

KUPARUK RIVER UNIT

APPROVAL OF THE
TWELFTH EXPANSION OF THE KUPARUK PARTICIPATING AREA

Findings and Decision of the Director
of the Division of Oil and Gas
Under a Delegation of Authority
from the Commissioner of the State of Alaska
Department of Natural Resources

December 7, 2015

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I. INTRODUCTION AND DECISION SUMMARY

The State of Alaska (State), Department of Natural Resources (DNR), Division of Oil and Gas (Division), approved the Kuparuk River Unit (KRU) and the Kuparuk Participating Area (KPA) effective March 26, 1982; the approval was subsequently made retroactive to December 1, 1981. This is the twelfth expansion of the KPA.

On May 21, 2015, ConocoPhillips Alaska, Inc. (CPAI), as KRU Operator, submitted an application for the 12th Expansion of the KPA (Application). The proposed KPA expansion area covers approximately 11,747 acres.

A participating area “may include only the land reasonably known to be underlain by hydrocarbons and known or reasonably estimated through use of geological, geophysical, or engineering data to be capable of producing or contributing to the production of hydrocarbons in paying quantities.” 11 AAC 83.351(a). CPAI submitted confidential and public information in the Application. The confidential economic, geological, geophysical, and engineering data support the Application and indicate that the acreage proposed for inclusion in the KPA is producing or contributing to production of hydrocarbons in paying quantities, or is reasonably estimated to be capable of producing or contributing to production of hydrocarbons in paying quantities.

The Division finds that the expansion of the KPA 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. I approve the Application under the terms and conditions of Section IV. The effective date of the 12th Expansion of the KPA is retroactive to June 1, 2015.

II. APPLICATION AND LEASE SUMMARY

The Division approved the initial KPA on March 26, 1982 and made it retroactive to December 1, 1981. The initial participating area was established simultaneously with, and as a part of, the original Kuparuk River Unit Agreement. Since then, the KPA has been amended 11 times. The first KPA expansion was approved on February 25, 1983, to include two tracts for a total of all or portions of 63 leases comprising about 125,796 acres. The KPA was expanded a second time on May 31, 1985, to add all or portions of 17 oil and gas leases containing 18,033 acres, and expanding the KPA to about 143,830 acres. Three of the leases reserved a net profit share to the State. The KPA was expanded in 1988, but only two new unit wells were drilled outside of the 1988 KPA before the Operator requested another expansion in 1990. In its 1990 application, the Operator requested that 32 leases be added to the participating area. The Division determined that, based on the information provided by the Operator, 31 of the proposed tracts did not produce or contribute to the production of hydrocarbons in paying quantities and thus the participating area was expanded to include only one additional lease. In 1992, eight leases were added to the expanded KPA. One lease was added in 1999 and another in 2002. In late 2002, the KPA was expanded to include tracts with specific performance commitments. All or portions of five of those commitment leases contracted out of the participating area in 2005. DNR approved

expansion of the KPA in 2005 to include one lease, and another lease was added to the KPA in 2011.

In its Application, CPAI requested to expand the KPA to include all or portions of eleven leases: ADLs 25585, 25590, 25666, 25668, 25603, 25605, 25608, 380051, 380053, 390503, and 392634. The Application includes Exhibit C (Attachment 1), legally describing the proposed expanded participating area, its leases, tract allocations and cost participations, and ownership interests; and Exhibit D (Attachment 2), a map of the proposed expanded participating area. The Application contained confidential geologic, geophysical, engineering, and economic data in support of the expansion.

Table 1 below displays the unit tract numbers, lease numbers, legal descriptions, and acreage for the proposed KPA expansion area. All of the leases have a 12.5% royalty rate, except for Tract 168 which has a 16.66667% royalty rate, to the State. Ownership of all leases proposed for the expansion is aligned as follows:

ConocoPhillips Alaska, Inc.	55.402367%
BP Exploration (Alaska) Inc.	39.282233%
Union Oil Company of California	4.950600%
ExxonMobil Alaska Production, Inc.	0.364800 %

Table 1. Leases Proposed for Expanded KPA

Unit Tract	Lease	Legal Description	Expanded KPA Acres
69	ADL 025585	T11N, R08E, UM, Alaska, Sec. 29, W2; Sec. 30, All; Sec. 31, All, Sec. 32 NW4.	1,691
74	ADL 025590	T10N, R08E, UM, Alaska, Sec. 06, NE4 and W2; Sec. 07, W2.	741
78	ADL 025666	T10N, R09E, UM, Alaska, Sec. 10, S2.	320
87	ADL 025668	T10N, R09E, UM, Alaska, Sec. 17, All; Sec. 18, SE4; Sec. 19, All; Sec. 20: All.	2,032
88	ADL 025605	T10N, R08E, UM, Alaska, Sec. 24, NE4.	160
90	ADL 025603	T10N, R08E, UM, Alaska, Sec. 18, All; Sec. 19, All; Sec. 20, NW4.	1392
95	ADL 025608	T10N, R08E, UM, Alaska, Sec. 30, All; Sec. 31, N2.	931

