



# Commissioner's Written Determination and Right-of-Way Decision

Alpine Oil Pipeline Right-of-Way Lease, ADL 415701

Alpine Diesel Pipeline Right-of-Way Lease, ADL 415932

Alpine Utility Pipeline Right-of-Way Grant, ADL 415857

Alaska Department of Natural Resources  
Division of Oil and Gas  
State Pipeline Coordinator's Section  
3651 Penland Parkway  
Anchorage, Alaska 99508

## **Purpose of Written Determination and Right-of-Way Decision**

The Right-of-Way Leases for the Alpine Oil Pipeline and the Alpine Diesel Pipeline, authorized through Alaska Statute (AS) 38.35, expire December 14, 2018; the Right-of-Way Grant for the Alpine Utility Pipeline, authorized through AS 38.05.850, expires January 5, 2019. On July 12, 2018, ConocoPhillips Company (Conoco), Lessee/Grantee, submitted a notice of intent to renew all three Alpine Pipeline Right-of-Way (ROW) authorizations, and requested to amend the Alpine Utility Pipeline ROW Grant to allow for a 30-year renewal term.

AS 38.35 and 11 AAC 80.065 – .085 set forth the procedures governing applications and renewals of oil, gas, or products pipeline rights-of-way across State lands. Under AS 38.35, the Commissioner of the Department of Natural Resources (Commissioner) is granted all powers necessary and proper to lease State land for pipeline ROW purposes. Prior to renewing an AS 38.35 lease, the Commissioner is required to prepare a written determination that the lessee is in commercial operations and is in full compliance with the lease and State law.

A Right-of-Way Decision (Decision) is required to amend and renew the Alpine Utility Pipeline ROW Grant, which was issued under AS 38.05.850 for a treated seawater pipeline.

A 60-day public notice of the application under AS 38.35.070 was published on August 30, 2018. The following document is a determination to renew the AS 38.35 Alpine Diesel and Alpine Oil Pipeline ROW Leases for a 30-year period, and a Decision to amend the renewal period and renew the AS 38.05.850 Alpine Utility Pipeline ROW Grant for a 30-year period.

The public comment period for this Determination and Decision began on October 10, 2018, and expires at 5:00 p.m. on November 9, 2018. Written comments may be emailed to [spco.records@alaska.gov](mailto:spco.records@alaska.gov), faxed to 907-269-6880, or submitted by U.S. Mail or in person to this address:

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## **I. Introduction**

### **Nature of the Request**

On July 12, 2018, Conoco submitted an intent to renew the Alpine Oil Pipeline and the Alpine Diesel Pipeline ROW Leases issued under the provisions of 11 AAC 80.065 and AS 38.35, for 30 years, the maximum period authorized by law. Conoco also submitted an intent to renew and a request to amend the renewal period to 30 years for the Alpine Utility Pipeline ROW Grant issued under AS 38.05.850.

### **Applicant**

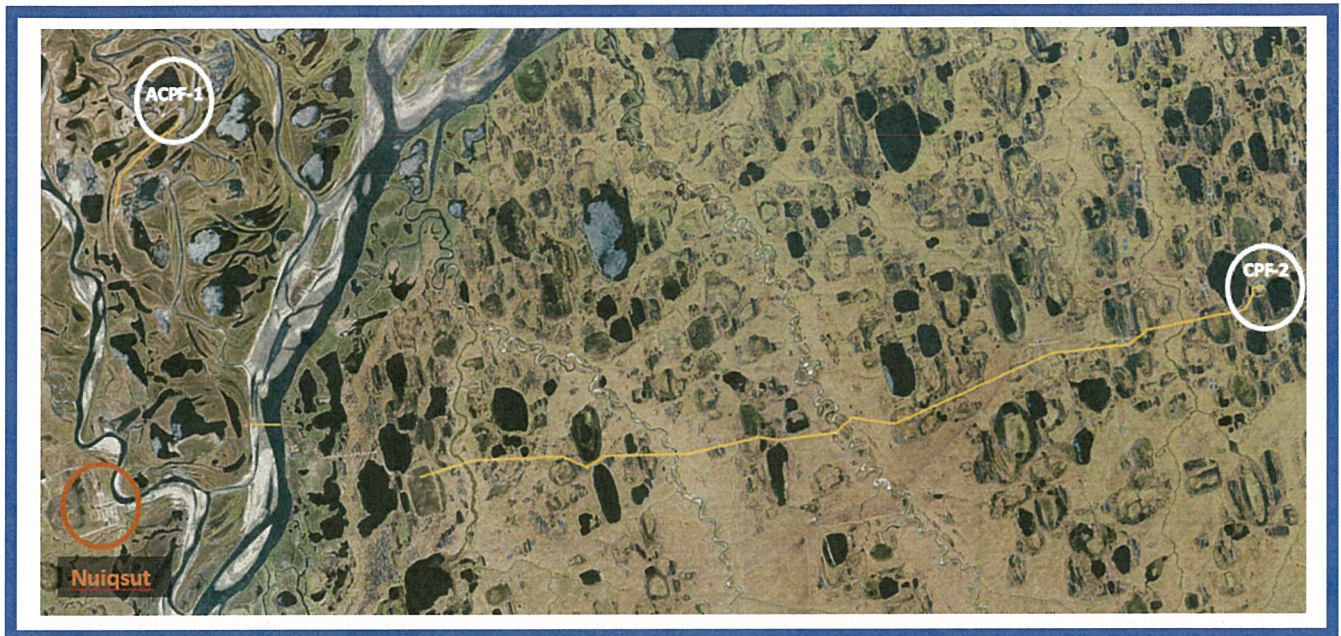
The Alpine leases and grant were originally issued to Atlantic Richfield Company. Assets held by Atlantic Richfield Company were sold in 2000 to Phillips Petroleum Company, predecessor to Conoco. Phillips Petroleum Company filed a certificate of amendment changing its name to ConocoPhillips Company in Delaware on December 12, 2002, and in Alaska on December 26, 2002. The Department of Commerce, Community and Economic Development: Division of Corporations, Business and Professional Licensing, issued an Amended Certificate of Authority for ConocoPhillips Company on December 31, 2002.

Conoco is a corporation that has remained in good standing during the lease/grant terms and has a current business license as ConocoPhillips Company since 2003. Conoco is the Lessee/Grantee for the Alpine Pipeline ROW Leases and Grant; however, the Alpine Oil Pipeline is owned by Alpine Transportation Company, a general partnership between Alpine Pipeline Company, managing partner (65%); Alpine Alaska Pipeline Systems, LLC (18.333%); ASRC Pipeline Company, Inc. (15%); and Kuukpik Transportation Company (1.667%). The Alpine Diesel and Utility Pipelines are wholly owned by ConocoPhillips Alaska, Inc. All three pipelines are operated by ConocoPhillips Alaska, Inc.

### **Alpine Pipelines**

The three Alpine pipelines are located on the North Slope of Alaska, are each approximately 34 miles long, and they connect Alpine Central Processing Facility 1 (ACPF-1) with Kuparuk Central Processing Facility 2 (CPF-2). The 14-inch diameter Alpine Oil Pipeline transports processed crude oil from ACPF-1 to CPF-2. The 2.375-inch diameter Alpine Diesel Pipeline transports heating fuel and other petroleum products from CPF-2 to ACPF-1. The 12.75-inch diameter Alpine Utility Pipeline transports treated seawater from CPF-2 to ACPF-1. All three pipelines are aboveground for most of their respective lengths, with a few cased road crossings and underground casings at the Colville River (see Figure 1).





*Figure 1: Pipeline location map*

### **Authorities**

The Commissioner of the Department of Natural Resources (Commissioner) authority derives from the AS 38.35 Right-of-Way Leasing Act. In part, AS 38.35.010(a) states, “It is the policy of this state that development, use, and control of a [crude oil, natural gas and their products]<sup>1</sup> pipeline transportation system make the maximum contribution to the development of the human resources of this state, increase the standard of living for all its residents, advance existing and potential sectors of its economy, strengthen free competition in its private enterprise system, and carefully protect its incomparable natural environment.”

The Commissioner has been given all powers necessary and proper to implement AS 38.35 to issue leases on State land for pipeline ROW purposes. When AS 38.35 pipeline ROW activities are involved, the State Pipeline Coordinator has delegation to issue permits, ROWs and easements under AS 38.05.850. On November 7, 1996, the Department of Natural Resources (DNR): Division of Mining, Land and Water, redelegated the authority to issue ADL 415857 to the State Pipeline Coordinator because the Alpine Utility Pipeline was located on the same vertical support members as the Alpine Oil and Alpine Diesel Pipelines.

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<sup>1</sup>Inserted language based on preceding sentence within the statute: “The natural resources of this state in crude oil and natural gas and their products by pipeline toward market in and out of the state are capable of making a significant contribution to the general welfare of the people of this state.”

