

OOOGURUK UNIT

APPLICATION FOR THE FORMATION OF THE OOOGURUK UNIT
NUIQSUT 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 the Application for Nuiqsut Participating Area and Kuparuk Participating Area, Oooguruk Unit, North Slope, Alaska (Application) on behalf of itself and Eni Petroleum US LLC (Eni). The proposed Oooguruk Unit Nuiqsut Participating Area (ONPA) encompasses all or portions of eight State oil and gas leases which lie within the boundary of the OU and comprises approximately 13,707 acres. This Decision addresses the Application for the ONPA; a separate decision addresses the Application for the Oooguruk Kuparuk Participating Area.

Effective June 1, 2008, three leases contracted from the OU pursuant to Section IV, paragraph 11, of the decision approving the formation of the unit. The contracted OU covers approximately 43,264 acres encompassing 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 Nuiqsut Reservoir within the ONPA is capable of producing or contributing to production of hydrocarbons in paying quantities.

The Division finds that the formation of the ONPA 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 ONPA as unit tract operations: ODSN 40 and ODSN 45. The effective date of the ONPA is June 1, 2008.

II. APPLICATION AND LEASE HISTORY

Pioneer submitted the Application under 11 AAC 83.351 in accordance with Articles 9.1, 9.2, and 9.3 of the Oooguruk Unit Agreement. The eight State leases proposed for the ONPA are ADLs 355036, 355037, 355038, 389950, 389952, 389954, 389958, 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 ONPA. Exhibit D is a map of the ONPA. 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. The 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 ADLs 389950, 389952, 389954, 389958, and 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. Effective July 11, 2003, ADLs 389950, 389952, 389954, and 389958 were committed in their entirety to the newly formed OU. The Division granted royalty modification to these leases, reducing the fixed royalty rate from 16.66667 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 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 ADLs 389950, 389952, 389954, 389958, and 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 proposed ONPA 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 ONPA has no additional environmental cost or benefit apart from that previously considered in approval of the OU. 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 Nuiqsut 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 ONPA 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 Nuiqsut 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 Nuiqsut 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 both the Nuiqsut sandstone within the Upper Jurassic Kingak Formation and the shallower Kuparuk C sandstone of Lower Cretaceous age in the OU. As part of this ongoing process, Pioneer applied to the Division on January 16th, 2008 for the formation of both the Oooguruk Kuparuk and Nuiqsut Reservoirs.

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

A. Geology of Nuiqsut Interval, Jurassic Kingak Formation

The Colville Delta area, which includes the producing Alpine and Fiord Fields southwest of the Oooguruk Unit (OU), is known to contain three oil-bearing intervals within the Jurassic Kingak Formation. From oldest to youngest these reservoir intervals are known as the Nechelik, Nuiqsut, and Alpine sandstones.

The regional depositional setting of the Kingak Formation in the Colville Delta area during the Jurassic is interpreted from both seismic and regional well control as a broad, very low gradient marine shelf on a south-facing passive margin. Shallow marine sediments were deposited from a northern source area that foundered in the early Cretaceous during the opening of the Canada Basin. Sedimentation on the shelf was relatively muddy due to limited accommodation space and relatively low rates of sediment input. The three successive Upper Jurassic intervals were deposited as progradational and aggradational coarsening upward units over a period of approximately 20 million years.

A number of factors likely contributed to the local deposition and preservation of reservoir quality sands in these three Jurassic intervals: eustatic and tectonic sea level changes; local topography created by normal faulting resulting from pre-breakup rift related extensional tectonics; and the point source contributions of local rivers, incised valleys, and /or eroded highlands sculpted by localized erosion during periods of low sea level.

The Alpine sand, which is the producing reservoir in the nearby Alpine Field, records the last significant sandstone pulse of Jurassic sedimentation in the vicinity of the Colville

Delta. The Alpine sandstone from the Bergschrund 1 well (discovery well for the Alpine field) produced 39° API gravity oil at a rate of 2,380 BOPD of. The Alpine interval is not present within the OU; it was apparently not deposited in the northeastern Colville Delta area, or was later eroded by the regional Lower Cretaceous Unconformity (LCU).

Depositional trends of the underlying Nuiqsut interval suggest that the Nuiqsut prograded into and is thickened in the northeastern Colville Delta and OU area. The Nuiqsut interval is cleaner, with better developed sands near the Ivik 1 and Oooguruk 1 wells (Oooguruk 1 was not tested) within the OU. Well data from the ARCO Kalubik 3 well limits the Jurassic delineation to the northwest of the OU, where the Nuiqsut interval thins and the top of the interval appears to have been truncated by the LCU. In the Natchiq 1 well the Jurassic section on well logs appears to consist predominantly of clay and silt, thus defining the extent of the Nuiqsut reservoir to the southeast. Further east, in the Unocal East Harrison Bay State 1 well, the Jurassic appears on welllogs to be composed predominantly of non-reservoir interbedded shale, siltstone and minor thin silty sandstone sequences.

Reservoir and fluid properties for the Oooguruk Nuiqsut Reservoir in Oooguruk Unit have been determined through the analyses of exploration well test data, conventional and sidewall core data, and well log data. Within the OU, the Oooguruk Nuiqsut Reservoir consists of very fine- to fine-grained, quartz rich sandstone with up to 15 percent siderite and glauconite. Reservoir porosity ranges from 10 – 20 percent and averages about 15 percent. Permeability ranges from 0.1 – 50 millidarcies and averages approximately 15 millidarcies. Estimated water saturation varies with facies and permeability and generally ranges between 40 – 60 percent for typical reservoir quality sandstone.

B. Prior Exploration and Development activities

Between 1970 and 1998, fifteen exploration wells were drilled by several companies in the area of the Colville Delta 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, the companies concluded that development was uneconomical.

Several of the prior exploration wells drilled in the Colville Delta area have evaluated and tested sandstones in the Nuiqsut interval: The Texaco Colville Delta 1 well, drilled in 1985, produced 25° API gravity oil at an average test rate of 273 barrels of oil per day (BOPD) with a maximum rate of 1,075 BOPD. The Texaco Colville Delta 2 well, drilled in 1986, produced 24° API gravity oil at a final average test rate of 485 BOPD . The Texaco Colville Delta 3 well, also drilled in 1986, produced 27° API gravity oil at an average test rate of 290 BOPD of. In 1992, the ARCO tested the Nuiqsut sandstone in the Kalubik 1 well which produced 23° API gravity oil at a rate of 336 BOPD .

In the winter of 2003, Pioneer drilled three exploration wells from ice islands in what is now the OU. The three wells were given Inupiat names: Ivik (walrus), Oooguruk

(bearded seal) and Natchiq (seal). The Oooguruk 1 well, located in Section 31, T14N, R8E, UM, was drilled as a vertical hole to a depth of 6,900 feet measured depth (MD). The Natchiq 1 well, located in Section 17, T13N, R8E, UM was drilled to a depth of 7,500' MD (-6,740' true vertical depth sub sea (TVDSS)). The Ivik 1 well, located in Section 6, T13N, R8E, UM, was drilled to a depth of 6,943' MD (-6,942' TVDSS).

Because of the similarity of the Nuiqsut interval in all three wells drilled, Pioneer only tested the Ivik 1 well. Pioneer perforated and fracture stimulated this well between 6,410 – 6,478 feet MD (-6,358 to -6,426 feet TVDSS) and tested the well at an initial rate of approximately 1,300 BOPD. During four days of tests the Nuiqsut sandstone averaged 964 BOPD.

