JEPPESEN
JeppView for Windows

List of pages in this Trip Kit

General Information

Location: MINERALNYYE VODY RUS
ICAO/IATA: URMM / MRV
Lat/Long: N44° 13.62', E043° 04.98'
Elevation: 1047 ft

Airport Use: Public
Daylight Savings: Not Observed
UTC Conversion: -3:00 = UTC
Magnetic Variation: 7.0° E

Fuel Types: Jet A-1
Customs: Yes
Airport Type: IFR
Landing Fee: Yes
Control Tower: Yes
Jet Start Unit: No
LLWS Alert: No
Beacon: No

Sunrise: 0154 Z
Sunset: 1615 Z

Runway Information

Runway: 12
Length x Width: 12795 ft x 197 ft
Surface Type: concrete
TDZ-Elev: 1037 ft
Lighting: Edge, ALS, Centerline, TDZ

Runway: 30
Length x Width: 12795 ft x 197 ft
Surface Type: concrete
TDZ-Elev: 1047 ft
Lighting: Edge, ALS, Centerline

Communication Information

ATIS: 125.250
ATIS: 127.400 Non-English
ATIS: 132.975 Non-English
Mineralnyye Vody Start Tower: 128.000
Mineralnyye Vody Start Tower: 124.000 Secondary
Mineralnyye Vody Start Tower: 129.000 Secondary
Mineralnyye Vody Ground: 129.000 Secondary
Mineralnyye Vody Ground: 121.900
Mineralnyye Vody Ground: 124.000 Secondary

Mineralnyye Vody Apron Ramp/Taxi: 118.900
Mineralnyye Vody Approach: 119.300
Mineralnyye Vody Approach: 124.000 Secondary
Mineralnyye Vody Approach: 129.000 Secondary
Mineralnyye Vody Radar: 129.000 Secondary
Mineralnyye Vody Radar: 124.000 Secondary
Mineralnyye Vody Radar: 120.700
Mineralnyye Vody Transit Operations: 118.000 Non-English

1. GENERAL

1.1. ATIS

ATIS 125.25
127.4 (Russian)

1.2. LOW VISIBILITY PROCEDURES (LVP)

1.2.1. GENERAL

LVP are applied, when RWY visibility values are less than 550m.

Implementation of LVP is announced by ATIS using the phrase: "Low visibility procedures in progress".

TWY are considered vacant after flight crew reports occupation of RWY 11/29. RWY 11/29 is considered vacant after flight crew reports RWY vacation to TWR controller.

Flight crew should read back all instructions of TWR and GND controller.

It is prohibited to turn off transponders and radio communication equipment on ACFT taxiing on the maneuvering area.

1.2.2. ARRIVAL

Vacating of RWY 11 via TWY A or B.

When the flight crew has doubts regarding safety of taxi operations, the pilot must stop the ACFT and request Follow-me car.

After landing on RWY 11, arriving ACFT shall be met by the Follow-me car on TWYA or B on flight crews request. Further taxiing of ACFT after the Follow-me car shall be carried out under control of GND controller.

Flight crew shall inform GND controller about ACFT arrival on stand using the following phrase: "ACFT call sign, on stand...".

1.2.3. DEPARTURE

It is prohibited to cross the RWY holding position line designated by lighting markers and DAY marking on TWYs A thru D and Z without TWR controller's permission.

Pilots should not request start-up clearance when the value of RVR is below APT take-off minimum.

During taxiing to the RWY holding position on TWYs A, B, C and M the responsibility for safety of taxi operations is imposed on the pilot-in-command.

1.3. TAXI PROCEDURES

Taxiing onto/along and crossing of the RWY are subject to clearance of START controller or GND controller undertaking the responsibilities of START controller.

ACFT shall taxi on the apron under own engines power or under tow using special vehicles under the supervision of GND controller or START controller undertaking the responsibilities of GND controller.

Taxiing along TR1 through the apron:

- from stands 1 thru 13 with MAX wingspan 246'/75m;
- from stands 14 thru 25 with MAX wingspan 166'/50.5m.

1.4. PARKING INFORMATION

ACFT shall taxi (be towed) into the stand and shall taxi from the stand (be towed from the stand to the start-up position) by the instruction of the duty specialist of the ground maintenance service.

Stands 2 thru 6 are equipped with aerobridges.

Stands 24, 25 and vacant stands available for helicopters.

Stand 12 is available for de-icing.

1.5. OTHER INFORMATION

TWY D is available as a RWY turn pad.

Birds in vicinity of APT.

2. ARRIVAL

2.1. COMMUNICATION FAILURE PROCEDURES

Maintain the last flight level assigned and acknowledged or at flight level indicated in the flight plan towards DVOR MNW (NDB/MKR MD). After passing MNW (MD) proceed to holding area MM003 or MM011 depending on active RWY. After passing MM003/MM011 execute racetrack pattern on heading 204°/024°, descend to FL120 and hold to burn out (dump) fuel. Afterwards land according to IAP.

2.2. CAT II OPERATIONS

RWY 11 approved for CAT II operations, special aircrew and ACFT certification required.

3. DEPARTURE

3.1. START-UP, PUSH-BACK AND TAXI PROCEDURES

Start-up of ACFT engines in the process of its towing is prohibited.

When ACFT APU is inoperative, start of one engine at idle power is permitted on stands 1 thru 14 and 26 thru 28 when ACFT APU is inoperative, after coordination with ground handling specialists.

Flight crew shall activate Mode S transponder before requesting clearance for towing or engines-start-up and turn the transponder off after parking on stand.

3.2. COMMUNICATION FAILURE PROCEDURES

3.2.1. COMMUNICATION FAILURE AFTER TAKE-OFF OR MISSED APPROACH

If at 1700' (200m) communication with MINERALNYYE VODY Radar is not established continue climbing to 5400' (1330m), fly according to IAP and land at Mineralnyye Vody AD depending on meteorological conditions and ACFT landing mass.

If due to meteorological conditions or other reasons it is impossible to land at Mineralnyye Vody AD, after carrying out the aerodrome traffic circuit flight and passing DVORDME MNW (NDB/MKR MD) at 5400' (1330m) or after going around proceed to:

- the destination AD climbing to altitude (FL) and along the route according to flight plan and land at the destination AD with minimum deviations from the time indicated in the flight plan;
- the alternate AD, chosen when making a decision for departure, at MEL or at FL specially established for a flight without radio communication depending on flight direction (FL140, FL150 or FL240, FL250) along departure route climbing to the indicated FL;
- holding area MM003 or MM011, depending on active RWY heading climbing to FL120. After passing MM003/MM011, execute racetrack pattern on heading 204°/024° and hold to burn out (dump) fuel. Afterwards land according to IAP.

3. DEPARTURE

3.2.2. COMMUNICATION FAILURE DURING CLIMB TO ALTITUDE (FL)

Maintain the last FL (altitude) assigned and acknowledged until CTR exit point. After that:

- proceed to the destination AD climbing to altitude (FL) and along the route according to flight plan and land at the destination AD with minimum deviations from the time indicated in the flight plan;
- return to the departure AD at the lower flight level of the same direction nearest to the assigned one, not below safe flight altitude, or at flight level specially established for a flight without radio communication depending on flight direction (FL140, FL150 or FL240, FL250).

After passing DVORDME MNW (NDB/MKR MD) proceed to holding area MM003 or MM011 depending on active RWY. After passing MM003/MM011 execute racetrack pattern on heading 204°/024°, descend to FL070 and hold to burn out (dump) fuel. Afterwards land according to IAP.

MINERALNYYE VODY, RUSSIA

RADAR MINIMUM ALTITUDES

MINERALNYYE VODY Radar (TWR)	Apt Elev
120.7	1047

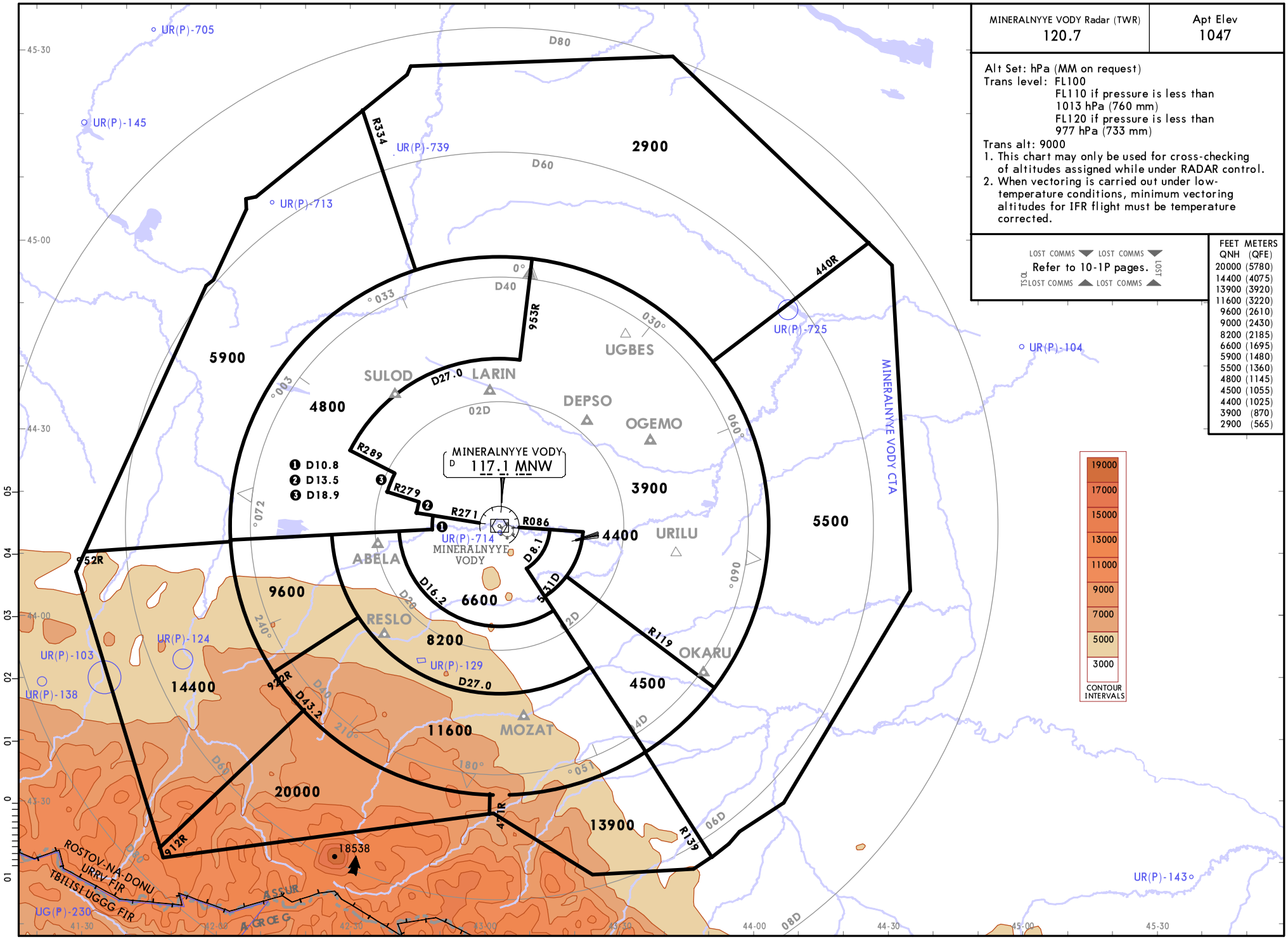
Alt Set: hPa (MM on request)
Trans level: FL100
FL110 if pressure is less than 1013 hPa (760 mm)
FL120 if pressure is less than 977 hPa (733 mm)
Trans alt: 9000

1. This chart may only be used for cross-checking of altitudes assigned while under RADAR control.
2. When vectoring is carried out under low-temperature conditions, minimum vectoring altitudes for IFR flight must be temperature corrected.

LOST COMMS ▼ LOST COMMS ▼ Refer to 10-1P pages. ▲ LOST COMMS ▲ LOST COMMS

FEET QNH	METERS (QFE)
20000	(5780)
14400	(4075)
13900	(3920)
11600	(3220)
9600	(2610)
9000	(2430)
8200	(2185)
6600	(1695)
5900	(1480)
5500	(1360)
4800	(1145)
4500	(1055)
4400	(1025)
3900	(870)
2900	(565)

CONTOUR INTERVALS: 19000, 17000, 15000, 13000, 11000, 9000, 7000, 5000, 3000



CHANGES: Prohibited areas added.

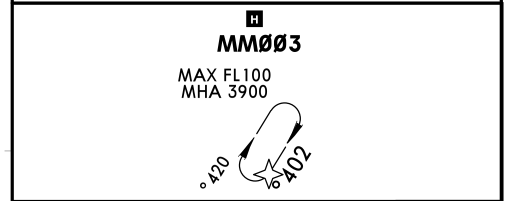
ATIS	Apt Elev
125.25 (Russian 127.4)	1047

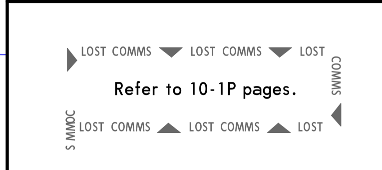
Alt Set: hPa (MM on request)
Trans level: FL100
FL110 if pressure is less than 1013 hPa (760 mm)
FL120 if pressure is less than 977 hPa (733 mm)

RNAV 1   GNSS required

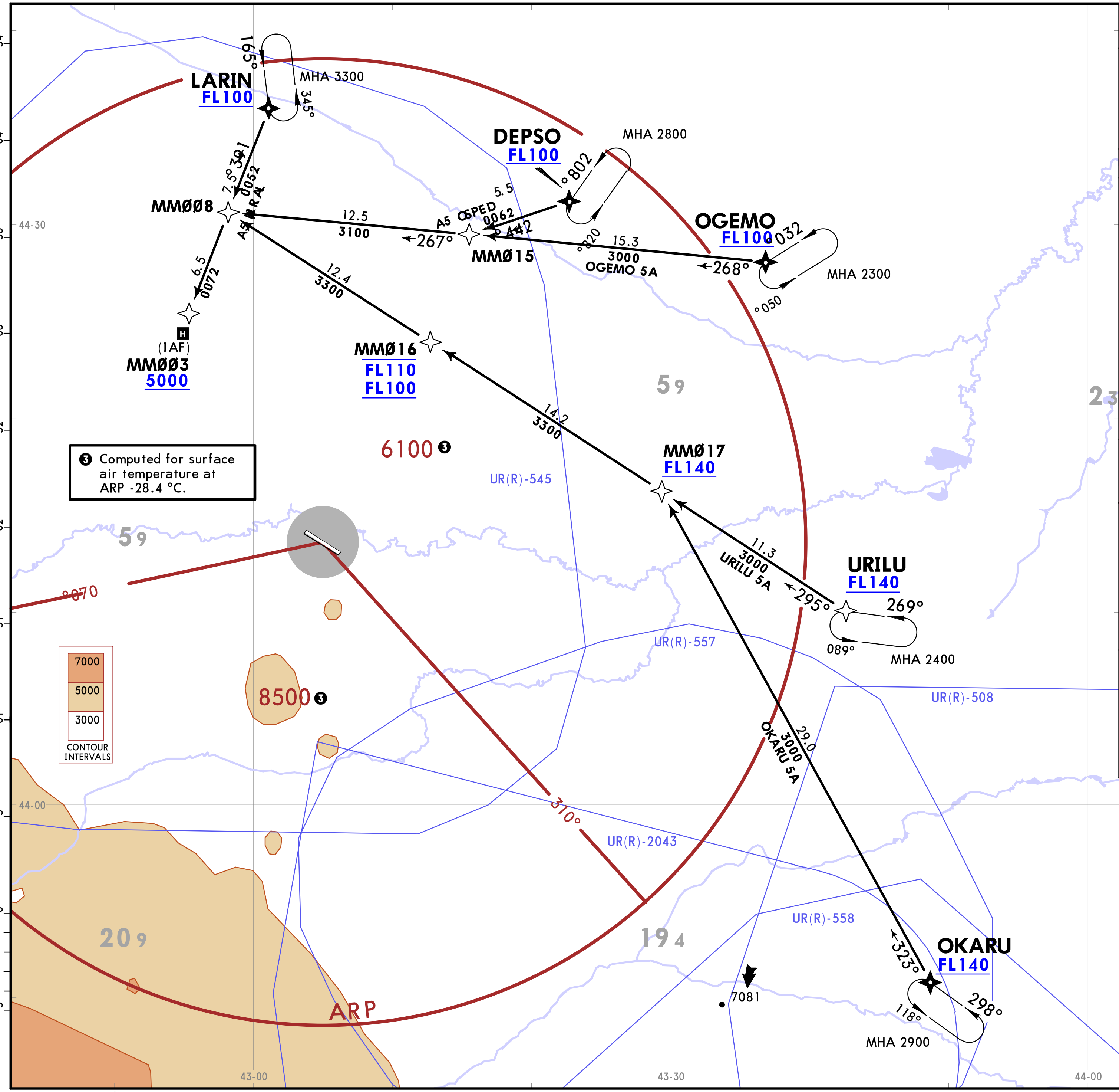
DEPSO 5A [DEPS5A] ❶
OGEMO 5A [OGEM5A] ❶
BY ATC
LARIN 5A [LARI5A] ❶
OKARU 5A [OKAR5A] ❷
URILU 5A [URIL5A] ❶
RNAV ARRIVALS
(RWY 11)

❶ Not available when UR(R)-545 active.
❷ Not available when UR(R)-508, UR(R)-545, UR(R)-557, UR(R)-558, UR(R)-2043 active.





FEET QNH	METERS (QFE)
5000	(1210)
3900	(875)
3300	(690)
2900	(570)
2800	(540)
2400	(420)
2300	(385)


LARIN
FL100
165°
345°
MHA 3300
DEPSO
FL100
MHA 2800
5.5
0062
A5
SPED
MMØ15
12.5
3100
267°
MMØØ8
7.5
0052
6.5
0072
(IAF)
MMØØ3
5000
OGEMO
FL100
032°
050°
268°
MHA 2300
15.3
3000
OGEMO 5A
12.4
3300
MMØ16
FL110
FL100
14.2
3300
MMØ17
FL140
6100 ❸
UR(R)-545
URILU
FL140
269°
089°
295°
MHA 2400
11.3
3000
URILU 5A
29.0
3000
OKARU 5A
UR(R)-557
UR(R)-508
UR(R)-2043
UR(R)-558
OKARU
FL140
298°
118°
323°
MHA 2900
7081
8500 ❸
310°
070°
ARP
7000
5000
3000
CONTOUR INTERVALS
44-30
44-00
43-00
43-30
44-00

❸ Computed for surface air temperature at ARP -28.4 °C.

CHANGES: MM008 bearing.

ATIS
125.25 (Russian 127.4)

Apt Elev
1047

Alt Set: hPa (MM on request)
Trans level: FL100
FL110 if pressure is less than 1013 hPa (760 mm)
FL120 if pressure is less than 977 hPa (733 mm)

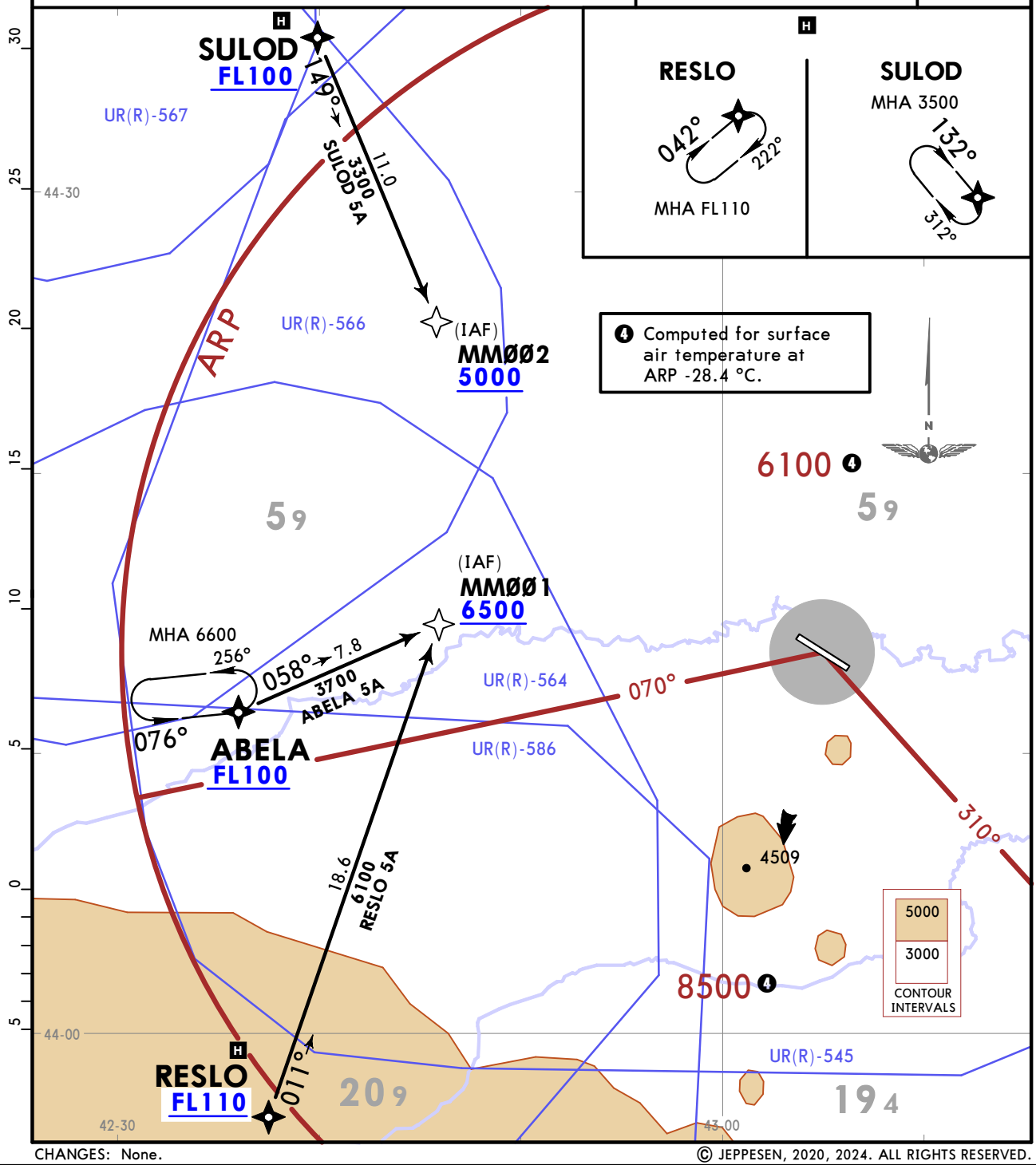
RNAV 1 GNSS required

ABELA 5A [ABEL5A]❶
RESLO 5A [RESL5A]❷
SULOD 5A [SULO5A]❸
RNAV ARRIVALS
(RWY 11)

❶ Not available when UR(R)-545, UR(R)-564, UR(R)-566 active.
❷ Not available when UR(R)-545, UR(R)-564, UR(R)-586 active.
❸ Not available when UR(R)-545, UR(R)-566, UR(R)-567 active.

LOST COMMS ▼ LOST COMMS ▼ COMMS
Refer to 10-1P pages.
COMMS LOST COMMS ▲ LOST COMMS ▲

FEET	METERS
QNH	(QFE)
6600	(1700)
6500	(1670)
5000	(1210)
3500	(755)



CHANGES: None.

URMM/MRV
MINERALNYYE VODY

JEPPESEN
16 FEB 24 (10-2B) Eff 22 Feb

MINERALNYYE VODY, RUSSIA

RNAV STAR

ATIS	Apt Elev
125.25 (Russian 127.4)	1047

Alt Set: hPa (MM on request)
Trans level: FL100
FL110 if pressure is less than 1013 hPa (760 mm)
FL120 if pressure is less than 977 hPa (733 mm)

RNAV 1 GNSS required

DEPSO 5B [DEPS5B] ❶
OGEMO 5B [OGEM5B] ❶
BY ATC
ABELA 5B [ABEL5B] ❷
LARIN 5B [LARI5B] ❶
SULOD 5B [SULO5B] ❸
RNAV ARRIVALS
(RWY 29)

❶ Not available when UR(R)-545 active.
❷ Not available when UR(R)-545, UR(R)-564, UR(R)-566 active.
❸ Not available when UR(R)-545, UR(R)-566, UR(R)-567 active.

