



**Alaska Department of Natural Resources
Division of Oil and Gas
Public Notice of Application to Form Proposed West Harrison Bay Unit**

The Department of Natural Resources (Department) gives notice under 11 AAC 83.311 of an application to form the West Harrison Bay Unit. The proposed West Harrison Bay Unit contains 18 leases in West Harrison Bay. It is situated in State of Alaska waters in Harrison Bay, approximately 34 miles northwest of the Colville River Unit. On August 27, 2020 Shell Offshore Inc. (Shell) the sole working interest owner, filed an application to form the proposed West Harrison Bay Unit with the Division of Oil and Gas (Division). Shell's address is: Stephane Labonte, Shell Offshore Inc., c/o Kyle Parker, 1029 West 3rd Avenue, Suite 550, Anchorage, Alaska 99501.

The West Harrison Bay Unit includes all or portions of the following lands:

Umiat Meridian, Alaska (West Harrison Bay)

T. 14 N., R. 1 E., secs. 1 thru 16 and secs. 8 thru 10.

T. 15 N., R. 1 E., secs. 4 thru 9, secs. 16 thru 21, and secs. 28 thru 33.

T. 14 N., R. 1 W., secs. 1 thru 6 and secs. 8 thru 12.

T. 15 N., R. 1 W., All.

T. 16 N., R. 1 W., secs. 19 thru 36.

T. 14 N., R. 2 W., secs. 1 and 3.

T. 15 N., R. 2 W., secs. 1 thru 5, 8 thru 17, 20 thru 29, and 33 thru 36.

T. 16 N., R. 2 W., secs. 25 thru 28 and secs. 32 thru 36.

You may review the non-confidential portions of the application on the Division's website at <http://dog.dnr.alaska.gov/Library/>, in-person at the Division's office, or by writing to Division of Oil & Gas, Units Section, 550 West 7th Avenue, Suite 1100, Anchorage, Alaska 99501-3560. The Division charges a photocopy fee of \$.25 per sheet, per 11 AAC 05.030(a)(3)(A).

Any person may file written comments on the application. Comments must be received by 4:30 p.m., Alaska Time, October 12, 2020, and should be mailed to the Division of Oil and Gas, attention Ken Diemer, Unit Manager, at the above address, or emailed to DOG.Units@alaska.gov. The Department will consider all timely written comments and evaluate the application based on the criteria in 11 AAC 83.303 and 83.336(a)(2). After the close of the comment period, the Department will issue a written decision to approve or deny the unit formation application. Individuals or groups of people with disabilities, who require special accommodations, auxiliary aids or services, or alternative communication formats, please contact Lorence Williams at (907) 269-8507, or TDD (907) 269-8411 (5 days before end of comment period).

This notice also appears on the State of Alaska website at <http://dnr.alaska.gov/commis/pic/pubnotfrm>.

July 27, 2020

VIA HAND-DELIVERY

Tom Stokes, Director
Division of Oil & Gas, Alaska Department of Natural Resources
550 W. 7th Avenue, Suite 1100
Anchorage, Alaska 99501

Re: Application for Approval to Establish the West Harrison Bay Unit

Dear Mr. Stokes:

In accordance with 11 AAC 83.306, Shell Offshore Inc. (“Shell”), owner of one hundred percent (100%) of the working interest allocable to the State leases subject to this application, hereby petitions the Alaska Department of Natural Resources, Division of Oil & Gas (“Division”) to approve the proposed West Harrison Bay Unit Agreement and the formation of the West Harrison Bay Unit. Shell is qualified to be a unit operator under 11 AAC 83.331.

In accordance with 11 AAC 83.341 and Section 8.1 of the proposed West Harrison Bay Unit Agreement, Shell’s Unit Plan of Exploration for the West Harrison Bay Unit is attached as Exhibit “G” thereto. The Plan of Exploration covers the period from January 1, 2021 to December 31, 2025.

As required by 11 AAC 83.321 five copies (one original and four copies) of the non-confidential portions of this Application for Approval to Establish the West Harrison Bay Unit (hereinafter referred to as the “Application”) are included with this Application. The **CONFIDENTIAL** portions of the Application (hereinafter referred to as the “Geological, Geophysical and Engineering Report”) have been submitted electronically pursuant to the instructions of Ken Diemer, Units Section Supervisor. Under the provisions of AS 38.05.035(a)(8)(C), Shell requests that those portions of the Application designated as confidential be maintained as such in accordance with the applicable statutory provisions.

I. Application Contents

A. Background and description of the area proposed to be unitized.

B. A discussion of why this Application satisfies the criteria set out in 11 AAC 83.303 to approve a unit agreement as those criteria relate to the proposed West Harrison Bay Unit leases, including pertinent confidential geological, geophysical, engineering, well data, and interpretations of those data, directly supporting the Application (Geologic, Geophysical and Engineering Report) as required by 11 AAC 83.306(4).

C. A summary and request for written findings and approval of the proposed West Harrison Bay Unit Agreement pursuant to 11 AAC 83.303.

D. A unit agreement (“West Harrison Bay Unit Agreement based upon the standard State of Alaska unit agreement form. Pursuant to 11 AAC 83.306, included with the Unit Agreement are a map of the proposed West Harrison Bay Unit (Exhibit B), legal descriptions of the lands included in the Application (Exhibit A) and a proposed Plan of Exploration (“POE”) (Exhibit G).

E. Pursuant to 11 AAC 83.351, Shell defers the determination of the Participating Areas for the West Harrison Bay Unit. Once appraisal wells have been completed and testing or production information is obtained Shell will make appropriate Participating Areas designations. As the owner of one hundred percent (100%) of the working owner interest of the subject leases, Shell also defers the submission of a Unit Operating Agreement until commercial arrangements with a partner(s) to share the exploration risks and costs associated with the POE are completed.

F. As required by 11 AAC 83.306(1), a Plan of Exploration for the West Harrison Bay Unit that complies with the criteria set out in 11 AAC 83.341 (Exhibit G to the proposed Unit Agreement).

G. Payment in the amount of \$10,000 as the Application fee for a new unit.

II. Background and Description of the Area Proposed to be Unitized

Shell has a long history in Alaska. Shell’s first exploration programs were conducted in the Cook Inlet Basin in the 1950s, which investment led to the State’s first offshore development in the early 1960s. Shell’s investment in Alaska expanded significantly in the early 1980’s when it purchased leases in the Beaufort and Chukchi Seas

and drilled seven wells in the Beaufort Sea from 1982 to 1985. The company was also the exploration operator for four wells in the Chukchi Sea from 1989 to 1991.

Shell renewed its investment with the purchase of a significant block of offshore Arctic leases at the 2005 Beaufort Sea sale. The Company conducted seismic acquisition programs in the Chukchi and Beaufort Seas in 2006 and initiated a two-rig program in the Beaufort Sea beginning 2007. The federal permitting process was challenging and uncertain followed by lengthy litigation from environmental NGOs. However, both Shell and ConocoPhillips received permits from the federal government to conduct a joint 3D seismic program in the Chukchi Sea and a Shell-only 3D survey in the Beaufort. The company purchased additional Beaufort acreage in 2007 to continue attempts to drill in the Beaufort Sea. Shell acquired the 18 West Harrison Bay leases in 2012 for \$2.6 million.

At end of 2007 Shell owned 139 leases in the Beaufort Sea acquired at a cost of ~\$80 million. In 2008 Shell purchased leases during the Chukchi Sea Lease Sale 193 expending approximately \$2.1 billion.

During the 2015 Alaska Arctic open-water season, and for the first time in more than 20 years, Shell executed an exploration drilling operation in the Chukchi Sea. Shell safely drilled into the targeted zones 134 miles Northwest of Utqiagvik, Alaska, on the Burger Prospect in a single season. This was accomplished with no significant downtime events, no major HSEE incidents, and no environmentally significant issues. Shell's team safely managed two drill rigs (the Noble Discoverer and the Polar Pioneer) and three ice management/anchor handling vessels, with a well-integrated relationship among all supporting contractors. Furthermore, the Alaska Venture (including key teams such as Exploration, Logistics, Operations, Oil Spill Response crews) managed operations for 24 marine vessels and additional aviation support including 6 helicopters and 5 fixed winged aircraft. There were approximately 1.2 million hours of work performed without a lost-time injury, including 4,000 lifting and hoisting operations for loadout and offloading and the start-up of novel technologies.

Throughout this same period Shell continued to collect important (a) ecological data to address stakeholder concerns and support permit applications and (b) physical data important for operations. This program brought industry, communities, universities, local, state and federal agencies together to recognize the importance of continuing to increase our understanding of the environmental health of the Chukchi and Beaufort Seas. Shell's Chukchi Sea environmental program began in 2006 and is recognized among many as one of the premier data collections in the U.S. Arctic environment to date.

Technically, the various operations/drilling teams at times faced challenges from the remoteness of the Chukchi exploration site along with well understood harsh conditions. The environmental challenges were managed successfully but were complicated by a complex and evolving regulatory framework, including regulator imposed limited drilling season length and severe restrictions associated with distance between drill ships and limiting ice reconnaissance that could have resulted in an unintended safety issue. There were many unsupported restrictive regulatory requirements implemented by various federal agencies following the Deepwater Horizon incident in 2010, which ultimately became the basis for the 2015 Arctic Rule. In addition, there were multiyear litigation actions, significant resistance from Alaska-based, National, and International NGOs, and a complex local community dynamic. One of the major positive stakeholder developments was the formation of the Alaska Inupiat Offshore LLC, which Shell believes resulted in a paradigm shift in how North Slope communities, native corporations, and the North Slope Borough Municipality and Wildlife Department viewed offshore drilling. This was accomplished in part by the establishment of a science collaboration between the North Slope Borough and Shell, which created a common basis for evaluating environmental issues and analysis.

Following the 2015 Chukchi drilling season, Shell withdrew from its federal Arctic lease position due to discouraging well results, high logistic and technical costs, and a challenging and unpredictable federal regulatory environment.

Shell's West Harrison Bay leases (Figure 1) were acquired in 2012 because prospectivity was recognized in the Brookian and Beaufortian megasequences (Figure 2). The company redirected focus to these leases in 2017 and generated five stand-alone prospects in the Nanushuk Formation and multiple leads in both the Torok Formation and Jurassic Alpine-like plays.

