

**OOOGURUK UNIT**

**Findings and Decision of the Director  
of the Division of Oil and Gas**

**APPROVAL OF THE  
FORMATION OF THE  
OOOGURUK UNIT**

**Under a Delegation of Authority  
from the Commissioner of the State Of Alaska  
Department of Natural Resources**

**July 11, 2003**

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

Pioneer Natural Resources Alaska, Inc. (Pioneer) and Armstrong Alaska, Inc. (Armstrong) jointly applied to form the Oooguruk Unit on January 31, 2003. Pioneer and Armstrong have a uniform working interest in all of the leases, 70 percent and 30 percent, respectively, and Pioneer is the proposed Oooguruk Unit Operator. The proposed Oooguruk Unit encompasses approximately 20,394 acres within twelve state leases.

The Department of Natural Resources, Division of Oil and Gas (DNR or the Division as appropriate) deemed the application complete on March 17, 2003. Public Notice of the application was published in the Anchorage Daily News and The Arctic Sounder on April 3, 2003. The public notices invited interested parties and members of the public to submit comments by May 1, 2003. The initial application proposed to unitize eleven state oil and gas leases, however, on April 30, 2003, Pioneer filed a request to amend the application to include an additional lease. The Division noticed the amended application for public comment on June 3, 2003 and the comment period closed on July 10, 2003.

The Division only received one comment, received on May 2, 2003. Anadarko Petroleum Corporation (Anadarko), which holds an adjoining lease to the proposed unit area, stated that they were not opposed to the formation of the unit, but reserved the right to apply to join the unit in the future. Anadarko also stated that if they joined, they should be allowed the opportunity to negotiate certain revisions to the Unit Agreement and Unit Operating Agreement.

For reasons set out in this decision, the Division approves the formation of the Oooguruk Unit effective today, July 11, 2003.

## **II. APPLICATION FOR THE FORMATION OF THE UNIT AREA**

The State awarded three of the twelve tracts proposed for the new unit in the November 18, 1997, lease sale. They have a 16.66667% royalty and a primary term that expires on December 31, 2004. Union Texas Alaska, LLC, now doing business as Phillips Alpine Alaska, LLC (Phillips), was the high bidder on two of the three tracts with a total bid of \$3,169,035 and John Winther was the high bidder on the third tract with a bid of \$204,442. Armstrong was awarded the other 9 leases on October 24, 2001, with a total bid of \$2,466,362. They have a 16.66667% royalty and a primary term that expires on June 31, 2009. The total of all bids received for the leases in the proposed unit is \$5,840,839.

On July 16, 2002, Armstrong submitted a Plan of Operations to drill three wells on its leases, which the Division approved on November 19, 2002.

On November 20, 2002, Pioneer and Armstrong met with the Division to discuss the technical aspects of their prospect and the process to form a new unit. The Division

followed up the meeting by providing an outline of the process and copies of the regulations and statutes.

Effective December 1, 2002, Armstrong assigned Pioneer 70% working interest in their 9 leases and named Pioneer operator of the proposed unit. Subsequently, Pioneer announced plans to drill up to three wells during the 2002-2003 winter drilling season. Pioneer's primary target was the Kuparuk C sands, which have been encountered in the offsetting Kuparuk River Unit to the southeast, although prospective intervals to be tested by this exploration program included but were not limited to the Cretaceous Middle Brookian, Cretaceous Torok, Kuparuk A, Kuparuk C, and the Jurassic Nuiqsut/Nechelik. Pioneer submitted a formal application on January 31, 2003. The Division reviewed the application and requested additional information.

The application includes an Oooguruk Unit Agreement, using the State Only Model Agreement (revised June 2002), and a Unit Operating Agreement (UOA). On February 13, 2003, the Division requested that Pioneer provide more evidence that all "proper parties" had been invited to join the unit.

On February 24, 2004, Pioneer spud its first exploration well in Alaska, the IVIK #1 well. This well was followed by two other wells this season, the Oooguruk #1 and the Natchiq #1 wells. On at least two occasions the Division visited the well sites to review the operation and to witness well tests.

On March 12, 2003, Phillips assigned 70% of their working interest in ADL's 388570 and 388569 to Pioneer and 30% to Armstrong and retained a 4.25% overriding royalty.

On March 17, 2003, the Division deemed the unit application complete and noticed it to the public on April 3, 2003.

On March 31, 2003 Pioneer released a press release announcing a 1,300 barrel of oil per day (BOPD) discovery from the Jurassic formation, not the primary target, the Kuparuk C formation.

On April 30, 2003, Pioneer submitted an amendment to its application to include lease ADL 388576 within the unit area. The Division noticed the amended application for public comment on June 3, 2003, and the comment period closed on July 10, 2003.

Effective February 13, 1998, John Winther assigned his interest to Petersburg Petroleum, LLC, who then assigned its interest to Winstar Petroleum, LLC (Winstar), effective September 1, 2000. On May 1, 2003, Winstar assigned 70% of their working interest in ADL388576 to Pioneer and 30% to Armstrong and retained a 4.25% overriding royalty.

On May 2, 2003, Anadarko submitted its public comment, which was the only comment received (See attachment 4). Anadarko did not ask the Division to delay making a decision on the unit application, but stated, "should the Jurassic reservoir(s) be commercially viable, Anadarko may consider joining the unit, assuming Anadarko would

be allowed the opportunity to negotiate certain revisions to the Unit Agreement and the Unit Operating Agreement.”

This decision approves the proposed Plan of Exploration (POE), and is not currently approving a Plan of Development or the formation of a Participating Area.

### **III. DISCUSSION OF DECISION CRITERIA**

The commissioner may approve the formation of a new unit if it is "necessary or advisable to protect the public interest." 11 AAC 83.303(c). The DNR considered the application under the criteria in 11 AAC 83.303(a) and (b).

A discussion of the subsection 11 AAC 83.303(b) criteria, as they apply to the application, is set out directly below, followed by the Director's Findings relevant to the subsection 11 AAC 83.303(a) criteria, and the Director's approval of the application.

#### **A. ISSUES OF CONSIDERATION UNDER 11 AAC 83.303(B)**

##### **1. Environmental Costs and Benefits of Unitized Exploration**

Alaska statutes require the DNR to give public notice and issue a written finding before disposal of the state's oil and gas resources. AS 38.05.035(e); AS 38.05.945; 11 AAC 82.415. In preparing a written decision before an oil and gas lease sale, the commissioner may impose additional conditions or limitations beyond those imposed by law. AS 38.05.035(e). The DNR develops lease stipulations through the lease sale process to mitigate the potential environmental, social and cultural impacts from oil and gas activity.