LOST COMMS ▼ LOST COMMS ▼ LOST COMMS
Refer to 10-1P pages.
S MMOC LOST COMMS ▲ LOST COMMS ▲ LOST COMMS

FEET QNH	METERS (QFE)
6600	(1695)
4500	(1055)
4400	(1025)
3500	(750)
3300	(690)
2800	(540)
2300	(385)

SULOD FL110
MHA 3500
132°
312°
106°
21.8
3300
SULOD 5B

LARIN FL100
MHA 3300
165°
345°
146°
10.6
3300
LARIN 5B

DEPSO FL100
MHA 2800
080°
155°
082°
14.6
3100
DEPSO 5B

OGEMO FL110 FL100
MHA 2300
032°
050°
042°
4.21
0003
B5 OMEGO

MMØ34
MMØ35 FL110 FL100
MMØ33 FL150
MMØ32
MMØ36
MMØ11 (IAF) 4500

114°
5.7
3400
6.6
0083
0.7
0083
11.9
3200
MHA 6600
652°
640°
670°
6.31
0073
B5 ALEBA
ABELA FL150
070°
MAX FL100
MHA 4400
060°
042°
0013
420°

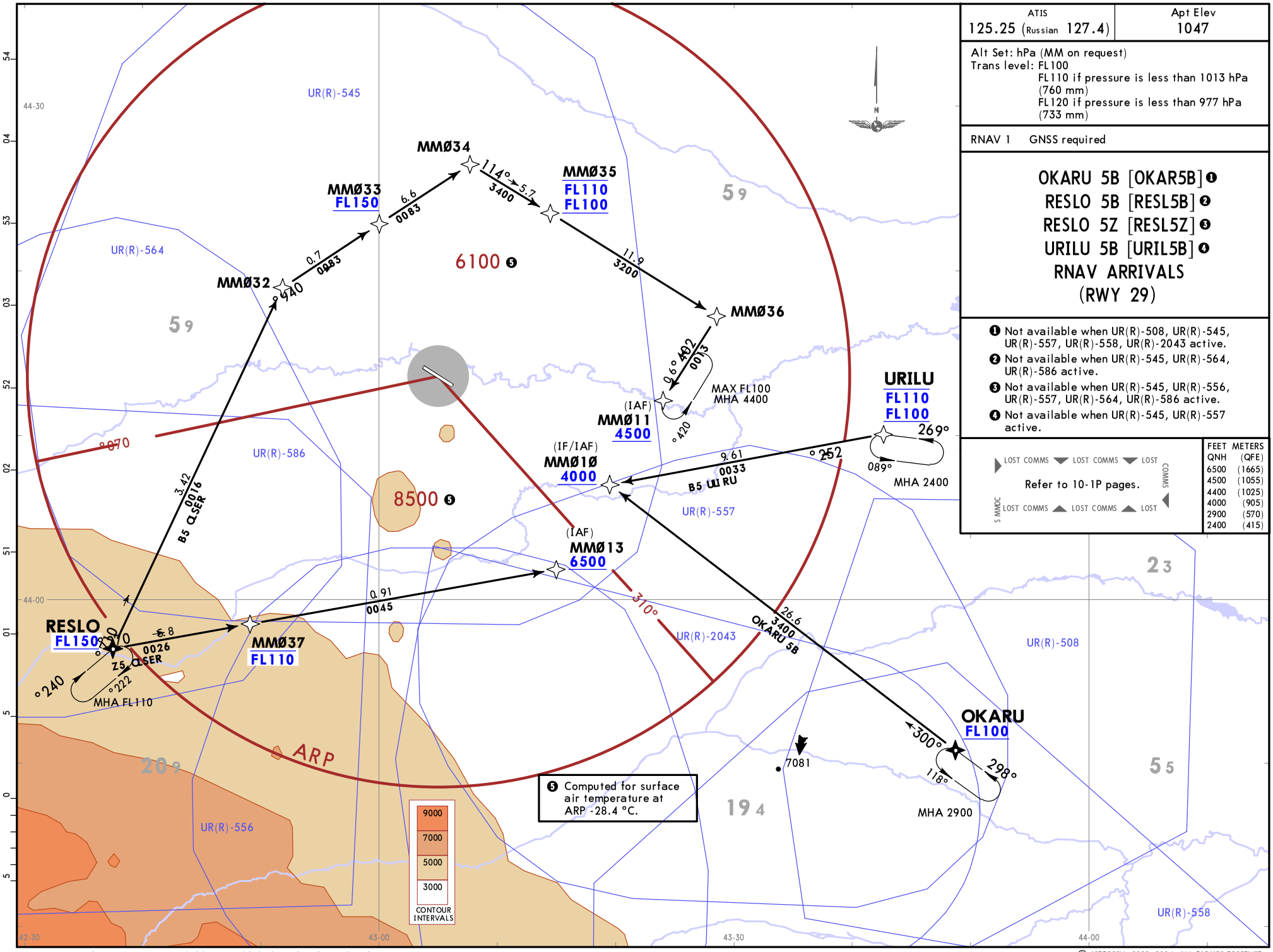
ARP
310°
6100 ❹
8500 ❹
4509

UR(R)-567
UR(R)-566
UR(R)-545
UR(R)-564

5000
3000
CONTOUR INTERVALS

❹ Computed for surface air temperature at ARP -28.4 °C.

CHANGES: RWY designation, MSA, TL, holdings established, track update, altitude at DEPSO.



ATIS	Apt Elev
125.25 (Russian 127.4)	1047

Alt Set: hPa (MM on request)
Trans level: FL100
FL110 if pressure is less than 1013 hPa (760 mm)
FL120 if pressure is less than 977 hPa (733 mm)

RNAV 1 GNSS required

OKARU 5B [OKAR5B] ❶
RESLO 5B [RESL5B] ❷
RESLO 5Z [RESL5Z] ❸
URILU 5B [URIL5B] ❹
RNAV ARRIVALS
(RWY 29)

❶ Not available when UR(R)-508, UR(R)-545, UR(R)-557, UR(R)-558, UR(R)-2043 active.
❷ Not available when UR(R)-545, UR(R)-564, UR(R)-586 active.
❸ Not available when UR(R)-545, UR(R)-556, UR(R)-557, UR(R)-564, UR(R)-586 active.
❹ Not available when UR(R)-545, UR(R)-557 active.

FEET	METERS
QNH	(QFE)
6500	(1665)
4500	(1055)
4400	(1025)
4000	(905)
2900	(570)
2400	(415)

❺ Computed for surface air temperature at ARP -28.4 °C.

CHANGES: RWY designation, MSA, TL, holdings established, track update, altitude at OKARU.

ATIS	Apt Elev
125.25 (Russian 127.4)	1047

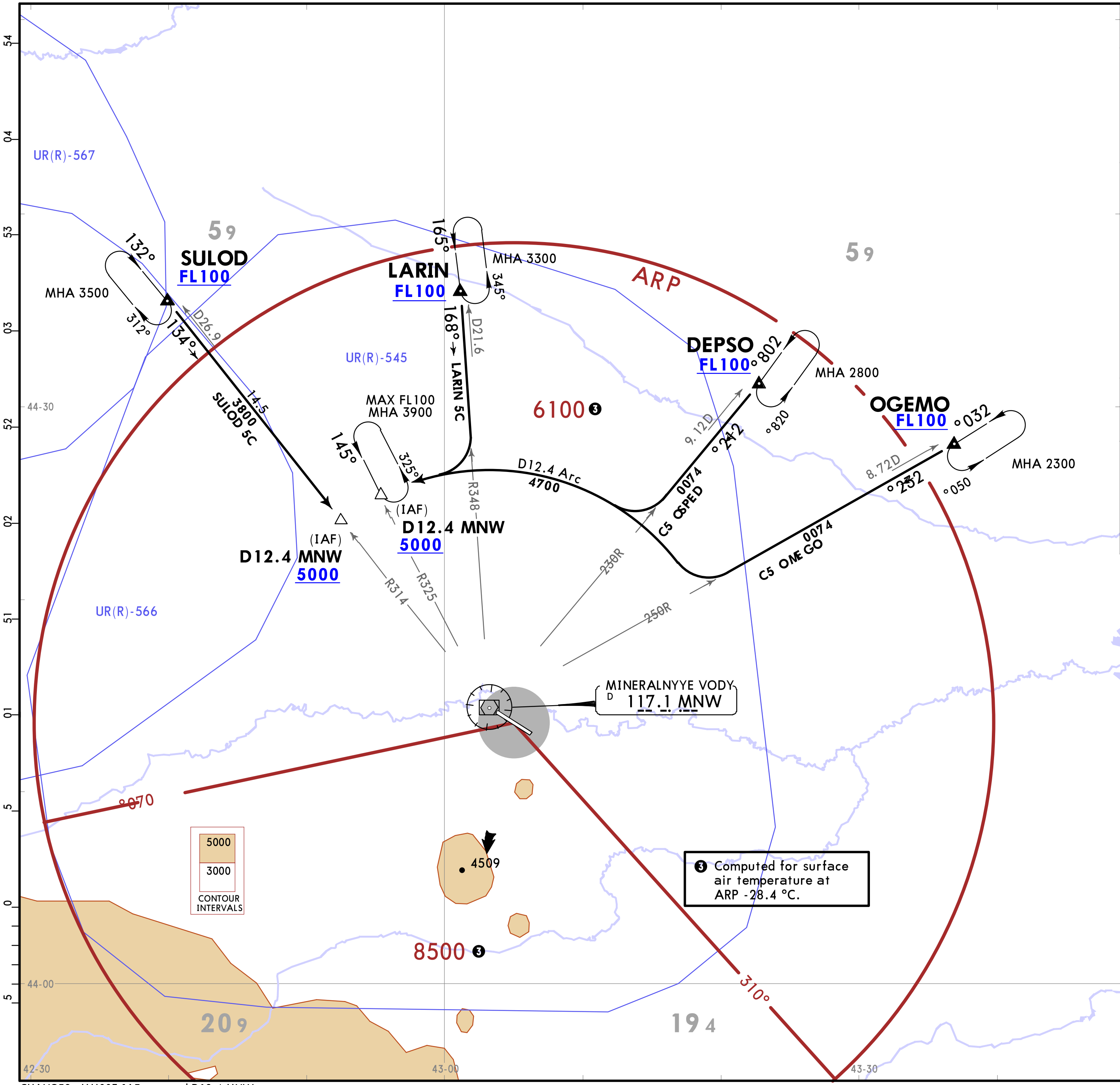
Alt Set: hPa (MM on request)
Trans level: FL100
FL110 if pressure is less than 1013 hPa (760 mm)
FL120 if pressure is less than 977 hPa (733 mm)
DME required.

DEPSO 5C [DEPS5C] ❶
OGEMO 5C [OGEM5C] ❶
BY ATC
LARIN 5C [LARI5C] ❶
SULOD 5C [SULO5C] ❷
ARRIVALS
(RWY 11)

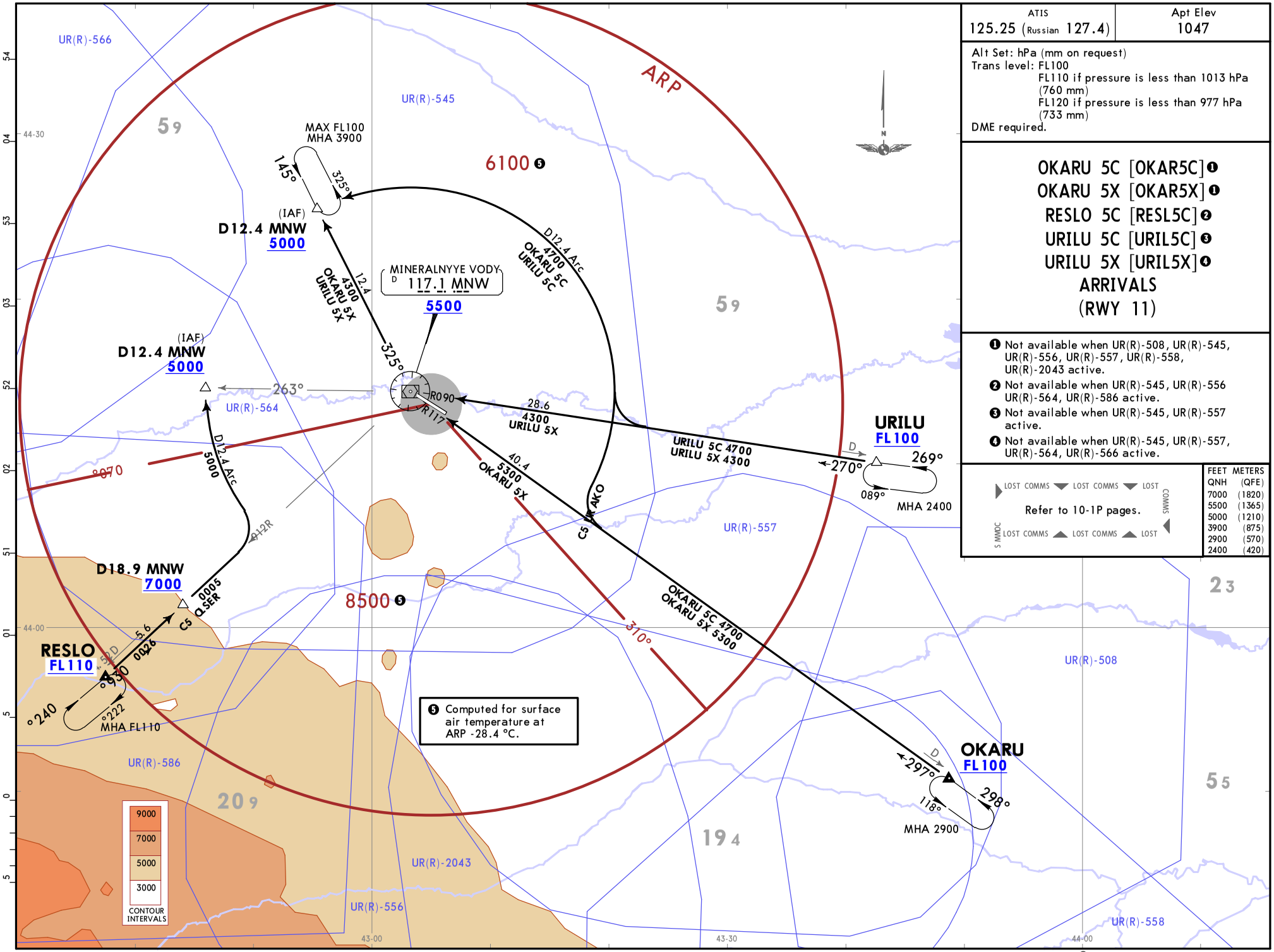
❶ Not available when UR(R)-545 active.
❷ Not available when UR(R)-545, UR(R)-566, UR(R)-567 active.

LOST COMMS — Refer to 10-1P pages.

FEET QNH	METERS (QFE)
5000	(1210)
3900	(875)
3500	(755)
3300	(690)
2800	(540)
2300	(385)


SULOD
FL100
MHA 3500
132°
312°
134°
D26.9
14.5
3800
SULOD 5C
LARIN
FL100
165°
345°
MHA 3300
168°
LARIN 5C
D21.6
DEPSO
FL100
802°
MHA 2800
820°
242°
9.12D
0074
C5 OSPED
OGEMO
FL100
032°
MHA 2300
050°
232°
8.72D
0074
C5 OME GO
ARP
6100 ❸
D12.4 Arc
4700
MAX FL100
MHA 3900
145°
325°
(IAF)
D12.4 MNW
5000
R348
R325
R314
230R
250R
MINERALNYYE VODY
D 117.1 MNW
UR(R)-567
UR(R)-545
UR(R)-566
070°
310°
4509
8500 ❸
5000
3000
CONTOUR INTERVALS
❸ Computed for surface air temperature at ARP -28.4 °C.

CHANGES: MM003 IAF renamed D12.4 MNW.



ATIS	Apt Elev
125.25 (Russian 127.4)	1047

Alt Set: hPa (mm on request)
Trans level: FL100
FL110 if pressure is less than 1013 hPa (760 mm)
FL120 if pressure is less than 977 hPa (733 mm)
DME required.

OKARU 5C [OKAR5C] ❶
OKARU 5X [OKAR5X] ❶
RESLO 5C [RESL5C] ❷
URILU 5C [URIL5C] ❸
URILU 5X [URIL5X] ❹
ARRIVALS
(RWY 11)

❶ Not available when UR(R)-508, UR(R)-545, UR(R)-556, UR(R)-557, UR(R)-558, UR(R)-2043 active.
❷ Not available when UR(R)-545, UR(R)-556 UR(R)-564, UR(R)-586 active.
❸ Not available when UR(R)-545, UR(R)-557 active.
❹ Not available when UR(R)-545, UR(R)-557, UR(R)-564, UR(R)-566 active.

LOST COMMS ▼ LOST COMMS ▼ LOST COMMS
Refer to 10-1P pages.
LOST COMMS ▲ LOST COMMS ▲ LOST COMMS
S MMOC

FEET	METERS
QNH	(QFE)
7000	(1820)
5500	(1365)
5000	(1210)
3900	(875)
2900	(570)
2400	(420)

CHANGES: MM001 & MM003 IAF renamed D12.4 MNW.

URMM/MRV
MINERALNYYE VODY

JEPPESEN
12 APR 24 (10-2F) Eff 18 Apr

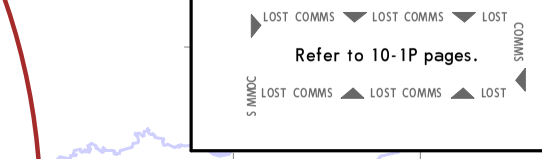
MINERALNYYE VODY, RUSSIA
STAR

ATIS	Apt Elev
125.25 (Russian 127.4)	1047

Alt Set: hPa (MM on request)
Trans level: FL100
FL110 if pressure is less than 1013 hPa (760 mm)
FL120 if pressure is less than 977 hPa (733 mm)
DME required.

DEPSO 5D [DEPS5D]❶
OGEMO 5D [OGEM5D]❶
BY ATC
LARIN 5D [LARI5D]❶
SULOD 5D [SULO5D]❷
SULOD 5W [SULO5W]❸
ARRIVALS
(RWY 29)

❶ Not available when UR(R)-545 active.
❷ Not available when UR(R)-545, UR(R)-564 UR(R)-566, UR(R)-567 active.
❸ Not available when UR(R)-545, UR(R)-557, UR(R)-564, UR(R)-566, UR(R)-567 active.



FEET QNH	METERS (QFE)
7000	(1820)
6000	(1515)
4500	(1055)
4000	(905)
3500	(750)
3300	(690)
2800	(540)
2300	(385)

SULOD
FL100
MHA 3500
LARIN
FL100
MHA 3300
DEPSO
FL100
MHA 2800
OGEMO
FL100
MHA 2300
ARP
UR(R)-567
UR(R)-545
UR(R)-566
UR(R)-564
UR(R)-557
SULOD 5D 3900
SULOD 5W 5300
LARIN 5D
D15.1 Arc 3900
D5 DEPSO
D5 OGEMO
D5 OMEGO
SULOD 5W
MINERALNYYE VODY
D 117.1 MNW
7000
D7.6 MNW
6000
D15.1 MNW
4500
(IAF)
MAX FL100
MHA 4000
6100❹
8500❹
❹ Computed for surface air temperature at ARP -28.4 °C.
5000
3000
CONTOUR INTERVALS
4509

CHANGES: MM011 IAF renamed D15.1 MNW.

JEPPESEN MINERALNYYE VODY, RUSSIA

12 APR 24 (10-2G) Eff 18 Apr

STAR

ATIS	Apt Elev
125.25 (Russian 127.4)	1047

Alt Set: hPa (mm on request)
Trans level: FL100
FL110 if pressure is less than 1013 hPa (760 mm)
FL120 if pressure is less than 977 hPa (733 mm)
DME required.

ABELA 5W [ABEL5W] ❶
OKARU 5D [OKAR5D] ❷
RESLO 5D [RESL5D] ❸
RESLO 5W [RESL5W] ❹
URILU 5D [URIL5D] ❺
ARRIVALS
(RWY 29)

❶ Not available when UR(R)-545, UR(R)-557, UR(R)-564, UR(R)-566, UR(R)-586 active.
❷ Not available when UR(R)-508, UR(R)-557 UR(R)-558, UR(R)-2043 active.
❸ Not available when UR(R)-545, UR(R)-556, UR(R)-557, UR(R)-562, UR(R)-564, UR(R)-586, UR(R)-2043 active.
❹ Not available when UR(R)-545, UR(R)-556, UR(R)-557, UR(R)-562, UR(R)-564, UR(R)-586 active.
❺ Not available when UR(R)-545, UR(R)-557 active.

❻ Computed for surface air temperature at ARP -28.4 °C.

MINERALNYYE VODY
D 117.1 MNW
7000

6100 ❻
8500 ❻

UR(R)-566
UR(R)-545
UR(R)-562
UR(R)-564
UR(R)-557
UR(R)-556
UR(R)-586
UR(R)-2043
UR(R)-508
UR(R)-558

MHA 6600
°652
°470
°670
D
8.91
0094
W5 ALEBA
452R
470R
ABELA
FL100

090°
7.6
5300
D7.6 MNW
6000
7.5
3700
(IAF)
D15.1 MNW
4500
090°
MAX FL100
MHA 4000
13.5
3300
URILU 5D
D28.6
270°
URILU
FL100
269°
089°
MHA 2400

4.52
0026
W6 ALSER
D15.1 Arc
6200
RESLO 5D
138°
169°
(IAF)
D15.1 MNW
5000
0084
D15.1 MNW
7000
R117
310°
(IAF)
D21.6 MNW
5000

RESLO
FL110
D
5.3
D5 ALSER
W6 ALSER
°240
°222
MHA FL110

18.8
3000
OKARU 5D
D40.4
297°
OKARU
FL100
298°
118°
MHA 2900

ARP

CONTOUR INTERVALS
9000
7000
5000
3000

FEET QNH	METERS (QFE)
7000	(1820)
6600	(1695)
6000	(1515)
5000	(1210)
4500	(1055)
4000	(905)
2900	(570)
2400	(415)

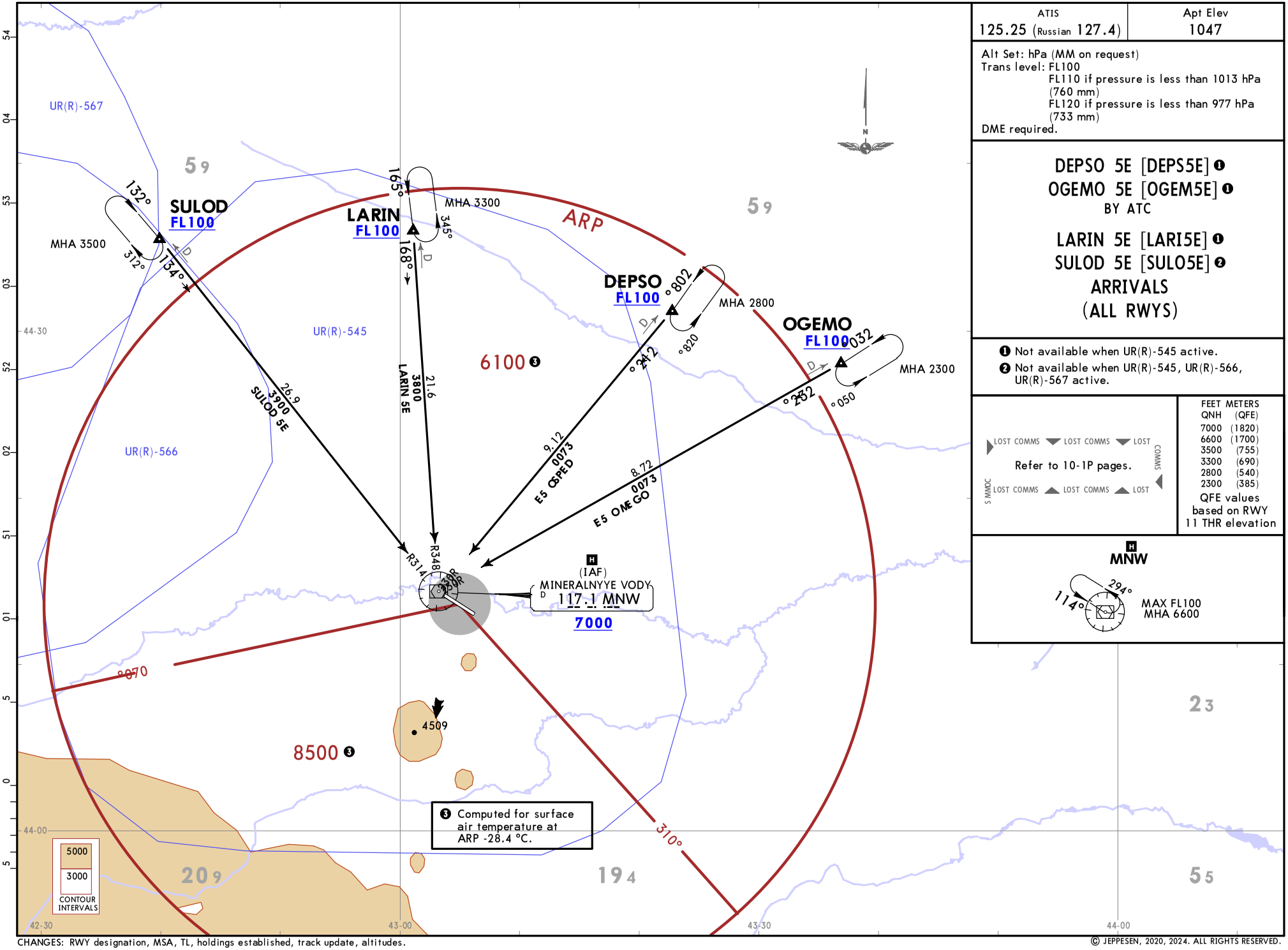
LOST COMMS ▼ LOST COMMS ▼ LOST COMMS
Refer to 10-1P pages.
LOST COMMS ▲ LOST COMMS ▲ LOST COMMS
S MNOC

CHANGES: MM011 & MM013 IAFs renamed D15.1 MNW.

URMM/MRV
MINERALNYYE VODY

JEPPESEN
16 FEB 24 (10-2H) Eff 22 Feb

MINERALNYYE VODY, RUSSIA
STAR



ATIS	Apt Elev
125.25 (Russian 127.4)	1047

Alt Set: hPa (MM on request)
Trans level: FL100
FL110 if pressure is less than 1013 hPa (760 mm)
FL120 if pressure is less than 977 hPa (733 mm)
DME required.

DEPSO 5E [DEPS5E] ❶
OGEMO 5E [OGEM5E] ❶
BY ATC
LARIN 5E [LARI5E] ❶
SULOD 5E [SULO5E] ❷
ARRIVALS
(ALL RWYS)

❶ Not available when UR(R)-545 active.
❷ Not available when UR(R)-545, UR(R)-566, UR(R)-567 active.

LOST COMMS ▼ LOST COMMS ▼ LOST COMMS
Refer to 10-1P pages.
LOST COMMS ▲ LOST COMMS ▲ LOST COMMS
S MMDC

FEET QNH	METERS (QFE)
7000	(1820)
6600	(1700)
3500	(755)
3300	(690)
2800	(540)
2300	(385)

QFE values based on RWY 11 THR elevation

H MNW
294°
114°
MAX FL100
MHA 6600

❸ Computed for surface air temperature at ARP -28.4 °C.

CHANGES: RWY designation, MSA, TL, holdings established, track update, altitudes.

JEPPESEN MINERALNYYE VODY, RUSSIA

STAR

ATIS	Apt Elev
125.25 (Russian 127.4)	1047

Alt Set: hPa (mm on request)
Trans level: FL100
FL110 if pressure is less than 1013 hPa (760 mm)
FL120 if pressure is less than 977 hPa (733 mm)
DME required.

