

APPROVAL OF THE SOUTHERN MILUVEACH UNIT  
TERM EXTENSION AND  
REVISED PLAN OF DEVELOPMENT

Findings and Decision  
of the Commissioner of the  
Department of Natural Resources,  
State of Alaska

March 30, 2016

TABLE OF CONTENTS

I. INTRODUCTION AND DECISION SUMMARY .....3

II. DISCUSSION OF DECISION CRITERIA .....3

    A. Decision Criteria considered under 11 ACC 83.303(b).....3

        1. The Environmental Costs and Benefits.....3

        2. Geologic and Engineering Characteristics.....4

        3. Plans of Exploration and Development .....4

        4. The Economic Costs and Benefits to the State and Other Relevant Factors .....5

    B. Decision Criteria Considered Under 11 ACC 83.303(a).....5

        1. Promote the Conservation of All Natural Resources.....5

        2. Prevention of Economic and Physical Waste .....6

        3. Protection of All Parties of Interest, Including the State .....6

III. FINDINGS AND DECISION .....6

    A. Conservation of All Natural Resources .....6

    B. Prevention of Economic and Physical Waste .....6

    C. Protection of All Parties in Interest, Including the State .....6

IV. ATTACHMENTS .....7

    Attachment 1: Request for Extension of the Term of the Southern Miluveach Unit Agreement, dated December 15, 2015 .....8

    Attachment 2: Amended Request for Extension of the Term of the Southern Miluveach Unit Agreement, dated March 11, 2016.....11

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

By letter dated December 15, 2015, and received December 21, 2015, the Southern Miluveach Unit Operator, Brooks Range Petroleum (BRPC) requested an extension of the Southern Miluveach Unit (SMU) Agreement under 11 ACC 83.336(a)(2) until March 31, 2017. By letter dated March 11, 2016, BRPC amended their request to extend the unit term until December 31, 2017.

Under 11 ACC 83.336 and Article 14 of the SMU Agreement, the SMU Agreement automatically terminates five years from the effective date unless certain conditions are met. Without an extension, the SMU Agreement would terminate effective March 31, 2016.

The State of Alaska, Department of Natural Resources (DNR), Division of Oil and Gas (Division) gave notice under 11 ACC 83.311 of the request to extend the unit agreement on December 31, 2015. The period for public comment closed effective February 1, 2016. No comments were received.

The Southern Miluveach Unit, formed effective March 31, 2011, is located on the North Slope of Alaska, south of the Kuparuk River Unit. The SMU contains 8,960 acres encompassing five state oil and gas leases. The SMU formation approval included Exhibit G to the SMU Agreement and the Initial Plan of Exploration (POE), effective March 31, 2011 and ending December 1, 2013. Following the POE, development operations are conducted under an approved Plan of Development (POD). The SMU is currently operating under the 3<sup>rd</sup> POD which expires concurrently with the unit term on March 31, 2016.

This approval constitutes the written findings and decision required under 11 ACC 83.303 and is fully appealable. DNR finds that approval of the unit extension request promotes conservation of all natural resources, prevents economic and physical waste, provides for the protection of all parties of interest, including the State, and meets the requirements of 11 ACC 83.336(2). DNR approves the unit term extension until December 31, 2017 in accordance with the criteria under 11 ACC 83.303 and BRPC's request. Additionally, the 3<sup>rd</sup> POD will be extended until December 31, 2016.

## **II. DISCUSSION OF DECISION CRITERIA**

AS 38.05.180(p) gives DNR the authority to approve an oil and gas unit agreement. DNR previously approved the Southern Miluveach Unit Agreement. A unit agreement terminates automatically five years from the unit agreement effective date. The DNR Commissioner (Commissioner) may issue a written decision extending the unit term for a period not to exceed five years if exploration operations have been conducted in accordance with an approved unit plan. 11 AAC 83.336(2). The Commissioner reviews requests for unit agreement extensions under 11 ACC 83.336(2), subject to the criteria specified in 11 ACC 83.303.

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

1. The Environmental Costs and Benefits

The Division previously considered the environmental costs and benefits of unitized development at SMU in the original unit formation approval and subsequent plans of exploration, development, and operations. Extending the SMU Agreement will allow previously approved activities to continue, but does not itself authorize additional activities. Therefore, the extension itself should have no environmental costs and benefits beyond those considered in earlier approvals.

