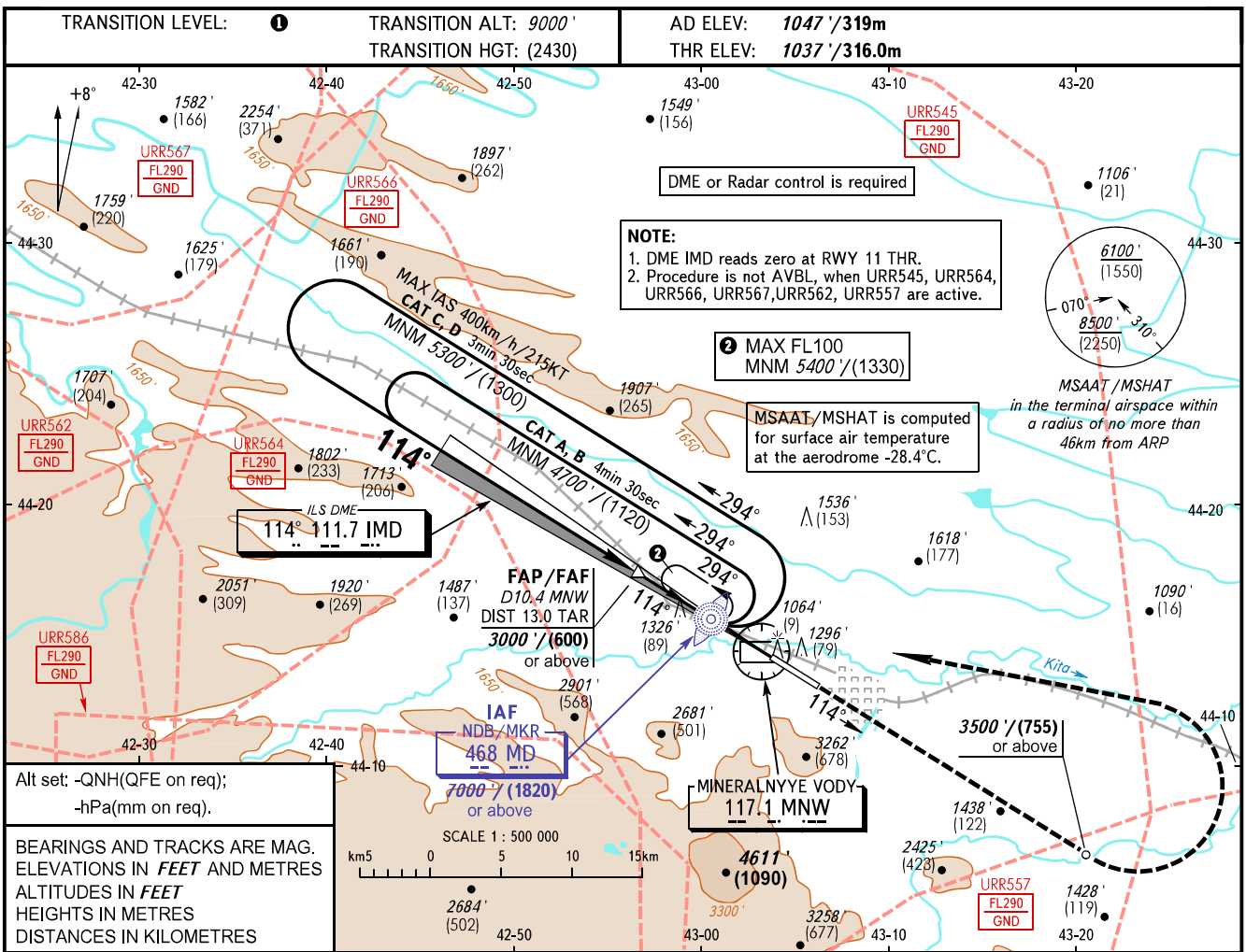


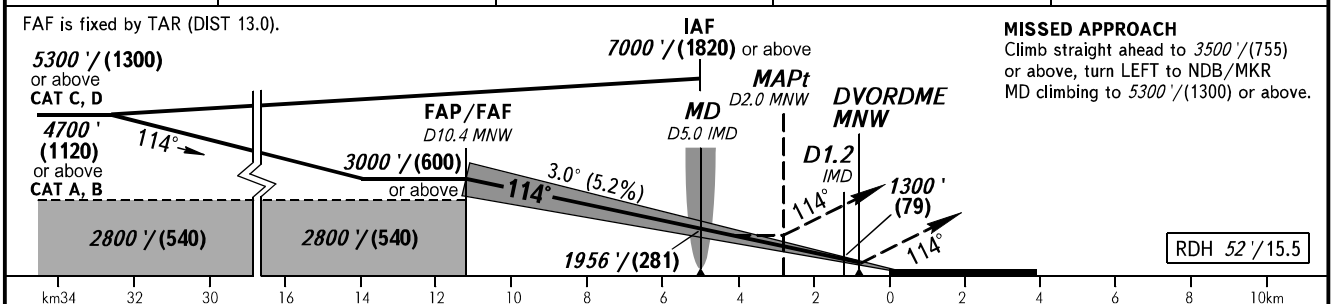
**INSTRUMENT  
APPROACH  
CHART - ICAO**

RADAR START **120.700**  
START **128.000**

**MINERALNYYE VODY, RUSSIA**  
MINERALNYYE VODY  
ILS X CAT I/II, LOC X RWY 11



|                 |               |               |               |               |
|-----------------|---------------|---------------|---------------|---------------|
| DME MNW         | 10.0          | 8.0           | 6.0           | 4.0           |
| ALTITUDE/HEIGHT | 2930' / (577) | 2589' / (473) | 2248' / (369) | 1907' / (265) |



| OCA(H)      |        | A                  | B                  | C                   | D                   |
|-------------|--------|--------------------|--------------------|---------------------|---------------------|
| Straight-in | CAT I  | 1194' (158') (49)  | 1206' (170') (52)  | 1214' (178') (55)   | 1225' (189') (58)   |
|             | CAT II | (69') / (22)       | (86') / (27)       | (98') / (30)        | (112') / (35)       |
|             | LOC    | 1820' (790') (245) | 1820' (790') (245) | 1820' (790') (245)  | 1820' (790') (245)  |
| Circling    |        | 1890' (840') (260) | 1890' (840') (260) | 2180' (1140') (350) | 2320' (1280') (395) |

① TRANSITION LEVEL:  
- FL100 when QNH is 1013 hPa (760mm mercury column) or above;  
- FL110 when QNH is 977 hPa (733mm mercury column) or above, but less than 1013 hPa (760mm mercury column);  
- FL120 when QNH is less than 977 hPa (733mm mercury column).  
Visual manoeuvring south of the AD is PROHIBITED.

|                 |         |      |      |      |      |      |      |      |      |
|-----------------|---------|------|------|------|------|------|------|------|------|
| GROUND SPEED    | km/h    | 150  | 180  | 210  | 240  | 270  | 300  | 330  | 360  |
|                 | kt      | 81   | 97   | 113  | 130  | 146  | 162  | 178  | 194  |
| FAF-MAPT 8316m  | min:sec | 3:20 | 2:46 | 2:23 | 2:05 | 1:51 | 1:40 | 1:31 | 1:23 |
| RATE OF DESCENT | m/s     | 2.2  | 2.6  | 3.0  | 3.5  | 3.9  | 4.3  | 4.8  | 5.2  |
|                 | ft/min  | 427  | 512  | 597  | 682  | 768  | 853  | 938  | 1024 |

CHANGE: New chart