The leases that are proposed to be included in the Oooguruk Unit contain many stipulations designed to protect the environment and address any outstanding concerns regarding impacts to the area's fish and wildlife species and to habitat and subsistence activities. They address the protection of primary waterfowl areas, site restoration, construction of pipelines, seasonal restrictions on operations, public access to, or use of the leased lands, and avoidance of seismic hazards. Including these leases in the Oooguruk Unit will not result in additional restrictions or limitations on access to surface lands or to public and navigable waters. All lease operations are subject to a coastal zone consistency determination, and must comply with the terms of both the State and North Slope Borough coastal zone management plans.

Ongoing mitigation measures such as seasonal restrictions on specific activities in certain areas can reduce the impact on bird, fish, and mammal populations. With these mitigation measures, the anticipated exploration and development related activity is not likely to significantly impact bird, fish, and mammal populations. Area residents use the unit area for subsistence hunting and fishing. Oil and gas activity may impact some wildlife habitat, and some subsistence activity. The environmental impact will depend on

the level of development activity, the effectiveness of mitigation measures and the availability of alternative habitat and subsistence resources. In any case, the anticipated activity under the new Ooguruk Unit will impact habitat and subsistence activity less than if the lessee developed the resources on an individual lease basis. Unitized exploration, development and production will minimize surface impact.

Furthermore, state unitization regulations require the commissioner to approve a Plan of Operations before the unit operator performs any field operations. 11 AAC 83.346. Before Pioneer began operations on the leases, it filed a lease Plan of Operations, which the Division Approved on November 19, 2002. Any additional Plan of Operations must describe the operating procedures designed to prevent or minimize adverse effects on natural resources. The unit operator must guarantee full payment for all damage sustained to the surface estate before beginning operations. The Plan of Operations must include plans for rehabilitation of the unit area. When the operator proposes to further explore and develop the unit area and submits a Unit Plan of Operations, the Division will ensure that it complies with the lease stipulations and lessee advisories developed for the most recent North Slope areawide lease sale.

The approval of the Ooguruk Unit has no environmental impact itself. The commissioner's approval of the unit is an administrative action, which by itself does not convey any authority to conduct operations within the unit. Unitization does not waive or reduce the effectiveness of the mitigating measures that condition the lessee's right to conduct operations on these leases. The Division's approval of the POE is only one step in the process of obtaining permission to drill wells and develop the known reservoirs within the unit area.

The Unit Operator must still obtain approval of a Plan of Operations and obtain various permits from state agencies before initiating activities. Pioneer plans to explore the area through ice roads and pads, which will leave no trace after they melt. All planned exploration wells will be plugged and abandoned before the ice breakup.

## 2. Geological and Engineering Characteristics of the Proposed Unit Area

### a. Kuparuk River Formation: Stratigraphy and Depositional and Tectonic History

The Kuparuk River Formation of Early Cretaceous age (120 – 145 million years old) has a unique and complex depositional history. The Kuparuk River formation is informally subdivided into four members designated by letters A (oldest) through D (youngest). Each member is further subdivided into sub-members designated by numbers, such as A-1 and C-4 (with one being the oldest sub-member). The lower A and B sandstone members were derived from a sub-aerially exposed northern provenance that foundered during Late Jurassic - Early Cretaceous time. The Kuparuk A sandstone sub-members are predictable, continuous, coarsening-upward marine offshore bars to shoreface sequences that were deposited over large contiguous areas. Following the deposition of shallow marine Kuparuk B sediments, the area became tectonically active due to regional rifting and extension tectonics that

resulted in regional tilting and the formation of localized high source areas that were subsequently eroded by the Lower Cretaceous Unconformity (LCU), a major regional scouring event. The LCU progressively truncates the B sediments, where deposited, and A sandstone members in a predictable manner. As the northern source terrain subsided, localized uplifted blocks along the Prudhoe Bay structural high became the primary source of the Upper Kuparuk C and D sediments. The Kuparuk C and D members are deposited on top of the eroded irregular topography created by the LCU and represent the first sediments sourced from the local structural highs. Sediment eroded from the highs were deposited as the C and D members and preserved in grabens and other low-lying areas on the eroded LCU surface. The most productive C sandstone areas tend to be associated with thicker sand intervals deposited in paleo-topographic depressions on down-thrown fault blocks. Kuparuk C sandstone is absent by erosion or non-deposition on paleo-topographic highs. In the northern Milne Point Unit and northeast part of the Kuparuk River Unit (around 3R, 3Q, and 3O pad, the primary oil production comes from the lower A sandstone members. Locally, the LCU has completely eroded out all of the B sandstone members and upper A sandstone members and has progressively eroded out or truncated the A3, A2, and A1 Kuparuk sandstone in a northwest direction. The LCU is generally coincident with the top of the reservoir sand in the northeastern Kuparuk River Unit and Milne Point Unit areas. To the west in the northwest part of the Kuparuk River Unit (around 3M and 3H pads), more Kuparuk C sandstone is preserved locally, primarily in paleo-topographic lows and grabens and a significant amount of Kuparuk production is from the Kuparuk C interval along with A sandstones. South of the Oooguruk Unit, in the Kalubik wells, and in the Colville Delta wells, some Kuparuk C sandstone is preserved.

#### b. Jurassic Sandstone Potential

The Colville Delta area, southwest of the proposed Oooguruk Unit, contains three oil-bearing Jurassic sands. From oldest to youngest the three sandstones are the Nechelik, Nuiqsut, and Alpine sandstones. All three sandstones appear to have the same general depositional setting and lithologic characteristics. The sands are very fine- to fine-grained quartz arenites, which contain up to 15% glauconite. These shallow marine sands were deposited from a northern source area that foundered in the early Cretaceous during the opening of the Canada Basin. The regional setting of the Colville Delta and Alpine area is interpreted from seismic and regional well control as a broad, very low gradient marine shelf on a south-facing passive margin. The shelf was likely a muddy one with limited accommodation space and relatively low rates of sedimentation. The three successive Upper Jurassic sand 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 preservation of these three Jurassic sandstone packages: eustatic and tectonic sea level changes; local topography created by normal faulting resulting from pre-breakup rift related extensional tectonics; and the localized point source contributions of localized rivers, incised valleys, eroded highs sculpted by localized erosion during lowstands of sea level. The Alpine interval records the last significant sandstone pulse of Jurassic sedimentation in the vicinity of the Alpine

field. The Alpine sandstone from the Bergschrund 1 well (discovery well for the Alpine field) produced at a rate of 2,380 BOPD of 39 API gravity oil. The Alpine interval is not present in the northern Colville Delta area; it was apparently eroded by LCU. The underlying Nuiqsut sandstones appear to have protruded into and are thickened in the Colville Delta area. The key to unlocking the reserves within the Jurassic sands is producing the low API gravity oil without damaging the formation with drilling fluids. Several wells in the Colville Delta area tested Nuiqsut sands: the Texaco Colville Delta 1 well produced at a rate of 1,075 BOPD of 25 API oil; the Texaco Colville Delta 2 well produced at a rate of 409 BOPD with the measured oil gravity varying from 24 – 40 degree API; the Texaco Colville Delta 3 well produced at a rate of 374 BOPD of 27.7 degree API oil; and the ARCO Kalubik 1 well produced at a rate of 410 BOPD of 21 degree gravity oil.

