OOOGURUK UNIT

APPROVAL OF THE FORMATION OF THE OOOGURUK UNIT TOROK 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

June 24, 2011

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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. Effective February 1, 2006, the Division granted royalty modification to certain formations and leases within the Oooguruk Unit and effective March 7, 2007 the Division approved the First Expansion of the OU. Effective June 1, 2008, the Division approved the formation of the Oooguruk Nuiqsut (ONPA) and Oooguruk Kuparuk (OKPA) Participating Areas. Also 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.

On November 18, 2010, Pioneer Natural Resources Alaska, Inc. (Pioneer), the designated Oooguruk Unit Operator, filed the Application for the Oooguruk Torok Participating Area, Oooguruk Unit, North Slope, Alaska (Application) on behalf of itself and Eni Petroleum US LLC (Eni). The proposed Oooguruk Unit Torok Participating Area (OTPA) encompasses portions of two State oil and gas leases that lie within the boundary of the OU, the ONPA and the OKPA, as shown in Exhibits C and D, Attachments 1 and 2, and comprises approximately 1,560 acres.

A participating area "may include only the land reasonably known to be underlain by hydrocarbons and known or reasonably estimated through use of geological, geophysical, or engineering data to be capable of producing or contributing to the production of hydrocarbons in paying quantities." 11 AAC 83.351(a). Pioneer submitted confidential and public information in the Application. The confidential geological, geophysical, and engineering data support the Application and indicate that the Oooguruk Torok Reservoir within the OTPA is capable of producing or contributing to production of hydrocarbons in paying quantities.

The Division finds that the formation of the OTPA 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. The effective date of the OTPA is March 1, 2010.

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 two State leases proposed for the OTPA are both Net Profit Share (NPS) leases: ADLs 355036 and 355037.

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 OTPA. Exhibit D is a map of the OTPA. 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 that includes NPS leases.

The Division issued ADLs 355036 and 355037 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. Effective February 1, 2006, the Division granted royalty modification to these leases for the Nuiqsut and Kuparuk intervals only; Torok production bears the full lease royalty rate of 12.5%.

Pioneer holds 70% working interest and Eni 30% working interest in ADLs 355036 and 355037. These two leases are segmented by depth: the Upper Interval from the surface down to the stratigraphic equivalent of 8,373 feet and the Lower Interval, below 8,373 feet. Each interval retains a different percentage of overriding royalty interest ownership. The stratigraphic limits of proposed OTPA lie entirely within the Upper Interval.

III. DISCUSSION OF DECISION CRITERIA

The DNR Commissioner (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

Approval of the OTPA has no direct environmental impact. This decision is an administrative action and does not authorize any on-the-ground activity.

A unit operator must obtain approval of a plan of operations from the State, and other permits from various agencies, before drilling a well or wells or initiating development activities. DNR considered environmental issues during the lease sale process, OU formation, and OU expansion. Pioneer has obtained the required permits for the current OTPA wells and is operating under an approved plan of operations.

Pioneer has designed the development of the Oooguruk Torok Reservoir within the OU to minimize the amount of surface impact from the facilities necessary to develop by utilization of an existing compact drillsite and existing infrastructure at the neighboring Kuparuk River Unit (KRU) including the use of existing vertical support members (VSMs) for flowlines, processing facilities, flowline transportation, and delivery and

return of gas and water. Formation of the OTPA will promote efficient development of the State's resources, while minimizing impacts to the region's cultural, biological, and environmental resources.

2. Geologic and Engineering Characteristics and Prior Exploration and Development Activities of the Proposed Oooguruk Torok 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 has submitted confidential geophysical, geological, and engineering data demonstrating that the OTPA is capable of producing or contributing to production of hydrocarbons in paying quantities.

A. Geology of Torok Interval

Prior Exploration and Development activities

Many wells in the area of the Oooguruk Unit encountered potential Torok reservoir interval during the early exploration days of the North Slope in the 1960's because of its shallow depth, generally between 4,000' to 6,000' true vertical depth subsea (TVDSS). The early exploration plays targeted the Sadlerochit (Ivishak sandstone) and later the Kuparuk formation whose reservoirs lie at deeper depths. Wells in the area that encountered significant Torok reservoir interval included the Sinclair Colville 1 well drilled in 1965-1966; the Texaco Colville Delta 2 and 3 wells drilled in 1986; the ARCO Kalubik 1 well drilled in 1992; the ARCO Kalubik 2 well drilled in 1998; and the Oooguruk and Ivik wells drilled in 2003. Both the Colville Delta 2 & 3 wells produced completion fluids and minor oil (unstimulated) at very low flow rates and at very low bottomhole pressures. Following moderate fracture stimulation, the Colville Delta 3 well did produce an average of 240 stock tank barrels of oil per day (STBOPD) during an 84 hour flow period. The Kalubik 1 well produced (unstimulated) completion fluids and water during a 12 hour test. During 1998, a Modular Dynamics Tester sample recovered from ARCO's Kalubik 2 well yielded a value of 19.8 API, but the well was not production tested. Formation tests conducted in the Torok interval in the Oooguruk 1 and Ivik 1wells produced water, confirming that the downdip Torok formation is wet east of the Colville Delta 2 and Kalubik 2 wells due to the presence of a normal, down to the east, northwest-southeast trending fault.

