

**COLVILLE RIVER UNIT**

**DENIAL OF THE FIFTH EXPANSION OF THE UNIT AREA  
WITH MODIFICATIONS UNDER WHICH APPROVAL WILL BE GRANTED**

Findings and Decision of the  
Commissioner of the State of Alaska  
Department of Natural Resources

February 17, 2017

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## **I. INTRODUCTION AND DECISION SUMMARY**

On March 31, 2016 the State of Alaska, Department of Natural Resources (DNR), Division of Oil and Gas (Division) received the application by ConocoPhillips Alaska, Inc. (Conoco) for the Fifth Expansion of the Colville River Unit (Application). The Application proposed expanding the unit to include leases previously committed to the Tofkat Unit. On April 5, 2016 the Division rejected the Application because Conoco held no working interest in the leases proposed for the expansion area and was not proposing to include the working interest owners of those leases in the unit.

On May 13, 2016 Conoco submitted lease assignment applications from Caracol Petroleum, LLC, TP North Slope Development, LLC, MEP Alaska LLC, AVCG, LLC, Ramshorn Investment, Inc. and Nabors Drilling Technologies USA, Inc. requesting the transfer to Conoco of 100% of the working interest in the leases previously proposed for the expansion area. By letter dated June 15, 2016 the Division issued a decision approving the assignments for the leases still in their primary term, but denying the assignments for those leases past their primary term.

On June 28, 2016 the Division received the Revised Application for the Fifth Expansion of the Colville River Unit (Revised Application) and Conoco's appeal of the portion of the June 15 decision which denied the assignments. The Revised Application proposed expanding the unit to include the same leases as were proposed in the first Application. By letter dated July 21, 2016 the Division rejected the Revised Application because Conoco still had no interest in these leases past their primary term and was not including the working interest owners in the Unit.

In a decision dated November 2, 2016, the Commissioner of DNR reversed the Division's June 15, 2016 decision and granted all of the assignments in the May 13, 2016 application to Conoco.

In a decision dated November 4, 2016 the Commissioner reversed the Division's July 21st, 2016 decision, accepted the Revised Application, and determined that DNR should process the application. After receipt of the application fee as required under 11 AAC 83.306 and 11 AAC 05.010(a)(10)(E), DNR began a review of the Revised Application on November 4, 2016.

The State of Alaska, Arctic Slope Regional Corporation (ASRC), and the United States Bureau of Land Management (BLM) jointly manage the CRU. The CRU contains State of Alaska oil and gas leases, ASRC oil and gas leases, jointly owned State of Alaska and ASRC oil and gas leases, and BLM oil and gas leases. The expansion area consists of jointly owned State of Alaska and ASRC oil and gas leases only.

“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(a). Conoco has submitted confidential geological, geophysical, and engineering data which demonstrate that the area approved for expansion includes all or part of an oil reservoir.

In parallel with DNR regulations, Article 12.1 of the Colville River Unit Agreement (CRUA) allows for expansion of the CRU to include any additional lands determined to overlie any reservoir, any part of which is within the Unit Area. Conoco has presented confidential geological, geophysical and engineering data to the Division that supports the determination that a reservoir within the unit boundaries extends into the expansion area. Therefore, the expansion meets the requirements of the CRUA.

To approve the expansion, however, the Commissioner also needs to find that the expansion of the CRU promotes conservation of all natural resources, promotes the prevention of economic and physical waste and provides for the protection of all parties of interest, including the State. AS 38.05.180(p); 11 AAC 83.303. After considering the materials Conoco submitted, I have concluded that certain modification are needed for me to make these findings. Accordingly, the expansion is denied as submitted. If Conoco accepts the modifications set forth in the terms and conditions of Section IV, the expansion will be approved with an effective date of July 1, 2016.

## **II. APPLICATION AND LEASE SUMMARY**

Conoco submitted the Revised Application under the provisions of 11 AAC 83.356 and Section 12.1 of the CRUA on June 28, 2016, and simultaneously paid the \$500.00 unit expansion application filing fee, in accordance with 11 AAC 83.306 and 11 AAC 05.010(a)(10)(E), respectively. This fee was returned when the Director rejected the Revised Application, but was resubmitted on November 4, 2016. The Application included: Exhibit A (Attachment 1), a list legally describing the proposed expanded unit area, its leases, and ownership interests; Exhibit B (Attachment 2), a map of the proposed expanded unit; Exhibit C, geological, geophysical, engineering, and well information directly supporting the application and; Exhibit D (Attachment 3), Planned exploration and development activities for the proposed expansion area. Conoco also submitted evidence of notice to proper parties by submitting the ballot agreement approving the fifth expansion signed by the CRU working interest owners. The ratified unit agreement and unit operating agreement were already on file with the Division.

DNR published a public notice in the *Alaska Dispatch News* and *Arctic Sounder* on November 17, 2016, under 11 AAC 83.311. Copies of the Application and the public notice were provided to interested parties. DNR provided public notice to the North Slope Borough, the City of Barrow, the City of Nuiqsut, the Kuukpik Corporation, ASRC, the Nuiqsut Postmaster, the Barrow Postmaster, and the radio station KBRW in Barrow, as well as the Alaska Department of Environmental Conservation, the Alaska Department of Fish and Game, the Alaska Oil and Gas Conservation Commissioners, and the ADF&G Division of Habitat. The public notice invited interested parties and members of the public to submit comments by December 19, 2016. No comments were received.

The proposed expansion includes an additional 9,146.60 acres. Attachments 1 and 2 contain the proposed expanded unit and a map of the proposed boundaries. The leases proposed for the expansion area are summarized below.

The expansion area was previously part of the CRU and known as the Titania Expansion Area. In a November 8, 2002 decision the Director approved the Second Expansion of the CRU which included the Titania Expansion Area as well as several other areas. As part of the 2002 decision a well was required to be drilled in the Titania Expansion Area and a payment made to the Division and ASRC. In a letter dated May 29, 2003 Conoco committed to drilling the first Titania well by June 1, 2004; however, the well was not drilled, and the Titania Expansion Area contracted from the unit shortly after and the leases expired.

The expansion area was subsequently offered at competitive lease sales and acquired by AVCG, LLC. In the October 28, 2011 Findings and Decision of the Director, Approval in Part of the Application to Form the Putu Unit, the expansion area was incorporated into the Tofkat Unit. Tofkat Unit Operator Brooks Range Petroleum Corporation (BRPC) failed to meet the terms of the unit agreement and the unit terminated effective March 31, 2016. As described above in the introduction, the working interest was then assigned to Conoco.

Tr.	ADL No./	Effective	Expiration		Royalty	Royalty	Mineral	Tract	WIO
No.	AK No.	Date	Date	Acres	(%)	Owners	Owns.%	Owner	(%)
185	390672	8/1/2005	7/31/2012	227.7	16.66667	State	20.95	Conoco	100.0
						ASRC	79.05		100.0
186	390675	8/1/2005	7/31/2012	606.4	16.66667	State	51.10	Conoco	100.0
						ASRC	48.90		100.0
187	391915	8/1/2005	7/31/2012	640.0	16.66667	State	50.52	Conoco	100.0
						ASRC	49.48		100.0
188	390674	8/1/2005	7/31/2012	640.0	16.66667	State	50.00	Conoco	100.0
						ASRC	50.00		100.0
189	391914	8/1/2005	7/31/2012	640.0	16.66667	State	78.22	Conoco	100.0
						ASRC	21.78		100.0
190	390676	8/1/2005	7/31/2012	640.0	16.66667	State	82.00	Conoco	100.0
						ASRC	18.00		100.0
191	391015	9/1/2006	8/31/2013	640.0	16.66667	State	58.57	Conoco	100.0
						ASRC	41.43		100.0
192	391016	9/1/2006	8/31/2013	363.0	16.66667	State	20.57	Conoco	100.0
						ASRC	79.43		100.0
193	390677	8/1/2005	7/31/2012	383.3	16.66667	State	34.87	Conoco	100.0
						ASRC	65.13		100.0
194	391536	7/1/2010	6/30/2017	5.53	16.66667	State	51.10	Conoco	100.0
						ASRC	48.90		100.0
195	390673	8/1/2005	7/31/2012	24.14	16.66667	State	5.55	Conoco	100.0
						ASRC	94.45		100.0
196	391535	7/1/2010	6/30/2017	615.8	16.66667	State	5.55	Conoco	100.0
						ASRC	94.45		100.0

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197	391922	7/1/2010	6/30/2017	231.3	16.66667	State		34.87	Conoco	100.0
						ASRC		65.13		100.0
198	391537	7/1/2010	6/30/2017	276.9	16.66667	State		20.57	Conoco	100.0
						ASRC		79.43		100.0
199	391923	7/1/2010	6/30/2017	409.5	16.66667	State		16.46	Conoco	100.0
						ASRC		83.54		100.0
200	391918	8/1/2005	7/31/2012	242.6	16.66667	State		16.46	Conoco	100.0
						ASRC		83.54		100.0
201	391917	8/1/2005	7/31/2012	640.0	16.66667	State		56.38	Conoco	100.0
						ASRC		43.62		100.0
202	391916	8/1/2005	7/31/2012	640.0	16.66667	State		73.39	Conoco	100.0
						ASRC		26.61		100.0
203	391919	8/1/2005	7/31/2012	640.0	16.66667	State		78.58	Conoco	100.0
						ASRC		21.42		100.0
204	390679	8/1/2005	7/31/2012	436.4	16.66667	State		46.12	Conoco	100.0
						ASRC		53.88		100.0
205	391538	7/1/2010	6/30/2017	203.6	16.66667	State		46.12	Conoco	100.0
						ASRC		53.88		100.0

### III. DISCUSSION OF DECISION CRITERIA

A unit may be expanded to conserve the natural resources of all or a part of an oil or gas pool, field, or like area when determined and certified to be necessary or advisable in the public interest (AS 38.05.180(p)). Conservation of the natural resources of all or part of an oil or gas pool, field, or like area means “maximizing the efficient recovery of oil and gas and minimizing the adverse impacts on the surface and other resources.” 11 AAC 83.395(1).

The DNR Commissioner (Commissioner) reviews applications related to units under 11 AAC 83.303 – 83.395.

The Commissioner will approve a proposed expanded unit upon a finding that it will (1) promote conservation of all natural resources, including all or part of an oil or gas pool, field, or like area; (2) promote the prevention of economic and physical waste; and (3) provide for the protection of all parties of interest including the state. 11 AAC 83.303(a).

In evaluating these three criteria, the Commissioner will consider (1) the environmental costs and benefits of unitized exploration or development; (2) the geological and engineering characteristics of the potential hydrocarbon accumulation or reservoir proposed for unitization; (3) prior exploration activities in the proposed unit area; (4) the applicant’s plans for exploration or development of the unit area; (5) the economic costs and benefits to the state; and (6) any other relevant factors, including measures to mitigate impacts identified above, the commissioner determines necessary or advisable to protect the public interest. 11 AAC 83.303(b).

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A discussion of the subsection (b) criteria, as they apply to the Application, is set out below, followed by a discussion of the subsection (a) criteria.

Article 12.1 of the CRUA describes the requirements for unit expansion: “After notice to the Working Interest Owners, and with the approval of the President and the Commissioner, (and the AO if any Federal Leases are directly implicated) the Unit Operator, at its own election may, or at the direction of the President, Commissioner (and the AO if any Federal Leases are directly implicated), shall, expand the Unit Area to include any additional lands determined to overlie any Reservoir, any part of which is within the Unit Area, or to include any additional lands regarded as reasonably necessary for the purposes of this Agreement. Any expansion shall not be effective until approved by the President and Commissioner (and the AO if any Federal Leases are directly implicated). The State, ASRC, and the United States will not unreasonably withhold any approval required by this Article.”

**A. Decision Criteria considered under 11 AAC 83.303(b)**

**1. Environmental Costs and Benefits**

The expansion area is habitat for various mammals, waterfowl, and fish. Area residents may use this area for subsistence hunting and fishing. Oil and gas activity in the proposed unit area may affect some wildlife habitat and some subsistence activity.

DNR also considers environmental issues during the lease sale process and the unit plan of operations approval process. Alaska statutes require DNR to give public notice and issue a written finding before disposal of the State’s oil and gas resources. AS 38.05.035(e); AS 38.05.945; 11 AAC 82.415. In the written best interest finding, the Commissioner may impose additional conditions or limitations beyond those imposed by law. AS 38.05.035(e). Leases in the expansion area include lease stipulations to mitigate the potential environmental impacts from oil and gas activity and DNR will evaluate compliance with those stipulations through the separate plan of operations review process. Conoco is operating under an approved plan of operations and has applied for a plan of operations for the expansion area.

Approval of the CRU expansion has no direct environmental impact. This decision is an administrative action and does not authorize any on-the-ground activity. The unit expansion does not entail any environmental costs in addition to those that may occur when permits to conduct lease-by-lease exploration or development are issued for the same acreage. To the contrary, expanding the unit may provide efficiencies to minimize environmental impact compared to a separate, lease-by-lease development of this acreage.

## **2. Geological and Engineering Characteristics and Exploration History**

### **Introduction**

The proposed fifth expansion acreage, which lies south of the existing CRU unit boundary, has a history of being included within units. In the November 8, 2002 Second Expansion of the Colville River Unit, Findings and Decision of the Director, Division of Oil and Gas, the Division included all of the proposed expansion acreage east of the Colville River into the CRU subject to work commitments. At that time, operator Phillips Alaska referred to the proposed acreage as the Titania expansion area. No well was drilled in the Titania expansion area. Pursuant to the terms and conditions of the Second Expansion the acreage was contracted out of the CRU in 2004, and the leases expired. The contracted acreage was offered in subsequent lease sales. AVCG won the acreage as high bidder over multiple years between 2004 and 2009.

In 2008, AVCG-affiliate Brooks Range Petroleum Corporation (BRPC) drilled three exploration wells (Tofkat #1, Tofkat #1A, and Tofkat #1B) in the eastern portion of the proposed expansion acreage. BRPC discovered hydrocarbons and then formed the Tofkat Unit in 2011. After the unit terminated for failing to meet the terms of the unit agreement in 2016, all the former Tofkat leases were assigned to CPAI, and are included in CPAI's proposed 5th expansion acreage.

### **Geological and Engineering Characteristics and Exploration History**

Three wells have been drilled in the proposed expansion acreage: Tofkat #1 and its sidetracks Tofkat #1A and Tofkat #1B. Tofkat #1 is a directional well that reached a total depth of 13,174' Measured Depth (MD) in the southeast quarter of Section 16, Township 10 North, Range 6 East, Umiat Meridian (Sec. 16, T10N, R6E, UM). Sidetrack Tofkat #1A reached a total depth of 11,297' approximately 0.7 miles to the southeast of the Tofkat #1 in the southeast quarter of Section 15, T10N, R6E, UM. Sidetrack Tofkat #1B reached a total depth of 15,575' MD approximately 0.8 miles to the northwest of Tofkat #1 in the southwest quarter of Section 9, T10N, R6E, UM. A comprehensive review of the drilling results of the Tofkat wells was included as part of the October 28, 2011 Findings and Decision of the Director, Approval in Part of the Application to Form the Putu Unit. This discussion will highlight prospective reservoir zones sand thicknesses encountered in the wellbores within the following geologic intervals (listed from shallower to deeper); Cretaceous Nanushuk Group, Cretaceous Torok Formation, lower Cretaceous Kuparuk C sandstone, and the Alpine sandstone within the Jurassic Kingak Formation within the proposed expansion acreage.

#### **Cretaceous Nanushuk and Torok Formations**

As mentioned in the October 28, 2011 Findings and Decision of the Director, Approval in Part of the Application to Form the Putu Unit, the three Tofkat wells (#1, #1A, and #1B) encountered two intervals of hydrocarbon bearing strata within the shelfal Nanushuk Formation. In the Tofkat #1 well, the Nanushuk intervals were penetrated between approximately 6,119' and 6,317' MD (-4,100' to -4,198' subsea). The Tofkat #1 well also encountered a hydrocarbon



bearing zone in the Albian-age Torok Formation turbidite interval between 10,995' and 11,190' MD (-6,547' to -6,648' subsea).

Tofkat #1 recovered oil samples from both the Nanushuk and Torok Formations via Modular Dynamic Tester (MDT) logging tool. Three fluid samples were taken from a Nanushuk sandstone at 6,168' MD. The MDT tool recovered oil of approximately 23 degree API gravity when corrected for oil-based mud contamination (35 degree API uncorrected). Two fluid samples were taken from a second Nanushuk sandstone at 6,294' MD. The MDT recovered oil corrected to approximately 14 degree API (35 degree API uncorrected). The sample from the Torok turbidites at 11,000' MD recovered 38 degree API gravity oil.

