



October 2, 2018

Andrew Mack, Commissioner  
State of Alaska, Department of Natural Resources  
Division of Oil and Gas  
550 West 7<sup>th</sup> Avenue, Suite 1100  
Anchorage, Alaska 99501-3560

**Re: Southern Miluveach Unit Proposed Sixth Plan of Development Amendment**

Commissioner Mack:

Brooks Range Petroleum Corporation ("BRPC") as the Operator of the Southern Miluveach Unit (SMU) and on behalf of the Unit's Working Interest Owners submits the attached Sixth Plan of Development ("6th POD") for the SMU per 11 AAC 83.343.

The 6th POD is to be considered an exhibit to the unit agreement and details the proposed development activities and the plans for exploration or delineation of any land in the unit not included in a participating area, based on data reasonably available at this time.

BRPC continues to actively work toward SMU first oil production. If you have any questions, please call me at (907) 865-5840.

Sincerely,

Bart Armfield  
President, CEO

cc: Chantal Walsh, Director, DNR Division of Oil and Gas  
Jes Spuhler, SMU Unit Manager

Southern Miluveach Unit  
Sixth Plan of Development  
(6th POD)

Submitted By  
Brooks Range Petroleum Corporation

On behalf of the  
Working Interest Owners

CaraCol Petroleum LLC, TP North Slope Development LLC,  
Brooks Range Petroleum Corporation, Nabors Drilling  
Technologies USA Inc., AVCG, LLC,  
Mustang Road LLC, MOC1 LLC

October 2, 2018

## SOUTHERN MILUVEACH UNIT PLAN OF DEVELOPMENT

The Southern Miluveach Unit is located on the North Slope of Alaska adjacent to the southwest edge of the Kuparuk River Unit. It is operated by Brooks Range Petroleum Corporation ("BRPC" or "Operator") on behalf of the Working Interest Owners: CaraCol Petroleum LLC, TP North Slope Development LLC, Brooks Range Petroleum Corporation, Nabors Drilling Technologies USA Inc., AVCG, LLC, Mustang Road LLC, MOC1 LLCC. The Unit is comprised of five leases totaling 8,960 acres.

In accordance with the requirements of 11 AAC 83.343 and Article 8 of the Southern Miluveach Unit Agreement, BRPC is submitting the Annual Report and the Sixth Plan of Development ("6th POD") for the Southern Miluveach Unit ("SMU") for the period of January 1, 2019 through December 31, 2019. BRPC believes this satisfies the requirements of 11 AAC 83.343 including compliance under the provisions of 11 AAC 83.303.

By letter dated December 20, 2017 the Division of Oil and Gas approved the 5th POD for the period January 1st, 2018 through December 31, 2018. By letter dated July 5, 2018, the Division of Oil and Gas partially approved an amendment to the 5th POD for 2018.

### Annual Report

The following is BRPC's annual report under 11 AAC 83.343.

The development plans proposed in the amended 5th POD consisted of the following:

1. Additional on-pad piles to be installed starting in 3Q2018.
  2. Installation of cross country pipelines to begin 4Q2018 (depending on tundra travel availability<sup>1</sup>).
  3. Engineering work to continue for the CPAI-executed pipeline tie-in work; the field work to begin as early as 4Q2018 (depending on tundra travel availability<sup>1</sup>).
  4. Telecoms survey work will be conducted in the summer of 2018 (late 2Q / early 3Q).
  5. Preparation of the Mustang Pad for installation of the EPF to begin in 3Q2018.
  6. Installation of the EPF on Mustang Pad will begin 3Q2018.
  7. Upon completion of installation, the functional check-out (FCO) of the EPF will take place. This is expected to occur 4Q2018.
  8. The transportation of produced oil from the EPF to the common carrier Alpine Pipeline will begin in 1Q2019<sup>1</sup>.
  9. BRPC to conduct economic, environmental, and risk analysis of transporting the produced oil by truck to a third party for processing and/or sales.
  10. Drilling activities will be conducted in a manner to best maximize recovery of the Mustang field resources and timed to best utilize the EPF:
    - a. Planned initial production is from existing wells:
      - i. North Tarn 1A
      - ii. SMU M-02 (requires perforation & stimulation)
      - iii. Mustang 1 (requires drilling lateral extension/possible sidetrack)
      - iv. Work on these wells will commence prior to EPF completion
    - b. Up to four new wells will be drilled in Q2 or Q3 of 2019.
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1. The extent to which the requirements of the previously approved plan were achieved:
    - (3) Engineering work continues on the CPAI-executed pipeline tie-in work and field work is expected to begin as tundra travel dictates.
    - (4) Telecoms survey work began in the summer of 2018 (3Q) and is expected to be completed in 4Q. (Field Work)

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<sup>1</sup> Delays in opening tundra access, will affect these planned dates.

