

KASILOF UNIT AGREEMENT

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

Under a Delegation of Authority
From The Commissioner of the State of Alaska,
Department of Natural Resources

October 25, 2002

TABLE OF CONTENTS

- I. INTRODUCTION, BACKGROUND, AND CONCLUSION1
- II. APPLICATION FOR THE FORMATION OF THE KASILOF UNIT1
- III. DISCUSSION OF DECISION CRITERIA2
 - A.) Decision Criteria considered under 11 AAC 83.303(b).....3
 - 1. The Environmental Costs and Benefits of Unitized Exploration or Development.....3
 - 2. The Geological and Engineering Characteristics of the Reservoir.....4
 - 3. Prior Exploration Activities in the Kasilof Unit Area5
 - 4. The Applicant’s Plans for Exploration and Development of the Proposed Unit Area7
 - 5. The Economic Costs and Benefits to the State8
 - 6. Other Relevant Factors Including Measures to Mitigate Impacts9
 - B.) Decision Criteria considered under 11 AAC 83.303(a).....9
 - 1. The Conservation of All Natural Resources9
 - 2. The Prevention of Economic and Physical Waste10
 - 3. The Protection of All Parties in Interest, Including the State.....12
- IV. FINDINGS AND DECISION12
 - A.) The Conservation of All Natural Resources.12
 - B.) The Prevention of Economic and Physical Waste.13
 - C.) The Protection of All Parties in Interest, Including the State.13
- V. ATTACHMENTS16
 - Exhibit A, Kasilof Unit Tract Description and Ownership Schedule.....16
 - Exhibit B, Map of the Kasilof Unit Boundary17
 - Cook Inlet Areawide Lease Sale Mitigation Measures18

I. INTRODUCTION, BACKGROUND, AND CONCLUSION

Marathon Oil Company (Marathon) filed the Kasilof Unit application (Application) with the Division of Oil and Gas (Division), Department of Natural Resources (DNR) on behalf of itself as designated unit operator. The proposed Kasilof Unit is located in State waters nearly five miles south of Cape Kasilof, Cook Inlet. The proposed unit area covers approximately 13,289 acres within three State of Alaska oil and gas leases. Approval of the proposed Unit Agreement (Agreement) would conform and modify the lease contracts to be consistent with the Agreement.

Two of the leases in the proposed unit area were offered in State of Alaska Lease Sale 74W, held on November 14, 1995. DNR issued oil and gas leases ADL 384534 and ADL 384529, effective February 1, 1996, on State of Alaska lease form number DOG 9208. The seven-year primary lease term of these leases expires on January 31, 2003. The remaining lease in the proposed unit area was offered in State of Alaska Lease Sale Cook Inlet Areawide 2000, held on August 16, 2000. DNR issued ADL 389502, effective May 1, 2001, on State of Alaska lease form number DOG 200004. The seven-year primary lease term of ADL 389502, absent it being unitized, drilled or in production will expire April 30, 2008. All three leases retain a 12.5% royalty to the State of Alaska. Marathon owns 100% of the working interest in all three leases.

For reasons set out in this decision, the Division approves the formation of the Kasilof Unit, subject to the work program, bid deferment payments, changes in lease agreement terms, and automatic contraction provisions defined in this decision.

II. APPLICATION FOR THE FORMATION OF THE KASILOF UNIT

Marathon submitted the Application on July 19, 2002, and simultaneously paid the \$5,000.00 unit application filing fee, in accordance with 11 AAC 83.306 and 11 AAC 05.010 (a)(10)(D), respectively. The Application includes: the Kasilof Unit Agreement; Exhibit A legally describing the proposed unit area, its leases, and ownership interest; Exhibit B, a map of the proposed unit; and Exhibit G, the proposed Plan of Exploration (Initial POE or IPOE). The Application also includes the Kasilof Unit Operating Agreement and technical data in support of the Application. Because Marathon is the sole working interest owner in the proposed unit area, and royalty is owned by the State in full, 11 AAC 83.328, requiring the applicant to invite all proper parties to join the Agreement, does not apply. The Agreement is based on DNR's standard state unit agreement form (Revised June 2002) with no modifications. Two of the three leases will be severed upon unitization consistent with 11 AAC 83.373 (See Paragraph IV.C.11 below).

The Agreement requires the Unit Operator, Marathon, to file unit plans describing the activities planned for the proposed unit area. The Unit Operator must consider how it can best develop the resource underlying the entire unit area, without regard to internal lease boundaries. Marathon

filed a proposed three-year Initial POE (IPOE). The IPOE is discussed further in Paragraph III.A.4 below.

The Agreement defines the relationship between the unit operator, the working interest owner, and the royalty owner. It describes the rights and responsibilities, in addition to those imposed by State law and the leases, of the unit operator, working interest owner and royalty owner for exploration of the unit area. It protects the interests of the State and the lessee. It defines Marathon's rights and responsibilities in the event of successful or unsuccessful exploration results. DNR may approve the Agreement if the available data suggests that the unit area covers one or more geologic formations that should be developed under a DNR approved plan, and the proposed unit meets the other statutory and regulatory criteria.

The Division determined that the Application was complete and published a public notice in the "*Anchorage Daily News*" and in the "*Peninsula Clarion*" on Sunday, July 28, 2002, under 11 AAC 83.311. DNR provided copies of the public notice to the Kenai Peninsula Borough (KPB), City of Kenai, Kenai City Council, Cook Inlet Region, Inc., Kenaitze Indian Tribe, Kenai Natives Association, Inc., Village of Salamatoff, Salamatoff Native Association, Ninilchik Traditional Council, Ninilchik Native Association, and to local post offices, libraries, radio stations, and other interested parties (Chambers of Commerce) under 11 AAC 83.311. DNR also provided public notice to the Alaska Department of Environmental Conservation (DEC), and the Alaska Department of Fish and Game (ADF&G). The public notice invited interested parties and members of the public to submit comments by August 27, 2002. The Division received no comments in response to the public notices.

III. DISCUSSION OF DECISION CRITERIA

AS 38.05.180(p) gives DNR the authority to form an oil and gas unit. The Commissioner of DNR (Commissioner) reviews unit applications under AS 38.05.180(p) and 11 AAC 83.301 – 11 AAC 83.395. By memorandum dated September 30, 1999, the Commissioner approved a revision of Department Order 003 that delegated this authority to the Director of the Division (Director).

The Director will approve the Agreement upon a written finding that it will: 1) promote the conservation of all natural resources; 2) promote the prevention of economic and physical waste; and 3) provide for the protection of all parties of interest, including the State. 11 AAC 83.303(a).

The Director will consider the following six criteria in making the written finding required in subsection (a): 1) the environmental costs and benefits of unitized exploration or development; 2) the geological and engineering characteristics of the potential hydrocarbon accumulation or reservoir proposed for unitization; 3) prior exploration activities in the proposed unit area; 4) the applicant's plans for exploration or development of the unit area; 5) the economic costs and benefits to the State; and 6) any other relevant factors, including measures to mitigate impacts identified above, the Director determines necessary or advisable to protect the public interest. 11

AAC 83.303(b). A discussion of the subsection (b) criteria, as they apply to the Agreement, 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 or Development

DNR considered environmental issues in the lease sale process, 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 IPOE requires at a minimum one exploratory well and either additional drilling or seismic data acquisition over the unit area within three years. The unit operator must obtain DNR's approval of a unit plan of operations and permits from various state and federal agencies before beginning operations, including exploratory wells, within the unit area. For example, State unitization regulations require the Commissioner's approval of a unit plan of operations before the unit operator performs any field operations. 11 AAC 83.346. A unit plan of operations provides a more detailed plan for surface activities incident to exploration of the unit area than does a POE.

When working interest owners begin the permitting process to commence any surface activities associated with a plan of exploration, it must submit a Coastal Project Questionnaire, permit applications, and supporting information to the Alaska Division of Governmental Coordination (DGC). Consistency with the Alaska Coastal Management Program (ACMP) is determined by the DGC, State resource agencies (DNR, DEC, ADF&G) and affected local governments (Kenai Peninsula Borough). The DGC conditions the proposed activity to ensure consistency with the ACMP and KPBCDP Coastal District Plan (KPBCDP). Submittal of these documents to the State initiates an intensive public and agency review process. DGC organizes an inter-agency review, determines which permits are required, and publishes a public notice soliciting comments from federal, State and local agencies, and the public. DGC designates a 50-day review schedule starting with the public notice. State and federal agencies are asked to review the application, request any additional information and submit comments. After reviewing the comments, DGC may impose additional mitigation measures as necessary to ensure the project is consistent with the ACMP and KPBCDP. DGC then issues a Proposed Consistency Determination for public comment. After a public comment period, usually 30-days, additional stipulations may be imposed and a Final Consistency Determination may be issued for a project in the unit area.

When reviewing a proposed unit plan of operations, the Division considers the unit operator's ability to compensate the surface owner for damage sustained to the surface estate and plans for restoration and rehabilitation of the unit area. In addition, 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 exploration activity that may occur following unitization, unless categorically approved under the ACMP ABC (General Concurrence) list, is subject to an ACMP consistency determination, and must comply with both the State and KPBCDP. In addition to the State review process, all development activities must comply with all applicable local ordinances. Some unit activity is proposed for private fee surface and subsurface owned land outside of the unit area; however, mitigation measures referenced below will be applied unit-wide.