From 2007 to the present Pioneer has drilled 18 wells that have penetrated the Torok interval, enroute to Kuparuk and Nuiqsut development targets. The ODSN-45 well was originally drilled to produce the Nuiqsut sandstone, but was plugged back due to operational difficulties and recompleted in the vicinity of the Kalubik 2 well, as a horizontal producer, ODST-45A, in the Torok. The well began producing in March of

2010. As of February 2011 the ODST-45A well has produced approximately 157,000 barrels of oil, averaging around 430 STBOPD from the Torok formation. Pioneer has utilized a variety of analyses such as: production tests, log analysis, core data, fluid analyses, and seismic mapping to determine the extent of the Torok reservoir. One of the delimiters for determining the outline of the accumulation is the 5,150 feet subsea lowest known oil contour from the Colville Delta 3 well in conjunction with the areas that can be reasonably produced from the existing offshore Oooguruk Drill Site (ODS).

Geology of the Torok Interval

Geological, geophysical, and engineering data submitted in support of the application for formation of the OTPA were received on November 18, 2010. Updated maps were provided on March 11, 2011. Submitted data included structure, isopach, net to gross and net sand maps, well logs, cross sections, seismic cross sections, and confidential geological, engineering, and well production test analyses for the Torok interval.

The Torok reservoir within the Oooguruk Unit is a combination structural-stratigraphic trap. The Torok in this area is part of an eastward dipping monocline. There are several minor northwest trending normal faults in the area and a major fault down to the east northwest-southeast trending fault between the Kalubik 1 and Colville Delta 2 wells. This major fault defines the northeast edge of the proposed OTPA and stratigraphically isolates the down dip water wet Torok formation east of the Texaco Colville Delta 2 well. The western edge of the proposed OTPA is formed as a result of stratigraphic closure due to sandstone onlap onto the toe of slope.

The Torok formation is a time transgressive unit of Albian to Cenomanian in age and forms a complex series of interbedded sandstone, siltstone, and mudstone deposits that record complex interaction of deposition, sedimentation, subsidence, sea-level changes, and erosion along a shelf edge margin during the middle Cretaceous. The resultant sedimentary deposits record the interplay of changes in sea level, subsidence, and sedimentation and accompanying depositional patterns of progradation, regression, and aggradation. The entire Torok interval is generally around 250 feet thick in the Oooguruk area. The most prospective Torok reservoirs in the area represent toe of slope and basin floor fan sandstone deposits. Some composite sand packages greater than 35-40 feet can be recognized and mapped with 3D seismic. The Alaska Oil and Gas Conservation Commission (AOGCC) Conservation Order (CO) Number 645 defines the interval from 4,991 to 5,272 feet measured depth (MD), (4,954' to 5,235' TVDSS)) in the ARCO Kalubik 1 well as the type section for the prospective Torok reservoir in the OTPA.

Because the Torok reservoir consists of very finely interbedded sandstones, siltstones, and mudstones, it is difficult to correlate individual beds, but far easier to define and correlate the entire interval. Whole core data from Colville Delta 3 and Kalubik 1 and 2 and sidewall core data from Colville Delta 2, Thetis Island 1, Ivik 1, and Oooguruk 1 were analyzed to calculate porosity, water saturation, net pay, and hydrocarbon pore feet. Sands are composed of very fine sand to coarse silt sized grains with 20% to 50% quartz,

15% to 25% feldspar, 5% to 40% clay, 4% mica, metamorphic rock fragments and minor amounts of carbonate. The net sand to gross thickness ratio of the Torok reservoir is typically 45% to 50%. Sandstone porosity is 12% to 26% with an average of 19%. Sandstone permeability ranges from 0.1 to 100 millidarcies (md), averaging 4 md. Routine core data suggests that 75% of the sand has a permeability greater than 1 md.

Pioneer has calculated the original oil in place (OOIP) for the proposed OTPA as 690 million STBO. Free gas has not been encountered nor is it expected within the Torok interval. The solution gas/oil ratio is estimated at 250 standard cubic feet of gas per STBO, yielding 170 billion standard cubic feet of in-place associated gas.