ABELA 5E [ABEL5E] ❶
OKARU 5E [OKAR5E] ❷
RESLO 5E [RESL5E] ❸
URILU 5E [URIL5E] ❹
ARRIVALS
(ALL RWYS)

❶ Not available when UR(R)-545, UR(R)-564, UR(R)-566, UR(R)-586 active.
❷ Not available when UR(R)-508, UR(R)-545, UR(R)-556, UR(R)-557, UR(R)-558, UR(R)-2043 active.
❸ Not available when UR(R)-545, UR(R)-556, UR(R)-562, UR(R)-564, UR(R)-586 active.
❹ Not available when UR(R)-545, UR(R)-557 active.

LOST COMMS ▼ LOST COMMS ▼ LOST COMMS
Refer to 10-1P pages.
S MMOC LOST COMMS ▲ LOST COMMS ▲ LOST COMMS

FEET	METERS
QNH	(QFE)
7000	(1820)
6600	(1700)
2900	(570)
2400	(420)

QFE values based on RWY 11 THR elevation

UR(R)-566
UR(R)-545
UR(R)-562
UR(R)-564
UR(R)-557
UR(R)-556
UR(R)-508
UR(R)-586
UR(R)-2043
UR(R)-558

6100 ❺
8500 ❺
5 9
2 3
5 5
2 0 9
1 9 4

MAX FL100
MHA 6600

(IAF)
MINERALNYYE VODY
D 117.1 MNW
7000

294°
114°
R090
R117
452R

MHA 6600
°652
°470
°670
D
8.91
0094
E5 ABELA
°070
ABELA
FL100

URILU
FL100
269°
270°
089°
28.6
4300
URILU 5E
MHA 2400

4.52
0026
E5 RESER
RESLO
FL110
°530
°240
°222
MHA FL110

310°
40.4
5300
OKARU 5E

OKARU
FL100
297°
298°
118°
MHA 2900
7081

ARP

❺ Computed for surface air temperature at ARP -28.4 °C.

CONTOUR INTERVALS
9000
7000
5000
3000

CHANGES: RWY designation, MSA, TL, holdings established, track update, altitudes.

URMM/MRV
MINERALNYYE VODY

JEPPESEN
1 AUG 25 (10-2K) Eff 7 Aug

MINERALNYYE VODY, RUSSIA
STAR

ATIS	Apt Elev
125.25 (Russian 127.4)	1047

Alt Set: hPa (MM on request)
Trans level: FL100
FL110 if pressure is less than 1013 hPa (760 mm)
FL120 if pressure is less than 977 hPa (733 mm)
DME or RADAR control required.

DEPSO 5F [DEPS5F] ❶
OGEMO 5F [OGEM5F] ❶
BY ATC
LARIN 5F [LARI5F] ❶
SULOD 5F [SULO5F] ❷
ARRIVALS
(ALL RWYS)

❶ Not available when UR(R)-545 active.
❷ Not available when UR(R)-545, UR(R)-566, UR(R)-567 active.

LOST COMMS ▼ LOST COMMS ▼ LOST COMMS
Refer to 10-1P pages.
S MMDC LOST COMMS ▲ LOST COMMS ▲ LOST COMMS

FEET	METERS
QNH	(QFE)
7000	(1820)
5400	(1330)
3500	(755)
3300	(690)
2800	(540)
2300	(390)

QFE values based on RWY 11 THR elevation

SULOD
(MNW D26.9)
(28.3 NM to ARP)
FL100

LARIN
(MNW D21.6)
(22.6 NM to ARP)
FL100

DEPSO
(MNW D21.9)
(21.7 NM to ARP)
FL100

OGEMO
(MNW D27.8)
(27.1 NM to ARP)
FL100

MHA 3500
MHA 3300
MHA 2800
MHA 2300

ARP

UR(R)-567
UR(R)-545
UR(R)-566

6100 ❸
8500 ❸

SULOD 5F 3900 25
F5 NRAL 0083 12
F5 OSPED 0083 22
F5 OMEGO 0073 92

MAX FL100
MHA 5400
(IAF)
468 MD
7000

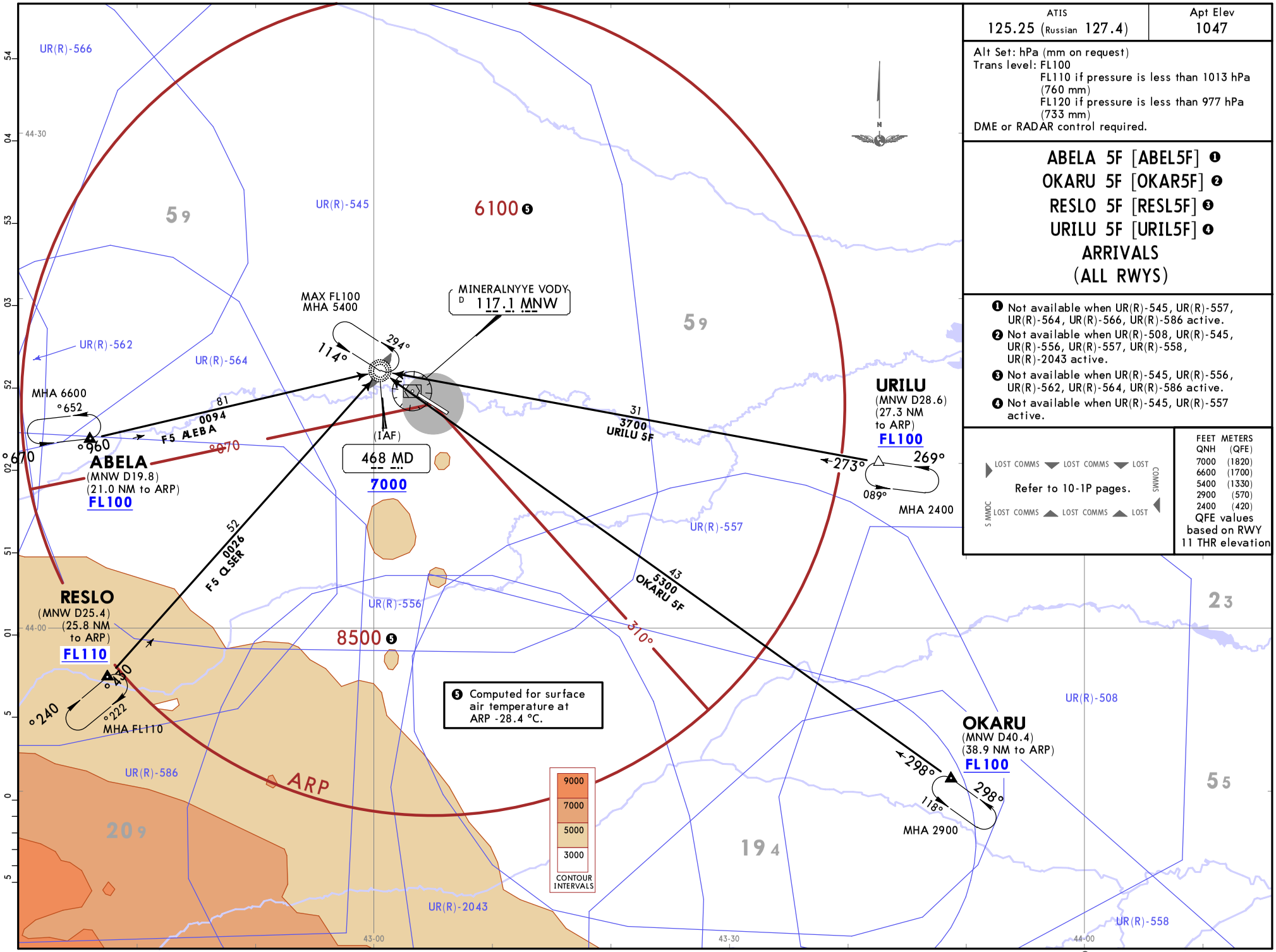
MINERALNYYE VODY
D 117.1 MNW

4509

5000
3000
CONTOUR INTERVALS

❸ Computed for surface air temperature at ARP -28.4 °C.

CHANGES: Distance to ARP added.



ATIS	Apt Elev
125.25 (Russian 127.4)	1047

Alt Set: hPa (mm on request)
Trans level: FL100
FL110 if pressure is less than 1013 hPa (760 mm)
FL120 if pressure is less than 977 hPa (733 mm)
DME or RADAR control required.

ABELA 5F [ABEL5F] ❶
OKARU 5F [OKAR5F] ❷
RESLO 5F [RESL5F] ❸
URILU 5F [URIL5F] ❹
ARRIVALS
(ALL RWYS)

❶ Not available when UR(R)-545, UR(R)-557, UR(R)-564, UR(R)-566, UR(R)-586 active.
❷ Not available when UR(R)-508, UR(R)-545, UR(R)-556, UR(R)-557, UR(R)-558, UR(R)-2043 active.
❸ Not available when UR(R)-545, UR(R)-556, UR(R)-562, UR(R)-564, UR(R)-586 active.
❹ Not available when UR(R)-545, UR(R)-557 active.

LOST COMMS ▼ LOST COMMS ▼ LOST COMMS
Refer to 10-1P pages.
LOST COMMS ▲ LOST COMMS ▲ LOST COMMS
5 MMOC

FEET	METERS
QNH	(QFE)
7000	(1820)
6600	(1700)
5400	(1330)
2900	(570)
2400	(420)

QFE values based on RWY 11 THR elevation

CHANGES: Distance to ARP added.

CHANGES: RWY designation, MSA, Trans alt, track update, altitude at UGBES.

Apt Elev 1047	Trans alt: 9000 QNH (QFE on request)
	RNAV 1 GNSS required

MOZAT 5L [MOZA5L] ❶
OKARU 5L [OKAR5L] ❷
URILU 5L [URIL5L] ❸
OGEMO 5L [OGEM5L] ❸
UGBES 5L [UGBE5L] ❸
BY ATC
RNAV DEPARTURES
(RWY 11)

❶ Not available when UR(R)-545, UR(R)-556, UR(R)-557, UR(R)-2043 active.
❷ Not available when UR(R)-508, UR(R)-545, UR(R)-557, UR(R)-558, UR(R)-2043 active.
❸ Not available when UR(R)-545, UR(R)-557, active.

These SIDs require minimum climb gradients of
MOZAT 5L: 3.7% up to 2700, then 4.7% up to FL110 due to airspace structure.
OGEMO 5L: 3.4% up to 1200, then 5.1% up to FL110 due to airspace structure.
OKARU 5L: 3.4% up to 1200, then 4.4% up to FL110 due to airspace structure.
UGBES 5L: 3.4% up to 1200.
URILU 5L: 3.4% up to 1200, then 5.9% up to FL110 due to airspace structure.

Gnd speed-KT	75	100	150	200	250	300
3.4% V/V (fpm)	258	344	516	689	861	1033
3.7% V/V (fpm)	281	375	562	749	937	1124
4.4% V/V (fpm)	334	446	668	891	1114	1337
5.1% V/V (fpm)	387	516	775	1033	1291	1549
5.9% V/V (fpm)	448	597	896	1195	1494	1792

UGBES
FL100
11.3
006°
MMØ24
9000
OGEMO
FL110
7.5
028°
MMØ23
9000
UGBES 5L
OGEMO 5L
❹ Computed for surface air temperature at ARP -28.4 °C.
UR(R)-545
6100 ❹
070°
114°
6.0
(OGEMO 5L, UGBES 5L only)
MMØ18
MAX 245 KT
4.0
MMØ25
072°
17.1
URILU 5L
URILU
FL130
FL110
190°
119°
UR(R)-557
UR(R)-508
8500 ❹
310°
26.8
OKARU 5L
24.6
MOZAT 5L
UR(R)-556
ARP
7081
OKARU
FL110
MOZAT
FL110
UR(R)-558
UR(R)-2043
9000
7000
5000
3000
CONTOUR INTERVALS
44-30
44-00
43-30
43-00
5 9
2 3
1 9 4
2 0 9

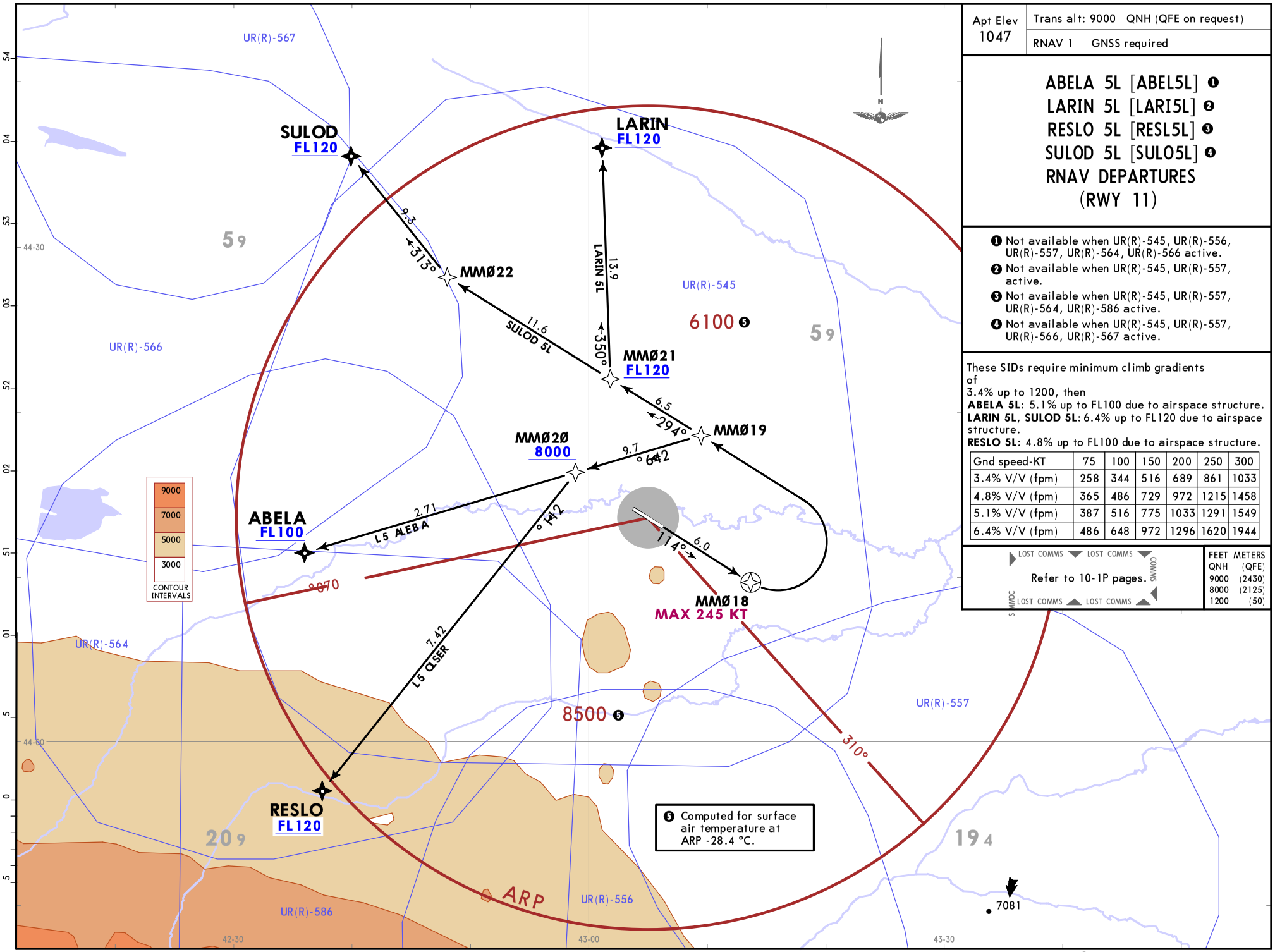
LOST COMMS ▼ LOST COMMS ▼ COMMS
Refer to 10-1P pages.
LOST COMMS ▲ LOST COMMS ▲ COMMS

FEET	METERS
QNH	(QFE)
9000	(2430)
2700	(510)
1200	(50)

MOZAT 5L [MOZA5L]
OKARU 5L [OKAR5L]
URILU 5L [URIL5L]
OGEMO 5L [OGEM5L]
UGBES 5L [UGBE5L]
BY ATC
RNAV DEPARTURES
(RWY 11)

URMM/MRV
MINERALNYYE VODY

MINERALNYYE VODY, RUSSIA
JEPPESEN
16 FEB 24
10-3
Eff 22 Feb
RNAV SID



Apt Elev	Trans alt: 9000 QNH (QFE on request)
1047	RNAV 1 GNSS required

ABELA 5L [ABEL5L] ❶
LARIN 5L [LARI5L] ❷
RESLO 5L [RESL5L] ❸
SULOD 5L [SULO5L] ❹
RNAV DEPARTURES
(RWY 11)

❶ Not available when UR(R)-545, UR(R)-556, UR(R)-557, UR(R)-564, UR(R)-566 active.
❷ Not available when UR(R)-545, UR(R)-557, active.
❸ Not available when UR(R)-545, UR(R)-557, UR(R)-564, UR(R)-586 active.
❹ Not available when UR(R)-545, UR(R)-557, UR(R)-566, UR(R)-567 active.

These SIDs require minimum climb gradients of
3.4% up to 1200, then
ABELA 5L: 5.1% up to FL100 due to airspace structure.
LARIN 5L, SULOD 5L: 6.4% up to FL120 due to airspace structure.
RESLO 5L: 4.8% up to FL100 due to airspace structure.

Gnd speed-KT	75	100	150	200	250	300
3.4% V/V (fpm)	258	344	516	689	861	1033
4.8% V/V (fpm)	365	486	729	972	1215	1458
5.1% V/V (fpm)	387	516	775	1033	1291	1549
6.4% V/V (fpm)	486	648	972	1296	1620	1944

LOST COMMS LOST COMMS
Refer to 10-1P pages.
LOST COMMS LOST COMMS

FEET	METERS
QNH	(QFE)
9000	(2430)
8000	(2125)
1200	(50)

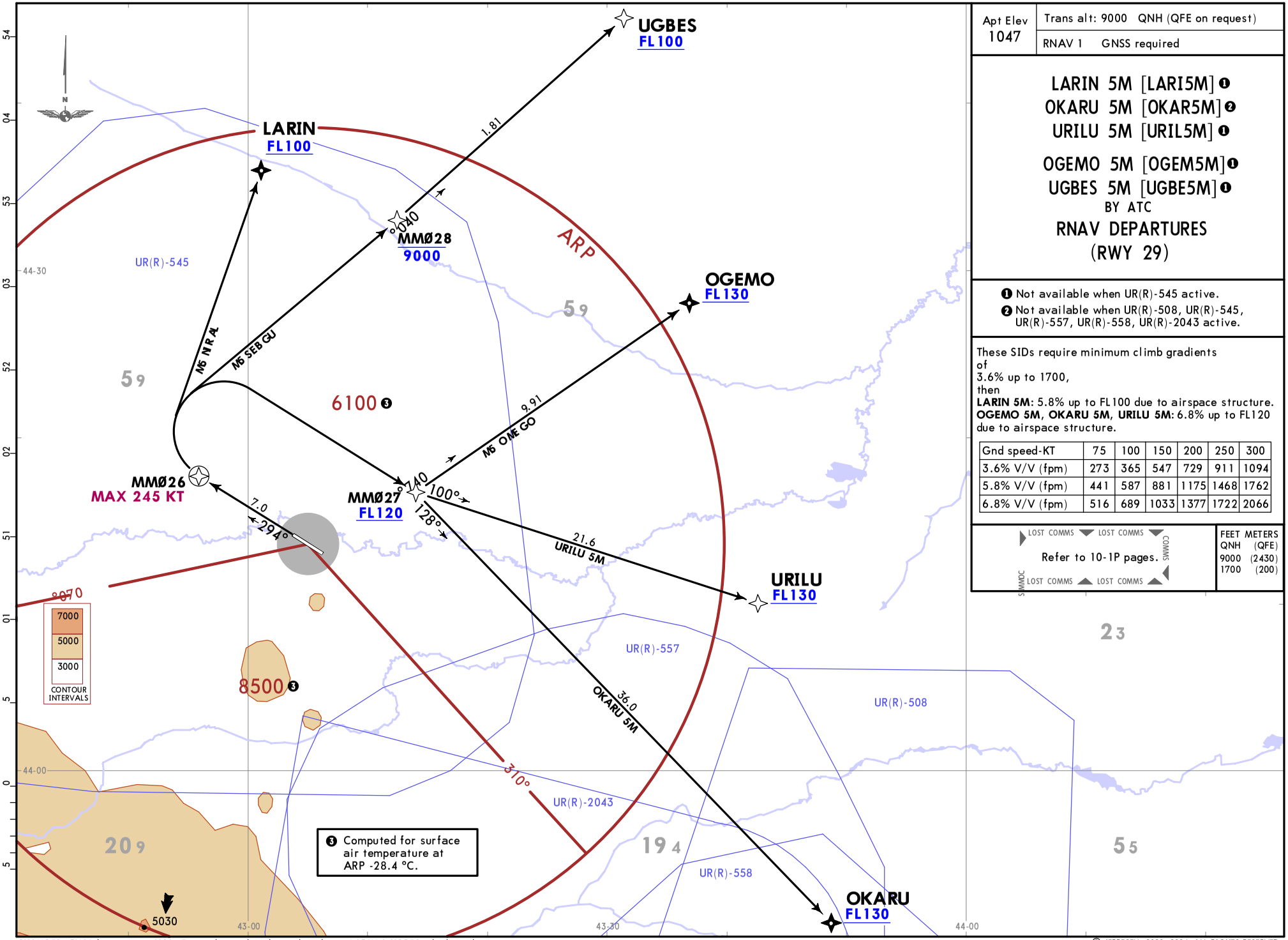
❺ Computed for surface air temperature at ARP -28.4 °C.

CHANGES: RWY designation, MSA, Trans alt, track update, altitude at ABELA, climb gradients.

JEPPESEN
16 FEB 24 (10-3B) Eff 22 Feb

MINERALNYYE VODY, RUSSIA

RNAV SID



Apt Elev	Trans alt: 9000 QNH (QFE on request)
1047	RNAV 1 GNSS required

LARIN 5M [LARI5M] ❶
OKARU 5M [OKAR5M] ❷
URILU 5M [URIL5M] ❶

OGEMO 5M [OGEM5M] ❶
UGBES 5M [UGBE5M] ❶
BY ATC

RNAV DEPARTURES (RWY 29)

❶ Not available when UR(R)-545 active.
❷ Not available when UR(R)-508, UR(R)-545, UR(R)-557, UR(R)-558, UR(R)-2043 active.

These SIDs require minimum climb gradients of 3.6% up to 1700, then
LARIN 5M: 5.8% up to FL100 due to airspace structure.
OGEMO 5M, OKARU 5M, URILU 5M: 6.8% up to FL120 due to airspace structure.

Gnd speed-KT	75	100	150	200	250	300
3.6% V/V (fpm)	273	365	547	729	911	1094
5.8% V/V (fpm)	441	587	881	1175	1468	1762
6.8% V/V (fpm)	516	689	1033	1377	1722	2066

LOST COMMS LOST COMMS
Refer to 10-1P pages.
LOST COMMS LOST COMMS
SMMOC COMMS

FEET	METERS
QNH	(QFE)
9000	(2430)
1700	(200)

CHANGES: RWY designation, MSA, Trans alt, track update, altitudes at LARIN & UGBES, climb gradients.

Apt Elev	Trans alt: 9000 QNH (QFE on request)
1047	RNAV 1 GNSS required

ABELA 5M [ABEL5M]❶
MOZAT 5M [MOZA5M]❷
RESLO 5M [RESL5M]❸
SULOD 5M [SULO5M]❹
RNAV DEPARTURES
(RWY 29)

❶ Not available when UR(R)-545, UR(R)-564, UR(R)-566 active.
❷ Not available when UR(R)-545, UR(R)-556, UR(R)-557, URR(R)-564, UR(R)-566, UR(R)-2043 active.
❸ Not available when UR(R)-545, UR(R)-564, UR(R)-566, UR(R)-586 active.
❹ Not available when UR(R)-545, UR(R)-564, UR(R)-566, UR(R)-567 active.

These SIDs require minimum climb gradients of
ABELA 5M: 3.6% up to 1700, then 6.3% up to FL100 due to airspace structure.
MOZAT 5M: 4.4% up to 4000, then 6.3% up to FL120 due to airspace structure.
RESLO 5M: 3.6% up to 1700, then 5.1% up to FL120 due to airspace structure.
SULOD 5M: 3.6% up to 1700, then 5.5% up to FL100 due to airspace structure.

Gnd speed-KT	75	100	150	200	250	300
3.6% V/V (fpm)	273	365	547	729	911	1094
4.4% V/V (fpm)	334	446	668	891	1114	1337
5.1% V/V (fpm)	387	516	775	1033	1291	1549
5.5% V/V (fpm)	418	557	835	1114	1392	1671
6.3% V/V (fpm)	478	638	957	1276	1595	1914

LOST COMMS LOST COMMS COMMS Refer to 10-1P pages. COMMS LOST COMMS LOST COMMS

FEET	METERS
QNH	(QFE)
9000	(2430)
4000	(905)
1700	(200)

SULOD
FL100

ABELA
FL140
FL100

MMØ29
MAX 245 KT

MMØ30

MMØ31
FL140
FL120

RESLO
FL140
FL120

MOZAT
FL130

ARP

6100 ❺
8500 ❺

❺ Computed for surface air temperature at ARP -28.4 °C.