Rotary sidewall cores were taken across the Nuiqsut interval in both the Ivik 1 and the Oooguruk 1 wells. Analyses of oil samples recovered from the Ivik 1 and Oooguruk 1 wells indicate Nuiqsut oil ranges between 19° – 24° API gravity, with a viscosity in the reservoir of 4.5 – 6.5 centipoise. This is heavier than the 39° API gravity oil produced from the Jurassic at the Alpine Field and is more akin to the oil gravity produced from the Cretaceous reservoir at the Kuparuk River Field. The Nuiqsut oil also contains 2 – 4 percent wax by weight and may contain asphaltenes. Solution gas-oil ratio ranges from 250 – 400 standard cubic feet per stock tank barrel standard cubic feet per stock tank barrel. Reservoir pressure in the Nuiqsut is 3,250 psi at 6,400 TVDSS. Bubble point pressure is about 1,900 psi

With lower oil gravities than those produced from the Alpine Field, the Jurassic Oooguruk Nuiqsut Reservoir has no direct producing analog on the North Slope. Production tests from exploration wells were all of relatively short duration; consequently it is recognized that a greater degree of uncertainty exists surrounding the eventual long-term productivity and recovery from the Oooguruk Nuiqsut Reservoir.

Pioneer drilled and completed one horizontal production well (ODSN-40) in the Oooguruk Nuiqsut Reservoir in 2008. Tract Operations were approved by the Division for production of this well in addition to three wells in the overlying Kuparuk interval prior to approval of the PA. Pioneer initiated production from the Oooguruk Nuiqsut Reservoir on August 12, 2008 from the ODSN 40 well, since then production from ODSN 40 has averaged approximately 250 BOPD. Through March 2009 ODSN 40 has produced over 25,000 barrels of oil.

The AOGCC approved pool rules for the Oooguruk Nuiqsut Reservoir on March 25, 2008 in Conservation Order No. 597. Pioneer submitted information for the Conservation Order that indicated Original Oil in Place (OOIP) ranges from 250-300 million stock tank barrels (MMSTB) in the Oooguruk Nuiqsut Reservoir. Initial estimates of primary, secondary and tertiary recovery range from 45 to 102 MMSTB. Initial development of the Oooguruk Nuiqsut Reservoir within the proposed PA is expected to be completed with 30 to 39 horizontal wells, consisting of equal number of producers and injectors. Annualized peak production from the Nuiqsut is expected to be between 9,000 and 20,000 BOPD.

C. Conclusion

Over the past two years, the Division has met with Pioneer regarding proposed Plans of Development (POD) 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 ONPA.

3. Plans of Exploration and Development for the Proposed Oooguruk Unit Nuiqsut 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 ONPA. 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 Nuiqsut Reservoir on March 25, 2008 in Conservation Order No. 597.

During the period of the 2nd OU POD, production continued from the Kuparuk, and production from the Nuiqsut Reservoir was initiated on August 12, 2008. To date Pioneer has drilled one disposal well, and completed batch drilling for surface casings for three wells, as well as completing two Nuiqsut producers, the ODSN 31 and ODSN 40 and one Kuparuk producer.

Pioneer submitted application to the AOGCC and received approval for Area Injection Order No. 34 to allow injection of fluids for enhanced oil recovery in the Oooguruk Nuiqsut Reservoir. Pioneer currently intends to operate an immiscible water alternating gas (WAG) enhanced oil recovery program for the Oooguruk Nuiqsut Reservoir using horizontal wells drilled from the ODS. The WAG flood will provide pressure maintenance, improve recovery by swelling of the under-saturated oil, decrease the viscosity of the in-situ oil and sweep 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. Rates of production lower than anticipated for the Oooguruk Nuiqsut Reservoir have prompted plans for a workover of the ODSN 40. Pioneer also evaluated a fracture stimulation program and anticipates favorable results from its implementation. The modeling results compare favorably with fracturing results for the Colville River Unit Alpine field, considered to be analogous to the Nuiqsut. 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 ONPA 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 ONPA are far outweighed by the additional royalty and tax benefits derived from production.

The eight leases proposed for the ONPA 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 on 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 other five ONPA leases would be restored from 5 percent royalty to the full 16.6667 percent royalty also at the beginning of the 4th year.

Approval of the ONPA 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 accuracy 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, 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 ONPA 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 ONPA. 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 ONPA. The Division approves Pioneer's proposed tract participation and determination schedule for allocating production and costs among the leases within the ONPA.

The Division proposed, and Pioneer agrees, that future expansions and contractions of the participating area boundary will be based upon 160 acre development well spacing for the Oooguruk Nuiqsut Reservoir

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, OU 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 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 for 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 ONPA to reflect the current development plans provides for efficient, integrated development of the Ooguruk Nuiqsut 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 Nuiqsut Reservoir through the existing KRU processing facilities will reduce the incremental environmental impact of the additional production. Producing oil and gas from the ONPA 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 ONPA 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 ONPA 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 ONPA 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 Nuiqsut 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 ONPA 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. Pioneer submitted geological, geophysical and engineering data to the Division in support of the Application. Based upon this data, the ONPA 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.

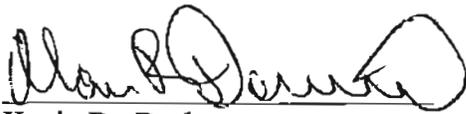
C. The Protection of All Parties in Interest, Including the State

1. The ONPA adequately and equitably protects the public interest, and is in the State's best interest.
2. The ONPA meets the requirements of 11 AAC 83.351.
3. The formation of the ONPA 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 ONPA 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 Nuiqsut 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. 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.
11. The ONPA boundary will contract to 160 acre spacing around development wells in the Final Redetermination.

For the reasons discussed in this Findings and Decision, I hereby approve the ONPA subject to the conditions set out in this decision. The ONPA 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

Sor

8/5/09

Date

V. ATTACHMENTS

1. Exhibit C, ONPA Tracts/leases
2. Exhibit D, Map of the ONPA 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, ONPA Tracts/leases

Exhibit C
Ooguruk Unit Agreement
Nutgat Participating Area

Unit Tract #	Lessors & Lease No.	Working Interest Owner	Working Interest	Effective Date	Description	Acres	Royalty	Unit Tract Participation (based on surface acreage)	
6	State of AK ADL 389958	Pioneer Natural Resources Alaska, Inc. Eni Petroleum US LLC	70.000000% 30.000000%	8/1/02	T14N, R7E, UMIAT MERIDIAN Sec 25: Protected, S2 SE4, NW4 SE4, SW4, S2 NW4, NW4 NW4 Sec 36: Protected, E2, SE4 SW4 Sec 35: Protected, All Sec 36: Protected, All	2,040,000,000	16.66667%*	14.88291%	
7	State of AK ADL 389954	Pioneer Natural Resources Alaska, Inc. Eni Petroleum US LLC	70.000000% 30.000000%	8/1/02	T14N, R8E, UMIAT MERIDIAN Sec 31: Protected, W2 SE4, SW4, S2 NW4, NW4	343,000,000	16.66667%*	2.50237%	
9	State of AK ADL 389950	Pioneer Natural Resources Alaska, Inc. Eni Petroleum US LLC	70.000000% 30.000000%	8/1/02	T14N, R8E, UMIAT MERIDIAN Sec 5: Protected, SW4, SW4 NW4 Sec 6: Protected, All Sec 7: Protected, All Sec 8: Protected, W2	1,773,000,000	16.66667%*	12.93500%	
11	State of AK ADL 389952	Pioneer Natural Resources Alaska, Inc. Eni Petroleum US LLC	70.000000% 30.000000%	8/1/02	T13N, R8E, UMIAT MERIDIAN Sec 17: Protected, NW4 NW4 Sec 18: Protected, NE4, SW4, NW4, NW4	471,000,000	16.66667%*	3.43620%	
13	State of AK ADL 355036	Pioneer Natural Resources Alaska, Inc. Eni Petroleum US LLC	70.000000% 30.000000%	8/1/83	T13N, R7E, UMIAT MERIDIAN Sec 1: Protected, All Sec 2: Protected, All Sec 3: Protected, All Sec 10: Protected, All Sec 11: Protected, All Sec 12: Protected, All Sec 13: Protected, All Sec 14: Protected, All Sec 15: Protected, All	5,760,000,000	12.5%* 30% NPS	42.02232%	
							Total	5,021,990%	Set Details Below

