FIRST EXPANSION OF THE NIKAITCHUQ UNIT AREA, TERMINATION OF THE TUVAAQ UNIT, AND THE CONTRACTION OF THE KUPARUK RIVER UNIT AREA

Findings and Decision of the Director
of the Division of Oil and Gas,
Under Delegation of Authority
from the Commissioner of the State of Alaska
Department of Natural Resources

OCTOBER 5 , 2007

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I. INTRODUCTION AND DECISION SUMMARY

Eni US Operating Co. Inc. (ENI), as the designated Nikaitchuq Unit Operator, filed the Nikaitchuq Unit (NU) expansion application (Application) with the State of Alaska (state), Department of Natural Resources (DNR). The Application meets the requirements for a complete application under 11 AAC 83.306. Public comment period closed on August 5, 2007, and DNR received no comments.

The existing Nikaitchuq Unit, formed effective April 29, 2004, is located on the North Slope of Alaska, north of the Kuparuk River Unit (KRU) and east of the Tuvaaq Unit. The existing unit area covers approximately 12,968 acres encompassing eight state oil and gas leases (state leases). The proposed Nikaitchuq Unit expansion area would increase the area committed to the Nikaitchuq Unit from the current 12,968 acres to a total of approximately 33,870 acres.

The Division of Oil and Gas (Division) finds that the expansion of the Nikaitchuq Unit promotes conservation of all natural resources, promotes the prevention of economic and physical waste and provides for the protection of all parties of interest, including the state. DNR approves the expansion of the Nikaitchuq Unit in accordance with the criteria under 11 AAC 83.303 and conditioned by the terms of this Decision.

II. APPLICATION

ENI submitted the Application on May 18, 2007, and simultaneously paid the $500.00 unit application filing fee, in accordance with 11 AAC 83.306 and 11 AAC 05.010(a)(10)(D), respectively. The Application includes: Exhibit A, legally describing the proposed expanded unit area, its leases, and ownership interests; Exhibit B, a map of the proposed expanded unit; Exhibit G, the Nikaitchuq Unit 2nd Plan of Exploration (2nd POE), evidence of mailing of notice of invitation to proper parties, and the necessary ratifications of joinder to the Unit Agreement. The Application also includes confidential, technical data.

The Division deemed the Application complete on June 27, 2007, and the public notice period commenced on July 5, 2007.

The Division published a public notice in the "*Anchorage Daily News*" and in the "*Arctic Sounder*" on July 5, 2007, under 11 AAC 83.311. Copies of the Application and the public notice were provided to interested parties. DNR provided public notice to the Alaska Department of Environmental Conservation, the DNR Office of Habitat, Management and Permitting, the North Slope Borough, the City of Barrow, the City of Nuiqsut, the Kuukpik Corporation, the Arctic Slope Regional Corporation, the Nuiqsut Postmaster, and the radio station KBRW in Barrow. The notice was also published on the State of Alaska Public Notice website and the Division's website. The public notices invited interested parties and members of the public to submit comments by August 5, 2007. DNR received no comments regarding the Application.

III. LEASE BACKGROUND

The existing Nikaitchuq Unit encompasses eight state leases: ADLs 388579, 388580, 388581, 388582, 388583, 389719, 389720, and 390433. DNR issued these leases effective January 1, 1998, following the Beaufort Sea Sale 86, held November 18, 1997, on Competitive Oil and Gas Lease Form No. DOG 9609(REV6/97). These leases have , seven-year primary terms and 16.66667 percent royalty rates. At the time of unit formation, April 29, 2004, paragraphs 15(d) and 36(b) were amended to conform to the provisions of lease form DOG 200204.

ENI proposed to include an additional 10 state leases to the Nikaitchuq Unit. Seven of these 10 are currently held by the Tuvaaq Unit, located due west of the existing Nikaitchuq Unit. The Tuvaaq leases, ADLs 388571, 388572, 388573, 388574, 388575, 388577 and 388578 were also issued effective January 1, 1998, following the Beaufort Sea Sale 86 held November 18, 1997, on Competitive Oil and Gas Lease Form No. DOG 9609(REV6/97). These leases also have seven-year primary terms and 16.66667 percent royalty rates. At the time of unit formation, August 20, 2004, paragraphs 15(d) and 36(b) were amended to conform to the provisions of lease form DOG 200204.

ENI also proposed to include ADLs 390615, 390616, and Segment 2 of ADL 355024 in the Nikaitchuq Unit. The DNR issued ADLs 390615 and 390616 effective July 1, 2005, following the 2004 Beaufort Sea Sale, on Competitive Oil and Gas Lease form No. DOG 200204(REV10/03). These lease also have seven year primary terms and 16.66667 percent royalty rates. The primary terms of these two leases will expire June 30, 2012.

