

OOOGURUK UNIT

APPLICATION FOR THE FORMATION OF THE OOOGURUK UNIT
KUPARUK PARTICIPATING AREA

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

August 5, 2009

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I. INTRODUCTION, BACKGROUND, AND DECISION SUMMARY

The State of Alaska (State), Department of Natural Resources (DNR), Division of Oil and Gas (Division) approved the formation of the Oooguruk Unit (OU) effective June 11, 2003, and the expansion of the OU effective March 7, 2007. On June 8, 2007, Pioneer Natural Resources Alaska, Inc. (Pioneer), the designated Oooguruk Unit Operator, filed the first OU Plan of Development (1st OU POD). During 2007, under the approved 1st OU POD, Pioneer completed development activities related to the construction of infrastructure required to proceed with the drilling of development wells: Oooguruk Drillsite (ODS), sub-sea flowline, surface flowline to the onshore Oooguruk Tie-In Pad (OTP) and installation of Multi-Phase Flow Meters (MPFMs).

On January 16, 2008 Pioneer filed an Application for Nuiqsut Participating Area (ONPA) and Kuparuk Participating Area (OKPA) in the Oooguruk Unit, North Slope, Alaska (Application) on behalf of itself and Eni Petroleum US LLC (Eni). The proposed Kuparuk Participating Area (OKPA) encompasses all or portions of four State oil and gas leases within the boundary of the OU and comprises approximately 5,160 acres. This Decision approves the Application for the OKPA; a separate decision approves the Application for the ONPA.

Effective June 1, 2008, three leases contracted from the OU pursuant to Section IV, paragraph 11 approval of the OU. The contracted OU covers approximately 43,264 acres in sixteen State oil and gas leases.

By June 2008 Pioneer had drilled one disposal well, completed batch drilling for surface casings for three wells, and completed the first Oooguruk Kuparuk Reservoir producer. Rather than construct processing facilities, Pioneer negotiated a facility sharing agreement with the Kuparuk River Unit (KRU) Working Interest Owners (WIOs) for the use of vertical support members (VSMs), flowline transportation, and processing services at the KRU Processing Facility. Pioneer applied for Alaska State Oil and Gas Conservation Commission (AOGCC) and Division approval for the first use of MPFMs to allocate hydrocarbons between participating areas and between two units, OU and KRU, for fiscal allocation and well test purposes. The AOGCC approved the applications on July 30, 2009, Conservation Order Numbers (CO Nos.) 596.007, 597.007, 432D.007, 406B.008, 430A.008, 435A.007, and 456A.007.

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). Pioneer submitted confidential and public portions of the Application. The confidential geological, geophysical, and engineering data support the Application and indicate that the Oooguruk Kuparuk Reservoir within the OKPA is capable of producing or contributing to production of hydrocarbons in paying quantities.

The Division finds that the formation of the OKPA 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. DNR approves the Application in accordance with the criteria under 11 AAC 83.303. Two wells currently produce from the proposed OKPA as unit tract operations: the ODSK 33, and the ODSK 41. The effective date of the OKPA is June 1, 2008.

II. APPLICATION AND LEASE HISTORY

Pioneer submitted the Application under 11 AAC 83.351 and in accordance with Articles 9.1, 9.2, and 9.3 of the Oooguruk Unit Agreement (OU Agreement). The four State leases proposed to be included in the OKPA are ADLs 355036, 355037, 355038, and 389959.

Pioneer submitted Exhibits C, D, E, and F to the OU Agreement (Attachments 1-4) with the Application. Exhibit C displays the unit tract numbers, legal descriptions, lease numbers, working interest ownership, royalty interest ownership, overriding royalty interest ownership, and unit tract participations for the OKPA. Exhibit D is a map of the OKPA. Exhibit E displays the allocation of participating area expense to each unit tract in the participating area, and Exhibit F displays the allocation of unit expense to each unit tract in the unit area and is required for any unit which includes Net Profit Share (NPS) leases.

The Division issued ADLs 355036, 355037, and 355038, effective August 1, 1983, on Competitive Oil and Gas Lease Form No. DMEM-4-83 (NET PROFIT SHARE)(REVISED May 5, 1983) DNR 10-1113, with ten-year primary terms, 12.5 percent fixed royalty rate, and 30 percent NPS for the State. These three leases were committed to the Kuukpik Unit, which terminated effective June 1, 2001.

Before the leases expired, a well was drilled on each lease which was determined to be capable of producing in paying quantities. This determination extended the leases' primary terms. The Division granted royalty modification to these leases, reducing the fixed royalty rate from 12.5 percent to 5 percent, effective February 1, 2006. The royalty reduction ends for all these leases when NPS payments become due on ADL 355036. The royalty reduction phases out and returns to the original lease royalty rate over a four year period. Effective March 7, 2007, the leases were committed in their entirety to the expanded OU.

The Division issued ADL 389959 effective August 1, 2002, on Competitive Oil and Gas Lease Form No. (DOG 200004) with a 16.66667 percent fixed royalty and seven-year primary terms. The Division granted royalty modification to ADL 389959, reducing the fixed royalty rate to 5 percent, effective February 1, 2006. The royalty reduction ends for all these leases when NPS payments become due on ADL 355036. The original royalty rate of 16.66667 percent is restored when the four year royalty reduction phase out period ends. Effective March 7, 2007, ADL 389959 was committed to the expanded OU.

Pioneer holds 70 percent and Eni holds 30 percent of the working interest in all depths in ADL 389959. ADLs 355036, 355037, and 355038, are segmented by depth: the Upper Interval from the surface down to the stratigraphic equivalent of 8,373 feet and the Lower Interval, below 8373 feet. Pioneer holds 70 percent and Eni holds 30 percent of the working interest in the Upper Interval of these leases, but not the Lower Interval. The stratigraphic limits of the proposed OKPA lie entirely within the Upper Interval.

III. DISCUSSION OF DECISION CRITERIA

The Commissioner of DNR (Commissioner) reviews participating area formation applications under 11 AAC 83.301 – 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 is followed by a discussion of the subsection (a) criteria.

A. Decision Criteria Considered Under 11 AAC 83.303(b)

1. The Environmental Costs and Benefits of Unitized Exploration or Development

DNR considered environmental issues in the lease sale process and the initial unitization process for the OU. Approval of the OKPA has no additional environmental cost or benefit apart from that previously considered in approval of the OU. In addition, the Plan of Operations and the lease include plans for rehabilitation of the unit and participating area.

Pioneer has designed the development of the Oooguruk Kuparuk Reservoir within the OU to minimize the amount of surface impact from the facilities necessary to develop by utilization of a compact drillsite and existing infrastructure at the KRU including the use of existing VSMs for flowlines, processing facilities, flowline transportation, and delivery and return of gas and water.

Formation of the OKPA will promote efficient development of the State's resources, while minimizing impacts to the region's cultural, biological, and environmental resources. Such impacts would be significantly greater if the Oooguruk Kuparuk Reservoir was developed on a lease-by lease basis, rather than on an integrated unitized basis.

2. Geologic and Engineering Characteristics and Prior Exploration and Development Activities of the Proposed Oooguruk Kuparuk Participating Area

A participating area application must meet the requirements of 11 AAC 83.351(a). 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).

Pioneer is developing oil reserves from the Cretaceous Kuparuk C sandstone and the Jurassic Nuiqsut sandstone within the OU. As part of this process, Pioneer applied to the Division on January 16th, 2008 for the formation of both the Oooguruk Kuparuk and Oooguruk Nuiqsut Reservoirs.

Pioneer has submitted confidential economic, geophysical, geological, and engineering data which demonstrate that the OKPA is capable of producing or contributing to production of hydrocarbons in paying quantities.

A. Kuparuk Geologic Setting

The Kuparuk River Formation of Early Cretaceous age (120 – 145 million years old) has a unique and complex depositional history. The Kuparuk River Formation is informally subdivided into four members designated by letters A (oldest) through D (youngest). Each member is further subdivided into sub-members designated by numbers, such as A-1 and C-4 (with one being the oldest sub-member). The lower A and B sandstone members (Berriasian and Valanginian in age) were derived from a subaerially exposed northern provenance that foundered during Late Jurassic - Early Cretaceous time. The Kuparuk A sandstone sub-members are predictable, continuous, coarsening-upward marine offshore bars to shoreface sequences that were deposited over large contiguous areas. Following the deposition of overlying shallow marine Kuparuk B sediments, the area became tectonically active due to regional rifting and extension tectonics that resulted in regional tilting and the formation of localized topographic highs that were subsequently eroded by the Lower Cretaceous Unconformity (LCU), a major regional scouring event. As the northern source terrain subsided, erosion of the Kuparuk B sediments and underlying Kuparuk A sandstone members in the uplifted blocks along the Prudhoe Bay structural high became the primary sediment source of the Kuparuk C and D intervals. Sediment eroded from these highs were re-deposited as the Kuparuk C and D members and preserved in grabens and other low-lying areas on top of the LCU erosional surface.