- (5) Preparation of the Mustang Pad for the installation of the EPF (blading, levelling, and gravel surface repairs) began in 3Q2018. (Field Work)
- (9) BRPC completed its economic, environmental, and risk analyses of trucking oil. BRPC included the advice of the Division of Oil and Gas (7/5/2018) that the costs of trucking may not qualify as “reasonable cost of transportation”. BRPC determined that trucking oil was not a viable option.
- (10.a.iii) Drilling of Mustang 1 lateral is on track and scheduled to occur in 1Q2019. (Field Work)
- (10.b) Up to four new wells are still scheduled to be drilled in 2019. (Field Work)

Additional field work performed, includes:

- Thermistor installed (9/2018) in preparation for ice road construction
  - Pipeline tie-in work started 9/2018:
    - Pre-weld heat loss and NDE
    - Caliper check of pipeline ovality
2. Actual operations that deviated from or did not comply with the approved plan and an explanation of the deviation or noncompliance:
- (1) BRPC did not install additional on-pad piles. These piles are not required for the Early Production Facility and their installation will be postponed until they are required.
  - (2) Installation of cross country pipelines is scheduled to begin in 1Q2019
  - (6) Installation of the EPF on Mustang Pad will begin 4Q2018.
  - (7) Upon completion of installation, the functional check-out (FCO) of the EPF will take place. This is expected to occur 1Q/2Q 2019.
  - (8) The transportation of produced oil from the EPF to the common carrier Alpine Pipeline will begin by 2Q2019.
  - (10.a) Planned initial production and well work on SMU M02 will take place in 1Q/2Q 2019.

### **6th POD Update, as Proposed**

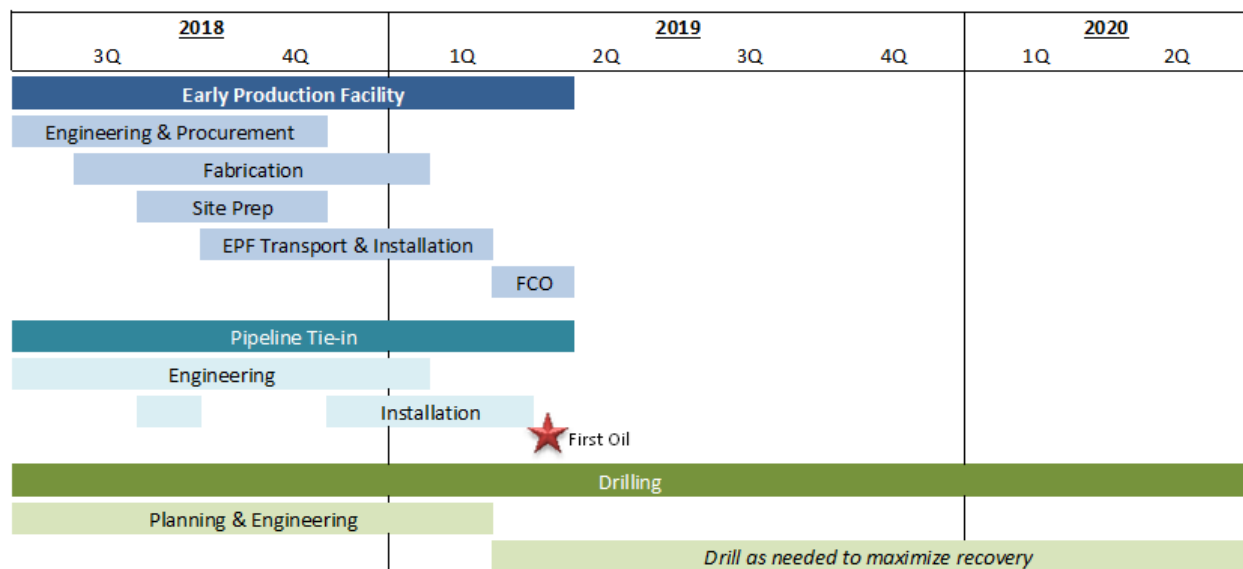
This 6th POD details the proposed development activities, and the plans for exploration or delineation of any land in the unit not included in a participating area, based on data reasonably available at this time. More specifically, the information below will address the following and meet the requirements of 11 AAC 83.343(c):