Following the May 17, 1983, Beaufort Sea Sale, DNR issued ADL 355024, effective June 1, 1983, on Competitive Oil and Gas Lease Form No. DMEM-4-83 (NET PROFIT SHARE)(REVISED May 5, 1983) DNR 10-1113. This lease has a 10 year primary term, 12.5 percent fixed royalty rate, and 30 percent net profit share (NPS). Effective June 1, 1985, ADL 355024 was committed, in part, to the KRU and the KRU Kuparuk Participating Area. Effective June 16, 1988, ADL 355024 was committed in its entirety to the KRU (Third Expansion of the Kuparuk River Unit).

ADL 355024, currently committed to the KRU, contains two aerially-differentiated segments, Segment 1 and Segment 2. Segment 1, the southern portion of ADL 355024, is not a part of the Application. The KRU WIOs had previously agreed to a farm-out of Segment 2 to ENI as 100 percent working interest owner (WIO) in Segment 2, commonly referred to as the Kigun portion of the lease. If the Division approves the proposed Nikaitchuq Unit expansion, this acreage, (Segment 2 of ADL 355024), will receive a new ADL, contract from the KRU, and be committed simultaneously to the expanded Nikaitchuq Unit.

On January 11, 2006, Kerr-McGee Oil & Gas Corporation (KMG), as operator of the Nikaitchuq Unit, and on behalf of itself and ENI Petroleum Exploration Co. Inc., submitted an application to the DNR Commissioner for royalty modification under AS

38.05.180(j)(1)(A) . On October 31, 2006, DNR determined that royalty modification was unwarranted.

As a result of several assignments of working and royalty interest shares, 100 percent of the working interest of each of the existing Nikaitchuq Unit leases and the leases proposed for expansion is held by ENI. Each lease has overriding royalty interest owners whose shares, in total, range from 1.8 to 6.178112 percent.

IV. DISCUSSION OF DECISION CRITERIA

AS 38.05.180(p) gives DNR the authority to approve an oil and gas unit. The DNR Commissioner (Commissioner) reviews unit applications under 11 AAC 83.301 – 11 AAC 83.395. By memorandum dated September 30, 1999, the Commissioner approved a revision of Department Order 003 and delegated this authority to the Division Director. The Division's review of the Application is based on the criteria set out in 11 AAC 83.303 (a) and (b). A discussion of the subsection (b) criteria, as they apply to the Application, is set out directly below, followed by a discussion of the subsection (a) criteria.

A. Decision Criteria considered under 11 AAC 83.303(b)

1. The Environmental Costs and Benefits of Unitized Exploration or Development

The proposed expanded Nikaitchuq Unit area lies offshore in the shallow waters of Harrison Bay Alaska, immediately north and contiguous to the KRU. The expansion area includes the current Tuvaaq Unit, which is due east of the expanded Oooguruk Unit, and a lease segment from the Kuparuk River Unit. This area is habitat for various marine mammals, waterfowl, and fish. Area residents may use this area for subsistence hunting and fishing. Oil and gas activity in the proposed unit area may affect some wildlife habitat and some subsistence activity. Lease mitigation measures, including seasonal restrictions on specific activities, reduce the impact on fish, wildlife, and human populations. Mitigation measures specifically address potential impacts to subsistence access and harvests.

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

DNR considered all comments submitted before holding the Beaufort Sea Sales in 1983, 1997, and 2004. DNR included mitigation measures in the leases. The proposed Nikaitchuq Unit expansion leases contain stipulations designed to protect the environment and address concerns regarding impacts to the area's fish and wildlife

species and to habitat and subsistence activities. They address the protection of primary waterfowl areas, site restoration, construction of pipelines, seasonal restrictions on operations, public access to, or use of, the leased lands, and avoidance of seismic hazards. Including the leases in the expanded Nikaitchuq Unit will neither change these protective measures, nor result in additional restrictions or limitations on public access to the lands or to public and navigable waters. Furthermore, lease operations both before and after unitization are subject to a coastal zone consistency determination, and must comply with the terms of both the State Coastal Management Program and North Slope Borough Coastal Management Plan, and require issuance of a permit from the U.S. Army Corps of Engineers. Lease and unit operations also require state approval of a Plan of Operations application.

Seasonal restrictions on specific activities in certain areas will reduce the impact on bird, fish, and mammal populations. Designating primary waterfowl areas and restricting activities within these areas is one method of protecting the bird habitat. DNR requires consolidation of facilities to minimize surface disturbances. Regulating waste disposal is another way to limit environmental impacts. With these mitigating measures, the anticipated exploration and development related activity is not likely to significantly impact bird, fish, and mammal populations.

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

A proposed Plan of Operations must describe the operating procedures designed to prevent or minimize adverse effects on natural resources. Plans of Operation are subject to extensive technical review by a number of local, state, and federal agencies. They are also subject to consistency with the Alaska Coastal Management Program and local coastal district plans, if the affected lands are within the coastal zone. The Unit Operator shall guarantee full payment for any damage sustained to the surface estate before beginning operations, and the Plan of Operations must include plans for rehabilitation of the unit area. Furthermore, when the lessees propose to explore or develop acreage within the unit area and submit a Unit Plan of Operations, the DNR may require that it comply with the lease stipulations and lessee advisories developed for the most current lease committed to the Nikaitchuq Unit or the region.

