011
 James R. Meek
 Vice President - Commercial & Negotiations *MS*