Unit Tract	Lease	Legal Description	Expanded KPA Acres
131	ADL 380051	T10N, R07E, UM, Alaska, Sec. 13, Unsurveyed, All; Sec. 24, Unsurveyed, All.	1280
134	ADL 380053	T10N, R07E, UM, Alaska, Sec. 25, Unsurveyed, All; Sec. 36, Unsurveyed, N2.	960
168	ADL 392364	T10N, R09E, UM, Alaska, Sec. 15, Unsurveyed, All including the bed of the Ugnuravik River; Sec. 16, Unsurveyed, All including the bed of the unnamed lake; Sec. 21, Unsurveyed, All including the bed of the Ugnuravik River; Sec. 22, Unsurveyed, N2, including the bed of the Ugnuravik River.	2240
TOTAL Expansion Acres:			11,747

III. DISCUSSION OF DECISION CRITERIA

The DNR Commissioner (Commissioner) reviews applications related to units, including participating area expansion, under 11 AAC 83.303 to 11 AAC 83.395. By memorandum dated September 30, 1999, the Commissioner approved a revision of Department Order 003 and delegated this authority to the Division Director. The Division’s review of the Application is based on the criteria set out in 11 AAC 83.303 (a) and (b). 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. Analysis and discussion of subsection (b) requirements precedes and supports findings under subsection (a).

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

1. Environmental Costs and Benefits

Approval of the KPA expansion has no direct environmental impact. This decision is an administrative action and does not authorize any on-the-ground activity. Unit operations in general, however, foster joint development which minimizes impacts to the environment. For this unit in particular, CPAI has designed the development of the KRU to minimize the amount of surface impact by using compact drill-sites and existing KRU infrastructure. Expansion of the KPA will continue to promote efficient development of the State’s resources, while minimizing impacts to the region’s cultural, biological, and environmental resources.

DNR’s overall process provides many opportunities to evaluate the environmental costs and benefits of development. DNR considered environmental issues during the lease sale process and KRU formation. Additionally, CPAI must obtain approval of a plan of operations from the State and permits from various agencies on State leases before drilling a well or wells or initiating development activities to produce reservoirs within the unit area. 11 AAC 83.346. Potential effects on the environment are analyzed when permits to conduct exploration or development in the unit area are reviewed. CPAI has obtained the required permits for the current KPA wells and is operating under an approved plan of operations and plan of development.

2. Geological and Engineering Characteristics

Exploration History

The Kuparuk River Oil Pool was discovered in 1969 by the Sinclair Ugnu No. 1 well. In terms of area, this pool is the second largest on the Arctic Slope of Alaska, occupying approximately 500 square miles. It is defined as the accumulation of oil that is common to, and correlates with, the accumulation found in the ARCO West Sak River State No. 1 well between the measured depths of 6,474 and 6,880 feet. Production from the Kuparuk Participating Area within the Kuparuk River Unit began in December 1981 and peaked in December 1992 at an average rate of 339,386 barrels of oil per day (BOPD). Current daily oil production of the KPA is approximately 81,000 BOPD based on September 2015 data from the Alaska Oil and Gas Conservation Commission. The KPA has produced a cumulative volume of over 2.37 billion barrels of oil since initial production started in 1981. Since production began, the area encompassing the KPA has been expanded eleven times as continued drilling and advancing technology has expanded the productive margins of the field. The area included in the 12th expansion of the KPA is located in three areas along the southern and southwestern portion of the unit: south of existing Kuparuk drill sites 2G and 2F, to the west of the 2M drill site, and the area of the current development of the new 2S (Shark Tooth) drill site southwest of the existing 2K drill site. Results from recent development drilling in conjunction with re-interpretation of 3D seismic surveys and advances in drilling and completion technologies have determined that a targetable productive reservoir exists beyond the current KPA boundaries, leading to this expansion request.

Characteristics of the Reservoir

The Kuparuk River Formation is a succession of clastic sediments deposited on a shallow marine shelf during Neocomian (Early Cretaceous) time. The formation is divided into Upper and Lower Members. These two Members are comprised of four informal units that are termed, in ascending order, "A", "B", "C", and "D". The A and C units are the pay-bearing intervals within the KRU. The A unit exists throughout the pool area, and consists of sandstone, siltstone and mudstone in a series of regressive cycles that range to 70 feet thick. When mapped in detail, these individual cycles form elongate bodies that strike northeast-southwest. Porosity averages 23 percent and permeability averages about 80 millidarcys (md). The A unit thins to the west where it is truncated by the locally intraformational Lower Cretaceous Unconformity, which lies at the base of the overlying C unit. The C Unit is composed of glauconitic sandstone and siltstone with subordinate conglomerate and lesser shale. Discontinuous zones of siderite-cemented sandstone are common. Porosity and permeability averages 21 percent and 90 md, respectively. Throughout the KRU, C-unit sand deposition appears to have been influenced by syndepositional, northwest-trending normal faults and other local pre-existing paleotopographic lows. CPAI provided DNR with both public and confidential data and analyses in the form of well data, depth structure and reservoir maps, well cross-sections, and proprietary seismic interpretations in support of the Application. In addition, CPAI held numerous technical meetings with DNR staff to discuss the submitted data, geologic interpretations, and ongoing efforts to develop the expansion acreage.

Recent Reservoir Development

In recent years, in addition to the continuous infill drilling program within the KPA, CPAI has expended considerable resources to better delineate and expand development along the periphery of the existing developed Kuparuk reservoir. This has been accomplished through the acquisition and interpretation of additional 3D seismic surveys as well as advances in drilling technologies such as directional drilling, horizontal wells, coil tubing drilling (CTD), and well completions. These technologies have enabled CPAI to develop thinner net pay intervals found along the margins of the reservoir. Much of this effort has been focused on the southern and southwestern portion of the unit where CPAI is now requesting the KPA expansion.

