

**Testimony before the U.S. House
Subcommittee on Energy and Mineral Resources**

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Submitted by: Scott Jepsen, Vice President of External Affairs and Transportation,
ConocoPhillips Alaska

Introduction

Chairman Gosar, Ranking Member Lowenthal, and members of the Subcommittee on Energy and Mineral Resources – My name is Scott Jepsen, and I am Vice President of External Affairs and Transportation, ConocoPhillips Alaska. ConocoPhillips appreciates the opportunity to submit testimony to the committee regarding our experience developing oil and natural gas resources in Alaska, and particularly in the National Petroleum Reserve – Alaska (NPR).

ConocoPhillips Overview

ConocoPhillips is the world's largest independent oil and natural gas exploration and production company based on proved reserves and production. Headquartered in Houston, Texas, we are a global company with operations and activities in 17 countries, \$88 billion in total assets, and approximately 13,100 employees as of March 31, 2017. Production excluding Libya averaged 1.584 million barrels of oil equivalent per day during the year's first quarter, and proved reserves were 6.4 billion equivalent barrels as of year-end 2016. Our largest sources of production include the Lower 48 U.S. states, Alaska, Canada, Europe and North Africa, and Asia Pacific and Middle East. In the Lower 48 specifically, we have operations and/or acreage in many of the home states of the Members of this Subcommittee including in Texas, Colorado, New Mexico, Wyoming and Louisiana.

Our Alaska Presence and History

ConocoPhillips is Alaska's largest oil producer, with significant interests in the Prudhoe Bay, Kuparuk River and Colville River units; we serve as operator of the latter two units. Approximately 1,100 employees and 1,800 contractors work in our Alaska operations, and we are one of Alaska's most active North Slope explorers and developers. Our 50-year history in Alaska goes back to the early days of Cook Inlet development and North Slope exploration. One of our heritage companies, ARCO Alaska, discovered the Prudhoe Bay Field. Another, Phillips Petroleum, helped create the Asia Pacific LNG market with construction of the Kenai plant and initiation of international sales to Japan in 1969. We have been in Alaska since the founding of its modern oil and gas industry, and with our large federal and state leasehold positions plan to be there for decades to come. We are currently, along with Anadarko, our co-venturer in the

Colville River Unit, the most active explorer and developer in the NPRA. We see significant potential for long-term development in NPRA.

Current Exploration and Production Activity

Alpine Field

The Alpine Field (contained within the Colville River Unit), the westernmost field on the North Slope, extends into the NPRA. Alpine was discovered in 1994 by ARCO Alaska and came on production in 2000. Colville River Unit production peaked in 2007 at approximately 139,000 barrels of oil per day (BOPD) gross and today is producing around 60,000 BOPD gross.

Alpine has no permanent road connection to other North Slope infrastructure. Each winter, we build an ice road connecting Kuparuk to Alpine and transport enough supplies and equipment for the entire operating year, requiring more than 1,500 truckloads. More than eight years of environmental studies guided conceptual development of the field, enabling engineers and environmental experts to locate drill sites and facilities to minimize impacts on the subsistence lifestyle of North Slope Alaska Natives, and on wildlife and waterfowl.

Alpine is located partially on Kuukpik Corporation (the Native village corporation for the nearby village of Nuiqsut) lands, with a portion of the subsurface owned by Arctic Slope Regional Corporation, the Alaska Native regional corporation for the North Slope. The State of Alaska is also a mineral owner in Alpine.

Alpine has a very small land footprint, made possible through continually progressing modern drilling and production technology. The total footprint of the roads, pads and processing facilities in the Colville River Unit is about 220 acres. This represents about 0.3% of the total area currently under development. The field has been developed through use of extended-reach and horizontal drilling that optimizes efficient use of the land. For example, each of Alpine's 12-acre drilling pads can access approximately 55 square miles of the deep subsurface. By comparison, in the 1970s a 65-acre pad could provide access to only about three square miles of subsurface. ConocoPhillips recently contracted for construction of an advanced drilling rig that will more than double the area that can be developed from a drill site to approximately 125 square miles. Additionally, Alpine is a near-zero discharge facility that uses clean-burning natural gas for power generation, and supplies natural gas (free of charge) to Nuiqsut for power and residential heating.