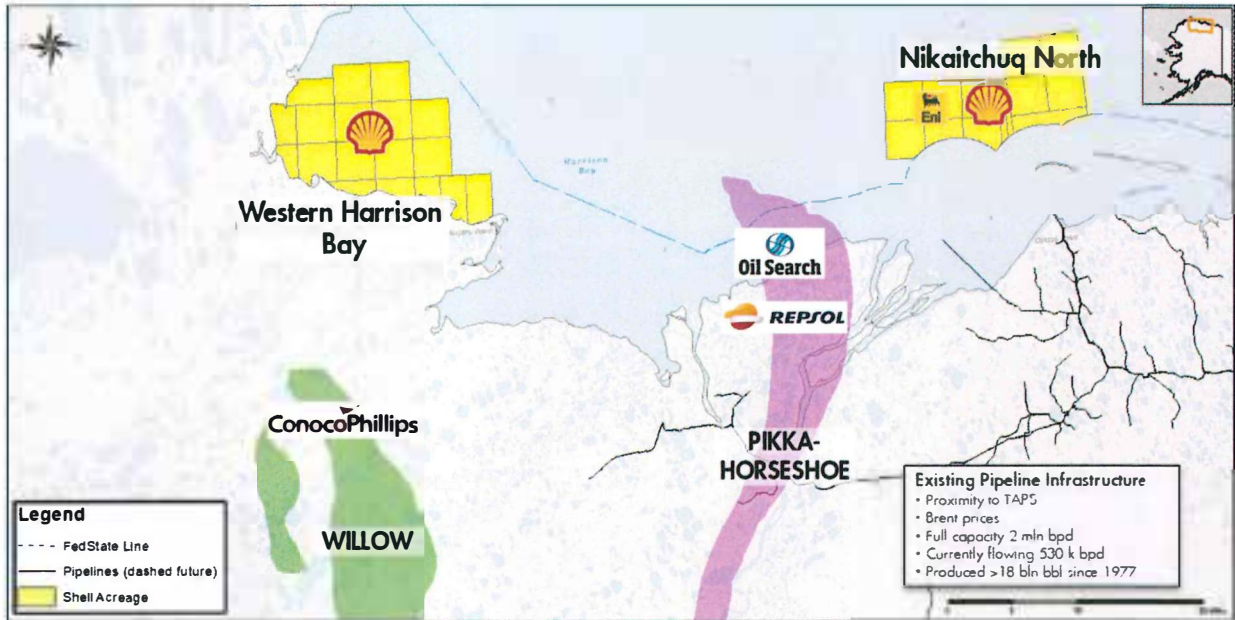


Figure 1. Map showing Shell's Alaska acreage and the Willow and Pikka accumulations.

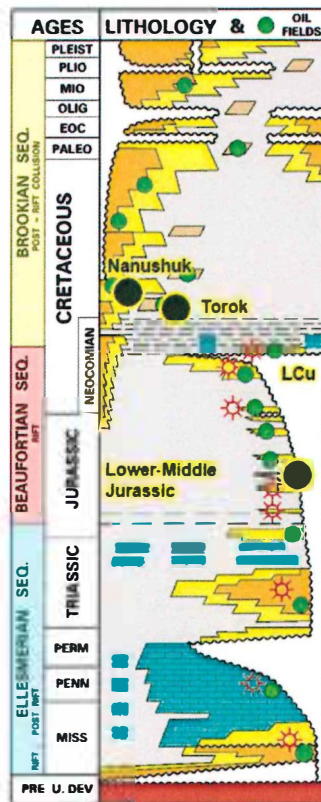


Figure 2. A North Slope chronostratigraphic diagram indicating the reservoirs of interest and the LCu.

The technical risk associated with the West Harrison Bay prospects was decreased by a string of discoveries in the same play. Starting in 2013 with the Qugruk No. 3 well, efforts in the Nanushuk and similar plays dominated exploration activity on the North Slope. To date, at least five independent accumulations have been found in the proposed West Harrison Bay Unit that, in total, host multiple billions of barrels recoverable light oil. Most notably among these are the Pikka and Willow accumulations (Figure 1).

Over the past several decades, Shell has built a large seismic and well database. To support the West Harrison Bay effort, the company purchased all available 2-D seismic data in the area and five 3-D seismic surveys. Although no wells have been drilled on the West Harrison Bay leases, several wells were drilled in close proximity to West Harrison Bay as part of the multi-decade US Navy NPRA drilling program, and these wells, notably Atigaru Pt. No. 1, North Kalilkipik No. 1, and Cape Halkett No. 1, inform Shell's interpretation. These wells provide excellent geologic control regarding the reservoir, source, and seal characteristics of the rocks they penetrated.

Shell's work at West Harrison Bay started with the creation of a robust regional geological model (extending from the Mackenzie delta area in the east to the Russia/US border in the west), a thorough "dry-hole" analysis, an analysis of why the Nanushuk was overlooked for so long, and investigations into the petroleum systems that could yield light oil at anomalously shallow depths. This basic work, together with the ongoing discoveries, indicated attractive leads on the West Harrison Bay acreage and justified more comprehensive multi-disciplinary analyses there. Detailed geological, petrophysical, and geophysical work included the integration of new well data and discoveries into a sequence stratigraphically based, and geophysically supported, holistic interpretation that ultimately led to designation of Shell's prospects.

III. Discussion of 11 AAC 83.303 Criteria

A. Proposed Unit Area

DNR's regulations define a unit to mean "a group of leases covering all or part of one or more potential hydrocarbon accumulations, or all or part of one or more adjacent or vertically separate oil or gas reservoirs[.]" 11 AAC § 83.395(7). A key requirement for unitization of separate oil and gas leases is that the leases that are the subject of the application cover a reservoir or potential hydrocarbon accumulation.

DNR defines a "reservoir" to mean an "oil or gas accumulation which has been discovered by drilling and evaluated by testing and which is separate from any other

accumulation of oil and gas.” 11 AAC 83.395(b). DNR defines a “potential hydrocarbon accumulation” to mean “any structural or stratigraphic entrapping mechanism which has been reasonably defined and delineated through geophysical, geological, or other means and which contains one or more intervals, zones, strata, or formations having the necessary physical characteristics to accumulate and prevent the escape of oil and gas.” 11 AAC 83.385(7). DNR regulations provide that a unit must encompass the minimum area required to include all or part of one or more oil or gas reservoirs, or all or part of one or more potential hydrocarbon accumulations. 11 AAC 83.356.

B. Unit Exploration Acreage

DNR regulations therefore provide that a unit must encompass the minimum area required to include all or part of one or more oil or gas reservoirs, or all or part of one or more potential hydrocarbon accumulations. The proposed West Harrison Bay Unit Area includes multiple stacked reservoirs and potential hydrocarbon accumulations that may comprise a single Participating Area (“PA”). Due to limited data, a PA is not currently identified with this Application. Once additional wells have been drilled and additional data obtained, Shell will then proceed with the PA process.

A map of the proposed West Harrison Bay Unit Area is attached to the West Harrison Bay Unit Agreement as Exhibit B, which is enclosed herein. The proposed West Harrison Bay Unit seeks to unitize all of the following State of Alaska leases, totaling 86,400 acres:

Lease No. ADL 392164, effective December 1, 2012, with a 10-year primary lease term. Unless otherwise extended, the term of ADL 392164 will expire on November 30, 2022.

Lease No. ADL 392165, effective December 1, 2012, with a 10-year primary lease term. Unless otherwise extended, the term of ADL 392165 will expire on November 30, 2022.

Lease No. ADL 392166, effective December 1, 2012, with a 10-year primary lease term. Unless otherwise extended, the term of ADL 392166 will expire on November 30, 2022.

Lease No. ADL 392167, effective December 1, 2012, with a 10-year primary lease term. Unless otherwise extended, the term of ADL 392167 will expire on November 30, 2022.

Lease No. ADL 392168, effective December 1, 2012, with a 10-year primary lease term. Unless otherwise extended, the term of ADL 392168 will expire on November 30, 2022.

Lease No. ADL 392169, effective December 1, 2012, with a 10-year primary lease term. Unless otherwise extended, the term of ADL 392169 will expire on November 30, 2022.

Lease No. ADL 392170, effective December 1, 2012, with a 10-year primary lease term. Unless otherwise extended, the term of ADL 392170 will expire on November 30, 2022.

Lease No. ADL 392171, effective December 1, 2012, with a 10-year primary lease term. Unless otherwise extended, the term of ADL 392171 will expire on November 30, 2022.

Lease No. ADL 392172, effective December 1, 2012, with a 10-year primary lease term. Unless otherwise extended, the term of ADL 392172 will expire on November 30, 2022.

Lease No. ADL 392173, effective December 1, 2012, with a 10-year primary lease term. Unless otherwise extended, the term of ADL 392173 will expire on November 30, 2022.

Lease No. ADL 392174, effective December 1, 2012, with a 10-year primary lease term. Unless otherwise extended, the term of ADL 392174 will expire on November 30, 2022.

Lease No. ADL 392175, effective December 1, 2012, with a 10-year primary lease term. Unless otherwise extended, the term of ADL 392175 will expire on November 30, 2022.

Lease No. ADL 392176, effective December 1, 2012, with a 10-year primary lease term. Unless otherwise extended, the term of ADL 392176 will expire on November 30, 2022.

Lease No. ADL 392177, effective December 1, 2012, with a 10-year primary lease term. Unless otherwise extended, the term of ADL 392177 will expire on November 30, 2022.

Lease No. ADL 392178, effective December 1, 2012, with a 10-year primary lease term. Unless otherwise extended, the term of ADL 392178 will expire on November 30, 2022.

Lease No. ADL 392179, effective December 1, 2012, with a 10-year primary lease term. Unless otherwise extended, the term of ADL 392179 will expire on November 30, 2022.

Lease No. ADL 392180, effective December 1, 2012, with a 10-year primary lease term. Unless otherwise extended, the term of ADL 392180 will expire on November 30, 2022.

Lease No. ADL 392181, effective December 1, 2012, with a 10-year primary lease term. Unless otherwise extended, the term of ADL 392181 will expire on November 30, 2022.

A more complete description of the leases proposed to be included in the West Harrison Bay Unit Area is set forth in Exhibit A to the proposed West Harrison Bay Unit Agreement.

