



**Alaska Department of Natural Resources  
Division of Oil and Gas  
Public Notice of Narwhal LLC's Application for  
Expansion of the West Harrison Bay Unit**

The Department of Natural Resources (Department) Division of Oil and Gas (Division), gives notice under 11 AAC 83.311 of an application by Narwhal, LLC to expand the West Harrison Bay Unit. The proposed West Harrison Bay Unit expansion includes all leases currently located within the West Harrison Bay Unit, totaling approximately 81,000 acres, and an additional ten Narwhal, LLC leases, totaling 60,114 acres for a combined total of 141,114 acres. Narwhal, LLC, filed an application to form the proposed expanded West Harrison Bay Unit with the Division, which was deemed complete on February 16, 2023. Narwhal, LLC's address is 406 West Fireweed Lane, Suite 100, Anchorage, AK 99503.

The proposed Narwhal Unit includes all or portions of the following lands:

Umiat Meridian, Alaska

- T. 14 N., R. 01 E., U.M., secs. 1 thru 16; & 21 thru 24.
- T. 14 N., R. 01 W., U.M., secs. 1 thru 12.
- T. 14 N., R. 02 E., U.M., secs. 2 thru 18.
- T. 14 N., R. 02 W., U.M., secs. 1 and 3.
- T. 15 N., R. 01 E., U.M., secs. All.
- T. 15 N., R. 01 W., U.M., secs. All.
- T. 15 N., R. 02 E., U.M., secs. 7; 18 thru 20; & 28 thru 33.
- T. 15 N., R. 02 W., U.M., secs. 1 thru 5; 8 thru 17; 20 thru 29 & 33 thru 36.
- T. 16 N., R. 01 E., U.M., secs. 19 thru 21; & 28 thru 33.
- T. 16 N., R. 01 W., U.M., secs. All.
- T. 16 N., R. 02 W., U.M., secs. 1 and 2; 11 thru 15; & 22 thru 36.
- T. 17 N., R. 01 W., U.M., secs. 20 and 21; 28 and 29 & 30 thru 33.
- T. 17 N., R. 02 W., U.M., secs. 25 and 26.

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., Thursday, March 23, 2023, and should be mailed to the Division of Oil and Gas, attn: Ken Diemer, Unit Manager, at the Division's address above, or emailed to [DOG.Units@alaska.gov](mailto: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 term extension 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>.

Published: February 23, 2023



## Narwhal LLC

December 20, 2022

Akis Gialopsos, Acting Commissioner  
Alaska Department of Natural Resources  
550 W. 7<sup>th</sup> Avenue, Suite 1100  
Anchorage, Alaska 99501-3563

Re: Application for Expansion of the West Harrison Bay Unit

Dear Commissioner:

In accordance with 11 AAC 83.306, Narwhal, LLC ("Narwhal"), owner of one hundred percent (100%) of the working interest in the State leases subject to this Application, hereby petitions the Alaska Department of Natural Resources, Division of Oil & Gas ("Division") to expand the West Harrison Bay Unit to include leases owned and operated by Narwhal.

In accordance with 11 AAC 83.341 and Section 8.1 of the West Harrison Bay Unit Agreement, Narwhal's Unit Plan of Exploration for the expanded West Harrison Bay Unit is attached as Exhibit "G" to this Application. The Plan of Exploration covers the period from January 1, 2023 to December 31, 2025.

As required by 11 AAC 83.321, five copies (one original and four copies) of the nonconfidential portions of this Application for Expansion of 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 Submittal" and "Commercial Proposals") have been submitted electronically. Under the provisions of AS 38.05.035(a)(8)(C), Narwhal requests that those portions of the Application designated as confidential be maintained as such.

**I. Application Contents.** This application consists of the following.

- I. Application Contents
  - II. Background and description of the area proposed for expansion
  - III. Analysis of criteria in 11 AAC 83.303
  - IV. West Harrison Bay Unit Agreement and Joinder
  - V. Participating Areas
  - VI. Plan of Exploration
  - VII. Joint Operating Agreement
  - VIII. Application fee of \$1,500
- Exhibit A – Description of Leases to be included in the unit  
Exhibit B - Map of the proposed expanded West Harrison Bay Unit

---

**406 West Fireweed Lane, Suite 100, Anchorage, AK 99503**

Page 1



## Narwhal LLC

Exhibit G - proposed Plan of Exploration ("POE")  
Joinder in the West Harrison Bay Unit Agreement  
Placeholder Form AAPL Joint Operating Agreement (without exhibits)

### II. Background and Description of the Area Proposed for Expansion

Narwhal's West Harrison Bay leases were acquired in 2016 and 2019. In the 2016 Beaufort Sea Areawide Sale, Narwhal acquired six leases comprising 31,214.80 acres for a total cash bonus bid and interest of \$782,573.08. This was followed by acquisition of seven more leases totaling 28,899.36 acres in the 2019 Beaufort Sea Areawide Sale with a bonus bid and interest of \$784,460.52. Narwhal's combined current leasehold is 60,114.16 acres and has made annual lease rental payments on these holdings that total \$2,739,960.00 as of August 1, 2022. In addition to lease acquisition costs, Narwhal has spent \$375,000 for the purchase and reprocessing of seismic data, and Narwhal's ongoing technical studies, stakeholder outreach and permitting programs. To date, Narwhal has invested over \$4,680,000 on the leases and continues to expend funds toward exploration of its leases.

A "unit" is defined under 11 AAC 83.395 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, which are subject to a unit agreement[.]" 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. A "reservoir" is defined under 11 AAC 83.395 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." A "potential hydrocarbon accumulation" is defined under 11 AAC 83.385 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." Under 11 AAC 83.356, 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.

