

## **DONKEL OIL AND GAS UNIT**

### **DENIAL OF THE APPLICATION TO FORM THE DONKEL OIL AND GAS UNIT**

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

**AUGUST 31, 2011**

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

The State of Alaska (state), Department of Natural Resources (DNR), Division of Oil and gas (Division) received the Application for the Formation of the Donkel Oil and Gas Unit (Application) on April 14, 2011 from Donkel Oil and Gas, LLC as the proposed Donkel Oil and Gas Unit Operator. Donkel Oil and Gas, LLC submitted confidential and public portions of the Application that meet the requirements for a complete application under 11 AAC 83.306 on May 16, 2011. The Division gave notice of the proposed Donkel Oil and Gas Unit under 11 AAC 83.311 on May 19, 2011. Public comment period closed on June 16, 2011 and DNR received one comment.

The Division finds that the approval of the Application is not necessary or advisable to protect the public interest considering the provisions of AS 38.05.180(p) and 11 AAC 83.303. The Application is denied.

## **II. APPLICATION**

Donkel Oil and Gas, LLC submitted the Application on April 14, 2011, 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: Exhibit A (Attachment 1), a map of the proposed unit; Exhibit B (Attachment 2), legally describing the proposed unit area, its leases, and ownership interests; Exhibit G (Attachment 3), the Plan of Exploration (POE); and the Donkel Oil and Gas Unit Agreement. The Application also includes confidential technical data.

The initial Application did not include the following items as required by 11 AAC 83.306: (1) an executed Unit Operating Agreement; (2) evidence that all proper parties were invited to join the unit; and (3) geologic and other data and information requested by the Division. The executed Donkel Oil and Gas Unit Agreement submitted with the Application differed from the standard state unit agreement form, although Donkel Oil and Gas, LLC had proposed no modifications under 11 AAC 83.326. Also Division records indicated that Donkel Oil and Gas, LLC did not have a current Certificate of Good Standing with the State of Alaska as required by 11 AAC 82.200.

The Division notified Donkel Oil and Gas, LLC by email dated April 28, 2011 and by letter dated May 2, 2011 that the Application was deemed incomplete. Donkel Oil and Gas, LLC submitted the required items, including an executed Donkel Oil and Gas Unit Agreement using the standard state unit agreement form, on May 16, 2011 and the Division deemed the Application complete on May 19, 2011.

The Division published a public notice in the "*Anchorage Daily News*" on May 24, 2011, and in the "*Arctic Sounder*" on May 30, 2011, 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 June 16, 2011. DNR received comment regarding the Application from Pamela A. Miller, Arctic Program Director, Northern Alaska Environmental Center. The Division considered the comment in the evaluation of the Application and the issuance of this decision. Northern Alaska Environmental Center topics of concern related to environmental impacts of drilling activity and "insufficiencies related to site specific environmental analysis, inadequacies of mitigation measures, and other factors." Also, Ms. Miller stated that the Application "does not meet the public interest or the standards to promote the conservation of natural resources, or to promote the prevention of economic and physical waste."

### III. LEASE BACKGROUND

Donkel Oil and Gas, LLC proposes the following seven leases for inclusion in the Donkel Oil and Gas Unit comprising approximately 21,354 acres:

ADL	State Royalty Interest %	Lease Effective Date	Lease Primary Term	Lease Form	Working Interest Owners and Percentage	Lease Expiration Date
389711	12.5	6/1/2001	10	DOG 200004	Cade 75.00% Donkel Oil and Gas, LLC 25.00%	5/31/2011
389712	12.5	6/1/2001	10	DOG 200004	Cade 75.00% Donkel Oil and Gas, LLC 25.00%	5/31/2011
389713	12.5	6/1/2001	10	DOG 200004	Cade 75.00% Donkel Oil and Gas, LLC 25.00%	5/31/2011
389714	12.5	6/1/2001	10	DOG 200004	Cade 75.00% Donkel Oil and Gas, LLC 25.00%	5/31/2011
389715	12.5	6/1/2001	10	DOG 200004	Cade 75.00% Donkel Oil and Gas, LLC 25.00%	5/31/2011
391374	16.66667	9/1/2009	7	200604	Cade 75.00% Donkel Oil and Gas, LLC 25.00%	8/31/2016
391375	16.66667	9/1/2009	7	200604	Cade 75.00% Donkel Oil and Gas, LLC 25.00%	8/31/2016

#### **IV. DISCUSSION OF DECISION CRITERIA**

A unit may be formed to conserve the natural resources of all or a part of an oil or gas pool, field, or like area when determined and certified to be necessary or advisable in the public interest (AS 38.05.180(p)). Conservation of the natural resources of all or part of an oil or gas pool, field or like area means maximizing the efficient recovery of oil and gas and minimizing the adverse impacts on the surface and other resources. 11 AAC 83.395(1).