The proposed Kasilof Unit area is habitat for a variety of marine mammals, waterfowl, and fish. Local residents and visitors use this area for recreational boating and fishing, subsistence hunting and fishing, as well as commercial salmon harvesting. Oil and gas activity in the proposed unit area may affect some wildlife habitat near drill sites, and some human activity may be disturbed temporarily during drilling and facilities construction. Following installation of a gas conditioning facility and pipeline connection to the proposed KPPL pipeline or existing line, exhaust, noise, vehicular traffic, bulk fuel storage and resulting disturbance would be less than un-unitized development. Mitigation measures including seasonal restrictions on specific activities reduce the impact on fish, wildlife, and human populations. Mitigation measures specifically address potential impacts to local access and use of the area (See Attachment 3).

Approval of the Kasilof Unit itself has no environmental impact. The unitization does 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 is an administrative action, which, by itself, does not convey any authority to conduct any operations on leases within the unit. Unitization does not waive or reduce the effectiveness of the mitigation measures that condition the lessee's right to conduct operations on the leases. DNR's approval of the IPOE is only one step in the process of obtaining permission to drill a well or wells or develop the potential reservoirs in the unit area. The Unit Operator must still obtain approval of a Plan of Operations from the state under 11 AAC 83.158 or 11 AAC 83.346, and permits from various agencies on state leases before drilling a well or wells or initiating development activities..

Unitized exploration, development, and production benefits the environment primarily through consolidation of facilities. The costs, such as increased air emissions, are far less when lease activity is unitized.

2. The Geological and Engineering Characteristics of the Reservoir

State regulation requires that a unit must encompass the minimum area required to include all or part of one or more oil or gas reservoirs, or potential hydrocarbon accumulations. 11 AAC 83.356(a). DNR technical staff evaluated all data provided by the unit applicant to determine if the proposed unit area met those criteria. Marathon provided geological, geophysical and other technical data to delineate the reservoirs or accumulations. The technical data include a report on the history of oil and gas exploration in the application area; a Cook Inlet index map; a geological structure map of the application area; interpreted 2-D seismic sections; and other geological displays. The data are confidential and therefore are not discussed in detail here. Because the unit is in the exploration phase, there are no engineering data at this time.

Division staff evaluated the data provided by the unit operator, and otherwise available to them, and determined that the Kasilof Unit area encompasses all or part of one or more potential hydrocarbon accumulations, fulfilling the regulatory requirement in 11 AAC 83.356(a).

Cook Inlet areawide geology maps from the 1960s and 1970s identify the anticlinal trend that is the basis of the proposed Kasilof Unit, and the main structure in the proposed Kasilof Unit area is the Kasilof anticline. Beginning near the mouth of the Kasilof River the Kasilof anticline extends south for about 5 miles, closely paralleling the more landward Ninilchik anticline and the shoreline of the Kenai Peninsula. Additional structural features are present in the proposed unit area, on the same trend as the Kasilof anticline and in some cases perpendicular to the main trend, complicating the structure.

The Division cannot discuss the details of the confidential data, but the well and geophysical data provided with the Application, and otherwise available to DNR, indicate that the potential for hydrocarbons within the proposed unit area is sufficient to qualify for unitization, and unitized development and production of any underlying gas reservoirs is appropriate.

The Division's evaluation of the subsurface geology supports the configuration of the unit area as proposed. The operator has acknowledged that the unit area encompasses all or part of a potentially gas bearing reservoir in the Tyonek Formation. The initial well will be drilled to a depth sufficient to penetrate the Tyonek Formation. The Division's review of the geological information supports the inclusion of all or portions of the leases identified in the unit application within the proposed unit area.

3. Prior Exploration Activities in the Kasilof Unit Area

The proposed Kasilof Unit is located in Cook Inlet just offshore and south from the mouth of the Kasilof River. Marathon has justified the size of the Kasilof Unit based on the technical data and accompanying work plan that outlines how it plans to systematically explore, delineate, develop, and produce economic gas reserves, primarily within the Tyonek Formation.

The industry recognized the Kasilof anticline structure as a potential exploration target by the mid-1960s, and used surface mapping tools to key in on the location of major structures before mapping the subsurface with seismic, gravity, and magnetic tools and technology that were available at the time. In June of 1964, Union Oil Company (UNOCAL) drilled the UNOCAL Kasilof State 1 (KS 1) well, which was the first well drilled to test this part of the Ninilchik anticlinal trend (see Table 1). The primary exploration objective of KS 1 was oil in the Hemlock Formation, but gas in the younger intervals was a secondary target. UNOCAL initially drilled KS 1 to a total depth of 16,121 feet. The operator attempted one test in the Beluga Formation, which recovered water. UNOCAL plugged and abandoned the KS 1 as a dry hole.

Two months later, UNOCAL drilled the Kasilof State #2 well (KS 2) to a bottom-hole location less than one-half mile southeast of KS 1, to a total depth of 6,686 feet measured depth (MD).

Three tests in the Beluga Formation recovered water before UNOCAL plugged and abandoned it as a dry hole.

The State approved UNOCAL's application to form the first Kasilof Unit, which encompassed most of the acreage included in the current application, in 1967.

Also in November, 1967, UNOCAL drilled the Kasilof Unit #1 well (KU 1) approximately two miles west of KU 1, to a total depth of 5,500 feet MD. Unocal performed three tests of the Sterling Formation, recovering mostly water, before plugging and abandoning it as a dry hole.

In November 1968 Mesa Petroleum drilled the Kasilof Unit #2 (KU 2) approximately 1 mile north of the KU 1, to a total depth of 8,000 feet MD. This well flowed 2.3 million cubic feet (MMCF) per day from 10 feet of Tyonek sandstone and recovered 2,700 feet of low salinity water from a test of the Sterling Formation.

In January 1975, SOCAL completed the Cape Kasilof #1 (CK 1) approximately 1 mile west of the KU 1, to a total depth of 14,015 feet MD. This well flowed gas in amounts too small to measure from two short, undiagnostic tests from intervals in the Beluga Formation.

Tyonek Formation gas accumulations are present in the Falls Creek and Ninilchik Units located south of the proposed Kasilof Unit, and in the Kenai Unit to the north. The Kenai Unit has been producing gas since 1961 and Marathon continues to successfully delineate, and bring on-line, new reserves in this nearby field. Marathon has also recently reported exploration and delineation success at the Ninilchik Unit, and based on that success, has plans to extend the transportation pipeline infrastructure south from the Kenai Unit through the Kasilof area to the Ninilchik Unit for the purpose of developing gas resources in the area.

Operator	Well Name & No.	Year Drilled	Status	Bottom Location	API Number
UNOCAL	Kasilof State #1	1964	P&A	29-T3N-R12W SM	501331000700
UNOCAL	Kasilof State #2	1964	P&A	29-T3N-R12W SM	501331000800
UNOCAL	Kasilof Unit #1	1967	P&A	30-T3N-R12W SM	507332004500
Mesa	Kasilof Unit #2	1968	P&A	19-T3N-R12W SM	507332014100
SOCAL	Cape Kasilof #1	1975	P&A	25-T3N-R12W SM	507332026300

Technology (primarily drilling technology, well log analysis, and seismic acquisition and processing) has evolved greatly since these early wells were drilled on the southern Kenai Peninsula. Marathon is using advanced technology in its Cook Inlet exploration. With new seismic data and improved well log analysis tools, Marathon believes it has a greater ability to identify and refine potential gas exploration prospects within the Tyonek and Beluga formations.

In the past few years, Marathon used new seismic and log analysis technology to re-examine the well data discussed above and seismic data acquired before 1980, to evaluate the potential for natural gas in the area. No new seismic has been collected in this area recently.

Based on the history of the area and the data presented by Marathon, the presence of hydrocarbons in the proposed unit area is prospective, but relatively unproven. This is especially true of the western half of the proposed Kasilof Unit. While Marathon justified the size of the Kasilof Unit based on the technical data and the Initial POE (IPOE), described below, exploration commitments will eventually be necessary to hold the tracts on the western unit area.

4. The Applicant's Plans for Exploration and Development of the Proposed Unit Area

The IPOE (Exhibit G to the Agreement) sets out a timely sequence of reservoir delineation activities that will facilitate the ultimate development of the reservoir(s). Completion of the proposed exploration activities as scheduled will satisfy the performance standards and diligence requirements that the State and Marathon have agreed to as a condition of approval of the Agreement. The Division and Marathon have agreed that failure to perform the entire proposed work scope set out in the IPOE is a default under the Agreement and can result in the automatic termination of the Kasilof Unit.

Marathon must begin drilling the first exploration well in the unit before the end of the first IPOE year. Alternatively, in the event Marathon elects to acquire 3D seismic data in lieu of drilling, any lands in ADL 384529 and ADL 384534 not within the aerial extent of the seismic program will automatically contract out of the Unit. In the latter case, Marathon then tenders a sum to the State for acreage contracted out of the Unit and withheld from the State's annual competitive leasing program. The DNR, in its sole discretion, determines any revised unit area. Failure to either drill a well or conduct a 3-D seismic program by the first anniversary of the Unit effective date will result in the automatic termination of the Kasilof Unit.

In the event the 3D seismic data is acquired within the first year of the IPOE, drilling of the initial exploration well will be commenced before the end of the second year and drilling of the second well must begin before the end of the third year. If Marathon chooses to drill in the first year, then a second well must be drilled before the end of the third year. Marathon must drill at least one well by the end of the second IPOE year.

If Marathon acquires the 3D seismic data in years one or two, any lands not within the aerial extent of such program will contract out of the unit by the end of the second year, and then Marathon will tender a sum to the State for lost bonus bids. No deferment charge will be required for shot acreage that proves to be non-prospective and is subsequently contracted out of the unit.