This application proposes to expand the West Harrison Bay Unit to include ten leases in which Narwhal owns 100% of the working interest. The reasons for the requested expansion are that the subsurface resources extend across the current unit boundaries into the Narwhal leases. Expansion of the unit will expedite exploration and drilling activity, benefitting all parties including the State of Alaska. Further details are provided in the confidential portion of this application.

The proposed expanded West Harrison Bay Unit Area includes multiple stacked reservoirs and potential hydrocarbon accumulations that may comprise one or more Participating Area ("PA"). Narwhal is deferring any application for a PA pending the acquisition of additional data. Once



## Narwhal LLC

adequate testing is performed to delineate the reservoir(s), Narwhal will make appropriate PA applications. A map of the proposed expanded West Harrison Bay Unit Area is attached as Exhibit B. The proposed expanded West Harrison Bay Unit seeks to unitize all of the following State of Alaska leases, totaling 131,312.44 acres:

### Existing West Harrison Bay Unit Area Leases:

Lease	Effective Date	Primary Term	Expiration Date
ADL 392164	December 1, 2012	10	November 30, 2022
ADL 392165	December 1, 2012	10	November 30, 2022
ADL 392166	December 1, 2012	10	November 30, 2022
ADL 392167	December 1, 2012	10	November 30, 2022
ADL 392168	December 1, 2012	10	November 30, 2022
ADL 392169	December 1, 2012	10	November 30, 2022
ADL 392170	December 1, 2012	10	November 30, 2022
ADL 392171	December 1, 2012	10	November 30, 2022
ADL 392172	December 1, 2012	10	November 30, 2022
ADL 392173	December 1, 2012	10	November 30, 2022
ADL 392174	December 1, 2012	10	November 30, 2022
ADL 392175	December 1, 2012	10	November 30, 2022
ADL 392176	December 1, 2012	10	November 30, 2022
ADL 392177	December 1, 2012	10	November 30, 2022
ADL 392178	December 1, 2012	10	November 30, 2022
ADL 392179	December 1, 2012	10	November 30, 2022
ADL 392180	December 1, 2012	10	November 30, 2022
ADL 392181,	December 1, 2012	10	November 30, 2022

### Expanded West Harrison Bay Unit Area Leases:

Lease	Effective Date	Primary Term	Expiration Date
ADL 393176	July 1, 2017	8	June 30, 2025
ADL 393177	July 1, 2017	8	June 30, 2025
ADL 393178	July 1, 2017	8	June 30, 2025
ADL 393179	July 1, 2017	8	June 30, 2025
ADL 393180	July 1, 2017	8	June 30, 2025
ADL 393181	July 1, 2017	8	June 30, 2025
ADL 393895	August 1, 2020	8	July 31, 2028
ADL 393896	August 1, 2020	8	July 31, 2028
ADL 393898	August 1, 2020	8	July 31, 2028
ADL 393900	August 1, 2020	8	July 31, 2028



## Narwhal LLC

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

### III. Discussion of 11 AAC 83.303 Criteria

An application for unitization of state oil and gas leases is subject to the criteria set forth at 11 AAC 83.303(a). Approval of Narwhal's application to expand and join the West Harrison Bay Unit is consistent with each of the approval criteria as described below.

A. 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))

Expansion of the West Harrison Bay Unit Area will facilitate an efficient, integrated approach to the further evaluation and development of the numerous actual and potential reservoirs that cross the boundaries of the existing unit and extend through the expansion area. Expansion also promotes the conservation of all natural resources by eliminating the need for duplicative exploration activities within and outside the unit and allowing optimal placement of exploratory wells on the target structure without regard to lease boundaries. Drilling fewer wells and consolidating surface infrastructure will conserve surface resources. Optimizing development island and well placement across the expanded unit will conserve the oil and gas resources by ensuring the greatest possible recovery.

Expansion allows for coordinated use of infrastructure and the completion of required 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 on lease preservation. The data obtained from new wells is necessary to optimize the location of drilling future wells. Coordinated development operations will conserve the State's resources and facilitate the greatest ultimate recovery of those resources. Development under the terms of the West Harrison Bay Unit Agreement will promote efficient evaluation and development of the State's resources, and minimize impacts to the area's cultural, biological, and environmental resources.

B. Promote the Prevention of Economic and Physical Waste (11 AAC 83.303(a)(2))

Expansion of the West Harrison Bay Unit Area will promote the prevention of economic and physical waste by preventing unnecessary exploration drilling, development facilities and maximizing the recovery of oil and gas. Expansion of the unit allows exploration and development wells to be drilled in the best possible location to maximize drainage and eliminate redundant expenditures on neighboring leases. Exploration and development without regard to lease boundaries will prevent waste by allowing placement of facilities to maximize recovery.



## Narwhal LLC

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

Expansion of the West Harrison Bay Unit Area will provide for the protection of all parties of interest by allowing exploration and 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.

Expansion of the West Harrison Bay Unit Area advances Shell Offshore Inc.'s (Shell) and Narwhal's economic interests because it improves the economics of the project. Exploration and development under a single approved unit plan promotes the State's interests and eliminates the complications of competing leasehold interests and providing for accurate reporting and record keeping. Unit expansion also promotes earlier exploratory drilling as Narwhal has already applied for the federal permits necessary to drill in the 2023-2024 winter season. The sooner exploration wells are drilled, the sooner appraisal, delineation and confirmation wells will be drilled and development undertaken. Exploration leading to development and production sooner rather than later benefits Shell, Narwhal, and the State.

Expansion of the West Harrison Bay Unit Area is critical to securing 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. The State's approval of annual plans of development provide for continued review and approval of plans to develop the unit in a manner which minimizes economic and physical recovery.