AS 38.35.110(a) and Section 2(c) of the Alpine Oil and Alpine Diesel Pipelines ROW Leases provide for renewal for up to 30 years<sup>2</sup>. A decision under AS 38.05.850 will determine whether to amend and renew the Alpine Utility Pipeline ROW Grant.

## **II. Administrative Actions**

The Commissioner issued 20-year ROW leases for the Alpine Oil and Alpine Diesel Pipelines to Conoco on December 15, 1998. On January 6, 1999, the Commissioner issued a 20-year ROW grant for the Alpine Utility Pipeline. The Alpine Oil and Alpine Diesel Pipelines ROW Leases will expire on December 14, 2018; the Alpine Utility Pipeline ROW Grant will expire on January 5, 2019. The original leases and grant allowed for 10-year renewal periods. On September 5, 2003, Section 2(c) of the Alpine Oil and the Alpine Diesel ROW Leases were amended to allow a renewal term for additional periods of up to 30 years each, to comply with AS 38.35.110(a), revised in 2001.

Renewal of the Alpine Utility Pipeline ROW Grant for up to 10 years is provided for under Section 2(c), so long as the grantee is in commercial operation and is in full compliance with all terms of the grant and all State, federal, and local laws. The Commissioner received a request from Conoco to amend Section 2(c) of the Alpine Utility Pipeline ROW Grant to allow a renewal term for additional periods of up to 30 years each, and to subsequently renew the grant for 30 years.

Both the Commissioner's Written Determination for the AS 38.35 Alpine Oil Pipeline and Alpine Diesel Pipeline ROW Leases and the Decision under AS 38.05.850 for the Alpine Utility Pipeline ROW Grant are incorporated into this document, to determine whether to renew the leases and grant for a 30-year period. Attachment A contains the proposed renewal and amendment documents. The public notice for the Decision to amend and renew the Alpine Utility Pipeline ROW Grant will be provided with the AS 38.35 public notice.

### **Scope of Written Determination and Right-of-Way Decision**

AS 38.35.110(a) states that leases under AS 38.35 "shall be renewable for additional periods of up to 30 years each, so long as the lessee is in commercial operation and is in full compliance with all state law, including but not limited to state law pertaining to the regulation and taxation of the pipeline facility, and is in compliance with all terms of the lease."

The regulations (11 AAC 80.075) further define the requirements for a renewal determination and public notice. 11 AAC 80.075(a) states that "...the commissioner will make, in the exercise of

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<sup>2</sup>Original renewal period was 10 years. Amendments dated September 5, 2003, and recorded as 2003-001191-0 (Alpine Diesel Pipeline ROW Lease, ADL 415932) and 2003-001192-0 (Alpine Oil Pipeline ROW Lease, ADL 415701) respectively in the Barrow Recording District, increased the renewal periods to 30 years. Statute language is for renewal periods of up to 30 years.

reasoned discretion, a written determination whether the requirements of AS 38.35.110 have been satisfied.” After receipt of the application to renew a lease of State land for pipeline ROW purposes, the Commissioner determines whether the lessee is in commercial operation and is in full compliance with all terms of their lease and all State, federal, and local laws. The procedures for renewal of an AS 38.35 pipeline ROW lease are set out in 11 AAC 80.065 – .085.

The Commissioner’s determination will be based on an analysis of the Conoco applications and the administrative record; the Commissioner will determine if the Lessee is in commercial operation and in full compliance with all the terms of the leases.

This combined Decision under AS 38.05.850 will determine whether to amend Section 2(c) of the Alpine Utility Pipeline ROW Grant to allow a renewal term of up to 30 years each, and to renew the grant for 30 years.

### **Administrative Record**

The Alpine Oil Pipeline (ADL 415701) and Alpine Diesel Pipeline (ADL 415932) lease renewal applications, the Alpine Utility Pipeline (ADL 415857) Grant amendment and renewal application, and documents, maps, figures, and other information contained within the casefiles constitute the administrative record used in this Written Determination and Decision.

### **Public Notice of Applications**

Pursuant to AS 38.35.070, coordinating State agencies, as defined in AS 38.35.230(2), were furnished notice and directed to online sources for copies of the lease renewal requests. Notice of the AS 38.05.850 grant amendment and renewal request was sent concurrently. Interested parties, including other State and local government agencies, towns, and Regional and Village Corporations in the vicinity of the Alpine ROWs were also notified and provided information for accessing or requesting copies of the renewal and amendment requests.

Electronic copies were made available through the State of Alaska and DNR Division of Oil and Gas public notice websites. Hard copies were made available to the public at cost. Public notices of the renewal applications were sent for posting in local post offices and libraries and sent to cities and towns within the vicinity of the pipelines. Public notices were published in the Anchorage Daily News on August 30, 2018, and the Arctic Sounder on September 6, 2018. Any objections pursuant to AS 38.35.200 must be submitted in writing to DNR by 5:00 p.m. on October 29, 2018.

### **Public Hearings**

No requests have been received for a public hearing on the Alpine Pipeline ROW Leases and Grant renewal and amendment applications.

### **Public Notice of Written Determination and Right-of-Way Decision**

Notice will be published in accordance with AS 38.35.070, AS 38.05.850, and 11 AAC 80.085. Coordinating State agencies, as defined in AS 38.35.230(2), will be furnished notice and directed to online sources for copies of the Written Determination for the Alpine Oil and Alpine Diesel Pipeline ROW Lease renewals, and the Right-of-Way Decision to amend and renew the Alpine Utility Pipeline ROW Grant. Interested parties, including other State and local government agencies, towns, and Regional and Village Corporations in the vicinity of the Alpine Pipelines will be notified and provided information for accessing or requesting copies of the determination and decision. Electronic copies will be made available through the DNR Division of Oil and Gas website. Hard copies will be made available to the public at cost. Public notices will be sent for posting in local post offices and libraries and sent to cities and towns in the vicinity of the pipelines. Public notices will be published in the Anchorage Daily News and the Arctic Sounder.

If the Commissioner revises the Written Determination following closure of the public comment period, then the revised determination will be published consistent with AS 38.35.070. The Written Determination, or if revised, the revised determination published by the Commissioner, is the final administrative decision 30 days after the end of the public comment period, unless the Commissioner, in writing, extends that 30-day period for a specified period of not more than 90 additional days to allow for full consideration of comments received. If the Written Determination is revised, then notice will be published on or about the end of the determination and decision comment period.

### **Agency Review**

State agencies were noticed and provided a link to all application materials related to the Alpine Pipelines ROW renewal applications and the Alpine Utility Pipeline ROW amendment. State agencies will be notified of and provided a link to the Written Determination and Decision. The Alaska Department of Fish and Game provided confirmation that there do not appear to be changes to the wildlife and fish resources discussed in the initial decisions that can be attributed directly to the Alpine Pipeline Rights-of-Way. The State Historic Preservation Office will be providing updated information to DNR on any conflicts with cultural resources.

## **III. Land Status & Agency Review of Leasehold/Grant**

### **Location**

*Geographic:* The Alpine Pipeline ROWs are located on the North Slope, between the Kuparuk CPF-2 and the Alpine CPF-1. The ROWs cross the Colville River and end nine miles northeast of the City of Nuiqsut. The pipelines traverse both State of Alaska and Kuukpik Corporation owned lands. They are located entirely within the North Slope Borough.



*Native Regional Corporation:* Arctic Slope Regional Corporation

*Village Corporation:* Kuukpik Corporation

*Village:* Native Village of Nuiqsut

*U.S. Geologic Survey Map Coverage:* Beechey Point (A-5, B-5) and  
Harrison Bay (A-1, A-2, B-1, B-2, B-3)  
(1:63,360 scale)

### **Title**

The pipelines cross State and non-State lands as they travel from/to the ACPF-1 to/from the Kuparuk CPF-2. DNR reviewed the land title information to confirm ownership and status of the State lands encompassed by the Alpine Pipeline ROWs. Title research of the lands crossed by the ROWs confirmed State title for the existing State ROWs. The following is a general description of the State lands covered by the leases and grant renewal requests listed by township, all within the Umiat Meridian:

Township 12 North, Range 5 East, Section 32;  
Township 11 North, Range 5 East, Sections 5-7, 18;  
Township 10 North, Range 5 East, Sections 3;  
Township 10 North, Range 6 East, Sections 8-12, 17;  
Township 10 North, Range 7 East, Sections 1, 2, 7-11;  
Township 10 North, Range 8 East, Sections 5, 6;  
Township 11 North, Range 8 East, Sections 25, 32-36; and  
Township 11 North, Range 9 East, Sections 20, 21, 29, and 30.