UR(R)-567
UR(R)-545
UR(R)-566
UR(R)-564
UR(R)-557
UR(R)-586
UR(R)-556
UR(R)-2043

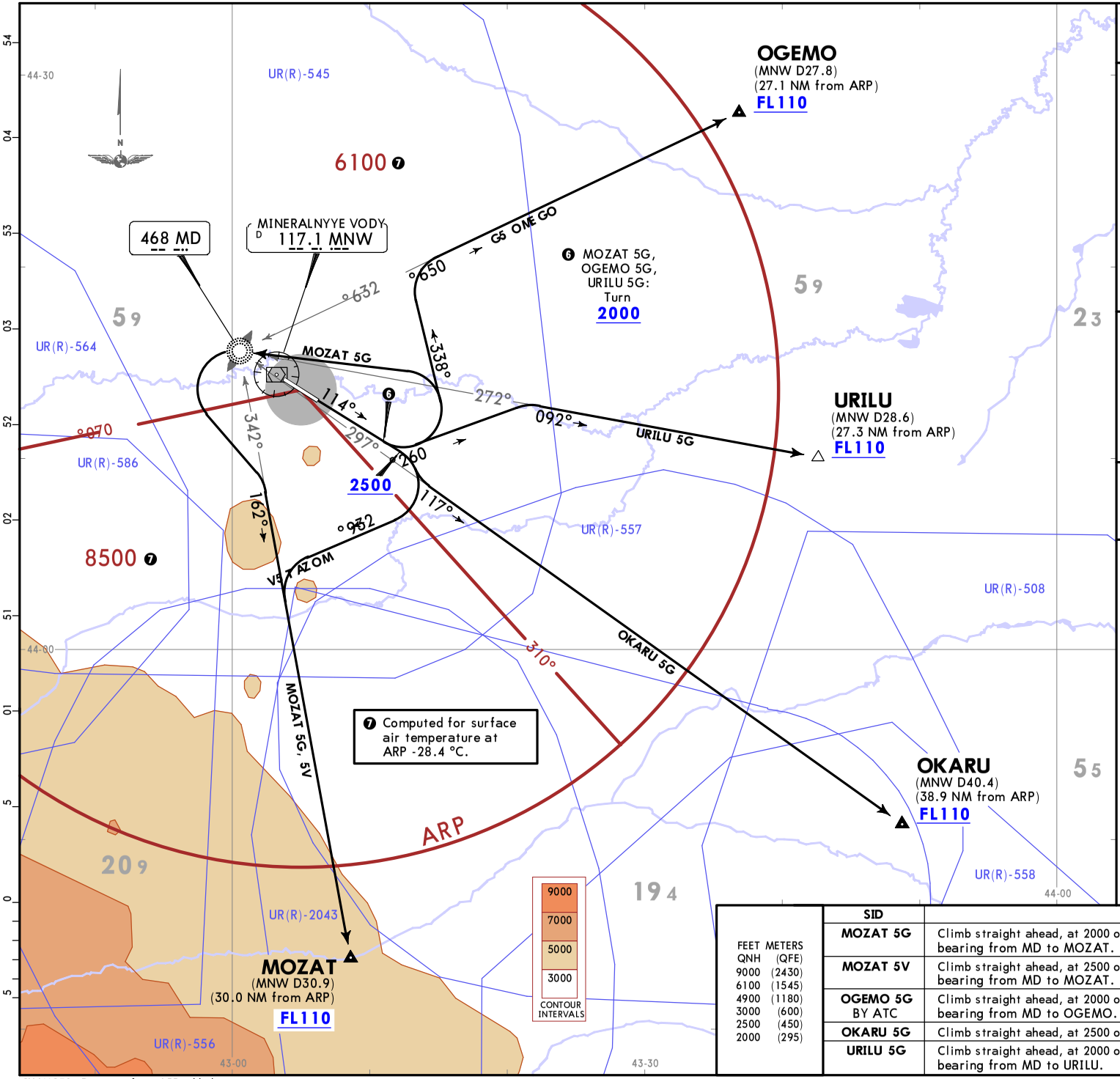
11000	
9000	
7000	
5000	
3000	

CONTOUR INTERVALS

9342

URMM/MRV
MINERALNYYE VODY

JEPPESEN MINERALNYYE VODY, RUSSIA
16 FEB 24 (10-3C) Eff 22 Feb
RNAV SID



Apt Elev	Trans alt: 9000 QNH (QFE on request)
1047	1. DME or RADAR control required. 2. Turn before DER is PROHIBITED.

MOZAT 5G [MOZA5G] ❶
MOZAT 5V [MOZA5V] ❷
OGEMO 5G [OGEM5G] ❸
OKARU 5G [OKAR5G] ❹
URILU 5G [URIL5G] ❺
DEPARTURES
(RWY 11)

❶ Not available when UR(R)-545, UR(R)-556, UR(R)-557, UR(R)-564, UR(R)-586, UR(R)-2043 active.
❷ Not available when UR(R)-545, UR(R)-556, UR(R)-557, UR(R)-564, UR(R)-2043 active.
❸ Not available when UR(R)-545 active.
❹ Not available when UR(R)-508, UR(R)-545, UR(R)-557, UR(R)-558, UR(R)-2043 active.
❺ Not available when UR(R)-545, UR(R)-557 active.

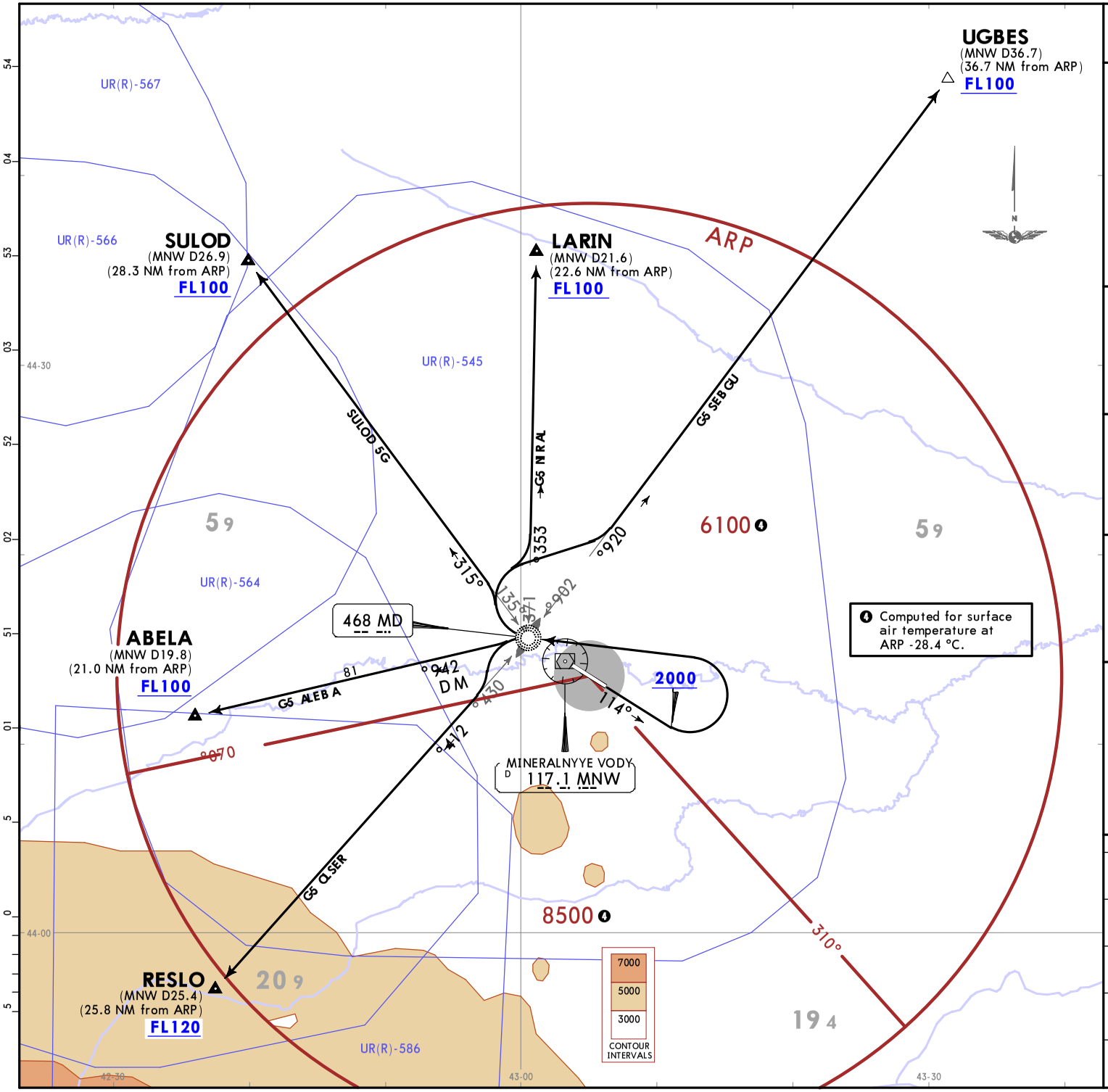
LOST COMMS LOST COMMS COMMS
Refer to 10-1P pages.
MMOC LOST COMMS LOST COMMS

These SIDs require minimum climb gradients of
MOZAT 5G: 5.4% up to 6100.
MOZAT 5V: 10.0% up to 4900, then 3.6% up to FL110 due to airspace structure.
OGEMO 5G: 3.4% up to 2000, then 5.1% up to FL110 due to airspace structure.
OKARU 5G: 4.2% up to 3000, then 4.4% up to FL110 due to airspace structure.
URILU 5G: 3.4% up to 2000, then 6.1% up to FL110 due to airspace strcuture.

Gnd speed-KT	75	100	150	200	250	300
3.4% V/V (fpm)	258	344	516	689	861	1033
3.6% V/V (fpm)	273	365	547	729	911	1094
4.2% V/V (fpm)	319	425	638	851	1063	1276
4.4% V/V (fpm)	334	446	668	891	1114	1337
5.1% V/V (fpm)	387	516	775	1033	1291	1549
5.4% V/V (fpm)	410	547	820	1094	1367	1641
6.1% V/V (fpm)	463	618	927	1235	1544	1853
10.0% V/V (fpm)	760	1013	1519	2025	2532	3038

SID	ROUTING
MOZAT 5G	Climb straight ahead, at 2000 or above turn LEFT to MD, turn LEFT, intercept 162° bearing from MD to MOZAT.
MOZAT 5V	Climb straight ahead, at 2500 or above turn RIGHT, 239° track, intercept 162° bearing from MD to MOZAT.
OGEMO 5G BY ATC	Climb straight ahead, at 2000 or above turn LEFT, 338° track, intercept 056° bearing from MD to OGEMO.
OKARU 5G	Climb straight ahead, at 2500 or above intercept 117° bearing from MD to OKARU.
URILU 5G	Climb straight ahead, at 2000 or above turn LEFT, 062° track, intercept 092° bearing from MD to URILU.

CHANGES: Distance from ARP added.



Apt Elev	Trans alt: 9000 QNH (QFE on request)
1047	1. DME or RADAR control required. 2. Turn before DER is PROHIBITED.

ABELA 5G [ABEL5G] ❶
LARIN 5G [LARI5G] ❶
RESLO 5G [RESL5G] ❷
SULOD 5G [SULO5G] ❸
UGBES 5G [UGBE5G] ❶
DEPARTURES
(RWY 11)

❶ Not available when UR(R)-545, UR(R)-564, UR(R)-566 active.
❷ Not available when UR(R)-545, UR(R)-564, UR(R)-567, UR(R)-586 active.
❸ Not available when UR(R)-545, UR(R)-564, UR(R)-566, UR(R)-567 active.

LOST COMMS ▼ LOST COMMS ▼ COMMS
Refer to 10-1P pages.
S MWDC LOST COMMS ▲ LOST COMMS ▲

FEET	METERS
QNH	(QFE)
9000	(2430)
2600	(480)
2000	(295)

❹ Computed for surface air temperature at ARP -28.4 °C.

These SIDs require minimum climb gradients of ABELA 5G, LARIN 5G, SULOD 5G, UGBES 5G: 5.4% up to 2600.
RESLO 5G: 5.4% up to 2600, then 3.9% up to FL120 due to airspace structure.

Gnd speed-KT	75	100	150	200	250	300
3.9% V/V (fpm)	296	395	592	790	987	1185
5.4% V/V (fpm)	410	547	820	1094	1367	1641

SID	ROUTING
ABELA 5G	Climb straight ahead, at 2000 or above turn LEFT to MD, intercept 249° bearing from MD to ABELA.
LARIN 5G	Climb straight ahead, at 2000 or above turn LEFT to MD, turn RIGHT, intercept 353° bearing from MD to LARIN.
RESLO 5G	Climb straight ahead, at 2000 or above turn LEFT to MD, intercept 214° bearing from MD to RESLO.
SULOD 5G	Climb straight ahead, at 2000 or above turn LEFT to MD, intercept 315° bearing from MD to SULOD.
UGBES 5G BY ATC	Climb straight ahead, at 2000 or above turn LEFT to MD, turn RIGHT, intercept 029° bearing from MD to UGBES.

CHANGES: Distance from ARP added.

URMM/MRV MINERALNYYE VODY

Apt Elev	Trans alt: 9000 QNH (QFE on request)
1047	DME or RADAR control required.

LARIN 5H [LARI5H] ❶
OGEMO 5H [OGEM5H] ❶
OKARU 5H [OKAR5H] ❷
UGBES 5H [UGBE5H] ❶
URILU 5H [URIL5H] ❸
DEPARTURES
(RWY 29)

❶ Not available when UR(R)-545 active.
❷ Not available when UR(R)-508, UR(R)-545, UR(R)-557, UR(R)-558, UR(R)-2043 active.
❸ Not available when UR(R)-545, UR(R)-557 active.

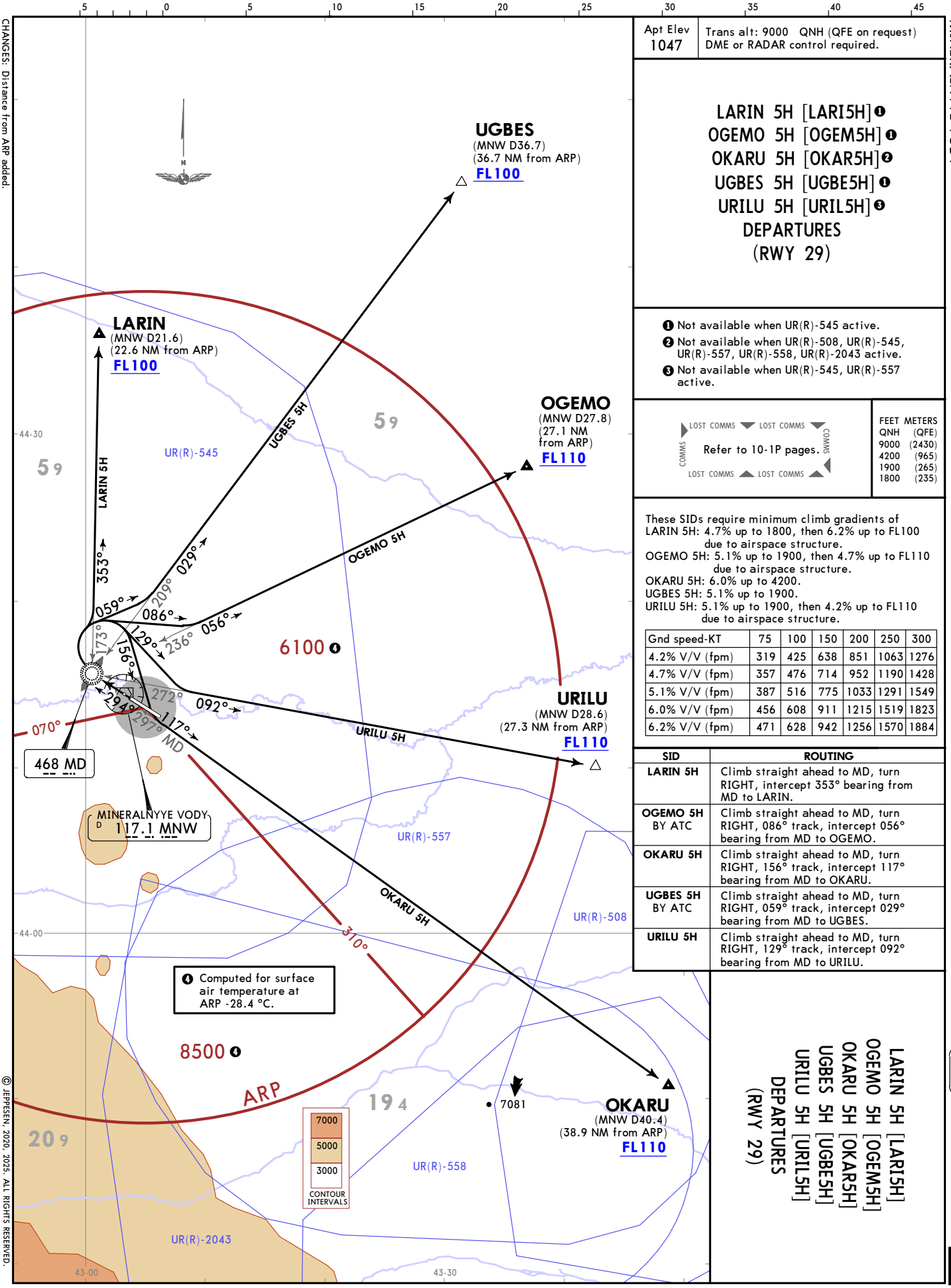
LOST COMMS ▼ LOST COMMS ▼ COMMS
Refer to 10-1P pages.
COMMS LOST COMMS ▲ LOST COMMS ▲

FEET	METERS (QFE)
QNH	
9000	(2430)
4200	(965)
1900	(265)
1800	(235)

These SIDs require minimum climb gradients of
LARIN 5H: 4.7% up to 1800, then 6.2% up to FL100 due to airspace structure.
OGEMO 5H: 5.1% up to 1900, then 4.7% up to FL110 due to airspace structure.
OKARU 5H: 6.0% up to 4200.
UGBES 5H: 5.1% up to 1900.
URILU 5H: 5.1% up to 1900, then 4.2% up to FL110 due to airspace structure.

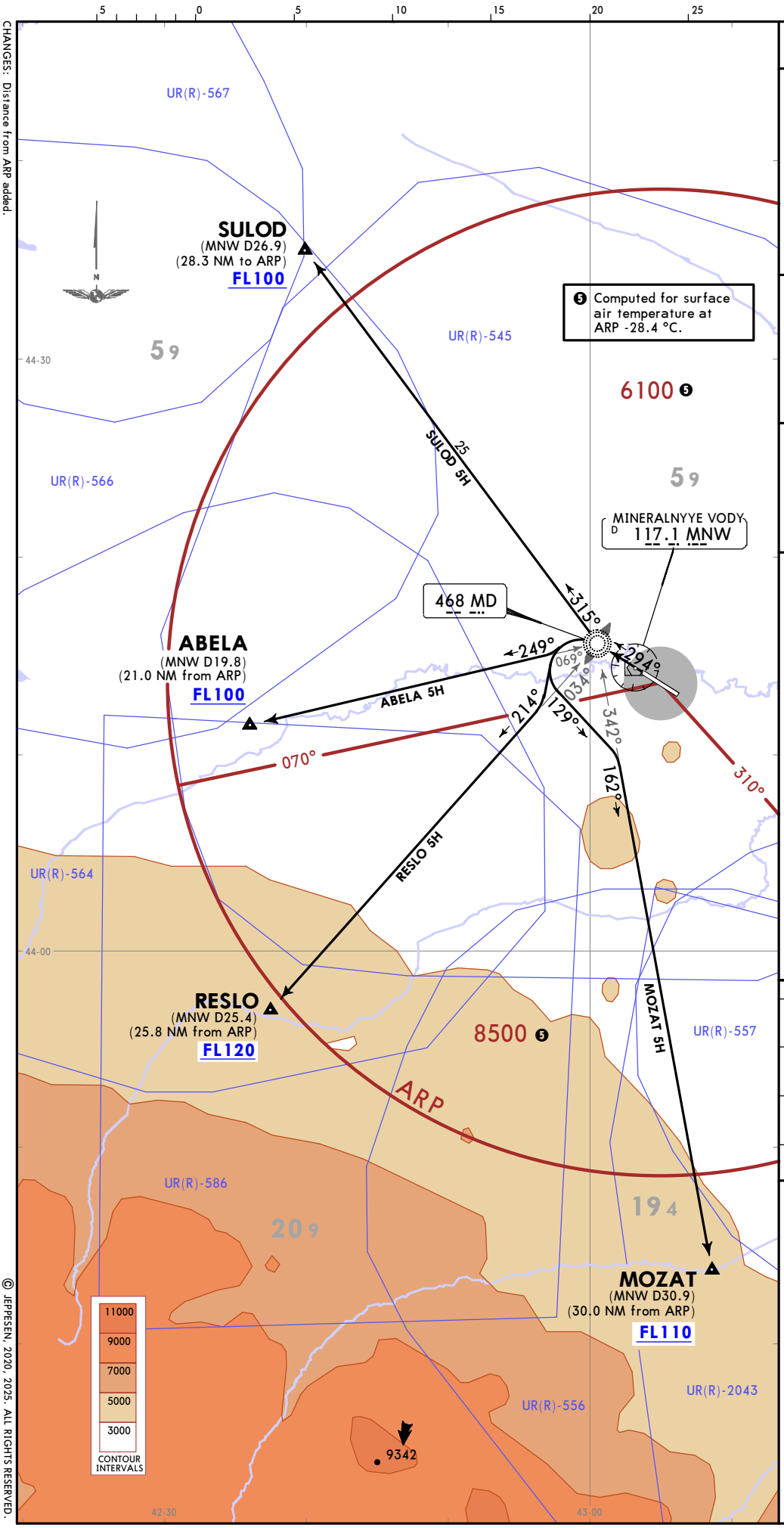
Gnd speed-KT	75	100	150	200	250	300
4.2% V/V (fpm)	319	425	638	851	1063	1276
4.7% V/V (fpm)	357	476	714	952	1190	1428
5.1% V/V (fpm)	387	516	775	1033	1291	1549
6.0% V/V (fpm)	456	608	911	1215	1519	1823
6.2% V/V (fpm)	471	628	942	1256	1570	1884

SID	ROUTING
LARIN 5H	Climb straight ahead to MD, turn RIGHT, intercept 353° bearing from MD to LARIN.
OGEMO 5H BY ATC	Climb straight ahead to MD, turn RIGHT, 086° track, intercept 056° bearing from MD to OGEMO.
OKARU 5H	Climb straight ahead to MD, turn RIGHT, 156° track, intercept 117° bearing from MD to OKARU.
UGBES 5H BY ATC	Climb straight ahead to MD, turn RIGHT, 059° track, intercept 029° bearing from MD to UGBES.
URILU 5H	Climb straight ahead to MD, turn RIGHT, 129° track, intercept 092° bearing from MD to URILU.



LARIN 5H [LARI5H]
OGEMO 5H [OGEM5H]
OKARU 5H [OKAR5H]
UGBES 5H [UGBE5H]
URILU 5H [URIL5H]
DEPARTURES
(RWY 29)

MINERALNYYE VODY, RUSSIA
JEPPESEN
1 AUG 25 (10-3F) Eff 7 Aug
SID



Apt Elev	Trans alt: 9000 QNH (QFE on request)
1047	DME or RADAR control required.

ABELA 5H [ABEL5H] ❶
MOZAT 5H [MOZA5H] ❷
RESLO 5H [RESL5H] ❸
SULOD 5H [SULO5H] ❹
DEPARTURES
(RWY 29)

❶ Not available when UR(R)-545, UR(R)-564, UR(R)-566 active.
❷ Not available when UR(R)-545, UR(R)-556, UR(R)-557, URR(R)-564, UR(R)-2043 active.
❸ Not available when UR(R)-545, UR(R)-564, UR(R)-586 active.
❹ Not available when UR(R)-545, UR(R)-566, UR(R)-567 active.

LOST COMMS ▼ LOST COMMS ▼ COMMS
Refer to 10-1P pages.
COMMS ▲ LOST COMMS ▲ LOST COMMS

FEET	METERS
QNH	(QFE)
9000	(2340)
8000	(2125)
5700	(1420)
3700	(810)
3500	(750)
1900	(265)

These SIDs require minimum climb gradients of
ABELA 5H: 5.2% up to 3700, then 7.0% up to FL100 due to airspace structure.
MOZAT 5H: 6.8% up to 5700.
7.4% up to 8000 during flights at Yessentuki AD due to airspace structure.
RESLO 5H: 5.7% up to 3500, then 6.3% up to FL120 due to airspace structure.
7.1% up to 9000 during flights at Yessentuki AD due to airspace structure.
SULOD 5H: 5.1% up to 1900, then 4.6% up to FL100 due to airspace structure.

Gnd speed-KT	75	100	150	200	250	300
4.6% V/V (fpm)	349	466	699	932	1165	1397
5.1% V/V (fpm)	387	516	775	1033	1291	1549
5.2% V/V (fpm)	395	527	790	1053	1316	1580
5.7% V/V (fpm)	433	577	866	1154	1443	1732
6.3% V/V (fpm)	478	638	957	1276	1595	1914
6.8% V/V (fpm)	516	689	1033	1377	1722	2066
7.0% V/V (fpm)	532	709	1063	1418	1772	2127
7.1% V/V (fpm)	539	719	1079	1438	1798	2157
7.4% V/V (fpm)	562	749	1124	1499	1873	2248

SID	ROUTING
ABELA 5H	Climb straight ahead to MD, turn LEFT, intercept 249° bearing from MD to ABELA.
MOZAT 5H	Climb straight ahead to MD, turn LEFT, 129° track, intercept 162° bearing from MD to MOZAT.
RESLO 5H	Climb straight ahead to MD, turn LFET, intercept 214° bearing from MD to RESLO.
SULOD 5H	Climb straight ahead to MD, intercept 315° bearing from MD to SULOD.

ABELA 5H [ABEL5H]
MOZAT 5H [MOZA5H]
RESLO 5H [RESL5H]
SULOD 5H [SULO5H]
DEPARTURES
(RWY 29)

URMM/MRV
MINERALNYYE VODY

JEPPESEN MINERALNYYE VODY, RUSSIA
1 AUG 25 (10-3G) Eff 7 Aug
SID

Apt Elev	Trans alt: 9000 QNH (QFE on request)
1047	DME required.