D. Environmental Costs and Benefits of Unitized Exploration or Development (11 AAC 83.303(b)(1))

Expansion of the unit will allow exploration and development activities to be conducted with the least environmental impacts, consistent with the well-established prudent, efficient and environmentally sound industry practices related to nearshore North Slope operations. The environmental impacts would be significantly greater if the reservoirs were developed on a lease-by-lease or well-by-well basis, rather than on an integrated unitized basis encompassing the minimum area required to include all or part of the oil or gas reservoirs and potential hydrocarbon accumulations involved.

E. 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 is being submitted separately.



## Narwhal LLC

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

To date, Narwhal has made a significant investment in acquiring and maintaining its West Harrison Bay leases, and acquiring and evaluating relevant geologic, geophysical and well data. Although no wells have been drilled on Narwhal's 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 Narwhal'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 existing West Harrison Bay Unit 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 Western Geco's 1981 data set. The seismic data are crucial for identifying geologic traps, reservoirs, and seals, especially the 3-D seismic data, which combined with the reprocessed 1981 2-D seismic data reveals critical amplitude anomalies and AVO attributes.

Since 2000, one other company besides Shell operated leases in West Harrison Bay: FEX L.P., a subsidiary of Talisman Energy, a Canadian independent. FEX paid \$3.5 million for 19 leases in the area. Most of the FEX leases are now operated by Shell as part of the West Harrison Bay Unit and these were acquired by FEX in the State of Alaska's 2011 Beaufort Sea Areawide lease sale.

G. Plan of Exploration for the Expanded West Harrison Bay Unit Area (11 AAC 83.303(b)(4))

During the period of January 2024 through April 2024, Narwhal plans to drill up to 4 exploration wells in the expanded unit. Prior to drilling operations, preliminary field activities will be conducted in summer 2023 to support project permitting, planning, and engineering for the proposed winter drilling program in 2024. Summer activities include marine shallow hazard surveys (SHS), freshwater source lake surveys, an archaeological survey, and gathering technical data to support project planning and engineering. Equipment may also be advance staged in the project area to support future winter operations.

Narwhal's logistical program will be supported by an approximately 104 kilometer (km) coastal sea ice trail extending from Oliktok Point to West Harrison Bay. This trail will be constructed primarily on grounded sea ice. All-terrain vehicles (ATV) such as rolligons or steigers will transport equipment and materials to and from West Harrison Bay via the coastal sea ice trail. In





## Narwhal LLC

the immediate vicinity of West Harrison Bay, local ice roads will be constructed on sea ice and onshore tundra to enable conventional rolling stock vehicles to support the drilling operations.

Exhibit G sets out the West Harrison Bay Unit Plan of Exploration ("POE").

Narwhal acknowledges that its proposed drilling program is more aggressive than the current POE for the West Harrison Bay unit. The existing POE calls for a unit operator to be identified by the end of 2022. Narwhal agrees that the unit needs a responsible operator and is agreeable to Shell continuing as operator, to Narwhal being designated as operator, or to a third-party operator. Furthermore, Narwhal is open to amending its existing permit applications to name an agreed-upon operator as the permittee. Narwhal's proposed POE will advance the understanding of the resource potential of the West Harrison Bay leases, develop additional information regarding the hydrocarbon potential of the West Harrison Bay leases, and provide data needed to evaluate the economics of future development.

### H. Economic Costs and Benefits to the State (11 AAC 83.303(b)(5))

A key goal of expansion of the West Harrison Bay Unit is to facilitate efficient and expedient exploration of the lands within the unit. The expansion of the West Harrison Bay Unit encourages investment in exploration, which may lead to the development of new, currently undeveloped formations underlying the leases. The State's economic interests are protected by expediting exploration drilling, efficiently allocating exploration resources, and maximizing the physical recovery of hydrocarbons from the West Harrison Bay Unit reservoirs. Maximizing hydrocarbon recovery assures that the production-based revenue occurring to the State is also maximized.

Expansion of the West Harrison Bay Unit may foster 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, royalty revenue to 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.

### IV. **Unit Agreement and Joinder**

The West Harrison Bay Unit Agreement is based upon the standard State of Alaska unit agreement form. Narwhal agrees to join and be subject to the West Harrison Bay Unit Agreement. Pursuant to 11 AAC 83.306. A signed Joinder is attached to this Application.

### V. **Participating Areas**

Pursuant to 11 AAC 83.351, Narwhal defers the determination of the Participating Areas ("PA") for the expanded West Harrison Bay Unit. Once testing or production information is obtained,



## **Narwhal LLC**

Narwhal will make appropriate PA applications. Narwhal is submitting this Application with a form Unit Joint Operating Agreement ("JOA"). Narwhal has not reached an agreement with Shell as to the respective rights and obligations of each party and submits the included form JOA as a placeholder until arrangements with Shell to share the risks and costs associated with the unit are completed.

### **VI. Unit Plan of Exploration**

In accordance with 11 AAC 83.343 and Section 8.1 of the West Harrison Bay Unit Agreement, Narwhal proposes the Unit Plan of Exploration for the West Harrison Bay Unit, which is attached as Exhibit G. The Unit Plan of Exploration includes the work commitments described above. Narwhal looks forward to working with Shell and the State of Alaska to integrate the proposed exploration activities set forth in Exhibit G with the existing POE for the West Harrison Bay Unit.