In 2012 CPAI drilled the Shark Tooth delineation well in the southeast portion of ADL 25603 approximately 4 miles southwest of the existing 2K drill site. The well successfully identified productive Kuparuk sands beyond the edge of the then-developed reservoir. Since then, CPAI has installed a new gravel road and drill site (DS-2S) and beginning this past summer has drilled and completed the first three wells and permitted the next three wells of an expansion project designed to accommodate up to 24 wells and produce approximately 8,000 BOPD. First production from DS-2S began in October of 2015. The KPA expansion acreage requested for this project encompasses approximately 4,850 acres and includes portions of leases ADL25603, ADL 25608, ADL 25590, ADL 380051, and ADL 380053.

In 2013, CPAI drilled a CTD horizontal lateral well (2G-17L1) into ADL 392364, which CPAI held south of the then KRU boundary. This horizontal well targeted the Kuparuk C sand, which had historically under-performed in this area. Initial rates from this well exceeded 2,900 BOPD and it currently produces approximately 700-800 BOPD. In late 2014, CPAI drilled an offsetting horizontal well (2F-22) in the C sand along the western boundary of the lease. Initial production rates exceeded 2,000 BOPD and the well currently produces approximately 1,100 BOPD. Two horizontal wells have been drilled within the lease targeting the lowermost Kuparuk A sand (A5): well 2E-01 came on production in January of 2015 at nearly 1,000 BOPD and currently produces around 300 BOPD, and well 2F-21 is the offsetting injection well that is currently being pre-produced at a rate of 100-200 BOPD. Based on these well results the unit boundary was expanded earlier this year to include ADL 392364. The requested southern KPA expansion area containing the existing four wells encompasses approximately 2,600 acres in leases ADL 392364 and ADL 25666 and approximately 2,200 acres comprised of portions of adjacent leases ADL 25668 and ADL 25605 to accommodate additional planned drilling.

Along the western margin of the field CPAI drilled and completed the 2M-36 well in early 2015. This well extends beyond the current KPA boundary into the western portion of lease ADL 25585. Initial production from this well averaged about 300 BOPD. The expansion portion of ADL 25585 is approximately 1,690 acres; two additional wells are planned in this lease. Portions of ADL 25590 and ADL 390503 totaling approximately 640 acres are requested in this area for additional wells planned beginning in 2016.

Conclusion

The expansion of the KPA proposed by CPAI is sufficiently supported by technical data submitted by the operator. Data submitted to the Division included: data and analysis from

recently-drilled unit wells, production/injection data and analysis, and confidential interpretation of proprietary seismic data. Review of this geological, geophysical, and engineering data, in conjunction with numerous follow-up meetings with the operator has allowed the Division to reasonably establish that productive and targetable Kuparuk reservoir sands exist in the requested expansion areas. Accordingly, the Division finds that the expansion area is reasonably known to be underlain by hydrocarbons and known or reasonably estimated to be capable of producing or contributing to production in paying quantities.

Furthermore, CPAI has advanced the infrastructure and resources capable of carrying forward the continued development of the expansion acreage. It should also be noted that all the lease acreage requested for expansion into the KPA is currently held within the KRU by existing production. Therefore none of the expansion acreage could be made eligible for contraction and re-leasing by the State.

The review and analysis of the technical information provided by CPAI, combined with their diligent efforts to-date to bring the resources in the expansion acreage on production and the reasonable plans for continued development on those lands, provide the Division the basis to support approval of the requested expansion.

3. Plans of Development

The Division approved the 2015 KRU Plan of Development (POD) for the period August 1, 2015 through July 31, 2016. The proposed participating area expansion is based on projects that have been approved, funded, and are in-progress, including installation of additional infrastructure and numerous wells which have already been drilled. For example, Drill Site 2S, which went on production in October of 2015, is located in the proposed KPA expansion area. The activities and plans set forth in the Application for an expansion of the KPA is consistent with the plans set forth in the current POD.

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

The expanded KPA will provide economic benefits to the State through royalty and tax payments on production.

CPAI uses a multiphase meter system to measure production before it enters the KRU facilities. CPAI uses well tests to allocate production for the KPA. Each producing well is tested monthly.

CPAI submitted tract participation schedules for the individual tracts in the KPA (Attachment 1) as required by 11 AAC 83.351(c) and 11 AAC 83.371. The proposed tract participation schedules allocate costs and production among the leases in the participating area on a net pay basis. CPAI also submitted confidential paying quantities calculations demonstrating that the expansion area is reasonably capable of producing hydrocarbons in paying quantities, as required by 11 AAC 83.351(c).

The Division finds CPAI's tract participation schedule equitably allocates production and costs among the leases in the participating area and adequately protects all parties, including the State. CPAI will work with the Division's Royalty Accounting Section to submit royalty and operator

reports to properly allocate the production from the KPA. The accounting codes approved for production from tract operations on leases which are now committed to the expanded KPA will be discontinued and CPAI will report all of the production from the KPA using the KPA production accounting code.

The allocation of production under the approved Exhibit C for the KPA also maximizes oil and gas recovery, promotes conservation, prevents waste, and protects all of the parties of interest, including the State.