Failure to begin drilling the initial exploration well in the unit area by the end of the second year is a default of the IPOE and will result in the automatic termination of the Kasilof Unit. Failure to drill two wells and shoot seismic over the unit area (or otherwise evaluate the entire unit area) by the end of the third year will result in automatic unit contraction. Any acreage not delineated by either seismic or drilling by the end of the third year will automatically contract out of the unit.

Marathon must propose in writing 90-days before the end of the third year, work that may include further unit exploration, delineation, or production activities, to be done in the fourth year. Should MOC decline to make a work commitment for the following year, either the unit will be terminated or the unit area will be contracted to the area defined by the then currently available information.

Marathon may propose at any time to accelerate the agreed-to work scope or propose a smaller Kasilof Unit with a simple 2-well work commitment that drills both of the two fault blocks in the prospect. It is the intent of DNR to contract out any acreage off structure by the end of the three years if it is still unexplored, regardless of work accomplished on the main prospect.

Marathon agreed to waive the extension provisions of 11 AAC 83.140 regarding any lands contracted or eliminated from the Kasilof Unit beyond their primary term. Marathon also agreed to waive the notice and hearing provisions for default under 11 AAC 83.374.

Completion of these exploration activities as scheduled will satisfy the performance standards and diligence requirements that the State and the working interest owner agreed to as a condition for approval of the Agreement. The IPOE with the agreed-to terms and conditions ensures that the lease extensions resulting from unitization under 11 AAC 83.336 continue only so long as the applicant proceeds diligently with exploration and development. The proposed IPOE advances exploration and evaluation of the prospect sooner than would occur under any individual lease exploration effort.

5. The Economic Costs and Benefits to the State

Approval of the Agreement in combination with the IPOE will result in both short-term and long-term economic benefits to the State. The assessment of the hydrocarbon potential of the leases will create jobs in the short-term. If the working interest owners make a commercial discovery, the State will earn royalty and tax revenues over the long-term life of the field.

The primary term of two leases in the proposed unit area will expire January 31, 2003, unless extended by unitization. If the lease expires, the leasehold interest will return to the State. The

earliest that DNR could reoffer the land, under the current Five-Year Oil and Gas Lease Sale Schedule, is May 2003. If DNR leased the expired lands in the next available sale, the State could receive bonus payments and rentals for the primary term of the new leases. However, it could be years before the new lessees would propose exploration of the area and even longer before the State receives royalties and taxes on any commercial production.

Marathon agreed to compensate the State for extending the lease terms through unitization and foregoing the bonus bids and interest the State could have earned if the acreage was offered in the Cook Inlet 2003, 2004 or 2005 Areawide lease sales. Imposing deferment charges protects the State from the loss of interest payments due to withholding the acreage from leasing.

If the working interest owners do not continue to explore and develop the unit area in accordance with the IPOE, the unit will terminate and the leasehold interests will return to the State. The potential long-term economic benefit of exploration and earlier development of the Kasilof Unit area outweighs the short-term loss of potential bonus payments. The State receives a 12.5% royalty share on all production from the unit area.

6. Other Relevant Factors Including Measures to Mitigate Impacts

There is a growing concern that the supply of natural gas in Cook Inlet is running out. Gas production from the Kasilof Unit would help replace depleting reserves to meet local demand in the coming years. Development and delivery of Kasilof Unit gas is in the best interests of local residents, the KPB, and all of Alaska.

DNR develops lease stipulations, or mitigation measures, through the lease sale process to mitigate potential adverse environmental and social impacts (See Attachment 3). Additional project-specific mitigation measures can be imposed when oil and gas lessees or the unit operator submit proposed plans of operation or development. AS 38.180(p); 11 AAC 83.341 – 11 AAC 83.346.

B.) Decision Criteria considered under 11 AAC 83.303(a)

1. The Conservation of All Natural Resources

Other natural resources that may be affected by development of the leases include marine waters, marine mammals, fish, land mammals, flora, fauna, the air, the soils, groundwater, streams and rivers of the Kenai Peninsula, and the mountains surrounding the entire Cook Inlet basin. As a balancing agency, DO&G believes that multiple use and enjoyment of all our natural resources can occur on State lands and that oil and gas can coexist with other uses. Mitigation measures are designed to protect environmental quality. Drilling a few high departure state-of-the-art gas

wells from land to extract natural gas from beneath the seafloor should have little or no impact on the abundance and quality and value of other natural resources. The wells would be drilled much deeper than the deepest drinking water well into rocks that are saturated with gas, brine or saltwater. Well house and associated gas handling facilities will be unobtrusively located on private property and consolidated. Natural beauty will remain unaffected with the imposition of lease sale mitigation measures, existing laws and regulations, and prudent operator standards that recognize implied covenants in the lease. Residents will hear little if any noise from unit operations after well and pipeline installation. Without unitizing the leases, the field and surrounding area at Kasilof could see more gas wells, water wells, disposal sites, fuel storage tanks, facilities, pipelines, utility lines, roads, traffic, emissions, and environmental risk than is necessary to develop, produce, and deliver the gas. While non-unitized development could bring additional benefits to the local economy in terms of jobs or increased demand for services, generally, lease-by-lease development would take away from surrounding natural resources and diminish their value to society.

Unitization of the leases overlying a reservoir conserves all natural resources, especially natural gas. With demand for Cook Inlet gas on the rise, every cubic foot is precious to Alaska and its economy. Kasilof Unit gas and gas condensates, if any, will be employed efficiently and only in volumes needed to meet demand of local consumers. It is burned as an energy source in efficient turbines to produce electricity for our communities and heat our homes, schools, and businesses. It may also be used to produce commodities including fertilizer, anhydrous ammonia, liquid natural gas, and high value fuels like diesel, jet fuel, or naphtha. Unitization will ensure that natural gas resources beneath the leases are used for the maximum benefit to Alaska.

The Agreement 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. Without the Agreement the lessee would be compelled to seek permits to drill wells on each individual lease in order to extend the leases beyond their primary terms. Unitization reduces both the number of facilities required to develop reserves that may be discovered and the aerial extent of land required to accommodate those facilities. Review and approval of exploration and development permits under a unit agreement will also ensure that rational surface-use decisions are made without consideration of individual lease ownership or expense. After unitization, facilities can be designed and located to maximize recovery and to minimize environmental impact, without regard to lease ownership. Although the applicant has not determined the extent of any gas contained in the prospective reservoir, the Agreement will ensure that the acreage is explored and recovery from the leases is maximized if a commercial hydrocarbon accumulation is discovered.

2. The Prevention of Economic and Physical Waste

The unit will prevent economic and physical waste because the unit operator must have a plan to share future costs, a coordinated exploration plan, and if a commercial discovery is made, a comprehensive reservoir depletion model. A cost-sharing agreement promotes efficient development of common surface facilities and operating strategies. With a cost-sharing agreement, the working interest owner or potential future owners in the unit can rationally decide

well spacing requirements, injection plans, and the proper joint-use of surface facilities. Unitization prevents economic and physical waste by eliminating redundant expenditures for a given level of production, and by avoiding loss of ultimate recovery with the adoption of a unified reservoir management plan.

Unitized operations improve development of reservoirs beneath leases that may have variable or unknown productivity. Marginally economic reserves, which otherwise would not be produced on a lease-by-lease basis, can be produced through unitized operations in combination with more productive leases. Facility consolidation lowers capital costs and promotes optimal reservoir management. Pressure maintenance and other field recovery procedures are easier to design and achieve 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 total cost of exploring and developing the Kasilof Unit leases would be higher on a lease-by-lease basis than it would be under unitization terms. Drilling and facilities investment costs will be minimized as a consequence of eliminating a need for numerous sites within the unit area. Locations of individual wells and surface facilities will be selected to optimize ultimate oil and gas recovery, while minimizing or completely avoiding adverse impacts to the environment.

Without unitization, the unregulated development of reservoirs can become a race for possession by competing operators. This race can result in: 1) unnecessarily dense drilling, especially along property lines; 2) rapid dissipation of reservoir pressure; and 3) irregular advance of displaced fluids, all of which contribute to the loss of ultimate recovery or economic waste. The proliferation of surface activity, duplication of production, gathering, and processing facilities, and haste to get oil to the surface also increase the potential for environmental damage. Lessee compliance with conservation orders and field pool rules issued by the AOGCC would mitigate some of these impacts without an agreement to unitize operations. Still, unitization is the most efficient method for maximizing oil and gas recovery, while minimizing negative impacts on other resources. Formation of the unit will provide the State with a comprehensive plan for exploring and developing the entire unit area. Formation of the Kasilof Unit and implementation of the proposed IPOE will ensure that working interest owners prudently explore the acreage included in the unit, and produce gas-bearing intervals with optimum recovery.

Reducing costs and environmental impacts through unitized operations will expedite development of any reserves discovered and will promote greater ultimate recovery of any natural gas and gas condensate from the unit area. This will increase and extend the State's income stream from production taxes and royalties. The revenues to the lessees and unit operator may be reinvested in new exploration and development in the State. Unitization means reduced costs and increased benefits to all interested parties. It benefits the local and State economy, and provides revenues to the State's general, school, constitutional budget reserve, and permanent funds.