### **VII. Joint Operating Agreement**

Narwhal has gone to great lengths to try to reach an agreement with Shell to explore and develop the combined acreage that would be unitized pursuant to this proposal, but Shell's unwillingness to engage in discussions with Narwhal makes it clear that action from DNR—specifically, involuntary unitization—is required to spur exploration drilling and development activities that are in the public interest. Since 2016, Narwhal has made at least six formal proposals and numerous other informal inquiries to either jointly explore and develop the parties' common oil and gas formations in West Harrison Bay or to purchase Shell's leases in West Harrison Bay. The proposals made by Narwhal have been reasonable, varied in form, and demonstrate tremendous flexibility and willingness to cooperate with Shell. Over the years, these proposals have included several cash offers to purchase Shell's leases outright. Narwhal also has offered Shell cash plus the option for Shell to repurchase its working interest in its West Harrison Bay leases upon a successful exploration drilling campaign fully funded by Narwhal, or alternatively to receive an overriding royalty interest in each party's West Harrison Bay leases. The following are several specific examples of the various proposals made by Narwhal to Shell:

- In 2017, Narwhal offered to purchase Shell's West Harrison Bay leases for a cash payment at closing, together with a failure-to-drill penalty in the event an exploration well is not spudded by a specific date set forth in the proposal, and a significant cash bonus payment upon testing a commercially successful well in West Harrison Bay.
- In December 2019, prior to Shell's decision to file its application to unitize its West Harrison Bay Leases, Narwhal provided Shell with a written proposal to form a unit that combined Narwhal and Shell's leases in West Harrison Bay for the purpose of joint exploration and development of oil and gas reserves that clearly extend under both parties' acreage.



## Narwhal LLC

- In 2021, Narwhal provided Shell with multiple additional proposals, including: (i) a lease combination agreement, together with an effort to seek a large operator that meets Shell's strict standards to conduct a drilling exploration program for the parties' combined acreage in West Harrison Bay; (ii) a proposal for a lease combination agreement and the use of a turnkey operator funded by the parties to conduct a drilling exploration program for the parties' combined acreage in West Harrison Bay; and (iii) a proposal for Shell's divestment of its West Harrison Bay leases with a significant cash payment upon a commercially successful discovery well drilled by Narwhal or another operator identified by Narwhal.
- In 2022, Narwhal submitted a proposal to purchase Shell's leases for cash or, alternatively, for Narwhal to commence critical path preliminary permitting and planning activities that could serve as the basis for an exploration drilling program in the 2023/2024 winter drilling season in West Harrison Bay, enabling Shell to meet its work program obligations under the West Harrison Bay Unit Agreement.

All of these proposals were summarily dismissed by Shell without comment or counteroffer. Copies of the CONFIDENTIAL Commercial Proposals are included as a part of this Application are being submitted separately. Narwhal has reached out to Shell several times in recent months, to no avail. Shell currently is unwilling to engage in any discussion with Narwhal relating to proposals to combine and develop the parties' acreage that contains formations that extend across the parties' lease boundaries. It is clear that involuntary unitization will be the necessary catalyst for exploration, development, and ultimately production activities on the combined acreage.

Narwhal submits the standard form joint operating agreement produced by the American Association of Professional Landmen as a placeholder in this Application, pending negotiation and agreement of operating terms by and between Shell and Narwhal.

Please contact me if you have questions or need to discuss the information submitted in this Application. An Application Fee of \$1,500 is submitted with this Application.

Sincerely,

[Stéphane Labonté \(Dec 19, 2022 15:25 MST\)](#)

Stéphane Labonte

Attachments:      Exhibit A to Expanded West Harrison Bay Unit Agreement  
                         Exhibit B to Expanded West Harrison Bay Unit Agreement  
                         Exhibit G to Expanded West Harrison Bay Unit Agreement  
                         Joinder in the West Harrison Bay Unit Agreement  
                         Placeholder Form AAPL Joint Operating Agreement (without exhibits)

**EXHIBIT A – WEST HARRISON BAY UNIT AGREEMENT  
DESCRIPTION OF LEASES**

<b>UNIT TRACT No.</b>	<b>LEASE No.</b>	<b>EXPIRATION DATE</b>	<b>ROYALTY INTEREST %</b>	<b>TOTAL ACRES</b>	<b>WORKING INTEREST %</b>	<b>LEGAL DESCRIPTION</b>
1	ADL 392164	11/30/2022	12.50	4,698.95	100 (Shell Offshore Inc.)	T. 14 N., R. 01 E., 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.
2	ADL 392165	11/30/2022	12.50	3,423.30	100 (Shell Offshore Inc.)	T. 14 N., R. 01 E., 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.
3	ADL 392166	11/30/2022	12.50	1,990.08	100 (Shell Offshore Inc.)	T. 14N., R. 01 E., 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;

**EXHIBIT A – WEST HARRISON BAY UNIT AGREEMENT  
DESCRIPTION OF LEASES**

UNIT TRACT No.	LEASE No.	EXPIRATION DATE	ROYALTY INTEREST %	TOTAL ACRES	WORKING INTEREST %	LEGAL DESCRIPTION
						Section 8, Unsurveyed, All, excluding the National Petroleum Reserve-Alaska, 469.61 acres.
4	ADL 392167	11/30/2022	12.50	2,519.09	100 (Shell Offshore Inc.)	T. 14 N., R. 01 W., 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; 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.
5	ADL 392168	11/30/2022	12.50	2,087.26	100 (Shell Offshore Inc.)	T. 14 N., R. 01 W., 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. 14 N., R. 02 W., Umiat Meridian, Alaska. Section 1, Unsurveyed, All, excluding the National Petroleum Reserve-Alaska, 197.61 acres.
6	ADL 392169	11/30/2022	12.50	5,625.00	100 (Shell Offshore Inc.)	T. 15 N., R. 01 E., 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;