## 2. Geologic and Engineering Characteristics

Approval of the extension to the SMU Agreement has no impact on the Division's earlier consideration of the geologic and engineering characteristics of the potential hydrocarbon accumulations or reservoirs in the unit area.

## 3. Plans of Exploration and Development

The SMU's Initial POE was approved through December 1, 2013, and required BRPC to drill, evaluate, and test three wells (North Tarn #1A, Mustang #1, and Mustang #2) in the Kuparuk formation by May 31, 2012. Two wells, North Tarn #1A and Mustang #1 (SMU M-01), were timely drilled. At BRPC's request, on February 23, 2012, the Division extended the Mustang #2 (SMU M-02) well drilling requirement date to May 31, 2014. BRPC did not drill, evaluate, and test the SMU M-02 by the deadline. By letter dated November 18, 2014, the Commissioner issued a notice of default with a cure demand to drill, evaluate, and test the SMU M-02 well by May 31, 2015. The notice was timely appealed by BRPC on December 8, 2014.

During the 1st Plan of Development (POD) for 2014, BRPC planned to begin development drilling and construction and installation of the processing facilities necessary for surface infrastructure to begin production in early 2015. During the 2015 2nd POD time period, BRPC planned to commission a rig and drill three wells beginning with the SMU M-02 well. Additionally, BRPC planned to install piles for pipeline support, execute pipeline tie-ins, set pipe racks, fabricate short lead process modules, and construct non-process infrastructure such as a warehouse, utility building, and permanent camp. In the first quarter of 2015, BRPC commissioned the Nabors Rig 16E and drilled the SMU M-02.

On April 3, 2015, BRPC notified the Division that the SMU M-02 well had been drilled and completed as an injection well. The DNR waived the requirement to test the SMU M-02 well and found that BRPC had cured the SMU default. BRPC then attempted to drill the Mustang #3 (SMU M-03) well and a horizontal lateral off the existing SMU M-01 wellbore. Both wells encountered drilling difficulties and had to be suspended in the intermediate section of the well prior to reaching the reservoir interval.

BRPC also continued facility and infrastructure construction during the 2015 2nd POD period. Contracting and fabrication are ongoing for oil processing, control room, and gas compression and conditioning modules. BRPC reported fabrication of 470 piles and vertical support members for module, pipeline, and platform support with 284 piles installed in the field. Two off-pad pipeline platforms, the Alpine pipeline tie-in platform and the BRPC pipeline pigging platform, were fabricated and installed. Two 5-megawatt dual-fueled turbine power generation packages were shipped to BRPC in Alaska. Other associated facility packages and equipment have been

ordered or bid upon during the 2nd POD period. BRPC reported that engineering is approximately 65% complete for work yet to be completed.

During the 3rd POD period, BRPC plans to use Managed Pressure Drilling to facilitate controlled drilling in over-pressured conditions. In order to continue with its drilling plans, BRPC may modify the Nabors Rig 16E or contract for another suitable rig. Reentering, completing, and testing the SMU M-01A and SMU M-03 are the priority drilling activities. However, drilling activities are likely deferred until next winter while reservoir studies are completed and rig modification or acquisition is conducted. Engineering and fabrication of all remaining processing modules is expected to continue during the 3<sup>rd</sup> POD period.

BRPC has undertaken exploration operations under approved plans of exploration and development. BRPC requests an extension of the SMU Agreement term. Because BRPC has conducted exploration under an approved POE, the unit extension request meets the requirements of 11 ACC 83.336(a)(2) for the Commissioner to consider granting a discretionary extension.

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

Under 11 ACC 83.336 and Article 14 of the SMU Agreement, a unit agreement automatically terminates five years from the effective date unless certain conditions are met. By approving the unit extension request, BRPC has the opportunity to complete the SMU facility infrastructure and bring wells online in 2017, thus resulting in an increase in oil production and resulting increase in royalty and tax revenue paid to the State.