The State received title to lands encompassed by the Alpine Pipelines ROWs through federal patent number (Patent) 50-74-0093, recorded as Document Number 401-1974-003775-0, under General Selection Files (GS) 1298 and 1313; Patent 50-74-0100, recorded as Document Number 413-1997-000550-0, under GS 1295 and 1299; and Patent 50-2016-0062, recorded as Document Number 413-2016-000542-0, under GS 1285. Additionally, the State received title to lands under the Colville River as part of Alaska's statehood entitlement to lands under navigable waters under the equal footing doctrine. Some State selected lands are tentatively approved to the State by the Bureau of Land Management, under GS 1286 and 1291.

In addition, DNR requested title reports from the DNR: Division of Mining Land and Water, Realty Services Section, to confirm the land status findings. If the reports identify any substantive changes to title within the ROWs, then those changes will be discussed in a revised or final determination.

### **Planning and Classification**

The area, although not covered by a DNR Land Management Plan, is classified as Resource Management by DNR Classification Order 618. There has been no change to the March 5, 1970,

designation of all State lands within the Umiat Meridian as Special Use Lands (ADL 50666). This designation established a permit requirement for motorized vehicle use, unless that use is for subsistence purposes or on a graveled road, and for geophysical, other exploration, construction and transportation activities, except along established roads, in addition to activities listed in 11 AAC 96.010.

Mineral Closing Order 740 closed to mineral entry all lands within 150 feet of the Alpine Oil Pipeline, under authority of AS 38.05.185(a) and AS 38.05.300(a).

#### **Public Access – Navigable and Public Waters (AS 38.05.127)**

The Alpine Pipeline ROW Leases and Grant required that the pipelines be built a minimum of five feet from ground level to allow for access to and along navigable and or public waters, per AS 38.05.127. In addition, the leases and grant do not allow storage within the ROWs without prior approval by the Commissioner. The current pipelines were built to meet this condition and continue to allow for access to and along public and navigable waters. The Lessee is in compliance with requirements to allow public access.

#### **Resources Within the Pipeline Rights-of-Way**

The original decisions in 1998 and 1999 identified minerals and materials, fish resources, and wildlife resources within the then proposed pipeline ROWs. The pipelines were installed to mitigate environmental impacts. In addition, Conoco has recorded Spectacled Eider observations along the Alpine Pipelines during most of the life of the leases and grant. There are no known impacts to the minerals and materials, fish resources, or wildlife resources discussed in the original Alpine ROW decisions. Several thermistors at the Colville River crossing are tilted, but remain operable. This has not negatively impacted erosion of the Colville River, as erosion at the Colville River has proceeded at a rate slower than initially predicted. The status of these thermistors is being monitored by Conoco and DNR.

### **IV. Renewal Requirements**

#### **Continued Commercial Operation**

##### *Alpine Oil Pipeline:*

Conoco provides annual reports to DNR that provide operational status information on the pipelines. In 2017, the report documents that the Alpine Oil Pipeline was available for 99.5% of the time, with two planned pipeline shutdowns and one shutdown resulting from activities at ACPF-1. A chart in the report lists throughput from 2013 through 2017. The throughput in 2017 was 23,007,701 barrels, an increase from 2016.

##### *Alpine Diesel Pipeline:*

Operational status information provided by Conoco in the 2017 Alpine Annual Report to DNR states that the Alpine Diesel Pipeline was available 100% of the time. A chart in the report lists

the throughput each year since 2013. A substantial rise in throughput occurred in 2014 and has remained at that higher level. The throughput in 2017 was 4,388,688 gallons.

Conoco temporarily operated the Alpine Diesel Pipeline using a single shipping pump during 2017 until planned pipe segment replacements were completed in 2018. The Alpine Diesel Pipeline road crossing pipeline replacement project has been completed and will continue to be monitored by Conoco and DNR.

*Alpine Utility Pipeline:*

Operational status information provided by Conoco in the 2017 Alpine Annual Report to DNR states that the Aline Utility Pipeline was available 100% of the time. A chart lists the throughput from 2013 through 2017. Treated seawater throughput for 2017 was 27,504,602 barrels.

**Compliance with State Laws**

DNR works closely with State, federal and local agencies as they relate to pipeline ROWs under AS 38.35 jurisdiction. Under Section 8(g): Covenants of Lessee/Grantee, and Section 40: Compliance, Conoco is required to operate the pipeline systems in compliance with all applicable federal, State and local laws and regulations. As discussed later in this document, DNR oversight activities verify compliance with all requirements of the leases and grant. Conoco has been in compliance with their lease and grant requirements.

DNR has not identified any areas where Conoco is in non-compliance with State, federal and local laws, and will be accepting comments or concerns related to the ROW renewal applications until the end of the comment periods.

**Compliance with the Lease/Grant**

*Rentals and Reimbursable Payments:*

The Lessee has remained current on annual rental payments and quarterly billings that pay for reimbursable services.

*Approved Documents:*

The Alpine Pipeline ROWs are due for appraisal every five years. On July 31, 2018, Conoco submitted a new appraisal for the Alpine Pipelines ROWs, which was approved by the DNR Review Appraiser on August 1, 2018. Appraisal Number 3246-3 sets the annual rental amount for the next five years.

Conoco has maintained approved Quality Assurance and Surveillance and Monitoring Programs for the duration of the leases and grant, periodically submitting updates to DNR for review and approval. Conoco submitted a revised Quality Assurance Program in June 2018 and a revised Surveillance and Monitoring Program in July 2018; both documents are under review by DNR. In the meantime, Conoco can continue to operate under the previously DNR approved plans.

*Compliance and Surveillance Background:*

Since the Alpine Pipeline ROW Leases and Grant were issued in 1998 and 1999, DNR has conducted roughly 40 external and internal audits and inspections of the Alpine Pipeline ROWs and pipeline systems to ensure compliance with the associated AS 38.35 leases (ADLs 415701, 415932) and AS 38.05 grant (ADL 415857), as part of the compliance monitoring program. The compliance monitoring program develops an annual monitoring plan for each pipeline and provides a structured approach to the oversight of pipeline activities. Conoco provides the following in their annual reports to DNR:

- Results of their surveillance and monitoring program during the preceding year, including annual and cumulative changes in facilities and operations, the effects of the changes, and proposed actions to be taken as a result of noted changes.
  - A summary of the scope of all surveillances, audits, self assessments or other internal evaluations performed by Conoco.
  - Summarized findings, action items and other observations identified as a result of all surveillances, audits, self-assessments or other internal evaluations performed by Conoco.
  - Descriptions of corrective and preventive actions planned or other internal evaluations performed by Conoco.
  - To the extent known, lists of surveillances, audits, self-assessments or other internal evaluations planned for the next year.
- The state of, changes to, and results from the last year of the lessee's risk management program, quality assurance program, and internal and external safety programs.
- Conoco's performance under the ROW lease, including stipulations.
- Information on construction, operations, maintenance, and termination activities necessary to provide a complete and accurate representation of the Conoco's activities and the state of the pipeline system.
- A summary of all events, incidents and issues that had the potential to or actually did adversely impact the pipeline system integrity, the environment, or worker or public safety, and a summary of Conoco's response efforts.
- A summary of all oil and hazardous substance discharges, including date, substance, quantity, location, cause, and cleanup actions undertaken. Minor discharges below agreed-upon thresholds may be grouped into monthly total amounts, provided the number of separate incidents is reported.
- Any additional information requested by the State Pipeline Coordinator.

Additionally, quarterly meetings and regular correspondence with Conoco compliance and regulatory personnel inform DNR compliance and engineering representatives of upcoming activities. DNR develops an annual surveillance program to document pipeline activities and ensure compliance with the leases and grant and their stipulations.

The DNR compliance program includes field components to verify the condition of the ROW and the pipeline system, and to ensure project activity is compliant with the leases and grant and company-based programs and processes.

DNR staff typically conducts summer and winter field inspections for each pipeline ROW. In the summertime, when snow cover is minimal, the ROW is easily accessible for determination of compliance with the sections and stipulations of the leases and grant. Construction and repair projects are typically undertaken in the wintertime, when access is facilitated through ice roads and off-road travel.

DNR surveillances have three principle steps:

1. Review Conoco's records documenting ongoing operational and maintenance activities;
2. Verify through inspection the integrity of the pipeline and ROW conditions as outlined in the relevant sections and stipulations of the lease and grant; and
3. Issue a lease compliance report with observations, photos, and areas of concern.

The compliance reports outline the purpose and findings of the surveillance. DNR bases its oversight of the lease and grant on the associated lease and grant stipulations, and the requirements of AS 38.35, AS 38.05.850, and 11 AAC 80.

*Compliance and Surveillance Overview:*

DNR's approach to assessing Conoco's compliance with the terms of the lease and grant is through lease compliance reports that cite the relevant sections and stipulations. These reports provide an opportunity to communicate the results of inspections and surveillances to the lessee and give specific examples on what improvements may be needed.

