

NINILCHIK UNIT

THE FIRST
EXPANSION OF THE UNIT AREA, FORMATION
OF THE FALLS CREEK, GRASSIM OSKOLKOFF, AND SUSAN DIONNE
PARTICIPATING AREAS, AND AMENDMENTS TO THE UNIT AGREEMENT

FINDINGS AND DECISION OF THE DIRECTOR,
DIVISION OF OIL AND GAS,
UNDER DELEGATION OF AUTHORITY FROM THE COMMISSIONER
STATE OF ALASKA
DEPARTMENT OF NATURAL RESOURCES

June 30, 2003

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I. INTRODUCTION, BACKGROUND AND DECISION SUMMARY

On March 14, 2003, Marathon Oil Company (Marathon), as Operator, and majority working interest owner in the Ninilchik Unit, applied to the Department of Natural Resources, Division of Oil and Gas (Division) to expand the Ninilchik Unit to encompass the Falls Creek Unit area, form the Falls Creek, Grassim Oskolkoff and Susan Dionne Participating Areas within the existing and expanded Ninilchik Unit, and amend the Ninilchik Unit Agreement (Application). Simultaneous with the Application, Marathon and Union Oil Company of California (Unocal), as 75 percent of the working interest in the Falls Creek Unit, requested that the U.S. Department of the Interior, Bureau of Land Management (BLM) approve Marathon and Unocal's decision to voluntarily terminate the Falls Creek Unit Agreement in order to allow for expansion of the Ninilchik Unit to encompass the area embraced within the Falls Creek Unit. Marathon requested that the BLM's approval of the termination of the Falls Creek Unit take effect contemporaneously with the Division's approval of its proposed expansion of the Ninilchik Unit Area.

The geographic area of the Falls Creek Unit is wholly within the Ninilchik Unit. At the time Marathon proposed the Ninilchik Unit in 2001, it requested that the Falls Creek Unit remain in effect pending the outcome of the Ninilchik Unit Initial Plan of Exploration. The Falls Creek Unit remained as a separate unit within a unit. Given the success of the Initial Plan of Exploration, Marathon and Unocal now request the termination of the Falls Creek Unit in order to form the Falls Creek Participating Area within the expanded Ninilchik Unit.

Marathon provided geological, geophysical, and engineering data supporting the formation of the three participating areas within the Ninilchik Unit. The submitted data justifies the formation of the Falls Creek Participating Area (Falls Creek PA), the Grassim Oskolkoff (GO PA) and the Susan Dionne Participating Area (Susan Dionne PA). The data indicate that the upper Tyonek Formation within the three participating areas is capable of producing or contributing to the production of hydrocarbons in paying quantities.

The Application also proposed two amendments to the Ninilchik Unit Agreement (Agreement) by the majority working interest owners in the Ninilchik Unit. The Agreement is based on DNR's State Only Royalty Owner model unit agreement form dated April 2001 (Model Form). At the time Marathon proposed the Ninilchik Unit in June 2001, it submitted the Model Form for the Ninilchik Unit Agreement with no modifications. The Division approved the Agreement on October 30, 2001. Subsequent to the approval of the Agreement, Marathon and the Division noted an error and an omission in the Agreement and Model Form. The proposed amendments to the Agreement address the error and omission.

After reviewing the Agreement, the latest Model Form dated April 2002, and the most current lease form for the most recent leases within the unit acquired in the Cook Inlet Areawide 2002 sale, the Division proposed, and the majority owners accepted, a third amendment to the Agreement to further harmonize the terms and conditions of the latest lease form within the unit to the Agreement. The proposed third amendment is taken from the April 2002 Model Form.

For the reasons set out in this Findings and Decision, the Division approves the expansion of the Ninilchik Unit to include the Falls Creek Unit Area, subject to the BLM's approval to terminate the

Falls Creek Unit Agreement. The Division approves the proposed amendments to the Agreement. The modifications to the Agreement are necessary and advisable to protect the public interest.

In addition, the Division approves Marathon's application to form the Falls Creek PA, the GO PA and the Susan Dionne PA subject to Marathon drilling the Marathon Falls Creek #3 (MFC3) Well in 2003, the Marathon Ninilchik State #1 (MNS1) Well by 2005, and the Marathon Susan Dionne #2 (MSD2) Well by 2005. If the wells are not timely drilled, the areas later specified in this document will automatically contract out of the appropriate participating area and the tract allocation schedule for the participating areas will be subject to a re-determination to the first date of production. The three participating areas are limited to the acreage proposed by Marathon because that acreage is "reasonably known to be underlain by hydrocarbons and known or reasonably estimated through use of geological, geophysical, or engineering data to be capable of producing or contributing to production of hydrocarbons in paying quantities." 11 AAC 83.351(a). If additional data are obtained or submitted in the future, the boundaries of the three participating areas may be revised. The Division also approves the tract allocation schedule for the three participating areas, Attachments 2 through 4 to this Findings and Decision. The tract allocation schedules adequately allocate production and costs among the leases in the three participating areas.

Under Article 13.1 and Article 14.1 of the Agreement, respectively, the effective date of the unit expansion and unit agreement amendments is July 1, 2003. Under Article 9.5 of the Agreement, the effective date of the Falls Creek PA, GO PA and Susan Dionne PA, and their respective tract allocation schedules, is July 1, 2003.

II. APPLICATION FOR THE EXPANSION OF THE UNIT AREA, FORMATION OF THE FALL CREEK, GRASSIM OSKOLKOFF, AND SUSAN DIONNE PARTICIPATING AREAS, AND AMENDMENTS TO THE UNIT AGREEMENT

Marathon requested approval by the BLM to terminate the Falls Creek Unit, and simultaneously applied to the Division to expand the Ninilchik Unit to include the Fall Creek Unit Area, on March 14, 2003. The WIOs in the expansion area leases are Marathon, Unocal and ConocoPhillips Alaska, Inc. A map of the current Falls Creek Unit and schedule setting out the ownership interests in those leases within the unit is Attachment 1 to this document. This map and schedule also depict the lands proposed for the Ninilchik Unit expansion. The proposed Ninilchik Unit expansion area covers approximately 630.15 acres, and the total unit area after the expansion would be approximately 25,797.15 acres.

With the application to expand the Ninilchik Unit, Marathon also applied to form the Falls Creek PA, the GO PA and Susan Dionne PA within the expanded Ninilchik Unit. The acreage within the proposed participating areas encompasses the intervals within the upper Tyonek Formation, which Marathon purports are capable of producing or contributing to the production of hydrocarbons in paying quantities.

The proposed vertical definition for the Falls Creek PA includes the reservoir portions of the upper Tyonek Formation within the proposed participating area. The type log for the Falls Creek PA is the Marathon Falls Creek #1 RD Well. The proposed Falls Creek PA encompasses approximately 988.68 acres, and a map of the Falls Creek PA and schedule setting out the ownership interests and

tract participation factors for the participating area are Attachment 2 to this document.

The proposed vertical definition for the GO PA includes the reservoir portions of the upper Tyonek Formation within the proposed participating area. The type log for the GO PA is the Marathon Grassim Oskolkoff #1 (MGO1) Well. The proposed GO PA encompasses approximately 1920 acres, and a map of the GO PA and schedule setting out the ownership interests and tract participation factors for the participating area are Attachment 3 to this document.

The proposed vertical definition for the Susan Dionne PA includes the reservoir portions of the upper Tyonek Formation within the proposed participating area. The type log for this participating area is the Marathon Susan Dionne #3 (MSD3) Well. The proposed Susan Dionne PA encompasses approximately 1760.57 acres, and a map of the participating area and tract participation factors for the participating area are Attachment 4 to this document.

Marathon submitted several attachments in support of the Application: (1) a proposed initial plan of development for each of the participating areas; (2) a map and legal description of the leases proposed for the three participating areas; (3) geological, geophysical and engineering data supporting the three participating areas; (4) the initial tract participation schedules for each participating area; and (5) a copy of the Ninilchik Unit Operating Agreement.

Marathon submitted geological evidence to support the formation of the three participating areas to develop the various gas-bearing reservoirs of the upper Tyonek Formation within each proposed participating area under a unified plan of development. A 3-D seismic program is planned for the Ninilchik Unit area in late 2003 that will cover the Susan Dionne PA, the GO PA and the southern part of the Falls Creek PA. Marathon expects to drill the MNS1 and the MSD2 Wells in 2004 or 2005 in the GO PA and the Susan Dionne PA, respectively. Marathon expects to drill the MFC3 Well within the Falls Creek PA this summer. Production facilities and the Kenai-Kachemak Pipeline are currently under construction to process and transport the gas from the proposed three participating areas. First gas production is anticipated in the third quarter 2003.

Finally, Marathon proposed two amendments to the Agreement. First, delete the following sentence of the Recitals Provision of the Agreement: “All working owners of the Leases that are subject to this Agreement are parties to this Agreement.” Second, add the following paragraph as Article 3.8 to the Agreement: “All data and information determined by the Commissioner to be necessary for the administration of this Agreement or for the performance of statutory responsibilities shall be provided by the Unit Operator, or Working Interest Owners, or both upon written request. All data and information provided to the Commissioner shall be protected from disclosure pursuant to the Lease, governing law, and regulations.”

After receipt of the Application, the Division proposed a third amendment to the Agreement as follows. Add the following paragraph as Article 12.4.1 to the Agreement: “Notwithstanding any contrary Lease term or provision in 11 AAC 83.228—11 AAC 83.229, all royalty deductions for transportation, including marine and pipeline transportation, from the Unit Area to the point of sale are limited to the actual and reasonable costs incurred by the Working Interest Owners. These transportation costs must be determined by taking into account all tax benefits applicable to the transportation.”

The Division determined that the Application was complete and published a public notice in the “Anchorage Daily News” and in the “Peninsula Clarion” on March 30, 2003, as required by 11 AAC 83.311. Copies of the public notice were also provided to interested parties in conformance with 11 AAC 83.311. The Division provided copies of the public notice to the Kenai Peninsula Borough, City of Kenai, Ninilchik Native Assn., Salamatoff Native Assn., Cook Inlet Region Corporation, and other interested parties. The Division also provided public notice to the Alaska Department of Environmental Conservation (DEC), Alaska Department of Fish and Game (ADF&G), and the Alaska Oil and Gas Conservation Commission (AOGCC).

The public notices invited interested parties and members of the public to submit comments by April 29, 2003. The Division received two comments from the public, interested parties, or state or local agencies during the 30-day public comment period. An April 25, 2003 comment from the Kenai Peninsula Borough Coastal District (KPBCD) Coordinator stated that the Kenai Peninsula Borough Coastal Management Plan (KPBCMP) recognizes designated critical habitat areas, and that the oil and gas industry has consistently expressed interest, and requested exemptions from buffer distances from the Clam Gulch Critical Habitat Area as it has explored for and developed resources near this area. The KPBCMP comment recommended that permits for oil and gas development in the Ninilchik Unit be required to maintain the buffer for the critical habitat area.

A subsequent letter from the Kenai Peninsula Borough Mayor, received on May 21, 2003, stated that the issues addressed and the comments offered by the KPBCD Coordinator involved matters of environmental permitting and were not relevant to the topic of unitization, and are not part of the responsibilities of the Coastal District as a matter of policy. The letter went on to state that the KPB does not object to the proposed Ninilchik Unit expansion.

The second comment was received from Paul L. Craig, Manager PLC, LLC on April 29, 2003. PLC, LLC is the owner of a 2 percent overriding royalty interest in ADL 384314, a state lease contiguous with the northern boundary of the proposed Falls Creek PA. PLC, LLC supports the formation of the proposed Falls Creek PA. However, PLC, LLC requested that the Division carefully review all available geological and geophysical data defining the boundaries of the proposed Falls Creek PA, especially the northern boundary abutting ADL 384314. PLC, LLC’s comments are addressed in section III.A.2 of this Findings and Decision.

III. DISCUSSION OF DECISION CRITERIA

The Commissioner of the Department of Natural Resources (Commissioner) reviews unit-related applications, including expansion of units and the formation of participating areas, under 11 AAC 83.303--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 Director of the Division of Oil and Gas (Director). The Division’s review of the Application is based on the criteria set out in 11 AAC 83.303 (a) and (b). A discussion of the subsection (b) criteria, as they apply to the application, is set out directly below, 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 and Development

DNR considered environmental issues in the lease sale process, the initial unitization process for the unit area leases, this unitization process, and will review them again during the unit plan of operations approval process. Unitized exploration, development, and production minimize surface impacts by consolidating facilities and reducing activity in the field. The Initial Niniilchik Unit Plan of Exploration (POE) required the drilling of new exploratory wells and the workover of other wells within the unit area. The unit operator is required to obtain DNR's approval of a unit plan of operations and permits from various state and federal agencies before beginning operations, including exploratory wells and surface pad construction, within the unit area. A unit plan of operations provides a more detailed plan for surface activities incident to exploration and development of the unit area than does a POE or a plan of development (POD).

When the unit operator begins the permitting process to commence operations under a POE or POD in a coastal area, it must submit a Coastal Project Questionnaire, permit applications, and supporting information to the appropriate state and federal agencies¹. The coordinating agency, in the case of a plan of operations, the DNR, issues a public notice and circulates the project to federal, state, and local agencies and the public for comments. The review will follow either a 30-day or 50-day schedule. The review participants, the various agencies and public, will have the opportunity to request additional information and submit comments. After reviewing the comments, the coordinating agency crafts additional mitigation measures as needed to ensure the project is consistent with the Alaska Coastal Management Program and the KPBCMP. Any alternative measures are included in a Proposed Consistency Response. If the proposed response is acceptable to the agencies and the applicant, the DNR will issue a Final Consistency Response and the permits for the project can be issued by the appropriate agencies.

When reviewing a proposed unit plan of operations, the Division considers whether the project complies with the mitigation measures contained in the most recent Cook Inlet Areawide oil and gas lease sale, site specific conditions, uses, or resources, and the rights of the surface owner if the state does not own the surface. If the operator and the surface owner have not come to an agreement for the payment of damages the operator may be required to post a bond an additional bond. DNR, DEC, and AOGCC have bonding and financial responsibility requirements to ensure performance by the operator and reclamation of the area. 11 AAC 96.060; 18 AAC 75; 20 AAC 25.025.

Any new exploration and development activity that may occur following unitization must be consistent with the ACMP, and comply with DNR management objectives.

¹ As a result of Executive Order 106, the Alaska Coastal Management Program (ACMP) moved from the Office of the Governor to the Department of Natural Resources (DNR) effective April 15, 2003. The policies and procedures of the ACMP remain the same at this time. State staffs, who implemented and managed the ACMP under the Division of Governmental Coordination (DGC) in the Governor's Office, are now employees in the Office of Project Management and Permitting (OPMP) within the Office of the DNR Commissioner.

State unitization regulations require the Commissioner to approve a Plan of Operations before the unit operator performs any field operations on the surface. 11 AAC 83.346. A proposed Plan of Operations must describe the operating procedures designed to prevent or minimize adverse effects on natural resources. When a unit operator proposes to explore or develop the unit area and submits a Unit Plan of Operations, the DNR will ensure that it complies with the lease stipulations and lessee advisories developed for the most recent Cook Inlet Areawide lease sale.

The approval of the Ninilchik Unit expansion and formation of the three participating areas itself has no environmental impact. The unit expansion and participating area formation do not entail any environmental costs in addition to those that may occur when permits to conduct lease-by-lease exploration or development are issued. The Commissioner's approval of the unit expansion and participating area formation is an administrative action that does not convey any authority to conduct any operations on the surface within the unit area. Unitization does not waive or reduce the effectiveness of the mitigating measures that condition the lessee's right to conduct operations on these leases. DNR's approval of the Unit Plan of Exploration or Plan of Development is only one step in the process of obtaining permission to drill a well or wells or develop the known reservoirs within the unit area. The Unit Operator must still obtain approval of a Plan of Operations from the state, and permits from various agencies on state leases before drilling a well or wells or initiating development activities to produce known reservoirs within the unit area.