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

Unitization serves to protect the economic interests of working interest owners as well as royalty owners. Combining interests, and operating under the terms of the Agreement and Kasilof Unit Operating Agreement, ensures each individual working interest owner an acceptable allocation of costs and revenues. Marathon, designated unit operator, holds 100% of the working interest in all three unit Tracts. Alaska retains 12.5% of the royalties from production sales and Marathon takes the remaining 87.5%. There are no other royalty owners or over-riding royalty interests in the unitized leases. Marathon agreed to use the DNR's standard state unit agreement form (Revised June 2002) and proposed no modifications. This form is continuously revised and improved by the Division keeping in mind the statutory charges of protecting correlative rights of all parties in interest. Under 11 AAC 83.328, all proper parties have been invited to join the Agreement. In this case, there are no other parties in interest in the unit area.

The Agreement in combination with the IPOE promotes the State's economic interests because exploration will occur earlier than without unitization. Diligent exploration under a single approved unit plan without the complications of competing operators is in the State's best interest. It advances evaluation of the State's petroleum resources, while minimizing impacts to the region's cultural and environmental resources. A commercial discovery will stimulate the State's economy with production-based revenue, a reliable energy supply, oil and gas related jobs, and service industry activity.

The Agreement provides for accurate reporting and record keeping, State approval of plans of exploration and development and operating procedures, royalty settlement, in-kind taking, and emergency storage of unitized substances, all of which will further the State's interest.

IV. FINDINGS AND DECISION

A.) The Conservation of All Natural Resources.

1. Unitization under the Agreement of the three leases that overlay a common reservoir will conserve all natural resources, including hydrocarbons, gravel, air quality marine and fresh water, wetlands, and other valuable habitat.
2. The unitized development and operation of the leases in this proposed unit will reduce the amount of land and fish and wildlife habitat that would otherwise be disrupted by individual lease development. This reduction in environmental impacts and preservation of natural resources and their value is in the public interest.
3. If the exploration activities during the IPOE period result in the discovery of a commercially producible reservoir, then there may be environmental impacts associated with reservoir development. All unit development must proceed according to an approved plan of development. Additionally, before undertaking

any specific operations, the unit operator must submit a unit plan of operations to the Division and apply for permits from other appropriate state and local agencies for review and approval. The lessees may not commence any drilling or development operations until all agencies have granted the required permits. DNR may condition its approval of a unit plan of operations and other permits on performance of mitigation measures in addition to those in the modified leases and the Agreement, if necessary or appropriate. Compliance with mitigation measures will minimize, reduce or completely avoid adverse environmental impacts.

B.) The Prevention of Economic and Physical Waste.

1. Marathon submitted geological data to the Division in support of the unit application. Division technical staff determined that the Kasilof Unit area encompasses all or part of one or more potential hydrocarbon accumulations. The available geological data justify including the proposed lands, described in Exhibit A, in the Kasilof Unit.
2. The IPOE provides for the reasonable exploration of potential hydrocarbon accumulations in the unit area. If the current or future working interest owners discover natural gas in commercial quantities, the Agreement will prevent the waste of gas, and increase the probability of recovering more hydrocarbons from the unit area. DNR must approve a plan of development before the unit operator produces any hydrocarbons in commercial quantities.
3. Unitization will result in financial savings to the working interest owner and subsequent royalty owners by consolidating facilities and optimizing wellbore placement. Fewer dollars will be spent recovering the same volumes of natural gas under unitization.

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

1. The Agreement, conditioned upon the performance of its IPOE, adequately and equitably protects the public interest, and is in the State's best interest.
2. The Agreement meets the requirements of AS 38.05.180(p) and 11 AAC 83.303.
3. DNR complied with the public notice requirements of 11 AAC 83.311.
4. The Agreement will not diminish access to public and navigable waters beyond those limitations (if any) imposed by law or already contained in the oil and gas leases covered by this Agreement.

5. The Agreement provides for expansions and contractions of the unit area in the future, as warranted by data obtained by exploration or otherwise. The Agreement thereby protects the public interest, the rights of the parties, and the correlative rights of adjacent landowners.
6. The applicant's IPOE meets the requirements of 11 AAC 83.303 and 11 AAC 83.341. The unit operator must conduct the proposed exploration activities in accordance with the timelines specified in the plan. The IPOE describes the performance standards and diligence requirements that the State requires. If the unit operator fails to perform any of the exploration activities outlined in the IPOE as scheduled, the plan will be in default and the unit will terminate.
7. In accordance with 11 AAC 83.341(d) the unit operator, Marathon, shall submit an annual report to the Division describing operations conducted under the IPOE during the preceding year. This report shall be due annually on or before the unit effective date, October 26. The annual status report must describe the status of projects undertaken and the work completed during the first year of the IPOE, as well as any proposed changes to the plan.
8. The unit operator must submit a second Plan of Exploration or First Plan of Development to the Commissioner at least 60-days before the IPOE expires. Alternatively, the unit operator must request approval of the First Plan of Development, if appropriate, at least 90-days before the IPOE expires (11 AAC 83.341(b) and .343(c)).
9. The Kasilof Unit will expedite exploration and potential development of the unit area. With the formation of the Kasilof Unit, economic benefits to the State outweigh the economic costs of extending the primary term of the State leases committed to the unit.
10. Marathon agreed to waive the extension provisions of 11 AAC 83.140 regarding any lands contracted or eliminated from the Kasilof Unit beyond their primary term. Marathon also agreed to waive the notice and hearing provisions for default under 11 AAC 83.374.
11. Exhibit A to the Agreement provides the legal description of the Kasilof Unit area, and lists the leases committed to the Agreement. Commitment of a portion of a State of Alaska lease constitutes a severance of the unitized and non-unitized portions of the lease (11 AAC 83.373). Exhibit A describes the unitized portions of three leases: ADL 384534, ADL 384529, and ADL 389502. Marathon owns 100% of the working interest in all three leases. Marathon requested that only portions of ADL 389502 and ADL 384529 be committed to the Kasilof Unit and that ADL 384534 be committed to the unit in its entirety. The Division accepts Marathon's proposal, and this decision constitutes a severance of ADL 389502

and ADL 389529 into unitized and non-unitized acreage. Both ADL 384529 and 389502 are still within their primary terms and the Division will assign new lease numbers to the non-unitized acreage. Under 11 AAC 83.373, the non-unitized acreage will be treated as separate and distinct leases having the same effective dates and terms as the original leases and may be maintained thereafter only in accordance with the terms and conditions of the original leases, statutes, and regulations.

For the reasons discussed in this Findings and Decision, I hereby approve the Kasilof Unit Agreement subject to the conditions specified herein. The Agreement shall become effective as of 12:01 a.m. on the day following approval by the Director.

A person adversely affected by this decision may appeal this decision, in accordance with 11 AAC 02, to Pat Pourchot, Commissioner, Department of Natural Resources, 550 W. 7th Avenue, Suite 1400, Anchorage, Alaska 99501-3561. Any appeal must be received at the above address, or by fax to 1-907-269-8918, within 30 calendar days after the date of "delivery" of this decision, as defined in 11 AAC 02.040. A copy of 11 AAC 02 may be obtained from any regional information office of the Department of Natural Resources.


for Mark D. Myers, Director
Division of Oil and Gas

October 25, 2002
Date

- Attachments:
1. Exhibit A, Tract Description and Ownership Schedule
 2. Exhibit B, Map of the Unit Boundary
 3. Cook Inlet Areawide Lease Sale Mitigation Measures

EXHIBIT "A"
KASILOF UNIT, KENAI PENINSULA BOROUGH ALASKA
MARCH 4, 2002

Schedule of Leases
State: Alaska

TRACT NO.	DESCRIPTION OF PROPERTY	GROSS ACRES	LESSOR/ ROYALTY OWNERS	ROYALTY	ORRIS	LESSEE/ WI OWNER	WI %	DATE	RECORDING DATA			
									BOOK	PAGE	DISTRICT	
STATE OF ALASKA LANDS												
1	TOWNSHIP 3N, RANGE 13 W Section 22: All Section 23: All Section 24: All Section 25: All Section 26: All Section 27: All Section 34: All Section 35: All Section 36: All	5760.00	State of Alaska ADL # 384534 Expires 2/1/03	12.50%	None	Marathon Oil Company	100%	2/1/2003				
2	TOWNSHIP 3N, RANGE 12 W Section 5: All Section 6: All Section 7: All Section 8: All Section 17: All Section 18: All	3757.00	State of Alaska ADL # 389502 Expires 5/1/08	12.50%	None	Marathon Oil Company	100%	5/1/2008				
3	TOWNSHIP 3N, RANGE 12 W Section 19: All Section 20: All Section 29: All Section 30: All Section 31: All Section 32: All	3772.00	State of Alaska ADL # 384529 Expires 2/1/03	12.50%	None	Marathon Oil Company	100%	2/1/2003				
TOTAL:		13289.00										