Within the OU, the Kuparuk C member is preserved and locally concentrated in structural depressions and grabens on the down thrown side of a system of northwest-southeast trending syn-depositional normal faults that extend from the 3M and 3H pads in the Kuparuk River Unit. Vertical displacement of these faults can range up to 200 feet. Away from the grabens and on the upthrown side of these faults the Kuparuk C is thin to absent and decreases in reservoir quality. The Kuparuk C reservoir ranges from 0 feet to approximately 40 feet in thickness and correlates to the basal portions of the Kuparuk C in the adjacent Kuparuk River Unit and nearby Milne Point and Colville River Units. The reservoir quality rock within the Kuparuk C member generally consists of fine- to coarse-grained, bioturbated, fining-upward quartz sandstone with 5 – 25 percent glauconite and 10 – 35 percent secondary siderite cement. Porosity ranges from 13 – 32 percent with an average of approximately 17 percent. Permeability ranges from 0 – 500

millidarcies and averages approximately 50 – 100 millidarcies. Average water saturation is about 30 percent. No oil-water contact has been identified within the Kuparuk in the OU.

B. Prior Exploration and Development activities

Between 1970 and 1998, fifteen exploration wells were drilled by several companies in the Colville Delta area that now includes the OU. A number of the wells encountered, and in some cases tested, oil bearing sands within both the Kuparuk and deeper Nuiqsut intervals, but at that time, concluded that development was uneconomical.

The first well to encounter oil-bearing Kuparuk C sandstone in the vicinity of the OU was the Unocal East Harrison Bay State I well drilled in 1977. Well logs indicate 15 feet of oil-bearing Kuparuk C sandstone that appears siderite cemented in the upper half of the section.

In 1992, ARCO drilled the Kalubik 1 well in Section 11, T13N, R7E, UM. Approximately 37 feet of oil bearing sandstone was encountered in the Kuparuk C interval between 6,083 - 6,120 feet measured depth (MD) (-6,046 to -6,083 feet true vertical depth sub sea (TVDSS)). Well reports indicate a drill stem test of Kuparuk C sandstone from 6,085 to 6,120 feet MD (-6,048 to -6,083 feet TVDSS) produced oil at a rate of 1,200 barrels of 28° API gravity oil per day, a 450 solution gas-oil ratio (GOR) and zero percent water cut. Although ARCO did not consider this area economic at the time, 14 years later the well is contained within the OU and considered the type log for the Oooguruk field.

The AOGCC approved pool rules for the Oooguruk Kuparuk Reservoir on March 25, 2008 in Conservation Order No. 596. Laboratory analysis of reservoir fluid samples from the Kalubik No.1 and Kuukpik No.3 exploratory wells in the Oooguruk Kuparuk Oil Pool indicate the trapped oil is similar to that from the Kuparuk River Oil Pool in the Kuparuk River and Milne Point Units. The Oooguruk Kuparuk oil samples measured between 23° and 26° API gravity, with 1.5% sulfur content. The solution gas-oil ratio GOR measured in the Kalubik No.1 was 450 standard cubic feet per stock tank barrel. Well test records from the Kalubik No. 1 well indicate Oooguruk Kuparuk Reservoir pressure is about 3,150 psi at about 6,050' TVDSS. The bubble point pressure is estimated at 2,600 psi.

Pioneer's information indicates the volume of original oil in place within the Kuparuk C member at Oooguruk ranges between 15 and 25 million barrels of stock tank oil (MMSTBO). Initial estimated primary, secondary and tertiary recovery ranged from 4-9 MMSTBO.

As of March, 2009 Pioneer has completed two horizontal production wells (ODSK-33 and ODSK-41) and one slant injector (ODSK-38) in the Kuparuk Formation. Tract Operations were approved by the Division for production of these wells prior to approval of the Initial PA. February, 2009 initial production from the ODSK-33 and ODSK -41

wells averaged over 4,700 and 5,600 barrels of oil per day (BOPD) respectively. To date, the Oooguruk Kuparuk Reservoir has produced over 1.2 MMBO from the ODSK-33, 38 and 41 wells.

The Kuparuk C reservoir within the OKPA is expected to be developed with five to eight horizontal wells with an equal number of producers to injectors. Annualized peak production from the Kuparuk C is expected to be between 2,000 and 8,000 BOPD.

C. Conclusion

Over the past two years, the Division has met with Pioneer regarding proposed Plans of PODs and the PA applications and to discuss the geology and engineering characteristics of the reservoirs within the OU. During these meetings, Pioneer has provided to the Division a full complement of data in support of the proposed PAs and PODs. Geologic and geophysical data submitted included maps and digital grids of depth structure, gross thickness, net pay, porosity and hydrocarbon pore feet for both the Kuparuk C and Nuiqsut intervals. Also included were well and seismic cross sections, calculated petrophysical curves, calculated average rock properties for each well, and a geologic summary of the area. Engineering data submitted by Pioneer included well test data from the recently drilled wells in the area, as well as data and analyses of reservoir fluids, relative permeability, capillary pressure and PVT properties.

Review of this data and evaluation of the subsurface geology by the Division supports the formation of the OKPA.

3. Plans of Exploration and Development for the Proposed Oooguruk Unit Kuparuk Participating Area

The Oooguruk Unit Initial Plan of Exploration (OU POE), effective June 11, 2003, with five year term, required Pioneer to drill three exploration wells. Pioneer met this requirement. The OU POE also required that on June 1, 2008, if ADL 388570, 388569, and 388576 were not included in a participating area or approved Plan of Exploration or Plan of Development, which included a firm commitment to drill, the leases would contract out of the unit.

ADLs 388570, 388569, and 388576 are not included in the Application. The OU 2nd POD did not commit to drill any of these leases. Effective June 1, 2008, the leases contracted from the unit.

During the 1st OU POD, effective from June 11, 2007 through June 11, 2008, Pioneer completed development activities and construction of infrastructure required to proceed with the drilling of development wells: ODS, sub-sea flowline, surface flowline to the onshore OTP and installation of MPFMs. Pioneer also submitted the Application and applied for AOGCC pool rules and approval of the use of MPFMs. Drilling commenced in December 2007 with completed wells being produced as tract operations until approval of the OKPA. Effective January 1, 2008, Pioneer executed the Production Processing

Services Agreement (PPSA) with the KRU owners allowing for processing of OU produced fluids and sharing of infrastructure. Pioneer elected not to build a stand-alone processing facility. The AOGCC approved pool rules for the Oooguruk Kuparuk Reservoir on March 25, 2008 in Conservation Order No. 596. During the 1st OU POD Pioneer initiated production from the Oooguruk Kuparuk Reservoir, on June 6, 2008, from the ODSK 33 well, produced as a tract operation.

Pioneer received approval from the AOGCC for Area Injection Order No. 33 to allow injection of fluids for enhanced oil recovery in the Oooguruk Kuparuk Reservoir. Pioneer intends to operate a waterflood secondary recovery program for the Oooguruk Kuparuk Reservoir. The waterflood will provide improved recovery by sweeping moveable oil from injectors to producers. Under the PPSA, the KRU processing facility provides return gas and water. Development drilling will continue through 2010.

Pioneer submitted the 3rd OU POD (Attachment 5) on March 11, 2009, effective June 11, 2009 to June 11, 2010 and provided a review and technical session on May 7, 2009. The Division approved the 3rd OU POD on May 13, 2009.

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

Approval of the OKPA will provide economic benefits to the State. The long-term goal is to maximize the physical and economic recovery of hydrocarbons from productive reservoirs. Maximum hydrocarbon recovery will enhance the State's long-term royalty and tax revenue stream. Any additional administrative burdens associated with the OKPA are far outweighed by the additional royalty and tax benefits derived from production.

The four leases proposed for the OKPA have received royalty modification. Pioneer stated that the project would not have gone forward without royalty modification. The leases approved for royalty modification received the following reduction to royalty: for the three NPS leases, a reduction in royalty to 5 percent until NPS payments first become due to the State from ADL 355036 at which time the royalty rate will increase by 1.875 percent each year for 3 years until restored to 12.5 percent at the beginning of the 4th year and the NPS rate will remain at 30 percent. The fourth lease would be restored from 5 percent royalty to its full 16.6667 percent royalty also at the beginning of the 4th year.

Approval of the OKPA in conjunction with the royalty modification will enable Pioneer to develop and produce resources. The confidential PPSA between OU and KRU WIOs represents the successful implementation of a facilities sharing agreement on the North Slope and achieves one of the goals set out in the Charter for Development of the Alaskan North Slope. Current and future lessees who do not own facilities will benefit greatly from an established method of contracting for processing and flowline facilities.

4.1 Facility Sharing, Metering, and Production Allocation

Pioneer applied to the AOGCC for approval to use MPFMs to measure and allocate oil production between the ONPA and OKPA. Pioneer and ConocoPhillips Alaska Inc., Operator of the KRU, jointly requested approval of a method of determining pool

production and allocation for commingled OU and KRU production and a waiver of 20 AAC 25.228 to use MPFMs. This is the first application received by the AOGCC and the Division for approval to commingle and allocate production between units. Although the commingled OU and KRU production will be measured in accordance with 20 AAC 25.228, the accuracy of OU production measurements will be less certain than would be the case if the measurements were performed by a typical Lease Automatic Custody Transfer (LACT) under 20 AAC 25.228(g).