Upper Interval (i.e. the interval from the surface down to the stratigraphic equivalent of 8,373' (Drillers total depth + 100') which is equivalent to 8,402' (Wireline Logger's total depth + 100') below the Kelly Bushing as shown on the East Landing Run 43 log dated April 5, 1992, in the ARCO-Kalidok #1 well (located in Sec. 11, T.13 N., R. 7 E., U.M.A. known in the DNR computer records as "Segment 1" of the Lease.)

Exhibit C
Oooguruk Unit Agreement
Nuigsut Participating Area

Unit Tract #	Lease & Lease No. State of AK	Working Interest Owner	Working Interest	Effective Date	Description	Acres	Royalty	OIR Burden	Unit Tract Participation (based on surface acreage)
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' (Diller's total depth + 100') which is equivalent to 8,402' (Whitlie Logger's total depth + 100') below the Kelly Bushing as shown on the Dual Logging Run #3 log dated April 5, 1992, in the ARCO-Kalabik #1 well located in Sec. 11, T.13 N., R. 7 E., UJM, 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: Prorated, S/2 NE4, NE4 NE4, SE4, S/2 SW/4 Sec 8: Prorated, E/2 NE4, NE4 SE4 Sec 9: Prorated, All Sec 16: Prorated, NE4, NE4 SE4, NE4 NW/4	1,360.000000	12.5%* 30% NPS	Total 5,0767380% Sec Details Below	9.52194%
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' (Diller's total depth + 100') which is equivalent to 8,402' (Whitlie Logger's total depth + 100') below the Kelly Bushing as shown on the Dual Logging Run #3 log dated April 5, 1992, in the ARCO-Kalabik #1 well located in Sec. 11, T.13 N., R. 7 E., UJM, known in the DNR computer records as "Segment 1" of the Lease.)	70.000000% 30.000000%	8/1/83	T13N, R7E, UMIAT MERIDIAN Sec 22: Prorated, NE4, NE4 SE4, NE4 NW/4 Sec 23: Prorated, All Sec 24: Prorated, W/2 E/2, W/2 Sec 25: Prorated, NW/4 NW/4 Sec 26: Prorated, NE4, E/2 NW/4, NW/4 NW/4	1,680.000000	12.5%* 30% NPS	Total 5,0767380% Sec Details Below	12.25651%
17	State of AK ADL 389959	Pioneer Natural Resources Alaska, Inc. Eni Petroleum US LLC	70.000000% 30.000000%	9/1/02	T13N, R7E, UMIAT MERIDIAN Sec 34: Prorated, E/2 E/2, NW/4 SE4, S/2 SW/4	280.000000	16.666667%*	04,250000% Held by Amdanko Petroleum Corp	2.04275%
WORKING INTEREST OWNERS-All Tracts and Intervals									
Pioneer Natural Resources Alaska, Inc.									
Eni Petroleum US LLC									
700 G Street, Suite 600									
Anchorage, AK 99501									
Eni Petroleum Exploration Co., Inc.									
1201 Louisiana St., Suite 3500									
Houston, TX 77002-5609									
Tracts 6, 7, 9 & 11 are burdened by Overriding Royalties held by the following parties in the stated percentages:									
William D. Amstrong									
16 Village Road									
Englewood, CO 80110									
Before Payout ("BPO")									
1.55580% of 66lbs									

**Exhibit C
Oooguruk Unit Agreement
Nuiqaut Participating Area**

Unit Tract #	Lessor & Lessee No.	Working Interest Owner	Working Interest	Effective Date	Description	Acreage	Royalty	ORR Burden	Unit Tract Participation (based on surface acreage)
		Jesse V. Samner 4531 West Geddes Avenue Littleton, CO 80128						0.04633% of 6/6ths	
		Edgar Kerr 155 Spotted Deer Lane Franktown, CO 80116						0.04633% of 6/6ths	
		Jeffrey A. Lysto 91 Rockholm Drive Littleton, CO 80127						0.04633% of 6/6ths	
		Pauline M. Reed P.O. Box 411 Franktown, CO 80116						0.04633% of 6/6ths	
		Matthew X. Parls 2901 South Madison Denver, CO 80210						0.04633% of 6/6ths	
		Richard C. Grosman 820 Pine Street, Gold Hill Bonlder, CO 80302						0.01235% of 6/6ths	
		Stuart W. Gustafson P.O. Box 4625 Horseshoe Bay, TX 78657						0.04633% of 6/6ths	
		GMT Exploration Company LLC 1560 Broadway, Suite 800 Denver, CO 80202						0.00000% of 6/6ths	
		Chester E. Parls 1208 Mesa Court Golden, CO 80103						0.04633% of 6/6ths	
		William D. Armstrong 16 Village Road Englewood, CO 80110						1.00000% of 6/6ths	
After Payout ("APO")		Jesse V. Samner 4531 West Geddes Avenue Littleton, CO 80128						0.08333% of 6/6ths	
		Edgar Kerr 155 Spotted Deer Lane Franktown, CO 80116						0.08333% of 6/6ths	
		Jeffrey A. Lysto 91 Rockholm Drive Littleton, CO 80127						0.08333% of 6/6ths	

Exhibit C
Ongoing Unit Agreement
Navigant Participating Area

Unit Tract #	Lessor & Lease No.	Working Interest Owner	Working Interest	Effective Date	Description	Acreage	Royalty	ORR Burden	Unit Tract Participation (based on surface acreage)
		Patricia M. Reed P.O. Box 411 Fremont, CO 80716						0.085339% of 666/bs	
		Matthew X. Fardin 2001 South Madison Denver, CO 80210						0.085339% of 666/bs	
		Richard C. Geerman 820 Pine Street, Gold Hill Boulder, CO 80302						0.033356% of 666/bs	
		Susan W. Gustafson P.O. Box 4625 Houma, LA 70657						0.085339% of 666/bs	

The overriding royalty interests noted above affecting Tracts 6, 7, 9 and 11 are set forth in and subject to that certain Development Agreement dated effective November 1, 2002 between Amnirang Resources, LLC and Pioneer Natural Resources Alaska, Jr. The burdens hereinafter shall not be construed in any fashion, expressed or implied, to be subsequently created interests.