C. Approval Criteria.

Shell respectfully submits that approval of the proposed West Harrison Bay Unit Agreement and the formation of the West Harrison Bay Unit meets the criteria of 11 AAC 83.303(a), because it will:

- (i) *Promote the Conservation of All Natural Resources, Including All or Part of an Oil and Gas Pool, Field or Like Area (11 AAC 83.303(a)(1))*

Unitization of the leases in the proposed West Harrison Bay Unit Area will facilitate an efficient, integrated approach to the further evaluation and development of the numerous actual and potential reservoirs, as well as promote the conservation of all natural resources.

Shell's ability to coordinate its continuing appraisal activities through unitization will reduce environmental impacts. Unitization also allows for coordinated use of infrastructure and the completion of additional required appraisal work in an orderly and rational manner over a wide geographic area, instead of focusing on lease-by-lease activities and making investment decisions based simply on lease preservation. Moreover, the data obtained from new wells is necessary to optimize the location of drilling future

development wells. Coordinated appraisal and development operations will therefore conserve resources and facilitate the greatest ultimate recovery of those resources.

(ii) *Promote the Prevention of Economic and Physical Waste (11 AAC 83.303(a)(2))*

Unitization of the leases in the proposed West Harrison Bay Unit Area will promote the prevention of economic and physical waste by maximizing the recovery of oil and gas. Unitization allows exploration and development wells to be drilled in the best possible location to maximize drainage. Unitization also allows for implementation of economic reservoir pressure maintenance efforts as early as first production in each individual reservoir and enables numerous relatively small accumulations to share facilities and infrastructure to achieve synergies required to justify economic/commercial development and maximize production.

(iii) *Provide for the Protection of All Parties of Interest, Including the State (11 AAC 83.303(a)(3))*

Unitization of the leases in the proposed West Harrison Bay Unit Area will provide for the protection of all parties of interest by allowing production from each individual reservoir to be allocated back to each tract contributing to production in paying quantities based on the interpretation of all the geological, geophysical, engineering, and well data available.

To date, Shell has made a significant investment in acquiring and maintaining the West Harrison Bay leases, and acquiring and evaluating all relevant geologic, geophysical and well data. The information obtained from this effort has led to the further delineation of reservoirs and the identification of several potential hydrocarbon accumulations and prospects inside the proposed West Harrison Bay Unit Area. Shell is currently identifying prospective partners and plans to continue its appraisal activities as described in the proposed Plan of Exploration.

Unitization advances the State and Shell's economic interests because it improves the economics of the project. DNR has long understood that an operator "would not produce marginal economic reserves on a lease by lease basis, but would produce them through unitized operations because facility consolidation saves capital and promotes better reservoir management". See Pioneer Unit Agreement, Decision and Findings of the Commissioner (March 31, 1998) at 11. Indeed, the high cost and high risk of exploring and developing the potential hydrocarbon accumulations require numerous prospects being explored and developed as a program, which then generate economic synergies and

improves the probability of continuing economic development. The pace of exploration and development is tied to the ability of any operator to accumulate an acreage position, that offers sufficient access, and control of enough prospects to offer said synergies and improved probability of an economic development.

Moreover, unitization is critical to securing corporate support for funding for additional exploration, delineation, and development activities because it provides certainty that exploration and development will occur in a prudent and coordinated manner that minimizes waste and maximizes recovery.

(iv) *Environmental Costs and Benefits of Formation of the West Harrison Bay Unit (11 AAC 83.303(b)(1))*

Exploration and development activities at the West Harrison Bay Unit will be conducted consistent with the well-established prudent, efficient and environmentally sound industry practices related to nearshore North Slope operations. This can only happen through unitized development. The environmental impacts would be significantly greater if the reservoirs were developed on a lease-by-lease or well-by-well basis in order to preserve leases, rather than on an integrated unitized basis.

(v) *Geological and Engineering Characteristics of the West Harrison Bay Unit Reservoirs (11 AAC 83.303(b)(2)).*

The **CONFIDENTIAL** Geological, Geophysical, and Engineering Submittal included as a part of this Application describes the characteristics of the Nanushuk reservoir and potential hydrocarbon accumulations and exploration prospects.

(vi) *Prior Exploration Activities in the Proposed West Harrison Bay Unit Area (11 AAC 83.303(b)(3))*

Although no wells have been drilled on the West Harrison Bay leases, several wells were drilled in close proximity to West Harrison Bay as part of the multi-decade US Navy NPRA drilling program, and these wells, notably Atigaru Pt. No. 1, North Kalilpkik No. 1, and Cape Halkett No. 1, inform Shell's interpretation. These wells provide excellent geologic control regarding the reservoir, source, and seal characteristics of the rocks they penetrated.

These and other wells have been tied to the local seismic dataset, both on 2-D and 3-D seismic surveys. A spec 3-D seismic survey was acquired on ice over most of the West Harrison Bay leases in 2006; this represents the most recent seismic data acquisition

in West Harrison Bay. Multiple vintages of 2-D seismic data were acquired after the start of the NPRA drilling program, with the most significant vintage, in terms of data quality, being 1981. The seismic data are crucial for identifying geologic traps, reservoirs, and seals, especially the 3-D seismic data, which was reprocessed by Shell and reveals critical amplitude anomalies and AVO attributes.

In the 21st century, only one other company operated these leases: FEX L.P., a subsidiary of Talisman Energy, a Canadian independent. FEX paid \$3.5 million for 19 leases in the area. Many of the FEX leases are now operated by Shell and these were acquired in the State of Alaska's 2011 Beaufort Sea Areawide lease sale.

(vii) Plan for Exploration and Development of the Proposed West Harrison Bay Unit Area (11 AAC 83.303(b)(4))

Exhibit G to the proposed West Harrison Bay Unit Agreement describes the West Harrison Bay Unit Plan of Exploration ("POE").

Over the last year, Shell has worked diligently to identify a partner(s) to share the exploration risk and cost associated with advancing its understanding of the resource potential of its West Harrison Bay leases. Shell had made solid progress toward that objective prior to the Covid-19 pandemic and the resulting collapse in oil prices. While oil projects on the North Slope remain attractive from the standpoint of geologic potential and the fiscal assumptions that are expected to prevail in the coming decades, the economic uncertainty resulting from the Covid-19 pandemic and the collapse in oil prices has negatively impacted Shell's ability to negotiate a commercial agreement with a potential partner(s).

Shell therefore requests that the West Harrison Bay initial POE be for a term of five years to allow it the time necessary to secure a partner, develop additional information regarding the hydrocarbon potential of the West Harrison Bay leases, evaluate the economic issues around any future development, and prepare a comprehensive Plan of Development based on the additional required geologic information that will be gathered from the appraisal drilling and testing described in the POE.

As outlined herein, during the term of the West Harrison Bay Unit, Shell will negotiate and finalize commercial agreements with a partner(s) to share exploration costs associated with the POE, designate and secure the State's approval for a new Unit Operator, and, together with the Unit Operator, complete additional required engineering and environmental studies necessary to support a future Plan of Development.

During calendar year 2021, Shell will complete the following:

- Identify outstanding data needs or issues of particular relevance to state and federal regulatory agencies and establish a schedule and project plan for addressing topic(s). Engage with the relevant state and federal agencies to review the lease stipulations and mitigation measures applicable to future exploration activities at location and establish a framework for working cooperatively with the relevant regulatory agencies to resolve issues that might arise during future operations. Develop a schedule and project plan for completing outstanding data requirements.
- Complete a Data Gap and Alternatives Analysis to determine what additional studies are required to advance exploration activities at the proposed Unit. Assemble a comprehensive inventory of recently completed and relevant studies; summarize preliminary project planning and engineering of alternatives and identify outstanding datasets to satisfy exploration drilling permitting requirements.
- Finalize commercial arrangements with a partner(s) to share the exploration risks and costs associated with the POE.
- Designate a new Unit Operator and initiate the Department of Natural Resources regulatory review process required for approval of a new Unit Operator.

During calendar year 2022, the Unit Operator will complete the following operations:

- Initiate exploration phase project scoping with the State and establish roles and responsibilities for co-managing the exploration and delineation drilling phase permitting process.
- Update the West Harrison Bay exploration and development schedule and capital budget estimate in line with the outcomes of the Data Gap & Alternatives analysis.
- Finalize subsurface well design and layout to optimize the reservoir.

During calendar year 2023, the Unit Operator will complete the following operations:

- Commence initial exploration phase drilling planning and permitting for the 2023-24 winter drilling season.
- Complete an exploration well and, assuming the success of that exploration well, a sidetrack well to evaluate the Nanushuk formation.

During calendar year 2024, the Unit Operator will complete the following operations:

- Commence initial exploration phase drilling planning and permitting for the 2024-25 winter drilling season.
- Complete an exploration well and, assuming the success of that exploration well, a sidetrack well to further evaluate the Nanushuk formation.

During calendar year 2025, the Unit Operator will complete the following operations:

- After evaluating the results of the well(s) completed during the winter 2023-24 and 2024-25 drilling seasons, the Unit Operator will submit either a further Plan of Exploration for the West Harrison Bay, or a Plan of Development. Such Plan will be submitted no later than December 31, 2025.

(viii) *Economic Costs and Benefits to the State (11 AAC 83.303(b)(5))*

A primary goal of unitization is the protection of the parties in interest in one or more hydrocarbon accumulations. The formation of the proposed West Harrison Bay Unit extends these benefits and protections to leases capable of contributing to production. The State's economic interests are protected by maximizing the physical recovery of hydrocarbons from the West Harrison Bay Unit reservoirs and by allowing Shell the opportunity to further evaluate potential hydrocarbon accumulations and potentially place these resources onto production. Maximizing hydrocarbon recovery assures that the production-based revenue occurring to the State is also maximized. In addition, the fact that the subject State leases consist entirely of submerged lands effectively precludes separate development. Without unitization, it is unlikely that the State will ever participate in the benefits of the hydrocarbons attributable to these leases.

Unitization also encourages investment in exploration, which may lead to the development of new, currently undeveloped formations underlying the leased area. While the present Application requests unitization under a single Working Interest Owner, this

may not be the status in future years. Shell requests unitization to ensure that the interests of Shell and the State of Alaska are fully aligned and well-defined.

Unitization fosters new production sources, which will stem the decline in Alaska production, generating jobs for North Slope and other Alaskans, provide long-term tax revenue to the North Slope Borough and the State of Alaska, and increase the longevity of the Trans-Alaskan Pipeline infrastructure. Therefore, the State's economic interests are advanced by unitized development.