20 AAC 25.228 requires that hydrocarbon measurement for custody transfer be performed in accordance with the American Petroleum Institute Manual of Petroleum Measurement Standards. Those standards apply to LACT meters which measure single phase sales quality oil. Multiphase meters provide separate measurement of oil, gas, and water, in a three phase fluid stream, but do not measure oil with the same degree of precision as a LACT meter. LACT meters are considered to have a measurement error band of +/- 0.25 percent and are deemed true and correct for custody transfer. MPFMs can have a much higher error band. A significant source of inaccuracy in measurement occurs when using MPFMs to measure a three phase stream containing a high, (greater than 80 percent), gas volume fraction. Gas volume fraction encountered in the range of operations for the OKPA and ONPA commingled stream will be much lower and will minimally impact meter accuracy. Data reported to the AOGCC and the Division indicate that the risk of inaccuracy is randomly distributed (no bias) i.e., it is equally likely that the meters will overreport volumes as often as they underreport volumes.

The Division approves the use of MPFMs for well testing and allocation between wells, between the ONPA and the OKPA, and between the OU and the KRU, subject to the same terms and conditions specified in AOGCC Conservation Order Nos. 596.007, 597.007, 432D.007, 406B.008, 430A.008, 435A.007, and 456A.007.

4.2 Point of Production and Transportation Deduction

11 AAC 83.295(23) defines the point of production for oil as the automatic custody transfer meter or unit through which oil enters into the facilities of a carrier pipeline or other transportation carrier. When there is no LACT meter, the point of production is the outlet flange of the tank gauge or DNR may approve another mechanism or device to measure the quantity of oil tendered and accepted into the facilities of a carrier pipeline or other transportation carrier. The point of production, as defined in the PPSA is the "Petroleum Delivery Point means the tailgates of KRU CPF1 and CPF2 where petroleum enters the KTC Kuparuk Pipeline." No transportation deduction will be allowed for transportation of non-sales quality oil. The cost of transportation from OTP to the KRU facilities, although outside the OU boundary, is considered a gathering line for the purposes of calculating allowable transportation deductions.

4.3 Shrinkage and Loss Factor

Shrinkage and loss factors are used to determine the correct sales volumes of produced oil. Shrinkage is the calculation required to convert the volume of oil measured at reservoir conditions to surface conditions (14.65 psi, 60 F). Due to differences in pressure, temperature, and composition between reservoir conditions and surface

conditions, a barrel of oil at reservoir conditions “shrinks” when brought to surface conditions. Every reservoir has a unique conversion factor, known as Formation Volume Factor (FVF), or B_o . For example, a reservoir barrel may be 1.05 times larger than the same barrel at surface conditions. A surface barrel is a shrunken reservoir barrel.

For OU production, the MPFMs used for well testing provide data for the calculation of a separate shrinkage factor for the OKPA and ONPA production. The Oooguruk OTP MPFM records, at line conditions, temperature and pressure, and oil, water, and gas rates. The KRU Operator has simulated the flash from the ODS to the crude separator at KRU CPF3. Wet crude is then sent to KRU CPF1 where it is flashed at the crude separator and then to atmospheric tank conditions. The stages of simulated flash are presented as a series of discrete look-up tables which correlate B_o with temperature and pressure. The simulation was created with historical KRU facility data and actual Oooguruk PVT data. The KRU Operator uses the Oooguruk MPFM data and the lookup tables to determine the shrinkage factor utilized in the final allocation of Oooguruk sales quality production available for delivery into the Kuparuk Pipeline. The Shrinkage Factor methodology utilized under the PPSA uses Oooguruk MPFM production data at line conditions to calculate and allocate Oooguruk stock tank barrels as measured by the KRU LACT meters.

KRU production will be commingled with OU production. The PPSA specifies a methodology to calculate Shrinkage Factors for each of the distinct fluid streams. The Shrinkage Factor will change periodically to reflect the varying composition of the produced and commingled fluids.

Loss is the amount of oil remaining in the three phase fluid stream after processing. Processing of three phase fluid does not remove 100 percent of the oil from the fluid stream. There is always a deemed volume of oil “lost”. The Loss Factor is applied to the shrunken barrels to calculate final sales barrels as follows: $(\text{Wet barrels} - \text{Shrinkage}) \times (\text{Loss Factor}) = \text{Dry (Sales Quality) barrels}$. The PPSA also specifies a Loss Factor which is subject to future adjustment.

4.4 Plant Fill and Back-out

The PPSA specifies a volume of oil which is the OU’s proportionate share of plant fill required for the operation of the KRU processing facility. This volume, when sold (passes point of production), will be royalty bearing. This volume will be considered to be the last volume of OU fluid processed and sold from OU. The State will not receive the royalty for this volume until the end of OU production, possibly twenty five years from now. However, the plant fill volume from OU will make available the same volume of KRU production, no longer needed for plant fill. That KRU production bears an average royalty of approximately 12.5 percent compared to the current modified OU rate of 5 percent and the State benefits from the difference in royalty rate of 7.5 percent. Since OU currently pays a modified royalty rate of 5 percent, but will pay the NPS rate of 30 percent after payout, the future higher royalty rate will further compensate the State

for the deferral of royalty payment on plant fill volumes. The Division will not require payment of royalty for the OU plant fill volumes until produced and sold.

Backout is the lost or deferred KRU production that results from Oooguruk's use of KRU processing capacity and the associated postponement of KRU production. Backout is a cost of facility sharing; incremental production from OU made possible by facility sharing is a benefit. The PPSA requires the OU WIOs to compensate the KRU WIOs for back-out by transferring the specified barrels at Pump Station One (PS#1). In effect, the OU sales volumes, which currently pay 5 percent royalty, will be used to compensate KRU for sales volumes which, if produced now, would have borne 12.5 percent royalty. The State defers collecting 7.5 percent on the backout volumes until those volumes are later produced by KRU. However, after payout, those OU sales volumes will pay the NPS royalty rate of 30 percent, at which time the State will benefit by receiving a royalty rate 17.5 percent higher than what it would otherwise receive for KRU sales volumes. The Division will not require OU to compensate the State for the current backout volume royalty difference of 7.5 percent.

4.5 Tract Allocation and Redetermination Schedule

Pioneer submitted a tract allocation schedule that describes how the OU WIOs plan to allocate the production and costs between the leases in the OKPA as required by 11 AAC 83.371 (Attachments 1- 4). Under this schedule, Pioneer owns 70 percent, and Eni owns 30% percent of the production from the proposed OKPA. Article 11 of the OU Operating Agreement describes the timing of and methodology for the determination of tract participation for Initial Participation, Interim, and Final Determinations agreed to by the OU WIOs. The article specifies approval and arbitration procedures, data requirements, deadlines, and calculation methodology. The Initial Participations shall be based on acreage. The Interim Determination will be based on Original Oil in Place (OOIP). The Final Determination will be based on the value of recoverable hydrocarbons and the portion of costs allocated to each tract, and will consider OOIP and original gas in place (OGIP), if a gas cap is present. The Final Determination is due not less than four years from the date of commencement of sustained commercial production of unitized substances and may be postponed for up to three years. Each Determination will revise allocation factors (tract participation) retroactively to the effective formation date of the OKPA. The Division approves Pioneer's proposed tract participation and determination schedule for allocating production and costs among the leases within the OKPA.

4.4 Gas Disposition

The PPSA provides for processing of three phase OU fluid, and the return of gas and water for reservoir pressure maintenance and enhanced oil recovery at OU. The PPSA also provides for a certain volume of OU gas to be retained by KRU to compensate KRU for OU's share of fuel and flare gas. OU's share is determined by the ratio of OU processed volume to total processed volume. The Division agrees that gas returned to OU for use at OU, and OU's proportionate share of fuel and flare gas will not bear royalty until produced and sold.

The Division recognizes that until the majority of the Nuiqsut injectors are completed, Oooguruk Kuparuk Reservoir wells may produce gas volumes in excess of the volume

returned to OU and the volume needed for the fuel and flare obligation. This excess gas, “gifted” by OU, would be disposed of at KRU and used for injection and enhanced oil recovery within the KRU. To the extent that the excess OU gas is disposed of at KRU, the Division agrees that for the first two years of production, those excess volumes will not bear royalty. The Division approves this arrangement because it would be burdensome for the Division and the OU WIOs to track and report the relatively small amount of excess gas produced by OU during this time, and because the initial modified royalty rate for OU is lower than the field wide effective royalty rate for the KRU. OU gas used for enhanced oil recovery at KRU will increase KRU production which bears a 12.5 percent royalty.

The Division will consider whether to require a gas disposition report for other participating areas in other units on a case-by-case basis, and will re-consider gas disposition reporting for OU after July 1, 2010.