Exhibit C
Cooparuk Unit Agreement
Participating Area

Unit Tract #	Lessors & Lessee No. Tract 33 is burdened by	Working Interest Owner	Working Interest in the stated percentages:	Effective Date	Description	Acreage	Royalty	ORR Burden	Unit Tract Participation (based on surface acreage)
Upper Interval	Hunt Petroleum Corporation 1601 Jami Street, Suite 4700 Dallas, TX 75201	50% Permian US LLC 1201 Louisiana, Suite 3500 Houston, TX 77002						0.25210000%	
		Pioneer Natural Resources Alaska, Inc. 700 G Street, Suite 600 Anchorage, AK 99501						0.51420000%	
		ConocoPhillips Alaska, Inc. 700 G Street Anchorage, AK 99501						1.20000000%	
		William D. Armstrong 16 Village Road Englewood, CO 80110						2.50000000%	
		GMT Exploration Company LLC 1500 Broadway, Suite 800 Denver, CO 80202						0.40400000%	
		Jeane V. Smith 4531 West Giddis Avenue Littleton, CO 80128						0.07400000%	
		Edgar Kerr 155 Spotted Bear Lane Franktown, CO 80116						0.01200000%	
		Jeffrey A. Lyle 91 Buckhorn Drive Littleton, CO 80127						0.01200000%	
		Elvisha M. Reed P.O. Box 411 Franktown, CO 80116						0.01200000%	
		Matthew X. Fucin 2001 South Madison Denver, CO 80210						0.01200000%	
		Stuart W. Gustafson P.O. Box 4625 Poncha Springs, TX 78857						0.01200000%	
		Chester E. Pusk 1208 Mesa Court Golden, CO 80403						0.00300000%	

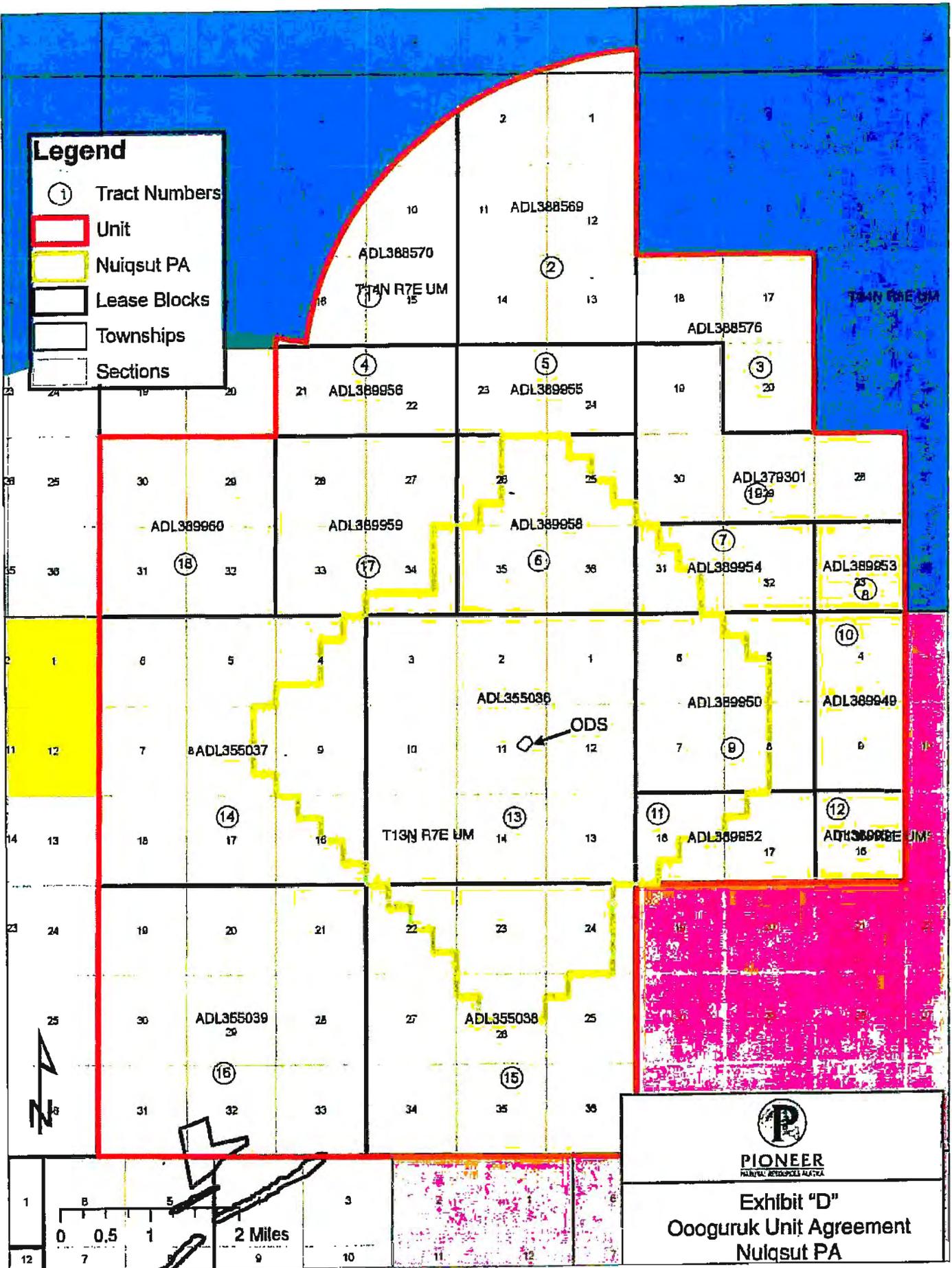
**Exhibit C
Oooguruk Unit Agreement
Nuiqsut Participating Area**

Unit Tract #	Lessor & Lease No.	Working Interest Owner	Working Interest	Effective Date	Description	Acres	Royalty	ORR Burden	Unit Tract Participation (based on surface acreage)
Tracts 14 & 15 are burdened by overriding royalties held by the following parties in the stated percentages:									
Tracts 14 & 15 Upper Interval		Anadarko Petroleum Corporation P.O. Box 1330 Houston, TX 77251-1330						0.09359800%	
		David L. Herby 2142 W. Day Creek CL Litchton, CO 80120						0.67500000%	
		Elmer L. Herby 1833 Cape Cod Way Litchton, CO 80120						0.67500000%	
		Hunt Petroleum Corporation 1601 Elm Street, Suite 4700 Dallas, TX 75201						0.12600000%	
		George Alan Jeyes, Jr. 3528 Eisenhower Lane Pflug, TX 75023						0.15000000%	
		Eni Petroleum US LLC 1201 Louisiana, Suite 3500 Houston, TX 77002						0.25714000%	
		Princo Natural Resources Alaska, Inc. 700 G Street, Suite 600 Anchorage, AK 99501						0.60000000%	
		ConocoPhillips Alaska, Inc. 700 G Street Anchorage, AK 99501						2.50000000%	
* The state's royalty interest in ADL 355036, ADL 355037, ADL 355038, ADL 355039, ADL 389950, ADL 389951, ADL 389952, ADL 389953, ADL 389954, ADL 389958, and 389959 is subject to the 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).									