**EXHIBIT A – WEST HARRISON BAY UNIT AGREEMENT  
DESCRIPTION OF LEASES**

<b>UNIT TRACT No.</b>	<b>LEASE No.</b>	<b>EXPIRATION DATE</b>	<b>ROYALTY INTEREST %</b>	<b>TOTAL ACRES</b>	<b>WORKING INTEREST %</b>	<b>LEGAL DESCRIPTION</b>
						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.
7	ADL 392170	11/30/2022	12.50	5,650.00	100 (Shell Offshore Inc.)	T. 15 N., R. 01 E., 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; Section 33, Protracted, All, 640.00 acres.
8	ADL 392171	11/30/2022	12.50	5,760.00	100 (Shell Offshore Inc.)	T. 15 N., R. 01 W., 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.
9	ADL 392172	11/30/2022	12.50	5,625.00	100 (Shell Offshore Inc.)	T. 15 N., R. 01 W., 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;

**EXHIBIT A – WEST HARRISON BAY UNIT AGREEMENT  
DESCRIPTION OF LEASES**

<b>UNIT TRACT No.</b>	<b>LEASE No.</b>	<b>EXPIRATION DATE</b>	<b>ROYALTY INTEREST %</b>	<b>TOTAL ACRES</b>	<b>WORKING INTEREST %</b>	<b>LEGAL DESCRIPTION</b>
						Section 16, Protracted, All, 640.00 acres; Section 17, Protracted, All, 640.00 acres; Section 18, Protracted, All, 598.00 acres.
10	ADL 392173	11/30/2022	12.50	5,650.00	100 (Shell Offshore Inc.)	T. 15 N., R. 01 W., 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; Section 33, Protracted, All, 640.00 acres.
11	ADL 392174	11/30/2022	12.50	5,760.00	100 (Shell Offshore Inc.)	T. 15N., R. 01 W., 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.
12	ADL 392175	11/30/2022	12.50	5,760.00	100 (Shell Offshore Inc.)	T. 15 N., R. 02 W., 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;

**EXHIBIT A – WEST HARRISON BAY UNIT AGREEMENT  
DESCRIPTION OF LEASES**

<b>UNIT TRACT No.</b>	<b>LEASE No.</b>	<b>EXPIRATION DATE</b>	<b>ROYALTY INTEREST %</b>	<b>TOTAL ACRES</b>	<b>WORKING INTEREST %</b>	<b>LEGAL DESCRIPTION</b>
						Section 15, Protracted, All, 640.00 acres.
13	ADL 392176	11/30/2022	12.50	3,503.98	100 (Shell Offshore Inc.)	T. 15 N., R. 02 W., 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; T. 16 N., R. 02 W., Umiat Meridian, Alaska. Section 32, Unsurveyed, All, excluding the National Petroleum Reserve-Alaska, 115.30 acres; Section 33, Unsurveyed, SW4SW4, excluding the National Petroleum Reserve-Alaska, 4.41 acres.
14	ADL 392177	11/30/2022	12.50	2,013.94	100 (Shell Offshore Inc.)	T. 15 N., R. 02 W., 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.
15	ADL 392178	11/30/2022	12.50	5,464.83	100 (Shell Offshore Inc.)	T. 14 N., R. 02 W., Umiat Meridian, Alaska. Section 3: Unsurveyed, All, excluding the National Petroleum Reserve-Alaska, 58.99 acres, T. 15 N., R. 02 W., Umiat Meridian, Alaska. Section 22: Protracted, All, 640.00 acres;



**EXHIBIT A – WEST HARRISON BAY UNIT AGREEMENT  
DESCRIPTION OF LEASES**

<b>UNIT TRACT No.</b>	<b>LEASE No.</b>	<b>EXPIRATION DATE</b>	<b>ROYALTY INTEREST %</b>	<b>TOTAL ACRES</b>	<b>WORKING INTEREST %</b>	<b>LEGAL DESCRIPTION</b>
						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.
16	ADL 392179	11/30/2022	12.50	5,601.00	100 (Shell Offshore Inc.)	T. 16 N., R. 01 W., 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; Section 32, Protracted, All, 640.00 acres; Section 33, Protracted, All, 640.00 acres.
17	ADL 392180	11/30/2022	12.50	5,760.00	100 (Shell Offshore Inc.)	T. 16 N., R. 01 W., 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.

**EXHIBIT A – WEST HARRISON BAY UNIT AGREEMENT  
DESCRIPTION OF LEASES**

<b>UNIT TRACT No.</b>	<b>LEASE No.</b>	<b>EXPIRATION DATE</b>	<b>ROYALTY INTEREST %</b>	<b>TOTAL ACRES</b>	<b>WORKING INTEREST %</b>	<b>LEGAL DESCRIPTION</b>
18	ADL 392181	11/30/2022	12.50	4,239.07	100 (Shell Offshore Inc.)	T. 16 N., R. 02 W., 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 SW4SW4 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.
<b>LEASES PROPOSED FOR UNIT EXPANSION</b>						
19	ADL 393176	6/30/2025	16.66667	3,400.98	100 (Narwhal, LLC)	T. 14 N., R. 02 E., Umiat Meridian, Alaska. Section 2, Protracted, All tide and submerged lands shoreward of the line fixed by coordinates in Exhibit A of the Final Decree in U.S. V. Alaska, No. 84 Original, 0.09 acres; Section 3, Protracted, All tide and submerged lands shoreward of the line fixed by coordinates in Exhibit A of the Final Decree in U.S. V. Alaska, No. 84 Original, 191.87 acres; Section 10, Protracted, All, 640.00 acres; Section 11, Protracted, All tide and submerged lands shoreward of the line fixed by coordinates in Exhibit A of the Final Decree in U.S. V. Alaska, No. 84 Original, 486.11 acres; Section 12, Protracted, All tide and submerged lands shoreward of the line fixed by coordinates in Exhibit A of the Final Decree in U.S. V. Alaska, No. 84 Original, 162.91 acres; Section 13, Protracted, All, 640.00 acres; Section 14, Protracted, All, 640.00 acres; Section 15, Protracted, All, 640.00 acres.