Since the Alpine Oil, Diesel, and Utility Pipelines all share the same vertical support members and overlapping ROWs, they are typically inspected at the same time. Attachment B provides a summary of trip dates, surveillance report letter numbers, and relevant lease/grant sections and stipulations. Over the life of the Alpine Pipeline ROW Leases and Grant, DNR has documented two unsatisfactory findings; both were for failing to comply with Stipulation 1.13.1, which requires the lessee to obtain Commissioner approval prior to utilizing the ROW for storage purposes. The first unsatisfactory finding was resolved in 2006 (SPCS Letter Number: 06-199-WW). There was a recent minor unsatisfactory finding resulting from a 2018 surveillance (Letter 18-191-AS); DNR is working with Conoco to ensure future storage and staging activities related to pipeline operations and maintenance are authorized properly. All other sections and stipulations of the leases and grant have been fulfilled when inspected, reviewed, or observed.

On July 7, 2017, the US Department of Transportation, Pipeline and Hazardous Material Safety Administration (PHMSA), issued two non-compliance letters to Conoco for activities related to the Alpine Oil and Diesel Pipelines. A July 7, 2017, Letter of Concern contained recommendations



for fatigue countermeasures training. Conoco communicated the shift requirements, implemented a reporting requirement for shifts that exceeded the maximum hours, and set up a login system to block sign-in, if the appropriate time-off had not been met.

The second non-compliance letter from PHMSA was a Warning Letter that identified a gap in the annual inspection required under 49 CFR 195.428. Conoco addressed the gap through a modification to the PHMSA compliance tool to monitor dates and to ensure that the calendar year requirement is met by triggering the task early. In addition, reporting requirements were put in place to require documenting all findings if either positive, neutral, or negative.

Conoco resolved these two non-compliance issues by taking the preceding actions to ensure current and future compliance with PHMSA requirements.

Conoco has a satisfactory track record of compliance with all the sections and stipulations of the leases and grant, and of self-reporting and resolution of the rare non-compliance issues. DNR staff has conducted approximately 40 field and internal surveillances over two decades of operation, and encourages ongoing communication with Conoco. See Attachment B, *Summary of Alpine Pipeline Surveillances*, for a listing of DNR surveillances on the Alpine Pipeline ROW Leases and Grant.

### **Technical Review**

The DNR engineering program conducted a review to:

- Evaluate the existing Alpine Pipelines design basis, design life, and conditions of the existing pipelines;
- Evaluate the applicant's technical ability to maintain and operate the Alpine Pipelines and associated facilities under the leases and grant;
- Evaluate the applicant's ability to meet the removal and remediation requirements for termination of the leases and grant; and
- Ensure that the Alpine Pipelines conform to laws and regulations and protect the environment.

Based on the review, DNR engineers concluded that the basis of design for the Alpine Pipelines falls within acceptable practices, standards and norms for Arctic pipeline design. The design and continued adherence with the Surveillance and Monitoring Program meets the technical requirements under the leases and grant, and supports an extended engineering design life of 30 years for the Alpine Pipelines.

The engineering program review is included with this determination and decision as Attachment C, *Engineering Recommendation Memo*. For detailed information about the reviewed documents, relevant codes, and other engineering issues, see Attachment C.

### **Financial Capability of the Applicant**

Conoco is a well-established American oil and gas company. As stated in their application, Conoco is the world's largest independent exploration and production company, based on proved reserves and production of liquids and natural gas. ConocoPhillips Company was incorporated in the state of Delaware on November 16, 2001, in connection with, and in anticipation of, the merger between Conoco Inc. and Phillips Petroleum Company (Phillips). The merger between Conoco and Phillips was consummated on August 30, 2002. They explore for, produce, transport and market crude oil, bitumen, natural gas, LNG and natural gas liquids on a worldwide basis. By December 31, 2017, their operations were producing in the United States, Norway, the United Kingdom, Canada, Australia, Timor-Leste, Indonesia, China, Malaysia, Qatar and Libya.

Conoco is the largest crude oil producer in Alaska with major ownership interests in Prudhoe Bay, Kuparuk and Colville River Units. They also operate the Colville River, Kuparuk River and Greater Moose's Tooth Units located on the Western North Slope. Additionally, they are one of Alaska's largest owners of State and federal leases, with approximately 1 million net undeveloped acres at year-end 2017. Alaska operations contributed 22 percent of their worldwide liquids production and less than 1 percent of their natural gas production in 2017.

As of January 2017, Conoco holds a 76.63% working interest in the Colville River Unit (also known as Alpine), a 54.02% working interest in the Kuparuk River Unit, a 36.08% working interest in the Prudhoe Bay Unit, a 75.38% working interest in the Bear Tooth Unit, a 78% working interest ownership in the Greater Moose's Tooth Unit, and a 4.94% working interest ownership in the Point Thomson Unit (DNR Division of Oil & Gas 2018). In 2018, ConocoPhillips Company purchased the remaining 22% ownership in the Colville River Unit from Anadarko. They have also announced the purchase of BP's 38% ownership interest in the Kuparuk River Unit.

In support of this determination and decision for renewal of the Alpine Oil, Alpine Diesel and Alpine Utility Pipeline ROW leases and grant, Conoco submitted to DNR financial information, including a corporate structure schematic outlining the relationship of ConocoPhillips Company and the Alpine Pipelines. Conoco has submitted the confidential versions of their Annual Reports from 2015, 2016 and 2017 for review.

Conoco, via its affiliates, has been a long-time operator in Alaska both in terms of exploration and development of oil and gas resources. Conoco is in good standing with the Alaska Department of Commerce, Community, and Economic Development (DCCED); the most recent biennial report was filed with DCCED on January 11, 2018.

Alpine Transportation Company owns the Alpine Oil Pipeline of which Conoco is 83.333% owner, with Arctic Slope Regional Corporation (ASRC) and Kuukpik Transportation Company having smaller ownership interests. The Alpine Diesel and Utility Pipelines are wholly owned by the ConocoPhillips Company. ConocoPhillips Alaska, Inc. is the operator of all the Alpine Pipelines and is wholly owned by the ConocoPhillips Company (see Figures 2 and 3 below).

## Alpine Oil Pipeline OWNERSHIP INTEREST

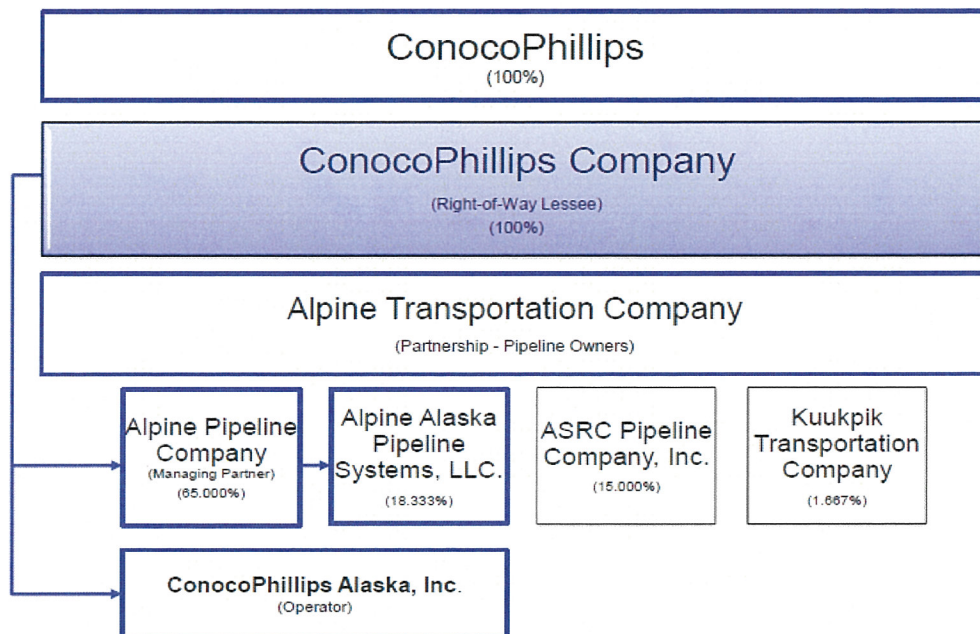


Figure 2. Alpine Oil Pipeline ownership structure, provided by Conoco

## Alpine Diesel & Utility Pipelines OWNERSHIP INTEREST

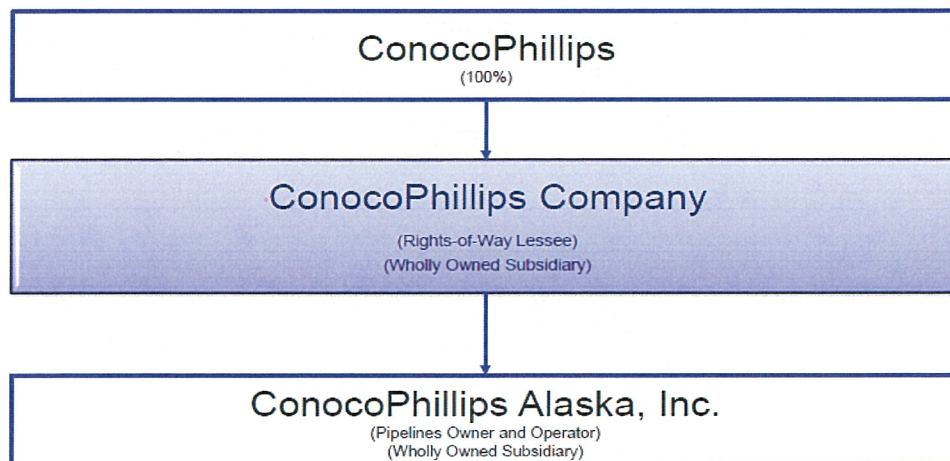


Figure 3. Alpine Diesel & Utility Pipelines ownership structure, provided by Conoco

