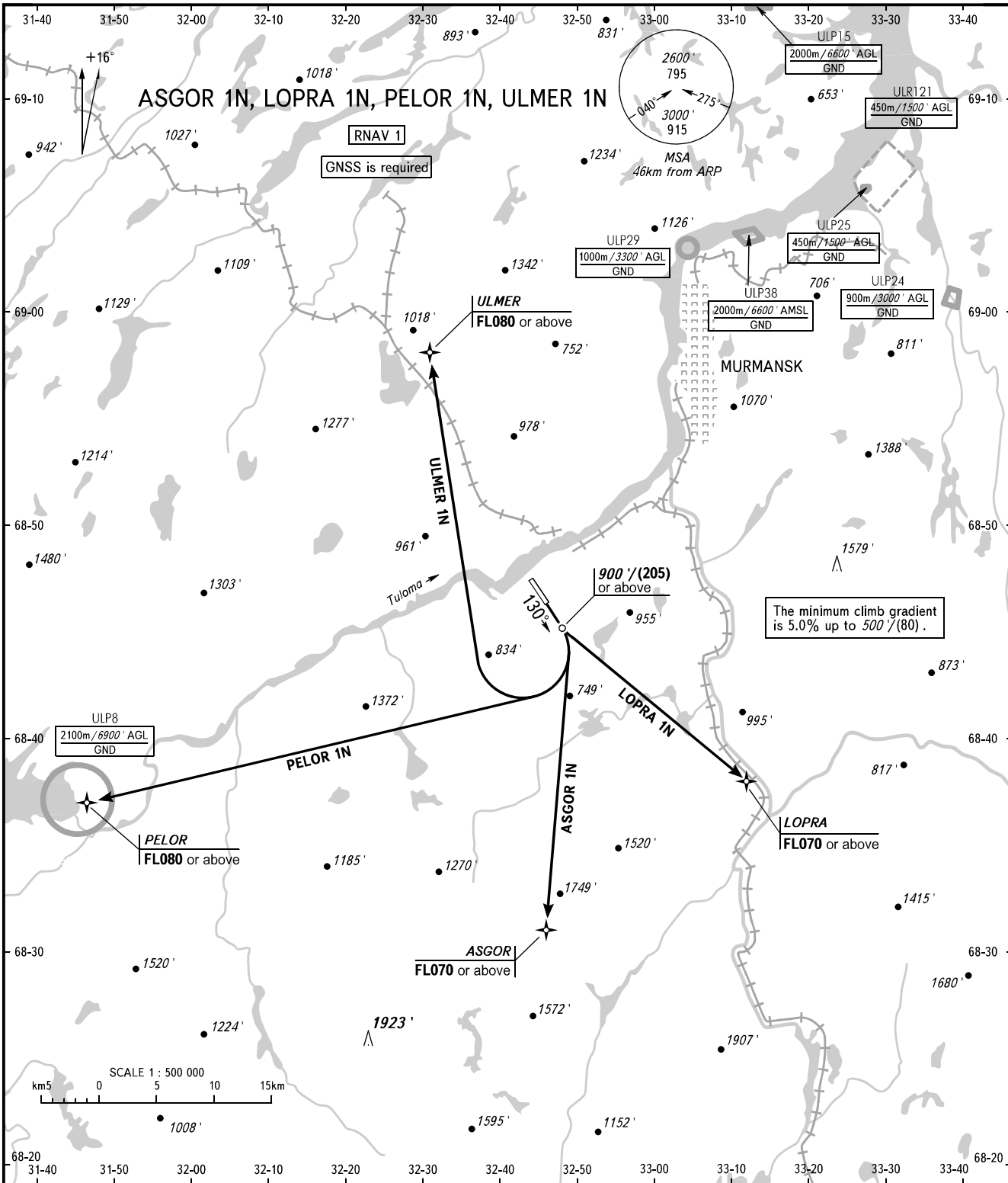


STANDARD DEPARTURE CHART  
INSTRUMENT (SID) - ICAO

TRANSITION ALTITUDE: 4000'  
TRANSITION HEIGHT: (1200)

MURMANSK, RUSSIA  
MURMANSK  
RNAV RWY 13



The minimum climb gradient is 5.0% up to 500'/(80).

TOWER 120.300  
RADAR 120.700

**WARNING:**

1. The minimum climb gradients are as follows:
  - LOPRA 1N - 9% up to FL070;
  - ASGOR 1N - 7.2% up to FL070.
2. If unable to maintain minimum climb gradient the flight crew shall advise ATS unit.
3. There are close-in obstacles (trees) located to the left of take-off heading at DIST 93 - 482m from DER with MAX ELEV (60').

BEARINGS AND TRACKS ARE MAGNETIC  
ALTITUDES AND ELEVATIONS IN FEET  
HEIGHTS IN METRES  
DISTANCES IN KILOMETRES

Alt set: -QNH(QFE on req);  
-hPa(mm on req).

CHANGE: Heading