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

1. Promote the Conservation of All Natural Resources

The unitization of oil and gas reservoirs and the formation and expansion of participating areas within unit areas to develop hydrocarbon-bearing reservoirs are well-accepted means of hydrocarbon conservation. The expansion of the KPA additionally conserves natural resources by increasing hydrocarbon production without increasing the surface acreage required to produce the additional hydrocarbons or the facilities required to accommodate that additional production. This expansion of an existing participating area promotes efficient evaluation and development of the State's resources, yet minimizes impacts to the area's cultural, biological, and environmental resources.

2. The Prevention of Economic and Physical Waste

Portions of the proposed expansion area already contribute to the production of oil from the KRU. Approval of the Application will prevent economic and physical waste because the approval will allocate production under the Exhibit C tract allocations, equitably allocating revenues and costs amongst the working interest owners (WIOs). Approval of the expansion area will not result in economic waste given the current well spacing, market demand, and anticipated production rates.

Approval of the proposed expansion to the KPA and associated field development will provide economic benefits to the state. The long-term goal is to maximize the physical and economic recovery of hydrocarbons from each of the productive reservoirs. Maximum hydrocarbon recovery will enhance the state's long-term royalty and tax revenue stream. Any additional administrative burden associated with the proposed expansion of the KPA is outweighed by the additional royalty and tax benefits derived from production.

Annual approval of the KRU development activities as described in the future plans of development must also provide for the prevention of economic and physical waste. Using the KRU infrastructure and facilities eliminates the need to construct stand-alone facilities. Increasing the volume of oil processed at KRU facilities lowers the cost for all barrels processed at KRU.

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

A participating area "must be expanded to include acreage reasonably estimated through use of geological, geophysical, or engineering data to be capable of producing or contributing to the production of hydrocarbons in paying quantities and must be contracted to exclude acreage reasonably proven through the use of geological, geophysical, and engineering data to be

incapable of producing hydrocarbons in paying quantities, subject to approval by the commissioner.” 11 AAC 83.351(c).

11 AAC 83.371(a) requires that the Division give notice and opportunity to be heard before disapproving an allocation formula, as follows:

The proposed or revised division of interest or formula allocating hydrocarbon production and unit operating costs among the leases in the unit area may not take effect until approved by the commissioner in writing. When requested by the commissioner, the lessees or unit operator shall promptly file with the commissioner all data that relates to the proposed or revised division of interests or allocation formula for all leases in the participating area. Before any disapproval of the proposed or revised division of interest or allocation formula, the commissioner will give the working interest and royalty owners reasonable notice and an opportunity to be heard. After the hearing, the commissioner will approve the proposed or revised division of interest or allocation formula as submitted unless the commissioner finds in writing that the formula does not equitably allocate production and costs among the leases.

Based upon the Division’s review of confidential geophysical, geological, and engineering data, CPAI has demonstrated that the acreage proposed for the KPA expansion is “reasonably estimated” to be capable of producing or contributing to production of hydrocarbons in paying quantities.

Some of the leases in the KPA expansion area are already committed to the Tarn Participating Area (TPA) and are contributing to production at TPA. Some of the acreage in the expansion area is already producing from the KPA, having been drilled as tract or lease operations. Other portions of the expansion area will be drilled in the future, but have not received final approval for drilling at this time. If CPAI does not drill the future wells, the acreage will not contract from the KRU because it is already held by commitment to an existing PA. However, participating areas are intended for sustained production. After discussion with CPAI, for any acreage within the KPA expansion area that remains undrilled, not contributing to production, or not subject to a plan to drill under an approved POD by January 1, 2021, CPAI and the Division agree to conduct a technical review to address those areas which may be subject to contraction from the KPA.

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). Approval of the expansion under future annually approved plans of development will provide for continued review and approval of CPAI’s plans to develop the KPA in a manner which will maximize economic and physical recovery. Combining interests and operating under the terms of the KRU Agreement and KRU Operating Agreement ensures each individual WIO an equitable allocation of costs and revenues commensurate with the resources of its leases. Allocation of production on an original oil in place basis under the approved Exhibit C protects the correlative rights of the WIOs.

The expansion of the KPA within the KRU protects the economic interests of the WIO of the reservoir and the royalty owner. The expansion promotes the State’s economic interests because

hydrocarbon recovery will be maximized and additional production-based revenue will be derived from increased production of the expanded participating area.

IV. FINDINGS AND DECISION

A. The Conservation of All Natural Resources

1. Expansion of the KPA will provide for continued development of the expansion areas under the KRU Agreement 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.

B. The Prevention of Economic and Physical Waste

1. CPAI submitted geological, geophysical, and engineering data to the Division in support of the Application. Division technical staff determined that the expanded KPA area is “reasonably estimated” to be capable of producing or contributing to production in paying quantities.
2. The available geological, geophysical, and engineering data justify including the proposed lands, as described in Attachment 1 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.