The proposed OTPA will employ a horizontal well line-drive pattern immiscible water-alternating gas flood to enhance recovery from the reservoir with a 1,500' inter-well spacing. Pioneer plans to align the orientation of the proposed horizontal wells dedicated to Torok development to take advantage of the minimum stress direction of the regional fracture patterns in order to maximum recovery. Due to the highly laminated nature of the reservoir, all the wells, including the injectors, will be hydraulically fracture stimulated to enhance productivity and improve vertical injection sweep.

Pioneer's analytical modeling suggests primary depletion of the Torok will yield approximately 5% recovery of the OOIP; models suggest secondary enhanced recovery methods should yield an expected incremental recovery of 15% of the OOIP, resulting in a range of expected ultimate recovery between 5 and 25%. Pioneer's petrographic descriptions and core flood data indicate that the Torok pay sands are compatible with both the water and gas planned for injection.

The confidential geological, geophysical, and engineering data provided by Pioneer confirm and justify the size and aereal extent of the OTPA, which includes "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 production of hydrocarbons in paying quantities." 11 AAC 83.351(a).

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

The Alaska Oil and Gas Conservation Commission (AOGCC) approved pool rules for the Oooguruk Torok Reservoir on May 26, 2011, in CO Number 645. One production well, ODSN-45A, and one injection well, ODST-46i, currently operate in the proposed OTPA. Pioneer plans to complete initial development drilling in the OTPA during the 2011-2012 drilling season with two additional wells. Pioneer has also applied to expand the OU to include the entire Torok Reservoir as defined in AOGCC CO 645.

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

The OTPA will provide economic benefits to the State through royalty and tax payments on production. The initial allocation methodology provides an equitable production

allocation between the leases. Pioneer submitted tract participation schedules for the leases in the proposed OTPA (Attachment 1) as required under 11 AAC 83.351. The proposed allocation distributes expenses and production among the tracts/leases on a surface acreage basis. Future determinations of participation will be on a volumetric basis, which will be adjusted to reflect expansions of the participating area.

4.1 Facility Sharing, Metering, and Production Allocation

Pioneer received approval from the AOGCC and the Division to use multiphase flowmeters (MPFMs) to measure and allocate oil production between the ONPA and OKPA. In AOGCC CO 645, Pioneer received approval to also use MPFMs to measure and allocate oil production between the OTPA and the existing ONPA and the OKPA, under the same conditions as the prior approval. Pioneer and ConocoPhillips Alaska Inc., Operator of the Kuparuk River Unit, received 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. 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 that measure single phase sales quality oil. MPFMs 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, ONPA, and OTPA 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 over report volumes as often as they underreport volumes.

The Division approves the use of MPFMs for well testing and allocation between wells, between the OTPA, 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, 456A.007 and 645.

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 Production Processing and Services Agreement between the Kuparuk River Unit Owners and the Oooguruk Unit Owners (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, ONPA, and OTPA production. The Oooguruk Oooguruk Tie-In Pad (OTP) MPFM records, at line conditions, temperature and pressure, and oil, water, and gas rates. The KRU Operator has simulated the flash from the Oooguruk Drillsite (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 pressure, volume, and temperature 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: (Wet barrels-Shrinkage)x(Loss Factor) = Dry (Sales Quality) barrels. The PPSA also specifies a Loss Factor which is subject to future adjustment.

4.4 Plant Fill and Back-out

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 OTPA sales volumes, which pay 12.5 percent royalty, will be used to compensate KRU for sales volumes which, if produced now, would have borne 12.5 percent royalty. After payout, OTPA sales volumes will pay the NPS royalty rate of 30 percent. The Division will not require OU to compensate the State for the backout volume associated with OTPA production.

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 OTPA 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 OTPA. 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 will 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, 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 OTPA. The Division approves Pioneer's proposed tract participation and determination schedule for allocating production and costs among the leases within the OTPA.

4.6 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 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, 2011.

4.7 NPSL Accounting

The OTPA includes two NPS leases, ADLs 355036 and 355037. 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 OTPA.
   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 OTPA and then to each Tract within PA by the tract allocation factor.

The Division approves the proposed cost center allocation methodology.

4.8 Paying Quantities Determination

A cash flow analysis was performed based on the data submitted and incorporating other elements to standardize the "participating area paying quantities" determination portion of the participating area approval process. The focus of this analysis was on the operating expenses as defined for purposes of the "paying quantities" definition. The estimated operating expenses for the OTPA were compared to forecast prices. The forecast "paying quantities operating expenses" in this analysis did not exceed forecast commodity prices. Therefore the project meets the paying quantities definition set out in 11 AAC 83.395.

