APPENDIX 10 TO LETTER OF INVITATION FOR
DISKO AND NUUSSUAQ 2020

Pre-defined minimum work programme

As regards the licence block offered on the Nuussuaq peninsula (block 1), the Government of Greenland will accept a work programme with a schedule of work obligations, which contains the exploration activities stated in this appendix 8, see section 4 of the letter of invitation.

1. Background

Map 1. Nuussuaq, survey area with wells and oil seeps. Two suggested seismic lines and the Q1- lead. Yellow line indicate the seismic survey proposed line location in the Aaffarsuaq Valley.
The Q1-lead is a large anticlinal structure situated in the central western part of the Nuussuaq peninsula. The identified mapped closure of the Q1-lead has an extent of ca. 60km² and an amplitude of approx. 180m.

The identified closure has been mapped out by the Geological Survey of Denmark and Greenland (GEUS) (referred to in this text). The presumed primary reservoir rock is the Cretaceous deltaic Atane Fm which is a well documented formation with numerous sandy intervals in the Disko-Nuussuaq region.

Also, the slope turbidite sections of the Itilli Fm are expected to constitute good reservoir units. The mapped out closure has been picked on the Tunnoqu Mb which forms part of the Paleocene volcanic series which overlie the Cretaceous sedimentary section. It is an assumption that the deeper lying reservoir rocks and units are conformable geometrically to the mapped out closure of the Tunnoqu Mb.

2. Seismic Survey

The survey may be implemented as one line through the Aaffarssuaq Valley (see Map 1), collecting explosive seismic reflection data.

The survey should be designed to localize and map deep structures within the Q1-lead trend. The survey can potentially add a lot of new data about the deeper structures and structural configuration of the Western Nuussuaq and reveal information about the subsidence and/or uplift history of the Nuussuaq Basin. Further will the data acquired from the survey be necessary for mapping potential prospects and calculating potential oil in place.

The geological background is examined in the following GEUS publication: Disko-Nuussuaq: Structural mapping and GIS compilation to better define petroleum exploration targets on Disko and Nuussuaq; Danmarks og Grønlands Geologiske Undersøgelse Rapport 2016/47

3. Aims

The aim is to minimum acquire a seismic reflection line of approximately 30 kilometres length through the Aaffarssuaq Valley (Map 1). The reflection line should to penetrate down to at least 4,000m.
The seismic line is meant to: a) constrain the structural configuration of the western part of the Nuussuaq peninsula, b) outline to what extent the strata beneath the mapped domal feature (Q1) have been affected by similar deformation, c) tie-in existing Nuussuaq onshore well data and d.) optimize the design of future onshore 2D seismic surveys.

4. Stratigraphic well

A stratigraphic well (-s) is to be drilled in the Aaffarsuaq Valley on the Nuussuaq peninsula. The primary stratigraphic well (if more than one) is to be drilled in the northern part of the Aaffarsuaq Valley and in the southern extremity of the Q1-lead anticlinal axis trend.

The stratigraphic well is to be drilled to a depth of at least 1200m below terrain surface, preferably up to 1500m below terrain surface. The stratigraphic well (-s) is to be drilled with full core retrieval.

5. Aims

The aim is to acquire subsurface geological data. The subsurface sample and core material from the stratigraphic well(-s) are to provide stratigraphic, sedimentological and structural information on the evolution of the Nuussuaq Basin. Relevant rock units retrieved from the stratigraphic well (-s) shall be subject to reservoir/seal/source analyses.

If hydrocarbons are encountered during drilling of the stratigraphic well (-s), be it liquid or volatile, these shall be sampled and stored under proper conditions for and prior to subsequent organic geochemical analyses.