With regard to the specific surface activities proposed for each of the participating areas, Marathon applied for permits and authorizations for the pads and wells for each participating area as well as the lateral flowline connections to the Kenai-Kachemak Pipeline and production facilities on the development pads from the various federal, state, and local agencies. Marathon has already received the permits and authorizations necessary for these activities. A copy of the Marathon's permit applications, the Final Consistency Determination with the ACMP for the projects, and the DNR approval of the Plan of Operations are available at the Division's Anchorage office.

2. The Geological and Engineering Characteristics of the Proposed Expansion Area and Participating Areas, and Prior Exploration Activities in the Unit Area

Marathon submitted geological, geophysical and engineering data for each of the three proposed participating areas. These data included: a report defining the geology of the gas bearing reservoirs in each of the participating areas; structure maps on two horizons; separate net pay maps for each of the gas sand intervals within each participating area; a composite net pay map; structural well-log cross section through the upper Tyonek Formation; seismic lines; and well test results for the recently drilled wells within each participating area.

A participating area may include only 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). "Paying quantities" means:

quantities sufficient to yield a return in excess of operating costs, even if drilling and equipment costs may never be repaid and the undertaking as a whole may ultimately result in a loss; quantities are insufficient to yield a return in excess of operating costs

unless those quantities, not considering the costs of transportation and marketing, will produce sufficient revenue to induce a prudent operator to produce those quantities.

11 AAC 83.395(4).

A participation area application must be evaluated under these standards, as well as those of 11 AAC 83.303.

The expanded Ninilchik Unit will encompass approximately 25,797 acres that overlie the Ninilchik anticline. The anticline fold axis trends approximately parallel to the Kenai Peninsula coastline for over 16 miles from near the community of Clam Gulch to just north of the town of Ninilchik. Shallowest in the south, it plunges to the north and is segmented by a number of crosscutting faults along the crest of the structure. These faults are believed to form part of the reservoir trap mechanisms in the three proposed participating areas. The surface expression of the anticline is visible along the cliffs that crop out along the coast.

The Ninilchik anticline was recognized as a highly potential exploration target in the late 1950s and was mapped in the subsurface with the seismic, gravity, and magnetic tools available at the time. Fourteen exploration wells have been drilled on this structure since Standard Oil of California (SOCAL) first drilled there in 1961 (Table 1). The SOCAL Falls Creek #1 (SFC1) well was the first well drilled to test the promising anticlinal structure. Although the primary exploration objective was oil, none was found. However, gas was discovered in the upper Tyonek Formation in four sandstone zones and the SFC1 was completed as a gas well in 1961. The SFC1 was later plugged and abandoned because the estimated size of the accumulation did not justify the cost of facilities and transportation. Unocal drilled the Unocal Ninilchik 1 well in 1962 and tested gas in two Tyonek Formation zones. Between 1964-1978 six exploration wells were drilled with oil and gas objectives: the Mobil Ninilchik #1, SOCAL Falls Creek #2, Falls Creek #43-6, Brinkerhoff Ninilchik #1, Unocal Clam Gulch #1, and Texaco Ninilchik #1. All six of these wells were plugged and abandoned as dry holes without testing the upper Tyonek Formation. In 1979 the Texaco Ninilchik #1 well was drilled and flow tested gas from one upper Tyonek interval. Marathon drilled the Corea Creek #1 well in 1996, and drill stem tested four intervals within the upper Tyonek, recovering minimal gas with water. The results of the well verified and delineated the size of the Falls Creek reservoir.

| Operator | Well Name & No. | Completion Date | Status¹ | Total Depth² | Location³ | API Number |
|-----------------|----------------------------|------------------------|---------------------------|--------------------------------|-----------------------------|-------------------|
| SOCAL | Falls Creek #1 | 04/24/1961 | P&A-G | 13,795 | 01-T1N-R13W SM | 501331000500 |
| UNOCAL | Ninilchik #1 | 12/02/1962 | P&A-G | 14,940 | 06-T1S-R13W SM | 501331000200 |
| Mobil | Ninilchik #1 | 05/22/1964 | P&A | 12,722 | 24-T1S-R14W SM | 501331000300 |
| SOCAL | Falls Creek #2 | 07/18/1966 | P&A | 8,256 | 22-T1N-R13W SM | 501331000600 |
| SOCAL | Falls Creek #43-6 | 04/09/1973 | P&A | 8,400 | 06-T1N-R12W SM | 501332024900 |
| Brinkerhoff | Ninilchik #1 | 02/25/1974 | P&A | 13,082 | 21-T1S-R13W SM | 501332024300 |
| UNOCAL | Clam Gulch #1 | 08/24/1978 | P&A | 14,200 | 28-T2N-R12W SM | 501332031600 |
| Texaco | Ninilchik #1 | 08/30/1979 | P&A-G | 12,903 | 22-T1N-R13W SM | 501332032600 |

| | | | | | | |
|----------|------------------------------|------------|-------|--------|----------------|--------------|
| Marathon | Corea Creek #1 | 05/31/1996 | P&A-G | 9,738 | 12-T1N-R13W SM | 501332046700 |
| Marathon | Grassim Oskolkoff #1 | 07/31/2001 | GAS | 11,600 | 30-T8N-R13W SM | 501332049300 |
| Marathon | Grassim Oskolkoff #2 | 11/29/2001 | GAS | 12,026 | 19-T9N-R13W SM | 501332050300 |
| Marathon | Susan Dionne #1 ⁴ | 01/23/2002 | GAS | 7,430 | 06-T1S-R13W SM | 501331000201 |
| Marathon | Falls Creek Unit #1RD | 04/09/2002 | GAS | 8,900 | 06-T1N-R12W SM | 501331000501 |
| Marathon | Susan Dionne #3 | 07/03/2002 | GAS | 10,255 | 01-T1S-R13W SM | 501332051200 |

1. GAS – completed as a gas production well; P&A – plugged and abandoned; P&A-G – plugged and abandoned with gas show(s).
2. Total depth shown here is measured depth (MD) in feet.
3. Location shown here is bottom hole location only. Many wells are directionally drilled from a different surface location.
4. Susan Dionne #1 was previously known as Alaskan Crude Corp. McCoy Prospect #1.

Recently, Marathon has re-examined the area with new seismic and drilling technology. Because the crest of the structure parallels the coastline, acquiring quality seismic data along the intertidal transition zone between the offshore marine and coastal land has always been a difficult, technically challenging and costly problem. In May 2001, Marathon acquired three high quality 2D seismic lines over the southern end of the structure and along the crest of the structure to help delineate potential exploration targets, especially along the crest of the anticline and the area south of the Falls Creek PA. Marathon has reprocessed these data to identify additional well locations in the Ninilchik Unit and to delineating the structure and reservoir limits for the proposed participating areas.

The Susan Dionne Participating Area

The Susan Dionne PA reservoir was discovered in 1962 when the UNOCAL Ninilchik #1 (UN1) tested gas from upper Tyonek Formation sand at 3,776 feet MD. The UN1 discovery was estimated at the time to be too small for development and was plugged and abandoned until 1985 when the UN1 was sidetracked. The sidetrack, named Alaskan Crude Corporation McCoy Prospect #1, was completed in 1986 and produced gas from upper Tyonek Formation sand, at 3,776 feet MD. Commercial production was never established from this sidetrack and the well was shut in. In 2001, Marathon took over operations for the sidetrack and renamed it the Marathon Susan Dionne #1 (MSD1). During the workover, several sands were identified in the well. One of these sands near the bottom of the Susan Dionne PA reservoir was tested and is reasonably known to be capable of producing in paying quantities. The MSD1 was then recompleted as a gas well in the Susan Dionne PA reservoir. The MSD3 Well was completed as a gas producer in 2002, and confirmed the presence of gas found in the MSD1. A permit-to-drill has been issued for the MSD2 at a location north of the MSD3, but that well has not been drilled to date.

The Susan Dionne PA reservoir is defined as the interval between the depths of 5,323 and 10,010 feet measured depth (MD) in the MSD3 type log, and comprises multiple sand intervals in the upper Tyonek Formation. The reservoir structure consists of a faulted anticline defined by three-way dip closure on the northwest, northeast and southeast. Closure on the southwest is by fault seal crosscutting perpendicular to the axial trend of the Ninilchik anticline isolating this reservoir from the southward extension of the anticlinal trend. Closure may also exist in a similar fashion on the north. The Susan Dionne PA reservoir sands are interbedded with silt, clay and coal and were deposited in a fluvial environment.

Grassim Oskolkoff Participating Area

Exploration drilling in the GO PA began in 1966 with the drilling of the SOCAL Falls Creek #2, which was drilled to delineate the gas discovery at SOCAL Falls Creek #1. No tests were conducted on the GO PA reservoir sands and the well was plugged and abandoned. Gas was discovered in the GO PA reservoir in 1979 with the drilling and testing of the Texaco Ninilchik #1 (TN1). The TN1 was drilled to test the oil potential of the Hemlock Conglomerate. Eight intervals were tested from the upper Tyonek Formation through the Hemlock Conglomerate. The results were not encouraging enough for development, and the well was plugged and abandoned. Marathon planned to reevaluate the potential of the upper Tyonek Formation with the drilling and testing of the MGO1 Well in 2001.

The MGO1 encountered several sands in the GO PA reservoir interval and one of these sands near the bottom of the GO PA reservoir was tested and is reasonably known to be capable of producing in paying quantities. The MGO1 was then completed as a gas well in the GO PA reservoir. The Marathon Grassim Oskolkoff #2 (MGO2) well in 2001 confirmed the gas-bearing intervals found in MGO1. A permit-to-drill has been issued for the MNS1, south of MGO2, but that well has not been drilled to date.

The GO PA reservoir is defined as the interval between the depths of 5,965 and 10,250 feet measured depth (MD) in the MGO1 well type log, and is composed of multiple sand intervals in the upper Tyonek Formation. The reservoir structure consists of a faulted anticline defined by three-way dip closure on the southeast, southwest, and northwest. Closure on the northeast is by fault seal crosscutting perpendicular to the axial trend of the Ninilchik anticline. Closure may also exist in a similar fashion on the south. Deposited in a fluvial environment, the GO PA reservoir sands are interbedded with silt, clay and coal and are commonly laterally discontinuous. Consequently, and as is the case here, additional well and seismic data are often required to demonstrate reservoir continuity and communication for final determination of a PA. The proposed MSN1 well is required for that purpose.

Falls Creek Participating Area

The Falls Creek PA was discovered in 1961 with the drilling of the SOCAL Falls Creek #1 (SFC1). The planned objective of this well was oil in the Hemlock Conglomerate. No oil was found in the Hemlock, but gas was discovered in the upper Tyonek Formation. Four Tyonek Formation sands were tested with individual flow rates of 30,000 to 2 million cubic feet per day. The well was completed in upper Tyonek Formation sand between 7,562-7,600 feet MD. In February 1964, the Falls Creek #1 well was certified as the discovery well, which established gas in commercial quantities in the Tyonek Formation.

SOCAL followed the discovery by drilling two delineation wells as dry holes. The SFC2, referenced above, was drilled more than four miles south, in what is now the proposed GO PA. The SOCAL Falls Creek #43-06 was drilled in 1973, but results were negative and the well was not tested. Marathon drilled the Corea Creek Federal #1 as a dry hole in 1996.

The Falls Creek PA reservoir is defined as the interval between the depths of 5,513 and 8,900 feet measured depth (MD) in the Marathon Falls Creek #1RD well type log, and is composed of

multiple sand intervals in the upper Tyonek Formation. The reservoir structure consists of a faulted anticline defined by four-way dip closure on the southeast, southwest and northwest. Closure on the northeast is by fault seal crosscutting perpendicular to the axial trend of the Ninilchik anticline. A fault crosscutting perpendicular to the axial trend of the Ninilchik anticline may also limit the extent of the reservoir on the south. The Falls Creek PA reservoir sands, interbedded with silt, clay and coal, were deposited in a fluvial environment and are commonly laterally discontinuous. Consequently reservoir continuity is sometimes difficult to determine.

Marathon based the Falls Creek PA boundary on their interpretation of the Lowest Known Gas (LKG) in each of the mapped sandstones of the upper Tyonek Formation within the participating area. Marathon's interpretation of the data has shown that the area included in the proposed Falls Creek PA is reasonably known to be underlain by hydrocarbons and known or reasonably estimated to be capable of producing or contributing to production of hydrocarbons in paying quantities. Based on other available data, the Division has some concerns regarding Marathon's interpretation of the southwest part of the proposed Falls Creek PA. The Division is including the acreage in question contingent on Marathon's drilling of the MFC3 Well to the permitted bottomhole location by July 2003 and having the well's results ultimately determine the configuration of the Falls Creek PA before first gas into the Kenai-Kachemak Pipeline. The lands in question are described in Attachment 2 as Ninilchik Unit Tract 3 (ADL 389727) within T1N, R13W, S.M.

During the 30-day public comment period, the Division received a comment from PLC, LLC requesting scrutiny of the geological and geophysical data that define the area abutting the northern boundary of the proposed Falls Creek PA. The Division did not receive any geological, geophysical or engineering data with the comment from PLC, LLC. The comment was general and did not identify specific technical issues for the Division to investigate. To address this comment the Division reviewed data and interpretations submitted by Marathon and other working interest owners in the Falls Creek Unit, publicly available data, and other confidential data available to the Division. The northern boundary of the proposed Falls Creek PA is controlled by the areal extent of the LKG in the upper Tyonek Formation reservoir intervals. Based on all the data and interpretations available to the Division, all sand intervals of the upper Tyonek that are gas-bearing within the proposed Falls Creek PA, are below the depth of LKG and are not gas-bearing outside of the proposed participating area northern boundary. The northern limit of the Falls Creek PA reservoir is determined by the Division to be contained completely inside the proposed participating area. Therefore, the area outside the proposed Falls Creek PA to the north is not included because that area is not underlain by hydrocarbons and known or reasonably estimated to be capable of producing or contributing to the production of hydrocarbons in paying quantities.

In summary, there is some uncertainty as to the areal extent of the gas-bearing reservoirs of the upper Tyonek Formation within the southwestern part of the proposed Falls Creek PA. Subject to the terms and conditions set out in Section III.A.3, Marathon's proposed drilling schedule outlined in the plan of development for each participating area, justifies the size of the three proposed participating areas. Delineation drilling will define whether the gas-bearing reservoirs of the upper Tyonek sands extend onto the lands in question.

The Division plans to closely evaluate results from the MFC3 well to determine whether the structure persists and the reservoir is present in the southwest portion of the proposed Falls Creek PA. There is some uncertainty regarding how abruptly the Ninilchik anticline plunges to the southwest and extent and continuity of the intra-reservoir sand intervals. If the results of the MFC3 well indicate that the structure plunges more abruptly on the southwest than Marathon currently believes, or the results of the MFC3 well indicate that the intra-reservoir sand intervals are not continuous, the Falls Creek PA boundary may contract.

Marathon has reasonably demonstrated by geological, geophysical, and engineering data that the upper Tyonek Formation within the proposed participating areas contains commercial hydrocarbons. Results of development drilling within the participating areas, especially the Falls Creek PA, will delineate the geometry and distribution of the individual Tyonek gas-bearing reservoirs and more accurately define their true lateral extent.