4.5 NPSL Accounting

The OKPA includes three NPS leases, ADLs 355036, 355037, and 355038. Pioneer proposes that expenses be broadly captured in four different cost centers:

- a. Well costs
Costs will be first allocated to the specific participating area into which the wells are drilled and then to each tract within the participating area by the tract allocation factor
- b. ODS costs
Including drillsite facilities, well-bay modules, and flowline manifolds.
Costs will be allocated to each PA by relative well count and then to each Tract within PA by the tract allocation factor.
- c. Flowline costs
Including all costs downstream of the ODS: sub-sea production, gas, water and diesel flowlines, shore crossings, above ground VSM supported flowlines and all facilities at the OTP.
Costs will be allocated to the specific PA by relative total reserves contribution and then to each tract within a PA by the tract allocation factor.
The Division agrees with proposed cost center methodology.
- d. Gas injection costs
Including compression and injection equipment.
Costs will be first allocated exclusively to the ONPA and then to each Tract within PA by the tract allocation factor.

The Division approves the proposed cost center allocation methodology.

The Director’s Decision approving royalty modification effective February 1, 2006 specified the deemed true and correct NPS lease balance and is repeated here for clarity:

The NPS lease regulations set out in 11 AAC 83.201 – 11 AAC 83.295 remain in full force and effect. However, Pioneer’s request that the current unaudited NPS

lease balance of \$80,000,000.00 as of January 1, 2005, be deemed true and correct and not be subject to future adjustment resulting from audit, is approved.

- a. The \$80,000,000.00 NPS lease balance will be allocated to the NPS leases (ADLs 355036, 355037, 355038, and 355039) pursuant to the final participating area redetermination.

B. Decision Criteria Considered Under 11 AAC 83.303(a)

1. Promote the Conservation of All Natural Resources

The formation of oil and gas units, as well as the formation of PAs within units, generally conserves hydrocarbons. Coordinated development of leases held by diverse parties maximizes total hydrocarbon recovery and minimizes waste. Formation of the OKPA to reflect the current development plans provides for efficient, integrated development of the Ooguruk Kuparuk Reservoir within the OU. A comprehensive operating agreement and plan of development governing the area will help avoid duplicative development efforts on and beneath the surface.

Producing hydrocarbon liquids from the Ooguruk Kuparuk Reservoir through the existing KRU processing facilities will reduce the incremental environmental impact of the additional production. Producing oil and gas from the OKPA through the KRU facility reduces the incremental environmental impact of the production and helps maximize hydrocarbon recovery, while minimizing negative impacts on all other natural resources. Any additional facilities OU WIOs may construct at a later date would be independently reviewed to assess environmental impacts.

2. The Prevention of Economic and Physical Waste

Generally, the formation of a PA facilitates the equitable division of costs and allocation of production, and provides for a coordinated development plan, which helps maximize hydrocarbon recovery from a reservoir. Formation of a PA which enables both facility sharing opportunities and adoption of a unified reservoir management strategy allows economically marginal hydrocarbon accumulations to be developed. Formation of the OKPA promotes complete development of a reservoir with variable productivity and profitability across adjoining leases.

Coordinated development under an equitable PA allocation schedule advances production and sales of the State's hydrocarbon resources, minimizes impacts to the region's cultural and environmental resources, and is in the State's best interest. Use of existing facilities and infrastructure prevents economic and physical waste.

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

Maximum hydrocarbon recovery promotes the State's economic interest. Diligent exploration and development under a single approved unit plan without the complications of competing leasehold interests promotes the State's interest. The formation of the

OKPA advances the efficient evaluation and development of the State's resources, minimizes impacts to the area's cultural, biological, and environmental resources which protect the State's interest.

Formation of the OKPA protects the economic interests of all parties. Combining interests and operating under the terms of the OU Agreement and OU Operating Agreement assures each individual WIO an equitable allocation of costs and revenues commensurate with the resources of its leases. Operating under the OU Agreement 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.

The KRU WIOs executed the PPSA, agreeing to provide processing services to OU by sharing the existing KRU processing capacity and infrastructure. Using the KRU infrastructure and facilities eliminates the need to construct stand-alone facilities to process production from the Oooguruk Kuparuk Reservoir; optimizing production while preventing economic and physical waste protects all parties.

IV. FINDINGS AND DECISION

A. The Conservation of All Natural Resources

1. The approval of the OKPA will conserve all natural resources, including hydrocarbons, gravel, sand, water, wetlands, and valuable habitat.
2. The development and operation of these leases under a unit agreement and approved participating area 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. All unit development must proceed according to an approved plan of development. The State, Division, and local agencies have issued various approvals for OU development. Future operations will require similar review and approval. DNR may condition its approval of a future unit Plan of Operations or permits on performance of mitigation measures. Compliance with mitigation measures will minimize, reduce or completely avoid adverse environmental impacts.

B. The Prevention of Economic and Physical Waste

1. Geological, geophysical and engineering data were submitted to the Division in support of the Application. Based upon this data, the OKPA is 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 production of hydrocarbons in paying quantities.

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

1. The OKPA adequately and equitably protects the public interest, and is in the State's best interest.
2. The OKPA meets the requirements of 11 AAC 83.351.
3. The formation of the OKPA 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 the OU Agreement.
4. The OKPA approval is effective retroactive to June 1, 2008. This approval meets the requirement of Article V.C.10 of the approval of the 1st Expansion of the Oooguruk Unit: that by June 1, 2010, Pioneer shall obtain approval of the Kuparuk PA.
5. The Division approves the use of MPFMs for well testing and allocation between wells, between the OKPA and the ONPA and between the OU and the KRU, subject to the same terms and conditions specified in AOGCC Conservation Order Nos. 596.007, 597.007, 432D.007, 406B.008, 430A.008, 435A.007, and 456A.007.
6. A transportation deduction will not be allowed for transportation of non-sales quality oil. The cost of transportation from OTP to CPF3 is considered a gathering line for the purposes of calculating allowable transportation deductions.
7. The Division agrees that gas returned to OU for use at OU, and OU's proportionate share of fuel and flare gas will not bear royalty and that gifted gas (OU gas in excess of that volume needed for fuel and flare at KRU) retained at KRU for use within KRU, will not pay royalty. Gas disposition reporting for OU will be reviewed after July 1, 2010.
8. The Division will not require payment of royalty for the OU plant fill volumes until produced and sold. The Division will not require OU to compensate the State for the backout volume royalty difference.
9. The Division approves Pioneer's OKPA tract allocation schedule for allocating production and costs among the leases in the OKPA.
 - a. Accounting Unit codes OO01 and OO04 are terminated effective July 31, 2009- Production Month of June 2009. The Accounting Unit code for the OKPA is OOKU.
 - b. Pioneer must submit revised operator reports and the lessees must submit revised royalty reports back to the start of production, zeroing out

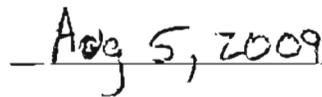
production under royalty accounting unit codes OO01 and OO04 and allocating all production to the OKPA royalty accounting code OOKU as set forth in the approved OKPA tract allocation schedule.

- c. These revised reports will be submitted within 60 days after the approval of the formation of the OKPA. Oooguruk invoices from the quality bank administrator must accompany these revised reports and all future royalty reports (A1).
 - d. If the reports and Oooguruk invoices from the quality bank administrator are not submitted within 60 days (October 4, 2009) of this approval, an Administrative Fee will be assessed under 11 AAC 04.080 for all revised reports and quality bank invoices that are not submitted by the due date.
10. The NPS lease regulations set out in 11 AAC 83.201 – 11 AAC 83.295 remain in full force and effect. Pioneer's request that the current unaudited NPS lease balance of \$80,000,000.00 as of January 1, 2005, be deemed true and correct and not be subject to future adjustment resulting from audit, is approved.
- a. The \$80,000,000.00 NPS lease balance will be allocated among the NPS leases (ADLs 355036, 355037, 355038, and 355039) pursuant to the final participating area redetermination.

For the reasons discussed in this Findings and Decision, I hereby approve the OKPA subject to the conditions set out in this decision. The OKPA is effective retroactive to June 1, 2008.

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 Tom Irwin, 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.