**EXHIBIT A – WEST HARRISON BAY UNIT AGREEMENT  
DESCRIPTION OF LEASES**

<b>UNIT TRACT No.</b>	<b>LEASE No.</b>	<b>EXPIRATION DATE</b>	<b>ROYALTY INTEREST %</b>	<b>TOTAL ACRES</b>	<b>WORKING INTEREST %</b>	<b>LEGAL DESCRIPTION</b>
20	ADL 393177	6/30/2025	16.66667	5,666.82	100 (Narwhal, LLC)	T. 14 N., R. 02 E., Umiat Meridian, Alaska. Section 4, Protracted, All tide and submerged lands shoreward of the line fixed by coordinates in Exhibit A of the Final Decree in U.S. V. Alaska, No. 84 Original, 631.82 acres; Section 5, Protracted, All, 640.00 acres; Section 6, Protracted, All, 609.00 acres; Section 7, Protracted, All, 612.00 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, 614.00 acres.
21	ADL 393178	6/30/2025	16.66667	5,760.00	100 (Narwhal, LLC)	T. 15 N., R. 01 E., 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.
22	ADL 393179	6/30/2025	16.66667	5,760.00	100 (Narwhal, LLC)	T. 16 N., R. 01 W., 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.

**EXHIBIT A – WEST HARRISON BAY UNIT AGREEMENT  
DESCRIPTION OF LEASES**

<b>UNIT TRACT No.</b>	<b>LEASE No.</b>	<b>EXPIRATION DATE</b>	<b>ROYALTY INTEREST %</b>	<b>TOTAL ACRES</b>	<b>WORKING INTEREST %</b>	<b>LEGAL DESCRIPTION</b>
23	ADL 393180	6/30/2025	16.66667	5,577.00	100 (Narwhal, LLC)	T. 16 N., R. 01 W., Umiat Meridian, Alaska. Section 4, Protracted, All, 640.00 acres; Section 5, Protracted, All, 640.00 acres; Section 6, Protracted, All, 576.00 acres; Section 7, Protracted, All, 579.00 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, 582.00 acres.
24	ADL 393181	6/30/2025	16.66667	5,050.00	100 (Narwhal, LLC)	T. 16 N., R. 02 W., Umiat Meridian, Alaska. Section 1, Unsurveyed, All, Excluding the National Petroleum Reserve-Alaska, 637.00 acres; Section 2, Unsurveyed, All, Excluding the National Petroleum Reserve-Alaska, 94.00 acres; Section 11, Unsurveyed, All, Excluding the National Petroleum Reserve-Alaska, 446.00 acres; Section 12, Protracted, All, 640.00 acres; Section 13, Protracted, All, 640.00 acres; Section 14, Unsurveyed, All, Excluding the National Petroleum Reserve-Alaska, 639.00 acres; Section 15, Unsurveyed, All, Excluding the National Petroleum Reserve-Alaska, 127.00 acres; Section 22, Unsurveyed, All, Excluding the National Petroleum Reserve-Alaska, 547.00 acres; Section 23, Protracted, All, 640.00 acres; Section 24, Protracted, All, 640.00 acres.
25	ADL 393895	7/31/2028	16.66667	3,793.44	100 (Narwhal, LLC)	T. 15 N., R. 02 E., Umiat Meridian, Alaska. Section 7, Protracted, All tide and submerged land shoreward of the line fixed by coordinates found in Exhibit A of the final decree in U.S. v. Alaska, No. 84 Original, 9.14 acres;