Drawdown mobility was also measured in the upper and lower Nanushuk intervals via MDT tool in the Tofkat #1. The MDT measurements from the upper Nanushuk, between 6,135' and 6,160' MD, indicate draw-down mobility in the range of 0.05 to 0.29 millidarcy/centipoise viscosity (md/cp), generally considered non-pay in conventional reservoir terms. The MDT draw-down mobility measured in the lower Nanushuk interval at 6,294' MD ranged from 2-7 md/cp, suggesting likely conventional pay depending on the expected fluid viscosity.

#### Kuparuk C sandstone

The Tofkat #1 well encountered approximately 8 feet True Vertical Thickness (TVT) of hydrocarbon bearing sandstone within the Kuparuk Formation between 11,932' -11,950' MD (-7027' and -7035' subsea). The upper 6 feet TVT of the interval penetrated by the well bore appears to contain secondary siderite cement. One fluid sample was taken from the lower portion of the Kuparuk C unit at 11,943' via MDT. The MDT sample contained 42 degree API gravity oil, similar to the oil gravity in the Nanuq Kuparuk Participating Area at CRU (40 to 41 degree API).

The two sidetracks were drilled from the Tofkat #1 wellbore in an attempt to delineate the extent of the Kuparuk C accumulation. Tofkat #1A well encountered approximately 4 feet TVT of non-reservoir Kuparuk C sandstone between 11,112' and 11,121' MD (-7,033' and -7,037' subsea). Tofkat #1B well encountered approximately 6 feet of non-reservoir Kuparuk Formation between 15,374' and 15,388' MD (-7,061' and -7,067' subsea).

#### Jurassic Alpine Potential

The west side of the proposed expansion area is along trend with the CRU Alpine production in the CD4 area. The southernmost row of production and injection wells in the CRU Jurassic Alpine C reservoir abuts against the northern boundary of proposed expansion acreage. Well logs indicate the Tofkat #1 well penetrated 6 feet TVT of Alpine C sandstone (12,779' to 12,790' MD (-7,454' to -7,460' subsea). As mentioned in the October 28, 2011 Findings and Decision of the Director, Approval in Part of the Application to Form the Putu Unit, the Alpine C penetrated by the Tofkat 1 well may be interpreted as a non-reservoir quality transgressive lag preserved atop the Upper Jurassic Unconformity surface. No cores, well tests, or MDT sampling was

attempted in this interval in Tofkat #1. The Tofkat #1A and #1B sidetracks were not drilled to a sufficient depth to penetrate and evaluate the Jurassic potential.

## **Conclusion**

The 5th expansion of the Colville River Unit proposed by CPAI is sufficiently supported by technical data submitted by the operator. Data submitted to DNR include maps, well log cross-sections through prospective reservoirs, seismic attribute displays, annotated seismic lines through prospective reservoirs, and an explanation of CPAI's proposed exploration drilling program.

Review of the geological, geophysical, and engineering data has allowed DNR to reasonably establish the potential for the Kuparuk, Alpine, and Brookian intervals in the proposed expansion acreage. Each of these prospective intervals currently produces oil in the adjacent CRU.

## **3. Plans of Development and Exploration**

The Division approved the 18th CRU Plan of Development (POD) effective April 13, 2016 for the period May 16, 2016 through May 15, 2017. The POD describes plans to continue drilling development wells in the Nanuq Kuparuk and Alpine participating areas.

The Revised Application included a Plan of Exploration/Plan of Development at Exhibit D describing plans to drill at least one exploration well by June 1, 2017 within the expansion area. The well will be drilled from an ice pad and tested if results are encouraging. Conoco plans to review the results of the well data in 2017 and 2018. If an additional appraisal well is needed Conoco may drill during the 2020 winter drilling season. Conoco states development may require an additional drilling pad and anticipates this new pad will require an Environmental Impact Statement from the US Army Corp of Engineers. Conoco estimates the Environmental Impact Statement and associated permits and approvals will take at least three years. Conoco further stated that its commitment to drill by June 1, 2017 was "contingent upon a decision extending the leases by the DNR and ASRC prior to August 1, 2016." It is unclear whether Conoco was referring to a decision on assignment of the leases or unit expansion. Regardless, subsequent actions by Conoco indicated that this August 1, 2016 date was not in fact a condition of its plans. In conversations with the Commissioner that occurred well after August 1, 2016, Conoco continued to state its intention to drill in the first half of 2017. Conoco also submitted a Plan of Operations application on October 3, 2016 to drill this well in 2017-2018. Thus, DNR understood that it was Conoco's intention to drill this well by June 1, 2017.

In discussions with the Commissioner, Conoco further represented that it would be able to drill this year and develop the expansion area as a whole more expeditiously than any other prospective operator because it has entered a surface use agreement with Kuukpik. The prior operator for this acreage, when it was the Tofkat Unit, cited its lack of an agreement with

Kuukpik as a central reason for its inability to explore or develop the unit before it automatically terminated. Like the Tofkat operator, Conoco will need to provide for full payment of damages to the surface owner before undertaking any operations. 11 AAC 83.346. Conoco's ability to do so is critical to the development of the expansion area. If the expansion area cannot be developed as part of the CRU, then including this acreage in the CRU would not serve the public interest. Conoco's representation that it already has an agreement with Kuukpik is thus a key consideration in determining whether expanding CRU is in the public interest. DNR has not seen Conoco's agreement with Kuukpik to evaluate whether the terms support expanding the unit.

On December 12, 2016, Conoco informed DNR in writing that it does not intend to drill the initial well until the 2017/2018 drilling season. Conoco stated that "[d]ue to the proximity of the project to the community of Nuiqsut, CPAI has determined that more time is needed to engage the community and educate residents about the project." This statement is at odds with Conoco's representations that it already has a surface use agreement and is thus better positioned than others to expeditiously develop this area.

In light of Conoco's inability or reluctance to proceed with the promised drilling this year, the Commissioner is highly concerned that including this acreage in CRU will indeed allow more expeditious development than if the acreage was offered for lease in a competitive sale. If CRU is ultimately expanded, the Commissioner will expect Conoco to fully enforce its agreement with Kuukpik. There is also a 1992 agreement between Kuukpik and ASRC under which Kuukpik agreed to allow oil and gas activities on these leases. ASRC or a third party beneficiary can seek to enforce this agreement. With multiple agreements in place allowing surface use, Commissioner will not be inclined to consider a need for community engagement as justification for further delays.

Aside from an initial well planned for 2017, Conoco's POE/POD for the expansion area does not set forth long-range proposed development activities with sufficient detail for the Commissioner to conclude that the expansion serves the State's and public interest. A POD with more specific commitments, as set forth in the Modifications section below, will support approval of the unit expansion. If Conoco accepts the Modifications, they will become part of Conoco's POE/POD for the expansion area. Failure to comply with these terms can put the entire unit in default. 11 AAC 83.374(a).

#### **4. The Economic Costs and Benefits to the State and Other Relevant Factors**

The expanded CRU may provide economic benefits to the State through royalty and tax payments on production and increased Trans Alaska Pipeline System throughput. Unitized development conducted under the CRU Agreement provides for development of all the unitized leases as a single lease, rather than development conducted on a lease-by-lease basis. Unitized development maximizes oil and gas recovery, promotes conservation, prevents waste, and protects all of the parties of interest.

In the Revised Application, page 2, bullet number five, Conoco claims the expansion of the CRU will expedite the development process. If this proves true it will be a benefit to the State; however, the benefit must be weighed against the loss of bonus bids the State might receive if the expansion area leases were allowed to expire and the area be offered in a new lease sale. Conoco's timeline included in Exhibit D of the Revised Application indicates production is not expected to be established until the fourth quarter of 2024, eight years from this decision. Because the State is losing value by foregoing a bonus bid, an expedited development is essential.

DNR must also consider the risk that including the expansion acreage in CRU will not result in expedited development. Exhibit D of the Revised Application indicates that portions of the expansion area can be reached from the existing CD4 drilling pad with Extended Reach Drilling from within the CRU. If this is true, this factor supports Conoco's claim that expansion of the CRU can expedite the development of the area. The existing CD4 pad and facilities will likely not need extensive new permitting, authorizations, or construction so that they can be used as a base for expansion area development. If the expansion area cannot be significantly developed from the CD4 pad and a new pad is needed to develop the majority of the expansion area resources, unitization provides little difference to expedited development as a new pad would need to be built in either case.

Exhibit D of the Revised Application describes the advantages to Conoco of sequential development of resources near the Alpine field. Conoco may find sequential development advantageous because it reduces cost, but the delay in resource development and the elimination of competition is a cost to the State. Because of temporal discounting, the delay in resource development reduces the value to the State of the eventual production. If the expansion area leases were allowed to expire and the area be offered in a new lease sale, another lessee might develop the expansion area more quickly than Conoco as it develops other resources near the Alpine field.

Conoco has represented to DNR that it entered an agreement with Armstrong Energy LLC, operator of the neighboring Pikka Unit, to exchange data about the area. If Conoco receives data about the expansion area, it could support expedited development of this area. But DNR has not seen the agreement between Conoco and Armstrong and thus is unable to determine whether it could facilitate expedited development of the expansion area without negatively impacting the development of other state resources.

As noted above in section II, Application and Lease Summary, the expansion area was previously part of the CRU. As in this application, Conoco had proposed expanding the CRU with the pledge to drill and evaluate the area. Conoco did not drill a well in the area when the unit was previously expanded to include it, which deprived the State of royalty it would have received from production at that time. Conoco's past failure to develop this acreage may not be indicative of its willingness and ability to develop it now, but it does demonstrate the ongoing costs to the State as the acreage has changed hands and moved in and out of units for years without development.

**B. Decision Criteria considered under 11 AAC 83.303(a)**

**1. Promote the Conservation of All Natural Resources**

A unit may be formed under AS 38.05.180(p) “[t]o conserve the natural resources of all or a part of an oil or gas pool, field, or like area.” Conservation of the natural resources of all or part of an oil or gas pool, field or like area means “maximizing the efficient recovery of oil and gas and minimizing the adverse impacts on the surface and other resources.” 11 AAC 83.395(9). The unitization of oil and gas reservoirs or accumulations and the formation and expansion of unit areas to develop hydrocarbon-bearing reservoirs or accumulations are well-accepted means of hydrocarbon conservation. Unitization, with development occurring under the terms of a unit agreement, can promote efficient evaluation and development of the State’s resources, and minimize impacts to the area’s cultural, biological, and environmental resources.

**2. The Prevention of Economic and Physical Waste**

Unitization, as opposed to activity on a lease-by-lease basis, may prevent economic and physical waste. Economic waste is often referred to as the drilling of wells in excess of the number necessary for the efficient recovery or delineation of the oil and gas in place. Physical waste, among other things, includes the inefficient, excessive, or improper use of, or unnecessary dissipation of, reservoir energy.

Unitization may also prevent economic and physical waste by eliminating redundant expenditures for a given level of production, or by avoiding loss of ultimate recovery with the adoption of a unified reservoir management plan. Annual approval of the CRU development activities, as described in the future plans of development, must also provide for the prevention of economic and physical waste. Using the CRU infrastructure and facilities would eliminate the need to construct stand-alone facilities.

Expanding the unit will do nothing to prevent economic and physical waste if the expansion area is not developed in concert with the rest of the unit. If leased through the competitive process, the working interest owners could combine this area into its own unit, thus preventing the economic and physical waste of lease-by-lease development. It is the potential for expedited development and development that utilizes existing facilities that supports expanding CRU.

**3. The Protection of All Parties of Interest, Including the State**

The people of Alaska have an interest in the development of the State’s oil and gas resources to maximize the economic and physical recovery of the resources. AS 38.05.180(a). Development of the expansion area under future annually approved plans of development will provide for continued review and approval of Conoco’s plans to develop the CRU in a manner which will maximize economic and physical recovery. Combining interests and operating under the terms of the CRUA and CRU Operating Agreement assures an equitable allocation of costs and revenues commensurate with the resources.

The CRU expansion will partially protect the economic interests of the WIOs, the State, and ASRC. The expansion promotes the State's economic interests because it may maximize hydrocarbon recovery, providing additional production-based revenue from increased production. Diligent exploration and development under a unified plan of development without the complications of competing leasehold interests promotes the State's interest. Operating under the CRUA provides for accurate reporting and record keeping, State approval of plans of exploration and development and operating procedures, royalty settlement, in-kind taking, and emergency storage of oil and gas, all of which will further the State's interest.

Conoco requests that the Revised Application acreage be subject to contraction from the CRU no sooner than June 1, 2025. Article 12.4 and 12.6 of the CRUA and 11 AAC 83.356(e) addresses the Commissioner's authority to contract the CRUA from time to time after 10 years have passed since first production. DNR cannot modify or contract away its regulatory discretion. *Exxon Corp. v. State*, 40 P.3d 786, 796 (Alaska 2001). Accordingly, Conoco's request is denied. Conoco will, however, get notice and an opportunity to be heard before the Commissioner exercises discretion to contract the unit. 11 AAC 83.356(e).

Conoco also states that its application is "contingent upon the State and ASRC releasing ConocoPhillips and its assigns from the obligations under that certain Corrected Dismantlement, Removal, and Restoration Agreement dated effective October 17, 2014." This agreement is between the State and TP North Slope Development LLC, MEP Alaska LLC, Caracol Petroleum LLC, Ramshorn Investments, Inc., AVCG LLC, Mustang Operations Center 1 LLC, and Brook Range Petroleum Corporation. The agreement creates a DR&R Trust Account that runs with the land, making funds available to the State or approved assignees of the leases to use for certain DR&R obligations. The fact that these funds may be available to assignees does not make those assignees parties to the agreement. Conoco is not a party to this agreement and thus there is no need to release Conoco from the agreement. The process for a party to seek release from the agreement in the event it reassigns the leases is set forth in Paragraph 2.2. A unit expansion application does not comport with that process.

As described in section III A 4 above, granting Conoco's Revised Request may result in economic costs to the State. The loss of bonus bids for the acreage, delay in development of other resources within and nearby the CRU, and the possibility Conoco may not develop the expansion area must be mitigated to protect the State's interest. This will be done by requiring the conditions set out in section IV below. If Conoco fails to meet these conditions any lease not in production or held by a participating area at the time of the failure will contract from the unit.

#### **IV. FINDINGS AND DECISION**

##### **A. The Conservation of All Natural Resources**

1. Expansion of the CRU will provide for continued development of the expansion area under the CRUA and will maximize the efficient recovery of oil and gas and minimize the adverse impacts on the surface and other resources, including hydrocarbons, gravel, sand, water, wetlands, and valuable habitat.
2. The unitized development and operation of the leases in this expansion will reduce the amount of land and fish and wildlife habitat that would otherwise be disrupted by individual lease development. This reduction in environmental impacts and preservation of subsistence access is in the public interest.
3. There is potential for environmental impacts associated with development. All unit development must proceed according to an approved plan of development. Additionally, before undertaking any specific operations, the Unit Operator must submit a unit plan of operations to the Division and other appropriate state and local agencies for review and approval. The lessees may not commence any drilling or development operations until all agencies have granted the required permits. DNR may condition its approval of a unit plan of operations and other permits on performance of mitigation measures in addition to those in the modified leases and the Agreement, if necessary or appropriate. Compliance with mitigation measures will minimize, reduce or completely avoid adverse environmental impacts.
4. Expedited development is important for expansion of the CRU to promote conservation of natural resources.

##### **B. The Prevention of Economic and Physical Waste**

1. Conoco submitted geological, geophysical and engineering data to DNR in support of the Application. DNR determined that the expanded CRU area encompasses all or part of one or more oil and gas reservoir(s).
2. The available geological, geophysical and engineering data justify including the proposed lands, as described in Section III, A.2. of this decision.
3. The production of hydrocarbons through the existing production and processing facilities reduces the environmental impact of the additional production. Using existing facilities will avoid unnecessary duplication of development efforts on and beneath the surface.
4. Expedited development is important for expansion of the CRU to prevent economic and physical waste.