c. Pioneer/Armstrong's Geological, Geophysical, and Engineering Information Submittal and the Results of their Winter Drilling Program

Armstrong Resources reinterpreted the structural and stratigraphic relationships within the proposed Oooguruk Unit area based on 2-D and 3-D seismic data integrated with surrounding well data in the area and came up with the Northwest Kuparuk prospect. In press releases, Pioneer said that their three well exploration program would test an area "prospective for oil in the same sands as the offsetting Kuparuk River unit eight to 10 miles to the southeast." (PNA April 2003). Other prospective exploration targets in the area included the Cretaceous Middle Brookian and Torok (Seabee) sandstones, Kuparuk A and C sandstones, and Jurassic Nuiqsut/Nechelik sandstones. The Kuparuk C sandstone was the primary target for Pioneer's three exploration wells.

Pioneer was able to drill all three of its wells this past drilling season in the Northwest Kuparuk prospect from ice islands in the shallow waters of the Beaufort Sea, northwest of the Kuparuk River Unit. The three wells have Inupiaq names: Ivik (walrus), Oooguruk (bearded seal) and Natchiq (seal). The Oooguruk well, a vertical hole, was completed March 29, 2003 to a depth of 6,900 feet. The Natchiq well was completed March 31, 2003 to a measured depth of 7,500' (6,740' true vertical depth (tvd)) and the Ivik well was completed April 9, 2003 to a measured depth of 6,943' (6,942' tvd). (PNA, May 18, 2003).

Although Pioneer/Armstrong's main objective had been the Kuparuk C sands, the company did not find commercial quantities of oil in the Kuparuk C sandstone in the three wells drilled this winter. Pioneer reported that: "Although all three of the wells found the sands filled with oil, they were too thin to be considered commercial," (PNA March 31, 2003). However, Pioneer reported that it had encountered two "thick, oil-bearing, Jurassic-aged sands, a secondary target" (PNA April 13, 2003) "very similar in geologic age, permeability, and porosity to those in the prolific, onshore Alpine field to the southwest" of the Oooguruk Unit (PNA, May 4, 2003). Because of the similarity of all three Northwest Kuparuk wells drilled, Pioneer tested only the Ivik 1 well. Pioneer fractured the wellbore and the well flowed at a sustained rate of approximately 1,300 barrels of oil per day. Pioneer spokeswoman Susan Spratlen summed up their concerns

about the commerciality of the Oooguruk Unit: "The issue is determining the permeability, how much oil there is and what the recovery factor will be." (PNA April 6, 2003). Pioneer is currently evaluating their drilling and test results to determine the commercial production potential of the Jurassic sands.

Pioneer has provided the state adequate seismic, well, and engineering information to properly evaluate and justify the formation of the Oooguruk Unit.

### 3. Prior Exploration Activities and the Plan of Exploration

#### a. Introduction

Pioneer and Armstrong applied to form the 20,394 acre Oooguruk Unit, comprised of 12 tracts that extend in a northwest – southwest direction south of the Exxon Thetis Island well and to the north of the ARCO Kalubik wells. The southeast portion of the proposed Oooguruk unit is contiguous with the northwest corner of the Kuparuk River Unit. The northwest part of the proposed Oooguruk Unit was once part of the Thetis Island Unit that terminated on May 15, 1995. The former Kuukpik Unit, terminated in 2001, is adjacent to the western edge of the proposed Oooguruk leases. Pioneer is applying as the operator of the proposed unit. Armstrong is a working interest partner who developed the Northwest Kuparuk prospect.

#### b. Early Exploration History of the Area

Two key exploration wells lie within a mile of the proposed unit area. The Unocal East Harrison Bay State 1 well lies in the northwest corner of the Kuparuk River Unit, east of the proposed Oooguruk Unit. The well was drilled in February 1997 to a measured depth of 9,809 feet, bottoming in argillite basement. The East Harrison Bay well logs appear to contain about 15 feet of oil-bearing Kuparuk sandstone that appears cemented in the upper half. The Jurassic section looks silty on logs. The ARCO Kuparuk River Unit (KRU) 3W-07 development well was drilled in March and April of 1993 just south of the proposed unit. The logs contain 15 feet of oil-filled Kuparuk sandstone that also appears to contain some siderite cement. The well was plugged and abandoned on April 12, 1993. The ARCO Kalubik 3 well, drilled in February 1998 lies directly south of the northwest part of the proposed Oooguruk Unit. The well bottomed in the Jurassic at a measured depth of 7,000 feet. The well encountered a 40-foot (md) thick interval of Kuparuk C sandstone that appears on electric logs as oil bearing, but siderite cemented in the upper 10 feet of the interval. On well logs, the Jurassic interval appears silty with a 12 foot silty sand developed around 6,565' measured depth (md). The well was plugged and abandoned on March 6, 1998.

#### c. Certified Wells in the Vicinity

Eight wells drilled within a few mile radius of the proposed Oooguruk Unit have been certified by the state as capable of production in paying quantities: the Exxon Thetis

Island 1 well, to the northeast; the Kalubik 1 well, to the southwest; the Kuukpik 3, to the west; and five Colville Delta wells (Texaco Colville 1, 1A, 2, and 3 and the Amerada Hess Corporation Colville 25-13-6) to the south of the proposed Oooguruk Unit. The two closest certified wells to the proposed unit are the Exxon Thetis Island 1 and ARCO Kalubik 1.

The Exxon Thetis Island 1 well was spud on March 6, 1993 and completed on April 28, 1993. A combined commingled drill stem test was conducted in two intervals: 6,356-6,364' (md) in a thin Kuparuk C sandstone, and 6,404-6,460' (md) in a Jurassic (probably Nuiqsut) sandstone. During the first 24 hours of the well test, the well stabilized on an 18/64" choke at a flow rate of 64 BWPD and 43 BOPD (rate varied between 50-350 BOPD) of 24.8 degree API oil. The well was then treated with acid and flowed for 30 hours. The well flow rate stabilized on an 18/64" choke at an average rate of 154 BOPD in the last four hours of the test (188 BOPD rate the last hour of the test). Exxon also tested a sandstone within the Seabee formation at 5,576-5,633' (md) that produced mud filtrate with a trace of oil. Exxon applied for Thetis Island Unit Well 1 Certification for lease ADL 379301 on May 18, 1994. The Thetis Island well was certified as capable of production in paying quantities on February 24, 1995.