MOZAT 5J [MOZA5J] ❶
OGEMO 5J [OGEM5J] ❷
OKARU 5J [OKAR5J] ❸
UGBES 5J [UGBE5J] ❷
URILU 5J [URIL5J] ❹
DEPARTURES
(RWY 11)

❶ Not available when UR(R)-545, UR(R)-556, UR(R)-557, UR(R)-2043 active.
❷ Not available when UR(R)-545 active.
❸ Not available when UR(R)-508, UR(R)-545, UR(R)-557, UR(R)-558, UR(R)-2043 active.
❹ Not available when UR(R)-545, UR(R)-557, active.

LOST COMMS ▼ LOST COMMS ▼ COMMS
COMMS ▶ Refer to 10-1P pages. ◀ COMMS
LOST COMMS ▲ LOST COMMS ▲

FEET	METERS
QNH	(QFE)
9000	(2430)
1900	(265)
1800	(235)

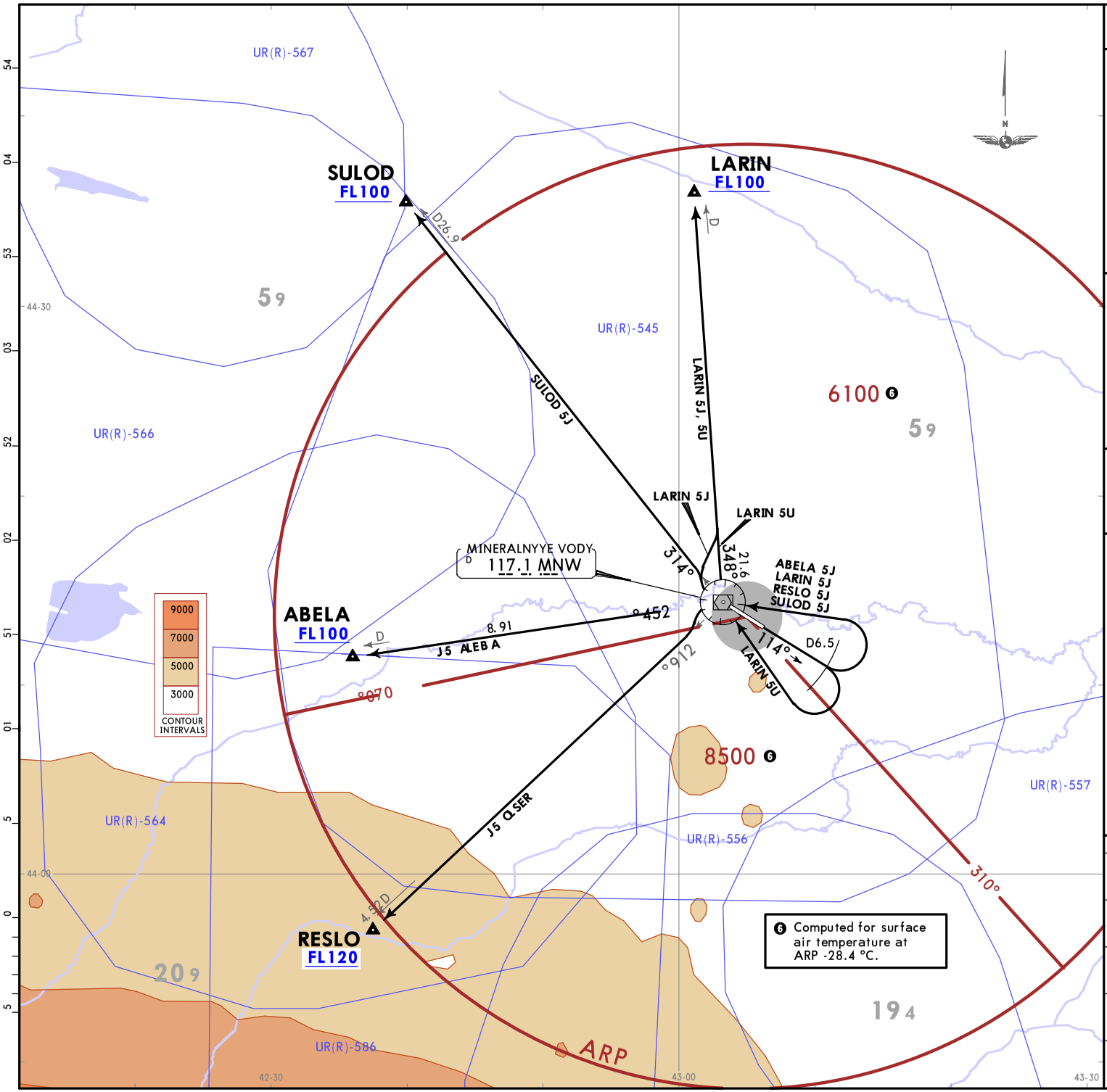
These SIDs require minimum climb gradients of
MOZAT 5J: 7.7% up to 5400, then 3.8% up to FL110 due to airspace structure.
OGEMO 5J: 3.6% up to 1900, then 5.0% up to FL110 due to airspace structure.
OKARU 5J: 3.6% up to 1900, then 4.4% up to FL110 due to airspace structure.
UGBES 5J: 5.1% up to 1800.
URILU 5J: 3.6% up to 1900, then 6.1% up to FL110 due to airspace structure.

Gnd speed-KT	75	100	150	200	250	300
3.6% V/V (fpm)	273	365	547	729	911	1094
3.8% V/V (fpm)	289	385	577	770	962	1154
4.4% V/V (fpm)	334	446	668	891	1114	1337
5.0% V/V (fpm)	380	506	760	1013	1266	1519
5.1% V/V (fpm)	387	516	775	1033	1291	1549
6.1% V/V (fpm)	463	618	927	1235	1544	1853
7.7% V/V (fpm)	585	780	1170	1560	1949	2339

SID	ROUTING
MOZAT 5J	Climb straight ahead to D6.5 MNW, turn RIGHT, 226° track, intercept MNW R165 to MOZAT.
OGEMO 5J BY ATC	Climb straight ahead to D6.5 MNW, turn LEFT, 337° track, intercept MNW R052 to OGEMO.
OKARU 5J	Climb straight ahead to D6.5 MNW, intercept MNW R117 to OKARU.
UGBES 5J BY ATC	Climb straight ahead to D4.9 MNW, turn LEFT, 306° track, intercept MNW R025 to UGBES.
URILU 5J	Climb straight ahead to D6.5 MNW, turn LEFT, 061° track, intercept MNW R090 to URILU.

UGBES
FL100
OGEMO
FL110
URILU
FL110
MOZAT
FL110
OKARU
FL110
MINERALNYYE VODY
D 117.1 MNW
ARP
UR(R)-545
UR(R)-557
UR(R)-508
UR(R)-556
UR(R)-558
UR(R)-2043
6100 ❺
8500 ❺
❺ Computed for surface air temperature at ARP -28.4 °C.
CONTOUR INTERVALS
7000
5000
3000
7081

MOZAT 5J [MOZA5J]
OGEMO 5J [OGEM5J]
OKARU 5J [OKAR5J]
UGBES 5J [UGBE5J]
URILU 5J [URIL5J]
DEPARTURES
(RWY 11)



Apt Elev	Trans alt: 9000 QNH (QFE on request)
1047	DME required.

ABELA 5J [ABEL5J] ❶
LARIN 5J [LARI5J] ❷
LARIN 5U [LARI5U] ❸
RESLO 5J [RESL5J] ❹
SULOD 5J [SULO5J] ❺
DEPARTURES
(RWY 11)

❶ Not available when UR(R)-545, UR(R)-564, UR(R)-566, UR(R)-586 active.
❷ Not available when UR(R)-545, UR(R)-564, UR(R)-566 active.
❸ Not available when UR(R)-545, UR(R)-556, UR(R)-557, UR(R)-564 active.
❹ Not available when UR(R)-545, UR(R)-564, UR(R)-586 active.
❺ Not available when UR(R)-545, UR(R)-564, UR(R)-566, UR(R)-567 active.

LOST COMMS ▼ LOST COMMS ▼ COMMS
Refer to 10-1P pages.
MMOC LOST COMMS ▲ LOST COMMS ▲

FEET	METERS
QNH	(QFE)
9000	(2430)
8000	(2125)
5400	(1330)
4200	(965)

These SIDs require minimum climb gradients of
ABELA 5J, LARIN 5J, SULOD 5J: 3.9% up to 4200.
LARIN 5U: 7.7% up to 5400.
RESLO 5J: 3.9% up to 4200, then 4.2% up to FL120 due to airspace structure.
3.6% up to 8000 during flights at Yessentuki AD due to airspace structure.

Gnd speed-KT	75	100	150	200	250	300
3.6% V/V (fpm)	273	365	547	729	911	1094
3.9% V/V (fpm)	296	395	592	790	987	1185
4.2% V/V (fpm)	319	425	638	851	1063	1276
7.7% V/V (fpm)	585	780	1170	1560	1949	2339

SID	ROUTING
ABELA 5J	Climb straight ahead to D6.5 MNW, turn LEFT to MNW, intercept MNW R254 to ABELA.
LARIN 5J	Climb straight ahead to D6.5 MNW, turn LEFT to MNW, intercept MNW R348 to LARIN.
LARIN 5U	Climb straight ahead to D6.5 MNW, turn RIGHT to MNW, intercept MNW R348 to LARIN.
RESLO 5J	Climb straight ahead to D6.5 MNW, turn LEFT to MNW, intercept MNW R219 to RESLO.
SULOD 5J	Climb straight ahead to D6.5 MNW, turn LEFT to MNW, intercept MNW R314 to SULOD.

CHANGES: RWY designation, MSA, Trans alt, track update, altitudes.

Apt Elev	Trans alt: 9000 QNH (QFE on request)
1047	DME required.

LARIN 5K [LARI5K] ❶
OGEMO 5K [OGEM5K] ❶
OKARU 5K [OKAR5K] ❷
UGBES 5K [UGBE5K] ❶
URILU 5K [URIL5K] ❸
DEPARTURES
(RWY 29)

❶ Not available when UR(R)-545 active.
❷ Not available when UR(R)-508, UR(R)-545, UR(R)-556, UR(R)-557, UR(R)-558, UR(R)-564, UR(R)-2043 active.
❸ Not available when UR(R)-545, UR(R)-557 active.

LOST COMMS / COMMS / LOST COMMS
Refer to 10-1P pages.

FEET	METERS
QNH	(QFE)
9000	(2430)
6200	(1575)
1900	(265)

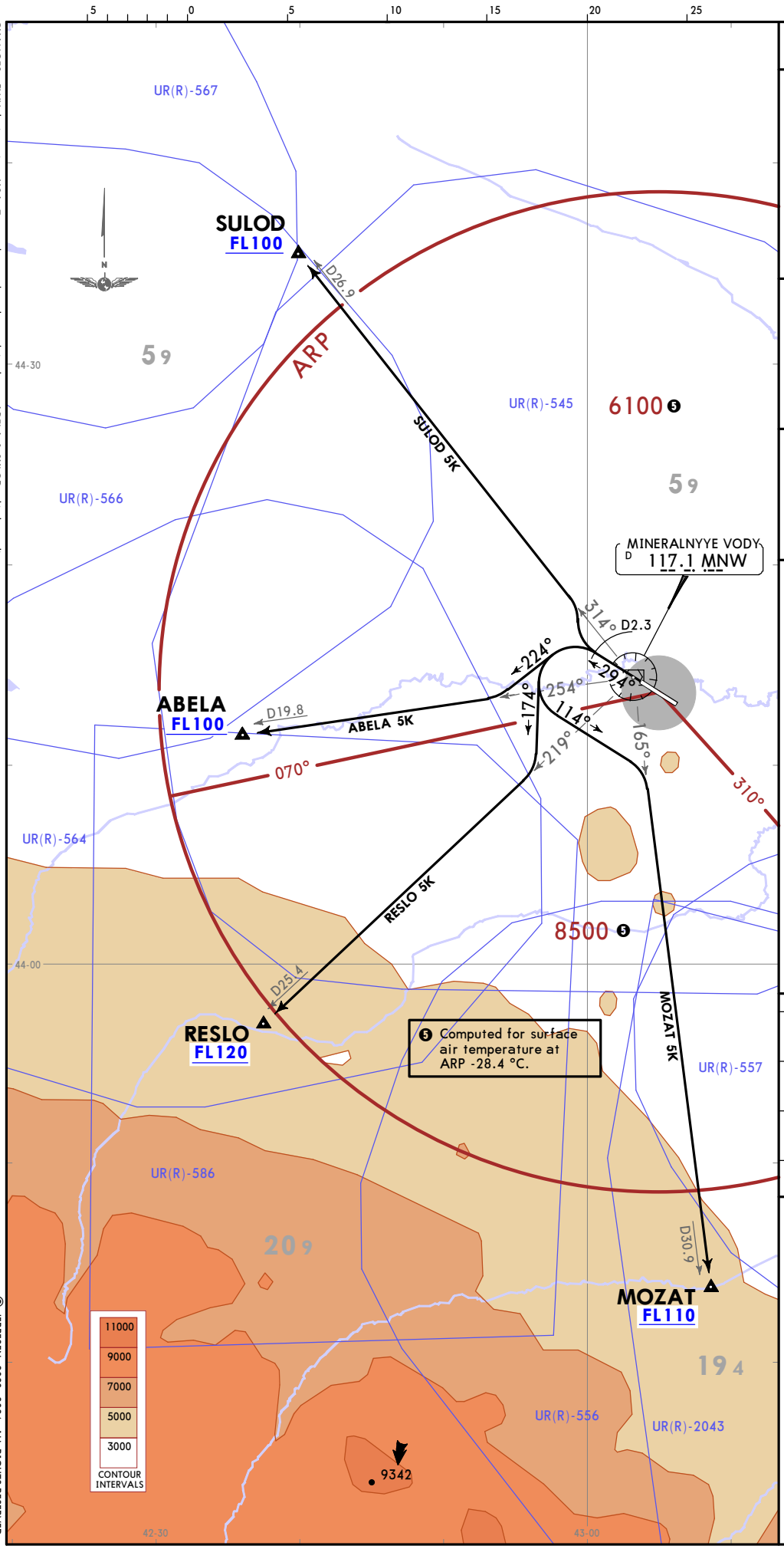
These SIDs require minimum climb gradients of
LARIN 5K: 5.1% up to 1900, then 5.6% up to FL100 due to airspace structure.
OGEMO 5K: 5.1% up to 1900, then 4.6% up to FL110 due to airspace structure.
OKARU 5K: 4.8% up to 6200.
UGBES 5K: 5.1% up to 1900.
URILU 5K: 5.1% up to 1900, then 4.1% up to FL110 due to airspace structure.

Gnd speed-KT	75	100	150	200	250	300
4.1% V/V (fpm)	311	415	623	830	1038	1246
4.6% V/V (fpm)	349	466	699	932	1165	1397
4.8% V/V (fpm)	365	486	729	972	1215	1458
5.1% V/V (fpm)	387	516	775	1033	1291	1549
5.6% V/V (fpm)	425	567	851	1134	1418	1701

SID	ROUTING
LARIN 5K	Climb straight ahead to D2.3 MNW, turn RIGHT, 018° track, intercept MNW R348 to LARIN.
OGEMO 5K BY ATC	Climb straight ahead to D2.3 MNW, turn RIGHT, 102° track, intercept MNW R052 to OGEMO.
OKARU 5K	Climb straight ahead to D5.4 MNW, turn RIGHT to MNW, intercept MNW R117 to OKARU.
UGBES 5K BY ATC	Climb straight ahead to D2.3 MNW, turn RIGHT, 070° track, intercept MNW R025 to UGBES.
URILU 5K	Climb straight ahead to D2.3 MNW, turn RIGHT, 138° track, intercept MNW R090 to URILU.

UGBES FL100
LARIN FL100
OGEMO FL110
URILU FL110
OKARU FL110
MINERALNYYE VODY D 117.1 MNW
UGBES 5K
LARIN 5K
OGEMO 5K
OKARU 5K
URILU 5K
D36.7
D21.6
D27.8
D28.6
D5.4
D2.3
348°
018°
070°
102°
025°
138°
052°
294°
117°
090°
310°
40.4
UR(R)-545
UR(R)-557
UR(R)-564
UR(R)-508
UR(R)-558
UR(R)-556
UR(R)-2043
6100 ❹
8500 ❹
ARP
7081
❹ Computed for surface air temperature at ARP -28.4 °C.
7000
5000
3000
CONTOUR INTERVALS

LARIN 5K [LARI5K]
OGEMO 5K [OGEM5K]
OKARU 5K [OKAR5K]
UGBES 5K [UGBE5K]
URILU 5K [URIL5K]
DEPARTURES
(RWY 29)



❺ Computed for surface air temperature at ARP -28.4 °C.

Apt Elev	Trans alt: 9000 QNH (QFE on request)
1047	DME required.

ABELA 5K [ABEL5K] ❶
MOZAT 5K [MOZA5K] ❷
RESLO 5K [RESL5K] ❸
SULOD 5K [SULO5K] ❹
DEPARTURES
(RWY 29)

❶ Not available when UR(R)-545, UR(R)-564, UR(R)-566 active.

❷ Not available when UR(R)-545, UR(R)-556, UR(R)-557, URR(R)-564, UR(R)-2043 active.

❸ Not available when UR(R)-545, UR(R)-564, UR(R)-586 active.

❹ Not available when UR(R)-545, UR(R)-566, UR(R)-567 active.

LOST COMMS ▼ LOST COMMS ▼ COMMS
COMMS ▲ LOST COMMS ▲ LOST COMMS
Refer to 10-1P pages.

FEET QNH	METERS (QFE)
9000	(2430)
8000	(2125)
5700	(1420)
3700	(810)
3400	(720)
1900	(265)

These SIDs require minimum climb gradients of
ABELA 5K: 5.4% up to 3700, then 6.9% up to FL100 due to airspace structure.
MOZAT 5K: 7.0% up to 5700.
7.4% up to 8000 during flights at Yessentuki AD due to airspace structure.
RESLO 5K: 5.8% up to 3400, then 6.2% up to FL120 due to airspace structure.
7.1% up to 9000 during flights at Yessentuki AD due to airspace structure.
SULOD 5K: 5.1% up to 1900, then 5.0% up to FL100 due to airspace structure.

Gnd speed-KT	75	100	150	200	250	300
5.0% V/V (fpm)	380	506	760	1013	1266	1519
5.1% V/V (fpm)	387	516	775	1033	1291	1549
5.4% V/V (fpm)	410	547	820	1094	1367	1641
5.8% V/V (fpm)	441	587	881	1175	1468	1762
6.2% V/V (fpm)	471	628	942	1256	1570	1884
6.9% V/V (fpm)	524	699	1048	1397	1747	2096
7.0% V/V (fpm)	532	709	1063	1418	1772	2127
7.1% V/V (fpm)	539	719	1079	1438	1798	2157
7.4% V/V (fpm)	562	749	1124	1499	1873	2248

SID	ROUTING
ABELA 5K	Climb straight ahead to D2.3 MNW, turn LEFT, 224° track, intercept MNW R254 to ABELA.
MOZAT 5K	Climb straight ahead to D2.3 MNW, turn LEFT, 114° track, intercept MNW R165 to MOZAT.
RESLO 5K	Climb straight ahead to D2.3 MNW, turn LEFT, 174° track, intercept MNW R219 to RESLO.
SULOD 5K	Climb straight ahead to D2.3 MNW, intercept MNW R314 to SULOD.

ABELA 5K [ABEL5K]
MOZAT 5K [MOZA5K]
RESLO 5K [RESL5K]
SULOD 5K [SULO5K]
DEPARTURES
(RWY 29)

URMM/MRV
MINERALNYYE VODY

JEPPESEN MINERALNYYE VODY, RUSSIA
16 FEB 24 (10-3L) Eff 22 Feb
SID

NOISE ABATEMENT

LT minus 3 HOURS = UTC(Z)

GENERAL

Noise abatement procedures during take-off, climb and approach shall be employed by all ACFT but not at the expense of flight safety or in case of engine failure during take-off.

By the decision of the Flight Control Officer, permission is granted to perform take-off, visual approach, GLS, RNP, DVOR approach on back course, involving RWY LGT switchover, if required, at the same time using radio navigation aids set to initial heading, provided the minimum separation intervals are maintained in compliance with the existing documents regulating flight operations in the airspace of the Russian Federation.

Use of the RWY system during the night period

Engines run-up above idle is PROHIBITED between 1900 UTC and 0400 UTC.

Flight Control Officer determines active RWY heading based on the following condition: RWY 29 for take-off, RWY 11 for landing, taking into account the maximum allowable tailwind component prescribed in the Aeroplane Flight Manual and RWY condition.

Flight Control Officer has the final authority when determining active RWY heading, taking into account weather conditions and air situation.

ARRIVALS

Landing restrictions

During instrument and visual approach descending below ILS glide path is PROHIBITED.

Change of ACFT configuration and flight speed during noise abatement procedures are permitted in compliance with the Aeroplane Flight Manual. Noise abatement procedures should not involve speed greater than the indicated air speed of descent.

Displacement of THR must not be used as a noise abatement measure.

Reverse thrust (except for reverse thrust at idle) shall be used only to ensure safety of flight operations.

DEPARTURES

Take-off restrictions

NADP 1 is applied.

Take-off with tailwind is allowed taking friction coefficient into account, if this direction is preferential for reducing the level of noise when overflying the city or in cases when upwind take-off does not ensure safety of flight operation or is PROHIBITED. Tailwind component must correspond to the limits established in the Aeroplane Flight Manual.

URMM/MRV

Apt Elev **1047′**

N44 13.6 E043 05.0

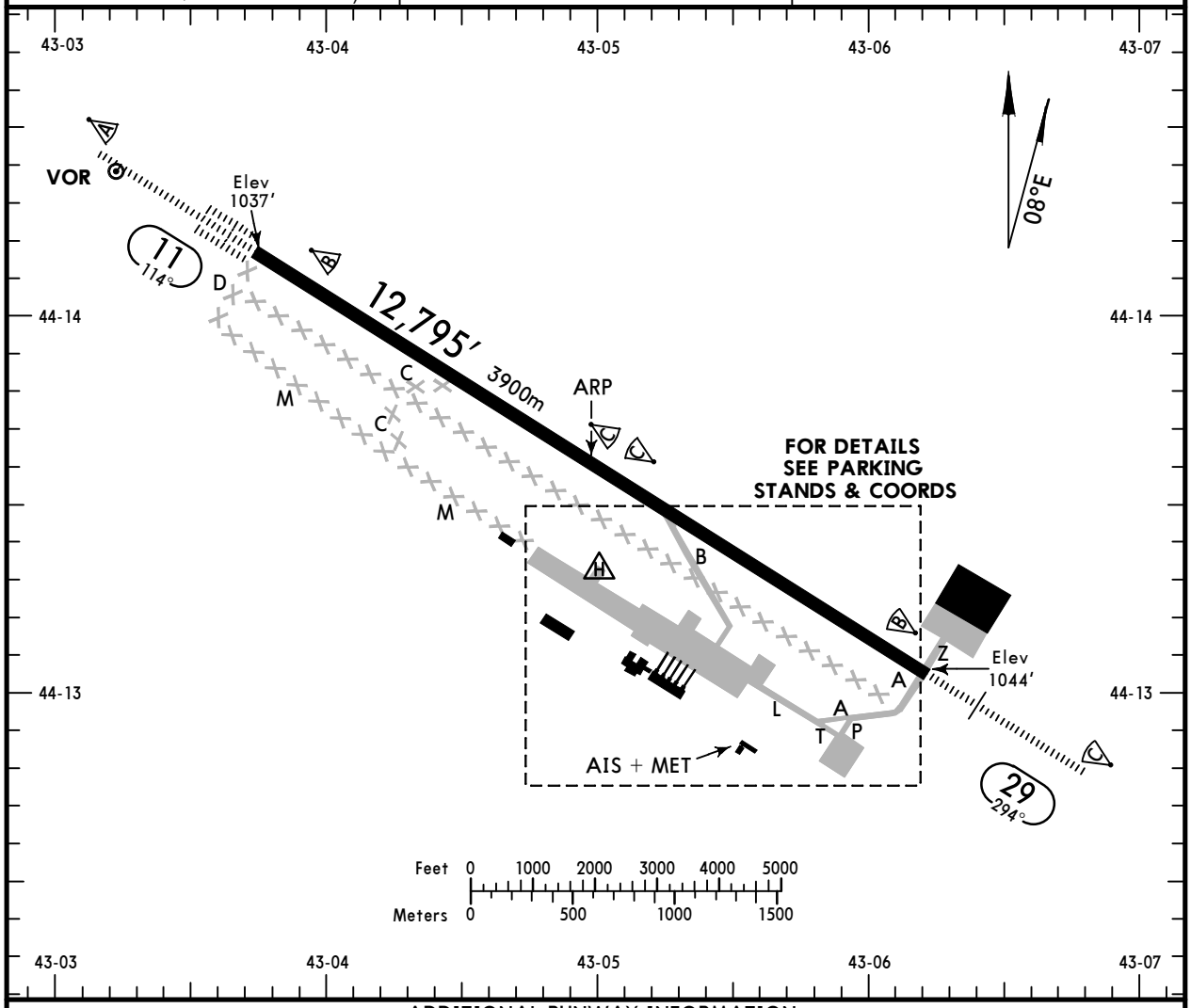
JEPPESEN

28 NOV 25 (10-9)

MINERALNYYE VODY, ~~RUSSIA~~

MINERALNYYE VODY

ATIS	MINERALNYYE VODY Ground	Start (TWR)
125.250 (Russian 127.4)	121.9	128.0



ADDITIONAL RUNWAY INFORMATION

RWY		USABLE LENGTHS — LANDING BEYOND — Threshold	Glide Slope	TAKE-OFF	WIDTH
11	HIRL(59m) CL(15m) ❶HIALS-II TDZ ❷ ❸ RVR		11,762′ 3585m	❺	197′ 60m
29	HIRL(59m) CL(15m) ❶HIALS PAPI-L(3.0°) ❹ RVR		11,823′ 3604m		

❶ length 900m.

❷ PAPI-L (angle 3.0°).

❸ HST-B with HSTIL.

❹ HST-C with HSTIL.

