

Enclosure 2

Technical and Operational Specifications

1. Delivery of helicopter

Helicopter(s) must be fully equipped and operational. All necessary prescribed and regulatory services must have been carried out immediately before the date of delivery, cf. Invitation to Tender, paragraph 2.2, so that flying operations can commence immediately, conditions permitting.

Any repair or maintenance services necessary in the period of contract must be planned and carried out in such a manner that the helicopter is fully operational in the period of the fieldwork, cf. Invitation to Tender, paragraph 2.2.

Tenderer is responsible for the administration and maintenance of the helicopter.

Flying hours in connection with maintenance services will not be part of the tender and shall not be charged to GEUS. If applicable, services should be carried out during transit(s).

2. Areas

In the summer of 2010 helicopter services are needed to support geological fieldwork in three areas of Greenland and ad hoc in other areas.

(1) Fieldwork will take place in Southwest Greenland, in the Paamiut area, 61-63° N, and in neighbouring areas for geological reconnaissance etc. A helicopter will operate out of a remote base camp in the field. The base camp is located in Mellemygden, about 20 km NE of Paamiut.

(2) Fieldwork will take place in Northeast Greenland, in the Daneborg area (Hold with Hope, Wollaston Forland) and the Danmarkshavn area (Store Koldewey), 73-77° N, and in neighbouring areas for geological reconnaissance etc. A helicopter will operate either out of the military station of Daneborg or out of Danmarkshavn.

In the same area further 7-10 flying hours will be required for another project - operating out of CNP – preferably immediately before the start of the first project.

(3) Fieldwork will take place in Southeast Greenland in the Tasiilaq region, operating between Køge Bugt and Skrækkensfjord, 65-67° N. Most of the fieldwork will be carried out from a ship based base camp and the helicopter will operate daily from the ship. During ship based fieldwork, the helicopter will, when not in operation, be parked on the coast near the ship. The first 7–10 days of the operation will possibly be carried out from Tasiilaq, operating out of the heliport.

Ad hoc helicopter services may be needed in Kangerlussuaq, Narsasuaq, Nuuk, Maniitsoq, Umanaq, Upernavik, Thule, Tasiilaq, Sødalen, and in Constable Pynt during the period of charter.

3. Operations

(1) Southwest Greenland: Mobilisation of field-teams (2-4 persons) and field camps, numerous take-offs and landings from unprepared sites in the field, sometimes in poorly charted areas. Frequent field camp moves need to be carried out and some sling operations of zodiac dinghies are planned. Flights

for geological reconnaissance, geological sampling, photography, etc. including numerous brief ground-stops for sample collection, etc. Other sling-operations (involving e.g. fuel barrels) may occur.

(2) Northeast Greenland: Mobilisation of field-teams (2-3 persons) and camps, drilling team and drilling rig plus various equipment associated with the drilling rig and drilling camp. Extensive sling-operations, moving of drilling equipment and camp using longline to and from drilling sites in the field. Numerous take-offs and landings from unprepared sites in the field, sometimes in poorly charted areas. Flights for geological reconnaissance, stereo-photography, etc., including numerous brief ground-stops for sample collection, etc.

Stereo-photography may preferably be undertaken with the sliding door open, conditions permitting.

The smaller project working from CNP will check and download data from 10 seismographs placed on an EW line from Kap Brewsater to the ice edge. A team of 2 or 3 persons will carry a spare station (less than 100 kg).

(3) Southeast Greenland: The focus of the fieldwork will be regional geochemical sampling with many demanding stops during daily operation. The geochemical sampling programme will be undertaken by 2-3 persons. Subsidiary to this, geological reconnaissance (2-4 persons), mobilisation of field-teams (2-4 persons) including field camp equipment and photogrammetry (2-3 persons) along steep cliff faces will be carried out. The photogrammetry may preferably be undertaken with the sliding door open or through the small sliding window in front of the helicopter, conditions permitting.

Mobilisation of persons to and from Tasiilaq or Kulusuk during fieldwork. Only limited sling-operations (e.g. in connection with movement of fuel barrels) will take place.

4. Type of helicopter

Helicopter(s) for operations (1), (2), and (3) must be duly certified airworthy in Greenland and with capacity and equipment as follows:

- Minimum passenger capacity: 4 persons + pilot
- Minimum useful load: no less than a total of 800 kg
- Minimum cargo swing load: no less than a total of 1000 kg
- Minimum endurance: no less than a total of 3.5 hrs.
- Preferably single-engine helicopter

- Fixed undercarriage/pop-out floats
- Loading hook
- Longline sling wire, shortline sling wire, loading nets (minimum 6), barrel-slings (minimum 2), straps and swivels
- Light-weight fuel-pump
- Spare-parts, components and tools for technical maintenance under field conditions for a minimum of optional 200 flying hours
- Radar altimeter
- VHF radio with a MHz frequency range of 118 - 135
- GPS
- Seats and safety belts for all passengers ("gunner-belts" for flying with sliding door open)
- Arctic survival equipment
- VHF/FM ship radio
- Radio Intercom with headsets for all passengers
- Satellite phone

Presuming that helicopter(s) at tenderer's disposal have the safety equipment required by regulations, ad hoc operations will use whatever helicopter is available at the given time and place.

5. Fuel

(1) Southwest Greenland: Fuel for operations in the Paamiut area will be provided by GEUS (50-80 200 litre drums of Jet A-1 fuel available).

(2) Northeast Greenland: Fuel for operations in the Daneborg area will be provided by GEUS (80 200 litre drums of Jet A-1 fuel available in DNB and another 36 drums in Danmarkshavn).

(3) Southeast Greenland: Fuel for operations in the Tasiilaq region will be provided by GEUS (70 drums of 200 litre Jet A-1 fuel available). When operating from the ship, fuel barrels will be onboard and will be transported to the coast at a suitable place for refuelling by the ship-crew. If operating out of Tasiilaq, the fuel will either be supplied via the facilities in the heliport or via fuel barrels that will be transported to the heliport.

Fuel for ad hoc operations will be provided by GEUS or by Service Provider, as the case may be.

6. Flight crew

The pilot(s) must be fully qualified and experienced with this particular type of work.

The pilot(s) must be experienced with sling operations, in particular the use of a longline sling wire.

The pilot(s) must be experienced with work in the high Arctic in general. This must include flying in poorly charted, mountainous regions, using all available means of orientation, including aerial photos, maps, etc.

The pilot(s) must be fluent in English.

The pilot(s) must be well acquainted with the conditions of field operations in the high Arctic.

The pilot(s) must accept to work under conditions identical to those offered to other participants in GEUS field operations, including staying in tent camps.

The pilot(s) must be qualified to carry out daily maintenance of the helicopter.

The pilot(s) must be acquainted with the use of firearms in the event of involvement with hostile animals.

7. Ground services

Tenderer must have access to necessary technical personnel (mechanics, etc.) and facilities to solve technical problems within reasonable time.