CD5 Development

About one-third of Alpine's production comes from drill site CD5, the latest development in the Colville River Unit. CD5 began producing in October 2015. CD5 produces oil and gas from federal, State/ASRC joint lands, and Alaska Native corporation-owned lands inside the NPRA. It is the first commercial oil development on Alaska Native corporation land in the NPRA.

CD5's current production of 20,000+ (BOPD) gross has exceeded our original peak production estimate of 16,000 BOPD gross. Over 700 people were employed during the peak winter construction seasons in 2014 and 2015. In 2016, additional wells were approved raising the total well count to 33 and total investment in the project to \$1.3 billion. The additional wells are planned to come online in the third quarter of this year, and are expected to further increase production at CD5.

Greater Mooses Tooth Developments

ConocoPhillips has identified other development opportunities in the Greater Mooses Tooth (GMT) Unit in NPRA that capitalize on existing infrastructure, thus minimizing the need for new facilities. Approximately eight miles west of CD5, the Greater Mooses Tooth #1 (GMT1) development was sanctioned for funding in November 2015, with the first construction season completed this past April. It will require total investment of approximately \$900 million gross and employ about 700 people during each of two winter construction seasons, ultimately yielding estimated gross peak production of around 30,000 BOPD with first oil expected in late 2018.

We also filed permits in August 2015 for Greater Mooses Tooth #2 (GMT2). We hope to approve funding of the project by the second quarter of 2018, with first oil planned for late 2021. Total investment will exceed \$1 billion. The proposed drill site will accommodate up to 48 wells, with estimated gross peak monthly production of 25,000-30,000 BOPD. Peak employment during construction will be similar to GMT1, about 700 positions. Since both GMT1 and GMT2 are near Alpine, they will utilize existing pipelines and processing facilities.

Willow Discovery

In January we announced Willow, a new oil discovery in the western portion of the GMT Unit, about 28 miles west of the Alpine Central Facility. Initial estimates indicate recoverable resource potential exceeding 300 million barrels of oil. Subject to future appraisal results and development options, Willow could produce up to 100,000 BOPD. This past winter we began appraisal work using 3D seismic data analysis.

Further Exploration

We are currently considering up to a four-well 2018 winter exploratory drilling program in the NPRA, subject to final budget approval. Three wells would better define the Willow discovery and one would target potential new resources.

Our recent exploration successes in NPRA were the basis for our substantial acreage acquisition in the December 2016 NPRA lease sale. Jointly, ConocoPhillips and Anadarko acquired 594,972 gross acres contiguous to current lease holdings. We are now developing plans for assessing and exploring this acreage.

Environmental Protection and Stakeholder Engagement

At 24 million acres, the NPRA is an area the size of Indiana. The surface occupancy of our current operations and planned developments is approximately 185 acres, or 0.0008% of the NPRA's surface area. The lessons learned from almost 50 years of North Slope experience have enabled us to significantly reduce our operational footprint and successfully produce oil and gas with minimal environmental impact.

ConocoPhillips embraces our role in responsibly accessing, developing and producing oil and natural gas, and cares deeply about the environment. As we have for decades, ConocoPhillips sponsors and employs environmental studies to better understand everything from air quality, hydrology and archeology to populations of mammals, birds and fish. Many studies are carried out cooperatively, working with local communities, government agencies and stakeholders to assess and monitor the ecosystems in which we operate.

Air Quality

For decades ConocoPhillips has monitored North Slope air quality, with one of the monitoring stations in operation since 1999 in Nuiqsut, the village nearest our oil exploration and production operations. The results are shared with various North Slope communities, including Nuiqsut, and with state and federal regulatory agencies. The measurements show that North Slope air quality at all locations is consistently better than national ambient air quality standards.

Wildlife Protection

Caribou are an important subsistence resource for all North Slope Native communities. For more than 20 years, ConocoPhillips has collaborated with regulatory agencies to monitor the distribution and movement of the Teshekpuk and Central Arctic herds. This long-term study is important for ensuring our operations have minimal effect on caribou habitat and migration.

For nearly 10 years, ConocoPhillips has consulted with the U.S. Fish and Wildlife Service on annual polar bear den detection surveys on the North Slope. Pregnant sows construct dens in drifted snow in which to birth and nurse their cubs. Surveys are conducted using aircraft equipped with a precision stabilized infrared (IR) camera to detect body heat emanating from bear dens. All travel and activity is typically prohibited within one mile of occupied dens.