3. Further Plans for Exploration or Development for the Participating Areas

The Initial Ninilchik Unit Plan of Exploration (POE), approved on October 30, 2001, and effective until December 31, 2004, set out a timely sequence of reservoir delineation activities that was designed to facilitate the ultimate development and production of any gas reservoirs discovered within the unit area. As described above, these initial activities discovered sufficient volumes of gas within the Ninilchik Unit to justify the design and construction of the Kenai-Kachemak Pipeline (KKPL), a 33-mile, 12-inch diameter pipeline that will generally follow the Sterling Highway between Kenai and Ninilchik. First shipments of gas on KKPL are expected in the August-September 2003 timeframe from the Falls Creek #1RD well, the MGO1 and MGO2 wells, and the MSD3 well.

In addition to the start-up of production from each of the three participating areas, the Initial Plans of Development (POD) submitted by Marathon for each of the three participating areas includes the following: (1) Marathon plans a 3D seismic program for the Ninilchik Unit in late 2003, which will cover the Susan Dionne PA, the GO PA, and the southern portion of the Falls Creek PA; and (2) following the interpretation of the 3D seismic data, Marathon expects to drill the Susan Diane #2 in the Susan Dionne PA and the MNS1 in the GO PA in either 2004 or 2005, and another well in the Falls Creek PA, MFC3, is planned for this July.

Representations made to the Division indicate that the MFC3 well will be drilled in July 2003, and the well information will be made available before first gas production is delivered to the KKPL. Based on this representation, the Division and the majority working interest owners, Marathon and Unocal, have agreed that the well data will be made available to the Division for its review before first gas is delivered to the KKPL. The Division, in its sole discretion, will determine whether or not the southwest Falls Creek PA lands in question are appropriate for continued inclusion in the participating area.

If the MFC3 well information is not available before first gas is delivered to the KKPL, the southwest Falls Creek PA lands in question will remain in the participating area until December 31, 2003, unless the Commissioner, in his sole discretion, decides otherwise. The finally

determined Falls Creek PA and the tract allocation schedule for those participating lands will be re-determined retroactive to the first day of production from the participating area. Any imbalances created by the retroactive adjustments of the Falls Creek PA tract participation schedule will be made from production of Unitized Substances from the Falls Creek PA after the effective date of the revised tract participation schedule.

Marathon proposed the areal extent of GO PA to produce the gas reservoirs of the upper Tyonek Formation from the MGO1 and MGO2 wells, and the permitted, but not yet drilled, MNS1 well. The areal extent of the GO PA is acceptable to the Division only if the MNS1 is drilled to its proposed bottomhole location and produces the known gas reservoirs from the southern part of the participating area². The Division, Marathon, and Unocal have agreed that failure to drill the MNS1 well and commit to connect the well to the KKPL, prior to December 31, 2005, will cause an automatic contraction of the GO PA as to the identified lands. Marathon shall provide the Division with notice of the MNS1 well drilling and the decision to produce or not produce the well to the KKPL. As with the Falls Creek PA, the tract allocation schedule for the contracted GO PA will be re-determined retroactive to the first day of production from the participating area, and any imbalances created by the retroactive adjustments of the revised GO PA areal extent and tract allocation schedule will be made from production of Unitized Substances from the GO PA after the effective date of the revised tract allocation schedule.

Similarly with the Susan Dionne PA, Marathon proposed its areal extent to produce the gas reservoirs of the upper Tyonek Formation from the MSD3 well, and the permitted, but not yet drilled, MSD2 well. The proposed Susan Dionne PA is acceptable to the Division only if the MSD2 well is drill to its proposed bottomhole location and produces the known gas reservoirs from the northern part of the participating area³. The Division, Marathon, and Unocal have agreed that failure to drill the MSD2 well and commit to connect the well to the KKPL, prior to December 31, 2005 will cause an automatic contraction of the participating area as to the identified lands. Marathon shall provide the Division with notice of the MSD2 well drilling and the decision to produce or not produce the well to the KKPL. As with the other two participating areas, the tract participation schedule for the contracted Susan Dionne PA will be re-determined retroactive to the first day of production from the participating area, and any imbalances created by the retroactive adjustments of the revised Susan Dionne PA tract participation schedule will be made from production of Unitized Substances from the Susan Dionne PA after the effective date of the revised tract participation schedule.

The currently proposed drilling schedule justifies the size of the three participating areas. The planned 3D seismic program and the delineation drilling will define whether commercially producible gas-bearing reservoirs of the Tyonek Formation extend onto the lands in question.

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

² The southern parts of the GO PA are the lands described in Attachment 3 for Section 27 of ADL 384305 (NU Tract 4), and Section 28 of ADL 389180 (NU Tract 6).

³ The northern part of the Susan Dionne PA is NU Tract 6 (ADL 389180) described in Attachment 4.

Approval of the three participating areas will provide near-term economic benefits to the state by creating jobs associated with the construction of the KKPL, production facilities and operation of each participating area, and the further delineation of the hydrocarbon potential of the tracts within the participating areas. The state will also benefit from each participating area's further plan of development, which proposes to maximize the physical recovery of hydrocarbons from all the gas-bearing reservoirs of the upper Tyonek within each participating area. Maximum hydrocarbon production will enhance the state's long-term royalty and tax revenues. The working interest owners have provided sufficient technical data to define the prospects under consideration, have committed their diverse lease interests, and have agreed to a further plan of development, which ensures a timely sequence of drilling and development activities to evaluate and develop all the leases in the participating areas.

Marathon submitted an allocation of production and cost schedule for the individual tracts/leases in the three proposed participating areas (Attachments 2 through 4 to this Findings and Decision) as required by 11 AAC 83.371. The proposed allocation distributes expenses and production among the tracts/leases in each participating area on a surface acreage basis. Each participating area is defined by the surface acreage covering the anticipated productive area. Since the gas-bearing Tyonek reservoirs are stacked sandstone bodies, the composite area of the reservoirs, which is controlled by structure and sandstone distribution, is summed together to define the outline of each participating area.

Based on the above and the terms and conditions imposed in Section III.A.3 that the areal extent and tract allocation schedule for the tracts within each participating areas may be adjusted by the non-drilling of required wells, Marathon's tract allocation schedule is acceptable for allocating production and costs among the leases within the participating areas. Surface acreage as the basis for tract allocation for the tracts within the participating areas is a long-established allocation methodology for gas reservoirs.

There are some potential economic costs associated with the participating areas. All the State of Alaska leases within the three participating areas reserve a 12.5% royalty to the state, except that the state's royalty share from the leases within the Falls Creek PA is subject to AS 38.05180(f)(5). AS 38.05.180(f)(5) entitles the lessee of all or part of the Falls Creek field that has been granted approval of a written plan submitted to the AOGCC under AS 31.05.030(i) to pay a royalty of five percent on the first 35 billion cubic feet of gas produced for sale from the field that occurs in the 10 years following the date on which the production for sale commences. Production for sale must commence before January 1, 2004. The Falls Creek Participating Area under the Falls Creek Unit contained 564.45 acres. The Falls Creek PA within the Ninilchik Unit contains 836.30 acres. The state's acreage represents approximately 84.6 percent of the production from the "field." The balance of the participating area, the non-state lands, is not subject to AS 38.05.180(f)(5) and will receive a 12.5 percent royalty share.

The GO PA and the Susan Dionne PA are not subject to AS 38.05.180(f)(5). However, these two participating areas may be subject to newly signed legislation, AS 43.20.043. This statute entitles a State of Alaska taxpayer that is an operator or working interest owner directly engaging in the exploration for and development of gas to a ten percent tax credit against its state tax liability for qualified capital investments and annual costs for qualified services. The taxpayer may not claim

this credit if it accepts any other tax credit or royalty modification under different statutes.

The State of Alaska leases in the Ninilchik Unit are written on a variety of forms, containing a variety of provisions. The lease forms vary from the very oldest form, the DL-1 form dated 1960 to the very latest lease form, #DOG 200204. The Ninilchik Unit Agreement, approved on October 30, 2001, conformed and modified the leases to be consistent with the Agreement. Consistent lease provisions allow the working interest owners and the state to reduce the administrative burdens of operating and regulating the unit. Conforming the terms and conditions of the leases to the Agreement allows the state to avoid costly and time-consuming litigation on some problematic lease provisions in the forms.

The need to amend the Agreement is required for three reasons: (1) not all working interest owners in the unit's leases are parties to the Agreement; (2) a discovery that a section of the April 2001 Model Form, the basis of the Agreement, was omitted from the final Agreement approved by the Division; and (3) the inclusion of lease form #DOG 200204 for ADLs 390105 and 390085 into the Ninilchik Unit area. The first two amendments deal with issues that should have been addressed when the unit was formed in October 2001. The third amendment includes the latest terms and conditions for leases within the Ninilchik Unit. The amendment avoids any potentially contradictory lease and Agreement provisions. The working interest owners and the State benefit by the continuation of consistent lease provisions to reduce the administrative burdens of operating and regulating the Ninilchik Unit.

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. Without unitization, the unregulated development of reservoirs tends to be a race for possession by competitive operators. This race can produce: (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 and gas to the surface also increase 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.

Our concern about lessees competing for the same reservoir is less in the proposed Ninilchik Unit expansion area and Falls Creek, GO and Susan Dionne PAs because the majority working interest owners – Marathon and Unocal-- have already aligned their leasehold interests in the proposed expansion acreage and the existing Ninilchik Unit. The majority working interest owners have executed various joint operating agreements that establish an area of common equity, establishing ownership percentages covering all horizons within the boundaries of the Ninilchik Unit, and certain adjacent areas, between themselves. However, even with only one primary working interest owner

group, expansion of the Ninilchik Unit and formation of the three participating areas will provide a comprehensive plan for developing each participating area and exploring all the reservoirs within the expanded unit. The POD for each participating area and the planned exploration activities for the other unit areas provide for an efficient, integrated approach to development of the Tyonek Formation gas-bearing reservoirs.

The Ninilchik Unit expansion will promote the conservation of both surface and subsurface resources through unitized (rather than lease-by-lease) development. Unitization allows the unit operator to explore the area as if it were one lease. The expansion of the Ninilchik Unit and the formation of the participating areas over the upper Tyonek Formation reservoirs 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 under the surface. Facilities can be located to maximize recovery and to minimize environmental impacts, without regard for individual lease ownership.

2. The 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 resolves the tension between lessees to compete for their share of production. Economic and physical waste, however, could still occur without an equitable cost sharing formula, and a well-designed and coordinated development plan. Consequently, unitization must equitably divide costs and production, and plan to maximize physical and economic recovery from any reservoir. It must also treat the royalty owner fairly.

An equitable allocation of hydrocarbon shares among the working interest owners discourages hasty or unnecessary surface development. Similarly, an equitable cost-sharing agreement promotes efficient development of reservoirs and common surface facilities and includes rational operating strategies. Such an agreement further allows the working interest owners 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 working interest owners. Pressure maintenance and secondary recovery procedures, if necessary, 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 majority of the lessees in the proposed unit expansion leases and participating areas have signed the Ninilchik Unit Agreement and the Unit Operating Agreement, and will share the existing unit production capacity and infrastructure. Using this infrastructure and facilities eliminates the need to construct stand-alone facilities to process the volume of recoverable hydrocarbons from the unit

expansion area and the three participating areas.

Expanding the Ninilchik Unit and forming the three participating areas include the leases that contain productive Tyonek Formation gas-bearing reservoirs and allowing these areas to access existing unit facilities and infrastructure prevents economic and physical waste.

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

The proposed expansion of the Ninilchik Unit and formation of the Falls Creek PA, GO PA and Susan Dionne PA seeks to protect the economic interests of all working interest owners of the reservoirs in the expanded unit and participating areas, as well as the royalty owner. Combining interests and operating under the terms of the Agreement and the Ninilchik Unit Operating Agreement provides each individual working interest owner an equitable allocation of costs and revenues commensurate with the value of their leases.

The amended Agreement in combination with the plan of development for each participating area with the agreed-to terms and conditions outlined in Section III.A.3 promotes the state's economic interests because hydrocarbon recovery will be maximized and additional production-based revenue will be derived from the participating areas' production. Diligent development and exploration under a single, approved unit plan without the complications of competing leasehold interests are 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.

Finally, the amendments to the Agreement conform and modify the lease contracts to be consistent with the Agreement. Consistent lease provisions allow the working interest owners and the state to reduce the administrative burdens of operating and regulating the unit. Conforming the terms and conditions of the leases to the Agreement allows the state to avoid costly and time-consuming litigation of some problematic lease provisions in the forms.

C. Amendments to the Ninilchik Unit Agreement

The proposed amendments to the Agreement reflect the unique circumstances of the Ninilchik Unit and attempt to continue to harmonize the terms and conditions of the various lease forms for the leases within the unit to the Agreement. All the proposed changes are acceptable to the majority working owners and the state.

The Agreement is based on DNR's State Only Royalty Owner model unit agreement form dated April 2001 (Model Form). At the time Marathon proposed the Ninilchik Unit in June 2001, they accepted the Model Form as the Ninilchik Unit Agreement with no modifications. The Division approved the Agreement on October 30, 2001. Subsequent to the approval of the Agreement, Marathon and the Division noted an error and an omission in the Agreement and Model Form. The first two proposed amendments to the Agreement address the error and omission.

The first amendment to the Agreement corrects an error in the Agreement. The error was, contrary to the Recitals Provision of the Agreement, that not all working interest owners of the leases in the Ninilchik Unit are parties to the Agreement. ConocoPhillips, an owner in ADLs 389737 (NU Tract

3), 384306 (NU Tract 5) and 384318 (NU Tract 1), was not a party to the Agreement. ConocoPhillips still is not a party to the Agreement. State unitization regulations do not require all parties of interest to be parties to the unit agreement. State law requires that parties to the unit agreement hold sufficient interest in the unit area to have effective control of unit operations. 11 AAC 83.316(c). In the expanded Ninilchik Unit, Marathon and Unocal control approximately 89.2 percent of the unit area with ConocoPhillips controlling approximately 2.16 percent.

The second amendment corrects an omission from the April 2001 Model Form. The April 2001 Model Form originally contained the proposed amendment language, but for an unknown reason was omitted from the copy of the Model Form provided to Marathon at the time of formation of the Ninilchik Unit in June 2001. The Amendment adds a new Article 3.8 to the Agreement, which requires the operator or working interest owners to provide certain information to the Commissioner.

Lastly, after reviewing the Agreement, the latest Model Form dated April 2002, and the most current lease form for the most recent leases within the unit acquired in the Cook Inlet Areawide 2002 sale, ADLs 390085 and 390105, the Division proposed, and the majority owners accepted, a third amendment to the Agreement to further harmonize the terms and conditions of the latest lease form within the unit to the Agreement. The proposed amendment attempts to avoid any potentially contradictory lease and Agreement provisions. The proposed third amendment is taken from the April 2002 Model Form, Article 12.5 of that Form, and the language addresses the latest lease language regarding the “Value” provision of the lease. Any new unit agreement proposed for state lands would be based on the April 2002 Model Form and would automatically include this article.

IV. FINDINGS AND DECISION

Considering the facts discussed in this document and the administrative record, I hereby make findings and impose conditions as follows.

1. The expansion of the Ninilchik Unit, the formation of the Falls Creek PA, GO PA and Susan Dionne PA, and the amendment to the Agreement promote the conservation of all natural resources, promote the prevention of economic and physical waste, protect all parties of interest, and are necessary and advisable to protect the public interest. AS 38.05.180(p); 11 AAC 83.303.
2. DNR complied with the public notice requirements of 11 AAC 83.311.
3. The applicants for expansion of the Ninilchik Unit have sufficient interest in the unit to exercise control of unit operations. 11 AAC 83.316(c).
4. The available well data and development plans justify the inclusion of the proposed lands within the Ninilchik Unit. Under the 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 lands described in Attachment 1 to this Findings and Decision are included in the expanded

Ninilchik Unit, contingent upon BLM's approval to terminate the Falls Creek Unit.

