



THE STATE
of **ALASKA**
GOVERNOR BILL WALKER

Department of Natural Resources

Division of Oil & Gas
550 W. 7th Avenue, Suite 1100
Anchorage, Alaska 99501-3560
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December 20, 2017

CERTIFIED MAIL

Mr. Lawrence J. Vendl
Brooks Range Petroleum
510 L Street, Suite 601
Anchorage, AK 99501

Re: North Tarn #1A Well Certification

Dear Mr. Vendl,

By your letter dated December 4, 2017 Brooks Range Petroleum Corporation (BRPC), as operator of the Southern Miluveach Unit, requested certification of the North Tarn #1A well as capable of producing in paying quantities as provided in 11 AAC 83.361.

The North Tarn #1A well is located on oil and gas lease ADL 390680. The lease was issued July 1, 2005, with a primary term of seven years. The entire lease was committed to the Southern Miluveach Unit effective November 18, 2011. The North Tarn #1A well was drilled as a sidetrack beginning April 11, 2011. The well was originally tested after completion but did not produce. BPRC fracture stimulated and flow tested the North Tarn #1A November 18-23, 2017 and provided detailed test results as well as a production and operating cost forecast for consideration.

The data available has been reviewed with conclusions as follows:

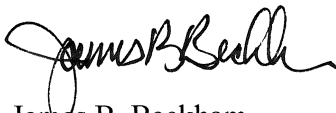
- Post fracture flow-rates from the well indicate high flow-capacity typical for Kuparuk C-sand with clear evidence of the fracture stimulation. Well performance analysis and comparison with offset production data indicate the North Tarn #1A well can meet the criteria for paying quantities.
- The relatively high gas-oil-ratio (GOR) agrees with measurements taken before the stimulation in 2012 and is likely influenced by excess gas injection that has occurred on the western side of KRU_2M approximately 1 mile east of SMU.
- GOR response will depend on how quickly BPRC initiates waterflood support as both 2M-37 & 38 wells' GOR increased until 2M-37 was converted to water injection. Given the planned gas capacity for SMU, higher oil rates could be processed, but a GOR waiver would need to be approved by AOGCC.

Following analysis by Division staff of the data submitted with the request, I have determined that the North Tarn #1A well meets the criteria provided in 11 AAC 83.135, 11 AAC 83.105, 11 AAC 83.361, 11 AAC 83.395 and lease paragraphs 4(d) and 34(6). The North Tarn #1A well is certified as capable of producing in paying quantities.

The certification of this well extends the unit so long as BRPC is continuously producing or conducting operations under an approved plan of development, as set forth in 11 AAC 83.336(a)(1). BRPC's proposed plan of development and whether it provides for sufficient operations to extend the unit are addressed in a separate decision. The certification of this well applies only so long as the North Tarn #1A well remains capable of producing in fact.

An eligible 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 Andrew T. Mack, 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.

Sincerely,

A handwritten signature in black ink, appearing to read "James B. Beckham". The signature is fluid and cursive, with a large initial "J" and "B".

James B. Beckham
Deputy Director