



## Hilcorp Alaska, LLC

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March 3, 2016

Mrs. Corrie Feige, Director  
Oil and Gas Division  
Alaska Department of Natural Resources  
550 W. 7<sup>th</sup> Avenue, Suite 1100  
Anchorage, AK 99501

**RECEIVED**

**MAR - 3 2016**

**DIVISION OF  
OIL AND GAS**

Colleen Miller, Resource Manager  
Cook Inlet Region, Inc.  
725 E. Fireweed Lane  
Anchorage, AK 99509-3330

Re: 2016 Plan of Development and Operations for the Deep Creek Unit

Dear Mrs. Corrie Feige and Ms. Miller:

Hilcorp Alaska, LLC ("Hilcorp") as Operator, hereby submits the 2016 Plan of Development and Operations for the Deep Creek Unit. This plan will be effective from June 1, 2016 through May 31, 2017.

### **I. FIELD OVERVIEW**

The Deep Creek Unit was formed in 2001. The Happy Valley Participating Area ("PA") was formed in 2004. This PA includes both the Tyonek and Beluga Formations. Pursuant to Conservation Order No. 553, the Alaska Oil and Gas Conservation Commission ("AOGCC") has defined a single pool for both formations. No oil is produced from the unit.

There are currently 19 unit wells (9 online, 5 shut-in, and 5 suspended and/or plugged and abandoned). Total cumulative production to date is ~29.5 BCF.

On January 1, 2012, Hilcorp acquired the Deep Creek Unit from former unit operator, Union Oil Company of California ("Chevron"). Since that time, Hilcorp has actively pursued various exploratory and development drilling projects, including the discovery of commercial quantities of gas from the Undefined Sterling and Beluga formations above the existing Beluga/Tyonek Pool.

In the 2015 POD approval, DNR approved a deferral of contraction until May 31, 2016, but conditioned such deferral on drilling the proposed Middle Happy Valley well.

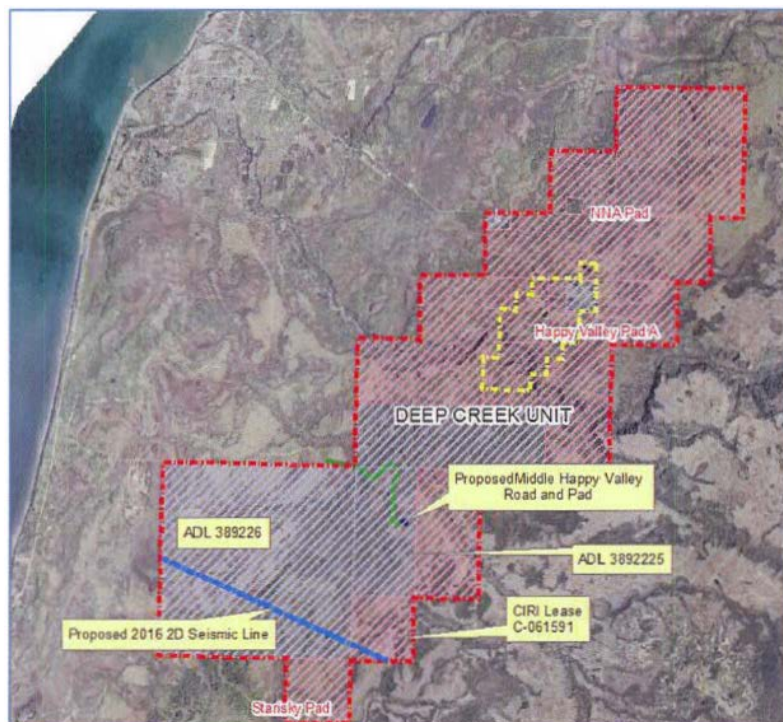
During the 2015 POD period, Hilcorp completed the civil design of the required road and pad and initiated the permitting process. The Plan of Operations was submitted to DNR on August 3, 2015 and approved on November 5, 2015. CIRI also provided permission

for construction on affected CIRI lands. However, in part due to delays associated with permitting, Hilcorp deferred construction of the Middle Happy Valley road and pad during winter 2015-2016 and instead progressed plans for the drilling of the Happy Valley B-17 well.

Drilling operations for the Happy Valley B-17 well commenced on November 24, 2015 and the well was spud on November 28, 2015.