❺ TAKE-OFF RUN AVAILABLE

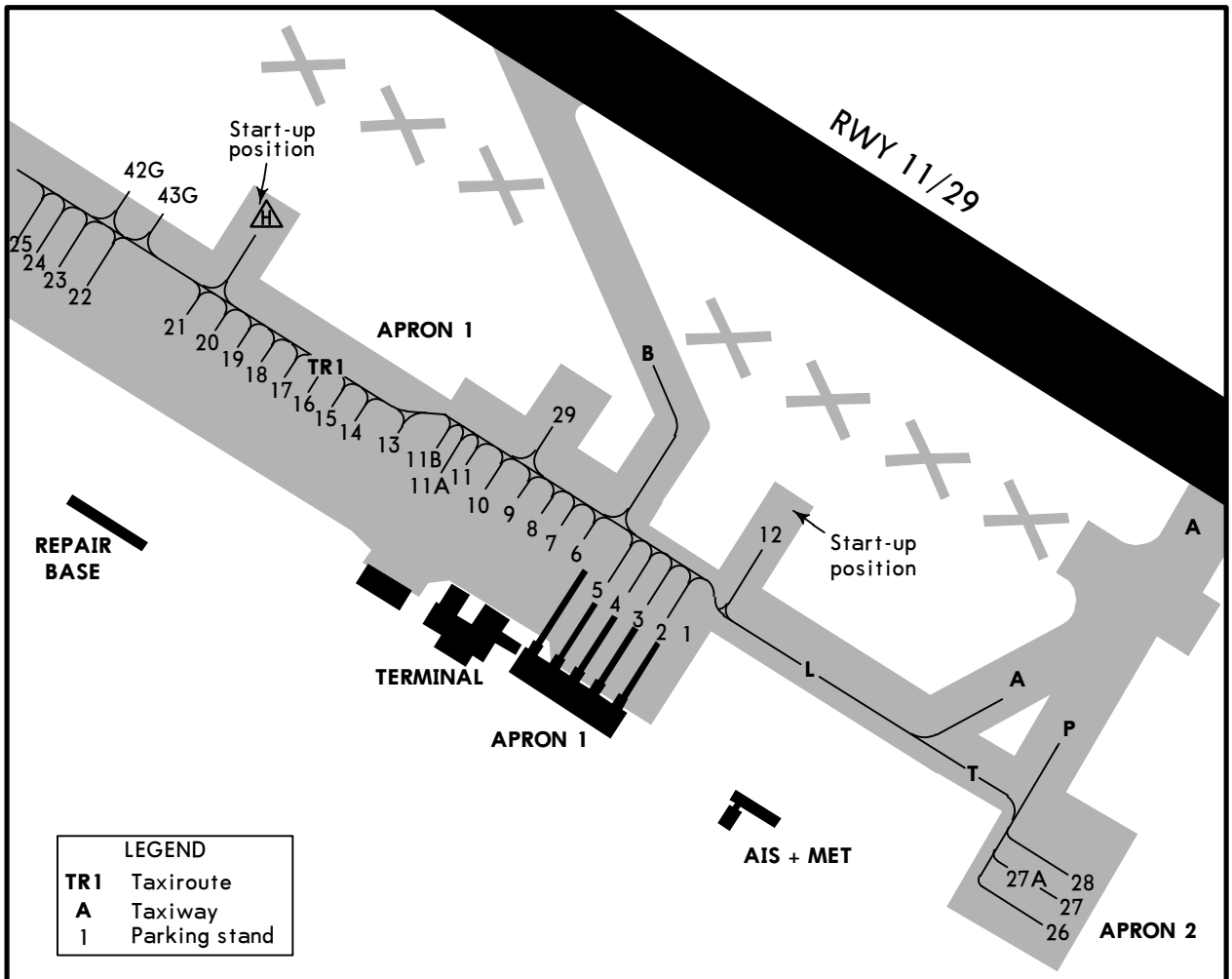
RWY 11:
From rwy head 12,795′ (3900m)
twy C int 8317′ (2535m)

RWY 29:
From rwy head 12,795′ (3900m)
twy B int 7480′ (2280m)

Std TAKE-OFF

HIRL & CL (spacing 15m or less) & relevant RVR	RL & CL & relevant RVR	RL & CL	RL & RCLM	RL or CL	RL or RCLM	Adequate Vis Ref	
			DAY	NIGHT	DAY	DAY	NIGHT
TDZ R125m Mid R125m Rollout R125m	TDZ R150m Mid R150m Rollout R150m	R200m	R300m		R400m	R/V500m	NA

CHANGES: Buildings.



INS COORDINATES

STAND No.	COORDINATES	STAND No.	COORDINATES
1, 2	N44 13.0 E043 05.5	23 thru 25	N44 13.3 E043 04.8
3 thru 5	N44 13.0 E043 05.4	26	N44 12.8 E043 05.9
6	N44 13.1 E043 05.4	27	N44 12.8 E043 06.0
7 thru 9	N44 13.1 E043 05.3	27A	N44 12.8 E043 05.9
10 thru 11A	N44 13.1 E043 05.2	28	N44 12.8 E043 06.0
11B	N44 13.2 E043 05.2	29	N44 13.2 E043 05.3
12	N44 13.0 E043 05.6	42G	N44 13.3 E043 04.9
13 thru 16	N44 13.2 E043 05.1	43G	N44 13.3 E043 05.0
17 thru 19	N44 13.2 E043 05.0		
20 thru 22	N44 13.3 E043 04.9		

CHANGES: Stands, buildings.

MINERALNYYE VODY, RUSSIA

MINERALNYYE VODY

STRAIGHT-IN RWY		A	B	C	D
11	CAT 2 ILS Z, Y or X	**1137**′(100′) **RA115**′ R300m	**1137**′(100′) **RA115**′ R300m	**1137**′(100′) **RA115**′ R300m	**1149**′(112′) **RA129**′❶R300m
	ILS Z, Y or X	**1237**′(200′) R550m	**1237**′(200′) R550m	**1237**′(200′) R550m	**1237**′(200′) R550m
	TDZ or CL out	❷ R550m	❷ R550m	❷ R550m	❷ R550m
	ALS out	R1200m	R1200m	R1200m	R1200m
	GLS	**1237**′(200′) R550m	**1237**′(200′) R550m	**1237**′(200′) R550m	**1237**′(200′) R550m
	TDZ or CL out	❷ R550m	❷ R550m	❷ R550m	❷ R550m
	ALS out	R1200m	R1200m	R1200m	R1200m
	❸ LOC Z or Y **with NDB/MKR**	**1720**′(683′) R1500m	**1720**′(683′) R1500m	**1720**′(683′) R2400m	**1720**′(683′) R2400m
	❸ LOC Z or Y **w/o NDB/MKR**	**1820**′(783′) R1500m	**1820**′(783′) R1500m	**1820**′(783′) R2400m	**1820**′(783′) R2400m
	❸ LOC X	**1820**′(783′) R1500m	**1820**′(783′) R1500m	**1820**′(783′) R2400m	**1820**′(783′) R2400m
	RNP **LNAV/VNAV**	**1397**′(360′) R900m	**1407**′(370′) R1000m	**1427**′(390′) R1100m	**1457**′(420′) R1200m
	ALS out	R1500m	R1500m	R1800m	R1900m
	❸ RNP **LNAV**	**1730**′(693′) R1500m	**1730**′(693′) R1500m	**1730**′(693′) R2400m	**1730**′(693′) R2400m
	❸ VOR Z **with D2.5**	**1790**′(753′) R1500m	**1790**′(753′) R1500m	**1790**′(753′) R2400m	**1790**′(753′) R2400m
	❸ VOR Z **w/o D2.5**	**1820**′(783′) R1500m	**1820**′(783′) R1500m	**1820**′(783′) R2400m	**1820**′(783′) R2400m
	❸ VOR Y	**2190**′(1153′) R1500m	**2190**′(1153′) R1500m	**2190**′(1153′) R2400m	**2190**′(1153′) R2400m
	❸ NDB Z or Y	**1960**′(923′) R1500m	**1960**′(923′) R1500m	**1960**′(923′) R2400m	**1960**′(923′) R2400m
29	ILS Z, Y or X	**1244**′(200′) ❷ R550m	**1244**′(200′) ❷ R550m	**1244**′(200′) ❷ R550m	**1244**′(200′) ❷ R550m
	ALS out	R1200m	R1200m	R1200m	R1200m
	GLS	**1237**′(200′) ❷ R550m	**1237**′(200′) ❷ R550m	**1237**′(200′) ❷ R550m	**1237**′(200′) ❷ R550m
	ALS out	R1200m	R1200m	R1200m	R1200m
	❸ LOC Z, Y or X **with D3.1 IMW/D5.7 MNW**	**1700**′(656′) R1500m	**1700**′(656′) R1500m	**1700**′(656′) R2300m	**1700**′(656′) R2300m
	ALS out	R1500m	R1500m	R2400m	R2400m
	❸ LOC Z, Y or X **w/o D3.1 IMW/D5.7 MNW**	**2040**′(996′) R1500m	**2040**′(996′) R1500m	**2040**′(996′) R2400m	**2040**′(996′) R2400m

❶ Without autoland: R350m.
❷ R750m when a Flight Director or Autopilot or HUD to DA is not used.
❸ Continuous Descent Final Approach.

CHANGES: Rwy designation, LOC Rwy 29 minimums.

MINERALNYYE VODY, RUSSIA

MINERALNYYE VODY

STRAIGHT-IN RWY	A	B	C	D
29 (contd) RNP LNAV/VNAV	**1334**′(290′)	**1344**′(300′)	**1354**′(310′)	**1364**′(320′)
	R750m	R750m	R750m	R750m
ALS out	R1400m	R1400m	R1400m	R1400m
❶ RNP LNAV	**1700**′(656′)	**1700**′(656′)	**1700**′(656′)	**1700**′(656′)
	R1500m	R1500m	R2300m	R2300m
ALS out	R1500m	R1500m	R2400m	R2400m
❶ VOR Z	**1800**′(756′)	**1800**′(756′)	**1800**′(756′)	**1800**′(756′)
with D5.7	R1500m	R1500m	R2400m	R2400m
❶ VOR Z	**2040**′(996′)	**2040**′(996′)	**2040**′(996′)	**2040**′(996′)
w/o D5.7	R1500m	R1500m	R2400m	R2400m
❶ VOR Y	**2140**′(1096′)	**2140**′(1096′)	**2140**′(1096′)	**2140**′(1096′)
	R1500m	R1500m	R2400m	R2400m

❶ Continuous Descent Final Approach.

CIRCLE-TO-LAND ❷	100 KT	135 KT	180 KT	205 KT
	1890′(843′)	**1890**′(843′)	**2180**′(1133′)	**2320**′(1273′)
after RNP 11	**1890**′(843′)	**1890**′(843′)	**2180**′(1133′)	**2330**′(1283′)
after VOR Y 11	**2190**′(1143′)	**2190**′(1143′)	**2190**′(1143′)	**2320**′(1273′)
after NDB Z 11	**1960**′(913′)	**1960**′(913′)	**2180**′(1133′)	**2330**′(1283′)
after NDB Y 11	**1960**′(913′)	**1960**′(913′)	**2180**′(1133′)	**2320**′(1273′)
to NDB B or A 11	**2210**′(1163′)	**2210**′(1163′)	**2210**′(1163′)	**2320**′(1273′)
after VOR Z 29	**2040**′(993′)	**2040**′(993′)	**2180**′(1133′)	**2320**′(1273′)
after VOR Y 29	**2140**′(1093′)	**2140**′(1093′)	**2180**′(1133′)	**2320**′(1273′)
to NDB C 29	**2170**′(1123′)	**2170**′(1123′)	**2180**′(1133′)	**2320**′(1273′)
	❸ V1500m	❸ V1600m	❸ V2400m	V3600m

❷ Prohibited South of airport.
❸ or higher minimums of preceding straight-in approach.

TAKE-OFF

Low Visibility Take-off					RL or RCLM	RL or CL	Adequate Vis Ref	
HIRL & CL (spacing 15m or less) & relevant RVR	RL & CL & relevant RVR	RL & CL	RL & RCLM	RL or CL				
			DAY	NIGHT	DAY	NIGHT	DAY	NIGHT
TDZ R125m Mid R125m Rollout R125m	TDZ R150m Mid R150m Rollout R150m	R200m	R300m		R/V400m		R/V500m	NA

URMM/MRV
MINERALNYYE VODY

JEPPESEN 28 NOV 25 (11-1)

MINERALNYYE VODY, ~~RUSSIA~~
ILS Z or LOC Z Rwy 11

ATIS	MINERALNYYE VODY Approach	MINERALNYYE VODY Radar (TWR)	MINERALNYYE VODY Start (TWR)	Ground
125.250 (Russian 127.4)	125.9	120.7	128.0	121.9

BRIEFING STRIP

LOC IMD	Final Apch Crs	D6.0 IMD	ILS DA(H)	Apt Elev 1047′
111.7	114°	3000′ (1963′)	1237′ (200′)	Rwy 1037′

MISSED APCH: Climb STRAIGHT AHEAD to MMØØ6, then turn LEFT to MMØØ7, then proceed to MMØØ3 climbing to 5000′ or above.

Alt Set: hPa (mm on req) Rwy Elev: 37 hPa Trans level: FL100 ❶ Trans alt: 9000′

1. RNAV 1 for initial and missed approach. 2 GNSS and DME required.

6100 070° 310° 8500
MSA ARP ❷

❶ FL110, if pressure is less than 1013 hPa (760 mm).
FL120, if pressure is less than 977 hPa (733 mm).
❷ is computed for surface air temperature at apt -28.4°C.

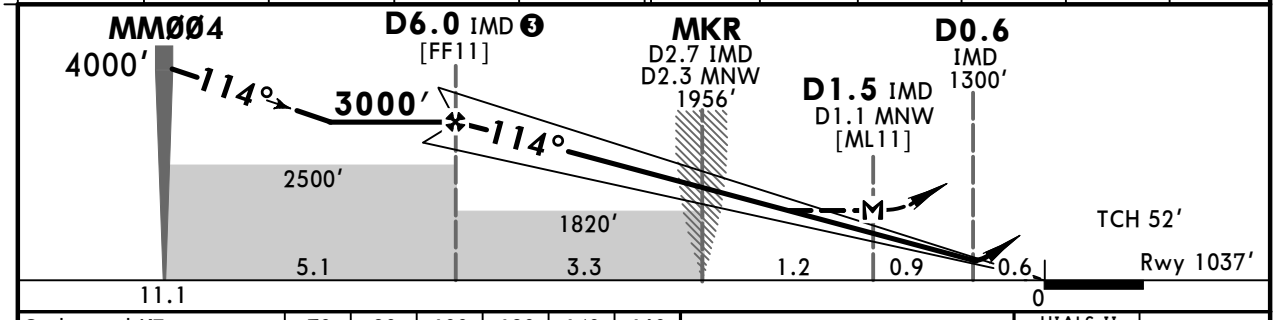
LOC: DME or Radar control required.
ILS DME reads zero at rwy 11 thresh.

Procedure is not available, when UR(R)-545, UR(R)-564 and UR(R)-566 are active.

FEET QNH	METERS (QFE)
9000	(2430)
8500	(2250)
6500	(1670)
6100	(1550)
5000	(1210)
4000	(905)
3900	(875)
3600	(785)
3500	(755)
3000	(600)
2930	(577)
2589	(473)
2500	(450)
2320	(395)
2248	(369)
2180	(350)
1956	(281)
1907	(265)
1890	(260)
1820	(245)
1720	(215)
1300	(79)
1237	(65)

4000 3000 2000 CONTOUR INTERVALS

MNW DME	5.4	4.3	3.2	2.2	IMD DME	5.4	4.3	3.2	2.2	1.1
ALTITUDE	2930′	2589′	2248′	1907′	ALTITUDE	2794′	2453′	2112′	1771′	1430′



Gnd speed-KT		70	90	100	120	140	160
ILS GS or LOC Descent Angle	3.00°	372	478	531	637	743	849
MAP at D1.5 IMD/ D1.1 MNW							

HIALS-II PAPI

MMØØ6

PANS OPS

Std

STRAIGHT-IN LANDING

	ILS	LOC (GS out) with MKR CDFA	LOC (GS out) w/o MKR CDFA
	DA(H) 1237′ (200′)	❷ DA/MDA(H) 1720′ (683′)	❷ DA/MDA(H) 1820′ (783′)
	TDZ or CL out / ALS out	ALS out	ALS out
A	R550m	R1500m	R1500m
B			
C	❶ R550m	R2400m	R2400m
D	R1200m		

CIRCLE-TO-LAND

Prohibited South of airport

Max KT	MDA(H)
100	1890′ (843′) V1500m
135	1890′ (843′) V1600m
180	2180′ (1133′) V2400m
205	2320′ (1273′) V3600m

❶ R750m when a Flight Director or Autopilot or HUD to DA is not used.
❷ VNAV DA(H) in lieu of MDA(H) depends on operator policy.

CHANGES: Note, recommended altitudes, boundaries.

URMM/MRV
MINERALNYYE VODY

JEPPESEN 28 NOV 25 (11-1A)

MINERALNYYE VODY, ~~RUSSIA~~
CAT II ILS Z Rwy 11

ATIS	MINERALNYYE VODY Approach	MINERALNYYE VODY Radar (TWR)	MINERALNYYE VODY Start (TWR)	Ground
125.250 (Russian 127.4)	125.9	120.7	128.0	121.9

BRIEFING STRIP

LOC IMD	Final Apch Crs	D6.0 IMD	CAT II ILS RA/DA(H) Refer to Minimums	Apt Elev 1047′ Rwy 1037′
111.7	114°	3000′ (1963′)		

MISSED APCH: Climb STRAIGHT AHEAD to MMØØ6, then turn LEFT to MMØØ7, then proceed to MMØØ3 climbing to 5000′ or above.

Alt Set: hPa (mm on req) Rwy Elev: 37 hPa Trans level: FL100 ❶ Trans alt: 9000′

1. RNAV 1 for initial and missed approach. 2.GNSS and DME required.

6100 070° 310° 8500 MSA ARP ❷

❶ FL110, if pressure is less than 1013 hPa (760 mm).
FL120, if pressure is less than 977 hPa (733 mm).
❷ is computed for surface air temperature at apt -28.4°C.

ILS DME reads zero at rwy 11 thresh.

Procedure is not available, when UR(R)-545, UR(R)-564 and UR(R)-566 are active.

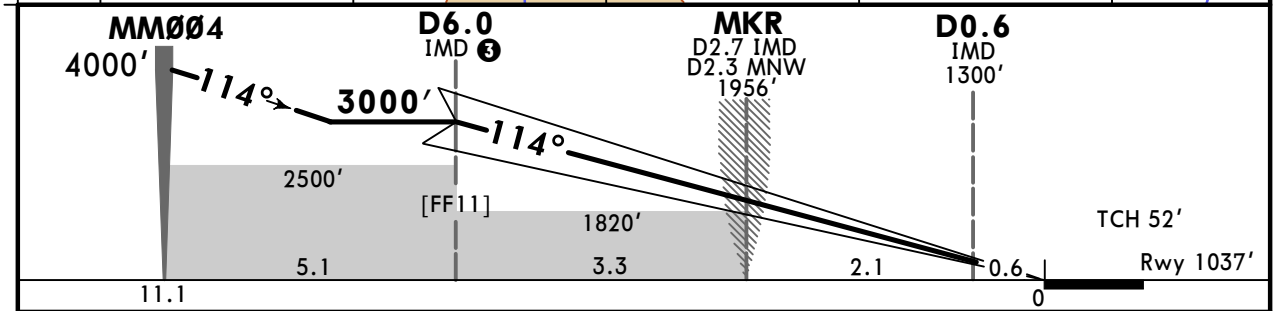
FEET QNH	METERS (QFE)
9000	(2430)
8500	(2250)
6500	(1670)
6100	(1550)
5000	(1210)
4000	(905)
3900	(875)
3600	(785)
3500	(755)
3000	(600)
2500	(450)
1956	(281)
1820	(245)
1300	(79)
1149	(34)
1137	(30)

CONTOUR INTERVALS: 4000, 3000, 2000

UR(R)-566, UR(R)-545, UR(R)-564, 44-30, 44-20, 44-10, 42-40, 42-50, 43-00, 43-10, 43-20

MMØØ2 (IAF) 5000 — 139° (SMA 3500) 6.4 — 1552′
MMØØ3 (IAF) 5000 — 024° 204° — 1913′
MAX FL100 MHA 3900
MMØØ4 (IF) 4000 — 114° — 6.4 — 204° (SMA 3900) — 1930′
MMØØ1 (IAF) 6500 — 6.4 — 024° (SMA 3600)
294° MMØØ7 — 1792′
D6.0 IMD [FF11]❸
MKR D2.7 IMD D2.3 MNW
MINERALNYYE VODY D 117.1 MNW
ILS DME 114° 111.7 IMD
D0.6 IMD
❸D5.6 MNW/ 7.0 NM RADAR FIX
MMØØ6 — 1546′

2258′ 1897′ 1477′ 1969′ 1569′ 1802′ 1713′ 1529′ 1920′ 1487′ 1523′ 1824′ 1887′ 2015′ 2904′ 2681′ 1647′ 1552′ 1650′ 3262′ 2944′ 1663′ 1522′ 1480′ 1627′



Gnd speed-Kts		70	90	100	120	140	160
GS	3.00°	372	478	531	637	743	849

HIALS-II PAPI MMØØ6

Std STRAIGHT-IN LANDING
CAT II ILS

ABC	D
RA 115′	**RA 129′**
DA(H) **1137′** (100′)	DA(H) **1149′** (112′)

PANS OPS

❶ R300m

❶ CAT D without autoland: R350m.

CHANGES: Boundaries.

URMM/MRV
MINERALNYYE VODY

28 NOV 25 (11-2)

JEPPESEN MINERALNYYE VODY, ~~RUSSIA~~
ILS Y or LOC Y Rwy 11

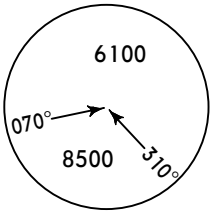
ATIS	MINERALNYYE VODY Approach	MINERALNYYE VODY Radar (TWR)	MINERALNYYE VODY Start (TWR)	Ground
125.250 (Russian 127.4)	125.9	120.7	128.0	121.9

BRIEFING STRIP

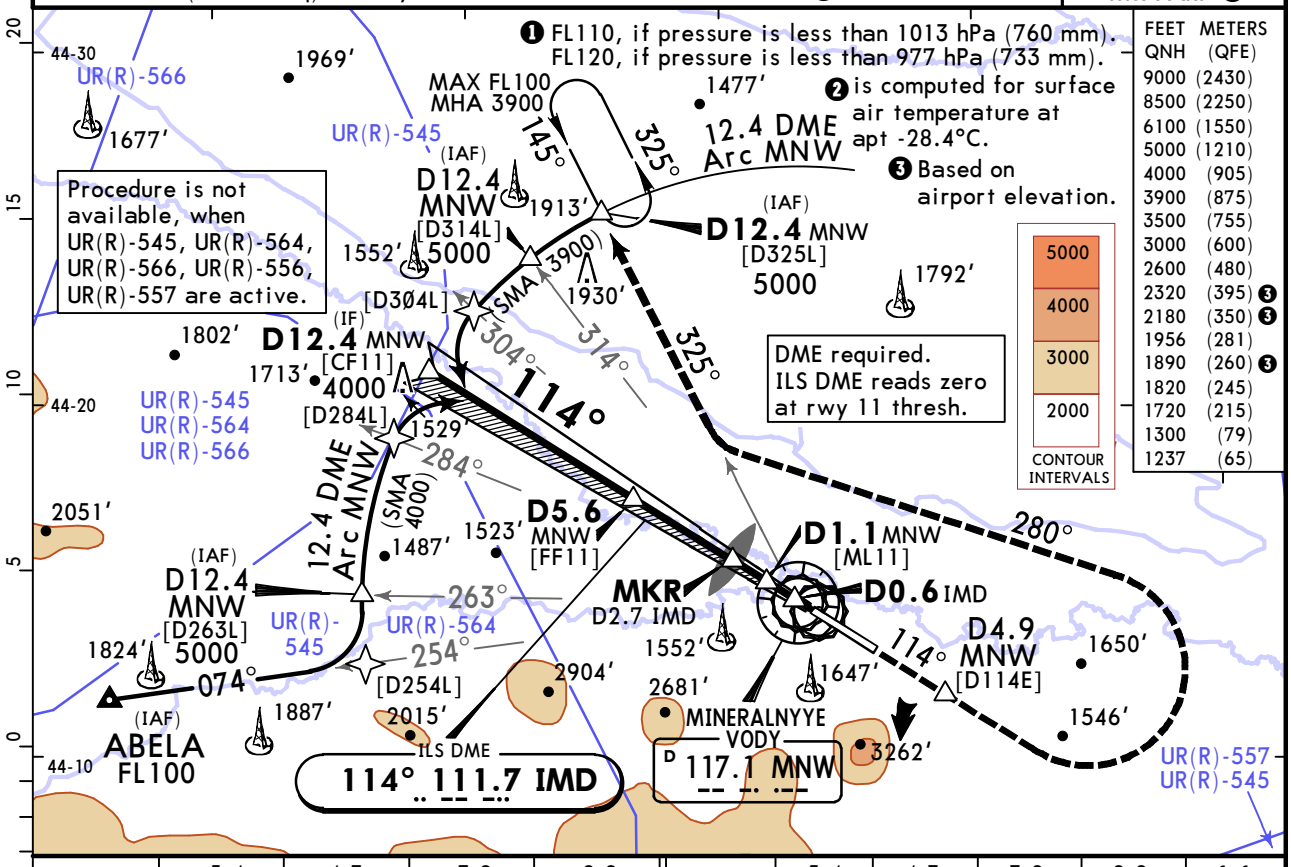
LOC IMD	Final Apch Crs	D5.6 MNW	ILS DA(H)	Apt Elev 1047′
111.7	114°	3000′ (1963′)	1237′ (200′)	Rwy 1037′

MISSED APCH: Climb STRAIGHT AHEAD to D4.9 MNW, after reaching 3500′ or above turn LEFT onto 280° to intercept R-325 MNW, then proceed to D12.4 MNW climbing to 5000′ or above.