Fishery Protection

For nearly 30 years, ConocoPhillips has conducted monitoring of a unique North Slope subsistence fishery on the Colville River Delta, near our Alpine operations. Each fall, Nuiqsut residents set gill nets under the ice to catch Arctic Cisco (locally known as Qaaktaq) that have migrated into the delta to overwinter. Fishery biologists work with subsistence fishers to monitor the catch. The survey provides better understanding of current fish population

dynamics, helps predict future harvests and provides insight into key factors that contribute to the health of the fishery.

Water Resource Protection

ConocoPhillips remains committed to minimizing the use of valuable freshwater resources. We are a leader in coordination of water-sharing agreements between the various North Slope operators to protect freshwater sources from overuse.

Community Relations

An important element of our operations is our close proximity to the village of Nuiqsut. Since we began developing Alpine in the late 1990s, we have worked closely with Nuiqsut to be good neighbors and address concerns about the potential impact of oil and gas development on their lifestyle. We believe the relationships we have developed with North Slope residents are mutually beneficial and provide the basis for understanding and working together to resolve local concerns. When we were permitting CD5, we spent several years working closely with Nuiqsut residents to locate one of the bridges to a location that the elders felt would cause the least impact to subsistence fishing.

Our goal is maintaining honest and respectful relationships with our Nuiqsut neighbors. We obtain feedback on our operations, and gather local and traditional knowledge to help protect subsistence resources. We also support community projects and work closely to develop and help fund economic opportunities. Our Village Outreach department is in frequent communication with Nuiqsut residents to find ways to balance the needs of subsistence resource users with oil and gas development.

ConocoPhillips also works in close collaboration with regulatory agencies and other interested stakeholders to design and build infrastructure that minimizes disturbance to wetlands and the unique benefits they provide. For example, in 2015, ConocoPhillips constructed a fourth bridge on the road to our new CD5 development in a section where the original design concept called for a gravel road with culverts. The bridge mitigates potential impacts to hydrologic flow and distribution of nutrients. Another example of our efforts to protect wetlands is our redesign of the gravel pads needed for manual pipeline valves. By placing valve pads adjacent to existing gravel roads, we avoid the need for new access roads, which translates to a smaller footprint.

Benefits of ConocoPhillips Operations

Revenue Generation

On the North Slope, we work closely with the local borough government, village government, native corporations, state and federal agencies, and local residents in all phases of our operations. Our North Slope operations have generated hundreds of millions of dollars in property taxes to the North Slope Borough; tens of billions of dollars in royalties, severance taxes, income taxes and additional property taxes to the state of Alaska; and hundreds of

millions of dollars in payments to the federal government. We have also paid in excess of a billion dollars to Arctic Slope Regional Corporation (ASRC) stemming from production of its minerals underlying the Colville River Unit, which under provisions of the Alaska Native Claims Settlement Act (ANSCA) benefits shareholders in Alaska Native Corporations statewide.

As development moves farther west into NPRA, the resulting economic stimulation will continue to benefit the state and federal governments, as well as North Slope residents (see Attachment 1). The GMT1 and GMT2 projects alone, by developing mineral interests held by ASRC, are expected to yield over \$700MM in long-term revenue to ASRC. Under ANSCA, ASRC will share 70% of its revenue with the other Native corporations in the state.

As development ultimately extends onto primarily federal mineral interests, the benefits to the federal government will also increase. Half of the federal revenues derived from oil and gas activities in NPRA, by federal statute, are earmarked for the State of Alaska, specifically for the NPRA Impact Mitigation Grant Program which was created to offset the impacts of oil and gas development on NPRA villages. Since 1999, over \$150 million has been allocated to the North Slope for this purpose. In addition to taxes and royalties, our support for the North Slope Borough and Nuiqsut residents includes programs addressing education, subsistence, emergency response, community events, workforce development and employment. The programs we have implemented, funded or otherwise supported are summarized in Attachment 2. We believe the relationships we have developed with North Slope residents are mutually beneficial and provide the basis for understanding and working together to solve local concerns.

State and National Job Creation and Economic Stimulation

From a socioeconomic perspective, our operations have created thousands of jobs for Alaskans; and generated a multitude of opportunities for Alaska businesses as well as businesses throughout the U.S.

The Challenging Operating Environment

Arctic Conditions

A common characteristic of NPRA developments is the extended time between discovery and first oil. Some of this is driven by the North Slope's natural environment, and some by regulatory requirements.