Kevin R. Banks,
Director
Division of Oil and Gas


Date

V. ATTACHMENTS

1. Exhibit C, OKPA Tracts/leases
2. Exhibit D, Map of the OKPA within the Oooguruk Unit Boundary
3. Exhibit E, Allocation of Participating Area Expense
4. Exhibit F, Allocation of Unit Area Expense
5. Exhibit G, Oooguruk Unit 3rd Plan of Development

ATTACHMENT ONE
Exhibit C, OKPA Tracts/leases

Exhibit C
Kuparuk Participating Area
 Attached to and made a part of that certain Oooguruk Unit Agreement

Unit Tract #	Lessor & Lease No.	Working Interest Owner	Working Interest	Effective Date	Description	Acreage	Royalty	ORR Burden	Unit Tract Participation (based on surface acreage)
13	State of AK ADL 355036	Pioneer Natural Resources Alaska, Inc. Eni Petroleum US LLC Upper Interval (i.e. the interval from the surface down to the stratigraphic equivalent of 8,373' (Driller's total depth +100') which is equivalent to 8,402' (Wireline Logger's total depth + 100') below the Kelly Bushing as shown on the Dual Laterolog Run #3 log dated April 5, 1992, in the ARCO-Kalubik #1 well located in Sec. 11, T.13 N., R. 7 E., U.M., known in the DNR computer records as "Segment 1" of the Lease.)	70.000000% 30.000000%	8/1/83	T13N, R7E, UMIAT MERIDIAN Sec 1: Protracted, W/2 SW/4 Sec 2: Protracted, S/2, S/2 NW/4, NW/4 NW/4 Sec 3: Protracted, All Sec 10: Protracted, E/2, E/2 NW/4, NW/4 NW/4 Sec 11: Protracted, All Sec 12: Protracted, W/2, W/2 Sec 13: Protracted, SW/4 NE/4, SE/4, W/2 Sec 14: Protracted, E/2, NE/4 SW/4, SE/4 NW/4, NW/4 Sec 15: Protracted, N/2, NE/4	3,480.00	12.5%* 30% NPS	Total 5.021390% See Details Below	67.44186%
14	State of AK ADL 355037	Pioneer Natural Resources Alaska, Inc. Eni Petroleum US LLC Upper Interval (i.e. the interval from the surface down to the stratigraphic equivalent of 8,373' (Driller's total depth +100') which is equivalent to 8,402' (Wireline Logger's total depth + 100') below the Kelly Bushing as shown on the Dual Laterolog Run #3 log dated April 5, 1992, in the ARCO-Kalubik #1 well located in Sec. 11, T.13 N., R. 7 E., U.M., known in the DNR computer records as "Segment 1" of the Lease.)	70.000000% 30.000000%	8/1/83	T13N, R7E, UMIAT MERIDIAN Sec 4: Protracted, NE/4, N/2, SE/4, SE/4 SE/4, NW/4 SW/4, E/2 NW/4	400.00	12.5%* 30% NPS	Total 5.0767380% See Details Below	7.75194%
15	State of AK ADL 355038	Pioneer Natural Resources Alaska, Inc. Eni Petroleum US LLC Upper Interval (i.e. the interval from the surface down to the stratigraphic equivalent of 8,373' (Driller's total depth +100') which is equivalent to 8,402' (Wireline Logger's total depth + 100') below the Kelly Bushing as shown on the Dual Laterolog Run #3 log dated April 5, 1992, in the ARCO-Kalubik #1 well located in Sec. 11, T.13 N., R. 7 E., U.M., known in the DNR computer records as "Segment 1" of the Lease.)	70.000000% 30.000000%	8/1/83	T13N, R7E, UMIAT MERIDIAN Sec 23: Protracted, NE/4 NE/4 Sec 24: Protracted, E/2, E/2 SW/4, NW/4 SW/4, NW/4 Sec 25: Protracted, NE/4	800.00	12.5%* 30% NPS	Total 5.0767380% See Details Below	15.50388%
17	State of AK ADL 389959	Pioneer Natural Resources Alaska, Inc. Eni Petroleum US LLC	70.000000% 30.000000%	9/1/02	T14N, R7E, UMIAT MERIDIAN	480.00	16.66667%*	Anadarko Petroleum Corp 4.25000%	9.30233%

Exhibit C
Kupurak Participating Area
 Attached to and made a part of that certain Ooguruk Unit Agreement

Unit Tract #	Lessor & Lease No.	Working Interest Owner	Working Interest	Effective Date	Description	Acreage	Royalty	ORR Burden	Unit Tract Participation (based on surface acreage)
					Sec. 33; Protracted, S/2 Sec. 34; Protracted, SW/4 SW/4, S/2 SW/4, NW/4 SW/4	5,160.00			100.00000%

Exhibit C
Kuparuk Participating Area
Attached to and made a part of that certain Oooguruk Unit Agreement

Unit Tract #	Lessors & Lease No.	Working Interest Owner	Working Interest	Effective Date	Description	Acreage	Royalty	ORR Burden	Unit Tract Participation (based on surface acreage)
		WORKING INTEREST OWNERS-All Tracts and Intervals							
		Pioneer Natural Resources Alaska, Inc.							
		700 G Street, Suite 600							
		Anchorage, AK 99501							
		Eni Petroleum US LLC							
		1201 Louisiana St., Suite 3500							
		Houston, TX 77002-5609							

* The state's royalty interest in ADL 355036, ADL 355037, ADL 355038, ADL 355039, ADL 389950, ADL 389952, ADL 389954, ADL 389958, and 389959 is subject to that certain Final Findings and Determination of the Commissioner of DNR dated February 1, 2006 (modifying royalty under the leases in response to the Oooguruk Development Royalty Modification Application filed on May 20, 2005).

Exhibit C

Kuparuk Participating Area

Attached to and made a part of that certain Oooguruk Unit Agreement

Unit Tract #	Lessor & Lease No.	Working Interest Owner	Working Interest	Effective Date	Description	Acreage	Royalty	ORR Burden	Unit Tract Participation (based on surface acreage)
Tract 13 Upper Interval		Hunt Petroleum Corporation 1601 Elm Street, Suite 4700 Dallas, TX 75201						0.25210000%	
		Eni Petroleum US LLC 1201 Louisiana, Suite 3500 Houston, TX 77002						0.51420000%	
		Western Natural Resources Alaska, Inc. 7000 G Street, Suite 600 Anchorage, AK 99501						1.20000000%	
		ConocoPhillips Alaska, Inc. 700 G Street Anchorage, AK 99501						2.50000000%	
		William D. Amundson 116 Village Road Englewood, CO 80110						0.40400000%	
		GMT Exploration Company LLC 2560 Broadway, Suite 800 Denver, CO 80202						0.07400000%	
		Jesse V. Sommer 4531 West Gerules Avenue Littleton, CO 80128						0.01200000%	
		Edgar Kerr 155 Spotted Deer Lane Franktown, CO 80116						0.01200000%	
		Jeffery A. Lysko 91 Buckhorn Drive Littleton, CO 80122						0.01200000%	
		Pauline M. Reed P.O. Box 411 Franktown, CO 80116						0.01200000%	
		Matthew X. Furrer 2001 South Madison Denver, CO 80210						0.01200000%	
		Stuart W. Grafton P.O. Box 4625 Huntsville Bay, TX 78657						0.01200000%	

Exhibit C
Kuparak Participating Area
Attached to and made a part of that certain Oooguruk Unit Agreement

Unit Tract #	Lessor & Lessee No.	Working Interest Owner	Working Interest	Effective Date	Description	Acreage	Royalty	ORR Burden	Unit Tract Participation (based on surface acreage)
		Chester E. Paris 1208 Main Court Golden, CO 80403						0.0051000096	

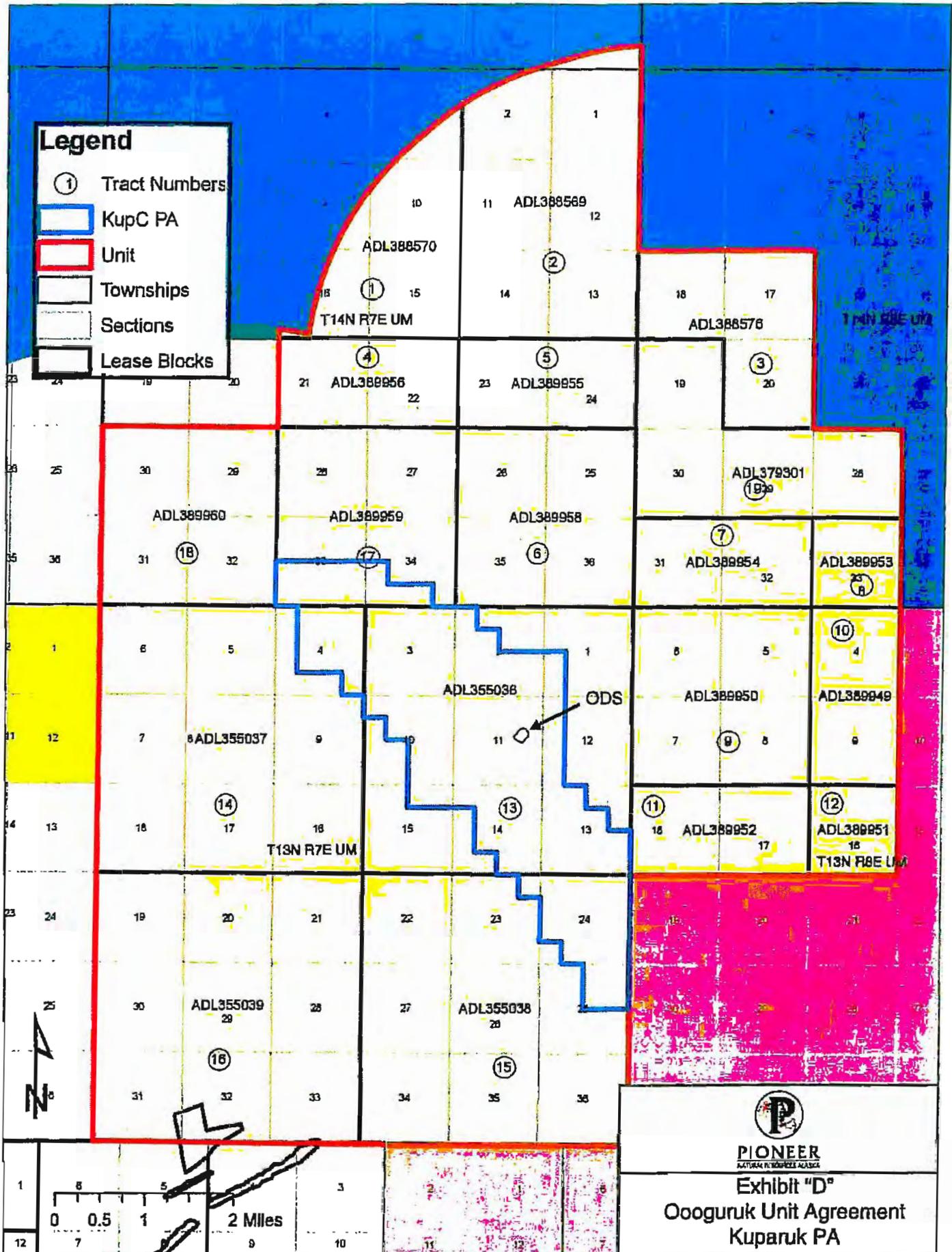
Exhibit C
Kuparuk Participating Area
Attached to and made a part of Unit certain Oooguruk Unit Agreement