Alt Set: hPa (mm on req) Rwy Elev: 37 hPa Trans level: FL100 ❶ Trans alt: 9000′

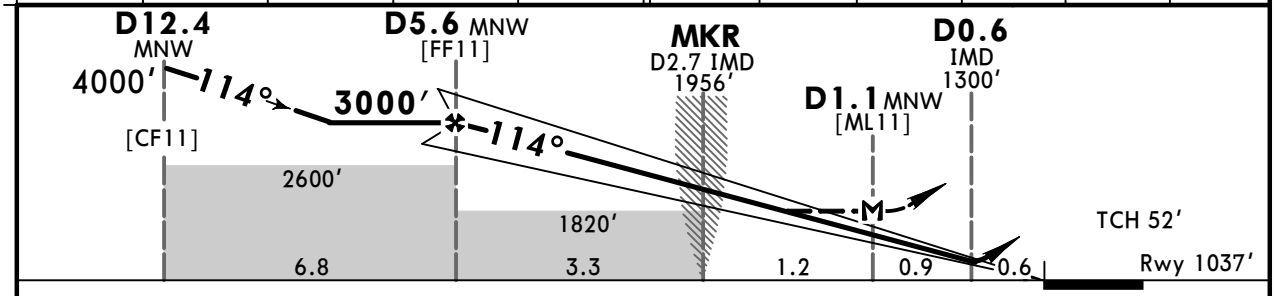


MSA ARP ❷



MNW DME	5.4	4.3	3.2	2.2
ALTITUDE	2930′	2589′	2248′	1907′

IMD DME	5.4	4.3	3.2	2.2	1.1
ALTITUDE	2794′	2453′	2112′	1771′	1430′



Gnd speed-Kts		70	90	100	120	140	160
ILS GS or LOC Descent Angle	3.00°	372	478	531	637	743	849
MAP at D1.1 MNW							

HIALS-II
PAPI
D4.9 MNW

Std

STRAIGHT-IN LANDING

	ILS			LOC (GS out) with MKR CDFA		LOC (GS out) w/o MKR CDFA	
	DA(H) 1237′ (200′)			❷ DA/MDA(H) 1720′ (683′)		❷ DA/MDA(H) 1820′ (783′)	
	FULL	TDZ or CL out	ALS out		ALS out		ALS out
A	R550m	❶ R550m	R1200m	R1500m		R1500m	
B							
C				R2400m		R2400m	
D							

CIRCLE-TO-LAND

Prohibited South of airport

Max Kts	MDA(H)
100	1890′ (843′) V1500m
135	1890′ (843′) V1600m
180	2180′ (1133′) V2400m
205	2320′ (1273′) V3600m

PANS OPS

❶ R750m when a Flight Director or Autopilot or HUD to DA is not used.
❷ VNAV DA(H) in lieu of MDA(H) depends on operator policy.

CHANGES: Recommended altitudes, boundaries.

URMM/MRV
MINERALNYYE VODY

28 NOV 25 (11-2A)

JEPPESEN

MINERALNYYE VODY, ~~RUSSIA~~
CAT II ILS Y Rwy 11

BRIEFING STRIP™

ATIS	MINERALNYYE VODY Approach	MINERALNYYE VODY Radar (TWR)	MINERALNYYE VODY Start (TWR)	Ground
125.250 (Russian 127.4)	125.9	120.7	128.0	121.9

LOC IMD	Final Apch Crs	D5.6 MNW	CAT II ILS RA/DA(H) Refer to Minimums	Apt Elev 1047′ Rwy 1037′
111.7	114°	3000′ (1963′)		

MISSED APCH: Climb STRAIGHT AHEAD to D4.9 MNW, after reaching 3500′ or above turn LEFT onto 280° to intercept R-325 MNW, then proceed to D12.4 MNW climbing to 5000′ or above.

Alt Set: hPa (mm on req) Rwy Elev: 37 hPa Trans level: FL100 ❶ Trans alt: 9000′

6100 070° 310° 8500 MSA ARP ❷

FEET QNH	METERS (QFE)
9000	(2430)
8500	(2250)
6100	(1550)
5000	(1210)
4000	(905)
3900	(875)
3500	(755)
3000	(600)
2600	(480)
1956	(281)
1820	(245)
1300	(79)
1149	(34)
1137	(30)

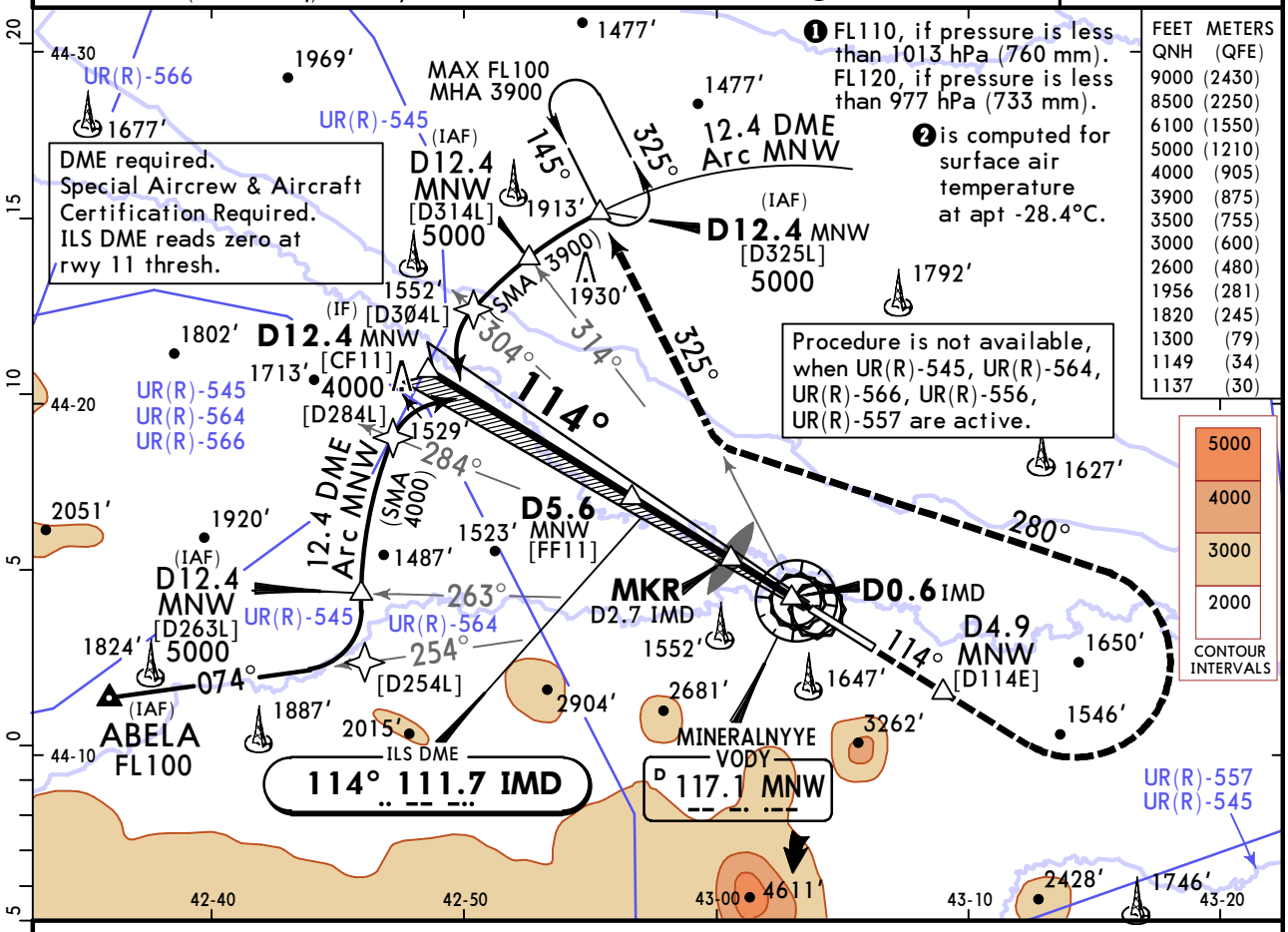
❶ FL110, if pressure is less than 1013 hPa (760 mm). FL120, if pressure is less than 977 hPa (733 mm).

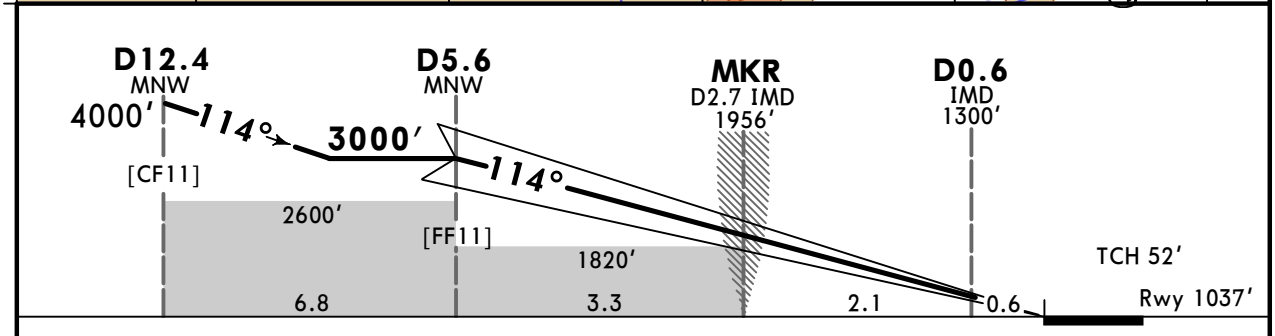
❷ is computed for surface air temperature at apt -28.4°C.

DME required. Special Aircrew & Aircraft Certification Required. ILS DME reads zero at rwy 11 thresh.

Procedure is not available, when UR(R)-545, UR(R)-564, UR(R)-566, UR(R)-556, UR(R)-557 are active.

5000 4000 3000 2000 CONTOUR INTERVALS





Gnd speed-Kts		70	90	100	120	140	160
GS	3.00°	372	478	531	637	743	849

HIALS-II PAPI

D4.9 MNW

Std STRAIGHT-IN LANDING
CAT II ILS

ABC	D
RA 115′	**RA 129′**
DA(H) **1137′** (100′)	DA(H) **1149′** (112′)

PANS OPS

❶ R300m

❶ CAT D without autoland: R350m.

CHANGES: Boundaries.

URMM/MRV
MINERALNYYE VODY

JEPPESEN 28 NOV 25 (11-3)

MINERALNYYE VODY, ~~RUSSIA~~
ILS X or LOC X Rwy 11

ATIS	MINERALNYYE VODY Approach	MINERALNYYE VODY Radar (TWR)	MINERALNYYE VODY Start (TWR)	Ground
125.250 (Russian 127.4)	125.9	120.7	128.0	121.9

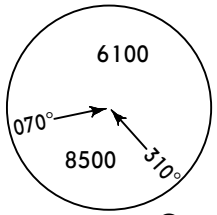
BRIEFING STRIP ™

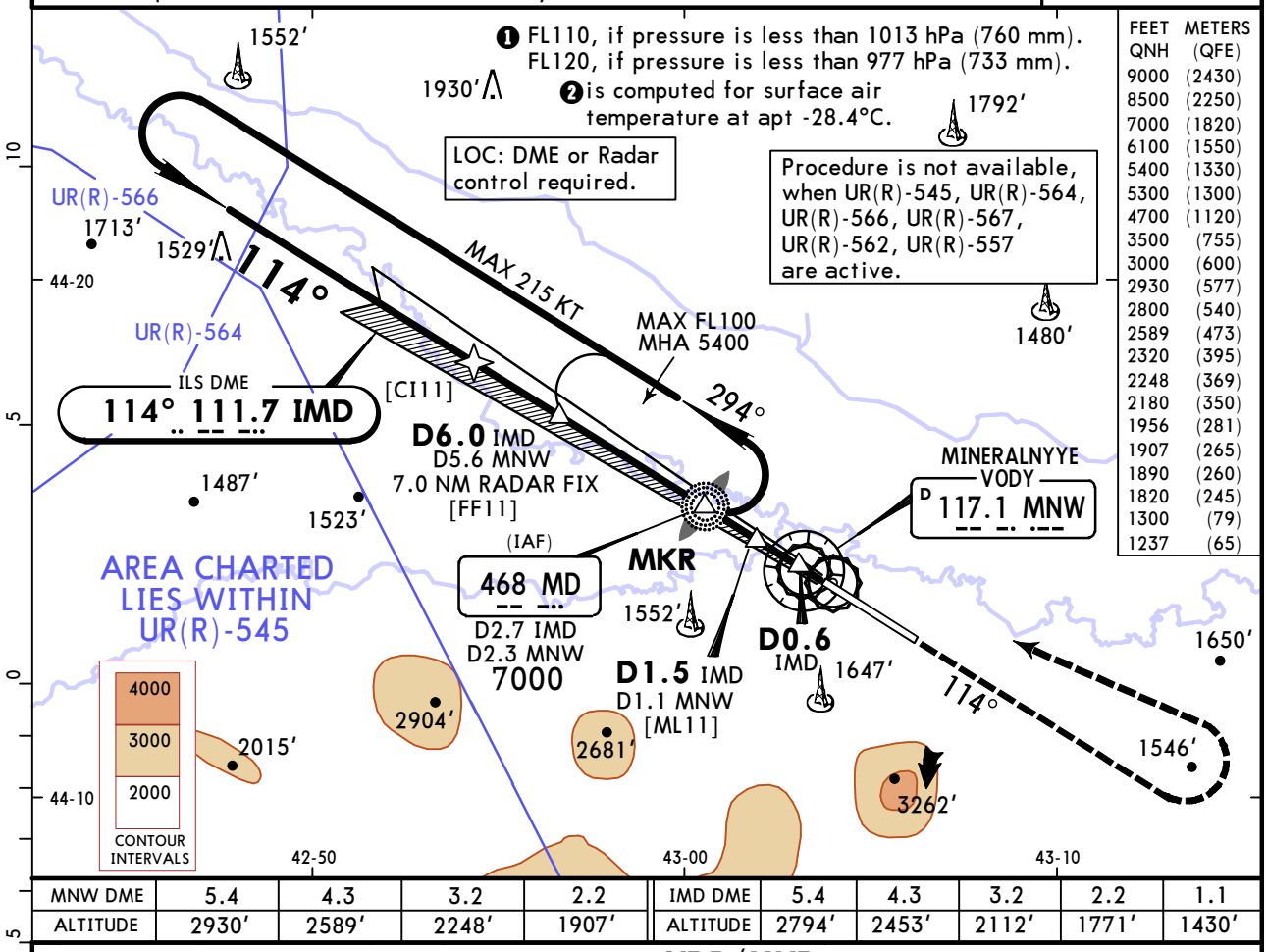
LOC IMD	Final Apch Crs	D6.0 IMD	ILS DA(H)	Apt Elev 1047′
111.7	114°	3000′ (1963′)	1237′ (200′)	Rwy 1037′

MISSED APCH: Climb STRAIGHT AHEAD to 3500′ or above, turn LEFT to NDB climbing to 5300′ or above. Turn before MAP prohibited.

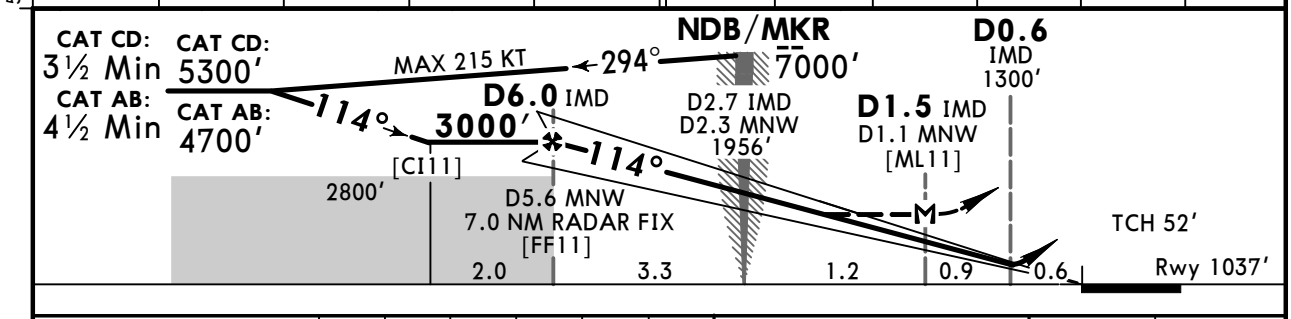
Alt Set: hPa (mm on req) Rwy Elev: 37 hPa Trans level: FL100 ❶ Trans alt: 9000′

1. DME required. 2. ILS DME reads zero at rwy 11 thresh.





MNW DME	5.4	4.3	3.2	2.2	IMD DME	5.4	4.3	3.2	2.2	1.1
ALTITUDE	2930′	2589′	2248′	1907′	ALTITUDE	2794′	2453′	2112′	1771′	1430′



Gnd speed-Kts		70	90	100	120	140	160
ILS GS or LOC Descent Angle	3.00°	372	478	531	637	743	849
MAP at D1.5 IMD/ D1.1 MNW							

HIALS-II
PAPI
3500′ or above

PANS OPS

Std STRAIGHT-IN LANDING

	ILS DA(H) 1237′ (200′)			LOC (GS out) CDFA ❷ DA/MDA(H) 1820′ (783′)	
		TDZ or CL out	ALS out		ALS out
A	R550m	❶ R550m	R1200m	R1500m	
B					
C				R2400m	
D					

CIRCLE-TO-LAND

Prohibited South of airport

Max KT	MDA(H)
100	1890′ (843′) V1500m
135	1890′ (843′) V1600m
180	2180′ (1133′) V2400m
205	2320′ (1273′) V3600m

❶ R750m when a Flight Director or Autopilot or HUD to DA is not used.
❷ VNAV DA(H) in lieu of MDA(H) depends on operator policy.

CHANGES: Note, recommended altitudes, boundaries.

URMM/MRV
MINERALNYYE VODY

JEPPESEN 28 NOV 25 (11-3A)

MINERALNYYE VODY, ~~RUSSIA~~
CAT II ILS X Rwy 11

BRIEFING STRIP ™

ATIS	MINERALNYYE VODY Approach	MINERALNYYE VODY Radar (TWR)	MINERALNYYE VODY Start (TWR)	Ground
125.250 (Russian 127.4)	125.9	120.7	128.0	121.9

LOC IMD	Final Apch Crs	D6.0 IMD	CAT II ILS RA/DA(H) Refer to Minimums	Apt Elev 1047′ Rwy 1037′
111.7	114°	3000′ (1963′)		

MISSED APCH: Climb STRAIGHT AHEAD to 3500′ or above, turn LEFT to NDB climbing to 5300′ or above.

Alt Set: hPa (mm on req) Rwy Elev: 37 hPa Trans level: FL100 ❶ Trans alt: 9000′

1. DME required. 2. ILS DME reads zero at rwy 11 thresh.

6100 070° 310° 8500 MSA ARP ❷

❶ FL110, if pressure is less than 1013 hPa (760 mm). FL120, if pressure is less than 977 hPa (733 mm).

❷ is computed for surface air temperature at apt -28.4°C.

FEET QNH	METERS (QFE)
9000	(2430)
8500	(2250)
7000	(1820)
6100	(1550)
5400	(1330)
5300	(1300)
4700	(1120)
3500	(755)
3000	(600)
2800	(540)
1956	(281)
1300	(79)
1149	(34)
1137	(30)

4000 3000 2000 CONTOUR INTERVALS

1552′ 1930′ 1792′ 1663′ 1522′ 1480′ 1713′ 1529′ 1487′ 1523′ 1552′ 1650′ 1647′ 2904′ 2681′ 2015′ 3262′ 1546′

UR(R)-566 UR(R)-564

114° MAX 215 KT MAX FL100 MHA 5400 294°

ILS DME 114° 111.7 IMD [CI11]

D6.0 IMD D5.6 MNW 7.0 NM RADAR FIX [FF11]

MINERALNYYE VODY D 117.1 MNW

(IAF) 468 MD D2.7 IMD D2.3 MNW 7000

MKR

D0.6 IMD

Procedure is not available, when UR(R)-545, UR(R)-564, UR(R)-566, UR(R)-567, UR(R)-562, UR(R)-557 are active.

AREA CHARTED LIES WITHIN UR(R)-545

44-20 44-10 42-50 43-00 43-10 10 5 0 5

CAT CD: 3½ Min CAT AB: 4½ Min

CAT CD: 5300′ CAT AB: 4700′

MAX 215 KT 294° 114° D6.0 IMD 3000′ [CI11]

NDB/MKR 7000′ D2.7 IMD D2.3 MNW 1956′

D0.6 IMD 1300′

114°

2800′ D5.6 MNW 7.0 NM RADAR FIX [FF11] 2.0 3.3 2.1 0.6

TCH 52′ Rwy 1037′

Gnd speed-Kts		70	90	100	120	140	160
GS	3.00°	372	478	531	637	743	849

HIALS-II PAPI 3500′ or above

Std STRAIGHT-IN LANDING **CAT II ILS**

ABC	D
RA 115′	RA 129′
DA(H) 1137′ (100′)	DA(H) 1149′ (112′)

❶ R300m

PANS OPS

❶ CAT D without autoland: R350m.

CHANGES: Boundaries.

URMM/MRV
MINERALNYYE VODY

JEPPESEN 28 NOV 25 (11-4)

MINERALNYYE VODY, ~~RUSSIA~~
ILS Z or LOC Z Rwy 29

ATIS	MINERALNYYE VODY Approach	MINERALNYYE VODY Radar (TWR)	MINERALNYYE VODY Start (TWR)	Ground
125.250 (Russian 127.4)	125.9	120.7	128.0	121.9

BRIEFING STRIP

LOC IMW	Final Apch Crs	D6.0 IMW	ILS DA(H)	Apt Elev 1047′
109.3	294°	3000′ (1956′)	1244′ (200′)	Rwy 1044′

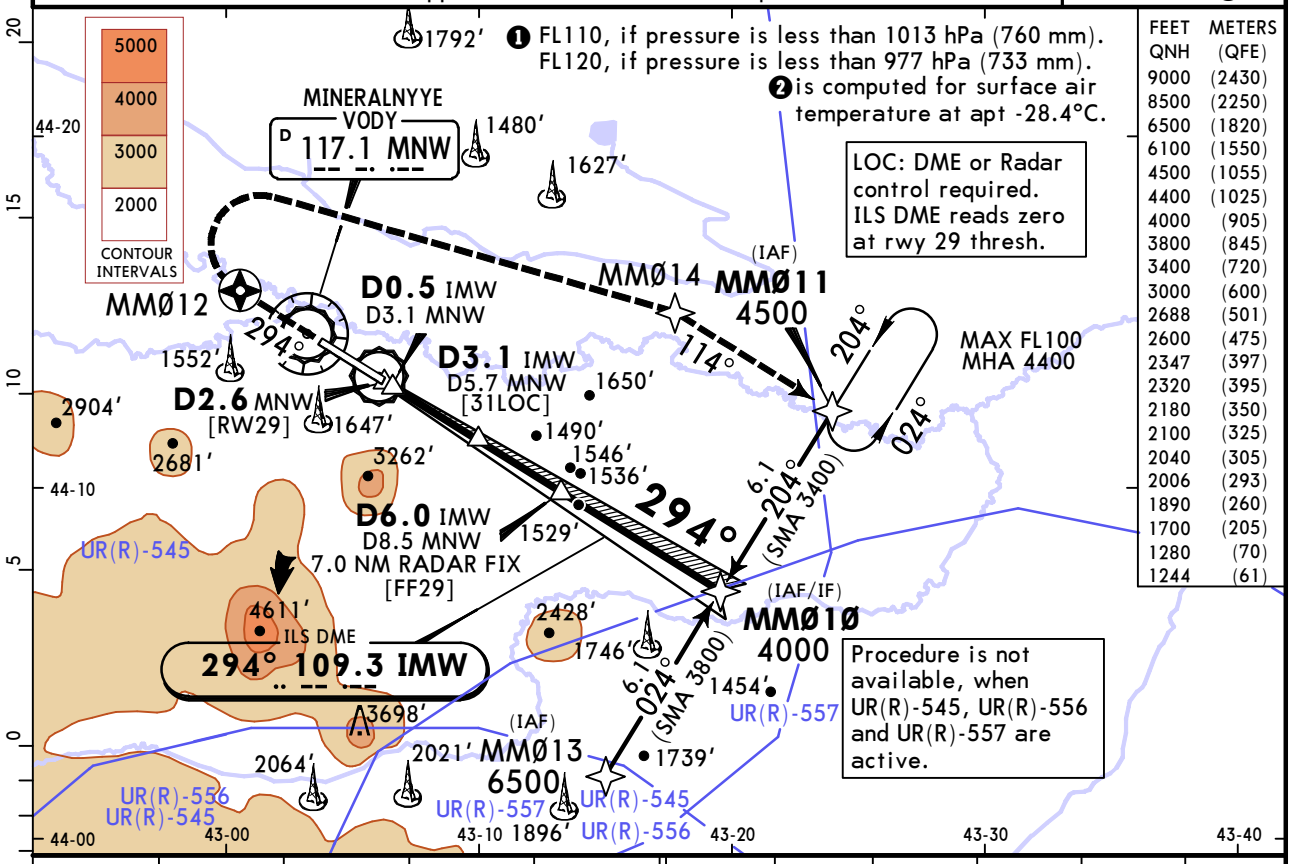
MISSED APCH: Climb STRAIGHT AHEAD to MMØ12, turn RIGHT to MMØ14, then proceed to MMØ11 climbing to 4500′ or above.