The DNR Commissioner (Commissioner) reviews applications related to units under 11 AAC 83.303 - 11 AAC 83.395. By memorandum dated September 30, 1999, the Commissioner approved a revision of Department Order 003 and delegated this authority to the Division Director.

The Commissioner will approve a proposed unit upon a finding that it will (1) promote conservation of all natural resources, including all or part of an oil or gas pool, field, or like area; (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).

In evaluating these three criteria, the Commissioner will consider (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 commissioner 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 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. Environmental Costs and Benefits**

The proposed Donkel Oil and Gas Unit is located on the North Slope of Alaska, offshore of the Arctic National Wildlife Refuge, east of the Point Thompson Unit. This area is habitat for various 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.

Approval of the formation of the Donkel Oil and Gas Unit does not authorize any on-the-ground activity. A plan of operations must be approved before any operation is conducted on a lease or in a unit. DNR develops lease stipulations through the lease sale process to mitigate the potential environmental impacts from oil and gas activity. Potential effects on the environment are also analyzed when permits to conduct exploration or development in the unit area are reviewed.

The activity proposed in the POE would not be conducted any differently as a unit than as individual leases. As a result, there is no environmental benefit to be gained by unitization.

## **2. Geologic and Engineering Characteristics and Prior Exploration Activities**

ARCO Alaska, Inc. drilled the Stinson #1 on State Oil and Gas lease ADL 371024 in the winter of 1989 to a total depth of 16,156 feet. The primary objective was a Paleocene stratigraphic play typified on seismic data by a thickened section displaying bi-directional downlap. Lower Cretaceous clastics of the Pt. Thomson interval were considered a secondary target. Both objectives proved unsuccessful from a reservoir perspective. The Paleocene section was silt/shale prone and the Lower Cretaceous interval was absent due to non-deposition.

The well did encounter a significant zone of hydrocarbon shows and flow that commenced in the Eocene at 12,500' and appeared to continue to TD in the Proterozoic basement. Test #1, which was an open hole test, 14,863'-15,194', achieved a flow of 430 BOPD, 7.1 MMCFGD and 520 BWD from a section that included the pre-Tertiary unconformity and the immediately underlying Proterozoic quartzite. Additional drill stem tests behind casing (#2 - #4) were subsequently conducted in both the Proterozoic quartzite and deeper metadolomites, but in all cases either failed or no significant flow was detected. The flow of hydrocarbon from the open hole most likely resulted from the movement of fluids through an intensely fractured basement and/or along the pre-Tertiary unconformity. Perforated interval in the succeeding test probably penetrated dense, well-lithified basement rocks and hence resulted in little fluid flow. Core data indicated the Proterozoic quartzites have an average porosity of 2% and permeability of 0.1 md. Similarly, the metadolomites have an average porosity of 2% and permeability of 0.2 md. In all, 5 cores were recovered from the well; one from the basal portion of the lower Eocene sandstones (core #1, 12,716'-12,732.9'), one from the basal Paleocene section (core #2, 14,890'-14,945') and three from the Proterozoic basement (core #3, 14,945'-14,946'; core #4 14,946'-14,954'; core #5, 16,092'-16,106').

Drill stem test #5 - #7 were conducted in the Tertiary section. Test #5 (14,150'-14,350') was conducted in thinly laminated, very fine-grained sandstone, siltstone and shale of the Paleocene; no significant flow was detected. Test #6 (12,590'-12,610'; 12,680'-12,720') was conducted in Eocene marine sandstone and also showed no significant flow. Due to severe hole wash outs, the test should be considered a failed test. Conventional core (core #1) from this interval had porosities ranging from 11-15%, average permeability of 1.7 md., and calculated water saturations of 20% to 35%. The core data were obtained from thin-bedded, fine-grained sandstones at the base of a thickening and coarsening upward section. If properly tested, the interval would probably flow oil. Test #7 (12,142'-12,332') was attempted through two casing strings in Eocene sandstone and conglomerate above the geopressure zone beginning at 12,500'; no significant flow was detected. After completing the test program, ARCO plugged and abandoned the well on August 20, 1990.

