

3800 Centerpoint Drive Suite 1400 Anchorage, AK 99503

Phone: 907/777-8432 Fax: 907/777-8301 cterrell@hilcorp.com

May 1, 2018

Ms. Chantal Walsh, Director Oil and Gas Division Alaska Department of Natural Resources 550 W. 7th Avenue, Suite 1100 Anchorage, AK 99501

14th PLAN OF DEVELOPMENT FOR THE NINILCHIK UNIT

Hilcorp Alaska, LLC ("Hilcorp"), as Operator of the Ninilchik Unit ("NINU"), hereby submits the proposed 14th Plan of Development for the NINU ("2018 POD") to the State of Alaska, Department of Natural Resources ("DNR"), pursuant 11 AAC 83.343.

On April 17th, 2017, DNR approved the 13th Plan of Development and Operations for the NINU ("2017 POD"), submitted by Hilcorp. On May 12th, 2017 Hilcorp submitted the first amendment to the 2017 POD, and was approved by DNR on May 22nd, 2017. On August 8th, 2017 Hilcorp submitted the second amendment to the 2017 POD, and was approved by DNR on August 24th, 2017. The 2017 POD was approved for the period of June 1, 2017 through May 31, 2018.

A. <u>PERIOD</u>

This plan will be effective from June 1, 2018 through July 31, 2019. The 2019 POD will be submitted on or before May 1, 2019.

B. 2017 ANNUAL REPORT

The following is Hilcorp's annual report of the 2017 POD period, pursuant 11 AAC 83.343 (d):

- 1) 2017 POD Approved Development Plan: The 2017 POD consisted of the following development plans:
 - a) Maintain/Enhance Production: Hilcorp anticipates current NINU production will be maintained and increased throughout the 2017 POD period.
 - b) Drilling Program:

Ninilchik Unit 14th Plan of Development Page 2 of 7

- Kalotsa #1 and #2: Kalotsa #1 was spudded in Dec 2016 and will be completed concurrently with Kalotsa #2 in Q2 2017. Both wells will have initial completions within the Tyonek with significant Beluga potential.
- Kalotsa #3 and #4: Kalotsa #3 and #4 are anticipated to be drilled in Q3 2017.
- **GO #9:** Depending on market demand and economic conditions, Hilcorp may consider the drilling of GO #9 in 2017, or this project may be deferred for other drilling/development opportunities.
- **Pearl #2A (Amended):** Hilcorp plans to drill Pearl #2A in late Q4 2017 from a new pad to be located on private land outside of the NINU, drilling into the NINU. Hilcorp anticipates that production from Pearl #2A will necessitate both unit and PA reconfigurations.
- Stratigraphic Test Wells (Amended): Hilcorp anticipates completing up to seven (7) planned stratigraphic test wells inside and in the vicinity of the NINU. Some of the data obtained from these stratigraphic test wells will be used in planning the proposed well design for the Pearl #2A well.
- c) Field Study: Hilcorp also plans to complete ongoing field studies of the Tyonek and Beluga formations and structures. With the addition of two (2) new wells from Kalotsa, Hilcorp anticipates the integration of new data to yield additional rate and reserves.
- **d)** Workover Program: Based on the results of the ongoing field studies, Hilcorp will identify future rig workover projects. During 2017, Hilcorp anticipates adding perforations in several PAX wells and will evaluate the utility of adding velocity strings and/or other artificial lift options in various wellbores to enhance production.
- e) Facility Projects: To the extent that Hilcorp's exploratory and development activities are successful, existing infrastructure and facilities will require expansion to accommodate increased production. Anticipated projects include:
 - To maintain and enhance production, additional compression will be considered at the GO, Francis, and SD-PAX pads.

Ninilchik Unit 14th Plan of Development Page 3 of 7

- Add additional compression at existing surface facilities to support existing wells and increased production achieved through Hilcorp's 2017 workover and drilling program.
- Increase the capacity of the existing surface equipment at unit pads for gas processing by adding additional line heaters, a gas dehydration module, and liquid separation vessels with associated piping and controls.
- As required, expand the pad(s) for the drilling program and production equipment explained above.
- To the extent required, expand other infrastructure requirements, including construction or expansion of access roads, pipelines, flow lines, metering, processing and storage vessels, etc.
- 2) 2017 POD Development Plans Achieved: The extent to which the requirements of the previously approved plan were achieved is as follows:
 - a) Maintain/Enhance Production:
 - Falls Creek PA: During 2017, production varied between 2.8 million standard cubic feet per day ("MMSCF/D") and 2.5 MMSCF/D.
 - Grassim Oskolkoff PA: During 2017, production varied between 3.65 MMSCF/D and 1.6 MMSCF/D.
 - Susan Dionne-Paxton PA: During 2017, production varied between 18.7 MMSCF/D and 15.4 MMSCF/D.
 - NINU Tract Operation (Beluga/Tyonek Pools): There are currently eight (8) active tract wells and three shut-in wells. During 2017, production from these tract operations varied between 8.9 MMSCF/D and 8.0 MMSCF/D.
 - b) Drilling Program:
 - Kalotsa #1: Drilled in December 2016 and completed in February 2017. The well is currently producing from several sands within the Tyonek formation.