2. Geologic and Engineering Characteristics of the Proposed Expanded Nikaitchuq Unit

Introduction and Summary

The area proposed for the Nikaitchuq Unit expansion lies offshore in the Beaufort Sea in the vicinity of Spy Island, approximately three miles north of Oliktok Point. The existing NU is north of and contiguous with the northern edge of the KRU and the Milne Point Unit (MPU). The KRU is operated by ConocoPhillips and produces from the Cretaceous Kuparuk River Formation and shallower Schrader Bluff formation. The BP- operated MPU field lies to the south-southeast of the NU and produces oil from the Schrader Bluff, Kuparuk, and Triassic Sag River formations. The western edge of the proposed NU is adjacent to the recently expanded Oooguruk Unit (OU) operated by Pioneer. Production from the OU is expected from the Kuparuk and Jurassic Nuiqsut sandstones.

Within the proposed expanded NU, potentially commercially recoverable reserves have been tested in the Cretaceous Schrader Bluff and the Triassic Sag River formations.

The Division deemed the geological data submitted in support of the Application for expansion of the Nikaitchuq Unit complete on June 27, 2007. Submitted data included structure maps and permeability and thickness maps for the Schrader Bluff sandstone and Sag River sandstone, well and seismic cross sections, and well production test data. The geological, geophysical, and engineering data that ENI submitted contained the results from the recently drilled wells in the area and justifies the expansion of the Nikaitchuq Unit.

Exploration History of the Area

Two early key exploration wells lie within several miles of the Nikaitchuq development area. The Unocal East Harrison Bay State #1 well lies near the northwest corner of the KRU, to the southwest of the NU. The well was drilled in February 1977 to a measured depth of 9,809 feet, bottoming in argillite basement. The East Harrison Bay State #1 well logs appear to show about 15 feet of oil-bearing Kuparuk sandstone that appears cemented in the upper half. The Jurassic section looks silty on logs. The ARCO Kalubik #3 well, drilled in February 1998, lies to the south-southwest of the Nikaitchuq area. The well bottomed in the Jurassic at a measured depth of 7,000 feet. The well encountered a 40-foot-thick MD interval of Kuparuk C sandstone that appears on electric logs as oil-bearing, but siderite cemented in the upper 10 feet of the interval. On well logs the Jurassic interval appears silty with a 12-foot silty sand developed around 6,565 feet MD. The well was plugged and abandoned on March 6, 1998.

Drilling History

The first major exploration activity in the area in the early 1970s targeted the Ivishak Formation following the discovery of the prolific Ivishak Formation in Prudhoe Bay State

#1 in 1967. The Hamilton Brothers Milne Point #18-1 was one of the early wells drilled on the Milne Point structure in 1970 in search of Ivishak and Lisburne objectives. This well encountered about 50 feet of tight oil-saturated sandstone that was not tested and a section of Kuparuk sandstone that tested at a rate of 875 BOPD. This discovery led to increased industry interest in the Milne Point area and led to exploration and delineation drilling for Kuparuk reserves. In the early 1980s the Sag River was cored in the Conoco Milne Point Unit #C-1 well and contained bleeding oil and gas. The Sag River Sandstone was also cored in the MPU #L-1 well and contained no visible porosity or staining and the Sag River appeared tight on wire line logs.

In the early 1990s about a dozen wells were drilled to the west-southwest of the Nikaitchuq area with Jurassic sandstones and Kuparuk C sandstones as targets. The ARCO Kalubik #1 well encountered approximately 160 feet of productive Nuiqsut and Nechelik sandstone that tested at an unstimulated rate of 336 BOPD. In addition the well penetrated an 85-foot section of Sag River Sandstone with calculated log porosities in the range of 15 to 22 percent. The Thetis Island #1 well also encountered an 80-foot section of porous Sag River sandstone with log-calculated porosities in the range of 16-24 percent. A pay section of Nuiqsut sandstone was also encountered in this well that tested at an average rate of 120 BOPD with a high rate of 650 BOPD. Both the Kalubik #1 well and Thetis Island #1 well drilled through Brookian sandstones that contained mud log hydrocarbon shows.

In the late 1990s BP drilled several dedicated Sag River Sandstone test wells, including MPU #C-23, #K-33, #E-13A, 3F-33, #F-33A, and #F-73A. Alaska Oil and Gas Conservation Commission (AOGCC) production data indicate that several Milne Point wells have produced oil out of the Sag River Sandstone and two oil producing wells MPU F-33A and K-33, are currently shut-in. MPU #C-23 produced 378,012 barrels of oil between 1996 and 2001. MPU #F-33 produced 314,276 barrels of oil between September 1996 and May 1999 and was subsequently plugged and abandoned. MPU #K-33 has produced approximately 93,241 barrels of oil since 1997. MPU #E-13A produced 366,665 barrels of oil between 1995 and April 2001. MPU #F-33A produced approximately 533,351 barrels of oil since April of 2001. MPU #F-73A produced 13,430 and is now a water alternating gas injection (WAGIN) well. AOGCC reservoir data indicate that the oil commonly recovered from the Sag River sandstone has an API oil gravity of about 37 degrees. Total production from the MPU Sag River Sandstone has been 1,709,268 barrels of oil and 1,754,912 MSCF gas through February 2006. The original GOR ranged from 784 – 974 SCF/STB. Production from the Sag River pool at MPU has been intermittent with shut-in periods from June 1999 through February 2002 and all of 2006.