**C. The Protection of All Parties in Interest, Including the State**

1. The unit expansion, as modified by the conditions stated below, protects all parties' interests including the State of Alaska and the people of Alaska who have an interest in the development of the State's oil and gas resources to maximize the economic and physical recovery of the resources.
2. By expanding the unit rather than certain leases in the expansion area expiring and being offered for competitive lease sale, the State loses the economic benefit of bonus bids.
3. Expanding the unit rather than leases expiring and being offered for competitive lease sale does not protect the public interest in competition.
4. Expedited development of the expansion area through unit expansion rather than new leases protects the State and public interest in development of natural resources. Sequential development of the expansion area along with Conoco's other projects protects Conoco's interests, but does not protect the State and public interest in expedited development.
5. The economic, geological, geophysical, and engineering data that Conoco provided reasonably justify the inclusion of the CRU expansion acreage under the terms of the applicable regulations governing formation, expansion, and operation of oil and gas units and participating areas. 11 AAC 83.301-83.395.
6. Conoco provided evidence of reasonable efforts to obtain joinder of any proper party to the Agreement.
7. Conoco holds sufficient interest in the unit area to give reasonably effective control of operations.
8. The unit expansion, as modified by the conditions stated below, meets the requirements of 11 AAC 83.303.
9. DNR complied with the public notice requirements of 11 AAC 83.311.
10. The unit expansion will not diminish access to public and navigable waters beyond those limitations (if any) imposed by law or already contained in the oil and gas leases covered by this decision.
11. The CRU Agreement and DNR regulations provide for additional expansions and contractions of the unit area in the future, as warranted by data obtained by exploration or otherwise. The CRU Agreement and regulations thereby protect the public interest, the rights of the parties, and the correlative rights of adjacent landowners. Conoco's request for DNR to agree to waive its regulatory discretion to contract the expansion area until



June 1, 2025 is denied.

12. The approved expanded unit, if the below modifications are accepted, will be effective July 1, 2016.

**D. Modifications Necessary for the Commissioner to Approve the Expansion**

In order to meet the provisions of 11 AAC 83.303, the Commissioner requires the following modifications to the Revised Application. These modifications will become part of Conoco's POE/POD for the expansion area. If Conoco fails to meet these conditions any lease not in production or held by a participating area at the time of the failure will contract from the unit.

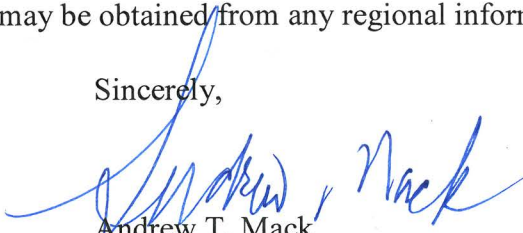
1. By March 1, 2017, Conoco must provide a \$2.5 million performance bond to benefit DNR securing its commitment to drill a well in the Expansion Area to the Nanushuk formation, log the Nanushuk formation, and if appropriate test the well by May 31, 2017 (2017 Well).
2. By March 1, 2017, Conoco must provide a \$10 million performance bond to benefit DNR securing its commitment to establish production from the Expansion Area by May 31, 2022.
3. By March 1, 2017 Conoco must provide a \$1.5 million bonus bid replacement payment to DNR.
4. If the 2017 Well described in term number one does not reach the depth of and log the Nanushuk formation, or is a dry hole, Conoco must drill a second well in the Expansion Area to the Nanushuk formation, log the Nanushuk formation, and if appropriate test the well by May 31, 2018 (2018 Well).
5. When either the 2017 or 2018 Well reaches total depth as defined by the Alaska Oil and Gas Conservation Commission drilling permit, DNR will return the \$2.5 million bond.
6. After the first successful evaluation of the Nanushuk formation is complete, Conoco will on May 31 of each following year, submit evidence of substantive progress in submitting and advancing all permits required to complete pads, roads, pipelines, and all surface infrastructure necessary to bring the Expansion Area into sustained production.
7. By May 31, 2022 Conoco must have commenced sustained production from the Expansion Area. DNR will return the \$10 million bond upon commencement of sustained production.

Conoco will accept these modifications in writing within ten days. Upon acceptance, the Commissioner will issue an approval of the modified Revised Application.

For the reasons discussed in this Findings and Decision, I hereby deny the CRU fifth expansion as set forth in the Revised Application, but will approve the expansion with the above modifications.

An eligible person affected by this decision may request reconsideration of it in accordance with 11 AAC 02. Any request for reconsideration must be received within 20 calendar days after the date of "issuance" of this decision, as defined in 11 AAC 02.040(c) and (d), and may be mailed or delivered to Andrew T. Mack, Commissioner, Department of Natural Resources, 550 W 7th Avenue, Suite 1400, Anchorage, Alaska 99501; faxed to 1-907-269-8918; or sent by electronic mail to [dnr.appeals@alaska.gov](mailto:dnr.appeals@alaska.gov). This decision takes effect immediately. An eligible person must first request reconsideration of this decision in accordance with 11 AAC 02 before appealing this decision to Superior Court. If the Commissioner does not act on a request for reconsideration within 30 days after issuance of this decision, the request for reconsideration is considered denied and this decision becomes a final administrative order and decision on the 31st day after issuance for the purposes of an appeal to Superior Court. A copy of 11 AAC 02 may be obtained from any regional information office of the Department of Natural Resources.

Sincerely,



Andrew T. Mack  
Commissioner

cc: Teresa Imm, Arctic Slope Regional Corporation  
Wayne Svejnoha, Bureau of Land Management

**V. Attachments**

1. Colville River Unit Proposed Exhibit A: Description of Lands within the Expanded Unit
2. Colville River Unit Proposed Exhibit B: Map of Expanded Unit Area
3. Colville River Unit Exhibit D: Plan of Exploration and Development for the Expansion Area

**1. Colville River Unit Proposed Exhibit A**

Description of Lands within the Proposed Expanded Unit

Exhibit A  
Attached to and made a part  
of the Colville River Unit Agreement

Tr. No.	ADL No./ AK No.	Legal Description	Acres	Depth Restrictions	Original			Mineral Owns.	Net Royalty*	ORRI Owners	Net ORRI (%)	Tract Owners	Working Interest (%)
					Royalty (%)	NPSL (%)	Royalty Owners						
1	364472	T13N,R5E-U.M.		None	12.5	30	State	100	12.5	CPAI	1.200000	CPAI	78.000000
	931986	Sec. 9, Protracted, All	640.00									APC	22.000000
		Sec. 10, Protracted, All	640.00										
		Sec. 15, Protracted, All	640.00										
		Sec. 16, Protracted, All	640.00										
		Sec. 21, Protracted, All	640.00										
		Sec. 22, Protracted, All	640.00										
		Sec. 28, Protracted, All	640.00										
	TOTAL		4,480.00										
2	364470	T13N,R5E-U.M.		None	12.5	30	State	100	12.5	Enea Tekna Inv.	0.666600	CPAI	78.000000
	931974	Sec. 17, Protracted, All	640.00							W.G. Stroecker	0.666600	APC	22.000000
		Sec. 18, Protracted, All	631.00							D.K. Nerland	0.023400		100.000000
		Sec. 19, Protracted, All	633.00							R.E. Wagner	0.643400		
		Sec. 20, Protracted, All	640.00								2.000000		
		Sec. 30, Protracted, All	636.00										
		TOTAL		3,180.00									

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					Royalty (%)	NPSL (%)	Royalty Owners						
3	364471	T13N,R5E-U.M.		None	12.5	30	State	100	12.5	Enea Tekna Inv.	0.666600	CPAI	78.000000
	931976	Sec. 26, Protracted, All	640.00							W.G. Stroecker	0.666600	APC	22.000000
		Sec. 27, Protracted, All	640.00							D.K. Nerland	0.023400		100.000000
		Sec. 29, Protracted, All	640.00							R. E. Wagner	0.643400		
		Sec. 31, Protracted, All	639.00								2.000000		
		Sec. 32, Protracted, All	640.00										
		Sec. 33, Protracted, All	640.00										
		Sec. 34, Protracted, All	640.00										
		Sec. 35, Protracted, All	640.00										
		Sec. 36, Protracted, All	640.00										
		TOTAL	5,759.00										
4	372105	T12N,R5E-U.M.		Above 10,350'	12.5		State	100	12.5	Petro-Hunt	0.440190	CPAI	78.000000
	932002	Sec. 5	640.00							XH, LLC	0.345030	APC	22.000000
		Sec. 6	577.00							RW Res	0.226800		100.000000
		TOTAL	1,217.00							CPAI	1.701900		
											2.713920		
				Below 10,350'	12.5		State	100	12.5			CPAI	66.790810
												APC	16.342170
												Petro-Hunt	7.336490
												XH, LLC	5.750530
												RW Res	3.780000
													100.000000

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					Royalty (%)	NPSL (%)	Royalty Owners							
5	372104 932000	T12N,R5E-U.M.		Above 10,350'	12.5		State	100	12.5	Petro-Hunt	0.440190	CPAI	78.000000	
		Sec. 3, All	640.00							XH, LLC	0.345030	APC	22.000000	
		Sec. 4, All	640.00							RW Res	0.226800		100.000000	
		TOTAL	1,280.00							CPAI	1.701900			
											2.713920			
					Below 10,350'	12.5		State	100	12.5			CPAI	66.790810
												APC	16.342170	
												Petro-Hunt	7.336490	
												XH, LLC	5.750530	
												RW Res	3.780000	
												100.000000		
6	372103 931998	T12N,R5E-U.M.		Above 10,350'	12.5		State	100	12.5	CPAI*	1.200000	CPAI	78.000000	
		Sec. 1, Unsurveyed, All	640.00							CPAI**	1.200000	APC	22.000000	
		Sec. 2, Unsurveyed, All	640.00							Petro-Hunt	0.257200		100.000000	
		TOTAL	1,280.00							RW Res	0.226800			
											XH, LLC	0.201600		
											CPAI	0.874400		
											3.960000			
					Below 10,350'	12.5		State	100	12.5			CPAI	71.471623
												APC	17.101710	
												Petro-Hunt	4.286667	
											RW Res	3.780000		
											XH, LLC	3.360000		
												100.000000		

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Tr. No.	ADL No./ AK No.	Legal Description	Acres	Depth Restrictions	Original			Net Royalty*	ORRI Owners	Net ORRI (%)	Tract Owners	Working Interest (%)	
					Royalty (%)	NPSL (%)	Royalty Owners						
7	372103	T12N, R5E-U.M.		Above 10,350'	12.5		State	100	12.5	CPAI*	1.200000	CPAI	78.000000
	931998	Sec. 11, All	640.00							CPAI**	1.200000	APC	22.000000
		Sec. 12, All	640.00							Petro-Hunt	0.257200		100.000000
		TOTAL	1,280.00							RW Res	0.226800		
										XH, LLC	0.201600		
										Chevron	1.703000		
										CPAI	0.874400		
										<u>5.663000</u>			
8				Below 10,350'	12.5		State	100	12.5	Chevron	1.703000	CPAI	71.471623
												APC	17.101710
												Petro-Hunt	4.286667
												RW Res	3.780000
												XH, LLC	3.360000
													100.000000
8	372104	T12N,R5E-U.M.		Above 10,350'	12.5		State	100	12.5	Petro-Hunt	0.440190	CPAI	78.000000
	932000	Sec. 9, All	640.00							XH, LLC	0.345030	APC	22.000000
		Sec. 10, All	640.00							RW Res	0.226800		100.000000
		TOTAL	1,280.00							Chevron	1.703000		
										CPAI	1.701900		
											<u>4.416920</u>		
					Below 10,350'	12.5		State	100	12.5	Chevron	1.703000	CPAI
												APC	16.342170
												Petro-Hunt	7.336490
												XH, LLC	5.750530
												RW Res	3.780000
													100.000000

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Tr. No.	ADL No./ AK No.	Legal Description	Acres	Depth Restrictions	Original			Net Royalty*	ORRI Owners	Net ORRI (%)	Tract Owners	Working Interest (%)	
					Royalty (%)	NPSL (%)	Royalty Owners						
9	372105	T12N, R5E-U.M.		Above 10,350'	12.5		State	100	12.5	Petro-Hunt	0.440190	CPAI	78.000000
	932002	Sec. 7, All	580.00							XH, LLC	0.345030	APC	22.000000
		Sec. 8, All	640.00							RW Res	0.226800		100.000000
		TOTAL	1,220.00							Chevron	1.703000		
										CPAI	1.701900		
										4.416920			
				Below 10,350'	12.5		State	100	12.5	Chevron	1.703000	CPAI	66.790810
												APC	16.342170
												Petro-Hunt	7.336490
												XH, LLC	5.750530
												RW Res	3.780000
												100.000000	
10	25538	T12N,R5E-U.M.		None	12.5		State	100	12.5	Chevron	1.703000	CPAI	78.000000
	932100	Sec. 17, All	640.00									APC	22.000000
		Sec. 18, All	583.00										100.000000
		Sec. 19, All	585.00										
		Sec. 20, All	640.00										
	TOTAL	2,448.00											



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					Royalty (%)	NPSL (%)	Royalty Owners						
11	372107	T12N,R5E-U.M.		Above 8.500'	12.5		State	100	12.5	Petro-Hunt	0.440190	CPAI	78.000000
	932006	Sec. 21, SE1/4SE1/4, W1/2SE1/4, SW1/4	280.00							XH, LLC	0.345030	APC	22.000000
		Sec. 22, SW1/4SE1/4, S1/2SW1/4	120.00							RW Res	0.226800		<u>100.000000</u>
		TOTAL	400.00							Chevron	1.703000		
										CPAI	0.880380		
											<u>3.595400</u>		
				8,500'-10,350'	12.5		State	100	12.5	Petro-Hunt	0.440190	CPAI	78.000000
										XH, LLC	0.345030	APC	22.000000
										RW Res	0.226800		<u>100.000000</u>
										Chevron	1.703000		
										CPAI	1.701900		
											<u>4.416920</u>		
				Below 10,350'	12.5		State	100	12.5	Chevron	1.703000	CPAI	66.790810
												APC	16.342170
												Petro-Hunt	7.336490
												XH, LLC	5.750530
												RW Res	3.780000
													<u>100.000000</u>

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Tr. No.	ADL No./ AK No.	Legal Description	Acres	Depth Restrictions	Original			Net Royalty*	ORRI Owners	Net ORRI (%)	Tract Owners	Working Interest (%)	
					Royalty (%)	NPSL (%)	Royalty Owners						
11A	391577	T12N,R5E-U.M.		Above 8.500'	12.5		State	100	12.5	Petro-Hunt	0.440190	CPAI	78.000000
	341402	Sec. 15, All	640.00							XH, LLC	0.345030	APC	22.000000
		Sec. 16, All	640.00							RW Res	0.226800		100.000000
		TOTAL	1,280.00							Chevron	1.703000		
										CPAI	0.880380		
											3.595400		
				8,500'-10,350'	12.5		State	100	12.5	Petro-Hunt	0.440190	CPAI	78.000000
										XH, LLC	0.345030	APC	22.000000
										RW Res	0.226800		100.000000
										Chevron	1.703000		
										CPAI	1.701900		
											4.416920		
				Below 10,350'	12.5		State	100	12.5	Chevron	1.703000	CPAI	66.790810
												APC	16.342170
												Petro-Hunt	7.336490
												XH, LLC	5.750530
												RW Res	3.780000
													100.000000

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Tr. No.	ADL No./ AK No.	Legal Description	Acres	Depth Restrictions	Original			Net Royalty*	ORRI Owners	Net ORRI (%)	Tract Owners	Working Interest (%)		
					Royalty (%)	NPSL (%)	Royalty Owners							
12	372106 932004	T12N,R5E-U.M.		Above 8,500'	12.5		State	100	12.5	CPAI*	1.515000	CPAI	78.000000	
		Sec. 13, All	640.00							Petro-Hunt	0.324590	APC	22.000000	
		Sec. 14, All	640.00							XH, LLC	0.254430		100.000000	
		Sec. 23, All	640.00							RW Res	0.226800			
		TOTAL	1,920.00							Chevron	1.703000			
										CPAI	0.649180			
											6.188000			
					8,500'-10,350'	12.5		State	100	12.5	CPAI*	1.515000	CPAI	78.000000
											Petro-Hunt	0.324590	APC	22.000000
											XH, LLC	0.254430		100.000000
										RW Res	0.226800			
										Chevron	1.703000			
										CPAI	1.255180			
											5.279000			
				Below 10,350'	12.5		State	100	12.5	Chevron	1.703000	CPAI	68.928524	
												APC	17.641213	
												Petro-Hunt	5.409868	
												XH, LLC	4.240395	
												RW Res	3.780000	
													100.000000	