The ARCO Kalubik 1 well was spud on March 5, 1992, reached T.D. on April 4, 1992 and completed on May 1, 1992. A drill stem test was conducted from April 16 - 19, 1992 on a perforated interval of Kuparuk C sandstone from 6,084-6,120 feet (md). The interval was tested for a 24-hour flow period and produced at a rate of 1,200 BOPD with a 450 GOR and 0% water cut. Two other intervals were tested in the well: an upper Cretaceous sandstone (5,050-5,250' md) recovered 4.5 BO and 146 BW in a 12.5-hour test; an average oil rate of 10 BOPD was calculated. The Jurassic Nuiqsut sandstone at 6,385-6,445' md was also tested and recovered 280 BO (with a measured API gravity of 23 and a GOR of 232 scf/stb) and no formation water during a 20-hour test, with a measured oil rate of 336 BOPD. ARCO applied for well certification for the Kalubik 1 well on September 8, 1997 and the well was certified by the state for the Kuparuk C sandstone effective January 21, 1998.

Southwest of the Kalubik 1 well, the Texaco Colville Delta 1, 2, and 3, and the Amerada Hess Corporation (AHC) Colville 25-13-6 1 wells were certified by the state as capable of production in paying quantities on October 14, 1991 for the Jurassic Nuiqsut sandstone. In the Colville Delta 3 well, Texaco tested a Torok sandstone (5,120-5,183' md) that recovered 841 BO (24 degree API gravity) and diesel, 2 BW, and 508 MCF in 95.75 hours. A Torok test in the Texaco Colville Delta 2 well was wet. The state certified the ARCO Kuukpik 3 well as capable of production in paying quantities for the Kuparuk C and Jurassic Nuiqsut sandstones on April 14, 1993.

#### d. Kuparuk River Unit and Kuparuk Participating Area History

The proposed Oooguruk Unit is contiguous with the northwest corner of the Kuparuk River Unit. Kuparuk 3M pad lies to the southeast of the proposed Oooguruk Unit. Twenty-one of the thirty wells drilled at 3M pad were drilled in 1987; two wells were

drilled in 1989; and the remaining wells were drilled during 1993-1996. As of January 1, 2003, approximately 45.2 MMBO (million barrels of oil); 29.8 MMCFG (million cubic feet of gas); and 108.8 MMBW (million barrels of water) have been produced out of 3M pad from both Kuparuk A and C sandstones.

About 35 Kuparuk wells have been drilled from Kuparuk 3H pad, south of the proposed Oooguruk Unit. Approximately two-thirds of which were drilled during 1987-1988. Most of the remaining 3H wells were drilled during 1994 and 1996. A few wells were drilled in 2001. As of January 1, 2003, 3H pad has produced approximately 48.8 MMBO, 39.2 MMCFG, and 204 MMBW. In contrast to Kuparuk 3R, 3Q, and 3O pads, where most of the Kuparuk production is from the A sands, 3H and 3M pad reserves contain a significant contribution from the prolific Kuparuk C sandstone, in addition to production from the A sand members. The Pioneer/Armstrong acreage lies within a northwest-southeast trending normal fault system that extends to 3M and 3H pad, where there is significant Kuparuk C sandstone development in the low-lying graben areas.

The POE proposed drilling three wells in 5 years and conducting geologic/engineering studies to evaluate the potential for a fast track production start-up in the 2004/2005-winter season. Pioneer originally planned to drill a well every other year beginning in 2003, but an aggressive alternative plan was to drill all three wells during the first year. The drilling commitment would be satisfied as long as Pioneer drilled three wells to depths that would penetrate the Kuparuk Interval by June 1, 2007. Pioneer, however drilled all three wells during the spring 2003 drilling season, which satisfies the drilling commitments in the POE. The operator is still obligated to complete the geologic and engineering studies that will be needed to evaluate potential for fast track production start-up in the 2004/2005-winter season to bring the new discovery into production as soon as feasibly possible.

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

Approval of the Oooguruk Unit will result in both short-term and long-term economic benefits to the State. The additional assessment of the hydrocarbon potential of the leases will create jobs and in-state economic activity in the short-term and if the exploration activity is successful, the State will enjoy royalty and tax revenues as well as employment opportunities over the long-term.

The primary term of the majority of the leases is due to expire on July 31, 2009. There are three leases that have a primary term that ends on December 31, 2004. These three leases, along the northern edge of the proposed unit, were included in order to capture the upside potential of the prospect and will contract out of the unit if they are not included in a participating area by June 1, 2008 or are not included in the next Plan of Exploration or first Plan of Development.

The leases in the proposed Unit are not written on the current lease form. All leases will be modified and amended to conform to the current lease language found in lease form DOG 200204, paragraph 36(b) VALUE.

Any additional administrative burdens associated with the formation of the new unit are far outweighed by the additional royalty and tax benefits derived from any production that may occur if the exploration and development activity is successful.

## 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 is a well-accepted means of hydrocarbon conservation. Without unitization, the unregulated development of reservoirs tends to be a race for possession by competitive operators. The results can be: (1) overly dense drilling, especially along property lines; (2) rapid dissipation of reservoir pressure; and (3) irregular advance of displacing fluids. These all contribute to the loss of ultimate recovery or economic waste. The proliferation of surface activity; duplication of production, gathering, and processing facilities; and haste to get oil to the surface also increases the likelihood of environmental damage (such as spills and other surface impacts). Requiring lessees to comply with conservation orders and field rules issued by the AOGCC would mitigate some of these impacts without an agreement to unitize operations. Unitization, however, provides a practical and efficient method for maximizing oil and gas recovery, and minimizes negative impacts on other resources.

The formation of the Oooguruk Unit will promote the conservation of both surface and subsurface resources through the unitized (rather than lease-by-lease) development. Unitization allows the unit operator to explore the area as if it were one lease. The formation of the unit will allow this area to be comprehensively and efficiently explored and developed. Adoption of an Operating Agreement and Plan of Development governing that production will help avoid unnecessary duplication of development efforts on and beneath the surface.

Exploring and developing the leases under a unified Plan of Exploration and Plan of Development will reduce the incremental environmental impact of the additional production.

### 2. Prevention of Economic and Physical Waste

Traditionally, under unitized operations, the assignment of undivided equity interests in the oil and gas reservoirs to each lease largely has resolved the tension between lessees to compete for their share of production. Economic and physical waste, however, could still occur without a well-designed and coordinated development plan and an equitable cost sharing formula. Consequently, unitization must equitably divide costs and production, and plan to maximize physical and economic recovery from any reservoir.

An equitable allocation of hydrocarbon shares among the WIOs discourages hasty or unnecessary surface development. Similarly, an equitable cost sharing agreement promotes efficient development of reservoirs and common surface facilities and encompasses rational operating strategies. Such an agreement further allows the WIOs to decide well spacing requirements; scheduling, reinjection and reservoir management strategies; and the proper common, joint use surface facilities. Unitization prevents economic and physical waste by eliminating redundant expenditures for a given level of production, and avoiding loss of ultimate recovery by adopting a unified reservoir management plan.