5. 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. This reduction in environmental impacts and interference with any subsistence activity is in the public interest.
6. The Ninilchik Unit expansion 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.
7. The available geological and engineering data demonstrate that a paying quantities certification is appropriate for the lands proposed for the Falls Creek PA, GO PA and Susan Dionne PA subject to the terms and conditions set out in Section III.A.3. The data also suggest that the acreage is underlain by hydrocarbons and known and reasonably estimated to be capable of production or contributing to production in sufficient quantities to justify the formation of the three participating areas within the Ninilchik Unit.
8. The available geological and engineering data justify the inclusion of the proposed tracts within the three participating areas. Under the regulations governing formation and operation of oil and gas units (11 AAC 83.301 - 11 AAC 83.395), and the terms and conditions set out in Section III.A.3, and the terms and conditions under which these lands were leased from the State of Alaska, the lands described in Attachment 2 are included within the Falls Creek PA, the lands described in Attachment 3 are included in the Go PA, and the lands described in Attachment 4 are included in the Susan Dionne PA.
9. The formation of the Falls Creek, GO and Susan Dionne Participating Areas adequately divides costs and allocates produced hydrocarbons, and sets forth a development plan designed to maximize physical and economic recovery from the Tyonek Formation reservoirs within the three approved participating areas.
10. Under 11 AAC 83.351(a) and 11 AAC 83.371(a), the Division approves the allocations of production and costs for the tracts within the Falls Creek PA, GO PA and Susan Dionne PA under the terms and conditions set out in Section III.A.3 of this Findings and Decision.
11. Diligent exploration and delineation of the Tyonek Formation reservoirs underlying the approved participating areas is to be conducted by the Unit Operator under the plans of development and operation approved by the state. Before undertaking any specific surface operations, the unit operator must submit a Plan of Operations to the DNR and other appropriate state and local agencies for review and approval. All agencies must grant the required permits before drilling or development operations may commence. DNR may condition its approval of a unit Plan of Operations and other permits on performance of mitigating measures in addition to those in the leases if necessary or

appropriate. Requiring strict adherence to the mitigation measures will minimize adverse environmental impacts.

12. The Falls Creek PA, GO PA and Susan Dionne PA Plans of Development, subject to the terms and conditions of Section III.A.3, meet the requirements of 11 AAC 83.303 and 11 AAC 83.343. Each plan is approved until December 31, 2004, to synchronize each participating areas' Plan of Development with the Initial POE for the Ninilchik Unit. A revised participating area Plan of Development that describes the status of projects undertaken, drilling results, and the work completed, any changes or expected changes to the plan, and a further plan of development, must be submitted in accordance with 11 AAC 83.343.

For the reasons discussed in this Findings and Decision, I hereby approve the First Expansion of the Ninilchik Unit, formation of the Falls Creek PA, GO PA and Susan Dionne PA, and their respective tract allocation schedules, and the amendments to the Ninilchik Unit Agreement subject to the conditions specified herein. These approvals are effective July 1, 2003.

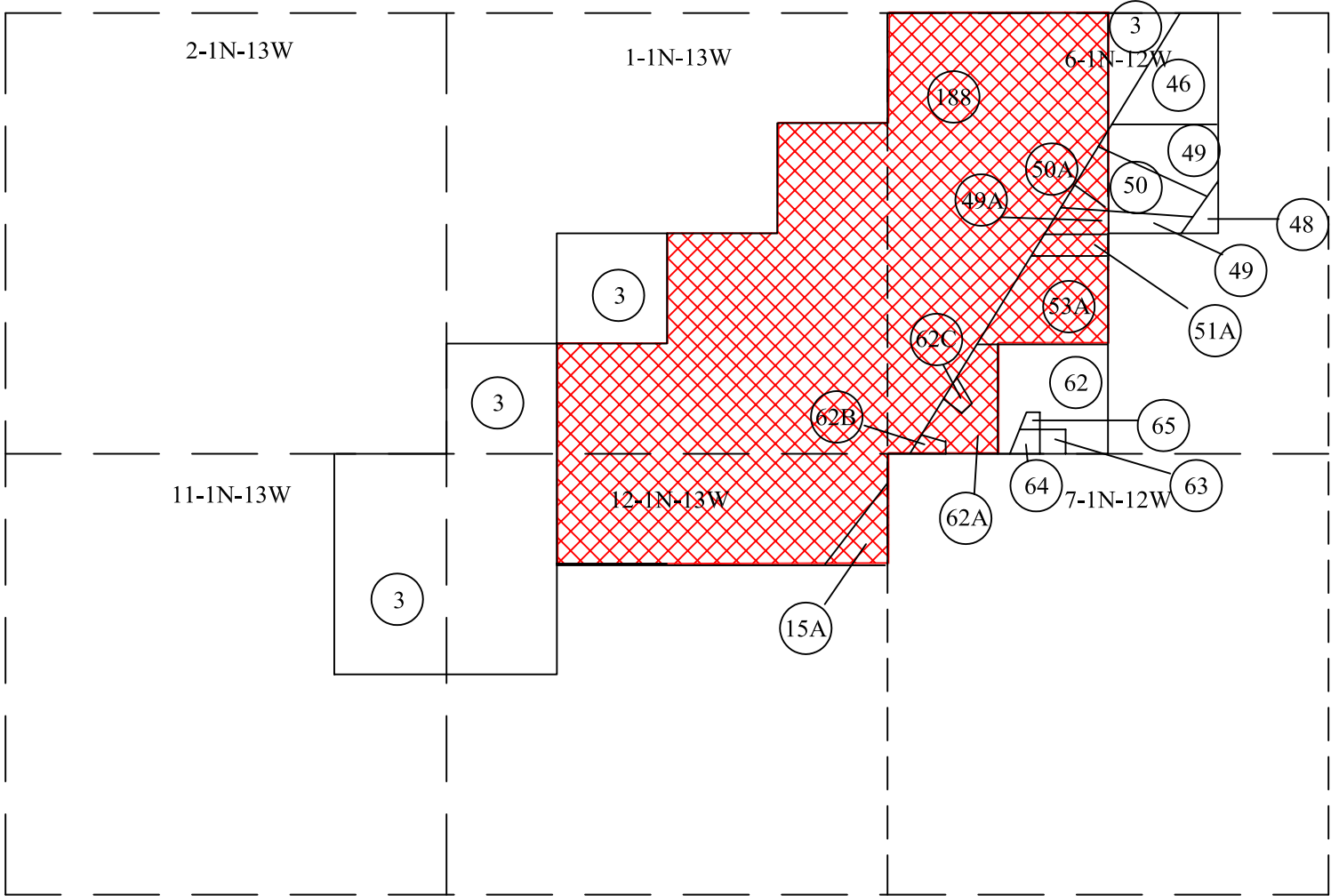
A person affected by this decision may appeal it, in accordance with 11 AAC 02. Any appeal must be received within 20 calendar days after the date of "issuance" of this decision, as defined in 11 AAC 02.040(c) and (d) and may be mailed or delivered to Tom Irwin, Commissioner, Department of Natural Resources, 550 W. 7th Avenue, Suite 1400, Anchorage, Alaska 99501; faxed to 1-907-269-8918, or sent by electronic mail to dnr_appeals@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. A copy of 11 AAC 02 may be obtained from any regional information office of the Department of Natural Resources.

Appeal Code: OGO063003NUFIRSTEXP3PAS

Mark D. Myers, Director
Division of Oil and Gas

Date

- Attachments:
- 1) Map of and Former Falls Creek Unit and First NU expansion area leases
 - 2) Map and Falls Creek PA Leases and Tract Participation Schedule
 - 3) Map and GO PA Leases and Tract Participation Schedule
 - 4) Map and Susan Dionne PA Leases and Tract Participation Schedule
 - 5) Amended Ninilchik Unit Agreement



MARATHON OIL COMPANY
 NINILCHIK UNIT
 FALLS CREEK PARTICIPATION AREA
 July 1, 2003
 (Note: Cross-hatched (red) area represents former Falls Creek Unit boundary.)

**NINILCHIK UNIT
FALLS CREEK PARTICIPATION AREA
EXHIBIT "C"
JULY 1, 2003**

**Schedule of Leases
State: Alaska**

| Ninilchik Unit Tract No. | Original Falls Creek Unit Tract No. | DESCRIPTION OF PROPERTY | GROSS ACRES | TRACT PARTICIPATION FACTOR | LESSOR/ ROYALTY OWNERS | ROYALTY | ORRIS | LESSEE/ WI OWNER | WI % | RECORDING DATA | | |
|--------------------------|-------------------------------------|-------------------------|-------------|----------------------------|------------------------|---------|-------|------------------|------|----------------|------|----------|
| | | | | | | | | | | BOOK | PAGE | DISTRICT |

U.S. PUBLIC DOMAIN LANDS

| | | | | | | | | | | | | |
|-----|---|--|-------|------------|--------------------------------------|--------|---|--|-------------------|--|--|--|
| 15A | 3 | T 1N, R 13W, S.M. Sec. 12: Lot 1, except that portion lying in the S/2NE/4 a/d/a that part of Lot 1 lying in the NE/4NE/4 | 10.23 | 1.0347130% | United States of America A-024399 | 12.50% | Loraine Ealand 1% x 100% Chevron USA, Inc. 6.5% x 50% (See ORRI Note #1, following) | Marathon Oil Company Union Oil Co. of California ConocoPhillips Alaska, Inc. | 45% 30% 25% | | | |
|-----|---|--|-------|------------|--------------------------------------|--------|---|--|-------------------|--|--|--|

STATE OF ALASKA LANDS

| | | | | | | | | | | | | |
|-----|------|---|--------|-------------|-------------------------------------|---|--|--|-------------------|--|--|--|
| 188 | 14 | T1N, R 13W, S.M. Sec. 1: SE/4NE/4 & SE/4 & SE/4SW/4 Sec. 12: NE/4NW/4 & N/2NE/4, except that part lying above the line of mean high tide T1N, R 12W, S.M. Sec. 6: W/2 except that part lying above the line of mean high tide | 564.45 | 57.0912732% | State of Alaska ADL 590 Parcel B | 12.5% (See Royalty Note #1, following) | Chevron USA, Inc. 6.5% x 50% (See ORRI Note #1, following) | Marathon Oil Company Union Oil Co. of California ConocoPhillips Alaska, Inc. | 45% 30% 25% | | | |
| 3 | None | T1N, R 13W, S.M. Sec. 1: NE/4SW/4 & SW/4SW/4 Sec. 11: E/2NE/4 Sec. 12: W/2NW/4 T1N, R 12W, S.M. Sec. 6: That part of the W/2NE/4 lying below the line of mean high tide (EST. 31.85 acres) | 271.85 | 27.4962576% | State of Alaska ADL #389737 | 12.5% (See Royalty Note #1, following) | Chevron USA, Inc. 6.5% x 100% (See ORRI Note #1, following) | Marathon Oil Company Union Oil Co. of California | 60% 40% | | | |

PATENTED FEE LANDS

| | | | | | | | | | | | | |
|----|------|--|-------|------------|--|--------|--|---|------------|-----|-----|-------|
| 46 | None | T 1N, R 12W, S.M. Sec 6: That part of GLO Lot 1 lying within the W/2NE/4 (estimated 10.44 acres) | 10.44 | 1.0559534% | Trudy S. Webb | 12.50% | | Marathon Oil Company Union Oil Co. of California | 60% 40% | 575 | 260 | Kenai |
| 48 | None | T 1N, R 12W, S.M. Sec 6: Tract #1 of Udelhoven Subdivision (Plat #H77-80) (a part of GLO Lot 2) | 2.67 | 0.2699559% | Heirs of William Wade Thebaut, dec. 50%** Heirs of Ruth Udelhoven, dec. 50%*** | 12.50% | Chevron USA, Inc. 6.5% x 100% (See ORRI Note #1, following) | Marathon Oil Company Union Oil Co. of California | 60% 40% | 21 | 21 | Homer |
| 49 | None | T 1N, R 12W, S.M. Sec 6: That part of Tracts #2 & #3 & #5 & #6 & #7 of Udelhoven Subdivision (Plat #H77-80) (a part of GLO Lot 2) lying in SW/4NE/4 and any mineral rights underlying roads in the SW/4NE/4 | 29.95 | 3.0293927% | Heirs of William Wade Thebaut, dec. 50%** Heirs of Ruth Udelhoven, dec. 25%* * * James Udelhoven 25% | 12.50% | Chevron USA, Inc. 6.5% x 100% (See ORRI Note #1, following) | Marathon Oil Company Union Oil Co. of California | 60% 40% | 21 | 21 | Homer |
| 50 | None | T 1N, R 12W, S.M. Sec 6: That part of Tract #4 of Udelhoven Subdivision (Plat #H77-80) (a part of GLO Lot 2), lying in SW/4NE/4 | 3.62 | 0.3661448% | Heirs of William Wade Thebaut, dec. 50%** Jennifer Linnann Udelhoven 50% | 12.50% | Chevron USA, Inc. 6.5% x 100% (See ORRI Note #1, following) | Marathon Oil Company Union Oil Co. of California | 60% 40% | 21 | 21 | Homer |