(ix) *Other Relevant Factors (11 AAC 83.303(b)(6))*

[N/A]

D. Term.

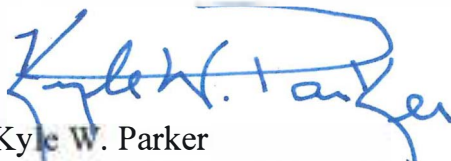
Consistent with 11 AAC 83.336, Shell requests that the term of the proposed West Harrison Bay Unit be established to run through December 31, 2025, subject to the terms and conditions of the proposed West Harrison Bay Unit Agreement.

IV. Approval of Unit Plan of Exploration

In accordance with 11 AAC 83.343 and Section 8.1 of the proposed West Harrison Bay Unit Agreement, Shell, as operator, and as the only working interest owner of the proposed West Harrison Bay Unit, hereby requests that DNR approve the Unit Plan of Exploration for the West Harrison Bay Unit, which is attached thereto as Exhibit G. That Unit Plan of Exploration includes the work commitments described above.

Please feel free to contact me if you have questions or need to discuss the information submitted.

Sincerely,



Kyle W. Parker
Counsel for Shell Offshore Inc.

Enclosures

WEST HARRISON BAY UNIT AGREEMENT

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EXHIBIT F: ALLOCATION OF UNIT EXPENSES

EXHIBIT G: UNIT PLAN

RECITALS

This document is the proposed West Harrison Bay Unit Agreement (“Agreement”), executed by Shell Offshore Inc. (“Shell”), which is the Working Interest Owner of the leases proposed to be included in the unit.

Shell submitted an application to the Alaska Department of Natural Resources (“DNR”) for approval of formation of the West Harrison Bay Unit (“Unit”) out of state oil and gas leases.

DNR may approve unitization of state oil and gas leases when it is necessary or advisable in the public interest.

DNR’s decision on whether to approve formation of the Unit will be set forth in a separate appealable DNR decision.

ARTICLE 1: Purpose and Scope of Agreement

- 1.1. In consideration of the mutual promises in this Agreement, the Shell commits its interests in the Unit Area defined in Exhibit A and depicted in Exhibit B to this Agreement, subject to (1) all state statutes and regulations currently in effect or enacted or promulgated after the effective date of this Agreement; (2) the terms of this Agreement; and (3) DNR’s authority to manage state oil and gas resources and to resolve disputes by administrative decision and appeal.
- 1.2. The purpose of this Agreement is to conserve natural resources by maximizing the efficient and timely production of oil and gas resources from the leases and working interests committed to the Unit and minimizing the adverse impacts to the surface estate and other resources from development.
- 1.3. This Agreement is effective as of the Effective Date and automatically expires five years from the Effective Date as provided in 11 AAC 83.336, unless otherwise extended pursuant to 11 AAC 83.336(a)(1) or 11 AAC 83.336 (a)(2).
- 1.4. Shell acknowledges that DNR is not a Party to this agreement but is instead the agency authorized by Alaska law to approve formation of a unit including state oil and gas leases when it is necessary and advisable in the public interest to explore, develop, and produce state oil and gas resources.

ARTICLE 2: Definitions

- 2.1. **Alaska Oil and Gas Conservation Commission** (“AOGCC”) means the independent quasi-judicial agency of the State of Alaska established by the Alaska Oil and Gas Conservation Act, Alaska Statute 31.05.
- 2.2. **Commissioner** means the Commissioner of the Department of Natural Resources, State of Alaska, or the Commissioner's authorized representative, including but not limited to the Director.
- 2.3. **Director** means the Director of the Department of Natural Resources, Division of Oil and Gas or the Director’s authorized representative.
- 2.4. **Effective Date** means 12:01 a.m. on the date identified as the effective date in the Director’s approval of the unit, and if no date is specified, the date of the unit approval decision.
- 2.5. **Lease or Leases** means one or more oil and gas leases subject to this Agreement.
- 2.6. **Operations** means physical activities in or on an oil and gas lease that a lessee or unit operator may not conduct without an approved plan of operations under 11 AAC 83.158 or 11 AAC 83.346; activities conducted in support of, in anticipation of, or in conjunction with physical activities in or on an oil and gas lease (including but not limited to analyses, review, negotiations, or other work more accurately described as administrative, technical, or commercial activity) do not constitute Operations.
- 2.7. **Participating Area** means all Unit Tracts and parts of Unit Tracts established under the provisions of Article 10 of this Agreement to allocate Unitized Substances produced from a reservoir.
- 2.8. **Participating Area Expense** means all costs, expenses, or indebtedness incurred by the Unit Operator under this Agreement for or on account of production from or Operations in a Participating Area and allocated solely to the Unit Tracts in that Participating Area.
- 2.9. **Royalty Interest** means the State’s right to a share of production from the Unitized Area. It does not include an overriding royalty interest, which is a nonpossessory interest in oil and gas produced at the surface, free of the expense of production, that is derived from a Working Interest, but is not connected to ownership of the land or minerals. Overriding Royalty Interest owners are not proper parties to this Unit Agreement, nor do they have any rights to enforce the terms of this Unit Agreement.
- 2.10. **State** means the State of Alaska.
- 2.11. **Sustained Unit Production** means continuing production of Unitized Substances from a Unit Well in the Unit Area into production facilities and transportation from the unit Area

to market, excluding temporary production for initial testing, evaluation, or pilot production purposes.

- 2.12. **Unit Area** means the lands subject to this Agreement, described in Exhibit A and shown in Exhibit B to this Agreement.
- 2.13. **Unit Expense** means all costs, expenses, or indebtedness incurred by the Unit Operator under this Agreement for or on account of production from or Operations in the Unit.
- 2.14. **Unit Operating Agreement** means any and all agreements entered into by the Unit Operator and the Working Interest Owners, as described in Article 8 of this Agreement.
- 2.15. **Unit Operations** means all Operations conducted under this Agreement in accordance with a Unit plan of operations.
- 2.16. **Unit Operator** means the party designated by the Working Interest Owners and approved by the Director to conduct Unit Operations.
- 2.17. **Unit Plan** means a unit plan of exploration, plan of operations or plan of development as described in Article 9 of this Agreement.
- 2.18. **Unit Tract** means each separate parcel of land that is described in Exhibit A and given a Unit Tract number.
- 2.19. **Tract Participation** means the percentage of Unitized Substances and costs allocated to a Unit Tract in a Participating Area.
- 2.20. **Unit Well** means a well drilled within the Unit Area after the effective date of this Agreement unless specifically authorized by the Director.
- 2.21. **Unitized Substances** means all oil, gas, and associated substances produced from the Unit Area.
- 2.22. **Working Interest** means the interest held in lands by virtue of a Lease under which the owner of the interest is vested with the right to explore for, develop, and produce minerals. The right delegated to a Unit Operator by a Unit Agreement is not a working interest.

ARTICLE 3: Exhibits and copies of the agreement

- 3.1. The Unit Operator will provide the following exhibits to the Director:
 - 3.1.1. Exhibits A, B, and G as part of the Unit Agreement when the unit formation application is filed and whenever there is a change to the Unit Area or in interests committed to the unit.

- 3.1.2. Exhibit F as part of the Unit Agreement if the Unit Area includes or is proposed to include one or more net profit share leases.
- 3.1.3. Exhibits C, D, E, and F when a Participating Area application is submitted for approval, and upon approval of the Participating Area, they become part of this Agreement.
- 3.1.4. Revised Exhibits within 30 days of the information in an Exhibit no longer being accurate, a DNR decision affecting the information in an Exhibit, or a request from DNR for revised Exhibits. Events requiring revised Exhibits include, but are not limited to, expansion or contraction of the Unit Area, expansion or contraction of a Participating Area, changes to Tract Participation, and changes to working interest in Leases.
- 3.2. Exhibit A is a table that identifies and describes each Unit Tract, and displays the Unit Tract numbers, legal descriptions, lease numbers, Working Interest ownership, Royalty Interest ownership, and the applicable royalty and net profit share rates applicable to each Unit Tract.
- 3.3. Exhibit B is a map that shows the boundary lines of the Unit Area and of each Unit Tract, identified by Unit Tract number and lease number.
- 3.4. Exhibit C is comprised of a table for each Participating Area that displays the Unit Tract numbers, legal descriptions, lease numbers, Working Interest ownership, Royalty Interest ownership, and the percentage of Unitized Substances allocated to each (“Tract Participation”). Exhibit C must include a separate table for each Participating Area. Exhibit C and any revisions to Exhibit C are not effective until approved by the Director.
- 3.5. Exhibit D is comprised of a map for each Participating Area. Each Exhibit D map must show the boundary lines of the Unit Area, the Participating Area, and the Unit Tracts in that Participating Area identified by Unit Tract number and lease number.
- 3.6. Exhibit E is comprised of a table for each Participating Area that displays the allocation of Participating Area Expense to each Unit Tract in the Participating Area, identified by Unit Tract number and Lease number. Exhibits must include a separate table for each Participating Area in the Unit Area.
- 3.7. Exhibit F is a table that displays the allocation of Unit Expense to each Unit Tract in the Unit Area, identified by Unit Tract number and lease number. Exhibit F and any revisions to Exhibit F are not effective until approved by the Director.
- 3.8. Exhibit G is a Unit Plan for the Unit. Subsequent Unit Plans are part of this Agreement, but do not need to be labelled as a revised Exhibit G.
- 3.9. At least one copy of this Agreement will be filed with DNR, Division of Oil and Gas in Anchorage, Alaska and one copy will be filed with the AOGCC.

ARTICLE 4: Creation and Effect of Unit

- 4.1. All working interests in and to the lands described in Exhibit A and shown in Exhibit B are subject to this Agreement.
- 4.2. The provisions of a Lease committed to this Agreement and of any other agreement regarding that Lease are modified to conform to the provisions of this Agreement and to statutes and regulations regarding oil and gas leases and units existing on the Effective Date of this Agreement or enacted thereafter.
- 4.3. This Agreement does not transfer title to any Lease.
- 4.4. All data, information, and interpretations determined by the Director to be necessary for the administration of the Unit or for the performance of DNR responsibilities under Alaska law will be submitted to the Director by the Unit Operator or Working Interest Owners, or both, upon DNR written request. Upon request, DNR will keep records confidential to the extent allowed under applicable law.
- 4.5. When the Commissioner or Director makes a decision related to the administration of the Unit or Unit Leases in reliance on confidential information, and there is an appeal or request for reconsideration of that decision in which the confidential information is materially relevant to the issues on appeal, the Working Interest Owners agree to enter reasonable confidentiality agreement(s), as necessary, to provide parties to the appeal or reconsideration with access to the relevant confidential information.