Conoco operates an extensive network of pipelines across the world. Currently, Conoco operates approximately 27,991 miles of oil, natural gas, LPG (liquefied petroleum gas) and/or water pipelines throughout North America, the North Sea and the Asia Pacific region, including Australia. Onshore lines are located primarily in the Lower 48, Alaska and Indonesia, while offshore subsea pipelines are mostly in the North Sea (U.K. and Norway), Indonesia and China.

*ConocoPhillips Company as the Guarantor and Financier:*

The Commissioner has reviewed the financial statements provided by ConocoPhillips Company in consideration of providing adequate financial assurance required to renew the Alpine Pipelines ROW leases and grant. These financial statements have been audited by Ernst & Young LLP, an independent registered public accounting firm appointed by ConocoPhillips Company's Audit and Finance Committee of the Board of Directors and ratified by stockholders. Conoco's management has made available to Ernst & Young LLP all of the company's financial records and related data, as well as the minutes of stockholders and directors meetings.

ConocoPhillips Company's financial statements, filed confidentially with DNR, show sufficient equity on the balance sheets to provide the financial assurance to renew the Alpine Pipelines ROW leases and grant. In addition, ConocoPhillips Company has a worldwide insurance program subject to a \$125 million liability and \$150 million property risk, per occurrence deductible that covers the Alpine Pipelines. The cost to operate and maintain the Alpine Pipelines on an annual basis is estimated at \$26 million. The total estimated cost to satisfy dismantlement, removal and restoration requirements associated with the Alpine Pipelines is \$40 million.

Based on the financial analysis, DNR found that Conoco (parent company and the Lessees/Grantee) will not need to provide any other guaranties or forms of financial assurance at this time. Conoco is fit, willing and able to operate and maintain the Alpine Pipelines without financial conditions. If the Commissioner determines at any time that Conoco's guaranty is insufficient, then the Commissioner may require the substitution and delivery of a new form of guaranty with any provisions the Commissioner finds necessary. Additionally, if the Commissioner finds that the net assets of Conoco are insufficient to protect the public from damage for which Conoco may be liable arising out of pipeline activities, Conoco may need to procure and furnish additional liability and property damage, or some other security.

## **V. Findings**

DNR has completed a review of the administrative records for the Alpine Oil Pipeline ROW Lease, ADL 415701; the Alpine Diesel Pipeline ROW Lease, ADL 415932; and the Alpine Utility Pipeline ROW Grant, ADL 415857. DNR has also reviewed additional information from Conoco (as required), the lease compliance and technical reviews, and the financial analysis.

### **Renewal Requirement Findings**

- (1) I find that Conoco is in commercial operations, as required for renewal of the leases and grant under AS 38.35.110, and Section 2(c) of the leases and grant;
- (2) I find that Conoco is in full compliance with all State, federal and local laws, as required for renewal of the leases and grant under AS 38.35.110, and Sections 2(c) and 40 of the leases and grant; and
- (3) I find that Conoco is in compliance with all terms of the leases and grant, as required for renewal of the Alpine Oil Pipeline ROW Lease, the Alpine Diesel Pipeline ROW Lease, and the Alpine Utility Pipeline ROW Grant.

### **Term of Renewal Findings**

AS 38.35.110 and the leases allow for up to a 30-year renewal term. AS 38.05.850 does not limit the term for a pipeline grant, although the renewal term allowed under the grant is a period of 10 years. Conoco requested to renew the leases and grant for 30 years. DNR considered the nature and technical conditions and design of the pipeline systems and reviewed Conoco's surveillance and monitoring programs, notification records, and maintenance and operation activities, including recent pipe and valve replacement projects. A technical review determined the extended design life for the Alpine Pipelines is 30 years.

I find that the Alpine Oil Pipeline and Alpine Diesel Pipeline ROW Leases should be renewed for terms of 30 years each, and the Alpine Utility Pipeline ROW Grant should be amended and renewed for a term of 30 years, as requested by Conoco.

## **VI. Commissioner's Written Determination and Right-of-Way Decision**

I required the Lessee/Grantee to provide information considered relevant to determining compliance with AS 38.35.110 and AS 38.05.850, and conducted independent analyses and reviews. I evaluated the information for a determination based on the administrative record developed from the renewal application and other information contained within the casefiles.

It is my determination that the requirements of AS 38.35.110 and AS 38.05.850, and the requirements under the Alpine Oil Pipeline ROW Lease, Alpine Diesel Pipeline ROW Lease and the Alpine Utility Pipeline ROW Grant, have all been met. All three pipelines have a useful life of 30 years, which is the term length requested.

The Alpine Oil Pipeline ROW Lease, ADL 415701; The Alpine Diesel Pipeline ROW Lease, ADL 415932; and the Alpine Utility Pipeline ROW Grant, ADL 415857; will all be renewed for periods of 30 years under the same terms and conditions of the original leases and grant.

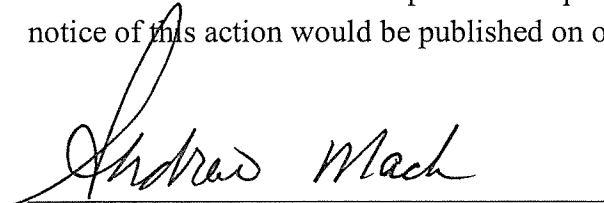


In conformance with 11 AAC 80.085, I direct that the following actions be taken:

1. provide a copy of my determination to Conoco and its agent;
2. make copies of the Determination and Decision, the leases and grant, and the proposed renewal and amendment documents available to the public for viewing; and
3. solicit written comments from the public for a minimum of 30 days.

Any comment, objection or expression of interest pertaining to the proposed actions for the Alpine Oil Pipeline ROW Lease, ADL 415701, or the Alpine Diesel Pipeline ROW Lease, ADL 415932, must be received in writing by the Division of Oil and Gas, State Pipeline Coordinator's Section, 3651 Penland Parkway, Anchorage, Alaska 99508, phone: 907-269-6403, fax: 907-269-6880, email: SPCO.records@alaska.gov., on or before 5:00 p.m. on November 9, 2018, to ensure consideration.

If I revise the Written Determination following closure of the public comment period, then the revised Written Determination will be published consistent with AS 38.35.070. My Written Determination, or if revised, the revised Written Determination, is the final administrative decision 30 days after the end of the public comment period unless, in writing, I extend the 30-day period for a specified period of not more than 90 additional days to allow for full consideration of the comments received. If the department requires additional time to consider public comments, then notice of this action would be published on or about November 9, 2018.



Andrew T. Mack, Commissioner  
Alaska Department of Natural Resources

10/9/2018  
Date

**RENEWAL AND AMENDMENT OF RIGHT-OF-WAY LEASE  
FOR THE ALPINE DIESEL PIPELINE  
ADL 415932**

This RENEWAL and AMENDMENT is made, entered into, and becomes effective on December 14, 2018, 12:00 noon Alaska Standard Time, [expiration date and time for the first lease term] by and between the State of Alaska acting through the Commissioner of Natural Resources or designee, whose mailing address is 3651 Penland Parkway, Anchorage, Alaska 99508, and ConocoPhillips Company (hereinafter referred to as COMPANY), whose mailing address is P.O. Box 100360, ANO 1020, Anchorage, AK 99510-0360.

This agreement, hereinafter referred to as RENEWAL, amends the ALPINE DIESEL PIPELINE RIGHT-OF-LEASE as recorded in the Barrow Recording District on January 28, 1999, as Document Number: 413-1999-000137-0.