Without a unit term extension, the Mustang development project is unlikely to progress from its current position. The SMU contains five leases. All of the leases are past the primary term. Since the leases are past their primary terms, the expiration of the SMU Agreement would return the lease acreage to the State and be available for competitive bidding in a future North Slope areawide lease sale. The public has an interest in maximizing competition among parties seeking to explore and develop resources. In the case of the SMU, BRPC's prior exploration and plans for development compels approval of a unit term extension.

Most of the on-pad production facility modules have been completed and a majority of the engineering has been completed to date. Further understanding of the Kuparuk Reservoir and new lessons from neighboring units on drilling techniques in over-pressured reservoirs also supports the likelihood of oil production at the SMU in the near-term. Providing a unit term extension in this instance is in the state's best interest and protects all parties.

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

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

The Division considered the promotion of the conservation of all natural resources criteria during the approval of the SMU Agreement, plans of exploration, and plans of development. The approval of the SMU extension request extends the term of the SMU Agreement until December 31, 2017, and requires development and production to occur under an approved unit plan of

development. The unit term extension continues the same conservation of natural resources provided by formation of the unit and unitized development.

2. Prevention of Economic and Physical Waste

Approval of the unit extension request prevents economic and physical waste because it approves development of all potentially productive leases under an approved unit agreement, rather than on a lease-by-lease basis. Unitization provides for equitable allocation of costs and revenues and efficient and consolidated reservoir management under a unified plan of development, eliminates redundant facilities, and lessens environmental impact.

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

Approval of the unit extension request protects all parties of interest, including the State, for the same reasons as the previous approvals of the unit formation and plans of exploration and development. Unitized development under an approved plan promotes development of the State's resources while minimizing impacts to cultural and environmental resources. Unitized development protects the economic interest of the working interest owners and royalty owners of a common reservoir. Operations conducted under the SMU Agreement will not diminish access to public and navigable waters beyond those limitations, if any, imposed by law or already established in the oil and gas lease contracts. The SMU Agreement and State statute and regulations provide for notice and an opportunity to be heard. No comments were received.

Extension of the term of the SMU Agreement further protects all parties by affording BRPC the opportunity to continue development efforts, while allowing additional time to complete module fabrication and shipment, and well completions.

### **III. FINDINGS AND DECISION**

A. Conservation of All Natural Resources

1. Approval of the unit extension request will conserve all natural resources, including hydrocarbons, gravel, sand, water, wetlands, and valuable habitat.

B. Prevention of Economic and Physical Waste

1. Approval of the unit extension request prevents economic and physical waste.

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

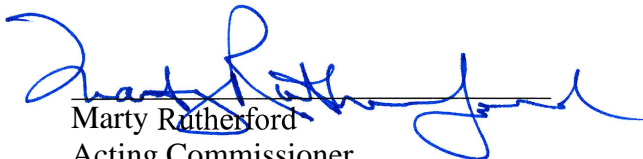
1. Approval of the unit extension request adequately and equitably protects the public interest, and is in the State's best interest.

2. The SMU 3rd POD is extended to December 31, 2016. The Division originally approved the 3rd POD to be effective from December 1, 2015 to March 31, 2016.

For the reasons discussed in this Findings and Decision, I approve the request to extend the term of the Southern Miluveach Unit Agreement effective from April 1, 2016 through December 31, 2017.

Additionally, the 3rd plan of development, effective until March 31, 2016, is extended through December 31, 2016. Pursuant to 11 ACC 83.343 (c), the 4th POD for the SMU is due to the Division ninety (90) days prior to the expiration of the 3rd POD, which is on or before October 2, 2016.

An eligible person affected by this decision may request reconsideration, in accordance with 11 AAC 02. Any request for reconsideration 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 Marty Rutherford, Acting 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. An eligible person must first request reconsideration of this decision in accordance with 11 AAC 02 before appealing this decision to Superior Court. If the commissioner does not act on a request for reconsideration within 30 days after issuance of this decision, the request for reconsideration is considered denied and this decision becomes a final administrative order and decision on the 31<sup>st</sup> day after issuance for the purposes of an appeal to Superior Court. A copy of 11 AAC 02 may be obtained from any regional information office of the Department of Natural Resources.