**NINILCHIK UNIT
FALLS CREEK PARTICIPATION AREA
EXHIBIT "C"
JULY 1, 2003**

**Schedule of Leases
State: Alaska**

| Ninilchik Unit Tract No. | Original Falls Creek Unit Tract No. | DESCRIPTION OF PROPERTY | GROSS ACRES | TRACT PARTICIPATION FACTOR | LESSOR/ ROYALTY OWNERS | ROYALTY | ORRIS | LESSEE/ WI OWNER | WI % | RECORDING DATA | | |
|--------------------------|-------------------------------------|---|-------------|----------------------------|---|---------|--|--|-------------------|----------------|------|----------|
| | | | | | | | | | | BOOK | PAGE | DISTRICT |
| 49A | 10A | T 1N, R 12W, S.M. Sec 6: That part of Tracts #2 & #3 of Udelhoven Subdivision (Plat #H77-80) (a part of GLO Lot 2), less that part lying in SW/4NE/4 | 2.00 | 0.2022899% | Heirs of William Wade Thebaut, dec. 50%** Heirs of Ruth Udelhoven, dec. 25%** * * James Udelhoven 25% | 12.50% | Chevron USA, Inc. 6.5% x 50% (See ORRI Note #1, following) | Marathon Oil Company Union Oil Co. of California ConocoPhillips Alaska, Inc. | 45% 30% 25% | 21 | 21 | Homer |
| 50A | 10B | T 1N, R 12W, S.M. Sec 6: That part of Tract #4 of Udelhoven Subdivision (Plat #H77-80) (a part of GLO Lot 2), less that part lying in SW/4NE/4 | 2.67 | 0.2700570% | Heirs of William Wade Thebaut, dec. 50%** Jennifer Linnann Udelhoven 50% | 12.50% | Chevron USA, Inc. 6.5% x 50% (See ORRI Note #1, following) | Marathon Oil Company Union Oil Co. of California ConocoPhillips Alaska, Inc. | 45% 30% 25% | 21 | 21 | Homer |
| 51A | 35 | T 1N, R 12W, S.M. Sec 6: The North 165' of Lot 3 | 2.34 | 0.2366792% | E.W. Vanderbilt (apparently deceased, but heirs/successors unknown) 100% | 12.50% | Chevron USA, Inc. 6.5% x 50% (See ORRI Note #1, following) | Marathon Oil Company Union Oil Co. of California ConocoPhillips Alaska, Inc. | 45% 30% 25% | 21 | 129 | Homer |
| 53A | 36 | T 1N, R 12W, S.M. Sec 6: Lot 3 except the North 165' | 28.90 | 2.9230894% | Harold Lee & Diane Pederson 100% | 12.50% | Chevron USA, Inc. 6.5% x 50% (See ORRI Note #1, following) | Marathon Oil Company Union Oil Co. of California ConocoPhillips Alaska, Inc. | 45% 30% 25% | 13 | 80 | Homer |
| 62 | None | T 1N, R 12W, S.M. Sec 6: That part of GLO Lot 4 lying in the SE/4SW/4 less and except Block 1, Lot 9 and Block 2, Lots 3 & 4 of Clammers Haven Addition #1 (plat #H-78-25) and any interest in roads and easements dedicated to public use in the SE/4SW/4 | 34.99 | 3.5390622% | Marcellus John Stark 75% Norma Jeanne O'Riorden Nichols 16.67% Walter G. Williams 8.33% | 12.50% | Chevron USA, Inc. 6.5% x 100% (See ORRI Note #1, following) | Marathon Oil Company Union Oil Co. of California | 60% 40% | 13 | 40 | Homer |
| 62A | 37A | T 1N, R 12W, S.M. Sec 6: Those parts of Clammers Haven Addition No.1 (plat H-78-25), described as all of Block 1, Lot 2 and those parts of Block 1, Lot 4 lying outside the SE/4SW/4 AND those parts of Block 2, Lot 1 lying outside the SE/4SW/4 and all minerals underlying dedicated roads and easements lying outside the SE/4SW/4 (a part of GLO Lot 4) | 12.11 | 1.2248655% | Marcellus John Stark 75% Norma Jeanne O'Riorden Nichols 16.67% Walter G. Williams 8.33% | 12.50% | Chevron USA, Inc. 6.5% x 50% (See ORRI Note #1, following) | Marathon Oil Company Union Oil Co. of California ConocoPhillips Alaska, Inc. | 45% 30% 25% | 13 | 40 | Homer |
| 62B | 37B | T 1N, R 12W, S.M. Sec 6: Those parts of Clammers Haven Addition No.1 (plat H-78-25), described as all of Block 1, Lot 1 (a part of GLO Lot 4) | 4.46 | 0.4511065% | Marcellus John Stark 75% Edward C. & Myong C. Greene 25% | 12.50% | Chevron USA, Inc. 6.5% x 50% (See ORRI Note #1, following) | Marathon Oil Company Union Oil Co. of California ConocoPhillips Alaska, Inc. | 45% 30% 25% | 13 | 40 | Homer |
| 62C | 37C | T 1N, R 12W, S.M. Sec 6: Those parts of Clammers Haven Addition No.1 (plat H-78-25), described as all of Block 1, Lot 3 (a part of GLO Lot 4) | 2.99 | 0.3024234% | Marcellus John Stark 75% Ronald D. & Janet L. Fales 25% | 12.50% | Chevron USA, Inc. 6.5% x 50% (See ORRI Note #1, following) | Marathon Oil Company Union Oil Co. of California ConocoPhillips Alaska, Inc. | 45% 30% 25% | 13 | 40 | Homer |
| 63 | None | T 1N, R 12W, S.M. Sec 6: Those parts of Clammers Haven Addition No.1 (plat H-78-25), described as all of Block 2 Lot 4 (a part of GLO Lot 4) | 1.70 | 0.1719464% | Marcellus John Stark 75% Michael & Marjorie Barry 25% | 12.50% | Chevron USA, Inc. 6.5% x 100% (See ORRI Note #1, following) | Marathon Oil Company Union Oil Co. of California | 60% 40% | 13 | 40 | Homer |

**NINILCHIK UNIT
FALLS CREEK PARTICIPATION AREA
EXHIBIT "C"
JULY 1, 2003**

**Schedule of Leases
State: Alaska**

| Ninilchik Unit Tract No. | Original Falls Creek Unit Tract No. | DESCRIPTION OF PROPERTY | GROSS ACRES | TRACT PARTICIPATION FACTOR | LESSOR/ ROYALTY OWNERS | ROYALTY | ORRIS | LESSEE/ WI OWNER | WI % | RECORDING DATA | | |
|--------------------------|-------------------------------------|--|-------------|----------------------------|--|---------|--|---|------------|----------------|------|----------|
| | | | | | | | | | | BOOK | PAGE | DISTRICT |
| 64 | None | T 1N, R 12W, S.M. Sec 6: Those parts of Clammers Haven Addition No.1 (plat H-78-25), described as all of Block 2, Lot 3 (a part of GLO Lot 4) | 1.74 | 0.1759922% | Marcellus John Stark 75% Michael & Marjorie Barry 25% | 12.50% | Chevron USA, Inc. 6.5% x 100% (See ORRI Note #1, following) | Marathon Oil Company Union Oil Co. of California | 60% 40% | 13 | 40 | Homer |
| 65 | None | T 1N, R 12W, S.M. Sec 6: Those parts of Clammers Haven Addition No.1 (plat H-78-25), described as all of Block 1, Lot 9 (a part of GLO Lot 4) | 1.57 | 0.1587976% | Marcellus John Stark 75% Corey Kruse 12.5% James Kruse 12.5% | 12.50% | Chevron USA, Inc. 6.5% x 100% (See ORRI Note #1, following) | Marathon Oil Company Union Oil Co. of California | 60% 40% | 13 | 40 | Homer |
| Total: | | | 988.68 | 100.0000000% | | | | | | | | |

TRACT NOTE: The first column represents the Ninilchik Unit Tract Number. The second column represents the tract number assigned under the former Falls Creek Unit.

TRACT NOTE: Because some of the sections included in this participating area are correction sections, the participation area contains only 988.68 acres, rather than the expected 1000 acres.

***ROYALTY NOTE #1:** Royalty subject to AS 38.05.180 (f)(5).

***ORRI NOTE#1:** Chevron USA, Inc. owns a 6.5% overriding royalty burdening Marathon Oil Company and Union Oil Company of California only.

****NOTE:** The heirs of William Wade Thebaut, deceased are apparently JoAnn Steik, James Thebaut and Shirley Cox.

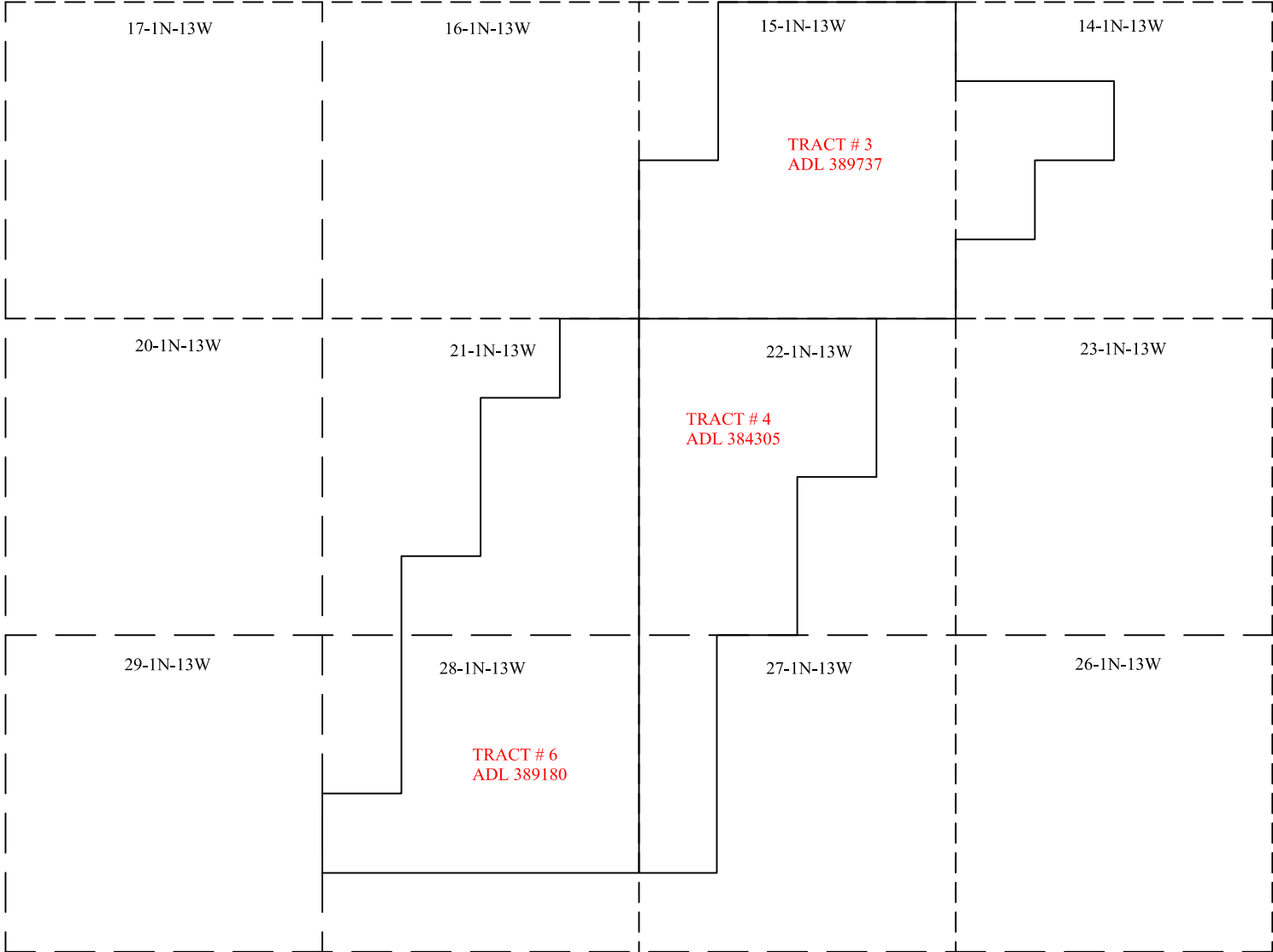
*****NOTE:** The heirs of Ruth Udelhoven, deceased, are apparently the following: Ashley Udelhoven, Jesse Udelhoven, Jennifer Wiederspohn, Ann Davis, Dawn Dutton and Sandra Udelhoven-Taylor.

RECAPITULATION BY LAND CATEGORIES:

| | | | | |
|---|--------------------------|-----------|---------------------|--------------|
| 1 | U.S. Public Domain Lands | 1 Tract | 10.23 Acres | 1.0347130% |
| 2 | State of Alaska Lands | 2 Tracts | 836.3 Acres | 84.5875308% |
| 3 | Patented Fee Lands | 15 Tracts | 142.15 Acres | 14.3777562% |
| | TOTAL: | | 988.68 Acres | 100.0000000% |

WORKING INTEREST RECAPITULATION

| | | | |
|---|---------------------------------|---------------------|--------------|
| 1 | Marathon Oil Company | 498.6855 Acres | 50.4395254% |
| 2 | Union Oil Company of California | 332.457 Acres | 33.6263503% |
| 3 | ConocoPhillips Alaska, Inc. | 157.5375 Acres | 15.9341243% |
| | TOTAL: | 988.68 Acres | 100.0000000% |



MARATHON OIL COMPANY
NINILCHIK UNIT
OSKOLKOFF PARTICIPATION AREA
July 1, 2003

NINILCHIK UNIT
GRASSIM OSKOLKOFF PARTICIPATION AREA
EXHIBIT "C"
JULY 1, 2003

Schedule of Leases
State: Alaska

| Ninilchik Unit Tract No. | DESCRIPTION OF PROPERTY | GROSS ACRES | TRACT PARTICIPATION FACTOR | LESSOR/ ROYALTY OWNERS | ROYALTY | ORRIS | LESSEE/ WI OWNER | WI % | RECORDING DATA | | |
|--------------------------------|-------------------------|----------------|----------------------------------|------------------------|---------|-------|------------------|------|----------------|------|----------|
| | | | | | | | | | BOOK | PAGE | DISTRICT |

STATE OF ALASKA LANDS

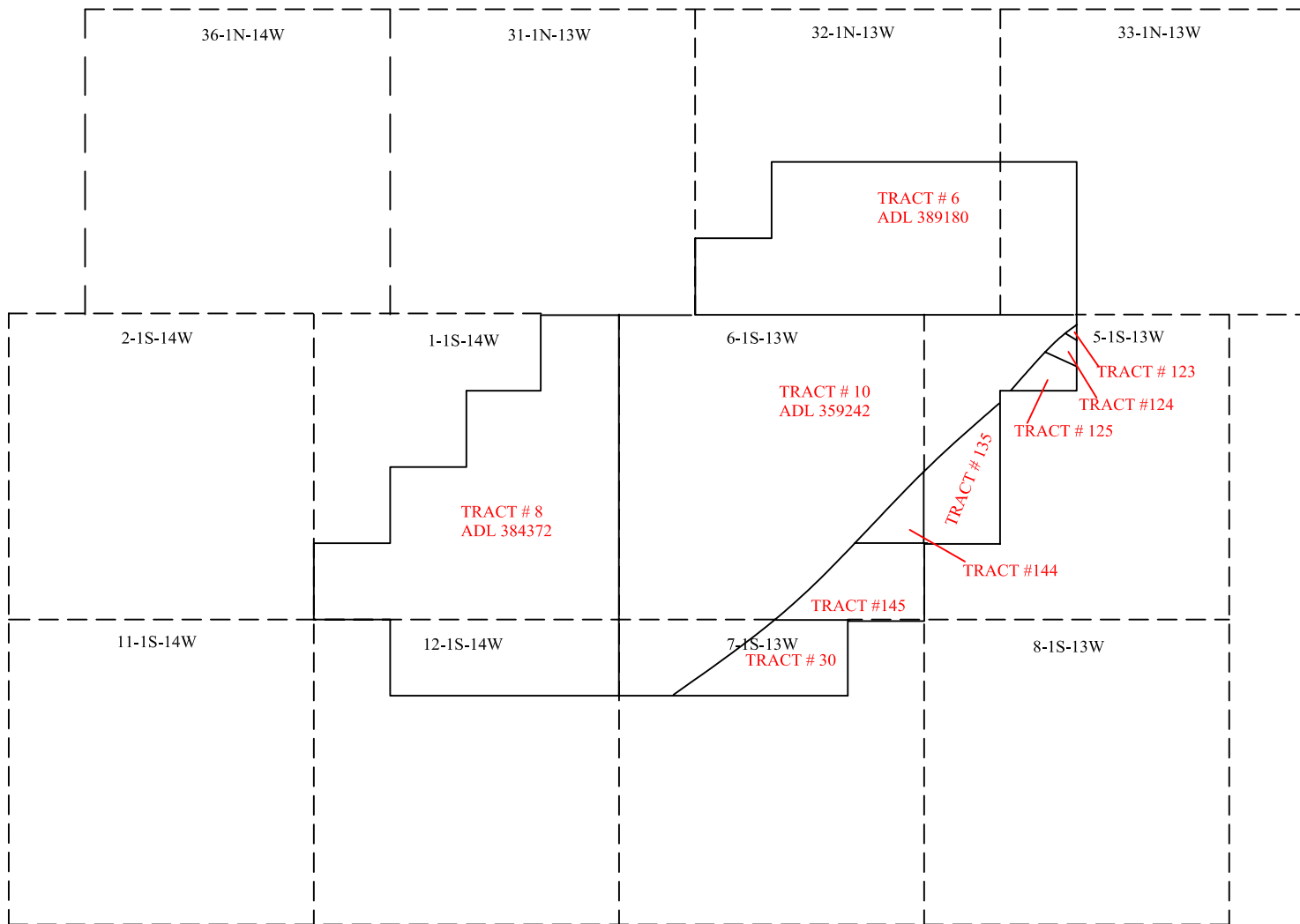
| | | | | | | | | | | | |
|---|--|--------|-------------|--------------------------------|--------|-------------------------------|---|------------|--|--|--|
| 3 | T1N, R 13W, S.M. Sec. 14: S/2NW/4 & NW/4SW/4 Sec. 15: All of section, except the W/2NW/4 | 680.00 | 35.4166667% | State of Alaska ADL #389737 | 12.50% | Chevron USA, Inc. 6.5% x 100% | Marathon Oil Company Union Oil Co. of California | 60% 40% | | | |
| 4 | T1N, R 13W, S.M. Sec. 22: W/2 & W/2NE/4 Sec. 27: W/2NW/4 & NW/4SW/4 | 520.00 | 27.0833333% | State of Alaska ADL #384305 | 12.50% | | Marathon Oil Company Union Oil Co. of California | 60% 40% | | | |
| 6 | T1N, R 13W, S.M. Sec. 21: NE/4NE/4 & S/2NE/4 & SE/4 & SE/4SW/4 Sec. 28: N/2S/2 & NE/4 & E/2NW/4 | 720.00 | 37.5000000% | State of Alaska ADL #389180 | 12.50% | | Marathon Oil Company Union Oil Co. of California | 60% 40% | | | |