Unitized operations greatly improve development of reservoirs beneath leases that may have variable productivity. Marginally economic reserves, which otherwise would not be produced on a lease-by-lease basis, often can be produced through unitized operations in combination with more productive leases. Facility consolidation saves capital and promotes better reservoir management by all WIOs. Pressure maintenance and secondary recovery procedures are much more predictable and attainable through joint, unitized efforts than would otherwise be possible. In combination, these factors allow less profitable areas of a reservoir to be developed and produced in the interest of all parties, including the state.

The lessees in the proposed unit leases have signed the Unit Agreement and the Unit Operating Agreement. By combining the efforts of multiple leases into a single effort, infrastructure can be shared and this eliminates the need to construct stand-alone facilities to process the volume of recoverable hydrocarbons that may be discovered on each individual lease, thus preventing economic and physical waste.

### 3. Protection of All Parties

The proposed unit seeks to protect the economic interests of all working interest owners of the reservoirs in the unit, as well as the royalty owner. Combining interests and operating under the terms of the Unit Agreement and the Unit Operating Agreement assures each individual working interest owner an equitable allocation of costs and revenues commensurate with the value of their lease(s).

Because hydrocarbon recovery will more likely be maximized, the state's economic interest is promoted. Diligent development and exploration under a single approved unit plan without the complications of competing leasehold interests is certainly in the state's interest. It promotes efficient evaluation and development of the state's resources, yet minimizes impacts to the area's cultural, biological, and environmental resources.

The lease form and the conditions of this decision provide, in part, that the state's royalty share will be free and clear of all lease expenses. Operating under the terms and conditions of the lease and Unit Agreement also provides for accurate reporting and record keeping, royalty settlement, in kind taking, and emergency storage of oil, all of which will further the state's interest.

Finally, conditions were proposed and agreed to by Pioneer, Armstrong and the DNR for including the acreage within the new unit. The details of these conditions are set out in the

Findings and Decision below. These conditions assure that the inclusion of the lands in the unit promotes the state's interest in the evaluation and development of those lands sooner rather than later.

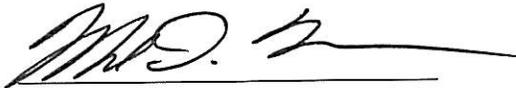
#### **IV. FINDINGS AND DECISION**

1. The formation of the Oooguruk Unit promotes the conservation of all natural resources, promotes the prevention of economic and physical waste, protects all parties of interest, and is necessary and advisable to protect the public interest. AS 38.05.180(p); 11 AAC 83.303.
2. The unitized development and operation of the leases will reduce the amount of land and fish and wildlife habitat that would otherwise be disrupted by individual lease development. Reducing environmental impacts and minimizing interference with subsistence activity is in the public interest.
3. The leases in the proposed Unit are not written on the current lease form. All leases will be modified and amended to conform to the current lease language found in lease form DOG 200204, paragraph 36(b) VALUE.
4. ADL 388570 is only partially committed to the Unit. The lease will be segregated in accordance with the Unit Agreement and applicable regulations.
5. The formation of the new unit will not diminish access to public and navigable waters beyond those limitations imposed by law or already contained in the oil and gas leases.
6. The available well data and exploration plan justifies the formation of the new unit. Under 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 of Alaska, the leases listed in Attachment 1, and shown on Attachment 2 are included in the Oooguruk Unit.
7. Pioneer drilled all three wells in the proposed Unit Plan of Exploration, satisfying the well commitments in the initial five-year Plan of Exploration. This does not limit the operator from pursuing further drilling operations within the next five years to continue delineation and development of the discovered resource.
8. Pioneer has agreed to evaluate and consider the reprocessing of the seismic data to improve the understanding of the prospective reservoir characteristics and parameters.
9. Pioneer plans to perform geologic studies during the term of the POE. These studies will build on efforts currently underway to identify and refine a possible fast track development scenario for initial production from the unit.

10. Pioneer will complete engineering work currently underway to meet a possible winter 2004/2005 fast track production start-up. Associated with this work is the identification of possible production synergies with the adjacent Kuparuk River Unit. Engineering design and costing studies will continue through at least 2005 to allow for the timely progression of development activities.
11. On June 1, 2008, each of the following leases, ADL 388570, ADL 388569, and ADL 388576 which are not included in a participating area or an approved Plan of Exploration or Plan of Development which includes a firm commitment to drill, will automatically contract out of the Unit.
12. In the event of a Unit contraction, tract and lease owners waive the extension provisions of 11 AAC 83.140 and the notice and hearing provisions of 11 AAC 83.374.

For the reasons and subject to the conditions and limitations set out above, I approve the formation of the Ooguruk Unit effective upon approval of the commissioner.

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, DNR, 550 W. 7th Avenue, Suite 1400, Anchorage, Alaska 99501; faxed to 1-907-269-8918; or sent by e-mail to [dnr\\_appeals@dnr.state.ak.us](mailto:dnr_appeals@dnr.state.ak.us). 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.



Mark D Myers  
Division of Oil and Gas

7-11-03  
Date

cc: Jeff Landry, Department of Law  
Sarah Palin, AOGCC

ATTACHMENT 1 – UNIT AGREEMENT, EXHIBIT A

EXHIBIT "A"  
Attached to and made a part of that certain  
Oooguruk Unit Agreement dated effective January 1, 2003