Between 2004 and 2005, Kerr McGee (KMG) drilled six wells in the Nikaitchuq and Tuvaaq Units. Three of the six wells tested oil from the Schrader Bluff or Sag River formations. In 2006 KMG drilled two additional wells to further delineate the Schrader Bluff sandstone. These wells have been suspended.

Brookian Sandstone Potential

Brookian sandstones were deposited during latest Cretaceous and Paleocene time in available accommodation spaces as the Colville Trough was filled with sediment in response to thrust loading from the Brooks Range, a large north vergent fold and thrust belt to the south. Brookian sandstone at 5,050 – 5,250 feet in the Kalubik #1 well tested oil (API gravity not measured) at the rate of 10 BOPD. Brookian sands were also tested in the Thetis Island #1 well at depths of 5,576 – 5,578 feet MD and 5,631 – 5,633 feet MD that produced mud filtrate with a trace of oil.

Schrader Bluff Formation Tests

KMG Nikaitchuq #4

Approximately 3,000 feet of gross horizontal Schrader Bluff formation was drilled in this well, with approximately 2,270 feet of net pay, from a 30foot TVD net pay thickness. A two-week production test was performed on the well using an electric submersible pump (ESP) to aid in producing the 16–17 API crude. The well tested at rates up to 1,200 barrels of oil per day during periods of the initial test. Permeability estimated from the test was greater than 350 millidarcies and was confirmed from the analysis of the tests conducted on a whole core obtained from the well.

KMG Tuvaaq #1

The well was not tested. It penetrated 30 feet net pay Schrader Bluff OA Sand and 12 feet net Schrader Bluff N sand. There were no cores taken at Tuvaaq. Schrader Bluff N sand was interpreted to be oil-filled here and at Kigun #1 appeared unconsolidated with permeability estimated from 100-1000 millidarcies and porosity 25-35 percent.

KMG Kigun #1

The well was not tested. It penetrated 29 feet net pay Schrader Bluff OA sand and 30 feet net N sand. An MDT tool run sampled the Schrader Bluff OA fluids which were 18 API, GOR 59 SCF/STB and viscosity of 82 cp at 87 degree reservoir temperature. (Contamination of the samples with oil-based mud caused concern about the reliability of the sample estimates.) Schrader Bluff OA sand core data indicated 25 percent to 38 percent porosity and up to 1,000 millidarcies permeability in the sandstone intervals.

Jurassic Sandstone Potential

Several wells in the Colville Delta area tested Nuiqsut sands: the Texaco Colville Delta #1 well produced at a rate of 1,075 BOPD of 25 API oil; the Texaco Colville Delta #2 well produced at a rate of 409 BOPD with the measured oil gravity varying from 24- to 40-degree API; the Texaco Colville Delta #3 well produced at a rate of 2,170 BOPD of 27.7-degree API oil; and the ARCO Kalubik #1 well produced at a rate of 410 BOPD of

21-degree gravity oil. In 2003, The Pioneer Ivik #1 well, drilled in the OU about three miles southwest of proposed Nikaitchuq Unit, tested 1,300 BOPD in Jurassic sands.

Sag River Formation Tests

KMG Nikaitchuq #1 (completed April 1, 2004)

Nikaitchuq #1 encountered 41 feet gross and 23 feet net pay in the Schrader Bluff OA sand and 33 feet gross and 17 feet net Sag River B Sand. The Schrader Bluff was not tested.

On April 19, 2004 KMG announced that the Nikaitchuq #1 well "production tested more than 960 BOPD of 38-degree API crude" from the Sag River Sandstone between the depth of 10,408 – 10,472 feet MD (8,679 – 8,741 feet subsea TVD). The Sag River sand was tested for 210 hours, fluids were produced for 150 hours after oil reached surface. Daily rate peaked at 960 BOPD on Day 3 and declined to 760 BOPD at the end of the Day 6. Daily rates were calculated on a 24-hour basis rather than using instantaneous rates as plotted in the operator's report. GOR was 937 SCF/STB during the test. Wellhead pressure (WHP) fluctuated during the test mainly caused by water-loading and gas-slugging. The final WHP ranged between 300 psi to 400 psi and 14 percent water cut. A pressure transient test analysis showed permeability of about 3 – 4 millidarcies and no skin effect (undamaged). The 591-foot test radius of investigation represents about 25 acres, a relatively small portion of the reservoir.

KMG Nikaitchuq #2

The well encountered 30.5 feet gross Sag River sand and 7 feet net Schrader Bluff OA sand. There was no flow test conducted. The well was cored in the Sag River Sandstone and permeability measured 2 millidarcies indicating tight reservoir rock.