1. Long-range proposed development activities for the unit, including plans to delineate all underlying oil or gas reservoirs, to bring the reservoirs into production, and to maintain and enhance production once established.
  - Central process facilities with 15,000 bopd capacity
  - Drill site facilities
  - Two cross-country pipelines
  - Non-process infrastructure including buildings and equipment
  - Communications tower and related infrastructure
  - Up to 10 production wells and 11 injection wells
2. Plans for the exploration or delineation of any land in the unit not included in a participating area:
  - BRPC continues to review all potential targets within the SMU Unit, including but not limited to the Kuparuk “C” and “A” sands. BRPC intends to continue exploration to fully explore the Unit area as economic conditions warrant and financial conditions allow.

3. Details of the proposed operations for at least one year following submission of the plan:

- Installation of cross country pipelines and tie in work may continue into 2Q2019.
- Installation of the EPF on Mustang Pad may continue into 2Q2019.
- Upon completion of installation, the functional check-out (FCO) of the EPF will take place. This is expected to occur by 2Q2019.
- The transportation of produced oil from the EPF to the common carrier Alpine Pipeline will begin in 1Q/2Q 2019.
- Drilling activities will be conducted in a manner to best maximize recovery of the Mustang field resources and timed to best utilize the EPF:
  - Planned initial production is from existing wells:
    - North Tarn 1A
    - Mustang 1 (requires drilling lateral extension/possible sidetrack-January 2019)
    - SMU M-02 (requires perforation & stimulation-prior to EPF Completion)
  - Up to four new wells will be drilled in 2019.
- During the initial field commissioning stage, BRPC intends to pre-produce from SMU M-02. Pre-producing from this well will allow us to better understand the performance of the A sands. This well will be converted to an injection well as determined by the reservoir.
- Based on facility constraints and levels of production, BRPC is anticipating maximum gas production to be ~6 MMSCFD. BRPC will be applying for an air permit modification with the Alaska Department of Environmental Conservation (ADEC) to flare the excess gas (that which is not used in power generation) prior to the conversion of the SMU M-02 well.