UNIT TRACT #	LESSOR LEASE #	WORKING INTEREST OWNERS	WORKING INTEREST	EFFECTIVE DATE	DESCRIPTION	ACREAGE	ROYALTY BURDEN	ORR BURDEN
1	STATE OF ALASKA ADL 388570	PIONEER ARMSTRONG	70.000000% 30.000000%	1/01/98	T14N R7E, UMIAT MERIDIAN Sec 3: Protracted - All Tide and Submerged Lands within the computed Territorial Sea, listed as "State Acreage" on Alaska's Seaward Boundary Diagram app'd by the State on 4/15/96 Sec 9: Protracted - All Tide and Submerged Lands within the computed Territorial Sea, listed as "State Acreage" on Alaska's Seaward Boundary Diagram app'd by the State on 4/15/96 Sec 10: Protracted - All Tide and Submerged Lands within the computed Territorial Sea, listed as "State Acreage" on Alaska's Seaward Boundary Diagram app'd by the State on 4/15/96 Sec 15: Protracted - All Tide and Submerged Lands within the computed Territorial Sea, listed as "State Acreage" on Alaska's Seaward Boundary Diagram app'd by the State on 4/15/96	1,870.09 Acres	16.65667%	04.25000% Held by Phillips Alpine Alaska, LLC
2	STATE OF ALASKA ADL 388569	PIONEER ARMSTRONG	70.000000% 30.000000%	1/01/98	T14N R7E, UMIAT MERIDIAN Sec 1: Protracted - All Tide and Submerged Lands within the computed Territorial Sea, listed as "State Acreage" on Alaska's Seaward Boundary Diagram app'd by the State on 4/15/96 Sec 11: Protracted - All Tide and Submerged Lands within the computed Territorial Sea, listed as "State Acreage" on Alaska's Seaward Boundary Diagram app'd by the State on 4/15/96 Sec 12: Protracted - All Tide and Submerged Lands within the computed Territorial Sea, listed as "State Acreage" on Alaska's Seaward Boundary Diagram app'd by the State on 4/15/96 Sec 13: Protracted - All Tide and Submerged Lands within the computed Territorial Sea, listed as "State Acreage" on Alaska's Seaward Boundary Diagram app'd by the State on 4/15/96 Sec 14: Protracted - All Tide and Submerged Lands within the computed Territorial Sea, listed as "State Acreage" on Alaska's Seaward Boundary Diagram app'd by the State on 4/15/96 Sec 35: Protracted - All Tide and Submerged Lands within the computed Territorial Sea, listed as "State Acreage" on Alaska's Seaward Boundary Diagram app'd by the State on 4/15/96 Sec 36: Protracted - All Tide and Submerged Lands within the computed Territorial Sea, listed as "State Acreage" on Alaska's Seaward Boundary Diagram app'd by the State on 4/15/96	3,882.87 Acres	16.65667%	04.25000% Held by Phillips Alpine Alaska, LLC
3	STATE OF ALASKA ADL 388576	PIONEER ARMSTRONG	70.000000% 30.000000%	1/01/98	T14N R7E, UMIAT MERIDIAN Sec 17: Protracted - All Tide and Submerged Lands within the computed Territorial Sea, listed as "State Acreage" on Alaska's Seaward Boundary Diagram app'd by the State on 4/15/96 Sec 18: Protracted - All Tide and Submerged Lands within the computed Territorial Sea, listed as "State Acreage" on Alaska's Seaward Boundary Diagram app'd by the State on 4/15/96 Sec 20: Protracted - All Tide and Submerged Lands within the computed Territorial Sea, listed as "State Acreage" on Alaska's Seaward Boundary Diagram app'd by the State on 4/15/96 Sec 20: Unsurveyed All Uplands	1,694.00 Acres	16.65667%	04.25000% Held by Winstar Petroleum, LLC

UNIT TRACT #	LESSOR LEASE #	WORKING INTEREST OWNERS	WORKING INTEREST	EFFECTIVE DATE	DESCRIPTION	ACREAGE	ROYALTY BURDEN	ORR BURDEN
4	STATE OF ALASKA ADL 385956	PIONEER ARMSTRONG	70.000000% 30.000000%	08/01/02	T14N17E UMIAT MERIDIAN SEC 21 PROTRACTED, ALL SEC 22 PROTRACTED, ALL	1,260.00 Acres	16.66667%	BPO 01.333333% APO 03.333333% See Details Below
5	STATE OF ALASKA ADL 385955	PIONEER ARMSTRONG	70.000000% 30.000000%	08/01/02	T14N17E UMIAT MERIDIAN SEC 23 PROTRACTED, ALL SEC 24 PROTRACTED, ALL	1,260.00 Acres	16.66667%	BPO 01.333333% APO 03.333333% See Details Below
6	STATE OF ALASKA ADL 385958	PIONEER ARMSTRONG	70.000000% 30.000000%	08/01/02	T14N17E UMIAT MERIDIAN SEC 25 PROTRACTED, ALL SEC 26 PROTRACTED, ALL SEC 35 PROTRACTED, ALL SEC 36 PROTRACTED, ALL	2,560.00 Acres	16.66667%	BPO 01.333333% APO 03.333333% See Details Below
7	STATE OF ALASKA ADL 385954	PIONEER ARMSTRONG	70.000000% 30.000000%	08/01/02	T14N18E UMIAT MERIDIAN SEC 31 PROTRACTED, ALL (623 acres) SEC 32 UNSURVEYED, ALL TIDE & SUBMERGED LANDS (635.09 acres) T14N18E TRACT A, UMIAT MERIDIAN SEC 32 UNSURVEYED, ALL UPLANDS (4.91 acres)	1,263.00 Acres	16.66667%	BPO 01.333333% APO 03.333333% See Details Below
8	STATE OF ALASKA ADL 385953	PIONEER ARMSTRONG	70.000000% 30.000000%	08/01/02	T14N18E UMIAT MERIDIAN SEC 33 PROTRACTED, ALL	640.00 Acres	16.66667%	BPO 01.333333% APO 03.333333% See Details Below
9	STATE OF ALASKA ADL 385950	PIONEER ARMSTRONG	70.000000% 30.000000%	08/01/02	T13N18E UMIAT MERIDIAN SEC 5 PROTRACTED, ALL SEC 6 PROTRACTED, ALL (625 acres) SEC 7 PROTRACTED, ALL (626 acres) SEC 8 PROTRACTED, ALL	2,533.00 Acres	16.66667%	BPO 01.333333% APO 03.333333% See Details Below
10	STATE OF ALASKA ADL 385949	PIONEER ARMSTRONG	70.000000% 30.000000%	08/01/02	T13N18E UMIAT MERIDIAN SEC 4 PROTRACTED, ALL SEC 9 PROTRACTED, ALL	1,280.00 Acres	16.66667%	BPO 01.333333% APO 03.333333% See Details Below
11	STATE OF ALASKA ADL 385952	PIONEER ARMSTRONG	70.000000% 30.000000%	08/01/02	T13N18E UMIAT MERIDIAN SEC 17 PROTRACTED, ALL SEC 18 PROTRACTED, ALL (631 acres)	1,271.00 Acres	16.66667%	BPO 01.333333% APO 03.333333% See Details Below
12	STATE OF ALASKA ADL 385951	PIONEER ARMSTRONG	70.000000% 30.000000%	08/01/02	T13N18E UMIAT MERIDIAN SEC 15 PROTRACTED, ALL	640.00 Acres	16.66667%	BPO 01.333333% APO 03.333333% See Details Below
TOTALS						20,393.96 Acres		

**WORKING INTEREST OWNERS**

Pioneer Natural Resources Alaska, Inc.  
5205 N. O'Conner Boulevard, Suite 1400  
Irving, Texas 75039

Armstrong Alaska, Inc.  
700 17<sup>th</sup> Street, Suite 1400  
Denver, Colorado 80202

**ROYALTY INTERESTS / OWNERS**

State of Alaska  
Department of Natural Resources  
Division of Oil and Gas  
550 West 7<sup>th</sup> Avenue, Suite 800  
Anchorage, AK 99501-3560