WHEREAS, the COMPANY has requested renewal of the ALPINE DIESEL PIPELINE RIGHT-OF-WAY LEASE, under Section 2(c), thereof;

WHEREAS, the State of Alaska has found that the LESSEE is in commercial operation, in full compliance with state law, including but not limited to state law pertaining to regulation and taxation of the pipeline and compliance with all terms of the ALPINE DIESEL PIPELINE RIGHT-OF-WAY LEASE; and

WHEREAS, Section 2(a) of the existing ALPINE DIESEL PIPELINE RIGHT-OF-WAY LEASE reads as follows:

2(a) This lease shall expire on December 14, 2018, 12:00 noon, Alaska Standard Time [20 years from date of execution], unless before that date it is released, abandoned, or otherwise terminated pursuant to the provisions of this grant or any applicable law regulation.

NOW, therefore, the parties agree that Section 2(a) of the ALPINE DIESEL PIPELINE RIGHT-OF-WAY LEASE is amended as follows:

2(a) This lease shall expire on December 14, 2048, 12:00 noon Alaska Standard Time [30 years from effective date of renewal], unless before that date it is released, abandoned, or otherwise terminated pursuant to the provisions of this lease or any applicable law or regulation.

Except as expressly amended hereby all terms, covenants and conditions of the ALPINE DIESEL PIPELINE RIGHT-OF-WAY LEASE shall remain in full force and effect.

The parties shall take such reasonable actions, and execute and deliver any further instruments, agreements, documents, or other papers, as are reasonably requested by either party to effect the purposes of this RENEWAL.

IN WITNESS WHEREOF, the parties have executed this RENEWAL on \_\_\_\_\_ day of \_\_\_\_\_, 2018; the RENEWAL will take effect on December 14, 2018, 12:00 noon Alaska Standard Time.

STATE OF ALASKA

CONOCOPHILLIPS COMPANY

\_\_\_\_\_  
Andrew T. Mack, Commissioner  
Alaska Department of Natural  
Resources

\_\_\_\_\_  
By: \_\_\_\_\_  
Title: \_\_\_\_\_  
Authorized Representative for  
ConocoPhillips Company

STATE OF ALASKA                    )  
  ) ss.  
THIRD JUDICIAL DISTRICT        )

THIS IS TO CERTIFY that on this \_\_\_\_\_ day of \_\_\_\_\_, 2018, before me appeared Andrew T. Mack, COMMISSIONER of the Department of Natural Resources of the State of Alaska, who executed the foregoing RIGHT-OF-WAY LEASE RENEWAL AND AMENDMENT and acknowledged voluntarily signing the same.

\_\_\_\_\_  
Notary Public in and for the State of Alaska  
My Commissioner Expires: \_\_\_\_\_

STATE OF \_\_\_\_\_ )  
  ) ss.  
\_\_\_\_\_ Judicial District        )

THIS IS TO CERTIFY that on this \_\_\_\_\_ day of \_\_\_\_\_, 2018, before me appeared \_\_\_\_\_, the \_\_\_\_\_ of ConocoPhillips Company, who executed the foregoing RIGHT-OF-WAY LEASE RENEWAL AND AMENDMENT and acknowledged voluntarily signing the same on behalf of said corporation.

\_\_\_\_\_  
Notary Public in and for the State of \_\_\_\_\_  
My Commissioner Expires: \_\_\_\_\_

DRAFT

**RENEWAL AND AMENDMENT OF RIGHT-OF-WAY GRANT  
FOR THE ALPINE UTILITY PIPELINE  
ADL 415857**

This RENEWAL and AMENDMENT is made, entered into, and becomes effective on January 5, 2019, 12:00 noon Alaska Standard Time, [expiration date and time for the first grant term] by and between the State of Alaska acting through the Commissioner of Natural Resources or designee, whose mailing address is 3651 Penland Parkway, Anchorage, Alaska 99508, and ConocoPhillips Company (hereinafter referred to as COMPANY), whose mailing address is P.O. Box 100360, ANO 1020, Anchorage, AK 99510-0360.

This agreement, hereinafter referred to as RENEWAL, amends the ALPINE UTILITY PIPELINE RIGHT-OF-GRANT as recorded in the Barrow Recording District on January 28, 1999, as Document Number: 413-1999-000135-0.

WHEREAS, the COMPANY has requested that Section 2(c) of the existing ALPINE UTILITY PIPELINE RIGHT-OF-WAY GRANT with an effective date of January 6, 1999 be amended to reflect a renewal term of up to thirty (30) years.

WHEREAS, the COMPANY has requested renewal of the ALPINE UTILITY PIPELINE RIGHT-OF-WAY GRANT, under Section 2(c);

WHEREAS, the State of Alaska has found that the GRANTEE is in commercial operation, in full compliance with State law, including but not limited to State law pertaining to regulation and taxation of the Pipeline and compliance with all terms of the ALPINE UTILITY PIPELINE RIGHT-OF-WAY GRANT; and

WHEREAS, the State of Alaska has found that it is in the State's best interest to renew the ALPINE UTILITY PIPELINE RIGHT-OF-GRANT and extend the renewal term up to 30 years; and

WHEREAS, Section 2(a) of the existing ALPINE UTILITY PIPELINE RIGHT-OF-WAY GRANT reads as follows:

2(a) This grant shall expire on January 5<sup>th</sup>, 2019, 12:00 noon, Alaska Standard Time [20 years from date of execution], unless before that date it is released, abandoned, or otherwise terminated pursuant to the provisions of this grant or any applicable law regulation.

NOW, therefore, the parties agree that Section 2(a) of the ALPINE UTILITY PIPELINE RIGHT-OF-WAY GRANT is amended as follows:



2(a) This grant shall expire on January 5, 2049, 12:00 noon, Alaska Standard Time [30 years from effective date of renewal], unless before that date it is released, abandoned, or otherwise terminated pursuant to the provisions of this grant or any applicable law or regulation.

WHEREAS, Section 2(c) of the existing ALPINE UTILITY PIPELINE RIGHT-OF-WAY GRANT reads as follows:

2(c) The Commissioner shall, upon request of the Grantee, renew this grant for additional periods of up to ten years each, so long as the Grantee is in commercial operations and the Grantee is in full compliance with all terms of this grant and all state, federal, and local laws including but not limited to state law pertaining to regulation and taxation of the Pipeline System. The Grantee shall give notice of its intent to seek renewal of this grant no later than six months before expiration.

NOW, therefore, the parties agree that the ALPINE UTILITY PIPELINE RIGHT-OF-WAY GRANT is amended as follows:

2(c) The Commissioner shall, upon request of the Grantee, renew this grant for additional periods of up to thirty (30) years each, so long as the Grantee is in commercial operations and the Grantee is in full compliance with all terms of this grant and all state, federal, and local laws including but not limited to state law pertaining to regulation and taxation of the Pipeline System. The Grantee shall give notice of its intent to seek renewal of this grant no later than six months before expiration.

Except as expressly amended hereby all terms, covenants and conditions of the ALPINE UTILITY PIPELINE RIGHT-OF-WAY GRANT shall remain in full force and effect.

The parties shall take such reasonable actions, and execute and deliver any further instruments, agreements, documents, or other papers, as are reasonably requested by either party to effect the purposes of this RENEWAL.

IN WITNESS WHEREOF, the parties have executed this RENEWAL on \_\_\_\_\_ day of \_\_\_\_\_, 2018; the RENEWAL will take effect on December 14, 2018, 12:00 noon Alaska Standard Time.

STATE OF ALASKA

CONOCOPHILLIPS COMPANY

\_\_\_\_\_  
Andrew T. Mack, Commissioner  
Alaska Department of Natural  
Resources

\_\_\_\_\_  
By: \_\_\_\_\_  
Title: \_\_\_\_\_  
Authorized Representative for  
ConocoPhillips Company

STATE OF ALASKA                    )  
  ) ss.  
THIRD JUDICIAL DISTRICT        )

THIS IS TO CERTIFY that on this \_\_\_\_\_ day of \_\_\_\_\_, 2018, before me appeared Andrew T. Mack, COMMISSIONER of the Department of Natural Resources of the State of Alaska, who executed the foregoing RIGHT-OF-WAY GRANT RENEWAL AND AMENDMENT and acknowledged voluntarily signing the same.

\_\_\_\_\_  
Notary Public in and for the State of Alaska  
My Commissioner Expires: \_\_\_\_\_

STATE OF \_\_\_\_\_ )  
  ) ss.  
\_\_\_\_\_ Judicial District        )

THIS IS TO CERTIFY that on this \_\_\_\_\_ day of \_\_\_\_\_, 2018, before me appeared \_\_\_\_\_, the \_\_\_\_\_ of ConocoPhillips Company, who executed the foregoing RIGHT-OF-WAY GRANT RENEWAL AND AMENDMENT and acknowledged voluntarily signing the same on behalf of said corporation.