**There is no Tract 13**

14	25530	T12N,R4E-U.M.		None	12.5		State	51.97	6.49625	Chevron	1.703000	CPAI	78.000000
	932098	Sec. 24, All	640.00				ASRC	48.03	5.00375	Kuukpik Corp.	1.000000	APC	22.000000
		TOTAL	640.00						11.5		2.703000		100.000000

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Tr. No.	ADL No./ AK No.	Legal Description	Acres	Depth Restrictions	Original			Net Royalty*	ORRI Owners	Net ORRI (%)	Tract Owners	Working Interest (%)	
					Royalty (%)	NPSL (%)	Royalty Owners						
15	25529	T12N,R4E-U.M.		None	12.5		State	50.05	6.25625	Chevron	1.703000	CPAI	78.000000
	932096	Sec. 23, All	640.00				ASRC	49.95	5.24375	Kuukpik Corp.	1.000000	APC	22.000000
		TOTAL	640.00						11.5		2.703000		100.000000
16	25529	T12N,R4E-U.M.		None	12.5		State	47.37	5.92125	Chevron	1.703000	CPAI	78.000000
	932096	Sec. 22 excl. NPRA	346.19				ASRC	52.63	5.57875	Kuukpik Corp.	1.000000	APC	22.000000
		TOTAL	346.19						11.5		2.703000		100.000000
17	387211	T12N,R4E-U.M.		None	16.66667		State	47.37	7.895002	Kuukpik Corp.	1.666667	CPAI	78.000000
	932197	Sec. 22, All, within NPRA, excl. USS 9502 Lot 2	257.86				ASRC	52.63	7.105001			APC	22.000000
		TOTAL	257.86						15.000003				100.000000
18-A	387211	T12N,R4E-U.M.		None	16.66667		State	26.23	4.371668	Kuukpik Corp.	1.666667	CPAI	78.000000
	932197	Sec. 21, All, within NPRA	229.92				ASRC	73.77	10.628335			APC	22.000000
		TOTAL	229.92						15.000003				100.000000
18-B	387211	T12N,R4E-U.M.		None	16.66667		State	26.23	4.37167	Kuukpik Corp.	1.000000	CPAI	78.000000
	932197	Sec. 21, tide & submerged lands seaward of the line of mean high water as shown on the official tract map for Oil and Gas Lease Sale 43	90.00				ASRC	73.77	11.295			APC	22.000000
		TOTAL	90.00						15.66667				100.000000
19	380095	T12N,R4E-U.M.		None	16.667		State	26.23	4.37175	Kuukpik Corp.	1.000000	CPAI	78.000000
	932056	Sec. 21, All, excl. tide & submerged lands seaward of the line of mean high water as shown on the official tract map for Oil and Gas Lease Sale 43 and NPRA	320.08				ASRC	73.77	11.29525			APC	22.000000
		TOTAL	320.08						15.667				100.000000

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Tr. No.	ADL No./ AK No.	Legal Description	Acres	Depth Restrictions	Original			Net Royalty*	ORRI Owners	Net ORRI (%)	Tract Owners	Working Interest (%)	
					Royalty (%)	NPSL (%)	Royalty Owners						
20	380095	T12N,R4E-U.M.		None	16.667		State	87.45	14.57529	Kuukpik Corp.	1.000000	CPAI	78.000000
	932056	Sec. 20, All, excl. tide & submerged lands seaward of the line of mean high water as shown on the official tract map for Oil and Gas Lease Sale 43	178.00				ASRC	12.55	1.09171			APC	22.000000
		TOTAL	178.00						<u>15.667</u>				<u>100.000000</u>
21	387211	T12N,R4E-U.M.		None	16.66667		State	87.45	14.575	Kuukpik Corp.	1.000000	CPAI	78.000000
	932197	Sec. 20, All, tide & submerged lands seaward of the line of mean high water as shown on the official tract map for Oil and Gas Lease Sale 43	462.00				ASRC	12.55	1.09167			APC	22.000000
		TOTAL	462.00						<u>15.66667</u>				<u>100.000000</u>
22	ASRC NPRA	T12N,R3E-U.M.		None	12.5		ASRC	100	11.25	Kuukpik Corp.	1.250000	CPAI	78.000000
	1	Sec. 25	640.00									AEP	22.000000
	932126	Sec. 26	640.00										<u>100.000000</u>
		Sec. 27	640.00										
		Sec. 34	640.00										
		Sec. 35	640.00										
		Sec. 36	640.00										
		TOTAL	3,840.00										

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Tr. No.	ADL No./ AK No.	Legal Description	Acres	Depth Restrictions	Original			Net Royalty*	ORRI Owners	Net ORRI (%)	Tract Owners	Working Interest (%)	
					Royalty (%)	NPSL (%)	Royalty Owners						
23	ASRC NPRA	T12N,R4E-U.M.		None	16.667		ASRC	100	15	Kuukpik Corp.	1.666700	CPAI	78.000000
	2	Sec. 28	565.98									AEP	22.000000
	932128	Sec. 29	402.79										100.000000
		Sec. 30	321.28										
		Sec. 31	541.00										
		Sec. 32	534.95										
		Sec. 33	640.00										
			T11N,R4E-U.M.										
			Sec. 4	640.00									
			Sec. 5	640.00									
			Sec. 7	593.24									
			Sec. 8	640.00									
			Sec. 9	640.00									
		Sec. 21	640.00										
		TOTAL	6,799.24										
24	387212	T12N,R4E-U.M.		None	Sliding		State	8	1.333334	Kuukpik Corp.	**1.666667	CPAI	78.000000
	932199	Sec. 27, All, within NPRA	550.29		Scale		ASRC	92	**13.666669			APC	22.000000
		TOTAL	550.29		**16.66667				15.000003				100.000000
25	25530	T12N,R4E-U.M.		None	12.5		State	8	1.000000	Chevron	1.703000	CPAI	78.000000
	932098	Sec. 27, All, excl. NPRA	89.71				ASRC	92	10.500000	Kuukpik Corp.	1.000000	APC	22.000000
		TOTAL	89.71						11.500000		2.703000		100.000000
26	387212	T12N,R4E-U.M.		None	Sliding		State	60.18	10.030002	Kuukpik Corp.	**1.666667	CPAI	78.000000
	932199	Sec. 26, All, within NPRA	17.36		Scale		ASRC	39.82	**4.970001			APC	22.000000
		TOTAL	17.36		**16.66667				15.000003				100.000000

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Tr. No.	ADL No./ AK No.	Legal Description	Acres	Depth Restrictions	Original			Net Royalty*	ORRI Owners	Net ORRI (%)	Tract Owners	Working Interest (%)	
					Royalty (%)	NPSL (%)	Royalty Owners						
27	25530	T12N,R4E-U.M.		None	12.5		State	60.18	7.522500	Chevron	1.703000	CPAI	78.000000
	932098	Sec. 26, All, excl. NPRA	622.64				ASRC	39.82	3.977500	Kuukpik Corp.	1.000000	APC	22.000000
		TOTAL	622.64						<u>11.500000</u>		<u>2.703000</u>		<u>100.000000</u>
28	25530	T12N,R4E-U.M.		None	12.5		State	55.79	6.973750	Chevron	1.703000	CPAI	78.000000
	932098	Sec. 25, All	640.00				ASRC	44.21	4.526250	Kuukpik Corp.	1.000000	APC	22.000000
		TOTAL	640.00						<u>11.500000</u>		<u>2.703000</u>		<u>100.000000</u>
29	25558	T12N-R5E,U.M.		None	12.5		State	100	12.5	Chevron	1.703000	CPAI	78.000000
	932102	Sec. 29, All	640.00									APC	22.000000
		Sec. 30, All	588.00										<u>100.000000</u>
		Sec. 31, All	591.00										
		Sec. 32, All	640.00										
		TOTAL	2,459.00										
30	25557	T12N-R5E,U.M.		None	12.5		State	100	12.5	Chevron	1.703000	CPAI	78.000000
	932106	Sec. 27, All	640.00									APC	22.000000
		Sec. 28, All	640.00										<u>100.000000</u>
		Sec. 33, All	640.00										
		Sec. 34, All	640.00										
		TOTAL	2,560.00										

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Tr. No.	ADL No./ AK No.	Legal Description	Acres	Depth Restrictions	Original			Net Royalty*	ORRI Owners	Net ORRI (%)	Tract Owners	Working Interest (%)			
					Royalty (%)	NPSL (%)	Royalty Owners								
31	372108 932008	T12N,R5E-U.M.	360.00	Above 8,500'	12.5		State	100	12.5	CPAI*	1.515000	CPAI	78.000000		
		Sec. 26, NW1/4NW1/4, S1/2 NW1/4, SW1/4, W1/2SE1/4, TOTAL		0.324590							APC	22.000000			
												0.254430		100.000000	
												0.226800			
												1.703000			
												0.649180			
												4.673000			
						8,500'-10,350'	12.5		State	100	12.5	CPAI*	1.515000	CPAI	78.000000
												Petro-Hunt	0.324590	APC	22.000000
												XH, LLC	0.254430		100.000000
										RW Res	0.226800				
										Chevron	1.703000				
										CPAI	1.255180				
										5.279000					
				Below 10,350'	12.5		State	100	12.5	Chevron	1.703000	CPAI	68.928524		
												APC	17.641213		
												Petro-Hunt	5.409868		
												XH, LLC	4.240395		
												RW Res	3.780000		
												100.000000			

**There is no Tract 32**



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Tr. No.	ADL No./ AK No.	Legal Description	Acres	Depth Restrictions	Original		Mineral Owns.	Net Royalty*	ORRI Owners	Net ORRI (%)	Tract Owners	Working Interest (%)
					Royalty (%)	NPSL (%)						
33	391579	T12N,R5E-U.M.		Above 7,130'	16.667		State	58.42	9.736860	CPAI	CPAI	78.000000
	341413	Sec. 36, SW1/4SW1/4	40.00				ASRC	41.58	5.930140	Chevron	APC	22.000000
		TOTAL	40.00						<u>15.667000</u>	Kuukpik Corp.	1.000000	<u>100.000000</u>
										<u>3.448500</u>		
				Below 7,130'	16.667		State	58.42	9.736860	CPAI	CPAI	77.700000
							ASRC	41.58	5.930140	Chevron	APC	22.000000
									<u>15.667000</u>	Kuukpik Corp.	1.000000	<u>0.300000</u>
										<u>3.448500</u>	Petro-Hunt	<u>100.000000</u>
34	391580	T12N,R5E-U.M.		Above 10,350'	12.5		State	100	12.5	CPAI*	CPAI	78.000000
	341403	Sec. 35, All	640.00							Petro-Hunt	APC	22.000000
		TOTAL	640.00							XH, LLC		<u>100.000000</u>
										RW Res		0.226800
										Chevron		1.703000
										CPAI		1.255180
										<u>5.279000</u>		
				Below 10,350'	12.5		State	100	12.5	Chevron	CPAI	68.928524
											APC	17.641213
											Petro-Hunt	5.409868
											XH, LLC	4.240395
											RW Res	3.780000
												<u>100.000000</u>
35	380096	T12N,R4E-U.M.		None	16.667		State	50.72	8.453500	Chevron	CPAI	78.000000
	932058	Sec. 36, All	640.00				ASRC	49.28	7.213500	Kuukpik Corp.	APC	22.000000
		TOTAL	640.00						<u>15.667000</u>		<u>2.703000</u>	<u>100.000000</u>

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Tr. No.	ADL No./ AK No.	Legal Description	Acres	Depth Restrictions	Original			Net Royalty*	ORRI Owners	Net ORRI (%)	Tract Owners	Working Interest (%)	
					Royalty (%)	NPSL (%)	Royalty Owners						
36	25530	T12N,R4E-U.M.		None	12.5		State	59.24	7.405000	Chevron	1.703000	CPAI	78.000000
	932058	Sec. 35, All, excl. NPRA	596.62				ASRC	40.76	4.095000	Kuukpik Corp.	1.000000	APC	22.000000
		TOTAL	596.62						11.500000		2.703000		100.000000
37	387212	T12N,R4E-U.M.		None	Sliding		State	59.24	9.873335	Kuukpik Corp.	**1.666667	CPAI	78.000000
	932199	Sec. 35, All, within NPRA	43.38		Scale		ASRC	40.76	**5.126668			APC	22.000000
		TOTAL	43.38		**16.66667				15.000003				100.000000
38	387212	T12N,R4E-U.M.		None	Sliding		State	0.18	0.03	Kuukpik Corp.	**1.666667	CPAI	78.000000
	932199	Sec. 34, All, within NPRA	640.00		Scale		ASRC	99.82	**14.970003			APC	22.000000
		TOTAL	640.00		**16.66667				15.000003				100.000000
39	387207	T11N,R4E-U.M.		None	Sliding		State	10.25	1.708334	Kuukpik Corp.	**1.666667	CPAI	78.000000
	932191	Sec. 3, All, within NPRA	588.85		Scale		ASRC	89.75	**13.291669			APC	22.000000
		TOTAL	588.85		**16.66667				15.000003				100.000000
40	380075	T11N-R4E- U.M.		None	16.667		State	10.25	1.708370	Kuukpik Corp.	1.000000	CPAI	78.000000
	932034	Sec. 3, All, excl. NPRA	51.15				ASRC	89.75	13.958630			APC	22.000000
		TOTAL	51.15						15.667000				100.000000
<b><u>There is no Tract 41</u></b>													
42	380075	T11N-R4E, U.M.		None	16.667		State	57.25	9.541860	Kuukpik Corp.	1.000000	CPAI	78.000000
	932034	Sec. 2, All	640.00				ASRC	42.75	6.125140			APC	22.000000
		TOTAL	640.00						15.667000				100.000000
43	380075	T11N-R4E,U.M.		None	16.667		State	53.51	8.918510	Chevron	1.703000	CPAI	78.000000
	932034	Sec. 1, All	640.00				ASRC	46.49	6.748490	Kuukpik Corp.	1.000000	APC	22.000000
		TOTAL	640.00						15.667000		2.703000		100.000000

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Tr. No.	ADL No./ AK No.	Legal Description	Acres	Depth Restrictions	Original			Net Royalty*	ORRI Owners	Net ORRI (%)	Tract Owners	Working Interest (%)	
					Royalty (%)	NPSL (%)	Royalty Owners						
44	25559	T11N,R5E-U.M.		None	12.5		State	100	12.5	Chevron	1.703000	CPAI	78.000000
	932104	Sec. 5, All	640.00									APC	22.000000
		Sec. 6, All	593.00										
		Sec. 7, All	596.00										
		Sec. 8, All	640.00										
		TOTAL		2,469.00									
45	372095	T11N,R5E-U.M.		Above 10,350'	12.5		State	100	12.5	CPAI*	1.515000	CPAI	78.000000
	931992	Sec. 3, All	640.00							Petro-Hunt	0.324590	APC	22.000000
		Sec. 4, All	640.00							XH, LLC	0.254430		100.000000
		Sec. 9, All	640.00							RW Res	0.226800		
		Sec. 10, All	640.00							Chevron	1.703000		
		TOTAL		2,560.00						CPAI	1.255180		
											5.279000		
				Below 10,350'	12.5		State	100	12.5	Chevron	1.703000	CPAI	68.928524
												APC	17.641213
												Petro-Hunt	5.409868
												XH, LLC	4.240395
												RW Res	3.780000
46	25560	T11N,R5E-U.M.		None	12.5		State	100	12.5	Chevron	1.703000	CPAI	78.000000
	932108	Sec. 2, All	640.00									APC	22.000000
		TOTAL		640.00									100.000000