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

1. Promote the Conservation of All Natural Resources

The unitization of oil and gas reservoirs and the formation of participating areas within unit areas to develop hydrocarbon-bearing reservoirs are well-accepted means of hydrocarbon conservation. Formation of a participating area within an existing unit, with development occurring under the terms of a unit agreement, promotes efficient evaluation and development of the State's resources, and minimizes impacts to the area's cultural, biological, and environmental resources.

2. The Prevention of Economic and Physical Waste

Approval of the formation of the OTPA will promote prevention of economic and physical waste. Approval of the OTPA will not result in economic waste given the current well spacing, market demand, and anticipated production rates. Annual approval of the OTPA development activities as described in the future plans of development must also provide for the prevention of economic and physical waste. Using the KRU infrastructure and facilities eliminates the need to construct stand-alone facilities to process production from the Oooguruk Torok Reservoir; optimizing production while preventing economic and physical waste protects all parties.

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

Formation of the OTPA 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 people of Alaska have an interest in the development of the State's oil and gas resources to maximize the economic and physical recovery of the resources. AS 38.05.180(a). Diligent exploration and development under a single approved unit plan without the complications of competing leasehold interests promotes the State's interest. Approval of the OTPA under the OU 5th POD and future annually approved plans of development will provide for continued review and approval of Pioneer's plans to develop the OTPA in a manner which will maximize economic and physical recovery of the resources.

The formation of the OTPA 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.

IV. FINDINGS AND DECISION

A. The Conservation of All Natural Resources

1. The approval of the OTPA will conserve all natural resources, including hydrocarbons, gravel, sand, water, wetlands, and valuable habitat.

2. The development and operation of these leases under the OU Agreement and the OTPA 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. With the approval of the OU 5th POD, the Division considered the prevention of economic and physical waste criteria under 11 AAC 83.303(a)(2). The OTPA development activities must be conducted under an annually approved plan of development, which will provide for the future promotion of prevention of economic and physical waste.

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

1. The formation of the OTPA meets the requirements of 11 AAC 83.351 and 11 AAC 83.371, adequately and equitably protects the public interest, and is in the State's best interest.

2. The geological and engineering data provided reasonably justify the inclusion of the proposed acreage within the OTPA under the terms of the applicable regulations governing formation and operation of oil and gas units (11 AAC 83.301 – 11 AAC 83.395) and the terms and conditions under which these lands were leased from the State.

3. The formation of the OTPA 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 OTPA overlies the Torok Formation. The stratigraphic limits of the OTPA

are the depths common to and correlating with the interval from 4,991' MD feet to 5,272' MD recorded in the Kalubik-1 well.

5. The OTPA approval is effective March 1, 2010.

6. The Division approves the use of MPFMs for well testing and allocation between wells, between the OKPA, ONPA, and the OTPA, 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, 456A.007 and 645.

7. 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.

8. 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.

9. The Division approves the OTPA tract allocation schedule effective March 1, 2010 for allocating production and costs among the leases in the OTPA. Pioneer shall report production from the OTPA to royalty accounting unit code OUTO.

    a. Accounting Unit codes OO06 and OO08 are terminated effective June 1, 2011, Production Month of April, 2011. The Accounting Unit code for the OTPA is OOTO.

    b. Pioneer shall submit revised operator reports and the lessees shall submit revised royalty reports and NPS lease reports back to the start of production, zeroing out production under royalty accounting unit codes OO06, and OO08 and allocating all production to the OTPA royalty accounting code OOTO as set forth in the approved OTPA tract allocation schedule.

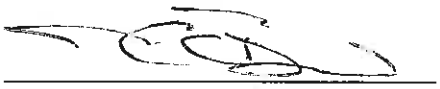
    c. These revised reports must be submitted within 60 days after the approval of the formation of the OTPA. Oooguruk invoices from the quality bank administrator must accompany these revised reports and all future royalty reports (A1).

    d. If the reports and Oooguruk invoices from the quality bank administrator are not submitted within 60 days (August 24, 2011) 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 OTPA boundary will contract to 160 acre spacing around development wells in the Final Redetermination, unless the parties agree otherwise.

For the reasons discussed in this Findings and Decision, I hereby approve the OTPA subject to the conditions set out in this decision. The OTPA is effective March 1, 2010.

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 Daniel S. Sullivan, 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.