Unit Tract #	Lessor & Lease No.	Working Interest Owner	Working Interest	Effective Date	Description	Acreage	Royalty	OIR Burden	Unit Tract Participation (based on surface acreage)
Tracts 14 and 15 are burdened by overriding royalties held by the following parties in the stated percentages:									
Tracts 14 & 15 Upper Interval		Amalthea Petroleum Corporation P.O. Box 1330 Houston, TX 77251-1330						0.09354800%	
		David L. Herby 2142 W. Dry Creek Ct. Littleton, CO 80120						0.67500000%	
		Elmer L. Herby 1837 Cape Cod Way Littleton, CO 80120						0.67500000%	
		Hunt Petroleum Corporation 1601 Elm Street, Suite 4700 Dallas, TX 75201						0.12605000%	
		George Alvin Ayers, Jr. 3524 Blainwood Lane Pflug, TX 75023						0.15800000%	
		Eni Petroleum US LLC 1201 Louisiana, Suite 3500 Houston, TX 77002						0.25714000%	
		Pioneer Natural Resources Alaska, Inc. 700 G Street, Suite 600 Anchorage, AK 99501						0.60000000%	
		ConocoPhillips Alaska, Inc. 700 G Street Anchorage, AK 99501						2.00000000%	

ATTACHMENT TWO
Exhibit D, Map of the OKPA

Legend

- ① Tract Numbers
- KupC PA
- Unit
- Townships
- Sections
- Lease Blocks



PIONEER
NATURAL RESOURCES SERVICES

Exhibit "D"
Oooguruk Unit Agreement
Kuparuk PA

ATTACHMENT THREE
Exhibit E, Allocation of Participating Area Expense

Exhibit E
Kuparuk Participating Area
 Attached to and made a part of that certain Ooguruk Unit Agreement

Unit Tract #	Lessor & Lease No. State of AK	Working Interest Owner	Working Interest	Effective Date	Description	Average	Royalty	OTRR Expenses	PA Expense
13	ADL 355036	Pioneer Natural Resources Alaska, Inc. Eni Petroleum US LLC Upper interval (i.e. the interval from the surface down to the stratigraphic equivalent of 8,373' (Driller's total depth + 100') which is equivalent to 8,402' (Wireline Logger's total depth + 100') below the Kelly Bushing as shown on the Dual Laterolog Run #3 log dated April 5, 1992, in the ARCO-Kalitik #1 well located in Sec. 11, T.13 N., R. 7 E., U.M., known in the DNR computer records as "Segment 1" of the Lease.)	70.000000% 30.000000%	8/1/83	T13N, R7E, UMIAT MERIDIAN Sec 1: Protracted, W/2 SW/4 Sec 2: Protracted, S/2, S/2 NW/4, NW/4 NW/4 Sec 3: Protracted, All Sec 10: Protracted, E/2, E/2 NW/4, NW/4 NW/4 Sec 11: Protracted, All Sec 12: Protracted, W/2 W/2 Sec 13: Protracted, SW/4 NE/4, SE/4, W/2 Sec 14: Protracted, E/2, NE/4 SW/4, SE/4 NW/4, N/2 NW/4 Sec 15: Protracted, N/2 NE/4	3,480.00	12.5%* 30% NPS	Total 0.021990% See Details Below	67,441,866%
14	ADL 355037	Pioneer Natural Resources Alaska, Inc. Eni Petroleum US LLC Upper interval (i.e. the interval from the surface down to the stratigraphic equivalent of 8,373' (Driller's total depth + 100') which is equivalent to 8,402' (Wireline Logger's total depth + 100') below the Kelly Bushing as shown on the Dual Laterolog Run #3 log dated April 5, 1992, in the ARCO-Kalitik #1 well located in Sec. 11, T.13 N., R. 7 E., U.M., known in the DNR computer records as "Segment 1" of the Lease.)	70.000000% 30.000000%	8/1/83	T13N, R7E, UMIAT MERIDIAN Sec 4: Protracted, NE/4, N/2 SE/4, SE/4 SE/4, NW/4 SW/4, E/2 NW/4	400.00	12.5%* 30% NPS	Total 5.0767380% See Details Below	7,751,94%
15	ADL 355038	Pioneer Natural Resources Alaska, Inc. Eni Petroleum US LLC Upper interval (i.e. the interval from the surface down to the stratigraphic equivalent of 8,373' (Driller's total depth + 100') which is equivalent to 8,402' (Wireline Logger's total depth + 100') below the Kelly Bushing as shown on the Dual Laterolog Run #3 log dated April 5, 1992, in the ARCO-Kalitik #1 well located in Sec. 11, T.13 N., R. 7 E., U.M., known in the DNR computer records as "Segment 1" of the Lease.)	70.000000% 30.000000%	8/1/83	T13N, R7E, UMIAT MERIDIAN Sec 23: Protracted, NE/4 NE/4 Sec 24: Protracted, E/2, E/2 SW/4, NW/4 SW/4, NW/4 Sec 25: Protracted, NE/4	800.00	12.5%* 30% NPS	Total 5.0767380% See Details Below	15,503,88%
17	ADL 389959	Pioneer Natural Resources Alaska, Inc. Eni Petroleum US LLC	70.000000% 30.000000%	9/1/02	T13N, R7E, UMIAT MERIDIAN Sec 33: Protracted, S/2 Sec 34: Protracted, SW/4 SW/4, S/2 SW/4, NW/4 SW/4	480.00	10.666667%*	Anatirko Petroleum Corp 4.250000%	9,302,33%
						5,160.00			100,000,000%

* The state's royalty interest in ADL 355036, ADL 355037, ADL 355038, ADL 389950, ADL 389951, ADL 389952, ADL 389954, ADL 389958, and 389959 is subject to that certain Final Findings and Determination of the Commissioner of DNR dated February 1, 2006 (modifying royalty under the leases in response to the Ooguruk Development Royalty Modification Application filed on May 20, 2005).

ATTACHMENT FOUR
Exhibit F, Allocation of Unit Area Expense

Exhibit F
Kuparuk Participating Area
 Attached to and made a part of that certain Oroganuk Unit Agreement

Pioneer Natural Resources Alaska, Inc., as the Oroganuk Unit Operator, estimates the total Unit economic reserves will be contributed 93% from the Nuiqsut PA and 7% from the Kuparuk PA. The current Unit Plan of Development anticipates, by splitting a total of 34 wells for Oroganuk developments, five wells in the Kuparuk and 29 in the Nuiqsut. On a relative well count basis (4,7059% of the unit wells will be drilled to produce Kuparuk reserves and 85.2941% of the unit wells will be drilled to produce Nuiqsut reserves. Pioneer proposes that expenses be apportioned in four different cost centers, and such costs be allocated as follows:

1. Well Costs - will be first allocated to the specific Participating Area from which the wells are drilled (Kuparuk PA or Nuiqsut PA, and then to each Tract within a PA by the PA Tract Participation factor.
2. Oroganuk Drill Site (ODS) - Costs including all artificial facilities, (i.e. well-bay facilities, flowline manifolds, etc.) will be first allocated to the specific Participating Area by relative well count and then to each Tract within a PA by the PA Tract Participation factor.
3. Flowline Costs - Cost include all downstream of the ODS, (include sep-sep lines, phase production, gas, water and diesel flowlines, shore casing and above ground vertical support member supported flowlines and all facilities at the Onshore Tie-in Pad (OTIP). These will be first allocated to the specific Participating Area by relative total reserves contribution and then to each Tract within a PA by the PA Tract Participation factor.

4. Gas Injection Costs - These include compression and injection equipment and will be first allocated exclusively to the Nuiqsut PA, and then to each Tract within said PA by the PA Tract Participation factor.