ATTACHMENT TWO
Exhibit D, Map of the ONPA

Legend

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



PIONEER
PARTIAL INTERESTS ALASKA

Exhibit "D"
Oooguruk Unit Agreement
Nuiqsut PA

ATTACHMENT THREE
Exhibit E, Allocation of Participating Area Expense

Exhibit E
Ougrbruk Unit Agreement
Nadqut Participating Area

Unit Tract #	Lessor & Lease No.	Working Interest Owner	Working Interest	Effective Date	Description	Acres	Royalty	PA Expense
6	State of AK ADL 389958	Pioneer Natural Resources Alaska, Inc. Eni Petroleum US LLC	70.000000% 30.000000%	8/1/02	TI, N, RE, UMIAT MERIDIAN Sec 25: Protected, S/2 SE4, NW4 SW4, SW4, S/2 NW4, NW4 NW4 Sec 26: Protected, E/2 SE4 SW4 Sec 35: Protected, All Sec 36: Protected, All	2,040,00000	16.66667%*	14,88291%
7	State of AK ADL 389954	Pioneer Natural Resources Alaska, Inc. Eni Petroleum US LLC	70.000000% 30.000000%	8/1/02	TI, N, RE, UMIAT MERIDIAN Sec 21: Protected, W/2 SE4, SW/4, S/2 NW/4, NW/4 Sec 35: Protected, All Sec 36: Protected, All	343,00000	16.66667%*	7,50237%
9	State of AK ADL 389950	Pioneer Natural Resources Alaska, Inc. Eni Petroleum US LLC	70.000000% 30.000000%	8/1/02	TI, N, RE, UMIAT MERIDIAN Sec 5: Protected, NW/4, SW/4, NW/4 Sec 6: Protected, All Sec 7: Protected, W/2 Sec 8: Protected, W/2	1,773,00000	16.66667%*	12,93500%
11	State of AK ADL 389952	Pioneer Natural Resources Alaska, Inc. Eni Petroleum US LLC	70.000000% 30.000000%	8/1/02	TI, N, RE, UMIAT MERIDIAN Sec 17: Protected, NW/4 NW/4 Sec 18: Protected, NE/4 SW/4, S/2 SW/4, NW/4	471,00000	16.66667%*	3,43610%
13	State of AK ADL 355036	Pioneer Natural Resources Alaska, Inc. Eni Petroleum US LLC	70.000000% 30.000000%	8/1/83	TI, N, RE, UMIAT MERIDIAN Sec 1: Protected, All Sec 2: Protected, All Sec 3: Protected, All Sec 10: Protected, All Sec 11: Protected, All Sec 12: Protected, All Sec 13: Protected, All Sec 14: Protected, All Sec 15: Protected, All	5,760,00000	12.5%* 30% NPS	42,02232%

Exhibit E
Orogonut Unit Agreement
Nullgusut Participating Area

Unit Trust #	Lease & Lease No.	Working Interest Owner	Working Interest	Effective Date	Description	Revenue	Royalty	ORR Burden	PA Expense
14	State of AK ADL 355037	Pioneer Natural Resources Alaska, Inc. Eni Petroleum US LLC	70.000000% 30.000000%	8/1/83	T12N, R7E, UMIAT MERIDIAN Sec 4: Protected, S2 NE4, NE4 NE4 SE4, S2 SW4 Sec 8: Protected, E2 NE4, NE4 SE4 Sec 9: Protected, All Sec 10: Protected, NE4, NE4 SE4, NW4 NW4	1,360,000.00	12.5%* 30% NPS	Total 5.0767380% See Details Below	9,921,947*
15	State of AK ADL 355038	Pioneer Natural Resources Alaska, Inc. Eni Petroleum US LLC	70.000000% 30.000000%	8/1/83	T12N, R7E, UMIAT MERIDIAN Sec 21: Protected, All Sec 23: Protected, W2 E2, W2 Sec 24: Protected, NW4 NW4 Sec 25: Protected, NE4, E2 NW4, NW4 NW4 Sec 26: Protected, NE4, E2 NW4, NW4 NW4	1,680,000.00	12.5%* 30% NPS	Total 5.0767380% See Details Below	12,256,519*
17	State of AK ADL 389959	Pioneer Natural Resources Alaska, Inc. Eni Petroleum US LLC	70.000000% 30.000000%	9/1/02	T12N, R7E, UMIAT MERIDIAN Sec 36: Protected, E2 E2, SW4 SE4, S2 SW4	280,000.00	16.66667%*	04.25000% Held by Apidorko Petroleum Corp	2,042,755*
						13,707,030.00			100,000,000%

* The amie'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, 2005 (modifying royalty under the leases in response to the Orogonut Development Royalty Modification Application filed on May 20, 2005).

ATTACHMENT FOUR
Exhibit F, Allocation of Unit Area Expense

**Exhibit F
Ooquruk Unit Agreement
Nulagut Participating Area**

Pioneer Natural Resources Alaska, Inc., as the Ooquruk Unit Operator, estimates the total Unit economic reserves will be contributed 93% from the Nulagut PA and 7% from the Kuparuk PA. The current Unit Plan of Development contemplates the drilling a total of 34 wells for Ooquruk development; five wells in the Kuparuk and 29 in the Nulagut. On a relative well count basis 14,7059% of the unit wells will be drilled in produce Kuparuk reserves and 85,2941% of the unit wells will be drilled in produce Nulagut reserves. Pioneer proposes that expenses be broadly 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 into which the wells are drilled (Kuparuk PA or Nulagut PA, and then to each Tract within a PA by the PA Tract Participation factor.
2. Ooquruk Drill Site (ODS) - Costs including all utility facilities, (i.e. well-bay remedies, 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 includes all downstream of the ODS, include sub-sea three-phase production, gas, water and diesel flowlines, shore crossing 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 Inflation Costs - These include compression and injection equipment and will be first allocated exclusively to the Nulagut PA, and then to each Tract within said PA by the PA Tract Participation factor.