W.C. Barron
Director
Division of Oil and Gas

6/24
Date

V. ATTACHMENTS

1. Exhibit C, OTPA Tracts/leases
2. Exhibit D, Map of the OTPA within the Oooguruk Unit Boundary
3. Exhibit E, Allocation of Participating Area Expense
4. Exhibit F, Allocation of Unit Area Expense

ATTACHMENT ONE
Exhibit C, OTPA Tracts/leases

Exhibit C
Torok Participating Area
Attached to and made a part of that certain Ooogurak Unit Agreement

Unit Tract #	Lessor & Lease No.	Working Interest Owners	Working Interest	Effective Date	Description	Acreage	Royalty	ORR Burden	Unit Tract Participation (surf. acreage)
13	State of AK ADL 355036	Pioneer Natural Resources Alaska, Inc. Eni Petroleum US LLC	70.00000% 30.00000%	8/1/83	T13N, R3E, UMIAT MERIDIAN	1,160.00	12.5%* 30% NPS		
	UPPER INTERVAL	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 8,407' (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)			Sec 10: Protracted, SE/4 SE/4, W/2 SE/4, SW/4, S/2 NW/4, NW/4 NW/4 Sec 14: Protracted, W/2 NW/4, NW/4 SW/4 Sec 15: Protracted, All			Total 5.021390% See Details Below	74.35897%
14	State of AK ADL 355037	Pioneer Natural Resources Alaska, Inc. Eni Petroleum US LLC	70.00000% 30.00000%	8/1/83	T13N, R3E, UMIAT MERIDIAN	400.00	12.5%* 30% NPS		
	UPPER INTERVAL	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 8,407' (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 3 E., U.M. known in the DNR computer records as "Segment 1" of the Lease)			Sec 9: Protracted, E/2 NE/4, SW/4 NE/4, SE/4, E/2 SW/4 Sec 16: Protracted, NE/4, NE/4 SE/4			Total 5.076738% See Details Below	25.64103%
						1,560.00			100.00000%
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 and ADL 355037 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 Ooogurak Development Royalty Modification Application filed on May 20, 2005).									