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Tr. No.	ADL No./ AK No.	Legal Description	Acres	Depth Restrictions	Original			Net Royalty*	ORRI Owners	Net ORRI (%)	Tract Owners	Working Interest (%)	
					Royalty (%)	NPSL (%)	Royalty Owners						
47	391581	T11N,R5E-U.M.		None	12.5		State	63.69	7.961250	Chevron	1.703000	CPAI	78.000000
	341400	Sec. 1, W1/2W1/2	160.00				ASRC	36.31	3.538750	Kuukpik Corp.	1.000000	APC	22.000000
	TOTAL		160.00						11.500000		2.703000		100.000000
<b><u>There is no Tract 48</u></b>													
49	25560	T11N,R5E-U.M.		None	12.5		State	57.68	7.210000	Chevron	1.703000	CPAI	78.000000
	932108	Sec. 11, All	640.00				ASRC	42.32	4.290000	Kuukpik Corp.	1.000000	APC	22.000000
	TOTAL		640.00						11.500000		2.703000		100.000000
50	380075	T11N-R4E, U.M.		None	16.667		State	76.87	12.811920	Chevron	1.703000	CPAI	78.000000
	932034	Sec. 12, All	640.00				ASRC	23.13	2.855080	Kuukpik Corp.	1.000000	APC	22.000000
	TOTAL		640.00						15.667000		2.703000		100.000000
51	380075	T11N-R4E, U.M.		None	16.667		State	70.59	11.765240	Kuukpik Corp.	1.000000	CPAI	78.000000
	932034	Sec. 11, All, excl. NPRA	594.02				ASRC	29.41	3.901760			APC	22.000000
	TOTAL		594.02						15.667000				100.000000
52	387207	T11N,R4E-U.M.		None	Sliding		State	70.59	11.765002	Kuukpik Corp.	**1.666667	CPAI	78.000000
	932191	Sec. 11, All, within NPRA	45.98		Scale		ASRC	29.41	**3.235001			APC	22.000000
	TOTAL		45.98		**16.66667				15.000003				100.000000
53	380075	T11N-R4E, U.M.		None	16.667		State	2.39	0.398340	Kuukpik Corp.	1.000000	CPAI	78.000000
	932034	Sec. 10, All, excl. NPRA	5.83				ASRC	97.61	15.268660			APC	22.000000
	TOTAL		5.83						15.667000				100.000000
54	387207	T11N-R4E-U.M.		None	Sliding		State	2.39	0.398333	Kuukpik Corp.	**1.666667	CPAI	78.000000
	932191	Sec. 10, All, within NPRA	634.17		Scale		ASRC	97.61	**14.601670			APC	22.000000
	TOTAL		634.17		**16.66667				15.000003				100.000000

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					Royalty (%)	NPSL (%)	Royalty Owners						
55	387208	T11N-R4E-U.M.		None	Sliding		State	0.34	0.056667	Kuukpik Corp.	**1.666667	CPAI	78.000000
	932193	Sec. 16, All, within NPRA	630.47		Scale		ASRC	99.66	**14.943336			APC	22.000000
		TOTAL	630.47		**16.66667				15.000003				100.000000
56	380075	T11N-R4E, U.M.		None	16.667		State	0.34	0.05667	Kuukpik Corp.	1.000000	CPAI	78.000000
	932034	Sec. 16, All, excl. NPRA	9.53				ASRC	99.66	15.61033			APC	22.000000
		TOTAL	9.53						15.667				100.000000
57	387208	T11N-R4E-U.M.		None	Sliding		State	39.8	6.633335	Kuukpik Corp.	**1.666667	CPAI	78.000000
	932193	Sec. 15, All, within NPRA	103.94		Scale		ASRC	60.2	**8.366668			APC	22.000000
		TOTAL	103.94		**16.66667				15.000003				100.000000
58	380075	T11N-R4E, U.M.		None	16.667		State	39.8	6.633470	Kuukpik Corp.	1.000000	CPAI	78.000000
	932034	Sec. 15, All, excl. NPRA	536.06				ASRC	60.2	9.033530			APC	22.000000
		TOTAL	536.06						15.667000				100.000000
59	380075	T11N-R4E, U.M.		None	16.667		State	53.63	8.938510	Kuukpik Corp.	1.000000	CPAI	78.000000
	932034	Sec. 14, All	640.00				ASRC	46.37	6.728490			APC	22.000000
		TOTAL	640.00						15.667000				100.000000
60	380075	T11N-R4E, U.M.		None	16.667		State	67.55	11.258560	Kuukpik Corp.	1.000000	CPAI	78.000000
	932034	Sec. 13, All	640.00				ASRC	32.45	4.408440			APC	22.000000
		TOTAL	640.00						15.667000				100.000000
61	372097	T11N,R5E-U.M.		Above 10,350'	12.5		State	100.00	12.50000	CPAI*	1.515000	CPAI	78.000000
	931996	Sec. 17, All	640.00							Petro-Hunt	0.324590	APC	22.000000
		Sec. 18, All	599.00							XH, LLC	0.254430		100.000000
		TOTAL	1,239.00							RW Res	0.226800		
										Chevron	1.703000		
									CPAI	1.255180			
											5.279000		

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Tr. No.	ADL No./ AK No.	Legal Description	Acres	Depth Restrictions	Original			Net Royalty*	ORRI Owners	Net ORRI (%)	Tract Owners	Working Interest (%)
					Royalty (%)	NPSL (%)	Royalty Owners					
61	372097			Below 10,350'	12.5		State	100.00	12.500000	Chevron	CPAI	68.928524
	931996										APC	17.641213
	(Cont.)										Petro-Hunt	5.409868
											XH, LLC	4.240395
											RW Res	3.780000
<u>100.000000</u>												
62	372096	T11N, R5E-U.M.		Above 10,350'	12.5		State	100	12.50000	CPAI*	CPAI	78.000000
	931994	Sec. 16, All	640.00							Petro-Hunt	APC	22.000000
		TOTAL	640.00							XH, LLC		<u>100.000000</u>
										RW Res		0.226800
										Chevron		1.703000
										CPAI		1.255180
<u>5.279000</u>												
				Below 10,350'	12.5		State	100	12.50000	Chevron	CPAI	68.928524
											APC	17.641213
											Petro-Hunt	5.409868
											XH, LLC	4.240395
											RW Res	3.780000
<u>100.000000</u>												
63	384210	T11N, R5E, U.M.		None	16.667		State	50.01	8.335170	Chevron	CPAI	78.000000
	932078	Sec. 15, W1/2, NE1/4, N1/2SE1/4,					ASRC	49.99	7.331830	CPAI	APC	22.000000
		SW1/4SE1/4	600.00						<u>15.667000</u>	Kuukpik Corp.		1.000000
		TOTAL	600.00									<u>4.031100</u>

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Tr. No.	ADL No./ AK No.	Legal Description	Acres	Depth Restrictions	Original			Net Royalty*	ORRI Owners	Net ORRI (%)	Tract Owners	Working Interest (%)	
					Royalty (%)	NPSL (%)	Royalty Owners						
64	391583	T11N,R5E,U.M.		None	16.667		State	10.465210	Chevron	1.703000	CPAI	78.000000	
	341411	Sec. 14, NW1/4NW1/4	40.00				ASRC	5.201790	CPAI	1.328100	APC	22.000000	
	TOTAL		40.00					15.667000	Kuukpik Corp.	1.000000		100.000000	
										4.031100			
<b><u>There are no Tracts 65–67</u></b>													
68	380079	T11N-R5E,U.M.		None	16.667		State	9.543520	Chevron	1.703000	CPAI	78.000000	
	932040	Sec. 22, NW1/4, NW1/4SW1/4	200.00				ASRC	6.123480	Kuukpik Corp.	1.000000	APC	22.000000	
	TOTAL		200.00					15.667000		2.703000		100.000000	
69	384211	T11N,R5E-U.M.		None	16.667		State	8.333500	CPAI	1.328100	CPAI	78.000000	
	932080	Sec. 21, All	640.00				ASRC	7.333500	Kuukpik Corp.	1.000000	APC	22.000000	
	TOTAL		640.00					15.667000		2.328100		100.000000	
70	384211	T11N,R5E-U.M.		Above 7,631'	16.667		State	9.298520	CPAI	1.328100	CPAI	78.000000	
	932080	Sec. 20, All	640.00				ASRC	6.368480	Kuukpik Corp.	1.000000	APC	22.000000	
	TOTAL		640.00					15.667000		2.328100		100.000000	
					Below 7,631'	16.667		State	9.298520	CPAI	1.328100	CPAI	77.620000
							ASRC	6.368480	Kuukpik Corp.	1.000000	APC	22.000000	
										15.667000	2.328100	Petro-Hunt	0.380000
												100.000000	
71	384211	T11N,R5E-U.M.		Above 7,631'	16.667		State	8.813510	CPAI	1.328100	CPAI	78.000000	
	932080	Sec. 19, All	601.00				ASRC	6.853490	Kuukpik Corp.	1.000000	APC	22.000000	
	TOTAL		601.00					15.667000		2.328100		100.000000	

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Tr. No.	ADL No./ AK No.	Legal Description	Acres	Depth Restrictions	Original			Net Royalty*	ORRI Owners	Net ORRI (%)	Tract Owners	Working Interest (%)	
					Royalty (%)	NPSL (%)	Royalty Owners						
71	384211			Below 7,631'	16.667		State	52.88	8.813510	CPAI	1.328100	CPAI	77.620000
	932080						ASRC	47.12	6.853490	Kuukpik Corp.	1.000000	APC	22.000000
	(Cont.)								<u>15.667000</u>		<u>2.328100</u>	Petro-Hunt	0.380000
													<u>100.000000</u>
72	380077	T11N,R4E-U.M.		None	16.667		State	60.51	10.085200	Kuukpik Corp.	1.000000	CPAI	78.000000
	932036	Sec. 24, All	640.00				ASRC	39.49	5.581800			APC	22.000000
		TOTAL	640.00						<u>15.667000</u>				<u>100.000000</u>
73	380077	T11N,R4E-U.M.		None	16.667		State	50.67	8.445170	Kuukpik Corp.	1.000000	CPAI	78.000000
	932036	Sec. 23, All	640.00				ASRC	49.33	7.221830			APC	22.000000
		TOTAL	640.00						<u>15.667000</u>				<u>100.000000</u>
74	380077	T11N,R4E-U.M.		None	16.667		State	21.35	3.558400	Kuukpik Corp.	1.000000	CPAI	78.000000
	932036	Sec. 22, All, excl. NPRA	228.74				ASRC	78.65	12.108600			APC	22.000000
		TOTAL	228.74						<u>15.667000</u>				<u>100.000000</u>
75	387208	T11N,R4E-U.M.		None	Sliding		State	21.35	3.558334	Kuukpik Corp.	**1.666667	CPAI	78.000000
	932193	Sec. 22, All, within NPRA	411.26		Scale		ASRC	78.65	**11.441669			APC	22.000000
		TOTAL	411.26		**16.66667				<u>15.000003</u>				<u>100.000000</u>
76	387209	T11N,R4E-U.M.		None	Sliding		State	2.6	0.433333	Kuukpik Corp.	**1.666667	CPAI	78.000000
	932195	Sec. 27, All, within NPRA	614.70		Scale		ASRC	97.4	**14.566670			APC	22.000000
		TOTAL	614.70		**16.66667				<u>15.000003</u>				<u>100.000000</u>
77	380077	T11N,R4E-U.M.		None	16.667		State	2.6	0.433340	Kuukpik Corp.	1.000000	CPAI	78.000000
	932036	Sec. 27, All, excl. NPRA	25.30				ASRC	97.4	15.233660			APC	22.000000
		TOTAL	25.30						<u>15.667000</u>				<u>100.000000</u>



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					Royalty (%)	NPSL (%)	Royalty Owners						
78	387209	T11N,R4E-U.M.		None	Sliding		State	48.75	8.125002	Kuukpik Corp.	**1.666667	CPAI	78.000000
	932195	Sec. 26, All, within NPRA	25.23		Scale		ASRC	51.25	**6.875001			APC	22.000000
		TOTAL	25.23		**16.66667				<u>15.000003</u>				<u>100.000000</u>
79	380077	T11N,R4E-U.M.		None	16.667		State	48.75	8.125160	Kuukpik Corp.	1.000000	CPAI	78.000000
	932036	Sec. 26, All, excl. NPRA	614.77				ASRC	51.25	7.541840			APC	22.000000
		TOTAL	614.77						<u>15.667000</u>				<u>100.000000</u>
80	384209	T11N-R4E,U.M.		None	16.667		State	63.41	10.568540	CPAI	1.328100	CPAI	78.000000
	932076	Sec. 25, All	640.00				ASRC	36.59	5.098460	Kuukpik Corp.	1.000000	APC	22.000000
		TOTAL	640.00						<u>15.667000</u>		<u>2.328100</u>		<u>100.000000</u>
81	384211	T11N,R5E-U.M.		None	16.667		State	50.17	8.361830	CPAI	1.328100	CPAI	78.000000
	932080	Sec. 30, All	604.00				ASRC	49.83	7.305170	Kuukpik Corp.	1.000000	APC	22.000000
		TOTAL	604.00						<u>15.667000</u>		<u>2.328100</u>		<u>100.000000</u>
82	380082	T11N-R5E,U.M.		None	16.667		State	50.86	8.476840	Kuukpik Corp.	1.000000	CPAI	78.000000
	932046	Sec. 29, All	640.00				ASRC	49.14	7.190160			APC	22.000000
		TOTAL	640.00						<u>15.667000</u>				<u>100.000000</u>
83	384215	T13N,R4E-U.M.		None	16.667		State	57.35	9.558525	CPAI	1.328100	Petro-Hunt	0.380000
	932084	Sec. 36, Unsurveyed, All excl. tide & submerged lands seaward of the line of mean high water and channel closing line as shown on the official tract map for Oil and Gas Lease Sale 43	597.00				ASRC	42.65	6.108476	Kuukpik Corp.	1.000000	CPAI	77.620000
		TOTAL	597.00						<u>15.667000</u>		<u>2.328100</u>	APC	<u>22.000000</u> <u>100.000000</u>

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Tr. No.	ADL No./ AK No.	Legal Description	Acres	Depth Restrictions	Original			Net Royalty*	ORRI Owners	Net ORRI (%)	Tract Owners	Working Interest (%)	
					Royalty (%)	NPSL (%)	Royalty Owners						
84	380092	T12N-R4E, U.M.		None	16.667		State	55.36	9.226851	Kuukpik Corp.	1.000000	CPAI	78.000000
	932052	Sec. 1, Unsurveyed, All	640.00				ASRC	44.64	6.440149			APC	22.000000
		TOTAL	640.00						<u>15.667000</u>				<u>100.000000</u>
85	380092	T12N-R4E, U.M.		None	16.667		State	54.62	9.103515	Kuukpik Corp.	1.000000	CPAI	78.000000
	932052	Sec. 2, Unsurveyed, All excl. tide & submerged lands seaward of the line of mean high water as shown on the official tract map for Oil and Gas Lease Sale 43	583.00				ASRC	45.38	6.563485			APC	22.000000
		TOTAL	583.00						<u>15.667000</u>				<u>100.000000</u>
86	388525	T12N-R4E, U.M.		None	16.66667		State	54.62	9.103335	Kuukpik Corp.	1.000000	CPAI	78.000000
	932306	Sec. 2, Unsurveyed, All within the bed of the unnamed channel for the Colville River as shown on the official tract map for State Oil and Gas Lease Sale 75, dated August 26, 1992	57.00				ASRC	45.38	6.563335			APC	22.000000
		TOTAL	57.00						<u>15.666670</u>				<u>100.000000</u>
87	380092	T12N-R4E, U.M.		None	16.667		State	73.42	12.236911	Kuukpik Corp.	1.000000	CPAI	78.000000
	932052	Sec. 3, Unsurveyed, E1/2, E1/2W1/2, excl. tide & submerged lands seaward of the line of mean high water as shown on the official tract map for Oil and Gas Lease Sale 43	293.00				ASRC	26.58	3.430089			APC	22.000000
		TOTAL	293.00						<u>15.667000</u>				<u>100.000000</u>

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Tr. No.	ADL No./ AK No.	Legal Description	Acres	Depth Restrictions	Original			Net Royalty*	ORRI Owners	Net ORRI (%)	Tract Owners	Working Interest (%)	
					Royalty (%)	NPSL (%)	Royalty Owners						
88	388525	T12N-R4E, U.M.		None	16.66667		State	73.42	12.236669	Kuukpik Corp.	1.000000	CPAI	78.000000
	932306	Sec. 3, Unsurveyed, All within the beds of the Nechelik Channel and the bed of the unnamed channel of the Colville River as shown on the official tract map for Oil and Gas Lease Sale 75, dated August 26, 1992	327.00				ASRC	26.58	3.430001			APC	22.000000
		TOTAL	327.00						15.666670				100.000000
89	25526	T12N-R4E,U.M.		None	12.5		State	70.39	8.798750	Chevron	1.703000	CPAI	78.000000
	932094	Sec. 10, Unsurveyed, All, east of the highest high water mark on the left bank of the Nechelik Channel of the Colville River	375.36				ASRC	29.61	2.701250	Kuukpik Corp.	1.000000	APC	22.000000
		TOTAL	375.36						11.500000		2.703000		100.000000
90	25526	T12N-R4E,U.M.		None	12.5		State	52.87	6.608750	Chevron	1.703000	CPAI	78.000000
	932094	Sec. 11, Unsurveyed, All	640.00				ASRC	47.13	4.891250	Kuukpik Corp.	1.000000	APC	22.000000
		TOTAL	640.00						11.500000		2.703000		100.000000
91	25526	T12N-R4E,U.M.		None	12.5		State	53.32	6.665000	Chevron	1.703000	CPAI	78.000000
	932094	Sec. 12, Unsurveyed, All	640.00				ASRC	46.68	4.835000	Kuukpik Corp.	1.000000	APC	22.000000
		TOTAL	640.00						11.500000		2.703000		100.000000
92	25526	T12N-R4E,U.M.		None	12.5		State	55.09	6.88625	Chevron	1.703000	CPAI	78.000000
	932094	Sec. 13, Unsurveyed, All	640.00				ASRC	44.91	4.61375	Kuukpik Corp.	1.000000	APC	22.000000
		TOTAL	640.00						11.500000		2.703000		100.000000