ARTICLE 5: Designation of Unit Operator

- 5.1. Shell is designated as the Unit Operator until such time, if any, that a successor unit operator is designated and approved by the Director. Shell accepts the rights, duties, and obligations of the Unit Operator including to diligently conduct Unit Operations and to explore, develop, and produce the Unit Area.
- 5.2. Except as otherwise provided in this Agreement, and subject to the terms and conditions of an approved Unit Plan, the rights and obligations of the Working Interest Owners to conduct Operations to explore for, develop, and produce the Unit Area are delegated to and will be exercised by the Unit Operator. This delegation does not relieve a Working Interest Owner of the obligation to comply with all Lease terms. The Unit Operator will comply with all notification requirements of the Leases, this Agreement, the Unit Operating Agreement, and applicable statutes or regulations.
- 5.3. The Unit Operator will minimize and consolidate surface facilities to minimize surface impacts.
- 5.4. With the approval of the Director and the AOGCC, any Working Interest Owner is entitled to drill and operate a well on its Lease when the Unit Operator declines to drill that well.

The Working Interest Owner must comply with all applicable statutory, regulatory, and contractual obligations for drilling or operating a well.

- 5.5. A Working Interest Owner who assigns a working interest in a Lease that is subject to this Agreement is responsible for notifying the Unit Operator of Director approval of the assignment within 15 days of the approval.

ARTICLE 6: Resignation or Removal of Unit Operator

- 6.1. The Unit Operator may resign at any time, but the resignation is not effective until the Director approves a successor Unit Operator.
- 6.2. The Unit Operator may be removed by DNR for failure to perform the required duties and obligations set forth in the Agreement. The removal will not be effective until the Director gives the Unit Operator notice and an opportunity to be heard and DNR approves a successor Unit Operator.
- 6.3. Unless specified otherwise in the Unit Operating Agreement, the Unit Operator may be removed by an affirmative vote of the Working Interest owners owning a majority interest in the Unit. The removal is not effective until the Working Interest owners give the Director and the Unit Operator written notice of the removal and the Director approves a successor Unit Operator.
- 6.4. The resignation or removal of the Unit Operator will not release it from liability for any failure to meet obligations that accrued before the effective date of the resignation or removal.
- 6.5. When the resignation or removal of the Unit Operator becomes effective, the Unit Operator will relinquish possession of all unit equipment, artificial islands, wells, installations, devices, records, and any other assets used for conducting Unit Operations, whether or not located in the Unit Area, to the successor Unit Operator.
- 6.6. If the Unit Operator has a Working Interest in one or more leases committed to the unit, its obligations as a Working Interest Owner continue notwithstanding resignation or removal as Unit Operator.

ARTICLE 7: Successor Unit Operator

- 7.1. A proposed successor Unit Operator will accept all rights, duties, and obligations of a Unit Operator in writing before it will be considered for approval by the Director.
- 7.2. If a successor Unit Operator that is satisfactory to the Director has not been proposed within 30 days of notice of the resignation or removal of a Unit Operator, the Director may declare this Agreement terminated.

ARTICLE 8: Unit Operating Agreement

- 8.1. The Unit Operating Agreement is an agreement between the unit Working Interest Owners regarding voting mechanisms, operational details, and non-Participating Area unit cost allocations for implementation of the Unit Agreement. It is not binding on DNR. The Unit Agreement, lease terms, statutes, and regulations control in the event of a conflict with the Unit Operating Agreement.
- 8.2. The unit applicant will file an executed copy of the Unit Operating Agreement with the Director as part of the application to form a unit. Amendments to the Unit Operating Agreement, and all other agreements that affect the rights, duties, and obligations of some or all of the Working Interest Owners, must also be filed with the Director within 30 days of execution.

ARTICLE 9: Plans of Exploration, Development, and Operations; Bonding

- 9.1. A Unit Plan must comply with 11 AAC 83.341, 11 AAC 83.343 or 11 AAC 83.346 depending on whether it is a plan of exploration, plan of development or plan of operations.
- 9.2. A proposed Unit Plan is not effective until approved by the Director and will remain in effect until the date specified by the Director in the approval.
- 9.3. Approved Unit Plans, including any updates or amendments, are part of this Agreement.
- 9.4. The Unit Operator will maintain an approved Unit Plan at all times. Failure to do so is cause for default.
- 9.5. The Director, at the time a Unit Plan is approved, may, where facts and circumstances necessitate, require that the Unit Operator provide performance guarantee surety bonds or other mechanisms approved by the Director, which are adequate in the determination of the Director to protect the Unit Area and the State's interest.
- 9.6. The Unit Operator may explore, develop, or produce in the Unit Area only in accordance with an approved Unit Plan. Failure to comply with an approved Unit Plan is cause for default.
- 9.7. The Unit Plan may, in the Director's sole discretion, include a commitment to drill a well unless the Unit Operator: (a) begins within five years from the effective date of this Unit Agreement either Sustained Unit Production or Unit Operations to install permanent infrastructure; or (b) demonstrates to the Director's satisfaction that the Unit Operator has drilled a well capable of producing in paying quantities, and a prudent operator would not continue drilling additional wells.
- 9.8. Before beginning Operations on or in the Unit Area, the Unit Operator must obtain approval of its Unit Plan and any other required state, federal, or local permits and

approvals. A plan of operations must be consistent with the mitigation measures set forth in the most recent state areawide lease sale best interest finding for the region that includes the Unit Area as of the time the plan of operations is submitted. An amendment to a plan of operations must be consistent with the mitigation measures in the most recent state areawide lease sale best interest finding as of the time of the amendment submittal.

- 9.9. The Unit Operator shall post a performance bond in the amount of \$3.25 million no later than 60 days from the effective date of this agreement, and must either: (a) drill one well in the Unit by no later than two years from the effective date of the Unit Agreement; or (b) drill two wells in the Unit by no later than five years from the effective date of the Unit Agreement.
- 9.10. If the well(s) are not drilled within the time-frame set forth in the immediately preceding paragraph subsections (a), or (b), then the \$3.25 million performance bond posted by the Operator shall be surrendered in full to the Department on behalf of the State of Alaska, and the Unit will be terminated automatically after five years from the effective date of the Unit Agreement.
- 9.11. The wells referenced in Articles 9.9, and 9.10 must penetrate and log through the entire Torok section. The wells therefore must be drilled and logged to the stratigraphic equivalent of the top of the HRZ as seen at 7292' MD (-7250' SSTVD) in the Cape Halkett-1 well. Because the Atigaru-1 well in the area does not have an expression of the HRZ, drilling and logging the stratigraphic equivalent of the LCU as seen at 7319' MD (-7294' SSTVD) in this well would represent a qualifying minimum TD. The wells, at a minimum, must be logged with a typical log suite, including gamma ray, resistivity, and porosity logs. Rotary sidewall or full core samples must be acquired from potential reservoir intervals as well as fluid samples acquired in a flow test or by downhole sampling tool at reservoir conditions.
- 9.12. Because a significant portion of the requested unit area is not shown to be prospective due to the negative effect of the "flex wave" on the existing seismic data, the current seismic data does not support a reliable interpretation of the "flex wave" area of the unit. The Unit Operator therefore shall no later than the end of September 2022 acquire additional seismic information that can be interpreted to support the presence of a prospect(s) within the designated "flex wave" area of the unit in order to maintain that specific acreage area within the unit boundaries. If the Unit Operator does not obtain the additional seismic information over the designated "flex wave" area of the unit by the end of September 2022, then the Director may initiate contraction proceedings that would remove from the unit those areas still unproven to contain a potential hydrocarbon accumulation.
- 9.13. The Unit Operator will give the Director written notice before beginning testing, evaluation, or pilot production from a well in the Unit Area.
- 9.14. If production from a Participating Area, but not the Unit as a whole, ceases and is not resumed within 90 days, then within 120 days of ceasing production from that Participating

Area, the Operator will submit a plan of operations amendment that sets forth a rehabilitation plan for that Participating Area. The rehabilitation plan may address any continued use of improvements in the Participating Area for Unit Operations.

- 9.15. Sustained Unit Production will be maintained. If production should cease, the Operator will progress diligent Operations to restore Sustained Unit Production with lapses of no more than 90 days. The lapse may be longer if a suspension of Operations or production has been ordered or approved by the Director. An unapproved lapse in Sustained Unit Production of more than 90 days is cause for default.
- 9.16. After giving written notice to the Unit Operator and an opportunity to be heard, the Director may require the Unit Operator to modify from time-to-time, the rate of prospecting and development and the quantity and rate of production.