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

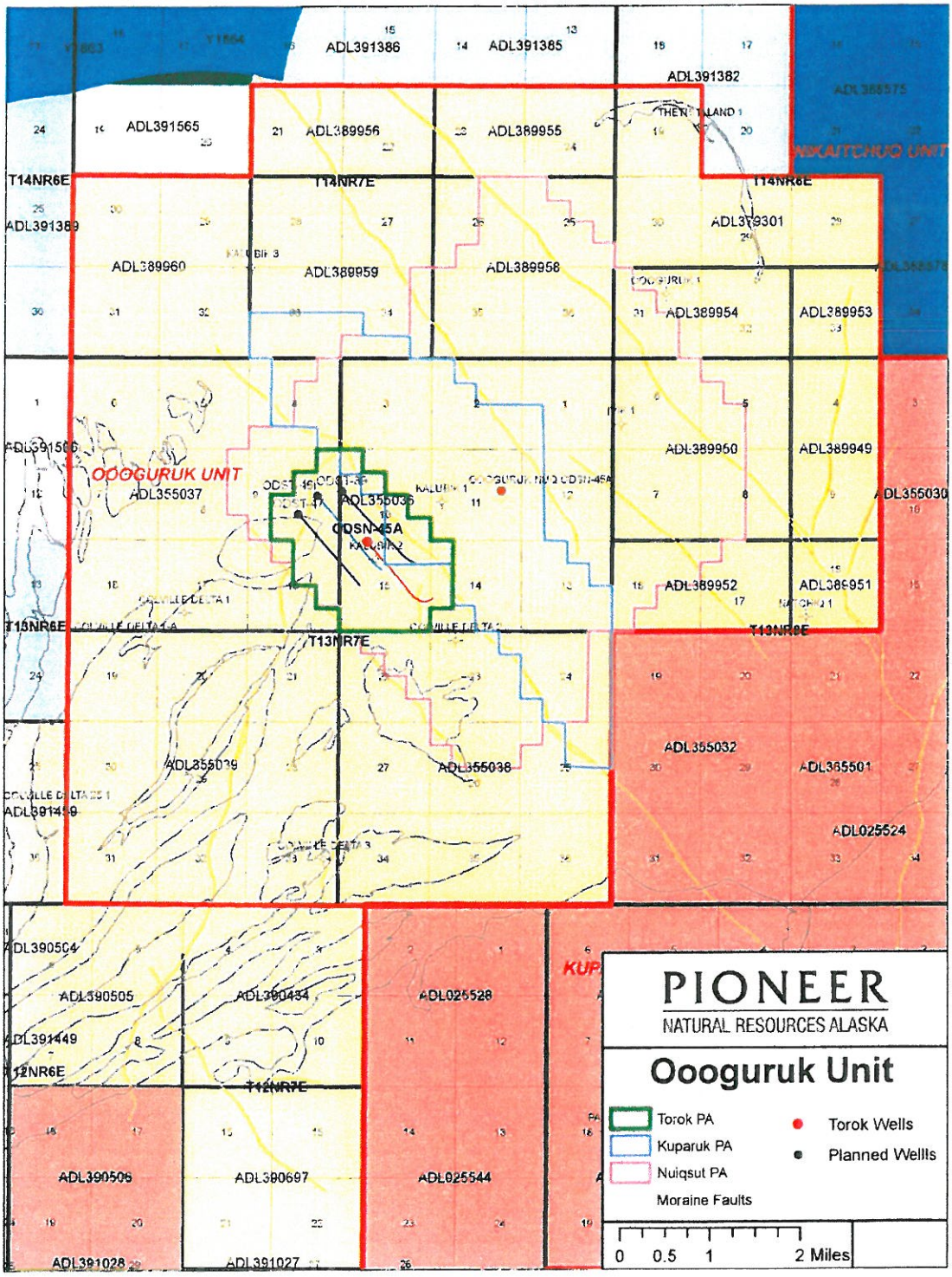
Unit Tract #	Lessor & Lease No.	Working Interest Owner	Working Interest	Effective Date	Description	Acreage	Royalty	ORR Burden	Unit Tract Participation (surf. acreage)
Tract 13 is burdened by Overriding Royalties held by the following parties in the stated percentages:									
Tract 13 Upper Interval		XH, LLC 1601 Elm Street, Suite 4700 Dallas, TX 75201						0.25210000%	
		Eni Petroleum US LLC 1201 Louisiana, Suite 3500 Houston, TX 77002						0.51429000%	
		Pioneer Natural Resources Alaska, Inc. 700 G Street, Suite 600 Anchorage, AK 00501						1.20000000%	
		ConocoPhillips Alaska, Inc. 700 G Street Anchorage, AK 00501						2.50000000%	
		William D. Armstrong 16 Village Road Englewood, CO 80110						0.40400000%	
		GMT Exploration Company LLC 1560 Broadway, Suite 800 Denver, CO 80202						0.07400000%	
		Jesse V. Sommer 4531 West Geddes Avenue Littleton, CO 80128						0.01200000%	
		Edgar Kerr 155 Spotted Deer Lane Franktown, CO 80116						0.01200000%	
		Jeffery A. Lyslo 91 Buckthorn Drive Littleton CO 80127						0.01200000%	
		Reed LIGC, LLC P.O. Box 411 Franktown, CO 80116						0.01200000%	
		Matthew X. Furin 2001 South Madison Denver, CO 80210						0.01200000%	
		Stuart W Gustafson P O. Box 4625 Horseshoe Bay, TX 78657						0.01200000%	
		Chester E. Paris 1208 Mesa Court Golden, CO 80403						0.00500000%	

Exhibit C
Torok 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 (surf. acreage)
Tracts 14 is burdened by Overriding Royalties held by the following parties in the stated percentages:									
Tract 14 Upper Interval		Anadarko Petroleum Corporation P.O. Box 1330 Houston, TX77251-1330						0.09354800%	
		David L. Herbaly as Trustee of the David L. Herbaly Revocable Trust dated May 24, 2004 1420 W Canal Ct Ste 150 Littleton, CO 80120						0.67500000%	
		Elmer L. Herbaly and Lorna M. Herbaly as Trustees of the Elmer L. Herbaly Revocable Trust dated May 24, 2004 1420 W Canal Ct Ste 150 Littleton, CO 80120						0.67500000%	
		XH, LLC 1601 Elm Street, Suite 4700 Dallas, TX 75201						0.12605000%	
		George Alan Joyce, Jr. 3528 Eisenhower Lane Plano, TX 75023						0.15000000%	
		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 00501						0.60000000%	
		ConocoPhillips Alaska, Inc. 700 G Street Anchorage, AK 99501						2.50000000%	

ATTACHMENT TWO
Exhibit D, Map of the OTPA

Exhibit D
Torok Participating Area
Attached to and made a part of that certain Oooguruk Unit Agreement