\_\_\_\_\_  
Notary Public in and for the State of \_\_\_\_\_  
My Commissioner Expires: \_\_\_\_\_

**RENEWAL AND AMENDMENT OF RIGHT-OF-WAY LEASE  
FOR THE ALPINE OIL PIPELINE  
ADL 415701**

This RENEWAL and AMENDMENT is made, entered into, and becomes effective on December 14, 2018, 12:00 noon Alaska Standard Time, [expiration date and time for the first lease term] by and between the State of Alaska acting through the Commissioner of Natural Resources or designee, whose mailing address is 3651 Penland Parkway, Anchorage, Alaska 99508, and ConocoPhillips Company (hereinafter referred to as COMPANY), whose mailing address is P.O. Box 100360, ANO 1020, Anchorage, AK 99510-0360.

This agreement, hereinafter referred to as RENEWAL, amends the ALPINE OIL PIPELINE RIGHT-OF-LEASE as recorded in the Barrow Recording District on January 28, 1999, as Document Number: 413-1999-000136-0.

WHEREAS, the COMPANY has requested renewal of the ALPINE OIL PIPELINE RIGHT-OF-WAY LEASE, under Section 2(c), thereof;

WHEREAS, the State of Alaska has found that the LESSEE is in commercial operation, in full compliance with state law, including but not limited to state law pertaining to regulation and taxation of the pipeline and compliance with all terms of the ALPINE OIL PIPELINE RIGHT-OF-WAY LEASE; and

WHEREAS, Section 2(a) of the existing ALPINE OIL PIPELINE RIGHT-OF-WAY LEASE reads as follows:

2(a) This lease shall expire on December 14, 2018, 12:00 noon, Alaska Standard Time [20 years from date of execution], unless before that date it is released, abandoned, or otherwise terminated pursuant to the provisions of this grant or any applicable law regulation.

NOW, therefore, the parties agree that Section 2(a) of the ALPINE OIL PIPELINE RIGHT-OF-WAY LEASE is amended as follows:

2(a) This lease shall expire on December 14, 2048, 12:00 noon Alaska Standard Time [30 years from effective date of renewal], unless before that date it is released, abandoned, or otherwise terminated pursuant to the provisions of this lease or any applicable law or regulation.

Except as expressly amended hereby all terms, covenants and conditions of the ALPINE OIL PIPELINE RIGHT-OF-WAY LEASE shall remain in full force and effect.

The parties shall take such reasonable actions, and execute and deliver any further instruments, agreements, documents, or other papers, as are reasonably requested by either party to effect the purposes of this RENEWAL.

IN WITNESS WHEREOF, the parties have executed this RENEWAL on \_\_\_\_\_ day of \_\_\_\_\_, 2018; the RENEWAL will take effect on December 14, 2018, 12:00 noon Alaska Standard Time.

STATE OF ALASKA

CONOCOPHILLIPS COMPANY

\_\_\_\_\_  
Andrew T. Mack, Commissioner  
Alaska Department of Natural  
Resources

\_\_\_\_\_  
By: \_\_\_\_\_  
Title: \_\_\_\_\_  
Authorized Representative for  
ConocoPhillips Company

STATE OF ALASKA                    )  
  ) ss.  
THIRD JUDICIAL DISTRICT        )

THIS IS TO CERTIFY that on this \_\_\_\_\_ day of \_\_\_\_\_, 2018, before me appeared Andrew T. Mack, COMMISSIONER of the Department of Natural Resources of the State of Alaska, who executed the foregoing RIGHT-OF-WAY LEASE RENEWAL AND AMENDMENT and acknowledged voluntarily signing the same.

\_\_\_\_\_  
Notary Public in and for the State of Alaska  
My Commissioner Expires: \_\_\_\_\_

STATE OF \_\_\_\_\_ )  
  ) ss.  
\_\_\_\_\_ Judicial District        )

THIS IS TO CERTIFY that on this \_\_\_\_\_ day of \_\_\_\_\_, 2018, before me appeared \_\_\_\_\_, the \_\_\_\_\_ of ConocoPhillips Company, who executed the foregoing RIGHT-OF-WAY LEASE RENEWAL AND AMENDMENT and acknowledged voluntarily signing the same on behalf of said corporation.

\_\_\_\_\_  
Notary Public in and for the State of \_\_\_\_\_  
My Commissioner Expires: \_\_\_\_\_

## Attachment B: Summary of Alpine Pipeline Surveillances

<u>Surveillance or Audit Date</u>	<u>Letter Number</u>	<u>Cited Sections and Stipulations</u>
06/28/2004	04-051-WW	Satisfactory all stipulations
06/27/2005	05-022-RG	Unsatisfactory for 1.13.1; Satisfactory all other stipulations
06/24/2006	06-199-WW	Satisfactory: 1.6.1, 1.7.2, 1.13, 2.3, 2.10
07/19/2006	06-272-WW	Satisfactory: 1.6.1, 1.7.2, 1.13, 2.3, 2.10
02/07/2007	07-011-WW	Satisfactory 1.2.1
10/01/2007	07-090-WW	Satisfactory 1.6.1(4), 3.2.1
01/28/2008	08-006-WW	Satisfactory 15(a), 15(b), 1.5.1, 1.6.1
02/11/2008	08-009-WW	Satisfactory 1.4.1, 1.6.1
03/26/2008	08-015-CT	Satisfactory 1.14.1
01/30/2009	09-016-CT	Satisfactory 1.4.1, 1.14.1
10/31/2009	09-126-TG	Satisfactory 8, 25
03/05/2010	10-SPCO-S-061	Satisfactory 2.11.1
11/22/2010	11-019-AS	Satisfactory 1.2, 1.4, 4.5, 1.6, 1.7, 1.8, 1.10, 1.11, 1.13, 2.8
01/15/2011	11-027-AS	Satisfactory 1.4, 1.14
08/29/2011	11-357-AS	Satisfactory 1.2.1, 1.4.1
01/17/2012	12-047-AS	Satisfactory 1.6.1
02/09/2012	12-079-AS	Satisfactory 1.4, 1.14
03/01/2012	12-046-AS	Satisfactory 1.9.1, 1.12.1, 2.1.1, 2.2.1, 2.4.1, 2.4.2, 2.4.3, 2.4.4, 2.5.1, 2.5.2, 2.5.3, 2.6.1, 2.7.1, 2.10.1, 2.10.2, 2.10.3, 2.11.1, 2.12.1, 2.13.1, 2.14.1, 3.1.1.1, 3.1.1.2, 3.1.2, 3.2.1
06/15/2012	12-358-AS	Satisfactory 15(b), 1.4.1, 1.6.1, 2.5.1
07/23/2012	12-360-AS	Satisfactory 15(b), 1.4.1, 1.6.1, 3.2.1
08/30/2012	12-484-AS	Satisfactory 15(b), 1.2.1, 1.4.1, 2.2, 3.1
01/31/2013	13-067-AS	Satisfactory 15, 1.6
02/28/2013	13-130-AS	Satisfactory 1.4, 1.14
06/12/2013	13-242-AS	Satisfactory 1.6.1
04/03/2013	13-319-AS	Satisfactory 1.2.1, 1.4.1, 1.5.1, 1.5.2, 1.5.3, 1.7.1, 1.7.3, 1.11.2, 1.13.1, 1.13.2
06/23/2014	14-316-AS	Satisfactory 6(a), 1.6, 2.8
02/27/2014	14-323-AS	Satisfactory 1.14.1
09/17/2014	14-458-AS	Satisfactory 6(a), 8(a), 1.2.1, 2.14.1, 3.2.1
03/23/2015	15-126-AS	Satisfactory 1.14.1
02/24/2015	15-146-AS	Satisfactory 1.6, 1.6.1, 1.8, 1.13.1, 1.13.2, 2.8.1
06/22/2015	15-286-AS	Satisfactory 14c, 1.4, 1.5, 1.6, 1.13, 2.2, 2.3, 3.1
06/30/2015	15-354-AS	Satisfactory 1.4, 4.6, 1.11.2, 2.1, 2.3.2, 2.4, 2.5, 2.6, 2.13
11/10/2015	15-549-AS	Satisfactory 1.4, 1.5.2, 1.6, 1.7.2, 1.8.2, 1.13, 2.1, 2.8.1
03/15/2016	16-115-AS	Satisfactory 1.2.1, 1.4, 1.5.2, 1.6, 3.2
05/26/2016	16-147-AS	Satisfactory 2.3.2
10/06/2016	16-361-AS	Satisfactory 1.14.1
10/28/2016	16-388-AS	Satisfactory 1.2.1, 1.4, 1.5, 1.6
04/03/2017	17-144-AS	Satisfactory 6, 8, 15, 30
07/10/2017	17-311-AS	Satisfactory 1.4, 1.6
03/13/2018	18-191-AS	Unsatisfactory 1.13.1; Satisfactory all other stipulations




**MEMORANDUM**  
**Department of Natural Resources**


**State of Alaska**  
**Division of Oil and Gas**  
**State Pipelines Coordinator's Section**

TO: Graham Smith  
Acting Pipeline Section Manager

DATE: 10/09/2018

THRU: James Curtis, P.E.   
Petroleum Reservoir Engineer

LETTER NO: 18-324-AS

FROM: Anthony Strupulis, P.E.   
Technical Engineer I

**SUBJECT: Engineering Recommendation on Alpine Pipelines Lease Renewal**

**Introduction**

The purpose of this review is to:

- evaluate the existing Alpine Pipelines design basis, design life, and condition of the existing pipelines;
- evaluate the applicant's technical ability to maintain and operate the Alpine Pipelines and associated facilities under the leases and grant;
- evaluate the applicant's ability to meet the removal and remediation requirements of the leases and grant and lease termination; and
- ensure that the pipelines conform to law and regulations and protect the environment.