RECAPITULATION BY LAND CATEGORIES:

| | | | | |
|---|------------------------|----------|---------------|--------------|
| 1 | State of Alaska Tracts | 3 Tracts | 1920.00 Acres | 100.0000000% |
|---|------------------------|----------|---------------|--------------|

WORKING INTEREST RECAPITULATION

| | | | |
|---|---------------------------------|----------------------|---------------------|
| 1 | Marathon Oil Company | 1152.00 Acres | 60.0000000% |
| 2 | Union Oil Company of California | 768.00 Acres | 40.0000000% |
| | | 1920.00 Acres | 100.0000000% |



MARATHON OIL COMPANY
 NINILCHIK UNIT
 DIONNE PARTICIPATION AREA
 July 1, 2003

**NINILCHIK UNIT
SUSAN DIONNE PARTICIPATION AREA
EXHIBIT "C"
JULY 1, 2003**

**Schedule of Leases
State: Alaska**

| Ninilchik Unit Tract No. | DESCRIPTION OF PROPERTY | GROSS ACRES | TRACT PARTICIPATION FACTOR | LESSOR/ ROYALTY OWNERS | ROYALTY | ORRIS | LESSEE/ WI OWNER | WI % | RECORDING DATA | | |
|--------------------------|-------------------------|-------------|----------------------------|------------------------|---------|-------|------------------|------|----------------|------|----------|
| | | | | | | | | | BOOK | PAGE | DISTRICT |

STATE OF ALASKA LANDS

| | | | | | | | | | | | |
|----|--|--------|-------------|--------------------------------|--------|---|---|------------|--|--|--|
| 6 | T1N, R 13W, S.M. Sec. 32: SE/4 & E/2SW/4 & SW/4SW/4 Sec. 33: W/2SW/4 | 360.00 | 20.4479231% | State of Alaska ADL #389180 | 12.50% | | Marathon Oil Company Union Oil Co. of California | 60% 40% | | | |
| 8 | T1S, R 14W, S.M. Sec. 1: NE/4NE/4 & S/2NE/4 & SE/4 & NE/4SW/4 & S/2SW/4 Sec. 12: N/2NE/4 & NE/4NW/4 | 522.57 | 29.6818644% | State of Alaska ADL #384372 | 12.50% | | Marathon Oil Company Union Oil Co. of California | 60% 40% | | | |
| 10 | T1S, R 13W, S.M. Sec. 5: All tide and submerged land Sec. 6: All tide and submerged land Sec. 7: All tide and submerged land lying within the N/2NW/4 (56.72 acres) | 708.72 | 40.2551446% | State of Alaska ADL #359242 | 12.50% | James W. White 3.5% James L. Thurman 1/3 x 3% Tucson, Ltd. 1/3 x 3% Metro National Bank and/or V. Paul Gavora 1/3 x 3% | Marathon Oil Company Union Oil Co. of California | 60% 40% | | | |

State Total: 1591.29

**COOK INLET REGION INC. (CIRI)
TRACTS**

| | | | | | | | | | | | |
|----|---------------------------------------|-------|------------|-------------------------|--------|--|---|------------|--|--|--|
| 30 | T 1S, R 13W, S.M. Sec 7: GLO Lot 1 | 53.52 | 3.0399246% | Cook Inlet Region, Inc. | 20.00% | | Marathon Oil Company Union Oil Co. of California | 60% 40% | | | |
|----|---------------------------------------|-------|------------|-------------------------|--------|--|---|------------|--|--|--|

CIRI Total: 53.52

PATENTED FEE LANDS

| | | | | | | | | | | | |
|-----|--|------|------------|---|--------|--|---|------------|------------|------------|-------|
| 123 | T1S, R 13W, S.M. Sec. 5: That part of Lot 6 of Sunset Bluffs Subdivision (Plat # H-79-5) that lies within the NE/4NW/4, a part of GLO Lot 2 (estimated 0.01 acres) | 0.01 | 0.0005680% | Richard L. Millett 50% Arthur T. Maze 50% | 12.50% | | Marathon Oil Company Union Oil Co. of California | 60% 40% | 311 321 | 541 654 | Homer |
| 124 | T1S, R 13W, S.M. Sec. 5: That part of Lot 7 of Sunset Bluffs Subdivision (Plat # H-79-5) that lies within the NE/4NW/4, a part of GLO Lot 2 (estimated 0.01 acres) | 0.30 | 0.0170399% | Richard L. Millett & Juanita J. Millett 100% | 12.50% | | Marathon Oil Company Union Oil Co. of California | 60% 40% | 311 | 541 | Homer |
| 125 | T1S, R 13W, S.M. Sec. 5: That part of Lots 8, 9 & 10 of Sunset Bluffs Subdivision (Plat # H-79-5) that lies within the NE/4NW/4, a part of GLO Lot 2 (estimated 9.67 acres) | 9.67 | 0.5492539% | Richard L. Millett 50% Arthur T. Maze 50% | 12.50% | | Marathon Oil Company Union Oil Co. of California | 60% 40% | 311 321 | 541 654 | Homer |

**NINILCHIK UNIT
SUSAN DIONNE PARTICIPATION AREA
EXHIBIT "C"
JULY 1, 2003**

**Schedule of Leases
State: Alaska**

| Ninilchik Unit Tract No. | DESCRIPTION OF PROPERTY | GROSS ACRES | TRACT PARTICIPATION FACTOR | LESSOR/ ROYALTY OWNERS | ROYALTY | ORRIS | LESSEE/ WI OWNER | WI % | RECORDING DATA | | |
|--------------------------|-------------------------|-------------|----------------------------|------------------------|---------|-------|------------------|------|----------------|------|----------|
| | | | | | | | | | BOOK | PAGE | DISTRICT |

PATENTED FEE LANDS

(continued)

| | | | | | | | | | | | |
|-----|---|-------|------------|---------------------------------------|--------|--------------------------------------|---|------------|-----|-----|-------|
| 135 | T1S, R 13W, S.M. Sec. 5: That part of GLO Lot 3 lying within the SW/4NW/4 (estimated 8.0 acres and all of GLO Lot 4 (38.2 acres) | 46.20 | 2.6241501% | Wayne Findley & E. Irene Findley 100% | 16.67% | | Marathon Oil Company Union Oil Co. of California | 60% 40% | 247 | 322 | Homer |
| 144 | T1S, R 13W, S.M. Sec. 6: GLO Lot 1 | 10.06 | 0.5714059% | Bea Bachner 100% | 12.50% | | Marathon Oil Company Union Oil Co. of California | 60% 40% | 250 | 399 | Homer |
| 145 | T1S, R 13W, S.M. Sec. 6: GLO Lot 2 | 49.52 | 2.8127254% | Paul H. & Susan M. Dionne 100% | 16.67% | Intrepid Production Company 5.33333% | Marathon Oil Company Union Oil Co. of California | 60% 40% | 243 | 195 | Homer |

Fee Land Total: 115.76
Total of all Tracts: 1760.57 100.0000000%

RECAPITULATION BY LAND CATEGORIES:

| | | | | |
|---|--------------------------------|----------|----------------------|---------------------|
| 1 | State of Alaska Tracts | 3 Tracts | 1591.29 Acres | 90.3849322% |
| 2 | Cook Inlet Region, Inc. Tracts | 1 Tract | 53.52 Acres | 3.0399246% |
| 3 | Fee Tracts | 6 Tracts | 115.76 Acres | 6.5751433% |
| | TOTAL: | | 1760.57 Acres | 100.0000000% |

WORKING INTEREST RECAPITULATION

| | | | |
|---|---------------------------------|----------------------|---------------------|
| 1 | Marathon Oil Company | 1056.34 Acres | 60.0000000% |
| 2 | Union Oil Company of California | 704.23 Acres | 40.0000000% |
| | | 1760.57 Acres | 100.0000000% |

Note: Because several sections contained in this Participation Area are correction sections, this PA contains 1760.57 acres, rather than the expected 1800 acres.

NINILCHIK UNIT AGREEMENT

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NINILCHIK UNIT AGREEMENT

RECITALS

All record owners of any right, title, or interest in the oil or gas reservoirs or potential hydrocarbon accumulations to be included in this Unit have been invited to join this Agreement.

The Commissioner of the Department of Natural Resources, State of Alaska, is authorized by Alaska Statute 38.05.180(p) and (q) and applicable regulations to consent to and approve oil and gas unit agreements to explore, develop and produce state oil and gas resources.

AGREEMENT

In consideration of the mutual promises in this Agreement, the parties commit their respective interests in the Unit Area defined in Exhibit A and depicted in Exhibit B to this Agreement, and agree as follows:

ARTICLE 1: DEFINITIONS

1.1 **Alaska Oil and Gas Conservation Commission (AOGCC)** means the independent quasi-judicial agency of the State of Alaska established by the Alaska Oil and Gas Conservation Act, AS 31.05.

1.2 **Approved Unit Plan** means a Unit Plan that has been approved by the Commissioner.

1.3 **Commissioner** means the Commissioner of the Department of Natural Resources, State of Alaska, or the Commissioner's authorized representative.

1.4 **Effective Date** means the time and date this Agreement becomes effective.

1.5 **Lease or Leases** means one or more oil and gas lease subject to this Agreement.

1.6 **Oil and Gas Rights** means the rights to explore, develop, and produce Unitized Substances.

1.7 **Outside Substances** means oil, gas, and other hydrocarbons and non-hydrocarbon substances obtained from outside the Unit Area and injected into a Reservoir in the Unit Area.

1.8 **Outside PA Substances** means oil, gas, and other hydrocarbons and non-hydrocarbon substances obtained from one Participating Area in the Unit Area and injected into a Reservoir in a different Participating Area in the Unit Area.

1.9 **Participating Area** means all Unit Tracts and parts of Unit Tracts designated as a Participating Area under Article 9.

1.10 **Participating Area Expense** means all costs, expenses or indebtedness, which are incurred by the Unit Operator for production from or operations in a Participating Area and allocated to the Unit Tracts in that Participating Area.

1.11 **Paying Quantities** means a quantity of Unitized Substances sufficient to yield a return in excess of operating costs, even if drilling and equipment costs will never be repaid and the undertaking considered as a whole will ultimately result in a loss. The quantity is insufficient to yield a return in excess of operating costs unless it will produce sufficient revenue, not considering transportation and marketing, to induce a prudent operator to produce it.

1.12 **Reservoir** means that part of the Unit Area containing an accumulation of Unitized Substances which has been discovered by drilling and evaluated by testing a well or wells, and which is geologically separate from and not in hydrocarbon communication with any other oil and gas accumulation.

1.13 **State** means the State of Alaska acting in this Agreement through the Commissioner.

1.14 **Sustained Unit Production** means continuing production of Unitized Substances from a well in the Unit Area into production facilities and transportation to market.

1.15 **Unit Area** means the lands subject to this Agreement, described in Exhibit A and depicted in Exhibit B to this Agreement, submerged or not.

1.16 **Unit Equipment** means all personal property, Lease and well equipment, plants, platforms and other facilities and equipment used, taken over or otherwise acquired for use in Unit Operations.

1.17 **Unit Expense** means all costs, expenses or indebtedness incurred by the Unit Operator for Unit Operations, except for Participating Area Expense.

1.18 **Unit Operating Agreement** means the agreement(s) entered into by the Unit Operator and the Working Interest Owners, as described in Article 7.

1.19 **Unit Operations** means all operations conducted in accordance with an Approved Unit Plan or Approved Unit Plans.

1.20 **Unit Operator** means the party designated by the Working Interest Owners and approved by the Commissioner to conduct Unit Operations.

1.21 **Unit Plan** means a unit plan of exploration or development as described in Article 8.

1.22 **Unit Tract** means each separate parcel that is described in Exhibit A and given a Unit Tract number.

1.23 **Unit Tract Participation** means the percentage allocation credited to a Unit Tract in a Participating Area to allocate Unitized Substances.

1.24 **Unitized Substances** means all oil, gas and associated substances, as those terms are defined in the Leases, within or produced from the Unit Area.

1.25 **Working Interest** means the right to explore for, develop or produce Unitized Substances, or cause Unitized Substances to be explored for, developed or produced.

1.26 **Working Interest Owner** means a party who owns a Working Interest.

ARTICLE 2: EXHIBITS

2.1 The following Exhibits are to be attached to and made a part of this Agreement. When this Agreement is approved, only Exhibits A, B, and G are required. Exhibit F is also required when this Agreement is approved, if the Unit Area includes Net Profit Share Leases. The Unit Operator shall supply all Exhibits.

2.2 Exhibit A is a table that displays for each Unit Tract: the Unit Tract number, the Lease number, the Working Interest ownership, and the applicable royalty and net profit share rates.

2.3 Exhibit B is a map that shows the boundary lines of the Unit Area and of each Unit Tract, identified by Unit Tract number and Lease number.

2.4 Exhibit C is comprised of a table for each Participating Area established under this Agreement. The Exhibit C table for each Participating Area must display the Unit Tract numbers, legal descriptions, Lease numbers, Working Interest ownership, and Unit Tract Participation for that Participating Area.

2.5 Exhibit D is comprised of a map for each Participating Area. Each Exhibit D map must show the boundary lines of a Participating Area and the Unit Tracts in that Participating Area, identified by Unit Tract number and Lease number.

2.6 Exhibit E is comprised of a table for each Participating Area that displays the allocation of Participating Area Expense to each Unit Tract in the Participating Area, identified by Unit Tract number and Lease number.

2.7 Exhibit F is a table that displays the allocation of Unit Expense to each Unit Tract in the Unit Area, identified by Unit Tract number and Lease number.

2.8 Exhibit G is the unit plan of exploration or unit plan of development required by the regulations, and this Agreement.

ARTICLE 3: CREATION AND EFFECT OF UNIT

3.1 All Oil and Gas Rights in and to the lands described in Exhibit A and shown in Exhibit B are subject to this Agreement so that Unit Operations will be conducted as if the Unit Area was a single Lease.