ATTACHMENT THREE
Exhibit E, Allocation of Participating Area Expense

Exhibit E
Torok 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	PA Expense
13	State of AK ADL 355036	Pioneer Natural Resources Alaska, Inc. Eni Petroleum US LLC	70.00000% 30.00000%	8/1/83	T13N, R7E, UMIAT MERIDIAN	1,160.00000	12.5% 30% NPS	Total 5.021390% See Details below	74.35897%
	UPPER INTERVAL	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 I" of the Lease.)			Sec 10: Protracted, SE/4 SE/4, W/2 SE/4, SW/4, NW/4 Sec 14: Protracted, W/2 NW/4, NW/4 SW/4 Sec 15: Protracted, All				
14	State of AK ADL 355037	Pioneer Natural Resources Alaska, Inc. Eni Petroleum US LLC	70.00000% 30.00000%	8/1/83	T13N, R7E, UMIAT MERIDIAN	400.00000	12.5% 30% NPS	Total 5.07673805% See Details below	25.64103%
	UPPER INTERVAL	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 I" of the Lease.)			Sec 9: Protracted, E/2 NE/4, SW/4 NE/4, SE/4, E/2 SW/4 Sec 16: Protracted, NE/4, NE/4 SE/4, NE/4 NW/4				
						1,560.00000			100.00000%

The state's royalty interest in ADL 355036 and ADL 355037 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).

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

Tract 13 is burdened by Overriding Royalties held by the following parties in the stated percentages:

Tract 13 Upper Interval	XH, LLC 1601 Elm Street, Suite 4700 Dallas, TX 75201	0.25210000%
	Pioneer Natural Resources Alaska, Inc. 700 G Street, Suite 600 Anchorage, AK 00501	1.20000000%
	Eni Petroleum US LLC 1201 Louisiana, Suite 3500 Houston, TX 77002, AK 00501	0.51429000%
	ConocoPhillips Alaska, Inc. 700 G Street Anchorage, AK 00501	2.50000000%
	William D. Armstrong 16 Village Road Englewood, CO 80110	0.46700000%
	GMT Exploration Company LLC 1560 Broadway, Suite 800 Denver, CO 80202	0.07400000%

11/18/10

Exhibit E
Torok 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	PA Expense
		Jesse V. Sommer 4531 West Geddes Avenue Littleton, CO 80128						0.01200000%	
		Edgar Kerr 155 Spotted Deer Lane Franktown, CO 80116						0.01200000%	
		Jeffery A. Lysio 91 Buckthorn Drive Littleton, CO 80127						0.01200000%	
		Reed LIGC, LLC P.O. Box 411 Franktown, CO 80116						0.01200000%	
		Matthew X. Furin 2001 South Madison Denver, CO 80210						0.01200000%	
		Stuart W. Gustafson P.O. Box 4625 Horseshoe Bay, TX 78657						0.01200000%	
		Chester E. Paris 1208 Mesa Court Golden, CO 80403						0.00500000%	
Tract 14 is burdened by Overriding Royalties held by the following parties in the stated percentages:									
Tract 14 Upper Interval		Anadarko Petroleum Corporation P.O. Box 1330 Houston, TX77251-1330						0.09354800%	
		David L. Herbaly as Trustee of the David L. Herbaly Revocable Trust dated May 24, 2004 1420 W Canal Ct Ste 150 Littleton, CO 80120						0.67500000%	
		Elmer L. Herbaly and Lorna M. Herbaly as Trustees of the Elmer L. Herbaly Revocable Trust dated May 24, 2004 1420 W Canal Ct Ste 150 Littleton, CO 80120						0.67500000%	
		XH, LLC 1601 Elm Street, Suite 4700 Dallas, TX 75201						0.12600000%	
		George Alan Joyce, Jr. 3528 Eisenhower Lane Plano, TX 75023						0.15000000%	
		Pioneer Natural Resources Alaska, Inc. 700 G Street, Suite 600 Anchorage, AK 99501						0.60000000%	
		Eni Petroleum US LLC 1201 Louisana, Suite 3500. Houston, TX 77002. AK 99501						0.25714000%	
		ConocoPhillips Alaska, Inc. 700 G Street Anchorage, AK 99501						2.50000000%	

ATTACHMENT FOUR
Exhibit F, Allocation of Unit Area Expense

Exhibit F
Torok Participating Area
Attached to and made a part of that certain Oooguruk Unit Agreement

Pioneer Natural Resources Alaska, Inc., as the Oooguruk Unit Operator, estimates the total Unit economic reserves will be contributed 77% from the Nuiqsut PA, 18% from the Kuparuk PA and 5% from the Torok PA. The current Unit Plan of Development contemplates the drilling a total of 41 wells for Oooguruk development; six wells in the Kuparuk, 31 in the Nuiqsut and four in the Torok. On a relative well count basis 14.6341% of the unit wells will be drilled to produce Kuparuk reserves, 75.6098% of the unit wells will be drilled to produce Nuiqsut reserves and 9.7561% of the unit wells will be drilled to produce Torok reserves.