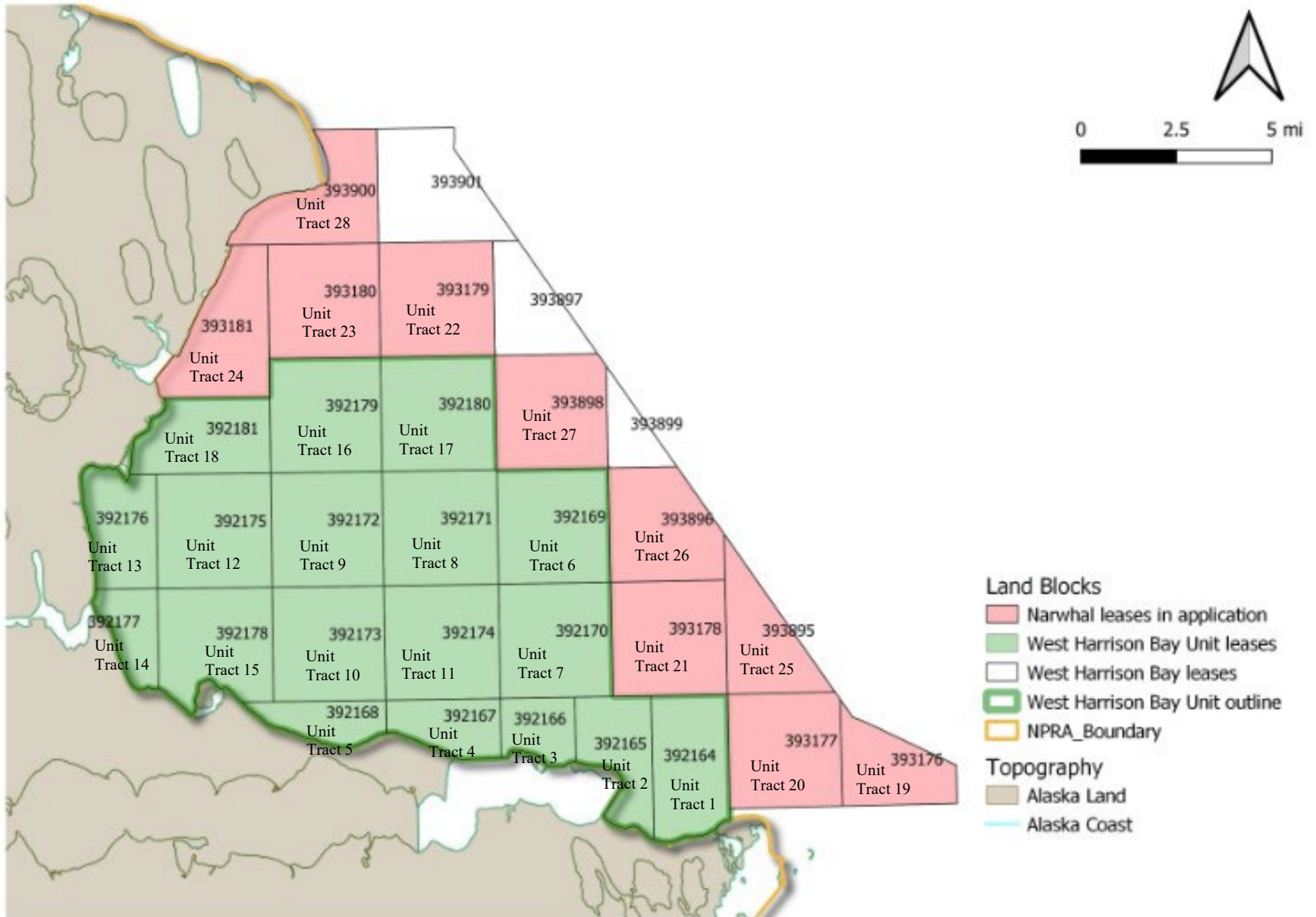
**EXHIBIT A – WEST HARRISON BAY UNIT AGREEMENT  
DESCRIPTION OF LEASES**

UNIT TRACT No.	LEASE No.	EXPIRATION DATE	ROYALTY INTEREST %	TOTAL ACRES	WORKING INTEREST %	LEGAL DESCRIPTION
						<p>Section 18, Protracted, All tide and submerged land shoreward of the line fixed by coordinates found in Exhibit A of the final decree in U.S. v. Alaska, No. 84 Original, 302.99 acres;</p> <p>Section 19, Protracted, All tide and submerged land shoreward of the line fixed by coordinates found in Exhibit A of the final decree in U.S. v. Alaska, No. 84 Original, 592.74 acres;</p> <p>Section 20, Protracted, All tide and submerged land shoreward of the line fixed by coordinates found in Exhibit A of the final decree in U.S. v. Alaska, No. 84 Original, 139.13 acres;</p> <p>Section 28, Protracted, All tide and submerged land shoreward of the line fixed by coordinates found in Exhibit A of the final decree in U.S. v. Alaska, No. 84 Original, 19.92 acres;</p> <p>Section 29, Protracted, All tide and submerged land shoreward of the line fixed by coordinates found in Exhibit A of the final decree in U.S. v. Alaska, No. 84 Original, 537.38 acres;</p> <p>Section 30, Protracted, All, 603.00 acres;</p> <p>Section 31, Protracted, All, 606.00 acres;</p> <p>Section 32, Protracted, All, 640.00 acres;</p> <p>Section 33, Protracted, All tide and submerged land shoreward of the line fixed by coordinates found in Exhibit A of the final decree in U.S. v. Alaska, No. 84 Original, 343.14 acres.</p>
26	ADL 393896	7/31/2028	16.66667	5,069.66	100 (Narwhal, LLC)	<p>T. 15 N., R. 01 E., Umiat Meridian, Alaska.</p> <p>Section 1, Protracted, All tide and submerged land shoreward of the line fixed by coordinates found in Exhibit A of the final decree in U.S. v. Alaska, No. 84 Original, 104.47 acres;</p> <p>Section 2, Protracted, All tide and submerged land shoreward of the line fixed by coordinates found in Exhibit A of the final decree in U.S. v. Alaska, No. 84 Original, 620.32 acres;</p> <p>Section 3, Protracted, All, 640.00 acres;</p> <p>Section 10, Protracted, All, 640.00 acres;</p> <p>Section 11, Protracted, All, 640.00 acres;</p> <p>Section 12, Protracted, All tide and submerged land shoreward of the line fixed by coordinates found in Exhibit A of the final decree in U.S. v. Alaska, No. 84 Original, 504.87 acres;</p>

**EXHIBIT A – WEST HARRISON BAY UNIT AGREEMENT  
DESCRIPTION OF LEASES**

<b>UNIT TRACT No.</b>	<b>LEASE No.</b>	<b>EXPIRATION DATE</b>	<b>ROYALTY INTEREST %</b>	<b>TOTAL ACRES</b>	<b>WORKING INTEREST %</b>	<b>LEGAL DESCRIPTION</b>
						Section 13, Protracted, All, 640.00 acres; Section 14, Protracted, All, 640.00 acres; Section 15, Protracted, All, 640.00 acres.
27	ADL 393898	7/31/2028	16.66667	5,578.81	100 (Narwhal, LLC)	T. 16 N., R. 01 E., Umiat Meridian, Alaska. Section 19, Protracted, All, 584.00 acres; Section 20, Protracted, All, 640.00 acres; Section 21, Protracted, All tide and submerged land shoreward of the line fixed by coordinates found in Exhibit A of the final decree in U.S. v. Alaska, No. 84 Original, 617.81 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; Section 32, Protracted, All, 640.00 acres; Section 33, Protracted, All, 640.00 acres.
28	ADL 393900	7/31/2028	16.66667	4,524.23	100 (Narwhal, LLC)	T. 17 N., R. 01 W., Umiat Meridian, Alaska. Section 20, Unsurveyed, All tide and submerged land excluding the National Petroleum Reserve - Alaska, 278.55 acres; Section 21, Protracted, All, 640.00 acres; Section 28, Protracted, All, 640.00 acres; Section 29, Unsurveyed, All tide and submerged land excluding the National Petroleum Reserve - Alaska, 399.24 acres; Section 30, Unsurveyed, All tide and submerged land excluding the National Petroleum Reserve - Alaska, 198.82 acres; Section 31, Protracted, All, 639.00 acres; Section 32, Protracted, All, 640.00 acres; Section 33, Protracted, All, 640.00 acres; T. 17 N., R. 02 W., Umiat Meridian, Alaska. Section 25, Unsurveyed, All tide and submerged land excluding the National Petroleum Reserve - Alaska, 11.23 acres; Section 36, Unsurveyed, All tide and submerged land excluding the National Petroleum Reserve - Alaska, 437.39 acres.