Lease & Lease No. State of AK ADL 389552	Working Interest Owner Pioneer Natural Resources Alaska, Inc. Eni Petroleum US LLC	Working Interest 70.000000%	Effective Date 8/1/02	Description TILAN, JIBS, UMIAT, MERIDIAN Sec 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100, 101, 102, 103, 104, 105, 106, 107, 108, 109, 110, 111, 112, 113, 114, 115, 116, 117, 118, 119, 120, 121, 122, 123, 124, 125, 126, 127, 128, 129, 130, 131, 132, 133, 134, 135, 136, 137, 138, 139, 140, 141, 142, 143, 144, 145, 146, 147, 148, 149, 150, 151, 152, 153, 154, 155, 156, 157, 158, 159, 160, 161, 162, 163, 164, 165, 166, 167, 168, 169, 170, 171, 172, 173, 174, 175, 176, 177, 178, 179, 180, 181, 182, 183, 184, 185, 186, 187, 188, 189, 190, 191, 192, 193, 194, 195, 196, 197, 198, 199, 200, 201, 202, 203, 204, 205, 206, 207, 208, 209, 210, 211, 212, 213, 214, 215, 216, 217, 218, 219, 220, 221, 222, 223, 224, 225, 226, 227, 228, 229, 230, 231, 232, 233, 234, 235, 236, 237, 238, 239, 240, 241, 242, 243, 244, 245, 246, 247, 248, 249, 250, 251, 252, 253, 254, 255, 256, 257, 258, 259, 260, 261, 262, 263, 264, 265, 266, 267, 268, 269, 270, 271, 272, 273, 274, 275, 276, 277, 278, 279, 280, 281, 282, 283, 284, 285, 286, 287, 288, 289, 290, 291, 292, 293, 294, 295, 296, 297, 298, 299, 300, 301, 302, 303, 304, 305, 306, 307, 308, 309, 310, 311, 312, 313, 314, 315, 316, 317, 318, 319, 320, 321, 322, 323, 324, 325, 326, 327, 328, 329, 330, 331, 332, 333, 334, 335, 336, 337, 338, 339, 340, 341, 342, 343, 344, 345, 346, 347, 348, 349, 350, 351, 352, 353, 354, 355, 356, 357, 358, 359, 360, 361, 362, 363, 364, 365, 366, 367, 368, 369, 370, 371, 372, 373, 374, 375, 376, 377, 378, 379, 380, 381, 382, 383, 384, 385, 386, 387, 388, 389, 390, 391, 392, 393, 394, 395, 396, 397, 398, 399, 400, 401, 402, 403, 404, 405, 406, 407, 408, 409, 410, 411, 412, 413, 414, 415, 416, 417, 418, 419, 420, 421, 422, 423, 424, 425, 426, 427, 428, 429, 430, 431, 432, 433, 434, 435, 436, 437, 438, 439, 440, 441, 442, 443, 444, 445, 446, 447, 448, 449, 450, 451, 452, 453, 454, 455, 456, 457, 458, 459, 460, 461, 462, 463, 464, 465, 466, 467, 468, 469, 470, 471, 472, 473, 474, 475, 476, 477, 478, 479, 480, 481, 482, 483, 484, 485, 486, 487, 488, 489, 490, 491, 492, 493, 494, 495, 496, 497, 498, 499, 500, 501, 502, 503, 504, 505, 506, 507, 508, 509, 510, 511, 512, 513, 514, 515, 516, 517, 518, 519, 520, 521, 522, 523, 524, 525, 526, 527, 528, 529, 530, 531, 532, 533, 534, 535, 536, 537, 538, 539, 540, 541, 542, 543, 544, 545, 546, 547, 548, 549, 550, 551, 552, 553, 554, 555, 556, 557, 558, 559, 560, 561, 562, 563, 564, 565, 566, 567, 568, 569, 570, 571, 572, 573, 574, 575, 576, 577, 578, 579, 580, 581, 582, 583, 584, 585, 586, 587, 588, 589, 590, 591, 592, 593, 594, 595, 596, 597, 598, 599, 600, 601, 602, 603, 604, 605, 606, 607, 608, 609, 610, 611, 612, 613, 614, 615, 616, 617, 618, 619, 620, 621, 622, 623, 624, 625, 626, 627, 628, 629, 630, 631, 632, 633, 634, 635, 636, 637, 638, 639, 640, 641, 642, 643, 644, 645, 646, 647, 648, 649, 650, 651, 652, 653, 654, 655, 656, 657, 658, 659, 660, 661, 662, 663, 664, 665, 666, 667, 668, 669, 670, 671, 672, 673, 674, 675, 676, 677, 678, 679, 680, 681, 682, 683, 684, 685, 686, 687, 688, 689, 690, 691, 692, 693, 694, 695, 696, 697, 698, 699, 700, 701, 702, 703, 704, 705, 706, 707, 708, 709, 710, 711, 712, 713, 714, 715, 716, 717, 718, 719, 720, 721, 722, 723, 724, 725, 726, 727, 728, 729, 730, 731, 732, 733, 734, 735, 736, 737, 738, 739, 740, 741, 742, 743, 744, 745, 746, 747, 748, 749, 750, 751, 752, 753, 754, 755, 756, 757, 758, 759, 760, 761, 762, 763, 764, 765, 766, 767, 768, 769, 770, 771, 772, 773, 774, 775, 776, 777, 778, 779, 780, 781, 782, 783, 784, 785, 786, 787, 788, 789, 790, 791, 792, 793, 794, 795, 796, 797, 798, 799, 800, 801, 802, 803, 804, 805, 806, 807, 808, 809, 810, 811, 812, 813, 814, 815, 816, 817, 818, 819, 820, 821, 822, 823, 824, 825, 826, 827, 828, 829, 830, 831, 832, 833, 834, 835, 836, 837, 838, 839, 840, 841, 842, 843, 844, 845, 846, 847, 848, 849, 850, 851, 852, 853, 854, 855, 856, 857, 858, 859, 860, 861, 862, 863, 864, 865, 866, 867, 868, 869, 870, 871, 872, 873, 874, 875, 876, 877, 878, 879, 880, 881, 882, 883, 884, 885, 886, 887, 888, 889, 890, 891, 892, 893, 894, 895, 896, 897, 898, 899, 900, 901, 902, 903, 904, 905, 906, 907, 908, 909, 910, 911, 912, 913, 914, 915, 916, 917, 918, 919, 920, 921, 922, 923, 924, 925, 926, 927, 928, 929, 930, 931, 932, 933, 934, 935, 936, 937, 938, 939, 940, 941, 942, 943, 944, 945, 946, 947, 948, 949, 950, 951, 952, 953, 954, 955, 956, 957, 958, 959, 960, 961, 962, 963, 964, 965, 966, 967, 968, 969, 970, 971, 972, 973, 974, 975, 976, 977, 978, 979, 980, 981, 982, 983, 984, 985, 986, 987, 988, 989, 990, 991, 992, 993, 994, 995, 996, 997, 998, 999, 1000	Acceage	Royalty	ORR Burden	Unit Tract Participation	Relative Reserve Allocation (93 x Tract Allocation)	Well Count Allocation (29/34 x Tract Allocation)