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					Royalty (%)	NPSL (%)	Royalty Owners						
93	388901	T12N,R4E-U.M.		None	12.5		State	64.45	8.05625	Chevron	1.703000	CPAI	78.000000
	932349	Sec. 14, Unsurveyed, All	640.00				ASRC	35.55	3.44375	Kuukpik Corp.	1.000000	APC	22.000000
		TOTAL	640.00						<u>11.50000</u>		<u>2.703000</u>		<u>100.000000</u>
94	388901	T12N,R4E-U.M.		None	12.5		State	58.34	7.29250	Chevron	1.703000	CPAI	78.000000
	932349	Sec. 15, Unsurveyed, All, east of the highest high water mark on the left bank of the Nechelik Channel of the Colville River	398.55				ASRC	41.66	4.20750	Kuukpik Corp.	1.000000	APC	22.000000
		TOTAL	398.55						<u>11.50000</u>		<u>2.703000</u>		<u>100.000000</u>
95	388904	T12N,R4E-U.M.		None	16.667		State	58.34	9.72353	Kuukpik Corp.	1.000000	CPAI	78.000000
	932355	Sec. 15, Unsurveyed, All, West of highest high water mark on the left bank of the Nechelik Channel of the Colville River, excluding U.S Survey 9502 Lots 1 and 2 and the NPR-A	73.46				ASRC	41.66	5.94347			APC	22.000000
		TOTAL	73.46						<u>15.66700</u>				<u>100.000000</u>
96	388906	T12N,R4E-U.M.		None	16.66667		State	58.34	9.72334	Kuukpik Corp.	1.666667	CPAI	78.000000
	932359	Sec. 15, Unsurveyed, All, within the NPR-A, excluding U.S. Survey 9502 Lots 1 and 2	7.66				ASRC	41.66	5.27667			APC	22.000000
		TOTAL	7.66						<u>15.00000</u>				<u>100.000000</u>

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					Royalty (%)	NPSL (%)	Royalty Owners						
97	388906	T12N,R4E-U.M.		None	16.66667		State	46.21	7.70167	Kuukpik Corp.	1.666667	CPAI	78.000000
	932359	Sec. 16, Unsurveyed all within the NPR-A, excl. U.S. Survey 9502 Lot 1	17.08				ASRC	53.79	7.29834			APC	22.000000
		TOTAL	17.08						15.00000				100.000000
98	388904	T12N,R4E-U.M.		None	16.667		State	46.21	7.70182	Kuukpik Corp.	1.000000	CPAI	78.000000
	932355	Sec. 16, Unsurveyed, All excluding U.S. Survey 9502 Lot 1 and the NPR-A	579.27				ASRC	53.79	7.96518			APC	22.000000
		TOTAL	579.27						15.66700				100.000000
<b><u>There are no Tracts 99–100</u></b>													
101	380093	T12N,R4E-U.M.		None	16.667		State	51.53	8.58851	Kuukpik Corp.	1.000000	CPAI	78.000000
	932054	Sec. 9, Unsurveyed, All	640.00				ASRC	48.47	7.07850			APC	22.000000
		TOTAL	640.00						15.66700				100.000000
102	380093	T12N,R4E-U.M.		None	16.667		State	70.39	11.731901	Kuukpik Corp.	1.000000	CPAI	78.000000
	932054	Sec. 10, Unsurveyed, All West of the highest high water mark on the left bank of the Nechelik Channel of the Colville River	264.64				ASRC	29.61	3.935099			APC	22.000000
		TOTAL	264.64						15.667000				100.000000

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Tr. No.	ADL No./ AK No.	Legal Description	Acres	Depth Restrictions	Original		Mineral Owns.	Net Royalty*	ORRI Owners	Net ORRI (%)	Tract Owners	Working Interest (%)
					Royalty (%)	NPSL (%)						
103	380093	T12N,R4E-U.M.		None	16.667		73.42	12.236911	Kuukpik Corp.	1.000000	CPAI	78.000000
	932054	Sec. 3, Unsurveyed, W1/2W1/2, excl. tide and submerged lands seaward of the line of mean high water as shown on the official tract map for O&G Lease Sale 43	20.00				26.58	3.430089	ASRC		APC	22.000000
		TOTAL	20.00					15.667				100.000000
104	380093	T12N,R4E-U.M.		None	16.667		57.69	9.615192	Kuukpik Corp.	1.000000	CPAI	78.000000
	932054	Sec. 4, Unsurveyed, All, excl. tide and submerged lands seaward of the line of mean high water as shown on the official tract map for O&G Lease Sale 43	502.00				42.31	6.051808	ASRC		APC	22.000000
		TOTAL	502.00					15.667				100.000000
105	389726	T12N,R4E-U.M.		None	16.66667		57.69	9.615002	Kuukpik Corp.	1.000000	CPAI	78.000000
	932684	Sec. 4, Unsurveyed, All within the bed of the Nechelik Channel of the Colville River as shown on the official Tract Map for the State O&G Lease Sale 75, dated August 26, 1992	138.00				42.31	6.051668	ASRC		APC	22.000000
		TOTAL	138.00					15.66667				100.000000

**There is no Tract 106**

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					Royalty (%)	NPSL (%)	Royalty Owners						
107	389725	T13N,R4E-U.M.		None	16.667		State	76.96	12.826923	CPAI	1.328100	CPAI	77.620000
	932682	Sec. 33, Unsurveyed, All, excluding tide and submerged lands seaward of the line of mean high water as shown on the official tract map for O&G Lease Sale 43	278.00				ASRC	23.04	2.840077	Kuukpik Corp.	1.000000	APC	22.000000
		TOTAL	278.00						15.667000		2.328100	Petro-Hunt	0.380000
													100.000000
108	388529	T13N,R4E-U.M.		None	16.66667		State	76.96	12.826669	Kuukpik Corp.	1.000000	CPAI	78.000000
	932310	Sec. 33, Unsurveyed, All tide and submerged lands seaward of the line of mean high water and all uplands within the bed of the Nechelik Channel of the Colville River, both as shown on the official tract map for State O&G Lease Sale 75A dated June 17, 1993	362.00				ASRC	23.04	2.840001			APC	22.000000
		TOTAL	362.00						15.66667				100.000000
109	388528	T13N,R4E-U.M.		None	16.66667		State	67.65	11.275023	Kuukpik Corp.	1.000000	CPAI	78.000000
	932308	Sec. 34, Unsurveyed, All tide and submerged lands seaward of the line of mean high water and the channel closing line, and all uplands within the bed of the unnamed channel of the Colville River, both as shown on the official tract map for State O&G Lease Sale 75A dated June 17, 1993	420.00				ASRC	32.35	4.391677			APC	22.000000
		TOTAL	420.00						15.6667				100.000000

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					Royalty (%)	NPSL (%)	Royalty Owners						
110	389725	T13N,R4E-U.M.		None	16.667		State	67.65	11.275226	CPAI	1.328100	CPAI	77.620000
	932682	Sec. 34, Unsurveyed, All, excluding tide and submerged lands seaward of the line of mean high water as shown on the official tract map for O&G Lease Sale 43	220.00				ASRC	32.35	4.391775	Kuukpik Corp.	1.000000	APC	22.000000
									15.667000		2.328100	Petro-Hunt	0.380000
		TOTAL		220.00									
111	389725	T13N,R4E-U.M.		None	16.667		State	60.52	10.086868	CPAI	1.328100	CPAI	77.620000
	932682	Sec. 35, Unsurveyed, All, excluding tide and submerged lands seaward of the line of mean high water and channel closing line as shown on the official tract map for O&G Lease Sale 43	555.00				ASRC	39.48	5.580132	Kuukpik Corp.	1.000000	APC	22.000000
									15.667		2.328100	Petro-Hunt	0.380000
		TOTAL		555.00									
112	388527	T13N,R4E-U.M.		None	16.66667		State	60.52	10.086669	A. James III	8.333330	CPAI	78.000000
	932623	Sec. 35, Unsurveyed, All tide and submerged lands seaward of the line of mean high water and the channel closing line as shown on the official tract map for O&G Lease Sale 75A dated June 17, 1993	85.00				ASRC	39.48	5.580001	Revocable Trust Kuukpik Corp.	1.000000	APC	22.000000
									15.66667		9.333330		100.000000
		TOTAL		85.00									



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Tr. No.	ADL No./ AK No.	Legal Description	Acres	Depth Restrictions	Original			Net Royalty*	ORRI Owners	Net ORRI (%)	Tract Owners	Working Interest (%)		
					Royalty (%)	NPSL (%)	Royalty Owners							
113	388527	T13N,R4E-U.M.		None	16.66667		State	57.35	9.558335	A. James III	8.333330	CPAI	78.000000	
	932623	Sec. 36, Unsurveyed, All tide and submerged lands seaward of the line of mean high water and the channel closing line as shown on the official tract map for O&G Lease Sale 75A dated June 17, 1993	43.00				ASRC	42.65	6.108335	Revocable Trust		APC	22.000000	
									15.66667					100.000000
			TOTAL	43.00							Kuukpik Corp.	1.000000		
114	389725	T13N,R4E-U.M.		None	16.667		State	83.68	13.946946	CPAI	1.328100	CPAI	77.620000	
	932682	Sec. 25, Unsurveyed, All, excluding tide and submerged lands seaward of the line of mean high water as shown on the official tract map for O&G Lease Sale 43	196.00				ASRC	16.32	1.720054	Kuukpik Corp.	1.000000	APC	22.000000	
									15.667			Petro-Hunt	0.380000	
			TOTAL	196.00										100.000000
115	388527	T13N,R4E-U.M.		None	16.66667		State	83.68	13.946669	A. James III	8.333330	CPAI	78.000000	
	932623	Sec. 25, Unsurveyed, All tide and submerged lands seaward of the line of mean high water as shown on the official tract map for O&G Lease Sale 75A dated June 17, 1993	444.00				ASRC	16.32	1.720001	Revocable Trust		APC	22.000000	
									15.66667				100.000000	
			TOTAL	444.00							Kuukpik Corp.	1.000000		9.333330

**There are no Tracts 116–118**

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Tr. No.	ADL No./ AK No.	Legal Description	Acres	Depth Restrictions	Original			Net Royalty*	ORRI Owners	Net ORRI (%)	Tract Owners	Working Interest (%)	
					Royalty (%)	NPSL (%)	Royalty Owners						
119	380081	T11N,R5E-U.M.		None	16.667		State	50.06	8.3435	Kuukpik Corp.	1.000000	CPAI	78.000000
	932044	Sec. 28, Unsurveyed, All	640.00				ASRC	49.94	7.3235			APC	22.000000
		TOTAL	640.00						15.667				100.000000
120	ASRC NPRA 2	T11N,R4E-U.M.		None	16.667		ASRC	100.00	15.0003	Kuukpik Corp.	1.666700	CPAI	78.000000
	932128	Sec. 28, All	640.00									APC	22.000000
		Sec. 33, All	640.00										100.000000
		Sec. 34, All	640.00										
		TOTAL	1,920.00										
121	388905	T11N,R4E-U.M.		None	Sliding		State	30.51	5.085001	Kuukpik Corp.	**1.666667	CPAI	78.000000
	932357	Sec. 35, Unsurveyed, All, within NPR-A	286.63		Scale		ASRC	69.49	**9.915002			APC	22.000000
		TOTAL	286.63		**16.66667				15.000003				100.000000
122	388902	T11N,R4E-U.M.		None	16.667		State	30.51	5.085102	Kuukpik Corp.	1.000000	CPAI	78.000000
	932351	Sec. 35, Unsurveyed, All, excluding the NPR-A	353.37				ASRC	69.49	10.581898			APC	22.000000
		TOTAL	353.37						15.667				100.000000
123	388902	T11N,R4E-U.M.		None	16.667		State	60.97	10.16187	Kuukpik Corp.	1.000000	CPAI	78.000000
	932351	Sec. 36, Unsurveyed, All	640.00				ASRC	39.03	5.50513			APC	22.000000
		TOTAL	640.00						15.667				100.000000
124	388903	T11N,R5E-U.M.		None	16.667		State	50.00	8.3335	Kuukpik Corp.	1.000000	CPAI	78.000000
	932353	Sec. 31, Unsurveyed, All	607.00				ASRC	50.00	7.3335			APC	22.000000
		Sec. 32, Unsurveyed, All	640.00						15.667				100.000000
		TOTAL	1,247.00										
125	391587	T11N,R5E-U.M.		None	16.667		State	50.20	8.366834	Kuukpik Corp.	1.000000	CPAI	78.000000
	341409	Sec. 33, Unsurveyed, All	640.00				ASRC	49.80	7.300166			APC	22.000000
		TOTAL	640.00						15.667				

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Tr. No.	ADL No./ AK No.	Legal Description	Acres	Depth Restrictions	Original			Net Royalty*	ORRI Owners	Net ORRI (%)	Tract Owners	Working Interest (%)	
					Royalty (%)	NPSL (%)	Royalty Owners						
<b><u>There are no Tracts 126–130</u></b>													
131	380044	T10N,R5E-U.M.		None	16.667		State	50.00	8.3335	Kuukpik Corp.	1.000000	CPAI	78.000000
	932015	Sec. 6, Unsurveyed, All	609.00				ASRC	50.00	7.3335	CPAI	1.290000	APC	22.000000
		TOTAL	609.00						15.667		1.290000		100.000000
131A	391590	T10N,R5E-U.M.		None	16.667		State	50.00	8.3335	Kuukpik Corp.	1.000000	CPAI	78.000000
	341405	Sec. 5, N1/2NW1/4, SW1/4NW1/4, NW/14SW1/4	160.00				ASRC	50.00	7.3335	CPAI	1.290000	APC	22.000000
		TOTAL	160.00						15.667		1.290000		100.000000
132	388902	T10N,R4E-U.M.		None	16.667		State	55.07	9.178517	Kuukpik Corp.	1.000000	CPAI	78.000000
	932351	Sec. 1, Unsurveyed, All, excluding the NPR-A	586.43				ASRC	44.93	6.488483			APC	22.000000
		TOTAL	586.43						15.667				100.000000
133	388902	T10N,R4E-U.M.		None	16.667		State	7.86	1.310026	Kuukpik Corp.	1.000000	CPAI	78.000000
	932351	Sec. 2, Unsurveyed, All, excluding the NPR-A	87.63				ASRC	92.14	14.356974			APC	22.000000
		TOTAL	87.63						15.667				100.000000
<b><u>There are no Tracts 134–161</u></b>													
162	390344	T12 N, R4E, U.M.		None	16.667		State	76.19	12.698587	Kuukpik Corp.	1.000000	CPAI	78.00
	933508	Section 5, Unsurveyed, All, excluding tide and submerged lands seaward of the line of mean high water as shown on the official tract map for O&G Lease Sale 43	308.00				ASRC	23.81	2.9684127			APC	22.00
		TOTAL	308.00						15.6670000				100.000000

