

PLACER UNIT
CONFIDENTIAL SUPPLEMENT
to
2017 Annual Report
and
2nd Plan of Development

Submitted by

ASRC Exploration LLC

June 9, 2017

CONFIDENTIAL UNDER AS 38.05.035 and 11AAC 82.810

DOG Staff Note:

*The POD supplemental document is no longer considered confidential.
Please see the Director's approval letter for further information.*

—Sean Clifton 2017-07-17

**Placer Unit Confidential Supplement
to
Annual Report for the Period September 9, 2016 to September 8, 2017
and
2nd Plan of Development for the Period
September 9, 2017 through September 8, 2018**

Currently, the only reservoir proven to be capable of production within the Placer Unit is the Kuparuk C. The Placer #1 well established the presence of oil in the Kuparuk C through logs and the recovery of oil in MDT samples. The Kuparuk C zone at the Placer #3 location was completed and flow tested.

**Accomplishments during the Placer Unit 1st Plan of Development (1st POD)
September 9, 2016 through September 8, 2017 were:**

- AEX certified Placer #3 as being capable of producing oil in “paying quantities” as defined in Alaska Regulations 11 ACC 83.105 and 11 ACC 83.361 & 395.
- AEX completed initial geologic and engineering study of Placer #3 data including
 - With EXPRO PTA expert, completed full analysis of the Long Term DST (The EXPRO report was submitted to the Division of Oil and Gas with the “paying quantities” certification application).
 - Completed thin section photography and description of the Side Wall Cores.
 - Finalized initial detailed evaluation report integrating geological and engineering data from Placer #3.
- To understand production Facility Access options and costs for processing Placer Unit production, AEX:
 - Signed an MOU with Brooks Range Petroleum Corporation (BRPC) to begin commercial discussions for utilization of the proposed SMU MOC-1 production facility.
 - Initiated discussions with ConocoPhillips Alaska Inc. (CPAI) for a Facility Sharing Agreement (FSA) to utilize facilities within the Kuparuk River Unit. AEX anticipates execution of a Confidentiality Agreement with CPAI in the near future to allow for discussions that will lead to a commercial analysis and potential negotiation of a FSA.

- AEX engaged ASRC Energy Services to complete the Placer Development Facility Study, a FEL-0 conceptual design and Class 5 cost estimate for production options being considered for production facility access. This report was completed and will assist in providing initial estimates of the best options for an AEX development for Placer.
- AEX recently received the Tabasco 3D seismic data and plans to begin reprocessing with the WBA, and Kookpuk 3D seismic data-set currently under license to AEX. There was a delay in obtaining the Tabasco 3D seismic data from the State of Alaska. This delay resulted in a more than 6-month postponement for AEX to receive and evaluate Requests for Proposals from geophysical companies for merging and reprocessing the abovementioned seismic for interpretation and reservoir evaluation as anticipated under the 1st POD. Details are as follows:
 - 1st POD plan assumed receipt of the Tabasco 3D data in September 2016.
 - Actual receipt of data from State was February 15, 2017.
 - During QA/QC it was determined that data from 0 seconds to 1.5 seconds was missing from the Tabasco 3D data set.
 - Requests for Proposals to merge and reprocess the seismic packages was submitted to potential vendors on April 8, 2017.
 - Proposals were received from 3 of the 4 vendors by May 25, 2017.
 - Proposals were reviewed and scored with a recommendation to award by June 6, 2017.
 - At this time, recommendation to award is working through AEX's internal Authorization for Expenditure process.
 - Anticipate being able to award seismic merging and reprocessing contract by mid-July 2017.

The goals of the reprocessing and merging of the 3D data sets are as follows:

- The Placer Kup C reservoir appears to extend over several separate 3D seismic surveys. Consequently, it is necessary for AEX to reprocess and merge parts of the Tabasco, WBA, and Kookpuk surveys. There is a very large difference in data density between the surveys. Recent advances in 5D interpolation algorithms are critical to successfully merge these data sets. Careful attention to amplitude preservation by offset and azimuth is also

critical. Additionally, we will test to determine if Kirchhoff Pre-Stack Depth Migration will produce a better product.

- After processing is complete, the data will be interpreted with the goal of delineating the extent and the thickness of the Kup C reservoir. Moreover, the data will also be used to evaluate the potential for production from the Moraine/Torok fan in the Placer Unit. Only after this work is completed can AEX determine the appropriate depletion plan and the facility requirements to produce the Placer reservoir.

-End-

The 2nd POD of the Placer Unit for the period September 9, 2017 through September 8, 2018 will be focused on establishing the viability of the Kuparuk C as a commercial reservoir and determining the most efficient way to develop it.

The work will include:

1. Complete the merging and reprocessing of the Tabasco 3D data with portions of the WBA and Kookpuk survey data.
2. Mapping the extent of the Kuparuk C sands within the Placer Unit. Given that the Placer # 3 well was drilled close to the western edge of the Unit, this work will include evaluating extension of reservoir beyond the current Unit boundary.
3. Analysis and interrogation of the test results from the Placer #3 well to determine if seismic faults located close to the Placer #3 location appear to be barriers and influence flow within the Kuparuk C.
4. Complete Kuparuk C reservoir studies, including geologic and dynamic reservoir models to determine the number and location of wells needed to efficiently produce the reservoir and avoid economic and physical waste. This will likely extend into the 3rd POD due to the delay in acquiring the Tabasco 3D seismic dataset and initialization of the merging, reprocessing and interpretation of seismic for reservoir continuity and characterization.
5. Determine what type and locations of facilities needed for the development of Placer including estimates of cost for development drillings, and costs for construction, and installation of facilities.
6. Evaluate facility sharing opportunities to process Placer oil through either the SMU MOC-1 production facility or through facilities located in the Kuparuk River Unit. AEX currently has an MOU with BRPC to evaluate use of the SMU MOC-1 production facility and are in initial discussions with CPAI for a Kuparuk River Unit FSA.

-End-