Unit Tract #	Lease & Lease No. State of AK	Working Interest Owner	Working Interest	Effective Date	Description	Acreage	Royalty	ORR Burden	Unit Tract Participation	Relative Reserve Allocation (.07 x Tract Factor)	Well Count Allocation (5/34 x Tract Factor)
13	ADL 355036	Pioneer Natural Resources Alaska, Inc. Eni Petroleum US LLC Upper Interval (i.e. the interval from the surface down to the stratigraphic equivalent of T373 (Diller's total depth +1497) which is equivalent to B402 (Whiteface Logger's total depth +1007) below the Kelly Bunking as shown on the Dual Laterolog Run #3 log dated April 5, 1992, in the ARCO-Kashalik #1 well located in Sec. 11, T.13 N., R. 7 E., D.M. known in the DNR computer records as "Segment 1" of the Lease.)	70.000000% 30.000000%	8/1/83	T13N, R7E, U13M2 MERIDIAN Sec 1: Produced, SW/4 SW/4 Sec 2: Produced, S/2, S/2 NW/4, NW/4 NW/4 Sec 3: Produced, All Sec 10: Produced, E/4, E/2 NW/4, NW/4 NW/4 Sec 11: Produced, All Sec 12: Produced, W/2, W/2 Sec 13: Produced, SW/4 NW/4, SW/4, W/2 Sec 14: Produced, E/2, N/2 SW/4, S/2 NW/4, W/2 NW/4 Sec 15: Produced, N/2, N/2	3,480.00	12.5%* 30% NPS	Total 5.021397% See Details Below	67.44186%	0.047209302	0.059179207
14	State of AK ADL 355037	Pioneer Natural Resources Alaska, Inc. Eni Petroleum US LLC Upper Interval (i.e. the interval from the surface down to the stratigraphic equivalent of M379 (Chaffin's total depth +1007) which is equivalent to B402 (Whiteface Logger's total depth +1007) below the Kelly Bunking as shown on the Dual Laterolog Run #3 log dated April 5, 1992, in the ARCO-Kashalik #1 well located in Sec. 11, T.13 N., R. 7 E., D.M. known in the DNR computer records as "Segment 1" of the Lease.)	70.000000% 30.000000%	5/1/83	T13N, R7E, U13M2 MERIDIAN Sec 4: Produced, NE/4, N/2 S/2, S/2 SW/4, SW/4 NW/4 SW/4, E/2 NW/4	400.00	12.5%* 30% NPS	Total 5.0767380% See Details Below	7.75194%	0.005426357	0.011399949
15	State of AK ADL 355038	Pioneer Natural Resources Alaska, Inc. Eni Petroleum US LLC Upper Interval (i.e. the interval from the surface down to the stratigraphic equivalent of S373 (Diller's total depth +1007) which is equivalent to B402 (Whiteface Logger's total depth +1007) below the Kelly Bunking as shown on the Dual Laterolog Run #3 log dated April 5, 1992, in the ARCO-Kashalik #1 well located in Sec. 11, T.13 N., R. 7 E., D.M. known in the DNR computer records as "Segment 1" of the Lease.)	70.000000% 30.000000%	8/1/83	T13N, R7E, U13M2 MERIDIAN Sec 23: Produced, NE/4 NE/4 Sec 24: Produced, E/2, E/2 SW/4, NW/4 SW/4, NW/4 Sec 25: Produced, NE/4	800.00	12.5%* 30% NPS	Total 5.0767380% See Details Below	15.50385%	0.010852713	0.022799818

Exhibit F
Kuparuk Participating Area
Attached to and made a part of that certain Ooguruk Unit Agreement

Unit Tract #	Lessor & Lease No.	Working Interest Owner	Working Interest	Effective Date	Description	Acres	Royalty	ORR Burden	Unit Tract Participation	Relative Reserve Allocation (OR x Tract Factor)	Well Count Allocation (SR x Tract Factor)
17	ADL 389959	Pioneer Natural Resources Alaska, Inc. Eni Petroleum US LLC	70.000000% 30.000000%	9/1/02	TRAK 878 URSANT HERMIDAN See 31: Paragraph 57 See 24: Paragraph SW4 SW/4, SW/8 SW/4, NW/4 SW/4	480.00	16.06667%*	Amundak Petroleum Corp 4.25000%	9.50233%	0.006511628	0.000957592
						5,100.00			100.00000%	0.070000	0.147058824

* The state's royalty interest in ADL 355076, ADL 355037, ADL 355039, ADL 389950, ADL 389952, ADL 389954, ADL 389956, and 389959 is subject to that certain Final Findings and Determination of the Commissioner of DNR dated February 1, 2006 (modifying royalty under the leases in response to the Ooguruk Development Royalty Modification Application filed on May 20, 2005).

ATTACHMENT FIVE
Exhibit G, 3rd OU Plan of Development

PIONEER

NATURAL RESOURCES ALASKA

March 11, 2009

RECEIVED

MAR 11 2009

DIVISION OF
OIL AND GAS

Mr. Kevin Banks
Alaska Department of Natural Resources
Division of Oil and Gas
550 W. 7th, Suite 1100
Anchorage, AK 99501-3561

Third Plan of Development - Oooguruk Unit, North Slope, AK

Dear Mr. Banks:

Pioneer Natural Resources Alaska, Inc. hereby submits the Third Plan of Development for the Oooguruk Unit for your approval.

Please advise if you have any questions or require additional information.

Sincerely,



Dale Hoffman

Attachment

cc: R. Province, Eni

THIRD PLAN OF DEVELOPMENT

OOOGURUK UNIT

June 11, 2009

Pioneer Natural Resources Alaska, Inc., as Operator

Eni Petroleum US LLC

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THIRD PLAN OF DEVELOPMENT OOOGURUK UNIT

This Third Plan of Development (POD) for the Oooguruk Unit (OU) is submitted by Pioneer Natural Resources Alaska, Inc. (Pioneer), as Operator, and on behalf of itself and Eni Petroleum US LLC (Eni), to the Department of Natural Resources (DNR) as required by Article 8 of the Oooguruk Unit Agreement and 11 AAC 83.343.

HISTORICAL ACTIVITIES

In June 2008 Pioneer became the first independent producer on the North Slope of Alaska by producing oil from the Oooguruk Unit. The unit comprises 16 state leases encompassing 43,236 acres. The leases are ADLs 389949, 389950, 389951, 389952, 389953, 389954, 389955, 389956, 389958, 355036, 355037, 355038, 355039, 379301, 389959, and 389960. Within the horizons currently targeted for development, Pioneer holds 70% of the working interest in each of the leases and Eni holds 30%.

1. 2008 – 2009 DEVELOPMENT UPDATE

Pioneer is actively developing the Kuparuk and Nuiqsut reservoirs and has sought approval from DNR for the Oooguruk-Kuparuk (OKPA) and Oooguruk-Nuiqsut (ONPA) participating areas.

1.1 Facilities

Construction and facility installation were completed at both ODS and OTP during the period of the Second POD. The original design basis assumed very low solids suspended in the flow stream. Plans to fracture stimulate the Oooguruk-Nuiqsut formation required facility upgrades to handle the solids on the surface. Consequently, in the summer of 2008 a sand jet system was installed in the OTP separators.

Schlumberger Vx multi-phase flow meters are being used for both well test purposes and fiscal allocation between OU and the Kuparuk River Unit (KRU).

1.2 Reservoir Management

The Alaska Oil and Gas Commission (AOGCC) issued pool rules on March 25, 2008 under Conservation Orders No. 596 and 597 for the Oooguruk-Kuparuk and Oooguruk-Nuiqsut reservoirs, respectively. Subsurface development of the Oooguruk Unit is ongoing with dedicated development wells to the Oooguruk-Nuiqsut and Oooguruk-Kuparuk oil pools with no subsurface commingling. Unitized substances are commingled on the surface. During the Second POD production was established from both the OKPA and ONPA. OKPA production was initiated on June 6, 2008 and ONPA production was initiated on August 12, 2008.

ODSK-33 drilling and production data indicate the well is connected to a large open fracture network, providing enhanced productivity. Post-production pressure data collected in the OKPA well ODSK-33 and material balance analysis suggest the well is in pressure communication with a reservoir larger than originally expected. As a result of the ODSK-33 performance data and seismic interpretation, the ODSK-38 injector was changed by drilling further north than planned in the Second POD, thereby increasing the developed area. Due to waterflood conformance concerns associated with horizontal injection in a fractured reservoir, the ODSK-38 injector was drilled as a conventional slant well rather than horizontal as proposed in the Second POD.

Although ONPA production was established in the plan period, rates from the 7365' MD undulating horizontal ODSN-40 well were lower than anticipated. Pressure transient data indicate the effective producing length is very short, possibly due to collapse of the open-hole section or significant damage to the sand face. A workover is planned in 3Q 09 to assess the wellbore condition and to improve well production capacity. A fracture stimulation evaluation was conducted for the Nuiqsut, which indicated significant benefit in both initial rate and reserves if the Nuiqsut interval is highly damaged or if it has lower permeability than expected. The modeling results are consistent with fracturing results at the Alpine field.