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Tr. No.	ADL No./ AK No.	Legal Description	Acres	Depth Restrictions	Original			Net Royalty*	ORRI Owners	Net ORRI (%)	Tract Owners	Working Interest (%)	
					Royalty (%)	NPSL (%)	Royalty Owners						
163	390344	T12 N, R4E, U.M.		None	16.667		State	64.60	10.76688	Kuukpik Corp.	1.00000	CPAI	78.000000
	933508	Section 8, Unsurveyed, All, excluding tide and submerged lands seaward of the line of mean high water as shown on the official tract map for O&G Lease Sale 43	531.00				ASRC	35.40	4.90012			APC	22.000000
		TOTAL	531.00						15.66700				100.000000
164	390345	T12 N, R4E, U.M.		None	16.667		State	69.63	11.60523	Kuukpik Corp.	1.00000	CPAI	78.000000
	933510	Section 17, Unsurveyed, All, excluding tide and submerged lands seaward of the line of mean high water as shown on the official tract map for O&G Lease Sale 43	448.00				ASRC	30.37	4.06177			APC	22.000000
		TOTAL	448.00						15.667000				100.000000
165	390348	T12 N, R4E, U.M.		None	16.66667		State	69.63	11.60523	Kuukpik Corp.	1.00000	CPAI	78.000000
	933516	Section 17, Unsurveyed, All, tide and submerged lands seaward of the mean high water as shown on the official tract map for O&G Lease Sale 43	192.00				ASRC	30.37	4.06177			APC	22.000000
		TOTAL	192.00						15.667000				100.000000

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Tr. No.	ADL No./ AK No.	Legal Description	Acres	Depth Restrictions	Original		Mineral Owns.	Net Royalty*	ORRI Owners	Net ORRI (%)	Tract Owners	Working Interest (%)
					Royalty (%)	NPSL (%)						
166	390350	T12 N, R4E, U.M.		None	16.66667		64.60	10.76667	Kuukpik Corp.	1.00000	CPAI	78.000000
	933520	Section 8, Unsurveyed, All, tide and submerged lands as shown on the official tract map for O&G Lease Sale 75	109.00				35.40	4.90000	ASRC		APC	22.000000
		TOTAL	109.00					15.66667				100.000000
167	390350	T12 N, R4E, U.M.		None	16.66667		76.19	12.69834	Kuukpik Corp.	1.00000	CPAI	78.000000
	933520	Section 5, Unsurveyed, All, tide and submerged lands and all uplands within the bed of the unnamed channel of the Colville River as shown on official tract map for O&G Lease Sale 75	332.00				23.81	2.96833	ASRC		APC	22.000000
		TOTAL	332.00					15.66667				100.000000
168	388465	T12 N, R4E, U.M.		None	16.66667		100.00	N/A	None	None	CPAI	78.000000
	300632	Section 6, Protracted, All tide and submerged lands Section 7, Protracted, All tide and submerged lands	577.00 580.00								APC	22.000000
		TOTAL	1,157.00									100.000000

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Tr. No.	ADL No./ AK No.	Legal Description	Acres	Depth Restrictions	Original			Mineral Owns.	Net Royalty*	ORRI Owners	Net ORRI (%)	Tract Owners	Working Interest (%)
					Royalty (%)	NPSL (%)	Royalty Owners						
169	388466	T12 N, R4E, U.M.		None	16.66667		State	100.00	N/A	None	None	CPAI	78.000000
	300634	Section 18, Protracted, All tide and submerged lands	583.00									APC	22.000000
		Section 19, Unsurveyed, All tide and submerged lands seaward of the line of mean high water and the channel closing lines as shown on the official tract map	444.59										
		Section 28, Unsurveyed, All tide and submerged lands seaward of the line of mean high water and the channel closing lines as shown on the official tract map	62.67										
		Section 29, Unsurveyed, All tide and submerged lands seaward of the line of mean high water	237.21										
		Section 30, Unsurveyed, All tide and submerged lands seaward of the line of mean high water and the channel closing lines as shown on the official tract map	286.90										
		Section 31, Unsurveyed, All tide and submerged lands seaward of the line of mean high water	47.04										
		Section 32, Unsurveyed, All tide and submerged lands seaward of the line of mean high water	90.66										
		TOTAL	1,752.07										

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Tr. No.	ADL No./ AK No.	Legal Description	Acres	Depth Restrictions	Original			Mineral Owns.	Net Royalty*	ORRI Owners	Net	Tract Owners	Working
					Royalty (%)	NPSL (%)	Royalty Owners				ORRI (%)		Interest (%)
169	388466 300634 (cont.)	THE CHANNEL CLOSING LINES WITHIN SECTIONS 19, 28 AND 30 WERE DRAWN BASED ON COASTAL BOUNDARY BAY CLOSING LINE PROCEDURE. THE PURPOSE IS TO SEGREGATE TIDE AND SUBMERGED ACREAGE FROM UPLAND ACREAGE.											
170	388463	T12 N, R3E, U.M.		None	16.66667		State	100.00	N/A	None	None	CPAI	78.000000
	300628	S1/2 of Section 1, Protracted, All tide and submerged lands	320.00									APC	22.000000
		S1/2 of Section 2, Protracted, All tide and submerged lands	320.00										100.000000
		Section 11, Unsurveyed, all tide and submerged lands seaward of the line of mean high water and the channel closing lines as shown on the official tract map	476.33										
		Section 12, Protracted, All tide and submerged lands	640.00										
		Section 13, Unsurveyed, All tide and submerged lands seaward of the line of mean high water and the channel closing lines as shown on the official tract map	454.20										
		Section 14, Unsurveyed, All tide and submerged lands seaward of the line of mean high water and the channel closing lines as shown on the official tract map	43.11										
		Section 24, Unsurveyed, All tide and submerged lands seaward of the line of mean high water	22.86										
		TOTAL	2,276.50										

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Tr. No.	ADL No./ AK No.	Legal Description	Acres	Depth Restrictions	Original				Net Royalty*	ORRI Owners	Net ORRI (%)	Tract Owners	Working Interest (%)
					Royalty (%)	NPSL (%)	Royalty Owners	Mineral Owns.					
170	388463 300628 (cont.)	THE CHANNEL CLOSING LINES WITHIN SECTIONS 11, 13 AND 14 WERE DRAWN BASED ON COASTAL BOUNDARY BAY CLOSING LINE PROCEDURE. THE PURPOSE IS TO SEGREGATE TIDE AND SUBMERGED ACREAGE FROM UPLAND ACREAGE.											

**There are no Tracts 171-176**

177	ASRC NPRA 1	T12N, R3E, U.M.		None	12.50	ASRC	100.00	10.500000	Kuukpik Corp.	2.000000	CPAI	78.000000
	932126	Section 11: all excluding tide and submerged lands seaward of the line of mean high water	178.72								AEP	22.000000
		Section 13: all excluding tide and submerged lands seaward of the line of mean high water	184.11									100.000000
		Section 14: all excluding tide and submerged lands seaward of the line of mean high water	624.00									
		Section 23	640.00									
		Section 24: All, excluding tide and submerged lands seaward of the line of mean high water	625.00									
		TOTAL	2,251.83									



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Tr. No.	ADL No./ AK No.	Legal Description	Acres	Depth Restrictions	Original			Net Royalty*	ORRI Owners	Net ORRI (%)	Tract Owners	Working Interest (%)	
					Royalty (%)	NPSL (%)	Royalty Owners						
178	ASRC	T12N, R4E, U.M.		None	16.667		ASRC	100.00	15.0000	Kuukpik Corp.	1.667000	CPAI	78.000000
	NPRA 2	Section 19 (fractional): All,										AEP	22.000000
	932128	excluding tide and submerged lands seaward of the line of mean high water	118.97										100.000000
		TOTAL	118.97										
179	ASRC	T11N, R3E, U. M.		None	12.5		ASRC	100.00	11.2500	Kuukpik Corp.	1.250000	CPAI	78.000000
	NPRA3	Section 1, All	640.00									AEP	22.000000
	932671	Section 2, All	640.00										100.000000
		Section 3, All	640.00										
		Section 12, All	640.00										
		Total	2,560.00										
180	ASRC	T11N, R4E, U.M.		None	16.667		ASRC	100.00	15.0000	Kuukpik Corp.	1.666700	CPAI	78.000000
	NPRA4	Section 6, All	593.45									AEP	22.000000
	932669	Section 17, All	640.00										100.000000
		Section 18, All	598.58										
		Section 29, All	640.00										
		Section 32, All	640.00										
		T10N, R4E, U.M.											
		Section 3, All	640.00										
		Section 4, All	640.00										
		Section 5, All	640.00										
		Total	5,032.03										
181	AA087888	T11N, R3E, U. M.		None	16.6667		BLM	100.00	16.66667	None	None	CPAI	78.000000
	307461	Section 10, All	640.00									AEP	22.000000
		Section 14, All	640.00										100.000000
		Total	1,280.00										

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					Royalty (%)	NPSL (%)	Royalty Owners							
181A	AA092347	T11N, R3E, U. M.		None	16.6667		ASRC	100.00	15.00000	Kuukpik Corp.	1.6667	CPAI	78.000000	
	340758	Section 11, All	640.00									AEP	22.000000	
		Section 13, All	640.00											100.000000
		Total		1,280.00										
182	AA081817	T11N, R4E, U.M.		None	16.66667		BLM	100.00	16.66667	None	None	CPAI	78.000000	
	932552	Section 31, All	605.00									AEP	22.000000	
		T11N, R3E, U. M.											100.000000	
		Section 23, All	640.00											
		Section 26, All	640.00											
		Section 36, All	640.00											
		Total		2,525.00										
182A	AA092344	T11N, R4E, U.M.		None	16.66667		ASRC	100.00	15.00000	Kuukpik Corp.	1.6667	CPAI	78.000000	
	340757	Section 19, All	600.00									AEP	22.000000	
		Section 20, All	640.00										100.000000	
		Section 30, All	602.00											
		T11N, R3E, U. M.												
		Section 24, All	640.00											
		Section 25, All	640.00											
	Total		3,122.00											
183	390337	T10N, R4E, U.M.		None	Sliding		State	7.86	1.31000	Kuukpik Corp.	1.53566	CPAI	78.000000	
	300618	Section 2, Surveyed by protraction, Lots 2 and 4	552.37		Scale		ASRC	92.14	13.82100			APC	22.000000	
		Total	552.37		16.66667**								100.000000	
184	390337	T10N, R4E, U.M.		None	Sliding		State	55.07	9.17834	Kuukpik Corp.	0.74883	CPAI	78.000000	
	300618	Section 1, Surveyed, by protraction, Lot 4	53.57		Scale		ASRC	44.93	6.73950			APC	22.000000	
		Total	53.57		16.66667**								100.000000	

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Tr. No.	ADL No./ AK No.	Legal Description	Acres	Depth Restrictions	Original			Net Royalty*	ORRI Owners	Net ORRI (%)	Tract Owners	Working Interest (%)
					Royalty (%)	NPSL (%)	Royalty Owners					
185	390672	T10N, R4E, U.M. Section 12, Surveyed, by protractions, Lots 1 and 2 and the bed and of the Nechelik Channel, 227.73 acres TOTAL	227.73 227.73	None	16.66667		State ASRC	20.95 79.05	3.491667 12.175003 15.666670	Kuukpik Corp. AVCG	1.000000 3.333330	CPAI 100.000000 100.000000
186	390675	T10N, R5E, UM Section 7, Surveyed, by protraction, Fractional, Lots 1 and 2 and the beds of the Nechelik Channel and the unnamed waterbody, 606.46 acres TOTAL	606.46 606.46	None	16.66667		State ASRC	51.10 48.90	8.516668 8.150002 16.666670	Kuukpik Corp. AVCG	1.000000 3.333330	CPAI 100.000000 100.000000
187	391915	T10N, R5E, UM Section 8, Surveyed, by protraction, All including the beds of the Nechelik Channel and the unnamed waterbody, 640.00 acres TOTAL	640.00 640.00	None	16.66667		State ASRC	50.52 49.48	8.420002 8.246668 16.666670	Kuukpik Corp. AVCG	1.000000 3.333330	CPAI 100.000000 100.000000
188	390674	T10N, R5E UM Setion 9, Surveyed, by protraction, All including the beds of the unnamed waterbodies, 640.00 acres TOTAL	640.00 640.00	None	16.66667		State ASRC	50.00 50.00	8.333335 7.333335 15.666670	Kuukpik Corp. AVCG	1.000000 3.333330	CPAI 100.000000 100.000000

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					Royalty (%)	NPSL (%)	Royalty Owners						
189	391914	T10N, R5E, UM Section 10, Surveyed, by protraction, All including the beds of the Colville River and the unnamed waterbodies 640.00 acres TOTAL	640.00 640.00	None	16.66667		State ASRC	78.22 21.78	13.036669 2.630001 15.666670	Kuukpik Corp. AVCG	1.000000 3.333330	CPAI	100.000000 100.000000
190	390676	T10N, R5E, UM Section 15, Surveyed, by protraction, All including the beds of the Colville River and the unnamed waterbody, 640.00 acres TOTAL	640.00 640.00	None	16.66667		State ASRC	82.00 18.00	13.666669 3.000001 16.666670	Kuukpik Corp. AVCG	1.000000 3.333330	CPAI	100.000000 100.000000
191	391015	T10N, R5E, UM Section 16, Surveyed, by protraction All excluding U.S. Survey 9121, 580.32 acres; Special Surveys U.S. Survey 9121, that portion within Section 16, 59.68 acres; Tract 191 contains 640.00 acres, more or less. TOTAL	640.00 640.00	None	16.66667		State ASRC	58.57 41.43	9.761669 5.905001 15.666670	Kuukpik Corp. AVCG	1.000000 3.333330	CPAI	100.000000 100.000000
192	391016	T10N, R5E, UM Section 17, Surveyed, by protraction. Lots 1, 2, and 3 and the bed of the Nechelik Channel of the Colville River, 342.76 acres; Special Surveys U.S. Survey 9121, that portion within Section 17, 20.30 acres; Tract 192 contains 363.06 acres, more or less TOTAL	363.06 363.06	None	16.66667		State ASRC	20.57 79.43	3.428334 12.238336 15.666670	Kuukpik Corp. AVCG	1.000000 3.333330	CPAI	100.000000 100.000000

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Tr. No.	ADL No./ AK No.	Legal Description	Acres	Depth Restrictions	Original			Net Royalty*	ORRI Owners	Net ORRI (%)	Tract Owners	Working Interest (%)	
					Royalty (%)	NPSL (%)	Royalty Owners						
193	390677	T10N, R5E, UM		None	16.66667		State	34.87	5.811668	Kuukpik Corp.	1.000000	CPAI	100.000000
		Section 18, Surveyed, by protraction, Fractional, Lots 1 and 2 and the bed of the Nechelik Channel, 383.34 acres	383.34				ASRC	65.13	9.855002	AVCG	3.333330		100.000000
		TOTAL	383.34						15.666670				
194	391536	T10N, R5E, UM		None	16.66667		State	51.10	8.516668	Kuukpik Corp.	1.666667	CPAI	100.000000
		Section 7, Surveyed by protraction, Lot 3, 5.53 acres	5.53				ASRC	48.90	6.483335	AVCG	1.500000		100.000000
		TOTAL	5.53						15.000003	BRPC	1.833330		
											4.999997		
195	390673	T10N, R4E, UM		None	16.66667		State	5.55	0.925000	Kuukpik Corp.	1.000000	CPAI	100.000000
		Section 13, Surveyed, by protraction, Lot 1 and the bed of the Nechelik Channel, 24.14 acres	24.14				ASRC	94.45	14.741670	AVCG	3.333330		100.000000
		TOTAL	24.14						15.66667				
196	391535	T10N, R4E, Tract A, UM		None	16.66667		State	5.55	0.925000	Kuukpik Corp.	1.666667	CPAI	100.000000
		Section 13, Surveyed, by protraction, Lot 2, 615.86 acres	615.86				ASRC	94.45	14.075003	AVCG	1.500000		100.000000
		TOTAL	615.86						15.000003	BRPC	1.833330		
											4.999997		
197	391922	T10N, R5E, UM		None	16.66667		State	34.87	5.811668	Kuukpik Corp.	1.666667	CPAI	100.000000
		Section 18, Surveyed by protraction, Lot 3, 231.32 acres	231.32				ASRC	65.13	9.188335	AVCG	1.500000		100.000000
		TOTAL	231.32						15.000003	BRPC	1.833330		
											4.999997		
198	391537	T10N, R5E, UM		None	16.66667		State	20.57	3.428334	Kuukpik Corp.	1.666667	CPAI	100.000000
		Section 17, Surveyed, by protraction, Lot 4, 276.94 acres	276.94				ASRC	79.43	11.571669	AVCG	1.500000		100.000000
		TOTAL	276.94						15.000003	BRPC	1.833330		
											4.999997		