KMG Nikaitchuq #3

A 3,000-foot horizontal section was drilled with approximately 1,834 feet of net pay in the Sag River Sandstone. The Sag River was tested using a pump for 81 hours after oil surfaced. The initial rate declined from 1,327 BOPD at Day 1 to 760 BOPD (at 81 hours) of 32-degree API oil. Solution GOR averaged about 230 SCF/STB during the test. Wellhead pressure stabilized at 130 psi and pump intake pressure down hole finished at 1,230 psi prior to shut-in. Water cut ranged from 40-60 percent during the test but the water source was not determined conclusively. Pressure transient analysis indicated 5 millidarcies permeability, no skin damage, and the drainage area bounded by faults. Source of water production hampers the assessment of the formation's productivity.

Conclusion

The geological, geophysical, and engineering data that ENI submitted contains the results from the recently drilled wells in the area and justifies the expansion of the Nikaitchuq Unit.

ENI has stated its plan is to develop the Nikaitchuq Schrader Bluff Formation with horizontal wells. ENI's performance prognosis can be compared to the analogs by evaluating average Schrader Bluff well performance from initial completion to date. There is nearly five years of history for the various Schrader Bluff Formation wells. ENI appears to assume its development will improve on the previous KRU and MPU Schrader Bluff completions by using the latest technology--horizontal and multilateral completions.

The Sag River Formation has been developed on a stand-alone basis at MPU. The MPU wells consistently show initial flush production followed by steep decline within the first year to less than 50 percent of the initial rate. KMG's Sag River tests showed similar initial production rates and comparable if not more pronounced decline. At this time no obvious upside is evident based on analog performance and KMG's test results. Stimulation and perhaps innovative EOR techniques could improve recovery prospects in the Sag River Formation at Nikaitchuq.

3. Plan of Exploration and Development for the Proposed Expanded Nikaitchuq Unit

The proposed expansion of the Nikaitchuq Unit would include all of the leases currently committed to the Tuvaaq Unit and lease segment from the KRU. Both the Nikaitchuq and Tuvaaq Units currently operate under their respective Initial Plans of Exploration (Initial POE), which have five year terms. Both units are in the third year of their Initial POEs. ENI has fulfilled the work commitments set out in both Initial POEs. The proposed 2nd POE submitted with the Application would supersede the Nikaitchuq and Tuvaaq Intial POEs and address exploration activity for the proposed expanded Nikaitchuq Unit.

The data acquired from drilling the Initial POE commitment wells in both Units provided sufficient geological and geophysical data to support an application for royalty modification in 2006. The previous Operator of the Nikaitchuq and Tuvaaq Units, KMG, on behalf of itself and ENI, submitted the Application for Royalty Modification for ADLs 355021, 355024, 388571, 388572, 388574, 388575, 388577, 388578, 388580, 388581, 388582, 388583, 390615, and 390616 on January 11, 2006. Through the royalty modification process, KMG and ENI presented the full Nikaitchuq project in detail describing development and production phases with extensive geological, geophysical, engineering, and economic data. Although the Division denied royalty modification, DNR found that, as required by AS 38.05.180(j), KMG had sufficiently delineated the Schrader Bluff and Sag River pools underlying the existing and proposed expanded Nikaitchuq Unit. The next step after delineation of a particular resource would be a Plan

of Development (POD), development activity, and the formation of participating areas leading to production. 11 AAC 83.343(a); 11 AAC 83.3519a). However, the 2nd POE does not address these activities.

The 2nd POE proposes to use results from the 2006-2007 "On-Ice Seismic Experiment" to determine appropriate 3-D seismic acquisition for the expansion acreage and commits ENI to acquire approximately 74 square miles of 3D seismic by September 2010.

In order to address the fact that, if approved, the proposed 2nd POE would apply to acreage for which a producible resource has been delineated, the Division proposed a series of development benchmarks, which ENI has agreed to. The terms of this Decision, and the conditions under which the state will approve the expansion, require that ENI commit specific leases in the expanded unit to participating areas within certain timeframes during the term of the proposed 2nd POE. The benchmarks are timed to parallel the likely development scenario presented with ENI's 2006 royalty modification application.

The planned development, as summarized in the Division's 2006 royalty modification decision, set out the following activities:

- formation of a new unit possibly comprised of the area currently committed to the Nikaitchuq and Tuvaaq units, surrounding acreage such as ADLs 390615 and 390616, and segments of ADLs 355021 and 355024 in which KMG had a working interest ownership;

- construction of a gravel pad with drilling, gathering, and production facilities on Oliktok Point near the existing ConocoPhillips Alaska Inc. seawater treatment facility;

- construction of a gravel drilling island near Spy Island tied back via a 3.8-mile subsea flow line and utility bundle to Oliktok Point for fluid processing;

- construction of a +/-14 mile pipeline from Oliktok Point to a tie-in near KRU DS-1Y pad for connection to the Kuparuk Transportation common carrier pipeline; and

- future modifications required to adjust facility configuration to accommodate actual results of well performance.