On February 28, 1997 the well was certified as being capable of producing hydrocarbons in paying quantities from the Proterozoic quartzite. The well data was held confidential until April, 2008 when ConocoPhillips relinquished the oil and gas lease to the State of Alaska. The well is no longer certified as being capable of producing hydrocarbons in paying quantities.

Subsequently the acreage was re-leased to Daniel K. Donkel and Samuel H. Cade as ADL 391375. One of the proposed options in the fourth year of the POE is to re-enter this well. ADL 391375 does not expire until August 31, 2016 which provides adequate time for Donkel Oil and Gas, LLC to conduct drilling and testing activity on this lease without unitization.

During the primary term of the leases in the unit application no exploration work was conducted.

### **3. Plan of Exploration and Development**

Donkel Oil and Gas, LLC submitted a POE as part of the Application and met with the Division for a technical presentation on May 5, 2011.

Donkel Oil and Gas, LLC proposes a four year exploration plan to conduct seismic, and then by August 31, 2015, the fourth year of the POE, to drill a well somewhere within the proposed unit boundary. In the first year, by August 2012, Donkel Oil and Gas, LLC will prepare, obtain permits for, and secure a contract to conduct a geophysical exploration program. In the second year, by August 2013, Donkel Oil and Gas, LLC proposes to perform a 3-D geophysical exploration program, and compile and interpret the data. During the third year of the plan, Donkel Oil and Gas, LLC proposes to obtain a permit to drill a well and in the fourth year of the proposed POE Donkel Oil and Gas, LLC proposes to drill a well. Donkel Oil and Gas, LLC has not submitted a plan to bring the proposed unit into production during the unit's five year term. 11 AAC 83.336.

Unitizing the leases is not necessary to conduct the activities proposed in the POE. The activities proposed in the POE would not be conducted any differently as a unit than as individual leases.

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

The POE does not propose activity which would result in greater economic benefit to the state if the leases were unitized than if the activities were conducted on a lease-by-lease basis. The activities proposed by Donkel Oil and Gas, LLC do not result in production sooner than if the same activities (seismic and drilling) were conducted on a lease-by-lease basis. Accordingly, unitization in this case offers no benefit to the state. Moreover, the POE does not describe any activity that would result in a benefit to the state which could not be conducted on a lease-by-lease basis during the leases' primary terms.

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

### **1. Promote the Conservation of All Natural Resources**

A unit may be formed under AS 38.05.180(p) "[t]o conserve the natural resources of all or a part of an oil or gas pool, field, or like area." Conservation of the natural resources of all or part of an oil or gas pool, field or like area means maximizing the efficient recovery of oil and gas and minimizing the adverse impacts on the surface and other resources. 11 AAC 83.395(9). The



unitization of oil and gas reservoirs and the formation of unit areas to develop hydrocarbon-bearing reservoirs are well-accepted means of hydrocarbon conservation. Unitization, with development occurring under the terms of a unit agreement, can promote efficient evaluation and development of the State's resources, and minimize impacts to the area's cultural, biological, and environmental resources.

The proposed Donkel Oil and Gas Unit, however, does not promote conservation of natural resources because Donkel Oil and Gas, LLC has not provided DNR a timely plan to bring the unitized leases into production. Unitization is not necessary to conduct the activities proposed in the POE. The activities can be conducted on a lease-by-lease basis without jeopardizing the conservation objectives advanced by unitization. None of the activities proposed by Donkel Oil and Gas, LLC require unitization to efficiently recover oil and gas or minimize adverse impacts. There are also no competing interests between the leases since the working interest ownership of all of the leases proposed for unitization is aligned. Thus there is no impediment to efficient exploration on a lease-by-lease basis.

Nor would unitization promote the conservation of other natural resources because the proposed POE will not lead to a more efficient use of gravel, water and other resources than would the same activities conducted on a lease-by-lease basis. In other words, the proposed activities will not differ whether performed in a unit or on individual leases, the risks and benefits to the environment are the same.

## **2. The Prevention of Economic and Physical Waste**

Unitization, as opposed to activity on a lease-by-lease basis, may prevent economic and physical waste. Economic waste is often referred to as the drilling of wells in excess of the number necessary for the efficient recovery of the oil and gas in place. Physical waste, among other things, includes the inefficient, excessive, or improper use of, or unnecessary dissipation of, reservoir energy.

Here, unitization would not prevent waste any more than conducting these activities on a lease-by-lease basis. The POE proposes to conduct an exploratory geologic program and drill a well in the fourth year. Because only one well is proposed for all these leases, the POE presents no threat of excessive drilling that makes it necessary to join the leases in a unit to avoid economic waste. Additionally, the use or dissipation of reservoir energy will not differ whether these proposed activities are carried out on individual leases or a unit, so there is no threat of physical waste favoring unitization either.