ARTICLE 10: Participating Areas and allocation of production

- 10.1. The Unit Operator will submit a request for approval of a proposed Participating Area to the Director for approval 90 days before the commencement of Sustained Unit Production from the proposed Participating Area.
- 10.2. A proposed Participating Area must be supported by an approved Unit Plan committing to Sustained Unit Production.
- 10.3. Unless another date is established by the Director, the effective date of a Participating Area will be no later than the date of first Sustained Unit Production.
- 10.4. Unitized Substance produced from one unit Participating Area (“originating Participating Area”) may be injected into another unit Participating Area (“receiving Participating Area”) for repressuring, recycling, storage, enhanced recovery, or other purposes only if the Director has approved the operation. The State will be paid royalty upon production from the originating Participating Area unless the Director approves payment of royalties when the Unitized Substances injected are produced and sold from the receiving Participating Area under the following conditions:
 - 10.4.1. The first Unitized Substances produced and sold from the receiving Participating Area will be considered to have been the injected Unitized Substances until a volume of Unitized Substances equal to the volume of injected Unitized Substances is produced and sold from the receiving Participating Area.
 - 10.4.2. All Unitized Substances produced and sold from the receiving Participating Area that is considered to have been injected will be allocated back to the originating Participating Area.
 - 10.4.3. The Unit Operator will provide monthly reports to the Director of the volumes transferred during the preceding month; and

- 10.4.4. The Working Interest Owners will pay royalties on injected substances produced and sold from a receiving Participating Area as if those injected substances were produced and sold from the originating Participating Area when they were produced from the receiving Participating Area.
- 10.5. The Commissioner's approval must be obtained for the proposed recovery rate and commencement date for recovery before any substance is injected within the Unit Area.
- 10.6. Production and costs will be allocated under 11 AAC 83.371 and any successor regulation. The Unit Operator will submit a proposed allocation plan, with supporting data, with the application to form a Participating Area. The allocation plan must be revised whenever a Participating Area is expanded or contracted.
- 10.7. The Working Interest Owners will pay royalties for each Unit Tract in proportion to each Working Interest Owner's ownership in that Unit Tract. The amount of Unitized Substances allocated to each Unit Tract will be deemed to have been produced from that Unit Tract.
- 10.8. If the Working Interest Owners allocate Unitized Substances, Participating Area Expense, or Unit Expense differently than described in Exhibits C, E, and F, that allocation will not be binding on the State or effective for determining royalty or net profit share payments. The Unit Operator will submit any allocation that is different than the allocations required in Exhibits C, E, or F to the Director under 11 AAC 83.371(b) for the State's information within 10 days of its effective date with a statement explaining the reason for the different allocation.
- 10.9. Royalties will not be due or payable to the State for the portion of Unitized Substances unavoidably lost or used in the Unit Area for development and production in accordance with prudent industry practices. Gas that is flared for any reason other than safety purposes as allowed by the AOGCC will not be deemed to be unavoidably lost and the Working Interest Owners will pay royalties for such flared gas as if it had been produced. This exemption does not apply to Unitized Substances that are sold, traded, or assigned, including sales, transactions, or assignments among the Working Interest Owners.

ARTICLE 11: Offset Wells

- 11.1. Whenever there is a risk of drainage from production Operations on property outside the Unit Area, the Unit Operator shall drill wells to protect the State from loss by reason of drainage. If oil or gas is produced in Paying Quantities, as defined in 11 AAC 83.105, for 30 consecutive days from a gas well within 1,500 feet of the Unit or an oil well within 500 feet of the Unit, the Director may issue a written demand to drill. The Unit Operator will have an opportunity to be heard on the demand. If the Director then finds that production from a well outside the Unit is draining the Unit Area, the Unit Operator will begin drilling Operations for an offset well in the Unit Area within 30 days. In lieu of drilling a well required by this paragraph, the Working Interest Owners may compensate

the State in full each month for the estimated loss of royalty through drainage in the amount determined by the Director.

ARTICLE 12: Leases, Rentals, and Royalty Payments

- 12.1. The Working Interest Owners will pay rent, royalty, and net profit share payments due under the Leases. Payments to the State must be made under 11 AAC 04.010 *et seq.*, 11 AAC 83.110, and 11 AAC 83.201 *et seq.*, and any successor regulations or statutes.
- 12.2. The royalty value, royalty in value, and royalty in kind provisions of state Leases committed to this agreement are amended to conform to the royalty value, royalty in value, and royalty in kind provisions of the lease attached to the state areawide lease sale best interest finding for the region that includes the Unit Area that is most recent as of the effective date of this Agreement.
- 12.3. If a state Lease committed to this Agreement provides for a discovery royalty rate reduction for the first discovery of oil or gas, that lease is amended to state that this Lease provision will not apply to a well spudded after the Effective Date.
- 12.4. Each month, the Unit Operator will furnish a schedule to the Director specifying for the previous month the amount of Unitized and Non Unitized Substances: 1) produced; 2) consumed in development and production Operations or unavoidably lost; 3) allocated to each unit tract; 4) allocated to each unit tract and delivered in-kind as royalty to the State; and 5) allocated to each Unit Tract for which royalty must be paid. The Unit Operator and Working Interest Owners will file all royalty and net profit share reports per 11 AAC 04.010 *et seq.* If any of the leases subject to this Agreement require net profit share payments, the operator will also provide an updated schedule of development costs and file net profit share reports in accordance with 11 AAC 83.201 *et seq.*
- 12.5. Each Working Interest Owner will pay royalties and net profit share payments to the State as provided in the Lease and based on the production allocated to the Unit Tract and in accordance with 11 AAC 04.010 *et seq.* and 11 AAC 83.201 *et seq.*
- 12.6. Royalties, whether paid in-kind or in-value, must be free and clear of all Lease expenses, unit expenses, and Participating Area Expenses including, but not limited to, separating, cleaning, dehydration, saltwater removal, processing, compression, pumping, manufacturing, preparing production for transportation off the Unit Area, and gathering and transportation costs incurred before the Unitized Substances are delivered to a common carrier. No lien for any expenses will attach to rent or royalty or net profit share payments due on produced Unitized Substances. But royalty and net profit share will bear a proportionate part of any gas shrinkage that occurs during gas processing and blending.
- 12.7. Shell acknowledges that sales information, including but not limited to confidential sales pricing terms, related to the production and sale of hydrocarbons from the Unit may be used by the DNR to administer the Unit, and other leases or Units in the area, including

valuation for royalty purposes and DNR may disclose such confidential sales information to other producer/lessees in the same area in the administration, collection, and/or audit of royalties and net profit share payments. DNR also reserves the right to utilize information filed Shell with the Department of Revenue in the administration, collection, and/or audit of royalties and net profit share payments.

- 12.8. Notwithstanding any contrary Lease term or regulation, all royalty deductions for transportation, including, but not limited to, marine, truck, and pipeline transportation, from the Unit Area to the point of sale are limited to the actual and reasonable costs incurred by the Working Interest Owners. Transportation deductions are only allowed for sales quality oil and after the oil has passed through a custody transfer meter approved by the AOGCC. The State reserves the right to audit these transportation deductions. These transportation costs must be determined by taking into account all tax benefits applicable to the transportation.
- 12.9. If the Unit Operator or Working Interest Owners commingle production from the Unit with production from other sources for processing, the Unit Operator and Working Interest Owners will provide the Director with a monthly statement that identifies the quality and volume of oil or gas produced from the Unit.
- 12.10. Any unpaid, underpaid, or overpaid royalty or net profit share payment from state Leases committed to this Agreement will accrue interest as provided in AS 38.05.135(d)-(e).
- 12.11. For each Participating Area, the Unit Operator will give the Director notice of the anticipated date for commencement of production at least ninety (90) days before the commencement of Sustained Unit Production. Each month after the commencement of Sustained Unit Production, the Unit Operator will provide the Director a written estimate of unit production for the following ninety (90) days. DNR may take the State's royalty share of unit production in-kind. The Director will give the Unit Operator 90 days' written notice of the State's initial election to take all or a portion of its share of unit production in-kind. After taking has commenced, the Director may increase or decrease the amount of its royalty share taken in-kind.
 - 12.11.1. The Director may elect to specify the Unit Tracts from which the State's royalty share of Unitized Substances taken in-kind are to be allocated. If the Director does not specify any Unit Tracts in the written notice to the Unit Operator, the Unitized Substances taken in-kind will be allocated to all Unit Tracts in accordance with the Tract Participation shown on Exhibit C to this Agreement.
 - 12.11.2. The Unit Operator will deliver the State's in-kind royalty to the custody transfer meter at a common carrier pipeline capable of carrying those substances, or at any other mutually agreeable place. The Director may designate any individual, firm, or corporation to accept delivery.

- 12.11.3. The State's share of Unitized Substances taken in-kind will be delivered to the point of sale in sales and common carrier pipeline quality condition. If a Working Interest Owner processes its share of the Unitized Substances to separate, extract, or remove liquids, the Director may require the Working Interest Owner to also process the State's share of Unitized Substances being taken in-kind in the same manner without cost to the State. The State, or its buyer, will only pay tariffed transportation costs and shrinkage of the volume of gas resulting from processing.
- 12.11.4. Each Working Interest Owner will furnish storage in or near the Unit Area for the State's royalty share of Unitized Substances to the same extent that the Working Interest Owner provides storage for its own share of Unitized Substances.
- 12.12. If a purchaser of the State's royalty taken in-kind does not take delivery, the Director may elect, without penalty, to underlift for up to six months following the failed delivery. The State may underlift all or a portion of its royalty share. The State's right to underlift is limited to the portion of its royalty share taken in-kind that the purchaser did not take delivery of or what is necessary to meet an emergency condition. The Director will give the unit operator written notice 30 days before the first day of the month in which the State will accept the underlifted royalty share of Unitized Substances. The State may correct an underlift of its royalty share at a daily rate not exceeding 25 percent of its royalty share of daily production, unless otherwise agreed.
- 12.13. The Unit Operator will maintain records, and will keep and have in its possession, books and records including expense records, of all exploration, development, production, and disposition of all Unitized Substances and substances from outside the Unit Area that are injected into the unit, Unitized Substances that are injected outside the unit, and substances injected into a Participating Area that were produced outside the Participating Area. Each Working Interest Owner will maintain records of the disposition of its portion of the Unitized Substances, substances produced from outside the unit that are injected into the Unit Area, and substances produced from outside a participating area that were injected into the Participating Area including sales prices, volumes, and purchasers. The Unit Operator or Working Interest Owner must provide the Director with copies of the records upon request. The books and records may be provided in a mutually agreeable electronic format. The books and records must employ methods and techniques that will ensure the most accurate figures reasonably available. The Unit Operator and the Working Interest Owners will use generally accepted and internally consistent accounting procedures, except when it would be inconsistent with net profit share lease regulations.
- 12.14. The Working Interest Owners acknowledge that when they provide records for DNR, either directly to DNR or indirectly through another State agency, DNR may disclose those records in an official investigation or proceeding, including an audit to which the records are relevant, in accordance with AS 38.05.036.
- 12.15. If a Lease requires payment of minimum royalty, the Lease is amended to delete that minimum royalty obligation.

ARTICLE 13: Unit Expansion and Contraction

- 13.1. Upon its own election or at the direction of the Director, the Unit Operator may apply to expand the Unit Area to include additional lands that include all or part of a reservoir or potential hydrocarbon accumulation or that facilitate production.
- 13.2. A Unit expansion is not effective until approved by the Director.
- 13.3. The Director will contract the Unit as provided in 11 AAC 83.356.
- 13.4. Within 30 days after approval by DNR of any expansion or contraction of the Unit Area, the Unit Operator will submit revised Exhibits A and B to the Director.