ENI's development studies indicated that extended reach horizontal producing and injection wells required for pressure maintenance were needed to economically recover the hydrocarbons in place. The planned development would permit a relatively small footprint for centralized facilities and minimal well pads, thereby reducing environmental impacts to the region. Initial drilling would be from a 313,000-square-foot pad to be constructed at Oliktok Point. Existing roads would be used for access. The production facilities would be located on the same pad. For future drilling, a small gravel island would be constructed shoreward of the barrier islands. A subsea bundle containing a

three-phase production line and multiple utility lines would be constructed to connect the gravel island to Oliktok Point to transport production to Oliktok Point and provide fuel, secondary recovery fluid, and power to the gravel island.

Under the agreement reached between the Division and ENI, any portion of a lease included in the expanded Nikaitchuq Unit not included in a participating area **by** specified dates as described in the 2nd POE, or covered by an approved POE or POD, would be severed and contract from the unit area. The Nikaitchuq and Tuvaaq unit agreements and lease amendments, agreed to at unit formation, allow for severance of acreage partially committed to a participating area. ENI has agreed to lease amendments for the expansion leases ADLs 390615, 390616, and 391283 in order that all leases in the expanded unit would have severance provisions. ENI has agreed to waive the 90-day extension provisions of 11 AAC 83.140 and of 11 AAC 83.374 and waive the provisions of 11 AAC 83.351, which, under certain circumstances, protect a lease from severance when a portion of a it is contracted out of a unit area.

If approved, the proposed 2nd POE, in conjunction with the requirement to commit specific leases to participating areas in accordance with the schedule set out below, would provide a clear description of planned unit exploration and development activities as required under 11 AAC 83.341 and 11 AAC 83.343, and allow for the approval of reasonable work commitments. As acreage is committed to PAs and PODs annually approved over the next five years, the 2nd POE would be amended. Any acreage not committed to a participating area, or not covered by an approved POE or POD within the stated timeframe, would automatically contract from the Nikaitchuq Unit.

Effective as of the approval of the Application, Segment 2 would be segregated from ADL 355024, contracted from the KRU with the concurrence of the Kuparuk River Unit Operator and working interest owners; simultaneously committed to the Nikaitchuq Unit; and receive the new ADL 391283. On October 5, 2009, any portion of ADL 391283 not committed to a participating area would be segregated as to the portion committed to the participating area and the portion not committed to the participating area. The portion not committed to the participating area would automatically contract from the Unit unless covered by an approved POE or POD. One reason for the proposed expansion is that ENI intends to produce at Nikaitchuq by 2009. Requiring formation of a participating area by 2009 commits ENI to the development of the expansion leases.

On October 5, 2011, any portion of ADLs 388571, 388574, 388575, 388577, 388578, 388581, 388582, and 388583--not committed to a participating area would be segregated as to the portion committed to the participating area and the portion not committed to the participating area. The portion not committed to the participating area would automatically contract from the Unit unless covered by an approved POE or POD.

On October 5, 2012, any portion of ADLs 388572 and 388573 not committed to a participating area would be segregated as to the portion committed to the participating area and the portion not committed to the participating area. The portion not committed to the participating area would automatically contract from the Unit unless covered by an

approved POE or POD, one of which must include a firm commitment to drill at least one well on either lease, or both leases will automatically contract from the unit.

On October 5, 2012, any portion of ADLs 388579, 388580, 389719, 389720, and 390433 not committed to a participating area would be segregated as to the portion committed to the participating area and the portion not committed to the participating area. The portion not committed to the participating area would automatically contract from the Unit unless covered by an approved POE or POD, one of which must include a firm commitment to drill at least one well on one of these leases or all the leases will automatically contract from the unit.

On October 5, 2012, any portion of ADLs 390615 and 390616 not committed to a participating area would be segregated as to the portion committed to the participating area and the portion not committed to the participating area. The portion not committed to the participating area would automatically contract from the Unit unless covered by an approved POE or POD.

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

Approval of the Application and the 2nd POE under the conditions set out in this Decision, which requires commitments to form participating areas will result in both short term and long-term economic benefits to the state. The assessment of the leases' hydrocarbon potential will create jobs in the short term. If the WIOs begin development and production from the expanded Nikaitchuq Unit, the state will earn royalty and tax revenues over the long-term life of the field.

If the expansion were not approved, the earliest that the Division could re-offer any of the acreage under the current Five Year Oil and Gas Lease Sale Schedule, would be 2013. There is no certainty that anyone would bid on the tracts or pursue exploration of this area. If the Division leased the two eligible tracts, ADLs 390615 and 390616, again in 2013, the state would receive bonus payments and rentals for the primary term of the new leases. However, it could be years before the new lessees would unitize and propose exploration of the unit area.