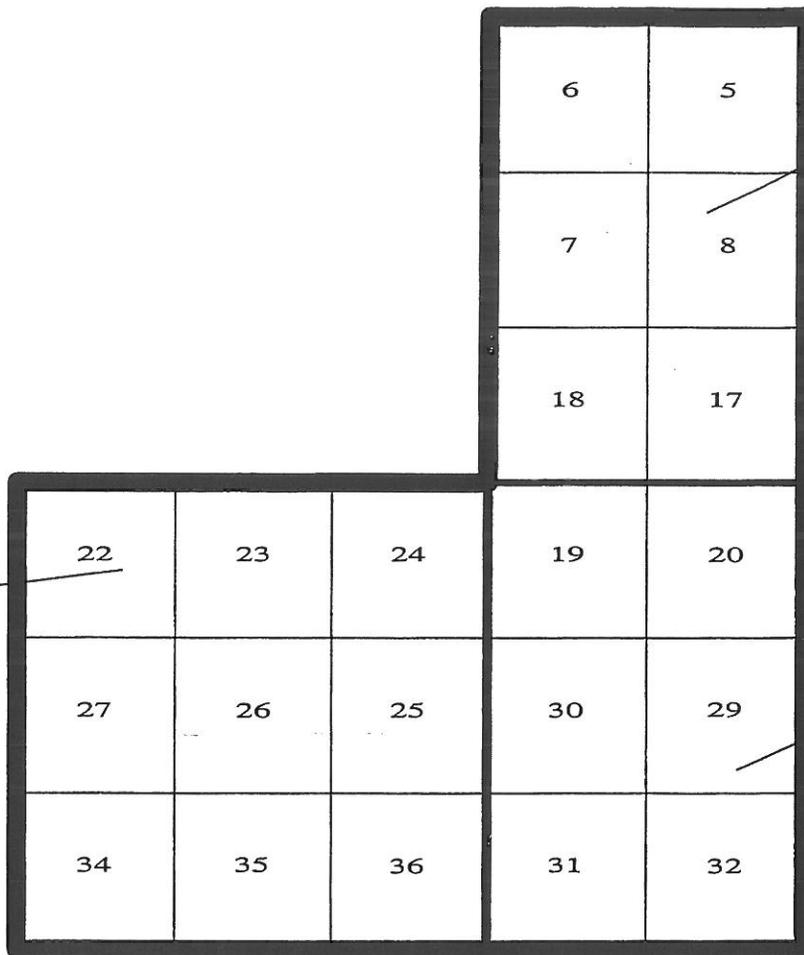
RECAPITULATION BY LAND CATEGORIES:

1	U.S. Public Domain Lands	Not applicable	0.00 Acres
2	State of Alaska Lands	3 Tracts	13289.00 Acres
3	Patented Fee Lands	Not applicable	<u>0.00</u> Acres
TOTAL:			13289.00 Acres

EXHIBIT "B"

TOWNSHIP 3N - RANGE 13W

TOWNSHIP 3N - RANGE 12W



Tract #2
Marathon Oil Company 100% WI
ADL #389502
Exp. 5/1/08

Tract #1
Marathon Oil Company 100% WI
ADL #384534
Exp. 1/31/03

Tract #3
Marathon Oil Company 100% WI
ADL #384529
Exp. 2/1/03

MARATHON OIL COMPANY
PO BOX 196168
ANCHORAGE, AK 99519-6168

KASILOF UNIT
KENAI PENINSULA BOROUGH, AK

Mitigation Measures and Lessee Advisories

Mitigation Measures

AS 38.05.035(e) and the departmental delegation of authority provide the director, Division of Oil and Gas (DO&G), with the authority to impose conditions or limitations, in addition to those imposed by statute, to ensure that a resource disposal is in the state's best interests. Consequently, to mitigate the potential adverse social and environmental effects of specific selected lease related activities, DO&G has developed mitigation measures and will condition plans of operation, exploration, or development, and other permits based on these mitigation measures.

Under AS 38.05.035(e), ADNR has authority to apply the following mitigation measures developed for this Cook Inlet Areawide lease sale, to all oil and gas activities performed to access the state's leased mineral interest, regardless of the surface ownership status of the land from which the lessee seeks access.

Lessees must obtain approval of a detailed plan of operations from the Director before conducting exploratory or development activities (11 AAC 83.158). An approved plan of operations is the authorization by which DO&G regulates exploration, development, and production activities.

A plan of operations must identify the specific measures, design criteria, and construction methods and standards to be employed to comply with the restrictions listed below. It must also address any potential geophysical hazards that may exist at the site. Plans of operation must comply with coastal zone consistency review standards and procedures established under 6 AAC 50 and 80 including coastal district plans. Applications for required state or federal agency authorizations or permits must be submitted with the plan of operations. DO&G will require, as a condition of consistency approval, such modification or terms as may be necessary to ensure consistency with the ACMP standards.

These measures were developed after considering terms imposed in other Cook Inlet region oil and gas lease sales; fish and wildlife resource and harvest data submitted by ADF&G; environmental data relating to air and water quality, solid and liquid waste disposal, and oil spills submitted by ADEC; consensus items from the Cook Inlet Areawide stakeholders process, as well as comments submitted by the public, local governments, environmental organizations, and other federal, state, and local agencies. Additional project-specific mitigation measures are imposed if and when oil and gas lessees submit proposed plans of exploration, operation, or development.

In addition to compliance with these mitigation measures, lessees must comply with all applicable local, state and federal codes, statutes and regulations, and any subsequent amendments. Lessees must also comply with all current or future ADNR area plans and recreation rivers plans; and ADF&G game refuge plans, critical habitat area plans, and sanctuary area plans within which a leased area is located. Federal, state and local government powers to regulate the oil and gas industry are discussed in the "Governmental powers to Regulate Oil and Gas Exploration, Development, Production, and Transportation" Chapter Eight of this finding. In addition, Appendix B lists federal and state statutes and regulations that apply to lease activities.

Information to lessees relevant to the lease sale is also presented in the "Lessee Advisories," section B, which contain precautions which may apply to post-lease sale activities, and reflect existing local, state, and federal law or policy at the time of the sale.

Hereafter, wherever abbreviations are used they mean: Alaska Coastal Management Program (ACMP), Alaska Department of Environmental Conservation (ADEC), Alaska Department of Fish and Game (ADF&G), Alaska Department of Natural Resources (ADNR), Alaska Oil and Gas Conservation Commission

(AOGCC), Areas Meriting Special Attention (AMSA), Director (Director, Division of Oil and Gas), Division of Forestry (DOF), Division of Mining, Land and Water (DMLW), Division of Oil and Gas (DO&G), Division of Parks and Outdoor Recreation (DPOR), Kenai Peninsula Borough (KPB), Municipality of Anchorage (MOA), Matanuska-Susitna Borough (MSB), State Historic Preservation Officer (SHPO), and U.S. Fish and Wildlife Service (USF&WS).

Lessees are advised that portions of the sale area may be subject to special area permits by ADF&G to protect areas designated by the legislature as state game refuges in AS 16.20.010 -AS 16.20.080.

For those mitigation measures and lessee advisories that are within ADNR's authority, the Lessee may request, and the Director of DO&G may grant, exceptions if compliance with the mitigation measure is not feasible or prudent, or an equal or better alternative is offered. Requests and justifications for exceptions must be included in the initial Plan of Operations when one is required. The decision whether to grant an exception will be based on review of the Plan of Operations by the public and in consultation with appropriate state resource agencies. Mitigation measures subject to exceptions are noted with an asterisk (*), followed by the initials of the agency that must be consulted in any decision to grant an exception. Critical habitat areas and state game refuges are jointly managed by ADNR and ADF&G; exceptions to mitigation measures in these areas must be agreed to by both agencies. Agency abbreviations are: ADF&G (Alaska Department of Fish and Game), ADEC (Alaska Department of Environmental Conservation), DL (Division of Lands) and DOF (Division of Forestry).

Except as indicated, the restrictions listed below do not apply to geophysical activity on state land; geophysical exploration is governed by 11 AAC 96.

The following mitigation measures and advisories will be imposed on oil and gas activities in or on all Cook Inlet Areawide leased lands and waterbodies as a condition of the approval of plans of operation. If units are formed with leases issued under different mitigation measures, the most recent measures will most likely be applied to the whole unit.

General

1. Oil and hazardous substance pollution control: In addition to addressing the prevention, detection, and cleanup of releases of oil, contingency plans (C-Plans) for oil and gas extraction operations should include, but not be limited to, methods for detecting, responding to, and controlling blowouts; the location and identification of oil spill cleanup equipment; the location and availability of suitable alternative drilling equipment; and a plan of operations to mobilize and drill a relief well.
2. Use of explosives will be prohibited in open water areas of fishbearing streams and lakes. Explosives must not be detonated beneath, or in close proximity to fishbearing streams and lakes if the detonation of the explosive produces a pressure rise in the waterbody greater than 2.5 pounds per square inch (psi) unless the waterbody, including its substrate, is solidly frozen.

Explosives must not produce a peak particle velocity greater than 0.5 inches per second (ips) in a spawning bed during the early stages of egg incubation. The minimum acceptable offset from fishbearing streams and lakes for various size buried charges is:

Charge Weight	Distance from Stream
1 pound charge	37 feet (11.2 m)
2 pound charge	52 feet (15.8 m)
5 pound charge	82 feet (25.0 m)
10 pound charge	116 feet (35.4 m)
25 pound charge	184 feet (50.1 m)
100 pound charge	368 feet (112.2 m)

There are numerous fishbearing streams and lakes within the sale area. Specific information on the location of these waterbodies may be obtained by contacting ADF&G.

3.* Onshore exploration activities must be supported by air service, an existing road system or port facility, ice roads, or by vehicles which do not cause significant damage to the ground surface or vegetation. Unrestricted surface travel may be permitted by the directors of DO&G and DL, if an emergency condition exists.

Construction of temporary roads may be allowed. Temporary means that a road must be removed to the extent that it is rendered impassable or is otherwise rehabilitated in a manner such that any placed gravel remaining approximates surrounding natural features. Construction of permanent roads will be prohibited during the exploration phase. *Exception - DL.