ARTICLE 14: Unit and Lease Termination

- 14.1. A Lease or portion of a Lease contracted out of the Unit Area may be maintained only in accordance with state law, the Lease, and this Agreement.
- 14.2. This Agreement may be terminated by an affirmative vote of the Working Interest Owners, subject to Director approval.
- 14.3. This agreement automatically expires and ceases to exist five years from the Effective Date of this Agreement as provided in 11 AAC 83.336. The Effective Date is not subject to change, regardless of any change to the Unit Area or amendment to this Agreement.
- 14.4. Each Lease committed to this Agreement is extended as provided in the Lease.
- 14.5. Each Lease committed to this Agreement on the day that this Agreement expires or terminates, will remain in force for an extension period of 90 days, or any longer period approved by the Director, and for so long thereafter as the Working Interest Owners are actively drilling or re-drilling or producing from the Lease in paying quantities.
- 14.6. Upon the expiration or termination of state Leases committed to this Agreement, the Working Interest Owners will continue to have rights as set forth in the Lease, including rights to access the Lease area for purposes of well abandonment and dismantlement, removal, and restoration. Notwithstanding any contrary Lease terms, within 120 days after expiration or termination of this Agreement, the Working Interest Owners will provide DNR with a proposed rehabilitation plan for any Unit Area Leases that are no longer in force, including (a) the location of all improvements; (b) plans for dismantling and removing each improvement and rehabilitating the area of the improvement; and (c) any requests to leave an improvement in place. To ensure that the Working Interest Owners return the land in good condition, DNR will approve or disapprove the rehabilitation plan and determine which, if any, improvements, such as roads, pads, and wells, may be left intact and the Working Interest Owners relieved of further responsibility for its maintenance, repair, abandonment, and rehabilitation. Returning the land in good condition

includes, but is not limited to, compliance with an approved rehabilitation plan. The Working Interest Owners, or the Unit Operator on behalf of the Working Interest Owners, may at any time within a period of one year after the termination of Unit Area Leases, or any extension of that period as may be granted by DNR, remove from the Unit Area all machinery, equipment, tools, and materials. Upon the expiration of that period and at the option of DNR, any machinery, equipment, tools, materials, and improvements that the Unit Operator or Working Interest Owners have not removed from the Unit Area may, at the election of the State, become the property of the State, or be removed by the State at the expense of the Working Interest Owners, or DNR may issue an order requiring the Working Interest Owners to remove any machinery, equipment, tools, materials, and improvements within 90 days.

ARTICLE 15: Counterparts

- 15.1. The signing of counterparts of this Agreement will have the same effect as if all parties had signed a single original of this Agreement.

ARTICLE 16: Laws and Regulations

- 16.1. This Agreement and all state Leases subject to this Agreement are subject to all applicable state and federal statutes and regulations in effect on the Effective Date of this Agreement, and to all statutes and regulations or amendments to statutes and regulations placed in effect after the Effective Date of this Agreement, without regard to whether this Agreement references a particular statute or regulation. A reference to a statute or regulation in this Agreement includes any change in that statute or regulation whether by amendment, repeal and replacement, or other means. This Agreement does not limit the power of the State of Alaska or the United States of America to enact and enforce legislation or to promulgate and enforce regulations affecting, directly or indirectly, the activities of the parties to this Agreement or the value of interests held under this Agreement. In case of conflicting provisions, statutes and regulations take precedence over this Agreement.

ARTICLE 17: Appearances and Notices

- 17.1. If the State gives the Unit Operator a notice or order relating to this Agreement, it will be deemed given to all Working Interest Owners. All notices required by this Agreement will be given in writing and delivered electronically, personally, or by United States mail to the Unit Operator at the address listed below. All notices actually received will also be deemed properly given. The Unit Operator will give 30 days' written notice to the State and the other Working Interest Owners of any change in its notice address. The State will give 30 days' written notice to the Unit Operator of any change in its notice address.

Address of the Unit Operator:

Stéphane Labonté
Exploration Manager Alaska & Canada
400 4th Avenue S.W.
P.O. Box 100 Station M
Calgary, Alberta
Canada T2P 2H5

Address of the State:

Director, Division of Oil and Gas
550 West Seventh Avenue, Suite 1100
Anchorage, Alaska 99501-3560

ARTICLE 18: Default

- 18.1. Failure to comply with any term of this Agreement, including Unit Plans or applicable statutes and regulations, is a default of this Agreement, without regard to any specific references to default in this Agreement.
- 18.2. The failure to comply with a Unit Plan or other aspect of this Agreement because of force majeure, as defined in 11 AAC 83.395, is not a default, so long as the Unit Operator is working diligently to overcome the force majeure condition. Failure to obtain a permit or other approval from a state, federal, or local agency or a landowner is not force majeure.
- 18.3. A seasonal restriction on Operations or production or other condition required in the Lease is not a suspension of Operations or production required by law or force majeure.

ARTICLE 19: Preservation of Rights

- 19.1. Nothing in this Agreement shall diminish a Party's right to appeal a decision of the Director, in accordance with 11 AAC 02.

[signature page follows]

IN WITNESS OF THE FOREGOING, the parties have executed this Unit Agreement on the dates opposite their respective signatures.

WORKING INTEREST OWNER(S)

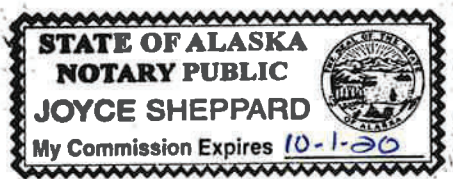
By: *Kyle W. Parker*
Kyle W. Parker
Counsel for Shell Offshore Inc.

Date: August 19, 2020

STATE OF ALASKA)
)ss.
THIRD JUDICIAL DISTRICT)

This certifies that on the 19th of August, 2020, before me, a notary public in and for the State of Alaska, duly commissioned and sworn, personally appeared Kyle W. Parker, known to me to be the person described in, and who executed the foregoing agreement, who then after being duly sworn according to law, acknowledged to me under oath that he executed same freely and voluntarily for the uses and purposes therein mentioned.

WITNESS my hand and official seal the day and year in this certificate first above written.



Joyce Sheppard
NOTARY PUBLIC in and for Alaska
My Commission Expires: 10/1/2020

EXHIBIT A – DESCRIPTION OF LEASES

LEASE No.	EXPIRATION DATE	ROY INT %	TOTAL ACRES	WORKING INTEREST %	LEGAL DESCRIPTION
ADL 392164	11/30/2022	12.50	4,698.95	100	Tract 469 ADL 392164 T. 014N., R. 001E., Umiat Meridian, Alaska. Section 1, Protracted, All, 640.00 acres; Section 2, Protracted, All, 640.00 acres; Section 11, Protracted, All, 640.00 acres; Section 12, Protracted, All, 640.00 acres; Section 13, Protracted, All, 640.00 acres; Section 14, Protracted, All, 640.00 acres; Section 23, Unsurveyed, All, excluding the National Petroleum Reserve-Alaska, 507.86 acres; Section 24, Unsurveyed, All, excluding the National Petroleum Reserve-Alaska, 351.09 acres; This Tract (469) contains 4,698.95 acres, more or less.
ADL 392165	11/30/2022	12.50	3,423.30	100	Tract 470 ADL 392165 T. 014N., R. 001E., Umiat Meridian, Alaska. Section 3, Protracted, All, 640.00 acres; Section 4, Protracted, All, 640.00 acres; Section 9, Unsurveyed, All, excluding the National Petroleum Reserve-Alaska, 513.49 acres; Section 10, Unsurveyed, All, excluding the National Petroleum Reserve-Alaska, 637.94 acres; Section 15, Unsurveyed, All, excluding the National Petroleum Reserve-Alaska, 580.49 acres; Section 16, Unsurveyed, All, excluding the National Petroleum Reserve-Alaska, 27.22 acres; Section 21, Unsurveyed, All, excluding the National Petroleum Reserve-Alaska, 55.11 acres; Section 22, Unsurveyed, All, excluding the National Petroleum Reserve-Alaska, 329.05 acres; This Tract (470) contains 3,423.30 acres, more or less.
ADL 392166	11/30/2022	12.50	1,990.08	100	Tract 471 ADL 392166 T. 014N., R. 001E., Umiat Meridian, Alaska. Section 5, Protracted, All, 640.00 acres; Section 6, Protracted, All, 609.00 acres; Section 7, Unsurveyed, All, excluding the National Petroleum Reserve-Alaska, 271.47 acres; Section 8, Unsurveyed, All, excluding the National Petroleum Reserve-Alaska, 469.61 acres; This Tract (471) contains 1,990.08 acres, more or less.
ADL 392167	11/30/2022	12.50	2,519.09	100	Tract 472 ADL 392167 T. 014N., R. 001W., Umiat Meridian, Alaska. Section 1, Protracted, All, 640.00 acres; Section 2, Protracted, All, 640.00 acres; Section 3, Unsurveyed, All, excluding the National Petroleum Reserve-Alaska, 601.83 acres; Section 10, Unsurveyed, All, excluding the National Petroleum Reserve-Alaska, 20.99 acres;