**OVERRIDING ROYALTY INTERESTS / OWNERS**

Tracts 1 and 2 are burdened by Overriding Royalties as stated above held by:

Phillips Alpine Alaska, LLC  
700 "G" Street  
Anchorage, AK 99501

Tract 3 is burdened by Overriding Royalties as stated above held by:

Winstar Petroleum, LLC  
P.O. Box 1364  
Petersburg AK 99853

Tracts 4 through 12 (inclusive) are held by the following parties in the stated percentages:

**BEFORE PAYOUT**

William D. Armstrong  
16 Village Road  
Englewood, CO 80110

1.11999972% of 8/8ths

Jesse V. Sommer  
4531 West Geddes Avenue  
Littleton, CO 80128

0.03333333% of 8/8ths

Edgar Kerr  
155 Spotted Deer Lane  
Franktown, CO 80116

0.03333333% of 8/8ths

Jeffery A. Lyslo  
91 Buckhorn Drive  
Littleton, CO 80127

0.03333333% of 8/8ths

Patricia M. Reed  
P.O. Box 411  
Franktown, CO 80116

0.03333333% of 8/8ths

Matthew X. Furin  
2001 South Madison  
Denver, CO 80210

0.03333333% of 8/8ths

Richard C. Geesaman  
820 Pine St., Gold Hill  
Boulder, CO 80302

0.01333333% of 8/8ths

Stuart W. Gustafson  
P.O. Box 4625  
Horseshoe Bay, TX 78657

0.03333333% of 8/8ths

**AFTER PAYOUT**

William D. Armstrong 16 Village Road Englewood, CO 80110	2.79999972% of 8/8ths
Jesse V. Sommer 4531 West Geddes Avenue Littleton, CO 80128	0.08333333% of 8/8ths
Edgar Kerr 155 Spotted Deer Lane Franktown, CO 80116	0.08333330% of 8/8ths
Jeffery A. Lyslo 91 Buckhorn Drive Littleton, CO 80127	0.08333333% of 8/8ths
Patricia M. Reed P.O. Box 411 Franktown, CO 80116	0.08333333% of 8/8ths
Matthew X. Furin 2001 South Madison Denver, CO 80210	0.08333333% of 8/8ths
Richard C. Geesaman 820 Pine St., Gold Hill Boulder, CO 80302	0.03333333% of 8/8ths
Stuart W. Gustafson P.O. Box 4625 Horseshoe Bay, TX 78657	0.08333333% of 8/8ths

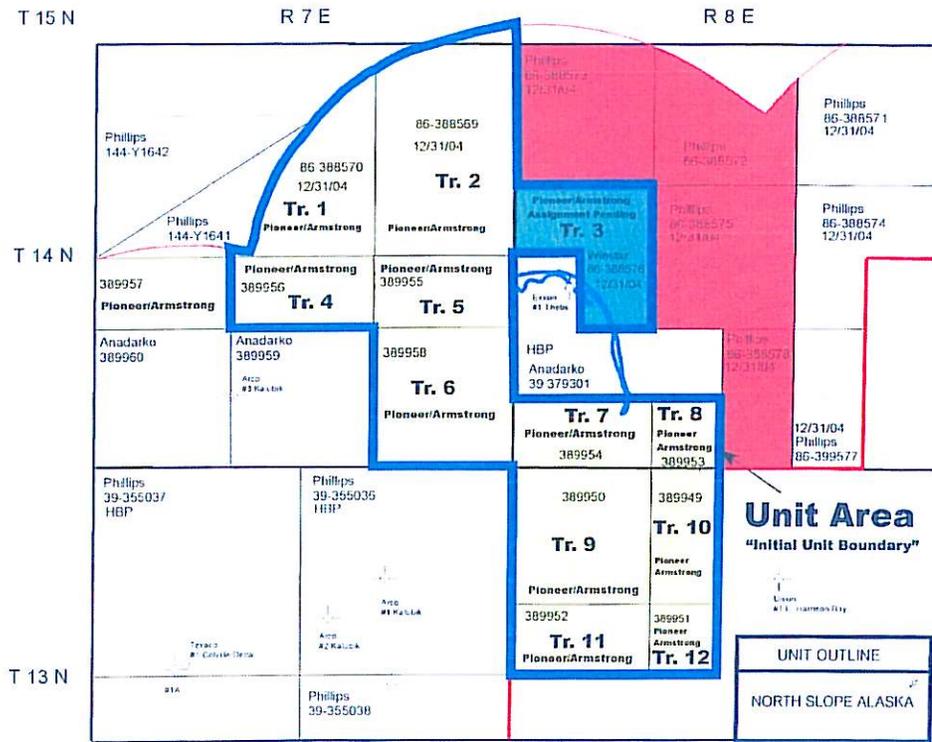
The overriding royalty interests noted above affecting Tracts 4 through 12, inclusive, are set forth in and subject to that certain Development Agreement dated effective November 1, 2002 between Armstrong Resources, LLC and Pioneer Natural Resources, Alaska, Inc.

The burdens noted herein shall not be construed in any fashion, expressed or implied, to be subsequently created interests.

# ATTACHMENT 2 – UNIT AGREEMENT, EXHIBIT B

## EXHIBIT "B"

Attached to and made a part of that certain Uooguruk Unit Agreement, dated effective January 1, 2003



## ATTACHMENT 3 – EXHIBIT G : INITIAL PLAN OF EXPLORATION

Outlined below is the initial Plan of Exploration for the proposed Oooguruk Unit. The proposed Unit will encompass 20,393.96 acres of State land within the shallow waters of Harrison Bay, Alaska. The Unit is immediately northwest of and contiguous with the Kuparuk River Unit. The Plan of Exploration is a 5-year forecast of planned unit exploration activities. Prospective intervals to be tested by this exploration program may include but are not limited to Cretaceous Middle Brookian, Cretaceous Torok, Kuparuk A, Kuparuk C and the Jurassic Nuiqsut/Nechelik.

### **Drilling Program**

Currently, three Exploration Wells are planned for the Oooguruk Unit. The first well will be drilled during the 2003 Winter Drilling Season. Based on the results from this initial test, a second Exploration Well is planned for the 2005 Winter Drilling Season, or earlier. A third Exploration Well is planned for the 2007 Winter Drilling Season, or earlier. The planned locations for each of these Exploration Wells are depicted upon the confidential displays submitted to the Division in support of the Oooguruk Unit application. The intended bottom-hole location and depths are set forth below. The Parties reserve the right to modify the order in which these wells are to be drilled. Following drilling of the first well, the location and drilling depth of subsequent wells may be adjusted pursuant to the results of prior wells.