Exploration and development in the Arctic has unique and special requirements. Due to the fragile nature of the tundra, exploratory drilling outside existing infrastructure is conducted in the winter, when the tundra is frozen, using ice roads and ice pads. This ice-based infrastructure melts in the summer, leaving no sign it was ever there. However, this shortens the exploratory drilling window to about 90 to 120 days per year. During development, to reduce the surface footprint we drill wells from a central gravel pad using extended-reach

drilling. These factors increase the cost and time required for exploration and development compared to land-based operations outside the Arctic. Once we announce our intention to develop a discovery, assuming no unexpected permitting delays and close proximity to existing infrastructure, we can move to production in about six to seven years. That timeframe includes three to four years for complex permitting, and three years for engineering and construction.

However, in cases like GMT2 where the discovery is far from existing infrastructure, development timing depends on first building infrastructure out to the discovery area. With our current assumption of first oil for GMT2 in 2021, the elapsed time from discovery to production will be 20 years.

Regulatory Considerations

From a regulatory point of view, the State of Alaska has implemented relatively efficient processes. Our key permitting challenge has been working with the federal government, whose regulatory framework has been less well defined.

Federal Permitting in NPRA

In order for development, conservation, and impact mitigation to proceed in an orderly manner in the NPRA, agency decisions must be predictable and reasonably durable. Predictability is essential for developers, residents, investors, the State of Alaska, the North Slope Borough, the Native Corporations, the tribes, villages and residents. Since we first entered the NPRA in 2000, we have seen steadily increasing and evolving permitting requirements from the federal government. At this time, new NPRA developments must address 265 best practices and mitigation measures (see Attachment 3).

Expanding Requirements

The steady expansion of standards and mitigation measures was complicated by agencies also revisiting previous work, decisions and compromises. For example, an Environmental Impact Statement (EIS) was performed in 2004 that explicitly evaluated and approved roads proposed for planned development of CD5, GMT1 and GMT2. However, as permitting of these projects proceeded, we faced conducting a Supplemental EIS (SEIS) for each, ostensibly because too much had changed in the intervening years. This requirement added time to the development schedule, increased costs, and created uncertainty regarding the viability of development.

Permitting Obstacles

Another key area of contention has been difficulty in permitting roads. As a company, we will not develop new drill sites and production facilities without connection by road to the Alpine infrastructure. We firmly believe that the lack of road access poses potential environmental risks, particularly in event of a hydrocarbon spill. It also causes an expanded development footprint as more infrastructure is required if a drill site cannot be reached by road. This in turn causes greater emissions from increased infrastructure and air traffic, adverse impacts on

subsistence hunting due to increased air traffic, increased operational difficulties, and higher costs. Following are several examples of difficulties in working with federal agencies to permit NPRA developments.

- CD5 - The Corps of Engineers initially rejected our application for a “roaded” bridge across the Nigliq Channel of the Colville River, which would have effectively prohibited development. After an appeal to the Corps, a permit was later granted for a road-bearing bridge. However, the complications over the permit added delay to the project.
- GMT1 – This development would not have occurred without construction of the CD5 road and bridge. While a roadless option was part of the BLM’s Corps of Engineers consideration in the permitting process, ultimately BLM and the Corps agreed that a road from CD5 to GMT1 was the preferred option. However, BLM required an \$8 million monetary payment to mitigate the development impacts. The amount was determined through negotiation, rather than by any specific impacts. Of this payment, \$1 million was for BLM’s use in developing a Regional Mitigation Strategy (RMS) for the Northeast NPRA, and \$7 million was earmarked for the Village of Nuiqsut. This payment was required without consideration of the funding discussed earlier already being directed to offset development impacts and without consideration of the positive socioeconomic and subsistence benefits of development for residents of Alaska’s North Slope. The BLM payment contrasts with mitigation payments to the Corps of Engineers to offset impacts to wetlands which have a measurable basis (e.g., acres of wetlands impacted).

BLM’s draft RMS was opposed by industry, environmental groups and native groups. A fundamental problem with the Strategy was BLM’s lack of a gap analysis to consider all the measures already in place to compensate for and minimize impacts (as noted above, NPRA developments are already subject to 265 existing mitigation measures/best practices). BLM is redrafting the RMS considering the comments received, and we urge that the final document not add unnecessary additional layers of regulation, mitigation, delays and costs.