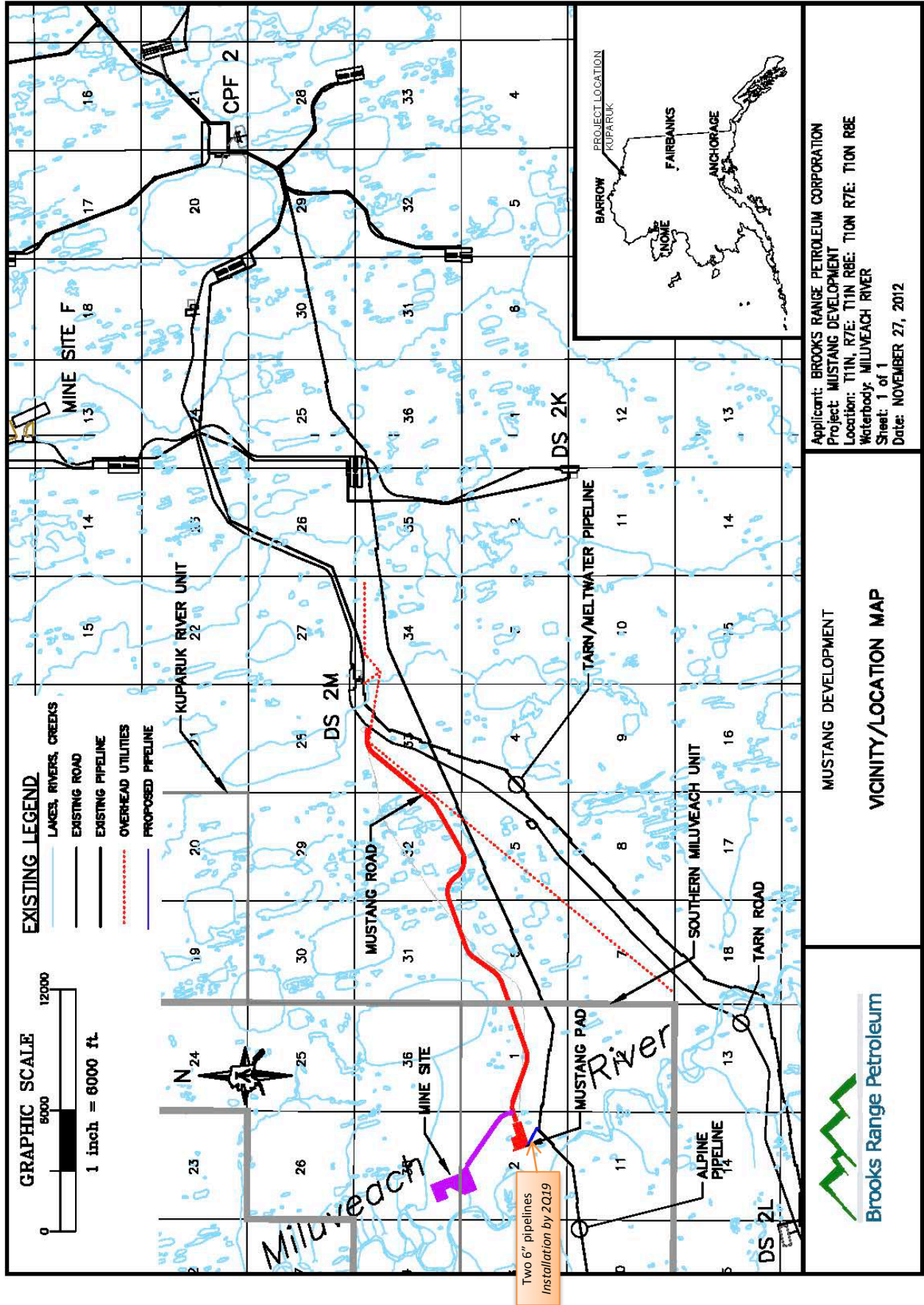
**Schedule**



4. The surface location of proposed facilities, drill pads, roads, docks, causeways, material sites, base camps, waste disposal sites, water supplies, airstrips, and any other operation or facility necessary for unit operations:

The locations of proposed activities are detailed on the following maps.

# Mustang Development Location Map





Site plan for the Alaska State Plane and 27. The plan shows various buildings including a Warehouse, Control Room, Construction Laydown and Staging Area, and Operations Camp. It also features a designated snow push area, a flange stack assembly, and a communication tower. Dimensions and elevations are provided throughout the drawing. A north arrow and a scale bar (1 inch = 60 feet) are included.

Key features and dimensions:

- Warehouse:** 175'-0" x 120'-0"
- Control Room:** 60'-1" x 35'-0"
- Construction Laydown and Staging Area:** 100'-0" x 75'-0"
- Operations Camp:** 100'-0" x 75'-0"
- Designated Snow Push Area:** 100'-0" x 75'-0"
- Flange Stack Assembly:** 100'-0" x 75'-0"
- Communication Tower and Antenna:** 100'-0" x 75'-0"
- Dimensions:** 100'-0", 120'-0", 175'-0", 275'-0", 350'-0", 400'-0", 450'-0", 500'-0", 550'-0", 600'-0", 650'-0", 700'-0", 750'-0", 800'-0", 850'-0", 900'-0", 950'-0", 1000'-0"
- Elevations:** 100'-0", 120'-0", 175'-0", 275'-0", 350'-0", 400'-0", 450'-0", 500'-0", 550'-0", 600'-0", 650'-0", 700'-0", 750'-0", 800'-0", 850'-0", 900'-0", 950'-0", 1000'-0"
- Scale:** 1 inch = 60 feet
- North Arrow:** True North, Magnetic North, Prevailing Winds