Marty Rutherford  
Acting Commissioner  
Department of Natural Resources

3/30/16  
Date

#### IV. ATTACHMENTS

- 1) Request for Extension of the Term of the Southern Miluveach Unit Agreement, dated December 15, 2015
- 2) Amended Request for Extension of the Term of the Southern Miluveach Unit Agreement, dated March 11, 2016

**Attachment 1:  
Request for Extension of the Term of the Southern Miluveach Unit Agreement,  
dated December 15, 2015**





December 15, 2015

Commissioner Mark Myers  
AK Department of Natural Resources  
550 West 7<sup>th</sup> Avenue, Suite 1400  
Anchorage, Alaska 99501-3560

RECEIVED

DEC 21 2015

DIVISION OF  
OIL AND GAS

**RE: Request for Extension of the Term of the Southern Miluveach Unit Agreement**

Dear Commissioner Myers:

Brooks Range Petroleum Corporation (“BRPC”) is the Operator of the Southern Miluveach Unit (“SMU”) located on the North Slope of Alaska. On behalf of the Unit’s Working Interest Owners, BRPC requests that the Commissioner of the State of Alaska Department of Natural Resources extend the term of the Southern Miluveach Unit Agreement until March 31, 2017 pursuant to the provision of 11 AAC 83.336(a)(2) after public notice pursuant to 11 AAC 83.311.

In accordance with the terms of the Southern Miluveach Unit Agreement, the Effective Date is March 31, 2011. Article 14 of the Unit Agreement specifies the term of the Unit as five years from the Effective Date. The expiration date of the initial term, in accordance with 11 AAC 83.336, is March 31, 2016.

BRPC is conducting activities under the state approved SMU Third Plan of Development (“POD”) beginning December 1, 2015 and ending March 31, 2016. During the initial term of the Unit Agreement, BRPC has conducted significant exploration activities to assess the reservoir potential, and has undertaken the design, fabrication, and construction of production facilities in order to develop the Mustang Field within the SMU. Significant investment dollars, approximately \$145 Million, have been spent on the construction of the Mustang Road gravel road and Mustang Pad, the drilling of wells, engineering studies, reservoir evaluation, economic analysis, permitting, camp facilities, and the aforementioned production facilities to be placed on the Mustang Pad. In addition, BRPC has collaborated with other Operators in the area by sharing the Mustang Road and Pad to further other North Slope exploration and development activities.

Due to a number of mechanical and reservoir problems encountered while drilling during the 2<sup>nd</sup> POD period, no producers were completed in the Kuparuk reservoir. One injection well has been completed. BRPC is requesting an extension of the Unit period to continue to conduct further drilling operations as outlined in the 3<sup>rd</sup> POD to provide the needed wells for production startup anticipated in 2017.

BRPC exploration activities conducted during the initial Unit term are as follows:

2012 Plan of Exploration (“POE”)

- \* Drilled and tested North Tarn #1A well in the Kuparuk C Sand formation
- \* Drilled Mustang #1 well in the Kuparuk C Sand formation
- \* Surface facilities and infrastructure engineering
- \* Materials Sales, Mustang Site Clearance, Corps of Engineers 404 Permit
- \* Purchased and reprocessed of 3D seismic survey covering the SMU and surrounding acreage

1<sup>st</sup> Plan of Development (“POD”) Activities –

- \* DeGolyger & MacNaughton Reserves Report
- \* Opened Gravel Mine
- \* Constructed Mustang Road and Mustang Pad
- \* Reservoir studies, Engineering studies

2<sup>nd</sup> POD Activities –

- \* Secured drilling rig, began drilling operations December 2014
- \* Drilled Mustang #2 – completed as an injection well
- \* Drilled Mustang #3 – after experiencing drilling difficulties, the well was plugged back to surface casing and was suspended
- \* Re-entry into Mustang #1 – an attempt was made to add a horizontal lateral to the well; however, due to deteriorating hole conditions, the well was plugged back to intermediate casing and was suspended
- \* Operations support facilities brought to Mustang Pad
- \* Civil work on road and pad
- \* Facilities engineering, design, fabrication and construction, logistics, procurement planning
- \* Contracts for materials, camps, catering, operations and drilling support
- \* Installed VSM's to connect SMU production facilities to Alpine Pipeline (Alpine transport line tie-in)

Current industry economic conditions changed dramatically during late 2014 and early 2015 with the drop in crude oil prices from \$120/barrel to \$35/barrel. In mid-2015, the State of Alaska made modifications to legislation regarding tax credit reimbursements; therefore, the Mustang development program schedule had to be adjusted to deal with unfavorable economic factors during the 2<sup>nd</sup> POD, continuing into the current SMU 3<sup>rd</sup> POD.