As a part of ENI's expansion application and earlier royalty modification application, ENI has stated their intent to construct a processing facility within the boundary of the expanded Nikaitchuq Unit at Oliktok Point. Approval of the expansion will promote the development and production of resources to be processed at the facility. Currently the only processing facility in the region is the Kuparuk River Unit processing facility. The construction of a new processing facility will provide benefit to current and future lessees who do not own facilities by offering a second source of processing capacity and accessible pipeline in the region.

5. Amendments to the State Only Model Unit Agreement Form and other Relevant Factors

The Nikaitchuq Unit Agreement executed at the formation of the Nikaitchuq Unit contains the June 2002 revisions to the State Only Model Form. DNR proposed an additional revision to this Agreement as a part of the expansion. The revision to Article 12: Leases, Rentals and Royalty Payments addresses transportation deductions. The revision further protects the state's interest and, in combination with the lease amendments discussed below, conforms the Agreement and current lease forms. ENI has accepted this revision and a copy of the executed Nikaitchuq Unit Agreement, State Only Model Form, Revised August, 2007, is attached to this Decision as Attachment 4.

Including the leases in the Expanded Nikaitchuq Unit Agreement would conform and modify the lease contracts to be consistent with the Agreement. Consistent lease provisions allow the WIOs and the state to reduce the administrative burdens of operating and regulating this unit. Conforming the terms of the older leases to the Agreement allows the state to avoid costly and time-consuming re-litigation of some problematic lease provisions in the older forms. Any additional administrative burdens associated with the expansion of the Unit are far outweighed by the additional royalty and tax benefits derived from any production that may occur if the exploration and development activity is successful.

Effective the date of this Decision, the WIOs agree to permanently amend the terms of ADLs 390615, 390616, and 391283 to conform with the provisions of the leases currently committed to the Tuvaaq and Nikaitchuq Units. The amendments to the leases include:

- Delete the last sentence of paragraph 15(d) of the leases, which reads:

  > If any portion of this lease is included in a participating area formed under a unit agreement, the entire leased area will remain committed to the unit and this lease will not be severed.

- Replace paragraph 36(b) of the leases with the following:

  > If oil, gas, or associated substances are sold away from the leased or unit area, the term "field price" will be the cash value of all consideration received by the lessee or other producer from the purchaser of the oil, gas or associated substances, less the lessee's actual and reasonable costs of transportation away from the leased or unit area to the point of sale. The "actual and reasonable costs of transportation" for marine transportation are as defined in 11 AAC 83.229(a), (b)(2), and (c) – (*l*).

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

1. Promote the Conservation of All Natural Resources

DNR recognizes unitization of the leases overlying a reservoir as a prudent conservation mechanism. Without unitization, the piece-meal, lease-by-lease development of reservoirs can become a race for possession by competing lessees. 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. Expansion of the NU will provide the state with a comprehensive plan for exploring and developing the entire unit area. Expansion of the NU subject to the terms and conditions of this Decision will ensure that the WIOs prudently explore the acreage included in the unit.

2. The Prevention of Economic and Physical Waste

The Unit expansion will prevent economic and physical waste because the Unit Operator must have a cost-sharing agreement, a coordinated exploration plan, and when 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 and reservoir model in place, the WIO 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. In the case of the proposed Nikaitchuq Unit expansion, there is currently only one WIO. However, future WIOs will benefit from a cost-sharing agreement.

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 secondary 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 Nikaitchuq Unit expansion 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. Reducing costs and environmental impacts through unitized operations will expedite development of any reserves discovered and will promote greater ultimate recovery of any oil and gas 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 of Interest, Including the State

Approval of the Application along with the agreed-to terms and conditions set out in this Decision and the 2nd POE, promotes the state's economic interests because exploration will likely occur earlier than without unit expansion. Unit expansion allows the acreage to be operated under a single Agreement. 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. Development will stimulate the state's economy with production-based revenue, 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 oil and gas, all of which will further the state's interest. The Agreement will further ENI's interest by providing clear provisions for the operation of the Nikaitchuq Unit. The modifications to the varying provisions of the leases will economically benefit the state, and reduce the administrative burdens of operating and regulating this Unit.

V. FINDINGS AND DECISION

A. The Conservation of All Natural Resources

1. The Agreement will conserve all natural resources, including hydrocarbons, gravel, sand, water, wetlands, and 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 subsistence access is in the public interest.

3. There is potential for 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 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. ENI submitted geological, geophysical and engineering data to the Division in support of the Application. Division technical staff determined that the expanded Nikaitchuq Unit area encompasses all or part of one or more potential hydrocarbon accumulations. The available geological, geophysical and engineering data justify including the proposed lands, described in Exhibit A to the Application, in the expanded Nikaitchuq Unit.

2. The 2nd POE subject to the terms and conditions discussed in Section IV.A.3., provides for the reasonable exploration and development of potential hydrocarbon accumulations in the unit area. The Agreement will prevent the waste of oil and gas, and increase the probability of recovering more hydrocarbons from the unit area. The Division must approve a plan of development before the Unit Operator produces any hydrocarbons in commercial quantities.