Area injection orders authorizing the injection of fluids for enhanced oil recovery in the Ooguruk-Kuparuk and Ooguruk-Nuiqsut reservoirs were issued by the AOGCC on April 11, 2008 as Area Injection Orders No. 33 and 34. OKPA injection in the ODSK-38 well is planned in 2Q09, subject to water supply availability. ONPA injection will be implemented upon sustained ONPA sustained production, tentatively 3Q09.

1.3 Drilling

The Second POD drilling schedule anticipated completing two Kuparuk producer/injector pairs and four Nuiqsut producer/injector pairs, along with casing six batch drilled surface holes. Drilling of the intermediate hole sections in ODSK-33 and ODSN-40 proved to be much more difficult and time consuming than anticipated. As a result fewer wells were completed over the period. Drilling activities were conducted on eight Nuiqsut wells and two Kuparuk wells; two wells are scheduled to be fracture stimulated during 2Q09. Producers and injectors are listed below:

Kuparuk Producers	Kuparuk Injectors	Nuiqsut Producers	Nuiqsut Injectors
ODSK-41	ODSK-38i	ODSN-40 ODSN-31	ODSN-32i ODSN-34i

Pioneer scheduled a workover in 3Q09 of the ODSN-40 well to improve productivity via hydraulic fracturing stimulation. Pioneer was unable to get intermediate casing to depth in the ODSN-45i well, which is now suspended.

Given suspected formation damage in ODSN-40 and the successful remediation of damage with fracture stimulations in offset fields, Pioneer evaluated the benefit of fracture stimulation of the Oooguruk-Nuiqsut production wells. Originally Pioneer planned to perform a pulse test to validate drilling orientation. Studies and engineering data from surrounding fields (Alpine, Fiord, Kuparuk) verified the maximum stress orientation was similar to natural fractures. With conclusive stress orientation data in hand, the perceived value of the pulse test diminished and Pioneer oriented the wells parallel to the faults rather than perpendicular.

Pioneer implemented the Managed Pressure Drilling (MPD) technique during the Second POD in the intermediate and production hole sections. MPD maintains a steady pressure during drilling (~12.5 ppg at all times), eliminating the stressing and destabilizing effect of pressure fluctuations on the formation.

2. 2009 - 2010 PROPOSED OPERATIONS

2.1 Facilities

No facility activities are planned during the period of this Third Plan of Development.

2.2 Reservoir Management

Pioneer plans to implement a pattern WAG flood in the Nuiqsut and waterflood in the Kuparuk utilizing horizontal wells drilled from ODS. The objectives of the WAG are to provide pressure maintenance, swell the under-saturated oil with gas and reduce in-situ viscosity of the oil, and to sweep moveable oil from injectors to producers. Although waterflood operations have been delayed, the plan remains for injection of return water supplemented by imported KRU water. Gas injection is desirable, but is subject to the Oooguruk WIO ability to acquire an adequate supply of outside gas from a third party.

2.3 Drilling

Drilling activities under the Third POD are planned to be conducted on 18 wells (16 Nuiqsut and 2 Kuparuk) and include the following producers and injectors:

Kuparuk Producers	Kuparuk Injectors	Nuiqsut Producers	Nuiqsut Injectors
ODSK-13	ODSK-14i	ODSN-04	ODSN-05i
		ODSN-37	ODSN-39i
		ODSN-36	
		ODSN-40	

Prior to the start of Oooguruk development, Pioneer perceived drilling conditions to be analogous to the Alpine development, which has in some instances since proved to be incorrect. Initial drilling revealed the mud weight required to keep the intermediate hole stable was on the order of 2 - 3 ppg higher than that of Alpine. The higher mud weight

results in longer drill times associated with lower rates of penetration due to buoyancy effects and increased difficulty in retrieving the bit from the hole (swabbing).

All Nuiqsut lateral sections were originally planned to be open-hole completions. Current plans are to install liners with fracture stimulations for producers and injection conformance equipment for injectors resulting in additional project time.

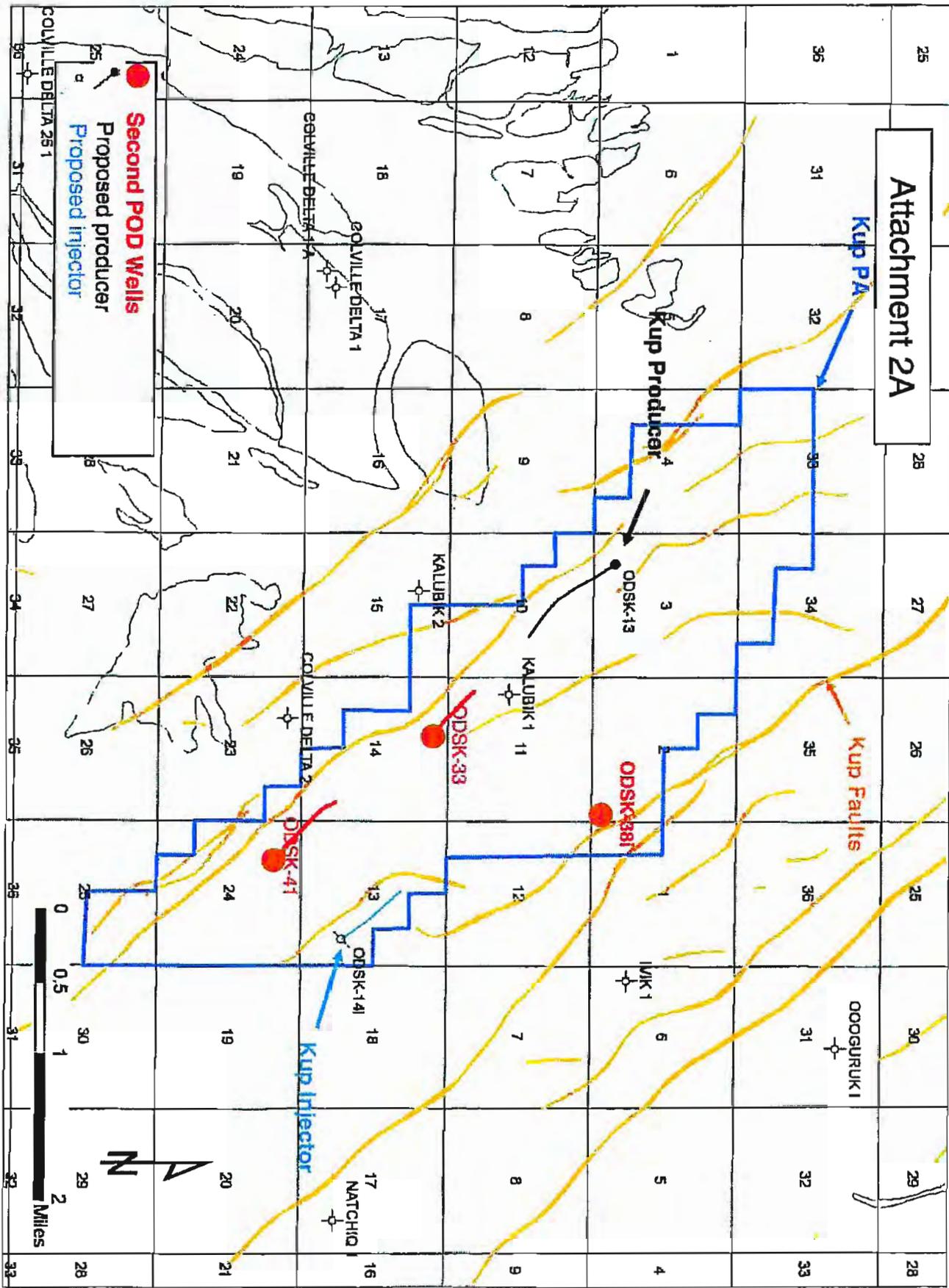
In the ODSN-40 and ODSN-45i wells, severe losses occurred while crossing large, mapped faults in the intermediate hole section. Isolation of these faults behind pipe should improve drilling times in this hole section. Pioneer is changing the casing design for some wells to allow placement of an additional casing string in the intermediate hole section of the wells and reduce some of the drilling problems associated with extended exposures and high circulating densities in this interval. The proposed casing design will consist of a 11-3/4" surface casing, an intermediate 9-5/8" drilling liner, an intermediate 7" casing string (tied back to the surface) and a 4.5" liner in the laterals.

3. PLAN OF EXPLORATION FOR LANDS NOT WITHIN A PARTICIPATING AREA

This update of the unit plan of exploration (POE) supersedes all previous plans of exploration, which are incorporated herein by reference. During the period June 11, 2008 – June 10, 2009 Pioneer continued to perform geologic and geophysical studies to improve our understanding of prospective reservoir characteristic and parameters and assist initial production from the unit. Pioneer pursued production from the Ooguruk Unit and has fulfilled its commitments under the existing POE.

This POE is for the period June 11, 2009 – June 10, 2010 and serves as a forecast of planned unit exploration activities. Pioneer will continue our geologic and geophysical analysis in association with development drilling to enhance our understanding of sub-surface characteristics and assessing our exploitation opportunities in the acreage immediately outside our development areas and at varying horizons.

Attachment 2A



Attachment 2B