3.2 So long as this unit remains in effect, each Lease in the Unit Area shall continue in effect.

3.3 Except as otherwise provided in this Agreement, where only a portion of a Lease is committed to this Agreement, that commitment constitutes a severance of the Lease as to the unitized and nonunitized portions of the Leased area. The portion of the Leased area not committed to this Agreement will be treated as a separate and distinct Lease having the same effective date and term as the Lease and may be maintained only in accordance with the terms and conditions of the Lease, statutes, and regulations. Any portion of the Leased area not committed to this Agreement will not be affected by the unitization, by operations in the Unit Area, or by a suspension approved or ordered by the Commissioner. If a Lease has a well certified as capable of production in paying quantities on it before commitment to this Agreement, the Lease will not be severed. If any portion of the Lease is included in a participating area formed under this Agreement, the entire Lease will remain committed to this Agreement and the Lease will not be severed.

3.4 Production of Unitized Substances in Paying Quantities from any part of a Participating Area shall be considered production from each Unit Tract in the Participating Area. It shall cause the portion of each Lease that is wholly or partially within the Participating Area to continue in effect as if a well were producing from each Unit Tract in the Participating Area.

3.5 The provisions of the various Leases and agreements pertaining to the respective Leases or production from those Leases are amended only to the extent necessary to make them conform to the written provisions of this Agreement. Otherwise, those Leases and agreements shall remain in full force and effect.

3.6 This Agreement shall not be construed to transfer title to Oil and Gas Rights by any party to any other party or to the Unit Operator.

3.7 Except as otherwise provided in this Agreement and subject to the terms and conditions of Approved Unit Plans, the exclusive rights and obligations of the Working Interest Owners to conduct operations to explore for, develop and produce Unitized Substances in the Unit Area are delegated to and shall be exercised by the Unit Operator. This delegation does not relieve a lessee of the obligation to comply with all Lease terms. The Unit Operator shall notify the other Working Interest Owners and the Commissioner of actions taken by the Unit Operator under this Agreement. The Unit Operator shall minimize and consolidate surface facilities to minimize surface impacts

3.8 All data and information determined by the Commissioner to be necessary for the administration of this Agreement or for the performance of statutory responsibilities shall be provided by the Unit Operator, or Working Interest Owners, or both upon written request. All data and information provided to the Commissioner shall be protected from disclosure pursuant to the Lease, governing law, and regulations.

ARTICLE 4: DESIGNATION OF UNIT OPERATOR

4.1. Marathon Oil Company is designated as the Unit Operator. Marathon Oil Company agrees to accept the rights and obligations of the Unit Operator to conduct Unit Operations and to explore for, develop and produce Unitized Substances as provided in this Agreement.

ARTICLE 5: RESIGNATION OR REMOVAL OF UNIT OPERATOR

5.1 The Unit Operator shall have the right to resign at any time. The Unit Operator's resignation shall not become effective until: 1) sixty days have passed since the Unit Operator delivers a written notice of an intention to resign to the Working Interest Owners and the Commissioner; and 2) all artificial islands, installations and other devices, including wells, used for operations in the Unit Area are in a condition satisfactory to the Commissioner for suspension or abandonment of operations. However, if a successor Unit Operator is designated and approved under Article 6, the resignation is effective when approved by the Commissioner.

5.2 The Unit Operator may be removed as provided in the Unit Operating Agreement. This removal shall not be effective until: 1) the Working Interest Owners notify the Commissioner and the Unit Operator; and 2) the Commissioner approves a successor Unit Operator.

5.3 The resignation or removal of the Unit Operator shall not release it from liability for any failure to meet obligations that accrued before the effective date of the resignation or removal.

5.4 The resignation or removal of the Unit Operator does not terminate its rights, title or interest or obligations as a Working Interest Owner or other interest in the Unit Area. A

termination of the Unit Operator's rights, title or interest may occur independently under the terms of the Leases and governing law. When the resignation or removal of the Unit Operator becomes effective, the Unit Operator shall relinquish possession of all Unit Equipment, artificial islands, wells, installations, devices, records, and any other assets used for conducting Unit Operations, whether or not located in the Unit Area, to the successor Unit Operator.

ARTICLE 6: SUCCESSOR UNIT OPERATOR

6.1. Whenever the Unit Operator tenders its resignation as Unit Operator or is removed as provided in Article 5, a successor Unit Operator may be designated as provided in the Unit Operating Agreement. The successor Unit Operator must accept the rights and obligations of a Unit Operator in writing. The successor Unit Operator shall file an executed copy of the designation of successor with the Commissioner. The designation of successor Unit Operator will not become effective until approved by the Commissioner.

6.2. If no successor Unit Operator is designated within sixty days after notice to the Commissioner of the resignation or removal of a Unit Operator, the Commissioner will, in his or her discretion, designate another Working Interest Owner as successor Unit Operator, or declare this Agreement terminated.

ARTICLE 7: UNIT OPERATING AGREEMENT

7.1 The Working Interest Owners and the Unit Operator shall enter into a Unit Operating Agreement. It will apportion all costs and liabilities incurred in maintaining or conducting Unit Operations among the Working Interest Owners. The Unit Operating Agreement will also apportion the benefits, which will accrue from Unit Operations among the Working Interest Owners.

7.2 Any allocation described in the Unit Operating Agreement will not bind the State in determining or settling royalties and net profit share payments. Allocations of Unit Expense, Participating Area Expense, or Unitized Substances for determining, settling and paying royalties and net profit share payments will be based on Exhibits C, E and F of this Agreement, and must be approved by the Commissioner in writing before taking effect. An original or revised conforming Exhibit C and F shall be submitted to the Commissioner within thirty days of: any change in the division of interest or allocation formula establishing or revising the Unit Tract Participation of any Unit Tract or Unit Tracts in a Participating Area.

7.3 The Working Interest Owners and the Unit Operator may establish, through one or more Unit Operating Agreements and amendments, other rights and obligations between the Unit Operator and the Working Interest Owners. The Unit Operating Agreement will not modify any term or obligation of this Agreement. If the terms of this Agreement and the Unit Operating Agreement conflict, this Agreement will prevail.

7.4 Any Working Interest Owner is entitled to drill a well on the unitized portion of its Lease when the Unit Operator declines to drill that well. A Working Interest Owner must have an approved permit to drill and the well must be part of an Approved Unit Plan. If the Commissioner determines any such well to be capable of producing Unitized Substances in Paying Quantities, the land upon which that well is situated will be included in a Participating Area. The Participating Area will be formed or an existing Participating Area enlarged as provided in this Agreement. The Unit Operator will thereafter operate the well in accordance with this Agreement and the Unit Operating Agreement.

7.5 The Unit Operator shall file a copy of the Unit Operating Agreement with the Commissioner when this Agreement is filed for approval. The copy of the Unit Operating Agreement is for informational purposes only. Approval of the Unit Agreement is not approval of the Unit Operating Agreement. Complete copies of all other Unit Operating Agreements and any amendments to them will also be filed with the Commissioner within thirty days of execution and at least thirty days before their effective dates.

ARTICLE 8: PLANS OF EXPLORATION, DEVELOPMENT AND OPERATIONS

8.1. Any Unit Plan and any amendment to a Unit Plan will not be effective until the Commissioner approves it. Approved Unit Plans are incorporated into this Agreement and become effective on the date of their approval.

8.1.1. A unit plan of exploration (“Plan of Exploration”) shall describe the proposed exploration and delineation activities for any land in the Unit Area that is not in a Participating Area. Plans of Exploration shall comply with 11 AAC 83.341 and any successor regulation. The Unit Operator shall submit updated Plans of Exploration to the Commissioner for approval at least sixty days before the current Plan of Exploration expires.

8.1.2. A unit plan of development (“Plan of Development”) shall include a description of the proposed development activities based on data available when the plan is submitted. Plans of Development shall comply with 11 AAC 83.343 and any successor regulation. The Unit Operator shall submit updated Plans of Development to the Commissioner for approval at least ninety days before the current Plan of Development expires.

8.1.3. When this Agreement is submitted to the Commissioner for approval, an initial Plan of Development or an initial Plan of Exploration (collectively called the “Initial Unit Plan”) shall be submitted for approval by the Commissioner.

8.2. The Unit Operator shall not explore, develop or produce on the Unit Area except in accordance with an Approved Unit Plan. The Unit Operator shall obtain a plan of operations approval, and any other permits and approvals required before operations begin. A plan of operations approval must be consistent with the mitigation measures and lessee advisories

developed for the most recent Lease within the Unit Area as deemed necessary by the Commissioner to protect the resources of the State. The Unit Operator shall submit a complete copy of all such applications to the Commissioner.

8.3. After Sustained Unit Production in Paying Quantities begins, Unit Operations shall be maintained, with lapses of no more than ninety days per lapse between operations. The lapse may be longer if suspension of operations or production has been ordered or approved by the Commissioner. Approved Unit Plans may call for a suspension of Unit Operations.

8.4. After giving written notice to the Unit Operator and an opportunity to be heard, the Commissioner may require the Unit Operator to modify from time to time the rate of prospecting and development and the quantity and rate of production.

8.5. If a well has been drilled in the Unit Area prior to the Effective Date of this Unit Agreement or is being drilled within the Unit Area on the Effective Date, that well will be considered a Unit Well as of the Effective Date of this Agreement.

8.6. The Commissioner will, in the agency's discretion, approve any injection of Outside Substances or Outside PA Substances within the Unit Area. Any injection of Outside Substances or Outside PA Substances within the Unit Area must be part of an Approved Unit Plan.

ARTICLE 9: PARTICIPATING AREAS

9.1. The Unit Operator shall submit a request for approval of the proposed initial Participating Area to the Commissioner at least six months before Sustained Unit Production from a Reservoir in the Unit Area. A Participating Area shall include only land that is reasonably known to be underlain by Unitized Substances and known or reasonably estimated through the use of geological, geophysical and engineering data to be capable of producing or contributing to production of Unitized Substances in Paying Quantities. The Unit Operator shall notify the Commissioner when Sustained Unit Production begins from each Participating Area.

9.2. Each application for approval of a Participating Area shall include Exhibits C, D, E and F. If approved by the Commissioner, the area described in Exhibit C and depicted in Exhibit D shall be a Participating Area, and the allocation of Participating Area Expenses and Unit Expenses described in Exhibits E and F shall be effective on the effective date of the Participating Area.

9.3. A separate Participating Area shall be established for each Reservoir in the Unit Area. If one Reservoir underlies another Reservoir in whole or in part, separate Participating Areas may be created for each Reservoir. Any two or more Reservoirs or Participating Areas may be combined into one Participating Area if approved by the Commissioner.

9.4. At the Unit Operator's election or if so directed by the Commissioner, the Unit Operator shall apply to expand or contract the Participating Area if expansion or contraction is

warranted by geological, geophysical, or engineering data. Each application for expansion or contraction shall include Exhibits C, D, E, and F. The application must be submitted to the Commissioner for approval. Before any directed expansion or contraction of the Participating Area, the Commissioner will give the Unit Operator reasonable notice and an opportunity to be heard.

9.5. The Commissioner will establish the effective date of the initial Participating Area. That effective date shall be no later than the date of the first Sustained Unit Production. The Commissioner will establish the effective date of each later Participating Area.

9.6. Land in a Participating Area shall remain in that Participating Area even if its Unitized Substances are depleted.

9.7. If the Working Interest Owners cannot agree on the fair, reasonable and equitable allocation of production or costs, the Commissioner shall prescribe an allocation.

9.8. A Unitized Substance produced from one Participating Area (“Originating Participating Area”) may be used as an Outside PA Substance (“Injected Substance”) for repressuring, recycling, storage or enhanced recovery purposes in another Participating Area (“Receiving Participating Area”) only if the State is paid royalty as if the Unitized Substance was sold by the Working Interest Owners, except as follows:

9.8.1. If the Commissioner consents to the transfer of Unitized Substances between Participating Areas without immediate payment of royalties, the Unit Operator shall provide monthly reports to the State. These monthly reports shall reflect the volumes of any Unitized Substance transferred and the British thermal units (“Btus”) in any natural gas Unitized Substance transferred as an Outside PA Substance during the preceding month.

9.8.2. If the Commissioner consents to the transfer of Unitized Substances between Participating Areas without immediate payment of royalties, the royalties shall be paid when the Injected Substances are produced and sold from the Receiving Participating Area. The first natural gas Unitized Substances produced and sold from the Receiving Participating Area shall be considered to be the Injected Substances until a volume of natural gas containing Btus equal to the Btus contained in the Injected Substances is produced and sold from the Receiving Participating Area. All the Unitized Substances produced and sold from a Receiving Participating Area that are considered to be the Injected Substance shall be allocated to the Originating Participating Area. The Working Interest Owners shall pay the State royalties on Injected Substances produced and sold from a Receiving Participating Area as if those Injected Substances were produced and sold from the Originating Participating Area when they were produced from the Receiving Participating Area.

9.9. All liquid hydrocarbons removed in any equipment or facility in Alaska from produced Injected Substances and not used for fuel shall be allocated to the Receiving Participating Area. If liquid hydrocarbons are removed from the natural gas, the Btu content of the natural gas shall be measured after liquid hydrocarbons are removed.

9.10. The Commissioner must approve the deemed recovery rate and commencement date for recovery before any Outside Substance is injected within the Unit Area.

9.11. After giving written notice to the Unit Operator and an opportunity to be heard, the Commissioner will, in his or her discretion, require the Unit Operator to modify from time to time the rate of prospecting and development and the quantity and rate of production from a Participating Area.

ARTICLE 10: OFFSET WELLS

10.1. The Unit Operator shall drill such wells as a reasonable and prudent operator would drill to protect the State from loss by reason of drainage resulting from production on other land. Without limiting the generality of the foregoing sentence, if oil or gas is produced in a well on other land not owned by the State or on which the State receives a lower rate of royalty than under any Lease in the Unit Area, and that well is within 500 feet in the case of an oil well or 1,500 feet in the case of a gas well of lands then subject to this Agreement, and that well produces oil or gas for a period of 30 consecutive days in quantities that would appear to a reasonable and prudent operator to be sufficient to recover ordinary costs of drilling, completing, and producing an additional well in the same geological structure at an offset location with a reasonable profit to the operator, and if, after notice to the Unit Operator and an opportunity to be heard, the Commissioner finds that production from that well is draining lands then subject to this Agreement, the Unit Operator shall within 30 days after written demand by the Commissioner begin in good faith and diligently prosecute drilling operations for an offset well on the Unit Area. In lieu of drilling any well required by this paragraph, the Working Interest Owners may, with the Commissioner's consent, compensate the State in full each month for the estimated loss of royalty through drainage in the amount determined by the Commissioner.

ARTICLE 11: ALLOCATION OF PRODUCTION

11.1 Production and costs will be allocated according to 11 AAC 83.371 and any successor regulation. The Unit Operator shall submit a proposed allocation plan, with supporting data, to the Commissioner for approval. The Commissioner will, in his or her discretion, revise the proposed allocation plan if it does not equitably allocate production and costs from the Reservoir. The Commissioner will give the Working Interest Owners reasonable notice and an opportunity to be heard before revising the Unit Operator's proposal. The allocation plan must be revised whenever a Participating Area is expanded or contracted. Within thirty days after approval by the Commissioner of any division of interest or allocation formula establishing or revising the Unit Tract Participation of any Unit Tract or Unit Tracts in a Participating Area, the Unit Operator shall submit revised Exhibits C and F to the Commissioner. The Unit Operator may submit a revised Exhibit F anytime, but any revisions to Exhibit F are not effective until approved by the Commissioner.

11.2 The Working Interest Owners shall pay royalties for each Unit Tract in proportion to each Working Interest Owner's ownership in that Unit Tract. The amount of Unitized Substances allocated to each Unit Tract shall be deemed to have been produced from that Unit Tract.