1 <sup>st</sup> Well	Ivik #1	T13NR8E U.M. Sec. 6: 1,450'FSL, 500' FWL , -7500' SS
2 <sup>nd</sup> Well	Oooguruk #1	T13NR8E U.M. Sec. 6: 1,450'FSL, 500' FWL , -7500' SS
3 <sup>rd</sup> Well	Natchq #1	T13NR8E U.M. Sec. 6: 1,450'FSL, 500' FWL , -7500' SS

### **Seismic Program**

The Oooguruk Unit Working Interest Owners have acquired from third parties 3-D seismic and 2-D seismic over the proposed Oooguruk Unit Area. Following the Drilling of the initial Exploration Well in the 2003 Winter Drilling Season, the Working Interest Owners will evaluate and consider the reprocessing of certain seismic data to improve our understanding of the prospective reservoir characteristics and parameters.

### **Geologic Studies**

Geologic studies are planned through 2004 to build on efforts currently underway to identify and refine a possible fast track development scenario for initial production from the Oooguruk Unit. Other efforts will be underway to evaluate additional opportunities that will compliment, facilitate and enhance planned development scenarios. In 2005/2006/2007, additional geologic studies are planned as new well information is incorporated into the geologic and seismic interpretations.

### **Engineering Studies**

The Plan of Exploration for the Oooguruk Unit incorporates current engineering work underway to meet a possible winter 2004/2005 fast track production start-up. Associated with this work is the identification of possible production synergies with the adjacent Kuparuk River Unit. The goal of the studies is to minimize costs and the environmental

footprint. Conceptual engineering and collaboration with the Kuparuk River Unit are critical to expedite production. Engineering scoping and costing studies will continue through at least 2005 to allow for the timely progression of development activities.

**Plan of Exploration Summary, Term and Work Commitment**

Detailed above is the initial Plan of Exploration for the proposed Oooguruk Unit. It represents our current thoughts regarding exploration activities and is based upon the Working Interest Owner's current analysis of existing geologic, geophysical and engineering data. As additional information is collected and exploration activities are completed, this Plan of Exploration may be modified to optimize exploitation of identified resources within the Unit Area. Annual updates and progress reports to this Plan of Exploration will be filed with the Department of Natural Resources.

The Working Interest Owners propose a term of 5 years for this initial Plan of Exploration. The Parties commit to the drilling of the three Exploration Wells to be drilled as follows; the initial Exploration Well to be drilled during the 2003 Winter Drilling Season, the second Exploration Well to be drilled during the 2005 Winter Drilling Season, or earlier, and the third Exploration Well to be drilled during the 2007 Winter Drilling Season, or earlier. Other activities discussed within this Plan of Exploration are included to inform the Division of the Working Interest Owner's plans and intentions; however, they are not intended to represent firm work commitments. The work commitments made under this Plan of Exploration will be satisfied when the three Exploration Wells discussed within this Unit Plan are drilled, provided the wells are drilled on or before the times set forth in this Unit Plan.

# ATTACHMENT 4 – Public Comment from Anadarko Petroleum Corporation

ANADARKO PETROLEUM CORPORATION

MAIN 907/ 273-6300  
3201 L STREET, SUITE 603 • ANCHORAGE, ALASKA 99503

April 30, 2003



Mr. Tom Irwin, Commissioner  
Alaska Department of Natural Resources  
550 West 7<sup>th</sup> Avenue, Suite 800  
Anchorage, Alaska 99501-3560

RECEIVED  
MAY 1 2003  
DIVISION OF  
OIL AND GAS

**Reference:** Oooguruk Unit Application  
Harrison Bay, North Slope, Alaska

Dear Commissioner Irwin:

Anadarko Petroleum Corporation ("Anadarko") is of the understanding that the thirty (30) day comment period regarding the referenced unit ends May 3<sup>rd</sup>, 2003. It is not our desire to delay the approval process; however, we desire to make the following comments based on our understanding from recent press releases that the primary Kuparuk objective was not successful and that Pioneer Natural Resources Alaska, Inc. ("Pioneer") was encouraged by the results from certain Jurassic formations.

Anadarko's adjoining leasehold contains the Thetis Island well which has certain Jurassic formations present from which the Thetis Island well was deemed capable of producing commercial quantities of hydrocarbons. Prior to drilling the Oooguruk Unit wells, Pioneer indicated to Anadarko that after review of their data, the Anadarko leases were not within the boundaries of the proposed unit. This appears to be based on the Kuparuk formation which was absent from the Thetis Island well. In light of the recent well results and the fact that Anadarko was not involved in the negotiations of the Unit Agreement, nor the Unit Operating Agreement, we propose, should the Jurassic reservoir(s) be commercially viable, that Anadarko's leasehold be considered for inclusion in an expanded unit area subject to Anadarko being allowed the opportunity to negotiate certain revisions to the Unit Agreement and Unit Operating Agreement.

Thank you for the opportunity to comment.

Very truly yours,  
Anadarko Petroleum Corporation

John A. Bridges  
Land Supervisor, Alaska

Cc: Mark Myers  
~~Mike Kotowski~~ → Christopher Ruff  
Pat Foley (Pioneer Natural Resources Alaska, Inc.)  
Ed Kerr (Armstrong Alaska Inc.)

DEPARTMENT OF  
NATURAL RESOURCES

MAY 1 2003

2003-05-01 10:14 AM  
MAY 1 2003

## ATTACHMENT 5 – PIONEER PRESS RELEASE 10-24-2002

Pioneer today announced that it has signed an agreement with Armstrong Resources LLC, which calls for the assignment of a 70% working interest, and operatorship in ten state leases on Alaska's North Slope to Pioneer. The leases cover approximately 14,000 acres between the Kuparuk River unit and Thetis Island. The agreement will be effective November 1, 2002.

Pioneer plans to drill up to three wells during this winter drilling season, contingent upon the receipt of required permits, to test an area that the Company believes is prospective for oil in the same sands as the offsetting Kuparuk River unit eight to ten miles to the southeast. The Kuparuk River unit was discovered in 1969 and is estimated to hold 2.5 billion barrels of recoverable oil. No wells have been drilled on the acreage covered by Pioneer's leases to date, but wells drilled just outside the perimeter of the acreage have encountered the primary target, the Kuparuk "C" sands, and were oil-bearing.

The acreage is offshore in approximately five to ten feet of water. Drilling plans call for grounded sea ice pad locations that will be accessed via ice roads from Oliktok Point dock. No tundra travel is planned. All sea ice operations are expected to be completed by the end of March.

Scott D. Sheffield, Chairman and CEO, stated, "This high-impact project is a great addition to our 2003 exploration program and will allow us to leverage our winter drilling expertise in Canada. We are excited to be expanding our North American exploration program into Alaska and look forward to partnering with Armstrong on the project."

### **Northwest Kuparuk Prospect**

- 70% working interest and Operator
- 10 state leases covering 14,000 acres
- Up to 3 wells planned for 2002/2003 winter season
- Offsets 2.5 Billion Barrel Kuparuk River Field, targeting same oil sands that produce at Kuparuk River