Unitization may also prevent economic and physical waste by eliminating redundant expenditures for a given level of production, or by avoiding loss of ultimate recovery with the adoption of a unified reservoir management plan. The POE, a unified reservoir management plan, does not propose any activity that could not be conducted any differently with unitization, as opposed to individual leases. Thus the Application does not present a potential for reduction of costs and environmental impacts through unitized operations that will expedite development of any reserves, or promote greater ultimate recovery of any oil and gas from the proposed unit area.



For these reasons, the proposed Donkel Oil and Gas Unit would not prevent economic or physical waste.

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

Donkel Oil and Gas, LLC would benefit from unitization of these leases including extension of the leases beyond their primary terms. Unitization would provide benefit to Donkel Oil and Gas, LLC in the extension of primary term of five of the seven proposed leases. Five of the leases would have expired May 31, 2011 if not for this Application.

Unitization would not, however, offer equal benefit or protections to the people of Alaska or the state.

The people of Alaska have an interest in both the conservation of natural resources for human use and development of the State's oil and gas resources to maximize the economic and physical recovery of the resources. AS 38.05.180(a)(1); AS 44.37.020(a). It is further in the state's best interest to encourage assessment of oil and gas resources, recognize the costs of exploring in varied geographic regions, and minimize the adverse impact of exploration, development, production, and transportation activity. AS 38.05.180(a)(2).

Often, unitization increases the likelihood that exploration and development will occur earlier than without unitization as various leaseholders can collaborate on the joint exploration and development of the unit area as if it was a single lease. In that respect, unitization can further the state and people's economic interests.

Here, the Donkel Oil and Gas Unit POE does not demonstrate that unitization will encourage earlier delineation drilling activities upon the subject leases than if these activities were conducted on a lease-by-lease basis, other than to provide Donkel Oil and Gas, LLC an extension to five of the lease's primary terms without any commitment to production.

Considering the proposed activities, unitization will not affect the risks or benefits to natural resources available for public use or minimize adverse impacts when compared to the same activities on individual leases.

The POE does not protect the State's interest in promoting timely and efficient development of State resources. The plan only proposes exploration activities, but does not offer a reasonable timetable for achieving development and sustained production in a timely and efficient manner.

## **V. FINDINGS**

### **A. Promote the Conservation of All Natural Resources**

1. State regulations define “conservation” for purposes of oil and gas leasing as “maximizing the efficient recovery of oil and gas and minimizing the adverse impacts on the surface and other resources.” 11 AAC 83.395(9). For the reasons discussed above, the proposed Donkel Oil and Gas Unit POE does not propose any activity which would maximize efficient recovery when conducted on unitized lands any more than if the lands were single leases. Therefore, unitization does not promote the conservation of all natural resources.

### **B. Promote the Prevention of Economic and Physical Waste**

The Donkel Oil and Gas POE proposes to conduct seismic and drill one well in the fourth year after unit formation. The proposed activity would not be conducted any differently as a unit than as individual leases. Thus for this and other reasons discussed above, unitization would not prevent economic or physical waste.

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

The legislature intended that oil and gas leases maximize production, competition amongst producers, and local employment. AS 38.05.180(a). Should the leases proposed for inclusion in the Donkel Oil and Gas Unit expire, not being in production or held by unitization, the area could be re-offered at lease sale by competitive bid thereby enhancing competition amongst parties seeking to develop and produce oil and gas resources. Allowing Donkel Oil and Gas, LLC to unitize and hold state leases is contrary to the public interest. To provide for unitization in this case would be contrary to the state’s interest in promoting diligent exploration by its lessees.

The only interest protected by granting unitization, is the lessees’ interest in extending the lease terms to conduct exploration activities that could otherwise be conducted on a lease-by-lease basis.

## **VI. DECISION**

The Application is denied because it is neither necessary nor advisable to protect the public or state’s interests. Donkel Oil and Gas Unit formation as proposed by Donkel Oil and Gas, LLC could deprive the state of the benefits of oil and gas leasing. The Application does not meet the requirements of 11 AAC 83.303 because the proposed activities do not require unitization in order to promote the conservation of all natural resources and prevent economic and physical waste. It is not in the state’s interest to allow Donkel Oil and Gas, LLC to retain the leases and benefit from the lease term extensions provided by unitization without having demonstrated the need for unitization.