11.3 The Working Interest Owners may allocate Unitized Substances, Participating Area Expense, and Unit Expense differently than described in Exhibits C, E and F. However, that allocation shall not be effective for determining royalty or net profit share payments. The Unit Operator shall submit any allocation which is different than the allocations required in Exhibit C, E or F to the Commissioner under 11 AAC 83.371(b) for the State's information within ten days of its effective date with a statement explaining the reason for the different allocation.

11.4 Royalties shall not be due or payable to the State for the portion of Unitized Substances unavoidably lost or used in the Unit Area for development and production in accordance with prudent industry practices. Gas that is flared for any reason other than safety purposes as allowed by the AOGCC shall not be deemed to be unavoidably lost, and the Working Interest Owners shall pay royalties for such flared gas as if it had been produced. This exemption does not apply to Unitized Substances that are sold, traded or assigned, including sales, transactions, or assignments among the Working Interest Owners.

11.5 If a State Lease committed to this Agreement provides for a discovery royalty rate reduction for the first discovery of oil or gas, that Lease provision shall not apply to a well spudded after the Effective Date.

ARTICLE 12: LEASES, RENTALS AND ROYALTY PAYMENTS

12.1. The Working Interest Owners shall pay rentals and royalty payments due under the Leases. Those payments must be made to any depository designated by the State with at least sixty days notice to the Unit Operator and the Working Interest Owners.

12.2. Each month, the Unit Operator shall furnish a schedule to the Commissioner. That schedule shall specify, for the previous month: 1) the total amount of Unitized Substances produced; 2) the amount of Unitized Substances used for development and production or unavoidably lost; 3) the total amount of Unitized Substances allocated to each Unit Tract; 4) the amount of Unitized Substances allocated to each Unit Tract and delivered in kind as royalty to the State; and 5) the amount of Unitized Substances allocated to each Unit Tract for which royalty is to be or has been paid to the State.

12.3. Each Working Interest Owner shall pay its share of royalties to the State on Unitized Substances as provided in the Lease, except "leased area" shall mean Unit Area, and "oil, gas, or associated substances" shall mean Unitized Substances.

12.4. Notwithstanding any contrary Lease term, royalties and the share of Unitized Substances attributable to royalties and any payment due must be paid free and clear of all Lease expenses, Unit Expenses and Participating Area Expenses. These excluded expenses include, but are not limited to, separating, cleaning, dehydration, saltwater removal, processing, and manufacturing costs. These excluded expenses also include the costs of preparing the Unitized Substances for transportation off the Unit Area and gathering and transportation costs incurred before the Unitized Substances are delivered to a common carrier pipeline. No lien for any of the excluded expenses shall attach to royalty Unitized Substances. The royalty share shall bear a proportionate part of any gas shrinkage that occurs during gas processing and blending.

12.4.1 Notwithstanding any contrary Lease term or provision in 11 AAC 83.228—11 AAC 83.229, all royalty deductions for transportation, including marine and pipeline transportation, from the Unit Area to the point of sale are limited to the actual and reasonable costs incurred by the Working Interest Owners. These transportation costs must be determined by taking into account all tax benefits applicable to the transportation

12.5. The Unit Operator shall give the Commissioner notice of the anticipated date for commencement of production at least six months before the commencement of Sustained Unit Production from a Participating Area. Within ninety days of receipt of that notice, the Commissioner will give the Working Interest Owners written notice of its elections to take in kind all, none, a specified percentage, or a specified quantity of its royalties in any Unitized Substances produced from the Participating Area. The Commissioner will, in his or her discretion, increase or decrease (including ceasing to take royalty Unitized Substances in kind) the amount of royalty Unitized Substances the State takes in kind. The Commissioner shall give written notice to the Working Interest Owners ninety days before the first day of the month in which an increase or decrease is to be effective.

12.5.1. The Commissioner will, in his or her discretion, elect to specify the Unit Tracts from which royalty Unitized Substances taken in kind are to be allocated.

12.5.2. The Unit Operator shall deliver the State's royalty Unitized Substances at the custody transfer meter at a common carrier pipeline capable of carrying those substances, or at any other place mutually agreeable place. The State will, in its discretion, designate any individual, firm or corporation to accept delivery.

12.5.3. Royalty Unitized Substances delivered in kind shall be delivered in good and merchantable condition and be of pipeline quality. If a Working Interest Owner processes the Unitized Substances to separate, extract or remove liquids from a Working Interest Owner's share of natural gas Unitized Substances, the State will, in its discretion, require that a Working Interest Owner also process the State's share of natural gas being taken in kind in the same manner without cost to the State. Under these circumstances, the State, or its buyer, shall only pay any tariffed transportation costs and shrinkage of the volume of gas resulting from processing.

12.5.4. Each Working Interest Owner shall furnish storage in or near the Unit Area for the State's share of Unitized Substances to the same extent that the Working Interest Owner provides storage for its own share of Unitized Substances.

12.6. If a purchaser of the State's royalty Unitized Substances does not take delivery of Unitized Substances, the State will, in its discretion elect, without penalty, to underlift for up to six months. The State will, in its discretion, underlift all or a portion of those substances. The State's right to underlift is limited to the portion of those substances that the purchaser did not take delivery of or what is necessary to meet an emergency condition. The State shall give the Unit Operator written notice thirty days before the first day of the month in which the underlifted royalty Unitized Substances are to be recovered. The State will, in its discretion, recover at a daily rate not exceeding 25 percent (25%) of its share of daily production, unless otherwise agreed.

12.7. The Unit Operator shall keep and have in its possession books and records showing the exploration, development, production and disposition of all Unitized Substances produced from the Unit Area. The Unit Operator shall permit the State or its agents to examine these books and records at all reasonable times. Upon request by the State, the Unit Operator's books and records shall be made available to the State at the State office designated by the State. These books and records of exploration, development, production, and disposition must employ methods and techniques that will ensure the most accurate figures reasonably available. The Unit Operator shall use generally accepted accounting procedures consistently applied.

12.8. If a Lease committed to this Agreement specifies the amount of rent due, that Lease is amended to require that rentals due be calculated under A.S. 38.05.180(n), as amended. If a Lease committed to this Agreement requires payment of minimum royalty, that Lease is amended to delete that minimum royalty obligation. The rental due under State law, as amended, must be paid in lieu of minimum royalty.

12.9. All rights and obligations relating to the State's net profit share will be determined in accordance with 11 AAC 83.201 - 11 AAC 83.295, as amended, notwithstanding any contrary Lease term. The State will, in its discretion, audit the net profit share reports or payments due for any Lease within ten years of the date of production. The period of limitations for the State to file a lawsuit relating to an audit of a net profit share report or payment shall be three years longer than the audit period. The Working Interest Owners holding interests in net profit share Leases shall maintain the records relevant to determination of net profit share until the audit period has expired.

ARTICLE 13: UNIT EXPANSION AND CONTRACTION

13.1. The Unit Operator, at its own election may, or at the direction of the Commissioner shall, apply to expand the Unit Area to include any additional lands determined to overlie a Reservoir that is at least partially within the Unit Area, or to include any additional lands that facilitate production. The Unit Operator shall notify the Working Interest Owners of

the proposed expansion. Any unit expansion shall not be effective until approved by the Commissioner.

13.2. Ten years after Sustained Unit Production begins, the Unit Area must be contracted to include only those lands then included in an approved Participating Area and lands that facilitate production including the immediately adjacent lands necessary for secondary or tertiary recovery, pressure maintenance, reinjection, or cycling operations. The Commissioner will, in the Commissioner's discretion, after considering the provisions of 11 AAC 83.303, delay contraction of the Unit Area if the circumstances of a particular unit warrant. If any portion of a Lease is included in the Participating Area, the portion of the Lease outside the Participating Area will neither be severed nor will it continue to be subject to the terms and conditions of the unit. The portion of the Lease outside the Participating Area will continue in full force and effect so long as production is allocated to the unitized portion of the Lease and the lessee satisfies the remaining terms and conditions of the Lease.

13.3. Not sooner than 10 years after the effective date of this Agreement, the Commissioner will, in the Commissioner's discretion, contract the Unit Area to include only that land covered by an approved unit plan of exploration or development, or that area underlain by one or more oil or gas reservoirs or one or more potential hydrocarbon accumulations and lands that facilitate production. Before any contraction of the Unit Area under this Section, the Commissioner will give the Unit Operator, the Working Interest Owners, and the royalty owners of the Leases or portions of Leases being excluded reasonable notice and an opportunity to be heard.

13.4. The Commissioner will give the Unit Operator and the Working Interest Owners of the affected Leases reasonable notice and an opportunity to be heard before any directed contraction or expansion of the Unit Area.

13.5. The Unit Area may be contracted with the Commissioner's approval and an affirmative vote of the Working Interest Owners.

13.6. Within thirty days after approval by the Commissioner of any expansion or contraction of the Unit Area, the Unit Operator shall submit revised Exhibits A and B to the Commissioner.

ARTICLE 14: UNIT EFFECTIVE DATE, TERM AND TERMINATION

14.1. This Agreement is effective as of 12:01 a.m. on the day after the Commissioner approves it. At least one copy of this Agreement shall be filed with the Department of Natural Resources, Anchorage, Alaska and one copy shall be filed with the AOGCC. This Agreement is binding upon each party who signs any counterpart.

14.2. Subject to the terms and conditions of the Approved Unit Plan, this Agreement terminates five years from the Effective Date unless:

14.2.1. A unit well in the Unit Area has been certified as capable of producing Unitized Substances in Paying Quantities; or

14.2.2. The unit term is extended with the approval of the Commissioner. An extension shall not exceed five years.

14.3. If the Commissioner orders or approves a suspension of production or other Unit Operations, this Agreement shall continue in force during the authorized suspension.

14.4. Nothing in this Article holds in abeyance the obligations to pay rentals, royalties, or other production or profit-based payments to the State from operations or production in any part of the Unit Area. Any seasonal restriction on operations or production or other condition required in the Lease is not a suspension of operations or production required by law or Force Majeure.

14.5. This Agreement may be terminated by an affirmative vote of the Working Interest Owners and the Commissioner's approval.

ARTICLE 15: EFFECT OF CONTRACTION AND TERMINATION

15.1. If a Lease or portion of a Lease is contracted out of the Unit Area under this Agreement, then it will be maintained only in accordance with State law and the Lease.

15.2. Each Lease committed to this Agreement on the day that this Agreement terminates shall remain in force for an extension period of ninety days, or any longer period which may be approved by the Commissioner. After the extension period expires, the Lease will be maintained only in accordance with State law and the Lease.

15.3. Upon the expiration or earlier termination of the unit, the Unit Operator will be directed in writing by the Commissioner and will have the right at any time within a period of one year after the termination, or any extension of that period as may be granted by the Commissioner, to remove from the Unit Area all machinery, equipment, tools, and materials. Upon the expiration of that period or extension of that period and at the option of the Commissioner, any machinery, equipment, tools, and materials that the Unit Operator has not removed from the Unit Area become the property of the State or may be removed by the State at the Working Interest Owners' expense. At the option of the State, all improvements such as roads, pads, and wells must either be abandoned and the sites rehabilitated by the Unit Operator to the satisfaction of the State, or be left intact and the Unit Operator absolved of all further responsibility as to their maintenance, repair, and eventual abandonment and rehabilitation. Subject to the above conditions, the Unit Operator shall deliver up the Unit Area in good condition.

ARTICLE 16: COUNTERPARTS

16.1. The signing of counterparts of this Agreement shall have the same effect as if all parties had signed a single original of this Agreement. Within thirty days after approval by the Commissioner of any change of the Working Interest ownership of Oil and Gas Rights in any Unit Tract, the Unit Operator shall submit a revised Exhibits A and C to the Commissioner.

ARTICLE 17: LAWS AND REGULATIONS

17.1. This Agreement is subject to all applicable State and federal statutes and regulations in effect of the Effective Date of this Agreement, and insofar as is constitutionally permissible, to all statutes and regulations placed in effect after the Effective Date of this Agreement. A reference to a statute or regulation in this Agreement includes any change in that statute or regulation whether by amendment, repeal and replacement, or other means. This Agreement does not limit the power of the State of Alaska or the United States of America to enact and enforce legislation or to promulgate and enforce regulations affecting, directly or indirectly, the activities of the parties to this Agreement or the value of interests held under this Agreement. In case of conflicting provisions, statutes and regulations take precedence over this Agreement.

ARTICLE 18: APPEARANCES AND NOTICES

18.1. If the State gives the Unit Operator a notice or order relating to this Agreement it shall be deemed given to all Working Interest Owners and all persons whose interest in the Unit Area derived from a Working Interest. All notices required by this Agreement shall be given in writing and delivered personally, or by United States mail or by facsimile machine to the Unit Operator at the address or facsimile number listed below. All notices actually received will also be deemed properly given. The Unit Operator will change its notice address by giving thirty days written notice to the State and the other Working Interest Owners. The State will change its notice address by giving thirty days written notice to the Unit Operator.

Address of the Unit Operator:

Fax:

Address of the State:

Commissioner, Department of Natural Resources
550 West Seventh Avenue, Suite 1400
Anchorage, Alaska 99501-3554
Fax: (907) 269-8918

with a copy to:

Director, Division of Oil and Gas
550 West Seventh Avenue, Suite 800
Anchorage, Alaska 99501-3560
Fax: (907) 269-8938

ARTICLE 19: JOINDER

19.1. The Commissioner will, in his or her discretion, order or, upon request, approve a joinder to this Agreement under the expansion provisions of Article 12. The Unit Operator shall submit a request for joinder with a signed counterpart of this Agreement and a notice of proposed expansion under Article 12. A joinder is subject to the requirements of the Unit Operating Agreement. However, the Commissioner will, in his or her discretion, modify any provision in a Unit Operating Agreement, which the Commissioner finds discriminates against parties who request joinder. The Commissioner shall give notice and an opportunity to be heard to the Unit Operator before modifying the Unit Operating Agreement.

ARTICLE 20: DEFAULT

20.1 The Commissioner will, in his or her discretion, determine that failure of the Unit Operator or the Working Interest Owners to comply with any of the terms of this Agreement, including any Approved Unit Plan, is a default under this Agreement. The failure to comply because of Force Majeure is not a default.

20.2 The Commissioner will give notice to the Unit Operator and the Working Interest Owners of the default. The notice will describe the default, and include a demand to cure the default by a certain date. The cure period shall be at least thirty days for a failure to pay rentals or royalties and ninety days for any other default.

20.3 If there is no well certified as capable of producing Unitized Substances in Paying Quantities and a default is not cured by the date indicated in the demand, the Commissioner will, in his or her discretion, terminate this Agreement after giving the Unit Operator notice and an opportunity to be heard. The Commissioner will give notice, by mail, of the termination, which is effective upon mailing the notice.

20.4 If there is a well capable of producing Unitized Substances in Paying Quantities and the operations to cure the default are not completed by the date indicated in the demand, the Commissioner will terminate this Agreement by judicial proceedings.

20.5 This Article's remedies are in addition to any other administrative or judicial remedy provided for by Lease, this Agreement, or federal or State law.

IN WITNESS OF THE FOREGOING, the parties have executed this Unit Agreement on the dates opposite their respective signatures.

WORKING INTEREST OWNERS

By: _____ Date: _____
(Company Name, signatory's printed name and title)

STATE OF ALASKA)
)ss.
THIRD JUDICIAL DISTRICT)

This certifies that on November ____, 2000, before me, a notary public in and for the State of Alaska, duly commissioned and sworn, personally appeared _____, known to me to be the person described in, and who executed the foregoing agreement, who then after being duly sworn according to law, acknowledged to me under oath that he executed same freely and voluntarily for the uses and purposes therein mentioned.

WITNESS my hand and official seal the day and year in this certificate first above written.

NOTARY PUBLIC in and for Alaska
My Commission Expires: _____