3<sup>rd</sup> POD Activities – Current Plan through March 31, 2016

- \* Complete well technical work
- \* Finalize well design and drilling protocols to address overpressure reservoir conditions
- \* Undertake rig modifications or secure new rig contract
- \* Continued reservoir studies to aid in the placement of the remaining development wells
- \* Through the end of 2015 and the 1st / 2nd quarter 2016, BRPC, with its engineering contractor(s), will complete all remaining engineering and will issue for fabrication all the remaining process modules. BRPC intends to mobilize installation contractor(s) to install, interconnect, and commission North Slope process facilities, at the earliest 2nd quarter 2016. The earliest time for 1st oil is 4th quarter 2016.

As demonstrated above, BRPC has undertaken substantial exploration operations under approved plans of exploration and development, and made significant financial commitments during the first four (4) years of the Unit plan.

BRPC requests that the State of Alaska Department of Natural Resources hereby amend the term of the Southern Miluveach Unit Agreement under the criteria of 11 AAC 83.303 to extend the term until March 31, 2017 so that BRPC may have adequate time to continue drilling the subsequent wells, conclude facilities fabrication and construction, and mobilize facilities for placement on the Mustang Pad for development startup.

BRPC requests that the information previously provided on a confidential basis remain confidential to the extent permitted by law and regulation consistent with the requirements of this extension request.

Should you have any questions, please call me at (907) 339-9965.

Sincerely,  
  
Bart Armfield  
President, CEO

cc: DO&G Director Corri Feige  
DNR DO&G Kathleen King, Unit Manager

**Attachment 2:  
Amended Request for Extension of the Term of the Southern Miluveach Unit Agreement,  
dated March 11, 2016**



Brooks Range Petroleum

March 11, 2016

Marty Rutherford, Acting Commissioner  
AK Department of Natural Resources  
550 West 7<sup>th</sup> Avenue, Suite 1400  
Anchorage, Alaska 99501-3560

**RE: Amended Request for Extension of the Term of the Southern Miluveach Unit Agreement**

Dear Acting Commissioner Rutherford:

On December 15, 2015, Brooks Range Petroleum Corporation ("BRPC"), as the Operator of the Southern Miluveach Unit ("SMU") located on the North Slope of Alaska requested an extension to the Unit term for the Southern Miluveach Unit Agreement by letter to the Commissioner of the State of Alaska Department of Natural Resources, and pursuant to the provision of 11 AAC 83.336(a)(2) after public notice pursuant to 11 AAC 83.311. The five-year unit term ends March 31, 2016; BRPC requested an extension through March 31, 2017.

Subsequent to that request, Bart Armfield, President/CEO of BRPC and Corri Feige, the Director of the Division of Oil and Gas met (February 12) to review the Mustang Operations within the SMU pertinent to the unit extension request. Based on their conversation which was focused on the SMU Mustang Project, a Unit extension end date of December 31, 2017 was identified as a more realistic and preferred deadline. It was also agreed that the term of the Third POD would coincide with the term of the Unit. Since that meeting, BRPC staff and Division of Oil and Gas Unit managers and technical team have met to review the February 12 discussion points, and BRPC has provided additional presentations relating to plans for drilling, development, financing, and facilities through December 31, 2017, as requested by the Unit Manager. The Division of Oil and Gas staff has indicated that they have received the information needed to make their Unit extension recommendation; however, BRPC needed to amend the requested extension date.

BRPC hereby requests that the State of Alaska Department of Natural Resources amend the term of the Southern Miluveach Unit Agreement and the Third POD under the criteria of 11 AAC 83.303 to extend until December 31, 2017.

BRPC requests that the information previously provided on a confidential basis remain confidential to the extent permitted by law and regulation consistent with the requirements of this extension request.

Should you have any questions, please call me at (907) 339-9965.

Sincerely,  
  
Bart Armfield  
President, CEO

cc: DO&G Director Corri Feige  
DNR DO&G Kathleen King, Unit Manager