4.
 - a. Removal of water from fishbearing rivers, streams, and natural lakes shall be subject to prior written approval by DMWM and ADF&G.
 - b. Compaction or removal of snow cover overlying fishbearing waterbodies will be prohibited except for approved crossings. If ice thickness is not sufficient to facilitate a crossing, ice and/or snow bridges may be required.
5. Water intake pipes used to remove water from fishbearing waterbodies must be surrounded by a screened enclosure to prevent fish entrainment and impingement. Screen mesh size shall not exceed 0.04 inches unless another size has been approved by ADF&G. The maximum water velocity at the surface of the screen enclosure may be no greater than 0.1 foot per second.

Facilities and Structures

6.
 - a. The siting of onshore facilities, other than docks, or road and pipeline crossings, will be prohibited within 500 feet of all fishbearing streams and lakes. Additionally, siting of facilities will be prohibited within one-half mile of the banks of Harriet, Alexander, Lake, Deep and Stariski creeks, and the Drift, Big, Kustatan, McArthur, Chuitna, Theodore, Beluga, Susitna, Little Susitna, Kenai, Kasilof, Ninilchik and Anchor rivers. New facilities may be sited within the one-half mile buffer if the lessee demonstrates that the alternate location is environmentally preferable, but in no instance will a facility be located within one-quarter mile of the river bank. ADF&G concurrence will be required for siting within the one-half mile buffer. Road and pipeline crossings must be aligned perpendicular or near perpendicular to watercourses.

- b. Lessees will minimize sight and sound impacts for new facilities sited less than one-half mile from river banks and in areas of high recreational use by (1) providing natural buffers and screening to conceal facilities; (2) conducting exploration operations between October 1 and April 30; and (3) using alternative techniques to minimize impacts.
 - c. Surface entry will be prohibited in parcels that are within the Kenai River Special Management Area (KRSMA).
 - d. Surface entry will be prohibited on state lands within the Kenai National Wildlife Refuge. This term does not limit surface entry on other private lands within the refuge.
 - e. Lessees are prohibited from placing drilling rigs and lease-related facilities and structures within an area near the Kenai River composed of: all land within Section 36 in T6N, R11W that is located south of a line drawn from the protracted NE corner to the protracted SW corner of the section; all land within the western half of Section 31 in T6N, R10W and Section 6 in T5N, R10W; and all land within Section 1 in T5N, R11W.
 - f. A fresh water aquifer monitoring well with quarterly water quality monitoring should be required down gradient of a permanent storage facility unless alternative acceptable technology is approved by ADEC.
7. The siting of new facilities in key wetlands and sensitive habitat areas should be limited to the extent possible. If facilities are to be located within these areas, the lessee should demonstrate to the satisfaction of the Director and ADF&G that impacts are minimized through appropriate mitigation measures.
- 8.* Measures will be required by the Director, after consultation with ADF&G and ADEC, to minimize the impact of industrial development on key wetlands. Key wetlands are those wetlands that are important to fish, waterfowl, and shorebirds because of their high value or scarcity in the region or that have been determined to function at a high level using the hydrogeomorphic approach. Lessees must identify on a map or aerial photograph the largest surface area, including reasonably foreseeable future expansion areas, within which a facility is to be sited, or an activity will occur. The map or photograph must accompany the plan of operations. DO&G will consult with ADF&G and ADEC to identify the least sensitive areas within the area of interest. To minimize impacts, the lessee must avoid siting facilities in the identified sensitive habitat areas. *Exception - ADF&G, ADEC.
- 9.* Impermeable lining and diking, or equivalent measures such as double-walled tanks, will be required for onshore oil storage facilities (with a total above ground storage capacity greater than 1,320 gallons, provided no single tank capacity exceeds 660 gal) and for sewage ponds. Additional site-specific measures may be required as determined by ADNR, with the concurrence of ADEC, and will be addressed in the existing review of project permits or oil spill contingency plans (C-Plans).
- Buffer zones of not less than 500 feet will be required to separate onshore oil storage facilities and sewage ponds from marine waters and freshwater supplies, streams and lakes, and key wetlands. Sumps and reserve pits must be impermeable and otherwise fully contained through diking or other means. *Exception - ADF&G, ADEC.
- 10.* With the exception of drill pads, airstrips, and roads permitted under Term 3, exploration facilities must be consolidated, temporary, and must not be constructed of gravel. Use of abandoned gravel structures may be permitted on an individual basis. *Exception - ADF&G, DL.

11.
 - a. Wherever possible, onshore pipelines must utilize existing transportation corridors and be buried where soil and geophysical conditions permit. In areas where pipelines must be placed above ground, pipelines must be sited, designed and constructed to allow free movement of moose and caribou.
 - b. Offshore pipelines must be located and constructed to prevent obstructions to marine navigation and fishing operations.
 - c. Pipelines must be located upslope of roadways and construction pads and must be designed to facilitate the containment and cleanup of spilled hydrocarbons. Pipelines, flowlines, and gathering lines must be designed and constructed to assure integrity against climatic conditions, tides and currents, and other geophysical hazards.

Local Hire

12. To the extent they are available and qualified, the lessee is encouraged to employ local and Alaska residents and contractors for work performed on the leased area. Lessees shall submit, as part of the plan of operations, a proposal detailing the means by which the lessee will comply with the measure. The proposal must include a description of the operator's plans for partnering with local communities to recruit and hire local and Alaska residents and contractors. The lessee is encouraged, in formulating this proposal, to coordinate with employment services offered by the state of Alaska and local communities and to recruit employees from local communities.

Training

13. Lessee must include in any plan of exploration or plan of development, a training program for all personnel, including contractors and subcontractors, involved in any activity. The program must be designed to inform each person working on the project of environmental, social, and cultural concerns which relate to the individual's job.

The program must employ effective methods to ensure that personnel understand and use techniques necessary to preserve geological, archeological, and biological resources. In addition, the program must be designed to help personnel increase their sensitivity and understanding of community values, customs, and lifestyles in areas where they will be operating.

Access

14.
 - a. Public access to, or use of, the leased area may not be restricted except within 1,500 feet (457 m) or less of onshore drill sites, buildings, and other related structures. Areas of restricted access must be identified in the plan of operations.
 - b. No lease facilities or operations may be located so as to block access to or along navigable and public waters as defined at AS 38.05.965(13) and (17).
15. Lease-related use will be restricted when the commissioner determines it is necessary to prevent unreasonable conflicts with local subsistence harvests and commercial fishing operations. In enforcing this term the division, during review of plans of operation or development, will work with other agencies and the public to assure that potential conflicts are identified and avoided. In order to avoid conflicts with fishing activities, restrictions may include alternative site selection, requiring directional drilling, seasonal drilling restrictions, subsea completion techniques, and other technologies deemed appropriate by the commissioner.

Prehistoric, Historic, and Archeological Sites

16.
 - a. Prior to the construction or placement of any structure, road, or facility resulting from exploration, development, or production activities, the lessee must conduct an inventory of prehistoric, historic, and archeological sites within the area affected by an activity. The inventory must include consideration of literature provided by the KPB, MOA, MSB and local residents; documentation of oral history regarding prehistoric and historic uses of such sites; evidence of consultation with the Alaska Heritage Resources Survey and the National Register of Historic Places; and site surveys. The inventory must also include a detailed analysis of the effects that might result from the activity.
 - b. The inventory must be submitted to the Director for distribution to DPOR for review and comment. In the event that a prehistoric, historic, or archeological site or area may be adversely affected by a leasehold activity, the Director, after consultation with DPOR and the KPB, MOA or MSB, will direct the lessee as to what course of action will be necessary to avoid or minimize the adverse effect.
 - c. Discovery of prehistoric, historic, or archaeological objects: In the event any site, structure, or object of prehistoric, historic, or archaeological significance is discovered during leasehold operations, the lessee must immediately report such findings to the Director. The lessee must make every reasonable effort to preserve and protect such site, structure, or object from damage until the Director, after consultation with the SHPO, has given directions as to its preservation.

Fishbearing Streams

17. Under Title 16 of the Alaska Statutes, the measures listed below will be imposed by ADF&G below the ordinary high water mark to protect designated anadromous fish-bearing streams. Similar provisions will be imposed by the Director to protect non-anadromous fishbearing streams. Specific information on the location of anadromous waterbodies in and near the area may be obtained from ADF&G.
 - a. Alteration of river banks will be prohibited.
 - b. Operation of equipment within riparian habitats will be prohibited.
 - c. The operation of equipment, excluding boats, in open water areas of rivers and streams will be prohibited.
 - d. Bridges or non-bottom founded structures will be required for crossing fish spawning and important rearing habitats. In areas where culverts are used, they must be designed, installed, and maintained to provide efficient passage of fish.

Waste Disposal

18. Solid waste disposal:
 - a. Solid waste generated from the development and/or operation of the lease areas shall be reduced, reused, or recycled to the maximum extent practicable. Garbage and domestic combustible refuse must be incinerated where appropriate. Remaining solid waste shall be taken to an approved disposal site, in accordance with 18 AAC 60.

New solid waste disposal sites will not be approved or located on state property during the exploratory phase. Exceptions may be provided for drilling waste if the facility will comply with the applicable provisions of 18 AAC 60.