**Background**

In advance of the decision to renew the associated right-of-way leases and grant, the Division of Oil and Gas (Division) performed an engineering review of the Alpine Pipelines, to include the sales oil, diesel fuel, and seawater pipelines. The goal of the review was to ensure the engineering design complies with pre-established criteria and that the criteria used are adequate to make a determination that the designs of the systems are within acceptable safety margins.

The Alpine Development, within the Colville River Unit, lies 34 miles west of the Kuparuk River Unit. At that time, Kuparuk's Central Processing Facility (CPF2) provides connections for communication, seawater, and diesel fuel, as well as providing sales oil transportation to market.

All arctic engineering projects are unique because of challenging environmental conditions and constraints. Operation of the Alpine Pipelines poses additional challenges due to the remote location and the Colville River crossing. The use of horizontal directional drilling (HDD) technology for placing pipelines under the Colville River was designed and constructed in the late 90's. Although this technology is not new to the pipeline industry, this was the first time this technology was used to drill horizontally through permafrost and in arctic conditions.

Another unique design feature of these pipelines is the use of vertical loops instead of valves along the right-of-way (ROW). This design approach involves elevating portions of the

*Attachment C*

pipelines to stop the flow of fluid should any of the pipelines be shut down or experience a leak. The vertical loops were approved by the U.S. Department of Transportation and the Alaska Department of Environmental Conservation, and were subsequently incorporated into the final project design. Vertical loops were installed periodically along the pipelines' route and specifically near each major river crossing in place of manual valves. They are designed to perform the same function as valves without the hydraulic inefficiencies and maintenance concerns associated with them. The vertical loops were designed to isolate and minimize the volume of oil released during a contingency spill event. The geometry of the vertical loop systems takes advantage of the relatively low terrain relief of the North Slope to provide artificial terrain breaks that greatly reduce the size of potential spills.

Other design features considered for the Alpine Pipelines include: elevating the cross-country pipelines five feet above the terrain, encasing the pipelines under the Colville River, periodic smart pigging, fiber optic communication, pressure/temperature sensors, impressed current cathodic protection system for the Colville River crossing, inlet/outlet metering, and visual monitoring including ground and air (infrared heat detection).

### **Codes, Regulations, and Standards**

- 49 CFR 195 Transportation of Hazardous Liquids by Pipelines
- ASME B 31.8 Pipelines Transportation Systems for Liquids and Slurries

### **Pipelines Physical Characteristics**

The cross-country aboveground sales oil pipeline is an insulated 14-inch diameter pipeline with 0.312-inch wall thickness, grade API 5L-X65 steel, and specific operating temperature, pressure and hydraulic limits.

The HDD portion of the sales oil pipeline has the same specifications as the cross-country aboveground pipeline except for an increased wall thickness of 0.438-inch, uninsulated pipe and specific operating temperature and duration limits<sup>1</sup>.

The seawater utility pipeline is an insulated 12-inch diameter pipeline with 0.330-inch wall thickness, grade API 5L-X65 steel, and specific operating temperature and duration limits<sup>1</sup>.

The diesel pipeline is an uninsulated 2.375-inch diameter pipeline with 0.156-inch wall thickness, coil tubing steel that meets grade API 5L-X52 criteria, and specific operating temperature, pressure and hydraulic limits.

### **Discussion**

The Alpine pipelines, approximately 34 miles long, have multiple connections with the Kuparuk facilities at tie-in locations at CPF2. At the time of construction, this was the best available location to support the Alpine Development.

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<sup>1</sup> The maximum allowable 72-hour average temperature at the Colville River crossing shall not exceed 165°F for the sales oil pipeline and 60°F for the seawater pipeline.

The Alpine pipelines are regulated by the U.S. Department of Transportation (DOT) under Title 49 of the *Code of Federal Regulations*, Part 195 – Transportation of Hazardous Liquids by Pipelines: Minimum Federal Safety Standards (49 CFR 195). The Alpine pipelines comply with and are designed, constructed, and operated in accordance with the applicable requirements of 49 CFR 195. They have incorporated launching and receiving facilities for in-line maintenance and inspection tools, mainline block valves and/or vertical loops, cathodic protection, leak detection and a supervisory control and data acquisition (SCADA) system.

The multiple buried pipelines under the Colville River have been functioning as designed without reportable incidents for almost two decades. Maintenance to the systems and monitoring of the natural Colville River bank erosion has occurred since construction; however, the actual erosion rates appear to be less than originally predicted, and therefore acceptable. Past performance data suggests the Colville River crossing and associated pipelines could continue to provide their critical functions for decades into the future. Annual surveillances and measuring of thermistor string temperature profiles suggest the thaw bulbs around the heated pipelines is within reasonable and anticipated limits.

The remainder of the cross-country aboveground Alpine pipelines are typical North Slope design where the pipeline is supported by vertical and horizontal support structures with varying spans lengths and types. Expansion and contraction of the pipelines, due to temperature differential, is allowed by the various types of support structure appurtenances. The Lessee has a monitoring plan to remedy vertical support members when subsurface soil conditions change. Frost heaving and/or subsidence are well known risks to the operator and repair procedures are in place to mitigate these events.

Wind induced vibration is a phenomenon when wind speed and direction excites the vibration characteristics of the pipelines. Counter-weights are placed in specific locations to dampen those movements. The Lessee has a monitoring and corrective action plans to maintain the system integrity.

Road crossings within Kuparuk River Unit are monitored and maintained annually. Recently, five new casings and carrier pipes were installed to the diesel pipeline when adverse conditions were identified. Adequate monitoring procedures by the Lessee are integral in extending the life span of the pipeline systems throughout the new lease terms.

Since constructed and put into operation, the seawater pipeline has had numerous repairs made to mitigate internal corrosion. Locations with unacceptable wall loss have been repaired with welded sleeves encircling the affected areas. Locations put on a watch list are evaluated annually to determine if they pose an acceptable risk or necessitate a repair. In 2018, a 100-foot section is being replaced entirely within the CPF2 area based on unacceptable risks. The Lessee has a comprehensive corrosion monitoring plan in place and its continued adherence is critical to extending the life span of the seawater pipeline.

The extended engineering design life of the Alpine pipelines is 30 years. As used herein, engineering design life is defined as the period over which the systems, components, and structure are required to perform their primary functions with acceptable safety, regulatory, and

environmental performance, and with acceptable probability they will not experience large failures, require extensive replacements, or need significant repairs. All time-dependent calculations utilize this 30-year period for design analysis.

### **Recommendation**

The review of the referenced technical documents concluded that the basis of design of the Alpine pipelines falls within acceptable practices, standards and norms for arctic pipeline design. The design and surveillance and monitoring program meet the technical requirements of the lease application. Therefore, renewal of the Alpine pipelines right-of-way leases and grant is recommended.

### **Reviewed Documents**

1. Renewal Applications dated July 12, 2018 for Alpine Pipelines: Technical Sections.
2. SPCO Design Basis Mechanical Analysis of Aboveground Pipelines & Aboveground River Crossings: 23100-MBJ-RP-001, Rev 6, January 2003.
3. Colville River Crossing Design Report: Revision. 5, 23100-MBJ-RP-003, October 2003.
4. Issued-for-Construction (IFC) drawings for the Pipelines, dated 9 Mar 1999, Pipelines Plan & Profile drawings, Rev 1
5. Annual Reports: 2017 and 2018
6. Pipeline Right-of-Way Leases/Grant Information
7. Surveillance and Monitoring Program
8. 2018 Alpine Diesel Road Corrosion Pipe Replacement Project
9. 2018 Alpine Utility Pipe Replacement Project
10. 2018 Alpine Oil Valve Replacement Project

### **Methodology**

1. Review of documents to ensure that, where required, they are stamped by an Alaska-licensed Professional Engineer working in the appropriate discipline.
2. Spot checks for conformance to legally required state, federal and local standards.
3. General review of the IFC drawings against the requirements of the approved Design Basis.