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

1. ENI provided evidence of reasonable effort to obtain joinder of any proper party to the Agreement.

2. ENI holds sufficient interest in the unit area to give reasonably effective control of operations.

3. The unit expansion adequately and equitably protects the public interest, and is in the state's best interest.

4. The unit expansion meets the requirements of 11 AAC 83.303.

5. The Division complied with the public notice requirements of 11 AAC 83.311.

6. The unit expansion will not diminish access to public and navigable waters beyond those limitations (if any) imposed by law or already contained in the oil and gas leases covered by this Agreement.

7. The Agreement provides for additional 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

8. The expanded Nikaitchuq Unit will expedite exploration and potential development of the unit area. With the expansion of the Nikaitchuq Unit, economic benefits to the state outweigh the economic costs of extending the primary term of the state leases committed to the unit.

9. Effective October 5, 2007, the Tuvaaq Unit covering ADLs 388571, 388572, 388573, 388574, 388575, 388577, and 388578 will be dissolved and the leases formerly included within the Tuvaaq Unit will be simultaneously committed to the Nikaitchuq Unit.

10. Effective October 5, 2007, that portion of ADL 355024 designated as Segment 2 will be segregated from the remaining portion of ADL 355024; will be contracted from the Kuparuk River Unit with the concurrence of the Kuparuk River Unit Operator and working interest owners; simultaneously committed to the Nikaitchuq Unit; and receive the new ADL 391283.

11. ENI has submitted a 2nd POE in conjunction with the Application. The 2nd POE replaces and supersedes the Initial POEs submitted for the Tuvaaq and Nikaitchuq Units. This 2nd POE is approved for the expanded Nikaitchuq Unit effective October 5, 2007, and it remains in effect for a period of five years, expiring October 4, 2012. An annual report will be due on or before October 5 of each plan year. The 2nd POE, subject to the terms and conditions discussed in Section IV.A.3, meets the requirements of 11 AAC 83.303 and 11 AAC 83.341.

12. On October 5, 2009, any portion of ADL 391283 not committed to a participating area will be segregated as to the portion committed to the participating area and the portion not committed to the participating area. The portion not committed to the participating area will automatically contract from the Unit unless included in an approved POE or POD. The Second POE will be amended to reflect acreage committed to a POD.

13. On October 5, 2011, any portion of the following leases, ADLs 388571, 388574, 388575, 388577, 388578, 388581, 388582, 388583, not committed to a participating area will be segregated as to the portion committed to the

participating area and the portion not committed to the participating area. The portion not committed to the participating area will automatically contract from the Unit unless included in an approved POE or POD. The Second POE will be amended to reflect acreage committed to a POD.

14. On October 5, 2012, any portion of, ADLs 388572, and 388573 not committed to a participating area will be segregated as to the portion committed to the participating area and the portion not committed to the participating area. The portion not committed to the participating area will automatically contract from the Unit unless included in an approved POE or POD which must include a firm commitment to drill at least one well on either lease, or both leases will automatically contract from the unit. The Second POE will be amended to reflect acreage committed to a POD.

15. On October 5, 2012, any portion of the following leases, ADLs 388579, 388580, 389719, 389720, 390433, not committed to a participating area will be segregated as to the portion committed to the participating area and the portion not committed to the participating area. The portion not committed to the participating area will automatically contract from the Unit unless included in an approved POE or POD which includes a firm commitment to drill at least one well on one of these leases, or all the leases will automatically contract from the unit.

16. On October 5, 2012, any portion of ADLs 390615 and 390616, not committed to a participating area will be segregated as to the portion committed to the participating area and the portion not committed to the participating area. The portion not committed to the participating area will automatically contract from the Unit unless included in an approved POE or POD.

17. In the event of a Unit contraction or termination, tract and lease owners waive the ninety day extension provisions of 11 AAC 83.140 and 11 AAC 83.374.

18. If a portion of a Lease contracts out of the Unit Area, that portion will be severed and treated as a separate and distinct lease, which may be maintained thereafter only in accordance with the terms and conditions of the original lease. The WIOs waive the provisions of 11 AAC 83.351 which protect the Lease from severance when a portion of a Lease is contracted out of the Unit Area.

19. If the Nikaitchuq Unit terminates or portions thereof contract for failure to fulfill any of the commitments in the 2nd POE, the WIO shall automatically surrender all leases or portions thereof within the Unit not then covered by an approved POE or POD or committed to a participating area and whose primary terms have expired, effective the day the unit terminates or contracts.

For the reasons discussed in this Findings and Decision, I hereby approve the expansion subject to the conditions set out in this decision, effective October 5 2007.

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

Kevin R. Banks,
Acting Director
Division of Oil and Gas

10-5-07
Date

VI. ATTACHMENTS

1) Exhibit A, Expanded Nikaitchuq Unit Tracts/leases
2) Exhibit B, Map of the Expanded Nikaitchuq Unit Boundary
3) Exhibit G, Plan of Exploration and Development (2nd POE)
4) Nikaitchuq Unit Agreement, State Only Model Form, Revised August, 2007