- b. The preferred method for disposal of muds and cuttings from oil and gas activities is by underground injection. Injection of non-hazardous oilfield wastes generated during development is regulated by AOGCC through its Underground Injection Control (UIC) Program for oil and gas wells.
 - c. Discharge of drilling muds and cuttings into lakes, streams, rivers, and high value wetlands is prohibited. Surface discharge of drilling muds and cuttings into reserve pits shall be allowed only when it is determined that underground injection is not technically achievable. A solid waste disposal permit must be obtained from ADEC. If use of a reserve pit is proposed, the operator must demonstrate the advantages of a reserve pit over other disposal methods, and describe methods to be employed to reduce the disposed volume. Onpad temporary cuttings storage will be allowed as necessary to facilitate annular injection and/or backhaul operations in accordance with ADEC solid waste regulations 18 AAC 60.
19. Wastewater disposal:
- a. Unless authorized by NPDES and/or state permit, disposal of wastewater into freshwater bodies, intertidal areas, or estuarine waters is prohibited.
 - b. Disposal of produced waters to freshwater bodies, intertidal areas, and estuarine waters is prohibited.
 - c. Disposal of produced waters in upland areas, including wetlands, will be by subsurface disposal techniques.
 - d. Surface discharge of reserve pit fluids will be prohibited unless authorized in a permit issued by AOGCC and approved by DL.

Gravel Mining

20. Gravel mining within an active floodplain will be prohibited. Upland sites will be restricted to the minimum necessary to develop the field in an efficient manner.

Special Areas

21. Management of legislatively designated state game refuges and critical habitat areas is the co-responsibility of ADF&G (AS 16.20.050-060) and ADNR (AS 38.05.027). For activities occurring within a refuge or critical habitat area, the lessee will be required to obtain permits from both ADNR and ADF&G.

Five state game refuges (SGR) and four critical habitat areas (CHA) are located within or partially within the sale area: The Goose Bay SGR, Palmer Hay Flats SGR, Anchorage Coastal Wildlife Refuge, Susitna Flats SGR, Trading Bay SGR, Redoubt Bay CHA, Kalgin Island CHA, Clam Gulch CHA, and Anchor River and Fritz Creek CHA.

Operations within these refuges must comply with the terms and conditions of the sale, the regulations contained in 5 AAC 95, and the requirements applicable to special area management plans. Where the requirements of this term are more restrictive than the requirements of other Sale 85 terms, the provisions of this term prevail.

- a. Surface entry for drilling and above ground lease-related facilities and structures will be prohibited within the Palmer Hay Flats SGR, Anchorage Coastal Wildlife Refuge, Clam Gulch CHA, Anchor River and Fritz Creek CHA, within the core Tule goose and trumpeter swan nesting and molting corridors along the Big, Kustatan, and McArthur rivers in the Trading Bay SGR and Redoubt Bay CHA, on tidelands and wetlands in the Goose Bay SGR and Kalgin Island CHA and within the primary shorebird area in Susitna Flats SGR, Trading Bay SGR, and Redoubt Bay CHA. Surface entry may be allowed on uplands within the Goose Bay SGR and Kalgin Island CHA; and surface entry for seismic surveys and similar temporary activities may be allowed in all of these areas, consistent with the Special Area regulations and applicable Special Area management plans. Directional drilling from adjacent sites may be allowed. Similar provisions will be imposed by the Director to protect primary shorebird habitat in Redoubt Bay south of the CHA.
- b. Exploration, development, and major maintenance within important Tule goose and trumpeter swan habitat in Trading Bay SGR, the Redoubt Bay CHA, and the Susitna Flats SGR, and the primary waterfowl area above mean high tide within the Susitna Flats SGR and Trading Bay SGR will be allowed only between November 1 and March 31, unless an extension is approved by ADF&G and DO&G. Routine maintenance and emergency repairs will be permitted on a year-round basis during the production phase. A detailed plan describing routine maintenance activities to be conducted between April 1 and October 31 must be submitted to ADF&G and DO&G for review and approval.
- c. Gravel pads and wellheads are the only above ground structures that will be allowed within the primary waterfowl area above mean high tide in the Susitna Flats SGR and the Trading Bay SGR and important Tule goose and trumpeter swan habitat in the Trading Bay SGR, Redoubt Bay CHA and Susitna Flats SGR.

Construction activities within a refuge must utilize the best available technology to minimize the visual, biological, and physical impacts of these structures and must be approved in writing by ADF&G and the Director.

- d. Surface discharge of produced waters will be prohibited.
- e. Disposal of drilling muds and cuttings will be allowed only at upland sites approved by the Director and ADF&G, after consultation with DL and ADEC.
- f. Facilities must be designed and constructed to prevent the spill and spread of hydrocarbons and to facilitate cleanup efforts.
- g. Facilities must be designed to minimize the possibility of spills or fires resulting from vandalism or hunting accidents.
- h. Upon abandonment or expiration of a lease, all facilities must be removed and the sites rehabilitated to the satisfaction of ADF&G and the Director. The departments may determine that it is in the best interest of the public to retain some or all of the facilities. Rehabilitation requirements will be identified in a Habitat Special Area Permit (AS 16.20.060 and/or AS 16.20.530).

- i. Gravel roads will not be allowed during exploration unless an exception is granted as provided above.
 - j. Public access to, or use of, the leased area may not be restricted except within the immediate vicinity of onshore drill sites, buildings, and other related structures. Areas of restricted access must be identified in the plan of operations. No lease facilities or operations may be located so as to block access to or along navigable and public waters as defined at AS 38.05.965(13) and (17).
22. Surface entry into the critical waterfowl habitat along the Kasilof River is prohibited. Directional drilling from adjacent sites may be allowed.
- 23.* Surface entry will be prohibited within one-quarter mile of trumpeter swan nesting sites between April 1 through August 31. The siting of permanent facilities, including roads, material sites, storage areas, powerlines, and above-ground pipelines will be prohibited within one-quarter mile of known nesting sites. Trumpeter swan nesting sites will be identified by ADF&G at the request of the lessee.
*Exception - ADF&G.
24. If the lessee discovers a previously unreported active or inactive bald eagle nest site, the lessee must immediately report the nest location to the Director. Lessees are advised that oil and gas activities likely to disturb nesting eagles are subject to the provisions of the Bald Eagle Act of 1940, as amended.
- Permanent facilities may be prohibited within one-quarter mile and will be prohibited within 500 feet of nests, active or inactive. Surface entry, fixed wing aircraft flights below 500 vertical feet, and helicopter flights below 1,500 vertical feet will be prohibited within 500 feet of active nests between April 1 and August 31. Human safety shall take precedence over this provision.
- Temporary activities within 500 feet of nesting sites may be allowed between September 1 and March 31 if they will not alter bald eagle habitat.
- Maps identifying documented nest sites will be made available by ADF&G, upon request.
25. The following measures will be required to minimize impacts on Kenai Lowlands Caribou Herd:
- a. Surface entry within the core caribou calving area is prohibited, except that surface entry for seismic exploration will be allowed from October 16 to March 31.
 - *b. Exploration and development activities will be restricted or prohibited between April 1 and October 15 within the core caribou summer habitat, except that maintenance and operation of production wells will be allowed year-round. Permanent roads, or facilities other than production wells, will also be restricted or prohibited within this area. Facilities within the core caribou summer habitat that required year-round access must be located in forested areas, where practical.
*Exception - ADF&G
 - *c. Pipelines must be buried within the core caribou summer habitat. *Exception - ADF&G.
26. For projects in close proximity to areas frequented by bears, lessees are encouraged to prepare and implement bear interaction plans to minimize conflicts between bears and humans. These plans could include measures to: (a) minimize attraction of bears to drill sites; (b) organize layout of buildings and work areas to minimize human/bear interactions; (c) warn personnel of
-

bears near or on drill sites and the proper procedures to take; (d) if authorized, deter bears from the drill site; (e) provide contingencies in the event bears do not leave the site; (f) discuss proper storage and disposal of materials that may be toxic to bears; and (g) provide a systematic record of bears on site and in the immediate area.

27. Prior to commencement of any activities, lessees shall confirm the locations of den sites that are actually occupied in the season of the proposed work with the Division of Wildlife Conservation, DF&G, based on data provided by DF&G. Exploration and development activities, begun between November 15 and March 31, will not be conducted within one-half mile of occupied brown bear dens, unless alternative mitigation measures are approved by DF&G. Occupied dens not previously identified by DF&G that are encountered in the field must be reported to the Division of Wildlife Conservation, DF&G, within 24 hours. Mobile activities shall avoid such dens by one-half mile unless alternative mitigation measures are approved by DO&G with concurrence from DF&G. Non-mobile facilities will not be required to be relocated.
28. To avoid possible adverse impacts to Kenai Peninsula brown bears, exploration activities will be allowed only between November 15 and March 31 within the brown bear movement corridors around Skilak Lake, Tustumena Lake, along the upper Anchor River drainage, and at the head of Kachemak Bay.
29. Lessees must disclose any requests for exceptions to these mitigation measures and advisories in their plans of operation and applicable permit applications.
30. Plans of operation submitted for review and approval must describe the lessee's efforts to communicate with local communities, and interested local community groups, if any, in the development of such plans.
31. Lessees must submit a plan of operations to the state for approval as required by 11 AAC 83.158. Where surface activities are proposed on non state-owned land, lessees must submit a copy of the plan of operations to the private surface owner. Plans of operation must describe the lessee's efforts to minimize impacts on residential areas and privately-owned surface lands.

Lessee Advisories

1. The use of explosives for seismic activities with a velocity of greater than 3,000 feet per second in marine waters is prohibited.
2. Lessees must include in their seismic permit applications a plan for notifying the public of their activities.
3. Forest clearing for seismic activity must be approved by the Director, after consultation with DOF and ADF&G.
4.
 - a. Aircraft flying over the primary shorebird habitat within the Susitna Flats SGR, Trading Bay SGR, and Redoubt Bay CHA must maintain a minimum altitude of 1,500 feet above ground level or a horizontal distance of one mile.
 - b. Aircraft flying over the Goose Bay SGR and the Palmer Hay Flats SGR, the primary waterfowl habitat above mean high tide within the Susitna Flats SGR and Trading Bay SGR, and the core

Tule goose and trumpeter swan molting and nesting corridors in Trading Bay SGR and Redoubt Bay CHA must maintain a minimum altitude of 1,500 feet above ground level or a horizontal distance of one mile from April 1 to October 31. Human safety will take precedence over this provision.