Pioneer proposes that expenses be broadly captured 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, Nuiqsut PA or Torok PA) and then to each Tract within a PA by the PA Tract Participation factor.
2. Oooguruk Drill Site (ODS) - Costs including all drillsite facilities, (i.e. well-bay modules, 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 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 (OTP).
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.

	Lessor & Lease No.	Working Interest Owner	Working Interest	Effective Date	Description	Acreage	Royalty	ORR Burden	Unit Tract Participation	Relative Reserve Allocation (.05 x Tract Allocation)	Well Count Allocation 4/41 x Tract Allocation)
13	State of AK ADL 355036	Pioneer Natural Resources Alaska, Inc. Eni Petroleum US LLC	70.00000% 30.00000%	8/1/83	T13N, R7E, UMIAT MERIDIAN	1,160.00	12.5% 30% NPS	Total 5.0213900% See Details below	74.35897%	0.037179487	0.072545
	UPPER INTERVAL	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 8,403' (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-Kuhbik #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.)			Sec 12: Protracted, SE/4 SE/4, W/2 SE/4, SW/4, S/2 NW/4, NW/4 NW/4 Sec 14: Protracted, W/2 NW/4, NW/4 SW/4 Sec 15: Protracted, All						
14	State of AK ADL 355037	Pioneer Natural Resources Alaska, Inc Eni Petroleum US LLC	70.00000% 30.00000%	8/1/83	T13N, R7E, UMIAT MERIDIAN	400.00	12.5% 30% NPS	Total 5.0767380% See Details below	25.64103%	0.012821	0.025016
	UPPER INTERVAL	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-Kuhbik #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.)			Sec 9: Protracted, E/2 NE/4, SW/4 NE/4, SE/4, E/2 SW/4 Sec 16: Protracted, NE/4, NE/4 SE/4						
						1,560.00			100.00000%	0.05	0.097561

Tract 13 is burdened by Overriding Royalties held by the following parties in the stated percentages:

Tract 13 Upper Interval	XH, LLC 1601 Elm Street, Suite 4700 Dallas, TX 75201	0.252100000%
	Pioneer Natural Resources Alaska, Inc. 700 G Street, Suite 600 Anchorage, AK 99501	1.200000000
	Eni Petroleum US LLC 1201 Louisiana, Suite 3600 Houston TX 77002, AK 00901	0.514300000
	ConocoPhillips Alaska, Inc. 700 G Street Anchorage, AK 99501	2.500000000%
	William O. Armstrong 16 Village Road Englewood, CO 80110	0.404000000%
	GMT Exploration Company LLC 1560 Broadway, Suite 2080 Denver, CO 80202	0.079000000%

11/18/10

Exhibit F
Torok Participating Area
Attached to and made a part of that certain Oooguruk Unit Agreement

Lessor & Lease No.	Working Interest Owner	Working Interest	Effective Date	Description	Acreage	Royalty	ORR Burden	Unit Tract Participation	Relative Reserve Allocation (.05 x Tract Allocation)	Well Count Allocation 4/41 x Tract Allocation)
	Jesse V. Sumner 4931 West Geddes 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 80127						0.01200000%			
	Third LIOC, LLC P.O. Box 411 Franktown, CO 80116						0.01200000%			
	Matthew X. Paris 2001 South Madison Denver, CO 80210						0.01200000%			
	Stuart W. Gustafson P.O. Box 4625 Homosassa Bay, TX 77657						0.01200000%			
	Chester L. Paris 1208 Mesa Court Golden, CO 80403						0.00500000%			
Tracts 14 is 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, TX77251-1330						0.09246000%			
	David L. Herbaly as Trustee of the David L. Herbaly Revocable Trust dated May 24, 2004 1420 W Canal Ct Ste 150 Littleton, CO 80120						0.67500000%			
	Elmer L. Herbaly and Loreta M. Herbaly as Trustees of the Elmer L. Herbaly Revocable Trust dated May 24, 2004 1420 W Canal Ct Ste 150 Littleton, CO 80120						0.67500000%			
	XH, LLC 1601 Elm Street, Suite 4700 Dallas, TX 75201						0.12603000%			
	George Alan Joyce, Jr. 3528 Eisenhower Lane Plano, TX 75023						0.15000000%			
	Pioneer Natural Resources Alaska, Inc 700 G Street, Suite 600 Anchorage, AK 00501						0.60000000%			
	Eni Petroleum US LLC 1201 Louisana, Suite 3500, Houston, TX 77002, AK 00501						0.25714000%			
	ConocoPhillips Alaska, Inc. 700 G Street Anchorage, AK 99501						2.50000000%			