**EXHIBIT B – WEST HARRISON BAY UNIT AGREEMENT  
DESCRIPTION OF LEASES**



**EXHIBIT G – WEST HARRISON BAY UNIT AGREEMENT**  
**Plan Of Exploration**

Given that the existing WHB unit term will end in December 2025 and Narwhal is unable to control the timing and transition to a new Operator, pending ADNR approval of Narwhal's entry into the Unit and appointment of an Operator other than Shell, whether it is Narwhal or another entity, Narwhal requests that the expanded West Harrison Bay Unit Plan of Exploration be for term of four years. This term will allow for sufficient time to transition to a new Operator, acquire additional information regarding the hydrocarbon potential of the West Harrison Bay leases through drilling, evaluate the economics of 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 Plan of Exploration.

The Plan of Exploration proposed below is subject to timely ADNR approval of Unit expansion and appointment of a new Operator by December 31, 2022. If Unit expansion and appointment of the new Operator occurs in 2023, it is possible that the activities proposed below will be deferred for a period of one year to allow sufficient time for permitting, planning, engineering and procurement in advance of the winter exploration drilling activities.

**West Harrison Bay Unit Plan of Exploration, 2022- 2025**

As outlined herein, during the term of the West Harrison Bay Unit, the Joint Venture (JV), comprising of Narwhal, Shell and any future partner allowed into the Unit, will complete additional required engineering, environmental studies and permitting necessary to support Exploration & Appraisal activities and a future Plan of Development, as well as drill at least two exploration wells to evaluate the resource potential of the subject lands.

During calendar year 2022, Narwhal has implemented the following operations:

- Initiate exploration phase project scoping targeting a Q1 2024 drilling campaign in WHB.
- Initiate long lead regulatory filing. Submit IHA's to USFWS and NMFS for 1 year period covering 2023 summer field scoping activity and a winter 2024 drilling campaign.

In addition, Narwhal proposes that the JV undertake the following activities during the remainder of calendar year 2022:

- Establish roles and responsibilities for managing the exploration drilling permitting, logistics and contractual processes.

During calendar year 2023, the JV will complete the following operations:

- Conduct preliminary activities to support winter 2024 drilling campaign, which may include project permitting, planning, and engineering.
- Commence mobilization of equipment related to winter 2024 drilling campaign.
- Commence permitting for summer technical studies, which may include shallow hazard and 3D seismic surveys in summer 2024.



**EXHIBIT G – WEST HARRISON BAY UNIT AGREEMENT**  
**Plan Of Exploration**

During calendar year 2024, the JV will complete the following operations:

- Complete at least two exploration wells to evaluate the Nanushuk formation. Pending ongoing analysis of geophysical data, one of the exploration wells may be drilled deeper to evaluate the Torok formation.
- Assess the drilling results and if successful: 1) commence permitting for 2025 exploration/appraisal drilling campaign, 2) continue permitting for summer technical studies, shallow hazard and 3D seismic surveys and 3) acquire 3D seismic in summer season if possible.

During calendar year 2025, the JV will complete the following operations:

- If 2024 drilling was successful: 1) complete two exploration wells to continue evaluation of the Nanushuk and/or Torok formations or 2) acquire 3D seismic if not acquired in 2024 or both.
- If drilling was successful, and after evaluating the results of the wells completed during the 2023-24 and 2024-25 drilling seasons, the JV will submit either a further Plan of Exploration for West Harrison Bay, or a Plan of Development.

Calendar year 2026 is a contingency year in the event that the West Harrison Bay Unit expansion and new Operator appointment are not completed by December 31, 2022.

## Joinder in West Harrison Bay Unit Agreement

WHEREAS, Shell Offshore Inc. (“Shell”) is a party to that certain West Harrison Bay Unit Agreement (the “Unit Agreement”) dated July 2020 governing operations for certain State of Alaska oil and gas leases located in the West Harrison Bay Unit (the “Shell Leases”), as to which Shell is a lessee; and

WHEREAS, Narwhal has applied to expand the West Harrison Bay Unit to include certain State of Alaska oil and gas leases neighboring the West Harrison Bay Unit (the “Narwhal Leases”), as to which Narwhal is a lessee; and

WHEREAS, expansion of the West Harrison Bay Unit requires that Narwhal, as owner of an undivided 100% of the working interest in the leases proposed to be added to the unit, must join the existing Unit Agreement,

THEREFORE:

Narwhal agrees to join as a party to the Unit Agreement, and to perform all the obligations of a party to the Unit Agreement.

Dated the 19<sup>th</sup> day of December, 2022.

NARWHAL, LLC



By: Stéphane Labonté (Dec 19, 2022 15:25 MST)

Name: Stéphane Labonte

Title: Manager