5.
 - a. Because of the state's interest in encouraging clean air, lessees are encouraged to adopt conservation measures to reduce hydrocarbon emissions.
 - b. The state recognizes that in the long run sources of energy other than oil and gas will be needed. Lessee participation in conducting research on alternative energy sources is appreciated.
6. In populated areas where there is no local planning and zoning, ADNR may require in approval of plans of operation that permanent structures be designed to be compatible with the aesthetics of the surrounding area.
7. To ensure sufficient vegetative cover in Kenai Peninsula brown bear feeding concentration areas, lessees may be required to locate exploration and development facilities beyond the 500 foot buffer along anadromous fish bearing streams. This requirement will be considered during review of site-specific plans of operations, in consultation with DF&G.
8. If data indicate that brown bear movement will be hindered by development and production activities, lessees may be required to locate facilities outside of the Kenai Peninsula brown bear movement corridors around Skilak Lake, Tustumena Lake, along the upper Anchor River drainage, and at the head of Kachemak Bay. This requirement will be considered during review of site-specific plans of operations, in consultation with DF&G.

State Only Unit Agreement
Revised June 2002

RECEIVED

JUN 12 2002

DIV. OF OIL & GAS
DIRECTOR'S OFFICE

ATTACHMENT 1

KASILOF UNIT AGREEMENT

Table of Contents

This replaces
UA in the
original
application
BA

RECITALS 2

AGREEMENT 2

ARTICLE 1: DEFINITIONS 2

ARTICLE 2: EXHIBITS 4

ARTICLE 3: CREATION AND EFFECT OF UNIT 5

ARTICLE 4: DESIGNATION OF UNIT OPERATOR 6

ARTICLE 5: RESIGNATION OR REMOVAL OF UNIT OPERATOR 7

ARTICLE 6: SUCCESSOR UNIT OPERATOR 7

ARTICLE 7: UNIT OPERATING AGREEMENT 8

ARTICLE 8: PLANS OF EXPLORATION, DEVELOPMENT AND OPERATIONS 9

ARTICLE 9: PARTICIPATING AREAS 10

ARTICLE 10: OFFSET WELLS 12

ARTICLE 11: ALLOCATION OF PRODUCTION 12

ARTICLE 12: LEASES, RENTALS AND ROYALTY PAYMENTS 13

ARTICLE 13: UNIT EXPANSION AND CONTRACTION 15

ARTICLE 14: UNIT EFFECTIVE DATE, TERM AND TERMINATION 16

ARTICLE 15: EFFECT OF CONTRACTION AND TERMINATION 17

ARTICLE 16: COUNTERPARTS 17

ARTICLE 17: LAWS AND REGULATIONS 18

ARTICLE 18: APPEARANCES AND NOTICES 18

ARTICLE 19: JOINDER 19

ARTICLE 20: DEFAULT 19

KASILOF 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 with the approval of the Commissioner.

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 with the Commissioner's approval.

1.9 **Participating Area** means all Unit Tracts and parts of Unit Tracts designated as a Participating Area under Article 9 to allocate Unitized Substances produced from a Reservoir.

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 **Royalty Interest** means an ownership right to or interest in the amount or value of Unitized Substances other than a Working Interest.

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

1.15 **Sustained Unit Production** means continuing production of Unitized Substances from a well in the Unit Area into production facilities and transportation to market, but does not include testing, evaluation or pilot production.

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

1.17 **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.

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

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

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

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

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

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

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

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

1.26 **Working Interest** means the interest held in lands by virtue of a lease, operating agreement, fee title or otherwise, under which the owner of the interest is vested with the right to explore for, develop and produce minerals; the right delegated to a unit operator by a unit agreement is not a working interest.

1.27 **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 identifies and describes each Unit Tract, and displays: the Unit Tract number, the Lease number, the Working Interest ownership, the Royalty Interest ownership, and the applicable royalty and net profit share rates applicable to each Unit Tract. Within thirty days after approval by the Commissioner of any expansion or contraction of the Unit Area under Article 13 or any change of the Working Interest or Royalty Interest in any Unit Tract, the Unit Operator shall submit a revised Exhibit A to the Commissioner.

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. Within thirty days after the Commissioner approves any expansion or contraction of the Unit Area under Article 13 or any change of the Working Interest or Royalty Interest in any Unit Tract, the Unit Operator shall submit a revised Exhibit B to the Commissioner.

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, Royalty Interest ownership, and Unit Tract Participation for that Participating Area. Exhibits must be prepared for each Participating Area established in the Unit Area. The Unit Operator shall submit an initial or revised Exhibit C to the Commissioner within thirty days of: 1) the effective date of any Participating Area, 2) any expansion or contraction of a Participating Area, 3) 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, or 4) any change of the Working Interest or Royalty Interest in any Unit Tract.

2.5 Exhibit D is comprised of a map for each Participating Area. Each Exhibit D map must show the boundary lines of the Unit Area, a Participating Area and the Unit Tracts in that Participating Area identified by Unit Tract number and Lease number. Within thirty days after approval by the Commissioner of a Participating Area or any expansion or contraction of a Participating Area under Article 9 or any change of the Working Interest or Royalty Interest in any Unit Tract in a Participating Area, the Unit Operator shall submit a revised Exhibit D to the Commissioner.

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. Exhibits must be prepared for each Participating Area established in the Unit Area. The Unit Operator shall submit an initial or revised Exhibit E to the Commissioner whenever an initial or revised Exhibit C is required.

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. The Unit Operator shall submit an initial or revised Exhibit F to the Commissioner whenever an initial or revised Exhibit A is required if the Unit Area includes Net Profit Share Leases. The Unit Operator may submit a revised Exhibit F anytime, but any revisions to Exhibit F are not effective until approved by the Commissioner.

2.8 Exhibit G is the unit plan of exploration or unit plan of development required by the regulations, and Article 8 of 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 into unitized and nonunitized portions. The portion of the leased area not committed to this Agreement will be treated as a separate and distinct 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 by unitization. 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, the provisions of 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 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 under the Lease, governing law, and regulations.

ARTICLE 4: DESIGNATION OF UNIT OPERATOR

4.1. Marathon Oil Company is designated as the Unit Operator. Marathon 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.

4.2. 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.

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, the Unit Operator shall submit an initial Plan of Development or an initial Plan of Exploration (collectively called the "Initial Unit Plan") 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 State areawide lease sale in the region that includes the unit 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. The Unit Operator shall give the Commissioner written notice before beginning testing, evaluation, or pilot production from a well in the Unit Area.

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 must receive approval from the Commissioner of a Participating Area before commencement of Sustained Unit Production. The Unit Operator shall notify the Commissioner of commencement of Sustained Unit Production within 10 days after commencement from each Participating Area.

9.2. Each application for approval of a Participating Area shall include Exhibits C, D, E, and G. Exhibit F is also required if the Unit Area includes Net Profit Share Leases. 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 G. Exhibit F is also required if the Unit Area includes Net Profit Share Leases. 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 saved, removed, or 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.

9.12. Underground storage shall be covered by separate agreement with the Commissioner.

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 must 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.

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, compression, pumping, 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 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.

12.5. 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.

12.6. 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.

12.6.1. 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.

12.6.2. 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.

12.6.3. 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.

12.6.4. 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.

12.7. 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.

12.8. 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.

12.9. 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.

12.10. 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 Commissioner will give the Unit Operator reasonable notice and an opportunity to be heard before any directed expansion of the Unit Area. The Unit Operator shall notify the Working Interest Owners of any expansion proposed by the Unit Operator or any third party, or proposed or directed by the Commissioner. 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, 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 Article 13.3, 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 reasonable notice and an opportunity to be heard before any directed contraction of the Unit Area. The Unit Operator shall notify the Working Interest Owners of any proposed, directed, or approved contraction of the Unit Area. Any unit contraction shall not be effective until approved by the Commissioner.

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:

J. Brock Riddle, Land Manager
Marathon Oil Company
P.O. Box 196168
Anchorage, AK 99519-6168

Fax: 907-564-6489

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 13. The Unit Operator shall submit a request for joinder with a signed counterpart of this Agreement and a notice of proposed expansion under Article 13. 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 OWNER

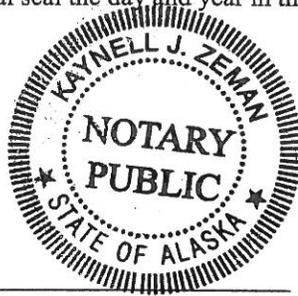
By: 
Marathon Oil Company
J. Brock Riddle, Attorney-In-Fact
(Company Name, signatory's printed name and title)

Date: 6-12-02

STATE OF ALASKA)
)ss.
THIRD JUDICIAL DISTRICT)

This certifies that on June 12, 2002, before me, a notary public in and for the State of Alaska, duly commissioned and sworn, personally appeared J. Brock Riddle, Attorney-In-Fact for Marathon Oil Company, 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.



Kaynell J. Zeman
NOTARY PUBLIC in and for Alaska
My Commission Expires: 10-9-05

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: _____

OVERRIDING ROYALTY 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: _____

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: _____