For the reasons discussed in this Findings and Decision, I hereby deny the Application.

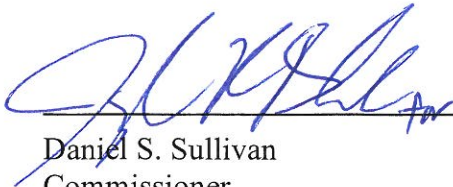
A person affected by this decision may request reconsideration, in accordance with 11 AAC 02. Any reconsideration request must be received within 20 calendar days after the date of "issuance" of this decision, as defined in 11 AAC 02.040(c) and (d), and may be mailed or delivered to Daniel S. Sullivan, Commissioner, Department of Natural Resources, 550 W. 7th Avenue, Suite 1400, Anchorage, Alaska 99501; faxed to 1-907-269-8918; or sent by electronic mail to [dnr.appeals@alaska.gov](mailto:dnr.appeals@alaska.gov). This decision takes effect immediately. If reconsideration is not requested by the deadline, this decision becomes a final administrative order and decision of the department on the 31st day after issuance. Failure of the commissioner to act on a request for reconsideration within 30 days after issuance of this decision is a denial of reconsideration and is a final administrative order and decision for purposes of an appeal to Superior Court. The decision may then be appealed to Superior Court within a further 30 days in accordance with the rules of the court, and to the extent permitted by applicable law. An eligible person must first request reconsideration of this decision in accordance with 11 AAC 02 before appealing this decision to Superior Court. A copy of 11 AAC 02 may be obtained from any regional information office of the Department of Natural Resources.



W. C. Barron,  
Director  
Division of Oil and Gas

8/31  
11

Date



Daniel S. Sullivan  
Commissioner  
Department of Natural Resources

8/31/2011

Date

## VII. ATTACHMENTS

- 1) Exhibit A, Proposed Donkel Oil and Gas Unit Tracts/leases
- 2) Exhibit B, Map of the Proposed Donkel Oil and Gas Unit Boundary
- 3) Exhibit G, Proposed Plan of Exploration

**ATTACHMENT ONE**

Exhibit A, Proposed Donkel Oil and Gas Unit Tracts/leases

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APR 14 2011

Exhibit "A"

# DONKEL OIL AND GAS UNIT AGREEMENT

## Unit Area

DIVISION OF  
OIL AND GAS

DOG Unit Tract Number	Description of Unitized Lands	Gross Acres	Committed DOG Unit Acreage	Tract Participating Factor	Lessor / Royalty Owner Lease No.	Expiration Date	Royalty Interest	ORRI Owners	Overriding Royalty Interest	Working Interest Owners & Percentage Working Interest	Recording District
1	<u>T. 10 N., R. 25 E., U.M.</u>			0.2526855	State of Alaska ADL-389715	5/31/2011	0.1250	AVCG, LLC Bow Valley Alaska Company Ramshorn Investments, Inc. TG World Energy, Inc. J. Andrew Bachner Keith C. Forsgren total	0.3000 0.2000 0.2500 0.2500 2.0000 0.0000 3.0000	Daniel K. Donkel 25.00% Samuel H. Cade 75.00%	Barrow
	Section 03: Protracted, All	640.00	640.00								
	Section 04: Unsurveyed, All tide and submerged lands seaward of the Arctic National Wildlife Refuge (PL 96-487)	633.64	633.64								
	Section 08: Unsurveyed, All tide and submerged lands seaward of the Arctic National Wildlife Refuge (PL 96-487)	166.78	166.78								
	Section 10: Unsurveyed, All tide and submerged lands seaward of the Arctic National Wildlife Refuge (PL 96-487)	600.01	600.01								
	Section 15: Unsurveyed, All tide and submerged lands seaward of the Arctic National Wildlife Refuge (PL 96-487)	88.86	88.86								
	<u>T. 10 N., R. 25 E., U.M.</u>										
	Section 16: Protracted, All tide and submerged lands shoreward of the line fixed by coordinates found in Exhibit A of the Final Decree in U.S. vs. Alaska, No. 84 Original	1.82	1.82								
	Section 21: Protracted, All tide and submerged lands shoreward of the line fixed by coordinates found in Exhibit A of the Final Decree in U.S. vs. Alaska, No. 84 Original	530.29	530.29								
	Section 22: Protracted, All tide and submerged lands shoreward of the line fixed by coordinates found in Exhibit A of the Final Decree in U.S. vs. Alaska, No. 84 Original	177.77	177.77								
	Section 27: Protracted, All tide and submerged lands shoreward of the line fixed by coordinates found in Exhibit A of the Final Decree in U.S. vs. Alaska, No. 84 Original	638.60	638.60								
	Section 28: Protracted, All	640.00	640.00								
	Section 33: Protracted, All	640.00	640.00								
	Section 34: Protracted, All	640.00	640.00								
	Comprising a total of approximately 5,395.77 acres.		5395.77								
2	<u>T. 10 N., R. 25 E., U.M.</u>			0.0711450	State of Alaska ADL-389714	5/31/2011	0.1250	AVCG, LLC Bow Valley Alaska Company Ramshorn Investments, Inc. TG World Energy, Inc. J. Andrew Bachner Keith C. Forsgren total	0.3000 0.2000 0.2500 0.2500 2.0000 0.0000 3.0000	Daniel K. Donkel 25.00% Samuel H. Cade 75.00%	Barrow
	Section 25: Protracted, All tide and submerged lands shoreward of the line fixed by coordinates found in Exhibit A of the Final Decree in U.S. vs. Alaska, No. 84 Original	7.34	7.34								
	Section 26: Protracted, All tide and submerged lands shoreward of the line fixed by coordinates found in Exhibit A of the Final Decree in U.S. vs. Alaska, No. 84 Original	356.05	356.05								
	Section 35: Protracted, All	640.00	640.00								
	Section 36: Protracted, All tide and submerged lands shoreward of the line fixed by coordinates found in Exhibit A of the Final Decree in U.S. vs. Alaska, No. 84 Original	477.01	477.01								