6	Pioneer Natural Resources Alaska, Inc. Eni Petroleum US LLC	70.000000%	8/1/02	TILAN, JIBS, UMIAT, MERIDIAN Sec 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100, 101, 102, 103, 104, 105, 106, 107, 108, 109, 110, 111, 112, 113, 114, 115, 116, 117, 118, 119, 120, 121, 122, 123, 124, 125, 126, 127, 128, 129, 130, 131, 132, 133, 134, 135, 136, 137, 138, 139, 140, 141, 142, 143, 144, 145, 146, 147, 148, 149, 150, 151, 152, 153, 154, 155, 156, 157, 158, 159, 160, 161, 162, 163, 164, 165, 166, 167, 168, 169, 170, 171, 172, 173, 174, 175, 176, 177, 178, 179, 180, 181, 182, 183, 184, 185, 186, 187, 188, 189, 190, 191, 192, 193, 194, 195, 196, 197, 198, 199, 200, 201, 202, 203, 204, 205, 206, 207, 208, 209, 210, 211, 212, 213, 214, 215, 216, 217, 218, 219, 220, 221, 222, 223, 224, 225, 226, 227, 228, 229, 230, 231, 232, 233, 234, 235, 236, 237, 238, 239, 240, 241, 242, 243, 244, 245, 246, 247, 248, 249, 250, 251, 252, 253, 254, 255, 256, 257, 258, 259, 260, 261, 262, 263, 264, 265, 266, 267, 268, 269, 270, 271, 272, 273, 274, 275, 276, 277, 278, 279, 280, 281, 282, 283, 284, 285, 286, 287, 288, 289, 290, 291, 292, 293, 294, 295, 296, 297, 298, 299, 300, 301, 302, 303, 304, 305, 306, 307, 308, 309, 310, 311, 312, 313, 314, 315, 316, 317, 318, 319, 320, 321, 322, 323, 324, 325, 326, 327, 328, 329, 330, 331, 332, 333, 334, 335, 336, 337, 338, 339, 340, 341, 342, 343, 344, 345, 346, 347, 348, 349, 350, 351, 352, 353, 354, 355, 356, 357, 358, 359, 360, 361, 362, 363, 364, 365, 366, 367, 368, 369, 370, 371, 372, 373, 374, 375, 376, 377, 378, 379, 380, 381, 382, 383, 384, 385, 386, 387, 388, 389, 390, 391, 392, 393, 394, 395, 396, 397, 398, 399, 400, 401, 402, 403, 404, 405, 406, 407, 408, 409, 410, 411, 412, 413, 414, 415, 416, 417, 418, 419, 420, 421, 422, 423, 424, 425, 426, 427, 428, 429, 430, 431, 432, 433, 434, 435, 436, 437, 438, 439, 440, 441, 442, 443, 444, 445, 446, 447, 448, 449, 450, 451, 452, 453, 454, 455, 456, 457, 458, 459, 460, 461, 462, 463, 464, 465, 466, 467, 468, 469, 470, 471, 472, 473, 474, 475, 476, 477, 478, 479, 480, 481, 482, 483, 484, 485, 486, 487, 488, 489, 490, 491, 492, 493, 494, 495, 496, 497, 498, 499, 500, 501, 502, 503, 504, 505, 506, 507, 508, 509, 510, 511, 512, 513, 514, 515, 516, 517, 518, 519, 520, 521, 522, 523, 524, 525, 526, 527, 528, 529, 530, 531, 532, 533, 534, 535, 536, 537, 538, 539, 540, 541, 542, 543, 544, 545, 546, 547, 548, 549, 550, 551, 552, 553, 554, 555, 556, 557, 558, 559, 560, 561, 562, 563, 564, 565, 566, 567, 568, 569, 570, 571, 572, 573, 574, 575, 576, 577, 578, 579, 580, 581, 582, 583, 584, 585, 586, 587, 588, 589, 590, 591, 592, 593, 594, 595, 596, 597, 598, 599, 600, 601, 602, 603, 604, 605, 606, 607, 608, 609, 610, 611, 612, 613, 614, 615, 616, 617, 618, 619, 620, 621, 622, 623, 624, 625, 626, 627, 628, 629, 630, 631, 632, 633, 634, 635, 636, 637, 638, 639, 640, 641, 642, 643, 644, 645, 646, 647, 648, 649, 650, 651, 652, 653, 654, 655, 656, 657, 658, 659, 660, 661, 662, 663, 664, 665, 666, 667, 668, 669, 670, 671, 672, 673, 674, 675, 676, 677, 678, 679, 680, 681, 682, 683, 684, 685, 686, 687, 688, 689, 690, 691, 692, 693, 694, 695, 696, 697, 698, 699, 700, 701, 702, 703, 704, 705, 706, 707, 708, 709, 710, 711, 712, 713, 714, 715, 716, 717, 718, 719, 720, 721, 722, 723, 724, 725, 726, 727, 728, 729, 730, 731, 732, 733, 734, 735, 736, 737, 738, 739, 740, 741, 742, 743, 744, 745, 746, 747, 748, 749, 750, 751, 752, 753, 754, 755, 756, 757, 758, 759, 760, 761, 762, 763, 764, 765, 766, 767, 768, 769, 770, 771, 772, 773, 774, 775, 776, 777, 778, 779, 780, 781, 782, 783, 784, 785, 786, 787, 788, 789, 790, 791, 792, 793, 794, 795, 796, 797, 798, 799, 800, 801, 802, 803, 804, 805, 806, 807, 808, 809, 810, 811, 812, 813, 814, 815, 816, 817, 818, 819, 820, 821, 822, 823, 824, 825, 826, 827, 828, 829, 830, 831, 832, 833, 834, 835, 836, 837, 838, 839, 840, 841, 842, 843, 844, 845, 846, 847, 848, 849, 850, 851, 852, 853, 854, 855, 856, 857, 858, 859, 860, 861, 862, 863, 864, 865, 866, 867, 868, 869, 870, 871, 872, 873, 874, 875, 876, 877, 878, 879, 880, 881, 882, 883, 884, 885, 886, 887, 888, 889, 890, 891, 892, 893, 894, 895, 896, 897, 898, 899, 900, 901, 902, 903, 904, 905, 906, 907, 908, 909, 910, 911, 912, 913, 914, 915, 916, 917, 918, 919, 920, 921, 922, 923, 924, 925, 926, 927, 928, 929, 930, 931, 932, 933, 934, 935, 936, 937, 938, 939, 940, 941, 942, 943, 944, 945, 946, 947, 948, 949, 950, 951, 952, 953, 954, 955, 956, 957, 958, 959, 960, 961, 962, 963, 964, 965, 966, 967, 968, 969, 970, 971, 972, 973, 974, 975, 976, 977, 978, 979, 980, 981, 982, 983, 984, 985, 986, 987, 988, 989, 990, 991, 992, 993, 994, 995, 996, 997, 998, 999, 1000 <td>2,040,000.00</td> <td>16.66667%</td> <td>DPO</td> <td>14.85201%</td> <td>0.13841031</td> <td>0.126842438</td>	2,040,000.00	16.66667%	DPO	14.85201%	0.13841031	0.126842438
7	Pioneer Natural Resources Alaska, Inc. Eni Petroleum US LLC	70.000000%	8/1/02	TILAN, JIBS, UMIAT, MERIDIAN Sec 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100, 101, 102, 103, 104, 105, 106, 107, 108, 109, 110, 111, 112, 113, 114, 115, 116, 117, 118, 119, 120, 121, 122, 123, 124, 125, 126, 127, 128, 129, 130, 131, 132, 133, 134, 135, 136, 137, 138, 139, 140, 141, 142, 143, 144, 145, 146, 147, 148, 149, 150, 151, 152, 153, 154, 155, 156, 157, 158, 159, 160, 161, 162, 163, 164, 165, 166, 167, 168, 169, 170, 171, 172, 173, 174, 175, 176, 177, 178, 179, 180, 181, 182, 183, 184, 185, 186, 187, 188, 189, 190, 191, 192, 193, 194, 195, 196, 197, 198, 199, 200, 201, 202, 203, 204, 205, 206, 207, 208, 209, 210, 211, 212, 213, 214, 215, 216, 217, 218, 219, 220, 221, 222, 223, 224, 225, 226, 227, 228, 229, 230, 231, 232, 233, 234, 235, 236, 237, 238, 239, 240, 241, 242, 243, 244, 245, 246, 247, 248, 249, 250, 251, 252, 253, 254, 255, 256, 257, 258, 259, 260, 261, 262, 263, 264, 265, 266, 267, 268, 269, 270, 271, 272, 273, 274, 275, 276, 277, 278, 279, 280, 281, 282, 283, 284, 285, 286, 287, 288, 289, 290, 291, 292, 293, 294, 295, 296, 297, 298, 299, 300, 301, 302, 303, 304, 305, 306, 307, 308, 309, 310, 311, 312, 313, 314, 315, 316, 317, 318, 319, 320, 321, 322, 323, 324, 325, 326, 327, 328, 329, 330, 331, 332, 333, 334, 335, 336, 337, 338, 339, 340, 341, 342, 343, 344, 345, 346, 347, 348, 349, 350, 351, 352, 353, 354, 355, 356, 357, 358, 359, 360, 361, 362, 363, 364, 365, 366, 367, 368, 369, 370, 371, 372, 373, 374, 375, 376, 377, 378, 379, 380, 381, 382, 383, 384, 385, 386, 387, 388, 389, 390, 391, 392, 393, 394, 395, 396, 397, 398, 399, 400, 401, 402, 403, 404, 405						