Ninilchik Unit 14th Plan of Development Page 4 of 7

- Kalotsa #2: Drilled in January 2017. The well was completed in March 2017 in the Tyonek formation. Production has been intermittent, producing in conjunction with market demand.
- Kalotsa #3 & Kalotsa #4: Both wells drilled in May and June of 2017 and completed in August and September of 2017. Each well identified significant potential in both the Beluga and Tyonek formations. However, due to lack of near-term market demand, the current strategy in each well has been to systematically identify unbooked/unproven sands in the lower Tyonek until demand warrants production from larger sands.
- Stratigraphic Test Wells (Amended): Hilcorp completed seven (7) stratigraphic test wells inside and in the vicinity of the NINU as planned. The data obtained from these stratigraphic test wells are being used in planning the proposed well design for the Pearl #2A well, as well as unit and PA reconfigurations.
- c) Field Study: Newly acquired data from the Kalotsa drill wells, in conjunction with an in depth petrophysical analysis, has allowed for reallocation and additions of Susan Dionne-Paxton PA. The process began in October 2017 and is still ongoing in 2018. A Grassim Oskolkoff PA field study was conducted in Q1 2018 that identified six (6) new drill well prospects within Grassim Oskolkoff PA (an increase from one as of 2017). During the field study Hilcorp re-evaluated the results of the Blossom exploratory well, which suggests that the original target may have been missed due to previously unforeseen faulting.
- d) Facility Improvements:
 - Kalotsa Pad: Pad facilities were completed in 2017 including a water tank, Heater Separator Units and flowlines to Susan Dionne Pad. Four flowlines were installed, however only 2 are currently connected to production.
 - Susan Dionne Pad: A concrete pad was installed for the installation of a new dehydration unit to process additional gas from the pad.
 - **Paxton Pad:** A coalescing filter was installed downstream of the compressors to remove excess lube oil before the pad dehydration.
- **3) 2017 POD Development Plans Not Achieved:** The following are actual operations that deviated from or did not comply with the previously approved plan and an explanation of the deviation or noncompliance:

Ninilchik Unit 14th Plan of Development Page 5 of 7

a) Drilling Program:

- **GO #9:** Hilcorp deferred the drilling of GO #9 in 2017 for other drilling/development opportunities.
- **Pearl #2A (Amended):** Hilcorp constructed the pad for drilling of Pearl #2A, however deferred the drilling of Pearl #2A during the 2017 POD period for other drilling/development opportunities.

b) Workover Program:

- During 2017, Hilcorp deferred adding perforations in several PAX wells and did not add velocity strings and/or other artificial lift options in various wellbores to enhance production.
- Hilcorp completed a workover on GO #8 during the 2017 POD period, adding production from the Upper Tyonek.

C. 2018 PLAN OF DEVELOPMENT

The following activities included in the 2018 POD follow the outline provided in 11 AAC 83.343 (a) and incorporate all planned development activities anticipated based on all data reasonably available at this time. The following components of the 2018 POD meet the requirements contained in 11 AAC 83.343 (c).

- 1) Long-Range Development Activities: The following are long-range proposed development activities for the unit, including plans to delineate all underlying oil or gas reservoirs into production, and maintain and enhance production once established:
 - **a) Drill Program:** Hilcorp has identified six (6) drill well prospects within the Grassim Oskolkoff PA (GO A, B, C, D, E, F) during the NINU field study. It is expected that these wells will not be drilled during the 2018 POD period, but could be drilled if market conditions change.

Ninilchik Unit 14th Plan of Development Page 6 of 7

- **2) Exploration/Delineation Plans:** The following are plans for the exploration or delineation of any land in the unit not included in a participating area:
 - a) Drilling Program:
 - **Pearl #2A:** Hilcorp plans to drill Pearl #2A from a new pad located on private land outside of the NINU. This well will be drilled into the NINU and it is classified as a delineation well. Hilcorp anticipates that production from Pearl #2A will necessitate both unit and PA reconfigurations. The drilling of this well was planned during the 2017 POD period, but was deferred for other drilling/development opportunities. There is a possibility that this well will be drilled late in the 2018 POD period, contingent on market conditions, but will most likely extend beyond the 2018 POD period.
 - **Blossom #1:** Depending on market demand and economic conditions, Hilcorp will consider sidetracking the existing Blossom exploratory well.
- **3) Proposed Operations:** The following are details of the proposed operations for at least one year following submission of the plan:
 - a) Maintain Production: During 2018, Hilcorp will evaluate the utility of adding velocity strings and/or other artificial lift options in various wellbores to enhance production.
 - b) Workover Program: Hilcorp is currently planning on working over GO #6 to the upper Tyonek and returning to production. Other opportunities that have been identified include Paxton #8 Tyonek perf adds, SD #6 Tyonek perf adds, and GO #7 fill-clean out and completed in the Tyonek formation.
- 4) Surface Location of Proposed Facilities: The following are 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:
 - a) Facility Projects:
 - Kalotsa Pad: Plan to complete the piping tie-ins of the pipelines from Kalotsa Pad to Susan Dionne Pad.
 - Susan Dionne Pad: Install additional dehydration facilities on the pad.

Ninilchik Unit 14th Plan of Development Page 7 of 7

• As the need arises, Hilcorp will pursue improvements through various well, infrastructure and facility repairs.

Your approval of this proposed 2018 POD is respectfully requested. Hilcorp believes that this 2018 POD satisfies the requirements of 11 AAC 83.343 and is in compliance with the provisions of 11 AAC 83.303. Should you have questions, please contact the undersigned at 777-8432.

Sincerely,

Terrell

Cody T. Terrell, Landman Hilcorp Alaska, LLC

cc: Kevin Pike, Division of Oil and Gas (via email)Sean Clifton, Division of Oil and Gas (via email)Jason Brune, Cook Inlet Region, Inc. (via email)Colleen Miller, Cook Inlet Region, Inc. (via email)