T. 10 N., R. 26 E., U.M.

Section 31:  
Protected, All tide and submerged lands seaward of the line fixed by coordinates found in Exhibit A of the Final Decree in U.S. vs. Alaska, No. 84 Original  
Comprising a total of approximately 1,519.21 acres.

38.81	38.81
<hr/>	
1519.21	

3

T. 09 N., R. 25 E., U.M.

Section 01:  
Protected, All  
Section 02:  
Protected, All  
Section 11:  
Protected, All  
Section 12:  
Protected, All  
Comprising a total of approximately 2,560.00 acres.

640.00	640.00	0.1198855	State of Alaska ADL-391375	8/31/2016	0.1250	none	0.0000	Daniel K. Donkel 25.00% Samuel H. Cade 75.00%	Barrow
640.00	640.00						0.0000		
640.00	640.00								
640.00	640.00								
<hr/>									
2560.00									

4

T. 09 N., R. 26 E., U.M.

Section 13:  
Protected, All  
Section 14:  
Unsurveyed, All tide and submerged lands seaward of the Arctic National Wildlife Refuge (PL 96-487)  
Section 23:  
Unsurveyed, All tide and submerged lands seaward of the Arctic National Wildlife Refuge (PL 96-487)  
Section 24:  
Unsurveyed, All tide and submerged lands seaward of the Arctic National Wildlife Refuge (PL 96-487)  
Section 25:  
Unsurveyed, All tide and submerged lands seaward of the Arctic National Wildlife Refuge (PL 96-487)  
Comprising a total of approximately 1,948.95 acres.

640.00	640.00	0.0512699	State of Alaska ADL-389713	5/31/2011	0.1250	AVCG, LLC Bow Valley Alaska Company Ramshorn Investments, Inc. TG World Energy, Inc. J. Andrew Bachner Keith C. Forsgren	0.3000 0.2000 0.2500 0.2500 2.0000 0.0000	Daniel K. Donkel 25.00% Samuel H. Cade 75.00%	Barrow
561.11	561.11								
82.46	82.46								
570.84	570.84								
94.54	94.54								
<hr/>									
1948.95									

5

T. 09 N., R. 26 E., U.M.

Section 05:  
Protected, All tide and submerged lands seaward of the line fixed by coordinates found in Exhibit A of the Final Decree in U.S. vs. Alaska, No. 84 Original  
Section 06:  
Protected, All tide and submerged lands seaward of the line fixed by coordinates found in Exhibit A of the Final Decree in U.S. vs. Alaska, No. 84 Original  
Section 07:  
Protected, All  
Section 08:  
Protected, All tide and submerged lands seaward of the line fixed by coordinates found in Exhibit A of the Final Decree in U.S. vs. Alaska, No. 84 Original  
Section 17:  
Protected, All  
Section 18:  
Protected, All  
Comprising a total of approximately 2,963.43 acres.