Exhibit A							
Attached to and made a part of the							
Southern Miluveach Unit							
Tract #	ADL #	Legal Description	Total Acres	Effective Date	State of Alaska Royalty Interest	Overriding Royalty Interest	Working Interest
1	390690	T. 11 N., R. 7 E., Umiat Meridian, Alaska.	640.00	2005-07-01	16.66667%		Caracol 36.2775%
		Section 24, Unsurveyed, All, Including The Bed Of The Unnamed Lake, 640.00 Acres;				Armstrong 3.33333%	TPNS 22.4575%
							MOC1 20.0000%
							BRPC 10.3650%
							Nabors 6.0786%
							AVCG 3.8214 %
							MRLLC 1.0000%
2	390691	T. 11 N., R. 7 E., Umiat Meridian, Alaska.	2560.00	2005-07-01	16.66667%		Caracol 36.2775%
		Section 25, Unsurveyed, All, Including The Bed Of The Unnamed Lake, 640.00 Acres;				Armstrong 3.33333%	TPNS 22.4575%
		Section 26, Unsurveyed, All, 640.00 Acres;					MOC1 20.0000%
		Section 35, Unsurveyed, All, Including The Bed Of The Miluveach River, 640.00 Acres;					BRPC 10.3650%
		Section 36, Unsurveyed, All, Including The Bed Of The Unnamed Lake, 640.00 Acres;					Nabors 6.0786%
							AVCG 3.8214 %
							MRLLC 1.0000%
3	390692	T. 11 N., R. 7 E., Umiat Meridian, Alaska.	640.00	2005-07-01	16.66667%		Caracol 36.2775%
		Section 34, Unsurveyed, All, Including The Bed Of The Miluveach River, 640.00 Acres;				Armstrong 3.33333%	TPNS 22.4575%
							MOC1 20.0000%
							BRPC 10.3650%
							Nabors 6.0786%
							AVCG 3.8214 %
							MRLLC 1.0000%
4	390681	T. 10N., R. 7E., Umiat Meridian, Alaska.	2560.00	2005-07-01	16.66667%		Caracol 36.2775%
		Section 3, Unsurveyed, All, Including The Beds Of The Unnamed Lakes, 640.00 Acres;				Armstrong 3.33333%	TPNS 22.4575%
		Section 4, Unsurveyed, All, Including The Bed Of The Unnamed Lake, 640.00 Acres;					MOC1 20.0000%
		Section 9, Unsurveyed, All, Including The Bed Of The Unnamed Lake, 640.00 Acres;					BRPC 10.3650%
		Section 10, Unsurveyed, All, Including The Beds Of The Unnamed Lakes, 640.00 Acres;					Nabors 6.0786%
							AVCG 3.8214 %
							MRLLC 1.0000%
5	390680	T. 10N., R. 7E., Umiat Meridian, Alaska.	2560.00	2005-07-01	16.66667%		Caracol 36.2775%
		Section 1, Unsurveyed, All, 640.00 Acres;				Armstrong 3.33333%	TPNS 22.4575%
		Section 2, Unsurveyed, All, 640.00 Acres;					MOC1 20.0000%
		Section 11, Unsurveyed, All, 640.00 Acres;					BRPC 10.3650%
		Section 12, Unsurveyed, All, 640.00 Acres;					Nabors 6.0786%
							AVCG 3.8214 %
							MRLLC 1.0000%
Interested Parties							
	Caracol	CARACOL PETROLEUM LLC					
	TPNS	TP NORTH SLOPE DEVELOPMENT, LLC					
	MOC1	MUSTANG OPERATIONS CENTER 1 LLC					
	BRPC	BROOKS RANGE PETROLEUM CORPORATION					
	NABORS	NABORS DRILLING TECHNOLOGIES USA, INC.					
	AVCG	AVCG, LLC					
	MRLLC	MUSTANG ROAD LLC					
	Armstrong	ARMSTRONG ALASKA, INC.					

Tract #	ADL #	Total Acres	Effective Date
1	390690	640.00	2005-07-01
2	390691	2,560.00	2005-07-01
3	390692	640.00	2005-07-01
4	390681	2,560.00	2005-07-01
5	390680	2,560.00	2005-07-01
		8,960.00	

Attached to and made part of the  
**Southern Miluveach Unit Agreement**