Another area of contention with BLM was the agency’s excessive time to approve a measurement system, and their adherence to unreasonably rigid measurement standards despite having the latitude under governing regulations to take a speedier and more flexible approach. ConocoPhillips engaged with BLM on GMT1 measurement issues early in 2013, and we submitted an application in December of 2013. We did not get approval until October, 2016. A major reason for this nearly three-year time scale was long periods of no response from BLM. The design ultimately approved by BLM imposed additional costs on the project in excess of \$15 million for a production separator to separate oil, gas and water at the drill site solely for purposes of federal royalty measurement. After measurement, the fluids will be recombined for delivery to a processing facility where they will be separated and measured again. This is an

expensive solution that marginally improves measurement accuracy solely to measure the federal share of production, which is estimated to be between only 2 to 2 ½ percent of total production from the drill site. This approach was not supported by other royalty or working interest owners, nor was it required by State regulators.

- GMT2 – Permitting is proceeding slowly. BLM took 11 months to issue the Notice of Intent to Proceed (with GMT1 it took 25 days), which in turn has delayed the project by one year. We are cooperating closely with BLM to help the agency perform the analysis necessary to complete the SEIS to enable an investment decision in late 2018.

Willow

In recent discussions with BLM, we have been encouraged by their desire to begin work on a regional air quality study and an EIS for development of Willow. We hope that these studies will be more durable than the 2004 EIS conducted for CD5, GMT1 and GMT2. We are also hopeful that BLM will pursue a more balanced approach in assessing oil and gas impacts by considering the positive socioeconomic and subsistence benefits of development. Recent policy changes to eliminate the BLM mitigation payments will help facilitate development on all federal lands.

Access to Federal North Slope Lands

NPRA

We would like to see more federal lands available for leasing on the North Slope. Our current acreage position abuts lands deemed unavailable for leasing by the 2013 NPRA Record of Decision. The area unavailable for leasing in the Northeast NPRA area has expanded from approximately 600,000 acres in 1999 to more than 3.1 million acres today (see Attachment 4). We believe this is more land than needed to protect this important wildlife and subsistence resource. We are not advocating for any changes to the current 265 mitigation measures/best management practices mentioned earlier that are already in place and believe that NPRA development can be done in a safe and environmentally sound manner that benefits all stakeholders. We are encouraged by Secretary Zinke's recent Secretarial Order calling for a review of the 2012 NPRA IAP through the lens of a better balance between development opportunities and protection of environmentally sensitive areas in the Reserve.

Arctic National Wildlife Refuge

Regarding the 1002 area in the Arctic National Wildlife Refuge (ANWR), we believe that expanded access is generally in the best interests of the State of Alaska and our country, and that this area can be developed in a safe and environmentally responsible manner. If the 1002 area was authorized for leasing, we would consider it against other opportunities in our portfolio, just as we do with exploration opportunities worldwide. That being said, we see tremendous potential in NPRA and remain focused on our projects and exploration plans in the Reserve.

Closing – Responsible Development Past, Present and Future

ConocoPhillips, through its heritage companies ARCO Alaska, PhillipsPetroleum and Conoco, has been an active explorer and developer on both federal and state lands in Alaska, both onshore and offshore, from Cook Inlet to the North Slope, for over 50 years. We have a track record of environmentally and socially responsible operations. Through our investments and those of other oil and gas companies, we have generated jobs for Alaskans and created wealth for the State of Alaska; Alaskan communities; Native regional and village corporations and their shareholders; and Alaskan and Lower 48 businesses. Our business and socioeconomic benefits have been positive game changers to the state. While we continue to explore and develop oil and natural gas resources on Alaska's state lands, federal lands there represent new opportunities for potentially important discoveries. However, there is intense competition for investment dollars and Alaska's high cost environment puts it at a cost disadvantage to many other locals. Unnecessary regulatory actions and requirements that add costs and delays could make Alaska non-competitive. The challenge for BLM is to provide access to federal lands under reasonable, predictable, cost effective and legally defensible permitting. Additional oil and gas exploration and development on Alaska federal lands will help meet the goal of American energy dominance and help keep a key piece of U.S. infrastructure, the Trans-Alaska Pipeline, economically viable. We are encouraged by recent changes in the federal government's philosophy surrounding the management of federal lands, especially in Alaska, and believe that these changes will help meet the energy goals of the U.S. and provide economic benefits to Alaskans and the country as a whole.

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