Exhibit A  
Attached to and made a part  
of the Colville River Unit Agreement

Tr. No.	ADL No./ AK No.	Legal Description	Acres	Depth Restrictions	Original			Net Royalty*	ORRI Owners	Net ORRI (%)	Tract Owners	Working Interest (%)	
					Royalty (%)	NPSL (%)	Royalty Owners						
199	391923	T10N, R5E, UM		None	16.66667		State	16.46	2.743334	Kuukpik Corp.	1.666667	CPAI	100.000000
		Section 20, Surveyed by protraction, Lots 2, 4 and 5 and the beds of all meanderable waterbodies within the National Petroleum Reserve-Alaska,					ASRC	83.54	12.256669	AVCG	1.500000		100.000000
		409.55 acres	409.55						15.000003	BRPC	1.833330		
		TOTAL	409.55								4.999997		
200	391918	T10N, R5E, UM		None	16.66667		State	16.46	2.743334	Kuukpik Corp.	1.000000	CPAI	100.000000
		Section 20, Surveyed by protraction, Fractional, Lots 1 and 3 and the bed of the Nechelik Channel, 242.67 acres	242.67				ASRC	83.54	12.923336	AVCG	3.333330		100.000000
		TOTAL	242.67						15.666670				
201	391917	T10N, R5E, UM		None	16.66667		State	56.38	9.396669	Kuukpik Corp.	1.000000	CPAI	100.000000
		Section 21, Surveyed, by protraction, All including the bed of the Colville River and the Nechelik Channel,					ASRC	43.62	6.270001	AVCG	3.333330		100.000000
		640.00 acres	640.00						15.666670				
		TOTAL	640.00										
202	391916	T10N, R5E, UM		None	16.66667		State	73.39	12.231669	Kuukpik Corp.	1.000000	CPAI	100.000000
		Section 22, Surveyed, by protraction, All including the bed of the Colville River, 640.00 acres	640.00				ASRC	26.61	3.435001	AVCG	3.333330		100.000000
		TOTAL	640.00						15.666670				
203	391919	T10N, R5E, UM		None	16.66667		State	78.58	13.096669	Kuukpik Corp.	1.000000	CPAI	100.000000
		Section 28, Surveyed, by protraction, All including the bed of the Colville River, 640.00 acres	640.00				ASRC	21.42	2.570001	AVCG	3.333330		100.000000
		TOTAL	640.00						15.666670				

Exhibit A  
Attached to and made a part  
of the Colville River Unit Agreement

Tr. No.	ADL No./ AK No.	Legal Description	Acres	Depth Restrictions	Original			Net Royalty*	ORRI Owners	Net ORRI (%)	Tract Owners	Working Interest (%)	
					Royalty (%)	NPSL (%)	Royalty Owners						
204	390679	T10N, R5E, UM		None	16.66667		State	46.12	7.686668	Kuukpik Corp.	1.000000	CPAI	100.000000
		Section 29, Surveyed, by protraction,					ASRC	53.88	7.980002	AVCG	3.333330		100.000000
		Fractional, Lot 1 and that portion of the							<u>15.666670</u>				
		Colville River within the NE 1/4 and											
		S 1/2, 436.40 acres	436.40										
		TOTAL	436.40										
205	391538	T10N, R5E, UM		None	16.66667		State	46.12	7.686668	Kuukpik Corp.	1.666667	CPAI	100.000000
		Section 29, Surveyed by protraction,					ASRC	53.88	7.313335	AVCG	1.500000		100.000000
		Lots 2 through 4 and the beds of all							<u>15.000003</u>	BRPC	1.833330		
		meanderable waterbodies, including									<u>4.999997</u>		
the portion of the Colville River lying													
		within the NW 1/4, 203.60 acres	203.60										
		TOTAL	203.60										
206	AA094165 366606	T11N, R3E, U.M.		None	16.6667		BLM	100.00	16.66667	None	None	CPAI	78.000000
		Section 22, All	640.00									AEP	22.000000
		Section 27, All	640.00										
		Section 34, All	640.00										
		Section 35, All	640.00										
		Total	2,560.00										
207	AA094167 366608	T10N, R3E, U.M.		None	16.6667		BLM	100.00	16.66667	None	None	CPAI	78.000000
		Section 1, All	638.00									AEP	22.000000
		Section 2, All	639.00										
		Section 3, All	639.00										
		Total	1,916.00										
208	AA092675 341734	T10N, R4E, U.M.		None	16.6667		BLM	100.00	16.66667	None	None	CPAI	78.000000
		Section 6, All	609.00									AEP	22.000000
		Total	609.00										

Exhibit A  
Attached to and made a part  
of the Colville River Unit Agreement

Tr. No.	ADL No./ AK No.	Legal Description	Acres	Depth Restrictions	Original		NPSL (%)	Royalty Owners	Mineral Owns.	Net Royalty*	ORRI Owners	Net	Tract Owners	Working
					Royalty (%)	ORRI (%)						Interest (%)		
<b>TOTAL UNIT ACREAGE</b>			<b>131,238.31</b>											

\* ASRC's net royalty amount reflects the net ORRI granted to Kuukpik.

\*\* This lease has a sliding scale overriding royalty therefore the original royalty percentage will vary between 16.66667% and 33.33333%. Kuukpik shall receive an overriding royalty equal to 10% of the Original Royalty Percentage, payable out of ASRC Original Royalty Percentage share of production. For example, using a fictitious tract with equal ownership of mineral interest between the State and ASRC, if the royalty rate escalates to 20%, then Kuukpik shall be entitled to receive 2% overriding royalty ( $0.10 \times 0.20 = 0.02$ ) on 8/8ths of production, the State would receive 10% royalty on 8/8ths of production ( $0.50 \times 0.20 = 0.10$ ), and ASRC would receive 8% royalty on 8/8ths of production [ $(0.50 \times 0.20) - (0.10 \times 0.20) = 0.08$ ].

**KEY:**

- APC:** Anadarko Petroleum Corporation
- AEP:** Anadarko E&P Onshore LLC
- ASRC:** Arctic Slope Regional Corporation
- AVCG:** AVCG, LLC
- BLM:** Bureau of Land Management
- BRPC:** Brooks Range Petroleum Corporation
- Chevron:** Chevron U.S.A. Inc.
- CPAI:** ConocoPhillips Alaska, Inc.
- CPAI\*:** CPAI, et al, as successor to Texaco
- CPAI\*\*:** CPAI, et al, as successor to Midgard Energy Company
- D.K. Nerland:** Delores K. Nerland
- Enea Tena Inv.:** Enea Tekna Investments
- Kuukpik Corp.:** Kuukpik Corporation
- Petro-Hunt:** Petro-Hunt, L.L.C.
- R.E. Wagner:** Richard E. Wagner
- R W Res:** Rosewood Resources, Inc.
- State:** State of Alaska
- W.G. Stroecker:** William G. Stroecker



**2. Colville River Unit Proposed Exhibit B**

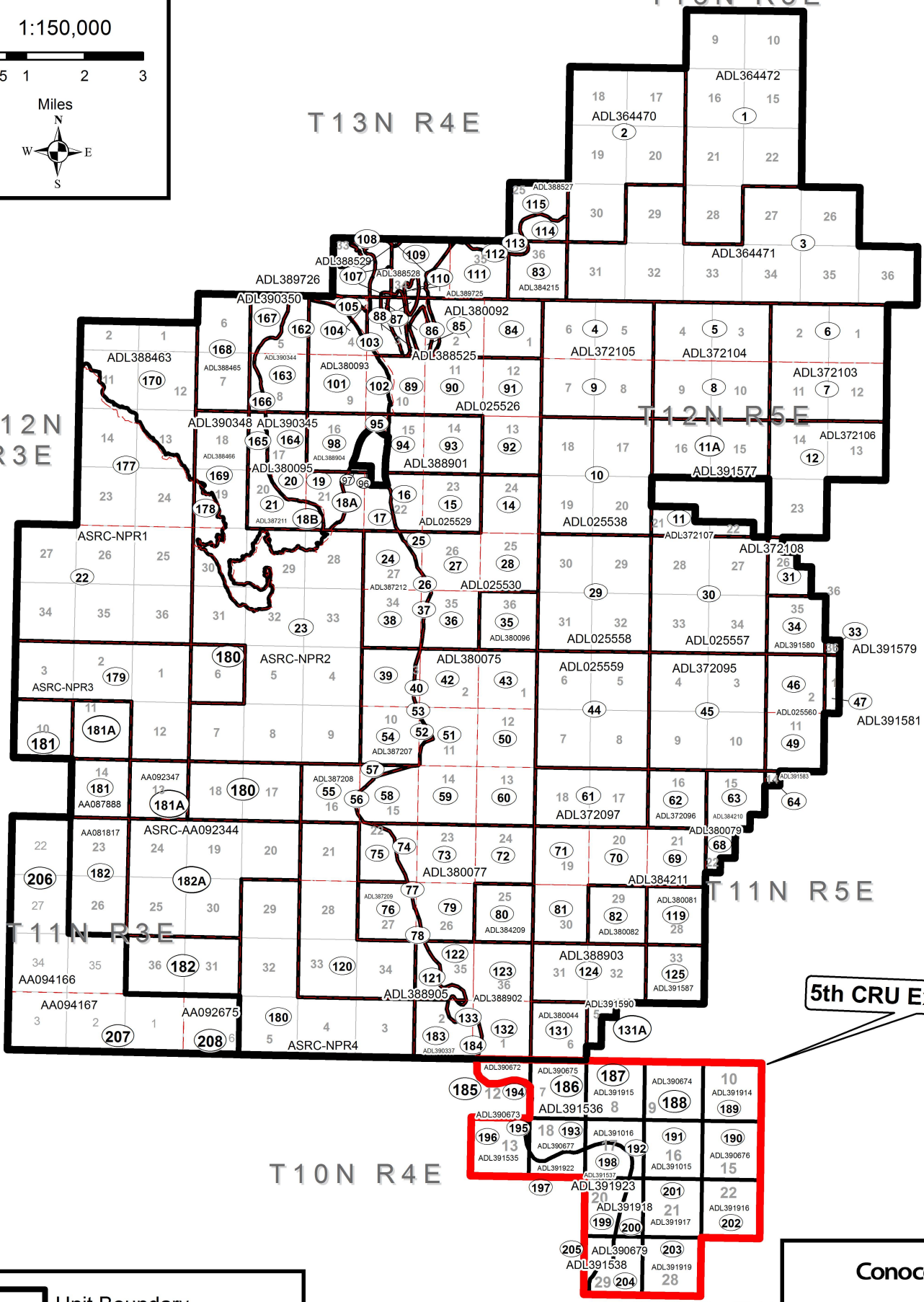
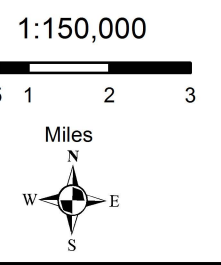
Map of Proposed Expanded Unit Area

T 13 N R 5 E

T 13 N R 4 E

T 12 N R 3 E

T 12 N R 5 E



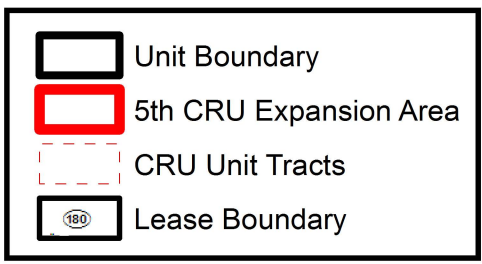
5th CRU Expansion Area

T 11 N R 5 E

T 11 N R 3 E

T 10 N R 4 E

T 10 N R 5



**ConocoPhillips**

**Exhibit B**  
**Fifth Expansion of the**  
**Colville River Unit**  
**Colville Delta, Alaska**  
 November 07, 2016

**3. Colville River Unit Exhibit D**

Proposed Plan of Exploration and Development for the Expansion Area

## **Exhibit D**

### **Planned Exploration and Development Activities for the Expansion Area attached to and made a part of the Application for the Fifth Expansion of the Colville River Unit**

The Colville River Unit (“CRU”) Working Interest Owners (“WIOs”) propose the following exploration and development activities and the timeline of proposed work program included below for the Expansion Area.

The CRU WIOs plan to drill at least one exploration well by June 1, 2017 to a bottomhole location of the CRU WIOs’ choice within the Expansion Area. Locations and archeology clearance will be staked in the summer of 2016. In the fall of 2016, the well will be permitted and funded. The well will be drilled as a winter operation from an ice pad and will be tested if well results are encouraging.

CRU WIOs will need sufficient time to plan the well, permit/stake locations, stage equipment. CRU WIOs will also need to engage in village outreach due to the well location in close proximity to the village of Nuiqsut. The planning and execution of this program will need to be decided by August 1, 2016 in order to meet the 2017 drill target. Consequently, the proposed dates in the preceding paragraph are contingent upon a decision extending the leases by the DNR and ASRC prior to August 1, 2016. Failing such a decision by the DNR and ASRC, the dates in the preceding paragraph will be extended by one year.

Interpretation of the well results and data will be conducted in 2017/2018. This analysis and interpretation is intended to provide the basis for evaluating, defining and optimizing future development for the Expansion Area. Such additional planning is necessary to optimize well location(s) for maximum resource recovery and co-use of other infrastructure, and minimize footprint and impacts. The limited operating seasons in the NPR-A, high costs associated with remote arctic operations (including the limitations of access only by seasonal ice road), and minimizing impacts require that all siting and planning be optimized as much as possible as early as possible, for successful development.

In the event additional information is required for permitting and funding of future development, CPAI may elect to drill an additional appraisal well in the Expansion Area during a winter drilling season in 2020 [or later]. Locations and archeology clearance would be staked in the summer of 2019. In the fall of 2019, the appraisal well would be funded and permitted.

#### **EXPANSION AREA DEVELOPMENT PLAN**

Exploration drilling and testing during 2017 will allow CPAI to understand the future potential development of the Expansion Area. CPAI anticipates initiating a National

Environmental Policy Act (NEPA) analysis for a future drillsite to develop portions of the resource that cannot be captured with Extended Reach Drilling from CD4. CPAI anticipates that development of the Expansion Area will require an Environmental Impact Statement (EIS) and understands the challenges and sensitivities of this potential development due to the proximity to the Village of Nuiqsut. Completion of the EIS process and obtaining the associated permits and approvals are anticipated to take at least three years.

Assuming exploration success in the target areas, and dependent upon the quality and extent of the reservoir sands encountered, the conceptual development plans for the Expansion Area would consist of constructing an acceptable drillsite honoring the Village of Nuiqsut set-back as well as incorporating the Village's location preferences. CPAI anticipates that development would connect to and share facilities with existing infrastructure such as the nearby Alpine CD-4 infrastructure. The development wells would be horizontal in the reservoir section and the depletion plan would call for a line drive miscible water alternating gas (MWAG) flood. The drillsite would be connected back to the nearest existing development drillsite within the CRU via gravel roads and pipelines. At this time the nearest drillsite is expected to be the CD-4 drillsite approximately six miles to the north. Gross production streams would be commingled in the existing pipeline network and sent to Alpine Central Facilities ("ACF") for processing and sales. ACF would supply the drillsites with injection water, gas lift gas, miscible injectant, and power.

The Unit Operator's intent with this development plan is to prudently and efficiently develop the resources with minimal surface impact through the use of as few carefully planned and sited drillsites as possible and sequential development of resources near the Alpine Field. Sequential development of satellite developments with early and complete planning avoids and minimizes impacts while adding maximum value to all stakeholders.

Sequential development also allows several other advantages for this resource development. For example, a sequential satellite development scenario allows for level resource loading as engineering, drilling and construction teams transition from one NPR-A project to the next. This type of development avoids large activity surges and downturns, which will minimize the required construction support infrastructure and associated impacts, and at the same time, create jobs and opportunities for a more sustained period of time. Additionally, sequential development will result in a development that maximizes use of existing facilities and minimizes or avoids the need for additional future facilities, resulting in the extension of the economic life of these resources and existing facilities. Longer resource and facilities lives will increase ultimate resource recovery, cash flow for investors and royalty owners, and economic opportunities for local residents. Finally, each sequential development benefits from local efficiencies and technology advancements that may be developed in the prior developments.

### CRU Fifth Expansion Area Timeline of Proposed Work Program

Proposed Tofkat Work Program																																				
NPRA Program	2016				2017				2018				2019				2020				2021				2022				2023				2024			
	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q				
<b>Tofkat</b>																																				
Exploration Well(s)				AFE	Drill/Test											AFE	Appraisal?																			
Evaluation						Evaluate Results												Evaluate Results																		
Commercial/CRU ERD		CRU Expansion																																		
Nanuq/Alpine																																				
Permitting EIS Pad									3-4 years EIS and Permitting																											
New Pad Development																					Project Approval					LLs				Gravel				Construction		
Development Drilling																																	Drill	Oil		