Exhibit F
Operating Unit Agreement
Natural Participating Area

Lease & Lease No. State of AK	Working Interest Owner	Working Interest	Effective Date	Description	Acres	Royalty	ORR Division	Unit Tract Participation	Relative Reserve Allocation (93% Tract Allocation)	Well Count Allocation (29/24 % Tract Allocation)
13 UPPER INTERVAL ADL 3551936 State of AK	Pioneer Natural Resources Alaska, Inc. Eni Petroleum US LLC Upper Interval (i.e. the interval from the surface down to the stratigraphic base of the 4333 (Dell) to 4100 (Wick) which is equivalent to the interval from the top of the 4100 (Wick) to the base of the 4333 (Dell) as defined in Section 11, T.13 N., R. 7 E., U.M. 6000 in the DNR computer records as "Segment 1" of the Lease.)	70.000000% 30.000000%	8/1/83	TLIN, RTE, UHAT, MERIDIAN Sec 1: Prorated, All Sec 2: Prorated, All Sec 3: Prorated, All Sec 10: Prorated, All Sec 11: Prorated, All Sec 12: Prorated, All Sec 13: Prorated, All Sec 14: Prorated, All Sec 15: Prorated, All	5,790.00000	12.5%* 30% NPS	Total 5.021380% See Details Below	42.02232%	0.3908807617	0.356425708
14 UPPER INTERVAL ADL 355037 State of AK	Pioneer Natural Resources Alaska, Inc. Eni Petroleum US LLC Upper Interval (i.e. the interval from the surface down to the stratigraphic base of the 4333 (Dell) to 4100 (Wick) which is equivalent to the interval from the top of the 4100 (Wick) to the base of the 4333 (Dell) as defined in Section 11, T.13 N., R. 7 E., U.M. 6000 in the DNR computer records as "Segment 1" of the Lease.)	70.000000% 30.000000%	8/1/83	TLIN, RTE, UHAT, MERIDIAN Sec 1: Prorated, SE NE/4, NE/4 NW/4, SE/4, SE SW/4 Sec 2: Prorated, E/2 NE/4, NE/4 SE/4 Sec 3: Prorated, All Sec 10: Prorated, NE/4, NE/4 SE/4, NE/4 NW/4	1,360.00000	12.5%* 30% NPS	Total 5.0767380% See Details Below	9.92194%	0.092274021	0.084628292
15 UPPER INTERVAL ADL 3551936 State of AK	Pioneer Natural Resources Alaska, Inc. Eni Petroleum US LLC Upper Interval (i.e. the interval from the surface down to the stratigraphic base of the 4333 (Dell) to 4100 (Wick) which is equivalent to the interval from the top of the 4100 (Wick) to the base of the 4333 (Dell) as defined in Section 11, T.13 N., R. 7 E., U.M. 6000 in the DNR computer records as "Segment 1" of the Lease.)	70.000000% 30.000000%	8/1/83	TLIN, RTE, UHAT, MERIDIAN Sec 1: Prorated, NE/4 NW/4, NE/4 NW/4 Sec 2: Prorated, NE/4 NW/4, NE/4 NW/4 Sec 3: Prorated, W/2 E/2, W/2 Sec 10: Prorated, NE/4 NW/4, NE/4 NW/4 Sec 11: Prorated, NE/4 NW/4, NE/4 NW/4	1,080.00000	12.5%* 30% NPS	Total 5.0767380% See Details Below	12.25651%	0.113885555	0.104550831
17 UPPER INTERVAL ADL 389759 State of AK	Pioneer Natural Resources Alaska, Inc. Eni Petroleum US LLC Upper Interval (i.e. the interval from the surface down to the stratigraphic base of the 4333 (Dell) to 4100 (Wick) which is equivalent to the interval from the top of the 4100 (Wick) to the base of the 4333 (Dell) as defined in Section 11, T.13 N., R. 7 E., U.M. 6000 in the DNR computer records as "Segment 1" of the Lease.)	70.000000% 30.000000%	9/1/02	TLIN, RTE, UHAT, MERIDIAN Sec 1: Prorated, E/2 U/2, SW/4, NE/4, SE SW/4	280.00000	16.66667%*	04.25700% Held by Associated Petroleum Corp	2.04275%	0.018697592	0.017423472
					15,707.00000			100.00000%	93.000000%	0.852931176

The overriding royalty interests noted above offering Tracts 6, 7, 9 and 11 are set forth in and subject to that certain Development Agreement dated effective November 1, 2002 between Amisong Resources, LLC and Pioneer Natural Resources Alaska, Inc. The burdens hereon shall not be construed in any fashion, expressed or implied, to be subsequently-extended interests.

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. Unfitized 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 Oooguruk-Kuparuk and Oooguruk-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.

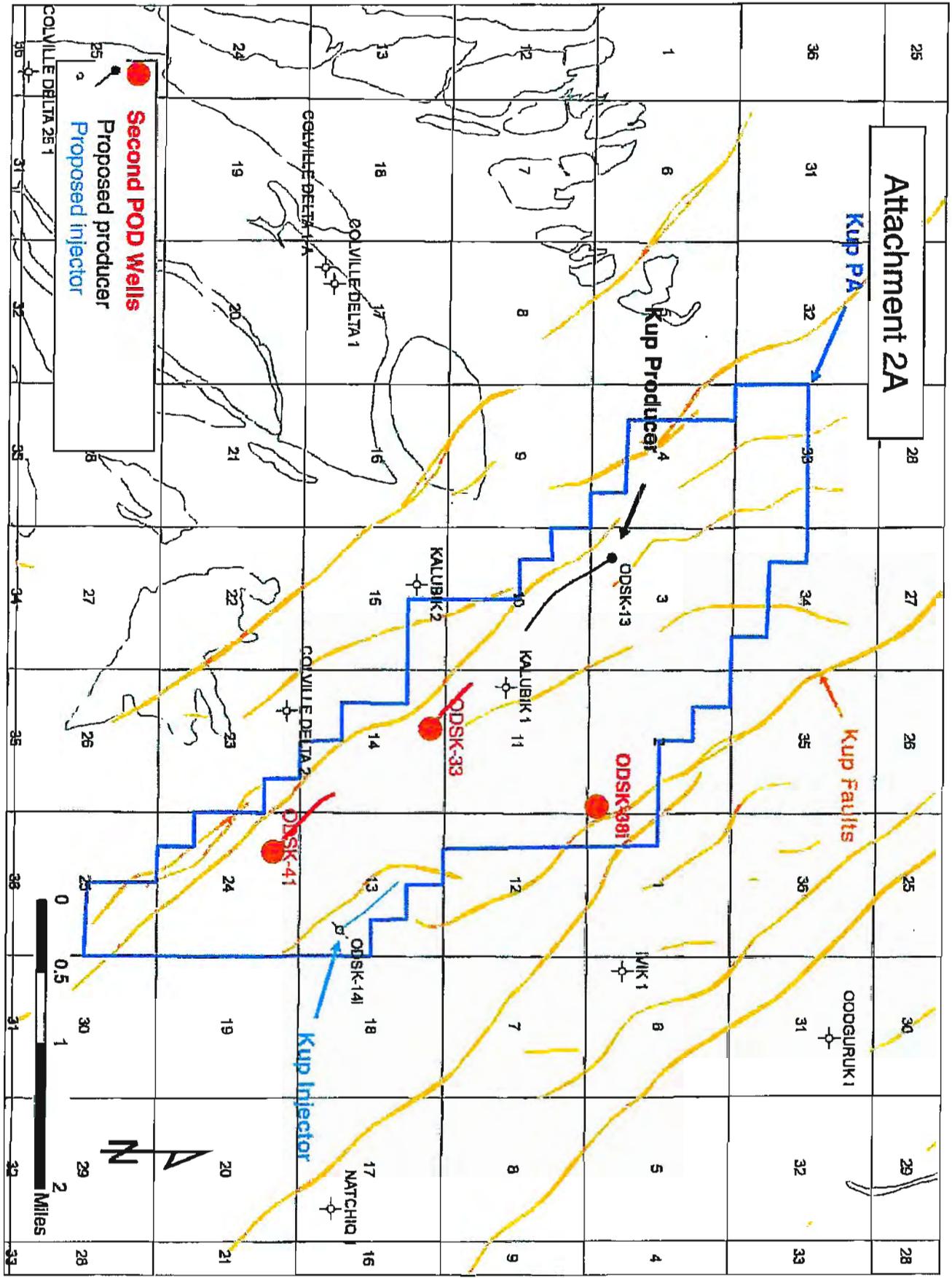
In the ODSN-40 and ODSN-45i wells, severe losses occurred while crossing large, mapped faults in the intermediate hole section. Isolation of these faults behind pipe should improve drilling times in this hole section. Pioneer is changing the casing design for some wells to allow placement of an additional 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