The Happy Valley B-17 wellbore extended north of the current Happy Valley PA and Pool boundary. Testing and completion of this exploratory tail is dependent on expansion of the Pool boundary. Following a pending AOGCC hearing and adjudication, Hilcorp anticipates production of this well on a tract basis. If commercial production from the Beluga/Tyonek Formation is sustainable, Hilcorp will prepare a proposal to expand the Happy Valley PA during the 2016 POD cycle and is currently evaluating a second delineation well (HVB-18) to further delineate the potential of the expanded Happy Valley PA / Pool.

Hilcorp remains committed to building the road and pad required to drill the Middle Happy Valley well, but cannot commit to drilling this exploratory prospect under the current economic and market climate. Rather, Hilcorp commits to completing its planned 2016 2D seismic program within the southern portion of the unit during the second quarter of 2016.



Data acquired from the 2016 2D seismic program will complement 3D data gathered in 2013, and together, will provide the information necessary for Hilcorp to evaluate new exploratory drilling opportunities in the southern portion of the Deep Creek Unit (e.g., ADL 389226 and CIRC lease C-061591).

In light of these activities, Hilcorp again requests DNR and CIRC defer unit contraction until at least June 1, 2017.

This extension will provide Hilcorp with sufficient time to complete its planned exploratory projects and accommodate potential unit expansion and/or establishment of additional PAs that may be necessary to accommodate new commercial discoveries.

## **II. 2015 PLAN REVIEW**

Highlights of Hilcorp's 2015 production, drilling and workover programs include:

1. **Happy Valley PA (Tyonek/Beluga Pool) Production:** During calendar year 2015, production from the Happy Valley PA was 3.921 MMSCF/D.
2. **Tract Operations (Undefined Gas Pools) Production:** During calendar year 2015, production from Happy Valley tract operations averaged 3.017 MMSCF/D.
3. **2015 Drilling Program.** As referenced above, Hilcorp successfully drilled the HVB - 17 well.
4. **2015 Workover Program.** During 2015, Hilcorp completed the following workovers and rate add projects:
  - HVA-10: Added perforations in the T-6 and T-7 sands.
  - HVA-07: Plugged back the lower Tyonek and added two new Tyonek zones.
5. **2015 Facility Improvements:** During 2015, Hilcorp completed the following facility improvements projects:
  - Happy Valley B Pad: Installed new piping to allow the HP separator for HV-12 to be used in the low pressure system on B pad. Also installed a new flange and quill on the flowline from B Pad to A pad.
  - Water Injection upgrade: Refurbished and installed a larger tank to enhance water disposal capabilities in the NNA 1 disposal well.
  - Installed a flowline to support production from the HVB-17 well.

## **III. 2016 PLAN OF DEVELOPMENT AND OPERATIONS**

Hilcorp anticipates that unit current production will be maintained throughout 2016, primarily through implementation of efficiencies and optimization projects.

**1. 2016 Drilling Program:**

- In 2016, Hilcorp anticipates drilling one (1) exploration/delineation well (HVB-18) to target the upper Tyonek discovered in the HVB-17 well.
- Hilcorp will progress permitting and construction activities required to access and build a pad for the Middle Happy Valley prospect. Drilling of the well in 2016 is subject to economic conditions and market availability.
- Based on the results of planned 2D seismic activity on the southern portion of the unit, additional exploratory drilling projects are anticipated to be identified on state and CIRI leases.

**2. 2016 Workover Program:**

- In 2016, Hilcorp will add perforations to the HVB-17 well.
- Other rig workovers and perf adds will be evaluated as necessary to maintain and enhance existing unit production.

In addition to the above, Hilcorp will evaluate and execute additional well work and drilling opportunities as they arise. Throughout 2016, Hilcorp will continue to pursue efficiencies through various well, infrastructure and facility repairs, including evaluation of shut-in wells for potential return to service or utility.

**3. 2016 Major 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:

- Add additional compression at existing surface facilities to support existing wells and increased production achieved through Hilcorp's 2016 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 associate 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.

Hilcorp, as Unit Operator, reserves the right to propose modifications to this Plan should conditions so warrant; however, no modifications will be made without first obtaining necessary approval from the appropriate governmental agencies.

Your approval of the submitted plan is respectfully requested. Should you have questions, please contact the undersigned at 777-8414.

Sincerely,

A handwritten signature in blue ink, appearing to read "David W. Duffy".

David W. Duffy, Landman  
Hilcorp Alaska, LLC

cc: Kyle Smith, Division of Oil and Gas (via email to [kyle.smith@alaska.gov](mailto:kyle.smith@alaska.gov))  
Colcen Miller, CIRI Resources Manager (via email to [cmiller@ciri.com](mailto:cmiller@ciri.com))