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

1. The economic, geological, geophysical, and engineering data that CPAI provided reasonably justify the inclusion of the KPA 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 – 11 AAC 83.395) and the terms and conditions under which these lands were leased from the State.
2. The KPA expansion provides for the equitable division of costs and an equitable allocation of produced hydrocarbons under a POD designed to maximize physical and economic recovery from the reservoirs within the approved participating areas. The allocations of production and costs for the tracts within the KPA is approved.
3. The approved KPA expansion area includes areas which have not yet received final approval for drilling, and are planned to be drilled at a time beyond the period of the current approved POD. The KPA may contract by January 1, 2021 to exclude acreage within the expansion area not drilled or contributing to production, or acreage not planned to be drilled under an approved POD.
4. Accounting Unit codes KU30, KU31, KU32, KU33, KU37, LN02, LN03, LN04, and LN07 are terminated effective December 1, 2015.

5. CPAI shall submit revised operator reports and the lessees shall submit revised royalty reports back to the June 2015 production month. The revised reports must, zero out production reported to Accounting Unit Codes KU30, KU31, KU32, KU33, LN02, LN03, LN04, and LN07 from June 1, 2015, and report that production to the PA Accounting Unit Code KPRK.
6. These revised reports must be submitted within 60 days after the approval of the expansion of the KPA.
7. The 12th Expansion of the KPA is approved as proposed, subject to the provisions of Section IV C. 3. and described in Attachments 1 and 2.

For the reasons discussed in this Findings and Decision, subject to the above terms and conditions, I hereby approve the 12th KPA expansion effective June 1, 2015.

A person affected by this decision may appeal it, in accordance with 11 AAC 02. Any appeal 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 Mark Myers, 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. This decision takes effect immediately. An eligible person must first appeal this decision in accordance with 11 AAC 02 before appealing this decision to Superior Court. A copy of 11 AAC 02 may be obtained from any regional information office of the Department of Natural Resources.



Corri A. Feige, Director
Division of Oil and Gas



Date

V. Attachments

1. KRU KPA, Proposed and Approved Exhibit C for the 12th Expansion of the KPA
2. KRU KPA, Proposed and Approved Exhibit D for the 12th Expansion of the KPA

ATTACHMENT ONE: KRU KPA, Proposed and Approved Exhibit C for the 12th Expansion of the KPA

RECEIVED**NOV 17 2015****DIVISION OF
OIL AND GAS**

Tract No.	Legal Description	ADL No.	Tract Participation	Cost Participation
1	T13N-R8E-UM Sec. 13: NE 1/4, S 1/2 Sec. 14: S 1/2 Sec. 23: All Sec. 24: All	25522	0.408248	0.408248
2	T13N-R9E-UM Sec. 17: All Sec. 18: All Sec. 19: All Sec. 20: All	25512	1.280389	1.280389
3	T13N-R9E-UM Sec. 15: All Sec. 16: All Sec. 21: All Sec. 22: All	25513	1.323905	1.323905
4	T13N-R9E-UM Sec. 25: All Sec. 26: All Sec. 35: All Sec. 36: All	25519	1.035442	1.035442
5	T13N-R9E-UM Sec. 27: All Sec. 28: All Sec. 33: All Sec. 34: All	25520	1.269189	1.269189
6	T13N-R9E-UM Sec. 29: All Sec. 30: All Sec. 31: All Sec. 32: All	25521	1.160228	1.160228
7	T13N-R8E-UM Sec. 25: All Sec. 26: All Sec. 35: All Sec. 36: All	25523	1.114033	1.114033
8	T13N-R8E-UM Sec. 27: All Sec. 33: All Sec. 34: All	25524	0.526242	0.526242
10	T12N-R8E-UM Sec. 3: All Sec. 4: E 1/2	25532	0.459726	0.459726

RECEIVED**NOV 17 2015****DIVISION OF
OIL AND GAS****Tract
No.****Legal
Description**
Sec. 9: All
Sec. 10: N2**ADL
No.****Tract
Participation****Cost
Participation**

Tract No.	Legal Description	ADL No.	Tract Participation	Cost Participation
11	T12N-R8E-UM Sec. 1: All Sec. 2: All Sec. 11: All Sec. 12: All	25531	1.571102	1.571102
12	T12N-R9E-UM Sec. 5: All Sec. 6: All Sec. 7: All Sec. 8: All	25631	1.043427	1.043427
13	T12N-R9E-UM Sec. 3: All Sec. 4: All Sec. 9: All Sec. 10: All	25630	1.432376	1.432376
14	T12N-R9E-UM Sec. 1: All Sec. 2: All Sec. 11: All Sec. 12: All	25629	1.294861	1.294861
15	T12N-R10E-UM Sec. 5: All Sec. 6: All Sec. 7: All Sec. 8: All	25628	0.702911	0.702911
16	T12N-R10E-UM Sec. 3: SW 1/4 Sec. 4: All Sec. 9: All Sec. 10: NW 1/4, S 1/2	25627	0.102774	0.102774
18	T12N-R10E-UM Sec. 23: S 1/2	25637	0.000008	0.000008
19	T12N-R10E-UM Sec. 15: All Sec. 16: All Sec. 21: All Sec. 22: All	25636	0.316299	0.316299
20	T12N-R10E-UM Sec. 17: All Sec. 18: All Sec. 19: All Sec. 20: All	25635	1.463796	1.463796

RECEIVED**NOV 17 2015****DIVISION OF
OIL AND GAS****Tract
No.****Legal
Description****ADL
No.****Tract
Participation****Cost
Participation**