46.98	46.98	0.1387783	State of Alaska ADL-389712	5/31/2011	0.1250	AVCG, LLC Bow Valley Alaska Company Ramshorn Investments, Inc. TG World Energy, Inc. J. Andrew Bachner Keith C. Forsgren	0.3000 0.2000 0.2500 0.2500 2.0000 0.0000	Daniel K. Donkel 25.00% Samuel H. Cade 75.00%	Barrow
505.68	505.68								
628.00	628.00								
511.77	511.77								
640.00	640.00								
631.00	631.00								
<hr/>									
2963.43									

RECEIVED

APR 14 2011

DIVISION OF  
OIL AND GAS



T. 09 N., R. 28 E., U.M.

Section 19: Protracted, All	633.00	633.00	0.1206264	State of Alaska ADL-389711	5/31/2011	0.1250	AVCG, LLC Bow Valley Alaska Company Ramshorn Investments, Inc. TG World Energy, Inc. J. Andrew Bachner Keith C. Forsgren	0.3000 0.2000 0.2500 2.0000 0.0000	Daniel K. Donkel 25.00% Samuel H. Cade 75.00%	Barrow
Section 20: Protracted, All	640.00	640.00								
Section 29: Protracted, All	640.00	640.00								
Section 30: Unsurveyed, All tide and submerged lands seaward of the Arctic National Wildlife Refuge (PL 96-487)	541.64	541.64								
Section 31: Unsurveyed, All tide and submerged lands seaward of the Arctic National Wildlife Refuge (PL 96-487)	12.58	12.58								
Section 32: Unsurveyed, All tide and submerged lands seaward of the Arctic National Wildlife Refuge (PL 96-487)	108.60	108.60								
Comprising a total of approximately 2,575.82 acres.		<u>2575.82</u>								

T. 09 N., R. 28 E., U.M.

Section 09: Protracted, All tide and submerged lands within the computed Territorial Sea, listed as "State Acreage" on the State of Alaska approved Territorial Sea Boundary Diagram dated 9/21/1999	42.15	42.15	0.2056093	State of Alaska ADL-391374	8/31/2016	0.1250	none		Daniel K. Donkel 25.00% Samuel H. Cade 75.00%	Barrow
Section 15: Protracted, All tide and submerged lands within the computed Territorial Sea, listed as "State Acreage" on the State of Alaska approved Territorial Sea Boundary Diagram dated 9/21/1999	373.45	373.45								
Section 16: Protracted, All tide and submerged lands within the computed Territorial Sea, listed as "State Acreage" on the State of Alaska approved Territorial Sea Boundary Diagram dated 9/21/1999	567.47	567.47								
Section 21: Protracted, All	640.00	640.00								
Section 22: Protracted, All	640.00	640.00								
Section 27: Protracted, All	640.00	640.00								
Section 28: Protracted, All	640.00	640.00								
Section 33: Protracted, All tide and submerged lands seaward of PLO 2214	255.11	255.11								
Section 34: Protracted, All tide and submerged lands seaward of PLO 2214	592.34	592.34								
Comprising a total of approximately 4,380.52 acres.		<u>4380.52</u>								

$\frac{4380.52}{1.00000000} = \text{Tract factor check}$

**Total Unifted Land: 21,353.70 acres**

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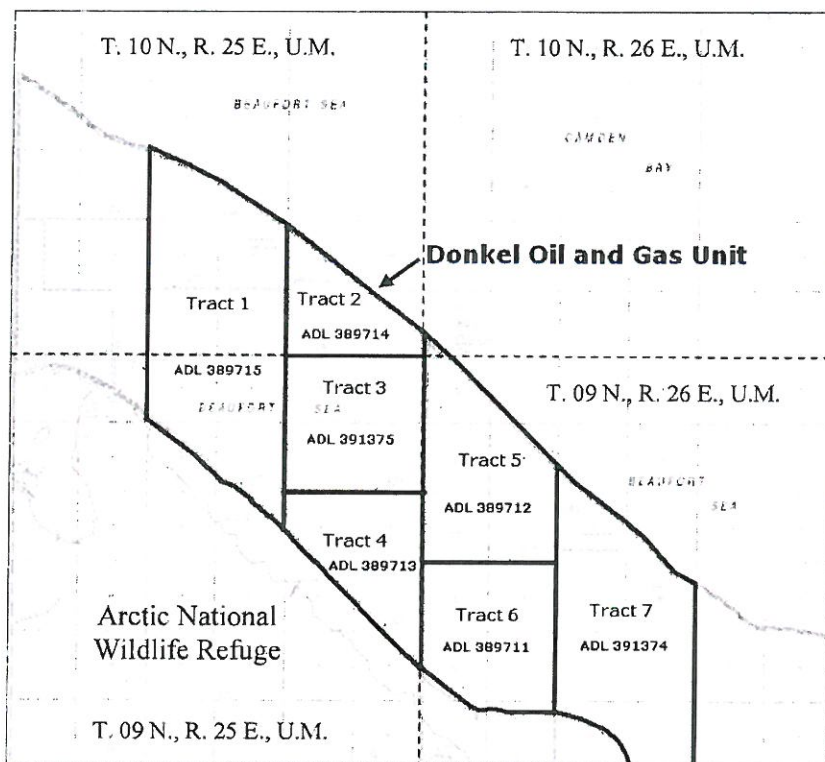
## **ATTACHMENT TWO**