EXHIBIT A – DESCRIPTION OF LEASES

LEASE No.	EXPIRATION DATE	ROY INT %	TOTAL ACRES	WORKING INTEREST %	LEGAL DESCRIPTION
					Section 11, Unsurveyed, All, excluding the National Petroleum Reserve-Alaska, 248.35 acres; Section 12, Unsurveyed, All, excluding the National Petroleum Reserve-Alaska, 367.92 acres; This Tract (472) contains 2,519.09 acres, more or less.
ADL 392168	11/30/2022	12.50	2,087.26	100	Tract 473 ADL 392168 T. 014N., R. 001W., Umiat Meridian, Alaska. Section 4, Unsurveyed, All, excluding the National Petroleum Reserve-Alaska, 617.97 acres; Section 5, Unsurveyed, All, excluding the National Petroleum Reserve-Alaska, 639.83 acres; Section 6, Unsurveyed, All, excluding the National Petroleum Reserve-Alaska, 497.37 acres; Section 8, Unsurveyed, All, excluding the National Petroleum Reserve-Alaska, 83.38 acres; Section 9, Unsurveyed, All, excluding the National Petroleum Reserve-Alaska, 51.10 acres; T. 014N., R. 002W., Umiat Meridian, Alaska. Section 1, Unsurveyed, All, excluding the National Petroleum Reserve-Alaska, 197.61 acres; This Tract (473) contains 2,087.26 acres, more or less.
ADL 392169	11/30/2022	12.50	5,625.00	100	Tract 475 ADL 392169 T. 015N., R. 001E., Umiat Meridian, Alaska. Section 4, Protracted, All, 640.00 acres; Section 5, Protracted, All, 640.00 acres; Section 6, Protracted, All, 592.00 acres; Section 7, Protracted, All, 595.00 acres; Section 8, Protracted, All, 640.00 acres; Section 9, Protracted, All, 640.00 acres; Section 16, Protracted, All, 640.00 acres; Section 17, Protracted, All, 640.00 acres; Section 18, Protracted, All, 598.00 acres; This Tract (475) contains 5,625.00 acres, more or less.
ADL 392170	11/30/2022	12.50	5,650.00	100	Tract 476 ADL 392170 T. 015N., R. 001E., Umiat Meridian, Alaska. Section 19, Protracted, All, 601.00 acres; Section 20, Protracted, All, 640.00 acres; Section 21, Protracted, All, 640.00 acres; Section 28, Protracted, All, 640.00 acres; Section 29, Protracted, All, 640.00 acres; Section 30, Protracted, All, 603.00 acres; Section 31, Protracted, All, 606.00 acres; Section 32, Protracted, All, 640.00 acres;

EXHIBIT A – DESCRIPTION OF LEASES

LEASE No.	EXPIRATION DATE	ROY INT %	TOTAL ACRES	WORKING INTEREST %	LEGAL DESCRIPTION
					Section 33, Protracted, All, 640.00 acres; This Tract (476) contains 5,650.00 acres, more or less.
ADL 392171	11/30/2022	12.50	5,760.00	100	Tract 478 ADL 392171 T. 015N., R. 001W., Umiat Meridian, Alaska. Section 1, Protracted, All, 640.00 acres; Section 2, Protracted, All, 640.00 acres; Section 3, Protracted, All, 640.00 acres; Section 10, Protracted, All, 640.00 acres; Section 11, Protracted, All, 640.00 acres; Section 12, Protracted, All, 640.00 acres; Section 13, Protracted, All, 640.00 acres; Section 14, Protracted, All, 640.00 acres; Section 15, Protracted, All, 640.00 acres; This Tract (478) contains 5,760.00 acres, more or less.
ADL 392172	11/30/2022	12.50	5,625.00	100	Tract 479 T. 015N., R. 001W., Umiat Meridian, Alaska. Section 4, Protracted, All, 640.00 acres; Section 5, Protracted, All, 640.00 acres; Section 6, Protracted, All, 592.00 acres; Section 7, Protracted, All, 595.00 acres; Section 8, Protracted, All, 640.00 acres; Section 9, Protracted, All, 640.00 acres; Section 16, Protracted, All, 640.00 acres; Section 17, Protracted, All, 640.00 acres; Section 18, Protracted, All, 598.00 acres; This Tract (479) contains 5,625.00 acres, more or less.
ADL 392173	11/30/2022	12.50	5,650.00	100	Tract 480 T. 015N., R. 001W., Umiat Meridian, Alaska. Section 19, Protracted, All, 601.00 acres; Section 20, Protracted, All, 640.00 acres; Section 21, Protracted, All, 640.00 acres; Section 28, Protracted, All, 640.00 acres; Section 29, Protracted, All, 640.00 acres; Section 30, Protracted, All, 603.00 acres; Section 31, Protracted, All, 606.00 acres;

EXHIBIT A – DESCRIPTION OF LEASES

LEASE No.	EXPIRATION DATE	ROY INT %	TOTAL ACRES	WORKING INTEREST %	LEGAL DESCRIPTION
					Section 32, Protracted, All, 640.00 acres; Section 33, Protracted, All, 640.00 acres; This Tract (480) contains 5,650.00 acres, more or less.
ADL 392174	11/30/2022	12.50	5,760.00	100	Tract 481 T. 015N., R. 001W., Umiat Meridian, Alaska. Section 22, Protracted, All, 640.00 acres; Section 23, Protracted, All, 640.00 acres; Section 24, Protracted, All, 640.00 acres; Section 25, Protracted, All, 640.00 acres; Section 26, Protracted, All, 640.00 acres; Section 27, Protracted, All, 640.00 acres; Section 34, Protracted, All, 640.00 acres; Section 35, Protracted, All, 640.00 acres; Section 36, Protracted, All, 640.00 acres; This Tract (481) contains 5,760.00 acres, more or less.
ADL 392175	11/30/2022	12.50	5,760.00	100	Tract 482 T. 015N., R. 002W., Umiat Meridian, Alaska. Section 1, Protracted, All, 640.00 acres; Section 2, Protracted, All, 640.00 acres; Section 3, Protracted, All, 640.00 acres; Section 10, Protracted, All, 640.00 acres; Section 11, Protracted, All, 640.00 acres; Section 12, Protracted, All, 640.00 acres; Section 13, Protracted, All, 640.00 acres; Section 14, Protracted, All, 640.00 acres; Section 15, Protracted, All, 640.00 acres; This Tract (482) contains 5,760.00 acres, more or less.
ADL 392176	11/30/2022	12.50	3,503.98	100	Tract 483 T. 015N., R. 002W., Umiat Meridian, Alaska. Section 4, Unsurveyed, All, excluding the National Petroleum Reserve-Alaska, 626.51 acres; Section 5, Unsurveyed, All, excluding the National Petroleum Reserve-Alaska, 596.08 acres; Section 8, Unsurveyed, All, excluding the National Petroleum Reserve-Alaska, 482.92 acres; Section 9, Protracted, All, 640.00 acres; Section 16, Protracted, All, 640.00 acres; Section 17, Unsurveyed, All, excluding the National Petroleum Reserve-Alaska, 398.76 acres;

EXHIBIT A – DESCRIPTION OF LEASES

LEASE No.	EXPIRATION DATE	ROY INT %	TOTAL ACRES	WORKING INTEREST %	LEGAL DESCRIPTION
					T. 016N., R. 002W., Umiat Meridian, Alaska. Section 32, Unsurveyed, All, excluding the National Petroleum Reserve-Alaska, 115.30 acres; Section 33, Unsurveyed, SW1/4SW1/4, excluding the National Petroleum Reserve-Alaska, 4.41 acres; This Tract (483) contains 3,503.98 acres, more or less.
ADL 392177	11/30/2022	12.50	2,013.94	100	Tract 484 T. 015N., R. 002W., Umiat Meridian, Alaska. Section 20, Unsurveyed, All, excluding the National Petroleum Reserve-Alaska, 357.09 acres; Section 21, Protracted, All, 640.00 acres; Section 28, Unsurveyed, All, excluding the National Petroleum Reserve-Alaska, 636.46 acres; Section 29, Unsurveyed, All, excluding the National Petroleum Reserve-Alaska, 61.42 acres; Section 33, Unsurveyed, All, excluding the National Petroleum Reserve-Alaska, 318.97 acres; This Tract (484) contains 2,013.94 acres, more or less.
ADL 392178	11/30/2022	12.50	5,464.83	100	Tract 485 T. 014N., R. 002W., Umiat Meridian, Alaska. Section 3, Unsurveyed, All, excluding the National Petroleum Reserve-Alaska, 58.99 acres; T. 015N., R. 002W., Umiat Meridian, Alaska. Section 22, Protracted, All, 640.00 acres; Section 23, Protracted, All, 640.00 acres; Section 24, Protracted, All, 640.00 acres; Section 25, Protracted, All, 640.00 acres; Section 26, Protracted, All, 640.00 acres; Section 27, Protracted, All, 640.00 acres; Section 34, Unsurveyed, All, excluding the National Petroleum Reserve-Alaska, 571.62 acres; Section 35, Unsurveyed, All, excluding the National Petroleum Reserve-Alaska, 361.60 acres; Section 36, Unsurveyed, All, excluding the National Petroleum Reserve-Alaska, 632.62 acres; This Tract (485) contains 5,464.83 acres, more or less.
ADL 392179	11/30/2022	12.50	5,601.00	100	Tract 491 T. 016N., R. 001W., Umiat Meridian, Alaska. Section 19, Protracted, All, 584.00 acres; Section 20, Protracted, All, 640.00 acres; Section 21, Protracted, All, 640.00 acres; Section 28, Protracted, All, 640.00 acres; Section 29, Protracted, All, 640.00 acres; Section 30, Protracted, All, 587.00 acres; Section 31, Protracted, All, 590.00 acres;

EXHIBIT A – DESCRIPTION OF LEASES

LEASE No.	EXPIRATION DATE	ROY INT %	TOTAL ACRES	WORKING INTEREST %	LEGAL DESCRIPTION
					Section 32, Protracted, All, 640.00 acres; Section 33, Protracted, All, 640.00 acres; This Tract (491) contains 5,601.00 acres, more or less.
ADL 392180	11/30/2022	12.50	5,760.00	100	Tract 492 T. 016N., R. 001W., Umiat Meridian, Alaska. Section 22, Protracted, All, 640.00 acres; Section 23, Protracted, All, 640.00 acres; Section 24, Protracted, All, 640.00 acres; Section 25, Protracted, All, 640.00 acres; Section 26, Protracted, All, 640.00 acres; Section 27, Protracted, All, 640.00 acres; Section 34, Protracted, All, 640.00 acres; Section 35, Protracted, All, 640.00 acres; Section 36, Protracted, All, 640.00 acres; This Tract (492) contains 5,760.00 acres, more or less.
ADL 392181	11/30/2022	12.50	4,239.07	100	Tract 494 T. 016N., R. 002W., Umiat Meridian, Alaska. Section 25, Protracted, All, 640.00 acres; Section 26, Protracted, All, 640.00 acres; Section 27, Unsurveyed, All, excluding the National Petroleum Reserve-Alaska, 572.36 acres; Section 28, Unsurveyed, All, excluding the National Petroleum Reserve-Alaska, 64.12 acres; Section 33, Unsurveyed, All, excluding the SW1/4SW1/4 and the National Petroleum Reserve-Alaska, 402.59 acres; Section 34, Protracted, All, 640.00 acres; Section 35, Protracted, All, 640.00 acres; Section 36, Protracted, All, 640.00 acres; This Tract (494) contains 4,239.07 acres, more or less.

WEST HARRISON BAY LEASES