21	T12N-R9E-UM Sec. 13: All Sec. 14: All Sec. 23: All Sec. 24: All	25634	1.490306	1.490306
22	T12N-R9E-UM Sec. 15: All Sec. 16: All Sec. 21: All Sec. 22: All	25633	1.663676	1.663676
23	T12N-R9E-UM Sec. 17: All Sec. 18: All Sec. 19: All Sec. 20: All	25632	2.395434	2.395434
24	T12N-R8E-UM Sec. 13: All Sec. 14: All Sec. 23: All Sec. 24: All	25547	1.284178	1.284178
25	T12N-R8E-UM Sec. 15: All Sec.16:NW4 Sec. 21: All Sec. 22: E2	25546	0.190571	0.190571
28	T12N-R8E-UM Sec. 27: All Sec. 34: All	25549	0.024552	0.024552
29	T12N-R8E-UM Sec. 25: All Sec. 26: All Sec. 35: All Sec. 36: All	25548	0.767229	0.767229
30	T12N-R9E-UM Sec. 29: All Sec. 30: All Sec. 31: All Sec. 32: All	25643	2.633447	2.633447
31	T12N-R9E-UM Sec. 27: All Sec. 28: all Sec. 33: All Sec. 34: All	25642	3.102422	3.102422

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Tract No.	Legal Description	ADL No.	Tract Participation	Cost Participation
32	T12N-R9E-UM Sec. 25: All Sec. 26: All Sec. 35: All Sec. 36: All	25641	2.713214	2.713214
33	T12N-R10E-UM Sec. 29: All Sec. 30: All Sec. 31: All Sec. 32: All	25640	2.565702	2.565702
34	T12N-R10E-UM Sec. 27: All Sec. 28: All Sec. 33: All Sec. 34: All	25639	1.343751	1.343751
35	T12N-R10E-UM Sec. 25: NW 1/4, S 1/2 Sec. 26: All Sec. 35: All Sec. 36: All	25638	0.343194	0.343194
36	T12N-R11E-UM Sec. 31: All	47449	0.005851	0.005851
37	T11N-R11E-UM Sec. 5: All Sec. 6: All Sec. 7: All Sec. 8: All	28242	0.122632	0.122632
38	T11N-R10E-UM Sec. 1: All Sec. 2: All Sec. 11: All Sec. 12: All	25649	1.315384	1.315384
39	T11N-R10E-UM Sec. 3: All Sec. 4: All Sec. 9: All Sec. 10: All	25648	1.794279	1.794279
40	T11N-R10E-UM Sec. 5: All Sec. 6: All Sec. 7: All Sec. 8: All	25647	2.886895	2.886895
41	T11N-R9E-UM Sec. 1: All	25646	3.330581	3.330581

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Tract No.	Legal Description	ADL No.	Tract Participation	Cost Participation
	Sec. 2: All Sec. 11: All Sec. 12: All			
42	T11N-R9E-UM Sec. 3: All Sec. 4: All Sec. 9: All Sec. 10: All	25645	3.782913	3.782913
43	T11N-R9E-UM Sec. 5: All Sec. 6: All Sec. 7: All Sec. 8: All	25644	2.494160	2.494160
44	T11N-R8E-UM Sec. 1: All Sec. 2: All Sec. 11: All Sec. 12: All	25569	1.472445	1.472445
45	T11N-R8E-UM Sec. 3: All Sec. 9: SE 1/4 Sec. 10: All	25568	0.775127	0.775127
49	T11N-R8E-UM Sec. 15: All Sec. 16: E 1/2 Sec. 21: All Sec. 22: All	25571	1.237986	1.237986
50	T11N-R8E-UM Sec. 13: All Sec. 14: All Sec. 23: All Sec. 24: All	25570	2.638687	2.638687
51	T11N-R9E-UM Sec. 17: All Sec. 18: All Sec. 19: All Sec. 20: All	25655	2.540429	2.540429
52	T11N-R9E-UM Sec. 15: All Sec. 16: All Sec. 21: All Sec. 22: All	25654	1.943604	1.943604
53	T11N-R9E-UM Sec. 13: All	25653	2.452334	2.452334

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OIL AND GAS****Tract
No.****Legal
Description****ADL
No.****Tract
Participation****Cost
Participation**

Tract No.	Legal Description	ADL No.	Tract Participation	Cost Participation
	Sec. 14: All Sec. 23: All Sec. 24: All			
54	T11N-R10E-UM Sec. 17: All Sec. 18: All Sec. 19: All Sec. 20: All	25652	2.472679	2.472679
55	T11N-R10E-UM Sec. 15: All Sec. 16: All Sec. 21: All Sec. 22: All	25651	2.810464	2.810464
56	T11N-R10E-UM Sec. 13: All Sec. 14: All Sec. 23: All Sec. 24: All	25650	1.635084	1.635084
57	T11N-R11E-UM Sec. 17: All Sec. 18: All Sec. 19: All Sec. 20: All	28243	0.728737	0.728737
58	T11N-R11E-UM Sec. 16: All Sec. 21: All	28244	0.031621	0.031621
60	T11N-R11E-UM Sec. 30: All Sec. 31:W2 and NE4	28248	0.247691	0.247691
61	T11N-R10E-UM Sec. 25: All Sec. 26: All Sec. 35: All Sec. 36: All	25661	1.094645	1.094645
62	T11N-R10E-UM Sec. 27: All Sec. 28: All Sec. 33: All Sec. 34: All	25660	1.939755	1.939755
63	T11N-R10E-UM Sec. 29: All Sec. 30: All Sec. 31: All Sec. 32: All	25659	1.776910	1.776910

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**Legal
Description**

T11N-R9E-UM
Sec. 25: All
Sec. 26: All
Sec. 35: All
Sec. 36: All

ADL
No.