Exhibit B, Map of the Proposed Donkel Oil and Gas Unit Boundary

Exhibit "B"

# DONKEL OIL & GAS UNIT AGREEMENT

## Unit Area



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### **ATTACHMENT THREE**

Exhibit G, Proposed Plan of Exploration

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**Exhibit "G"**

**DONKEL OIL & GAS UNIT AGREEMENT**

**Initial Plan of Exploration**

The Unit Operator, Donkel Oil & Gas, LLC ("DOG"), will complete this Initial Four - Year Plan of Exploration for the Donkel Oil & Gas Unit ("DOG UNIT"), effective September 1, 2011 to August 31, 2015.

**Year 2011 to 2012**

1. By August 31, 2012 DOG shall:
  - a. Prepare a 3-D Geophysical Exploration Program that will cover the unitized acreage, consisting of project schedule, line locations, number of shot points, and data acquisition and interpretation methodology.
  - b. Obtain all permits necessary for the Geophysical Exploration Program detailed in "a" above, including the necessary bonding.
  - c. Contract with a geophysical exploration company, qualified to do business in Alaska.
2. All data or geophysical information obtained shall be submitted to the Department of Natural Resources.
3. If DOG fails to complete the 1st year commitments listed above, by August 31, 2012, the DOG Unit will automatically terminate, however any lands with active leases, held by production, or undergoing drilling or re-drilling activities shall continue as provided in 11 AAC 83.140.

**Year 2012 to 2013**

1. By May 30, 2013 DOG shall:
  - a. Perform a 3-D geophysical exploration program that covers the leases within the DOG Unit, as proposed in year 1, item 1. a above.
2. By August 31, 2013 DOG shall:
  - a. Compile all the gathered geophysical information from the operations above and the data interpreted.
3. All data or geophysical information obtained shall be submitted to the Department of Natural Resources.

4. If DOG fails to complete the 2nd year commitments listed above, by August 31, 2013, the DOG Unit will automatically terminate, however any lands with active leases, held by production, or undergoing drilling or re-drilling activities shall continue as provided in 11 AAC 83.140.

**Year 2013 to 2014**

1. By August 31, 2014 DOG shall:
  - a. Obtain all permits necessary for the Drilling of an exploration well within the Unit, or a directional well with a surface location outside the Unit but with a bottom hole location within the Unit, or the reentry of the Stinson #1 Well within the DOG Unit, including the necessary bonding.
2. If DOG fails to complete the 3rd commitment listed above, by August 31, 2013, the DOG Unit will automatically terminate, however any lands with active leases, held by production, or undergoing drilling or re-drilling activities shall continue as provided in 11 /AC 83.140.

**Year 2014 to 2015**

1. By August 31, 2015 DOG shall:
  - a. Drill an exploration well within the Unit, or a directional well with a surface location outside the Unit but with a bottom hole location within the Unit, or re-enter the Stinson #1 Well within the DOG Unit, including the necessary bonding.
2. If DOG fails to complete the 4th commitment listed above, by August 31, 2013, the DOG Unit will automatically terminate. however any lands with active leases, held by production, or undergoing drilling or re-drilling activities shall continue as provided in 11 AAC 83.140.

In accordance with 11 AAC 8 3.341, DOG will submit an annual report to the Department of Natural Resources that describes the status of projects undertaken and the work completed during the prior year, as well as any proposed changes to the Initial Plan of Exploration.

DOG will submit a Second Plan of Exploration to the Department of Natural Resources and at least 60 days before the Initial Plan of Exploration for the DOG Unit expires. Alternatively, DOG may submit a request for Approval of the First Plan of Development for the DOG Unit to the Department of Natural Resources at least 90 days before the Initial Plan of Exploration for the DOG Unit expires.

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