25658

**Tract
Participation**

1.490158

**Cost
Participation**

1.490158

65

T11N-R9E-UM
Sec. 27: All
Sec. 28: All
Sec. 33: All
Sec. 34: All

25657

1.714325

1.714325

66

T11N-R9E-UM
Sec. 29: All
Sec. 30: All
Sec. 31: All
Sec. 32: All

25656

1.534957

1.534957

67

T11N-R8E-UM
Sec. 25: All
Sec. 26: All
Sec. 35: All
Sec. 36: All

25587

1.602535

1.602535

68

T11N-R8E-UM
Sec. 27: All
Sec. 28: All
Sec. 33: All
Sec. 34: All

25586

1.360687

1.360687

69

T10N-R8E-UM
Sec. 29: All
Sec. 30: All
Sec. 31: All
Sec. 32: All

25585

0.641881

0.641881

74

T10N-R8E-UM
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Sec. 6: All
Sec. 7: All
Sec. 8: All

25590

0.585930

0.585930

75

T10N-R8E-UM
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Sec. 4: All
Sec. 9: All
Sec. 10: All

25589

1.024159

1.024159

76

T10N-R8E-UM
Sec. 1: All
Sec. 2: All
Sec. 11: All

25588

1.231664

1.231664

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No.****Legal
Description**
Sec. 12: All**ADL
No.****Tract
Participation****Cost
Participation**

77	T10N-R9E-UM Sec. 5: All Sec. 6: All Sec. 7: All Sec. 8: All	25667	0.956394	0.956394
78	T10N-R9E-UM Sec. 3: All Sec. 4: All Sec. 9: All Sec. 10: All	25666	0.666379	0.666379
79	T10N-R9E-UM Sec. 1: All Sec. 2: All Sec. 11: All Sec. 12: All	25665	0.743726	0.743726
80	T10N-R10E-UM Sec. 5: All Sec. 6: All Sec. 7: All Sec. 8: All	25664	1.324992	1.324992
81	T10N-R10E-UM Sec. 3: All Sec. 4: All Sec. 9: All Sec. 10: NW 1/4	25663	0.810099	0.810099
82	T10N-R10E-UM Sec. 1: All Sec. 2: All	25662	0.034127	0.034127
84	T10N-R10E-UM Sec. 17: All Sec. 18: All	25671	0.142519	0.142519
85	T10N-R9E-UM Sec. 13: All Sec. 14: All	25670	0.103657	0.103657
87	T10N-R9E-UM Sec. 17: All Sec. 18: All Sec. 19: All Sec. 20: All	25668	0.658955	0.658955
88	T10N-R8E-UM Sec. 13: All Sec. 14: All	25605	0.409447	0.409447

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OIL AND GAS****Tract
No.****Legal
Description**
Sec. 23: All
Sec. 24: N 1/2**ADL
No.****Tract
Participation****Cost
Participation**

Tract No.	Legal Description	ADL No.	Tract Participation	Cost Participation
89	T10N-R8E-UM Sec. 15: All Sec. 16: All Sec. 21: All Sec. 22: All	25604	0.364955	0.364955
90	T10N-R8E-UM Sec. 17: All Sec. 18: All Sec. 19: All Sec. 20: All	25603	0.584347	0.584347
95	T10N-R8E-UM Sec. 29: All Sec. 30: All Sec. 31: N 1/2	25608	0.351721	0.351721
96	T10N-R8E-UM Sec. 27: N 1/2 Sec. 28: All	25607	0.244571	0.244571
122	T13N-R9E-UM Sec. 3: All Sec. 4: All Sec. 8: All, excluding T&S lands and USS 4275 Sec. 9: All Sec. 10: All Sec. 11: W 1/2	355023	0.620622	0.620622
122A	T13N-R9E-UM USS 4275 Include Tract C, ATS 1259 Exclude Tract B, ATS 1259 Exclude Tract A, ATS 1289	373301	0.247997	0.247997
123	T13N-R9E-UM Sec. 5: All, excluding USS 4275 Sec. 6: SE 1/4 Sec. 7: All, excluding USS 4275 Sec. 8: T&S lands	355024	0.085385	0.085385
124	T13N-R8E-UM Sec. 12: SE 1/4 Sec. 15: SE 1/4	355030	0.000861	0.000861
125	T13N-R8E-UM Sec. 19: SE 1/4 Sec. 20: SW 1/4	355032	0.206858	0.206858

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Tract
 NOV 17 2015 No.

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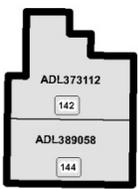
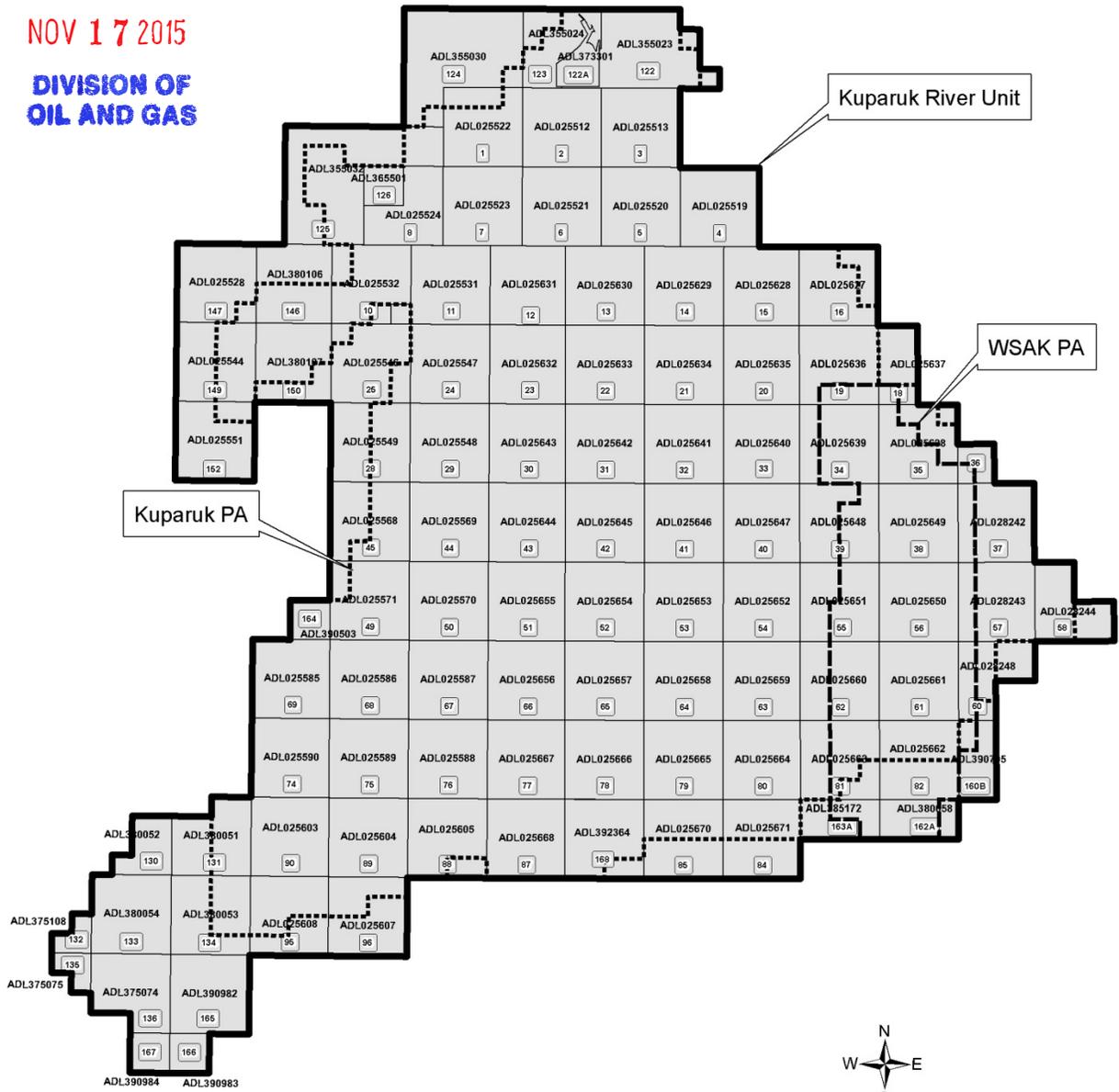
	<u>Legal Description</u>	<u>ADL No.</u>	<u>Tract Participation</u>	<u>Cost Participation</u>
	Sec. 22: All Sec. 29: All Sec. 30: E 1/2 Sec. 32: All			
126	T13N-R8E-UM Sec. 28: All	365501	0.027798	0.027798
131	T10N-R7E-UM Sec. 13: All Sec. 24: All	380051	0.247170	0.247170
134	T10N-R7E-UM Sec. 25: All Sec. 36: N 1/2	380053	0.111566	0.111566
146	T12N-R8E-UM Sec. 7: All Sec. 8: All	380106	0.134492	0.134492
147	T12N-R7E-UM Sec. 12: SE4	25528	0.024729	0.024729
149	T12N-R7E-UM Sec. 13: All Sec. 24: All	25544	0.202945	0.202945
150	T12N-R8E-UM Sec. 17: All Sec. 18: All Sec. 19: N 1/2 Sec. 20: NW4	380107	0.270212	0.270212
152	T12N-R7E-UM Sec. 25: N 1/2	25551	0.029297	0.029297
164	T10N-R08E-UM Sec. 20: All	390503	0.010287	0.010287
168	T10N-R9E-UM Sec. 15: All Sec. 16: All Sec. 21: All Sec. 22: N 1/2	392364	0.644071	0.644071
Total			100.000000	100.000000

ATTACHMENT TWO: KRU KPA, Proposed and Approved Exhibit D for the 12th Expansion of the KPA

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DIVISION OF OIL AND GAS



Legend

-  Kuparuk River Unit
-  Kuparuk PA
-  WSAK PA



1:250,000



ConocoPhillips

Kuparuk River Unit

Exhibit 'D'
 Kuparuk Participating Area
 WSAK Participating Area
 Located within T8-13N, R7-11E
 Umiat Meridian, Alaska

File Name: 11020201D03

Date: 3-9-15