Alt Set: hPa (mm on req) Rwy Elev: 37 hPa Trans level: FL100 ❶ Trans alt: 9000′

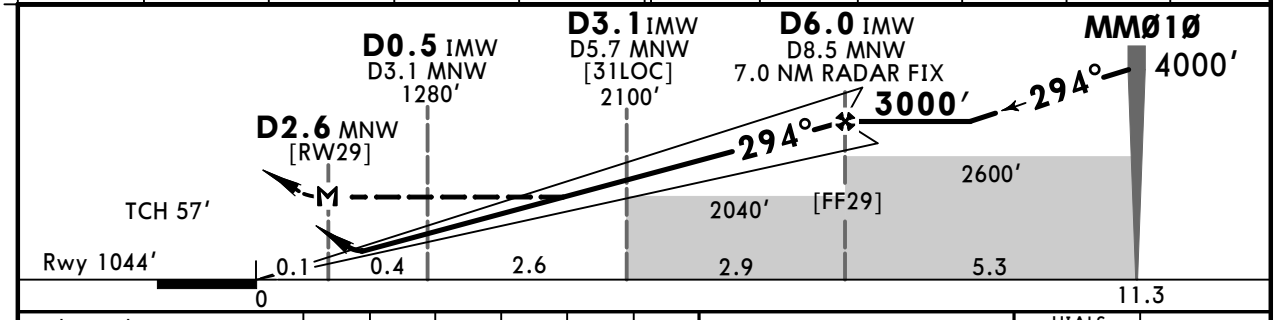
1. RNAV 1 for initial and missed approach. 2. GNSS and DME required.

6100 070° 310° 8500

MSA ARP ❷



MNW DME	4.3	5.4	6.5	7.6	IMD DME	1.1	2.2	3.2	4.3	5.4
ALTITUDE	1637′	2006′	2347′	2688′	ALTITUDE	1443′	1784′	2126′	2467′	2808′



Gnd speed-KT		70	90	100	120	140	160
ILS GS or LOC Descent Angle	3.00°	372	478	531	637	743	849
MAP at D2.6 MNW							

HIALS PAPI MMØ12

Std

STRAIGHT-IN LANDING

	ILS	LOC (GS out) with D3.1 IMW/D5.7 MNW CDFA	LOC (GS out) w/o D3.1 IMW/D5.7 MNW CDFA
	DA(H) 1244′ (200′)	❷ DA/MDA(H) 1700′ (656′)	❷ DA/MDA(H) 2040′ (996′)
	ALS out	ALS out	ALS out
A	❶ R550m	R1500m	R1500m
B			
C	R1200m	R2300m	R2400m
D		R2400m	R2400m

CIRCLE-TO-LAND

Prohibited South of airport

Max KT	MDA(H)
100	1890′ (843′) V1500m
135	1890′ (843′) V1600m
180	2180′ (1133′) V2400m
205	2320′ (1273′) V3600m

PANS OPS

❶ R750m when a Flight Director or Autopilot or HUD to DA is not used.
❷ VNAV DA(H) in lieu of MDA(H) depends on operator policy.

CHANGES: Note, recommended altitudes, boundaries.

URMM/MRV
MINERALNYYE VODY

JEPPESEN 28 NOV 25 (11-5)

MINERALNYYE VODY, ~~RUSSIA~~
ILS Y or LOC Y Rwy 29

ATIS	MINERALNYYE VODY Approach	MINERALNYYE VODY Radar (TWR)	MINERALNYYE VODY Start (TWR)	Ground
125.250 (Russian 127.4)	125.9	120.7	128.0	121.9

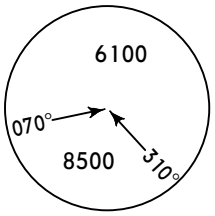
BRIEFING STRIP

LOC IMW	Final Apch Crs	D8.5 MNW	ILS DA(H)	Apt Elev 1047′
109.3	294°	3000′ (1956′)	1244′ (200′)	Rwy 1044′

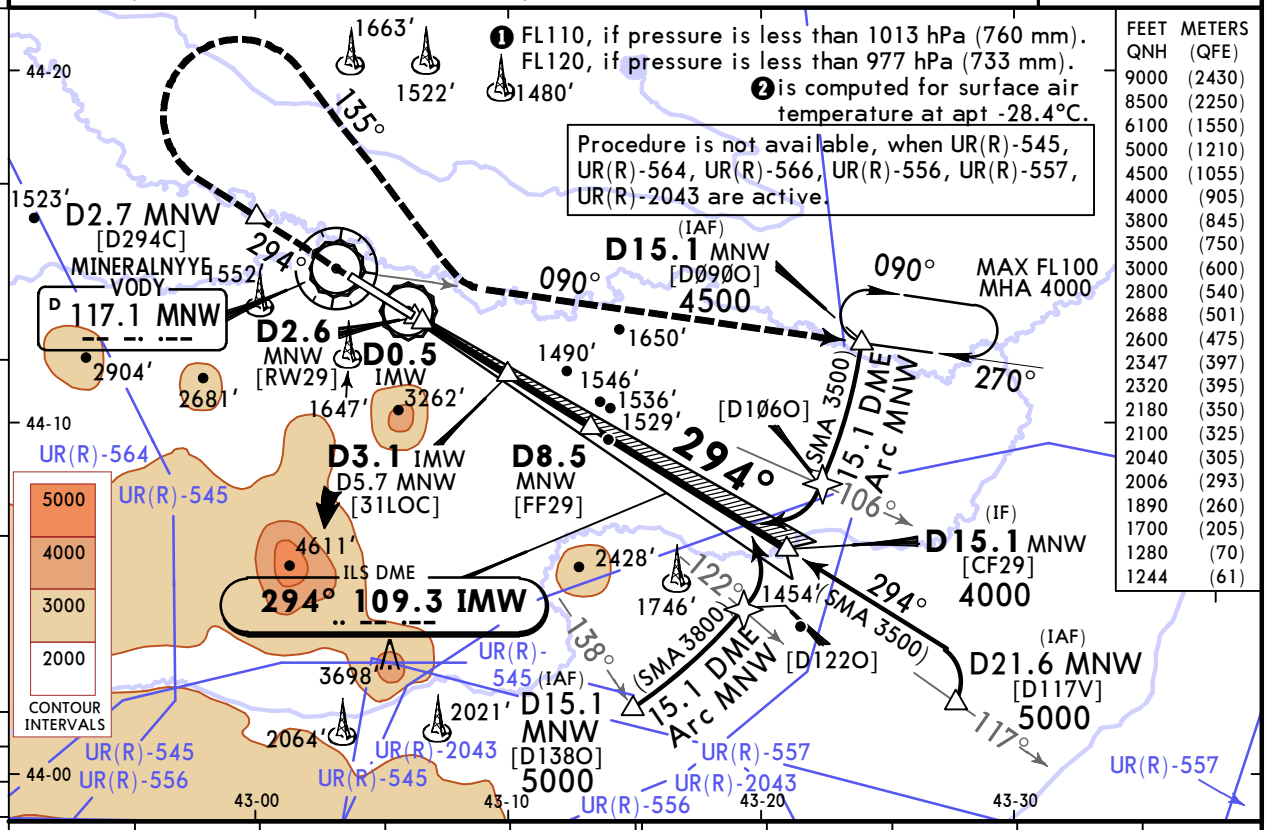
MISSED APCH: Climb STRAIGHT AHEAD to D2.7 MNW, after reaching 2800′ or above turn RIGHT onto 135° to intercept R-090 MNW, then proceed to D15.1 MNW climbing to 4500′ or above.

Alt Set: hPa (mm on req) Rwy Elev: 38 hPa Trans level: FL100 ❶ Trans alt: 9000′

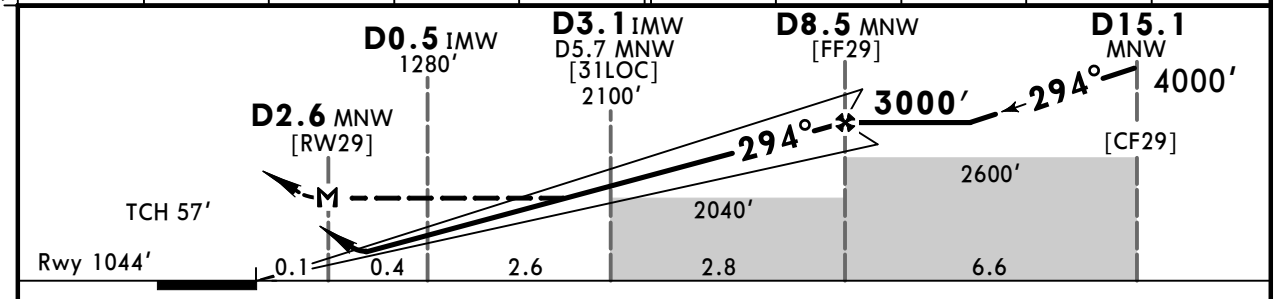
1. DME required. 2. ILS DME reads zero at rwy 29 thresh.



MSA ARP ❷



MNW DME	4.3	5.4	6.5	7.6	IMW DME	1.1	2.2	3.2	4.3
ALTITUDE	1637′	2006′	2347′	2688′	ALTITUDE	1443′	1784′	2126′	2467′



Gnd speed-KT		70	90	100	120	140	160
ILS GS or LOC Descent Angle	3.00°	372	478	531	637	743	849
MAP at D2.6 MNW							

HIALS
PAPI

D2.7 MNW

PANS OPS

Std

STRAIGHT-IN LANDING

	ILS	LOC (GS out) with D3.1 IMW/D5.7 MNW CDFA	LOC (GS out) w/o D3.1 IMW/D5.7 MNW CDFA
	DA(H) 1244′ (200′)	❷ DA/MDA(H) 1700′ (656′)	❷ DA/MDA(H) 2040′ (996′)
	ALS out	ALS out	ALS out
A	❶ R550m	R1500m	R1500m
B			
C	R1200m	R2300m / R2400m	R2400m
D			

CIRCLE-TO-LAND

Prohibited South of airport

Max KT	MDA(H)
100	1890′ (843′) V1500m
135	1890′ (843′) V1600m
180	2180′ (1133′) V2400m
205	2320′ (1273′) V3600m

❶ R750m when a Flight Director or Autopilot or HUD to DA is not used.
❷ VNAV DA(H) in lieu of MDA(H) depends on operator policy.

CHANGES: Note, recommended altitudes, boundaries.

URMM/MRV
MINERALNYYE VODY

JEPPESEN

28 NOV 25 (11-6)

MINERALNYYE VODY, ~~RUSSIA~~
ILS X or LOC X Rwy 29

ATIS	MINERALNYYE VODY Approach	MINERALNYYE VODY Radar (TWR)	MINERALNYYE VODY Start (TWR)	Ground
125.250 (Russian 127.4)	125.9	120.7	128.0	121.9

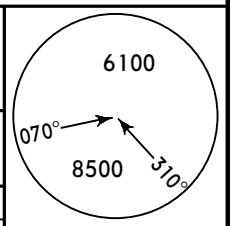
BRIEFING STRIP

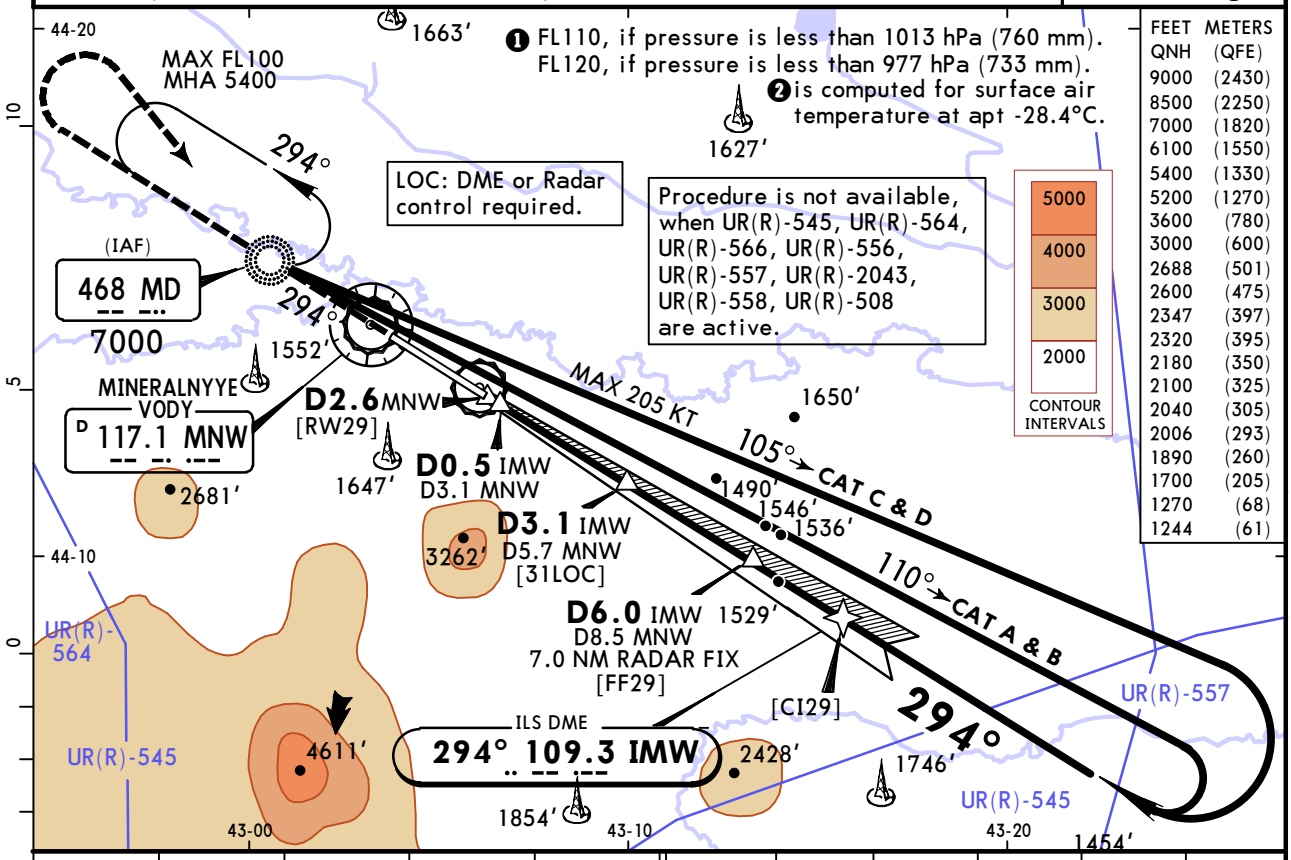
LOC IMW	Final Apch Crs	D6.0 IMW	ILS DA(H)	Apt Elev 1047′
109.3	294°	3000′ (1956′)	1244′ (200′)	Rwy 1044′

MISSED APCH: Climb STRAIGHT AHEAD to 3600′ or above, then turn RIGHT to NDB climbing to 5400′ or above. Turn before MAP prohibited.

Alt Set: hPa (mm on req) Rwy Elev: 38 hPa Trans level: FL100 ❶ Trans alt: 9000′

1. DME required. 2. ILS DME reads zero at rwy 29 thresh.

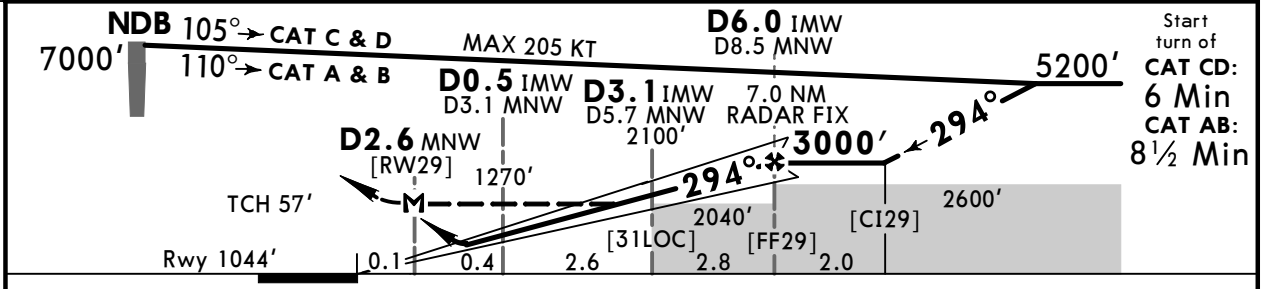




FEET QNH	METERS (QFE)
9000	(2430)
8500	(2250)
7000	(1820)
6100	(1550)
5400	(1330)
5200	(1270)
3600	(780)
3000	(600)
2688	(501)
2600	(475)
2347	(397)
2320	(395)
2180	(350)
2100	(325)
2040	(305)
2006	(293)
1890	(260)
1700	(205)
1270	(68)
1244	(61)

MNW DME	4.3	5.4	6.5	7.6
ALTITUDE	1637′	2006′	2347′	2688′

IMW DME	1.1	2.2	3.2	4.3	5.4
ALTITUDE	1443′	1784′	2126′	2467′	2808′



Gnd speed-KT		70	90	100	120	140	160
ILS GS or LOC Descent Angle	3.00°	372	478	531	637	743	849
MAP at D2.6 MNW							

HIALS
PAPI

3600′ or above

PANS OPS

Std

	ILS	STRAIGHT-IN LANDING LOC (GS out) with D3.1 IMW/D5.7 MNW CDFA	STRAIGHT-IN LANDING LOC (GS out) w/o D3.1 IMW/D5.7 MNW CDFA
	DA(H) 1244′ (200′)	❷ DA/MDA(H) 1700′ (656′)	❷ DA/MDA(H) 2040′ (996′)
	ALS out	ALS out	ALS out
A	❶ R550m	R1500m	R1500m
B			
C	R1200m	R2300m	R2400m
D		R2400m	

CIRCLE-TO-LAND

Prohibited South of airport

Max KT	MDA(H)
100	1890′ (843′) V1500m
135	1890′ (843′) V1600m
180	2180′ (1133′) V2400m
205	2320′ (1273′) V3600m

❶ R750m when a Flight Director or Autopilot or HUD to DA is not used.
❷ VNAV DA(H) in lieu of MDA(H) depends on operator policy.

CHANGES: Note, recommended altitudes, boundaries.

URMM/MRV
MINERALNYYE VODY

JEPPESEN MINERALNYYE VODY, ~~RUSSIA~~

1 AUG 25 (12-1) **Eff 7 Aug**

RNP Rwy 11

BRIEFING STRIP TM

ATIS	MINERALNYYE VODY Approach	MINERALNYYE VODY Radar (TWR)	MINERALNYYE VODY Start (TWR)	Ground
125.250 (Russian 127.4)	125.9	120.7	128.0	121.9

RNAV	Final Apch Crs 114°	MMØØ5 3000′ (1963′)	LNAV/VNAV DA(H) Refer to Minimums	Apt Elev 1047′ Rwy 1037′

MISSED APCH: Climb STRAIGHT AHEAD to MMØØ6, then turn LEFT to MMØØ7, then proceed to MMØØ3 climbing to 5000′ or above.

Alt Set: hPa (mm on req) Rwy Elev: 37 hPa Trans level: FL100 ❶ Trans alt: 9000′

RNP apch. 1. GNSS required. 2. Baro-VNAV not authorized below -32°C.

6100 070° 310° 8500

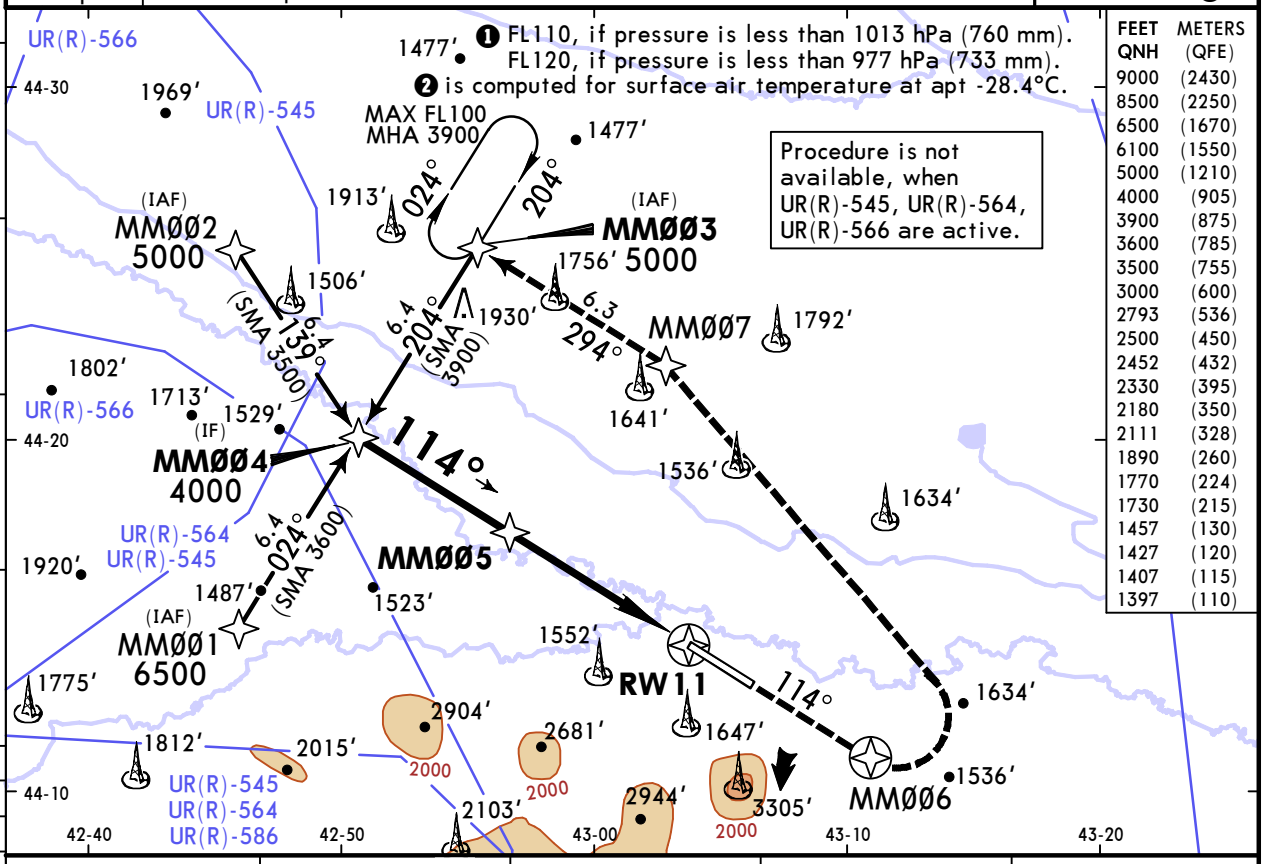
MSA ARP ❷

❶ FL110, if pressure is less than 1013 hPa (760 mm). FL120, if pressure is less than 977 hPa (733 mm).

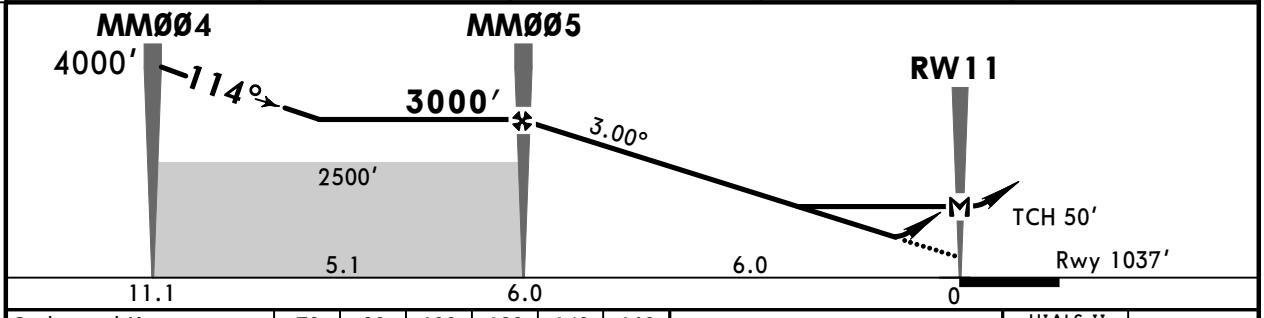
❷ is computed for surface air temperature at apt -28.4°C.

Procedure is not available, when UR(R)-545, UR(R)-564, UR(R)-566 are active.

FEET QNH	METERS (QFE)
9000	(2430)
8500	(2250)
6500	(1670)
6100	(1550)
5000	(1210)
4000	(905)
3900	(875)
3600	(785)
3500	(755)
3000	(600)
2793	(536)
2500	(450)
2452	(432)
2330	(395)
2180	(350)
2111	(328)
1890	(260)
1770	(224)
1730	(215)
1457	(130)
1427	(120)
1407	(115)
1397	(110)



DIST to RW11	5.4	4.3	3.2	2.2
ALTITUDE	2793′	2452′	2111′	1770′



Gnd speed-Kts	70	90	100	120	140	160
Glide Path Angle 3.00°	372	478	531	637	743	849
MAP at RW11						

HIALS-II
PAPI

MMØØ6

PANS OPS

Std STRAIGHT-IN LANDING

LNAV/VNAV

DA(H)

A: **1397′** (360′) C: **1427′** (390′)

B: **1407′** (370′) D: **1457′** (420′)

LNAV

CDFA

❶ DA/MDA(H) **1730′** (693′)

CIRCLE-TO-LAND

Prohibited South of airport

		LNAV/VNAV ALS out	LNAV ALS out	Max KT	MDA(H)
A	R900m	R1500m	R1500m	100	1890′ (843′) V1500m
B	R1000m			135	1890′ (843′) V1600m
C	R1100m	R1800m	R2400m	180	2180′ (1133′) V2400m
D	R1200m	R1900m		205	2330′ (1283′) V3600m

❶ VNAV DA(H) in lieu of MDA(H) depends on operator policy.

CHANGES: Non compulsary fixes.

URMM/MRV
MINERALNYYE VODY

JEPPESEN MINERALNYYE VODY, ~~RUSSIA~~

1 AUG 25 (12-2) Eff 7 Aug

RNP Rwy 29

BRIEFING STRIP TM

ATIS	MINERALNYYE VODY Approach	MINERALNYYE VODY Radar (TWR)	MINERALNYYE VODY Start (TWR)	Ground
125.250 (Russian 127.4)	125.9	120.7	128.0	121.9

RNAV	Final Apch Crs 294°	MMØØ9 3000′ (1956′)	LNAV/VNAV DA(H) Refer to Minimums	Apt Elev 1047′ Rwy 1044′

MISSED APCH: Climb STRAIGHT AHEAD to MMØ12, turn RIGHT to MMØ14, then proceed to MMØ11 climbing to 4500′ or above.

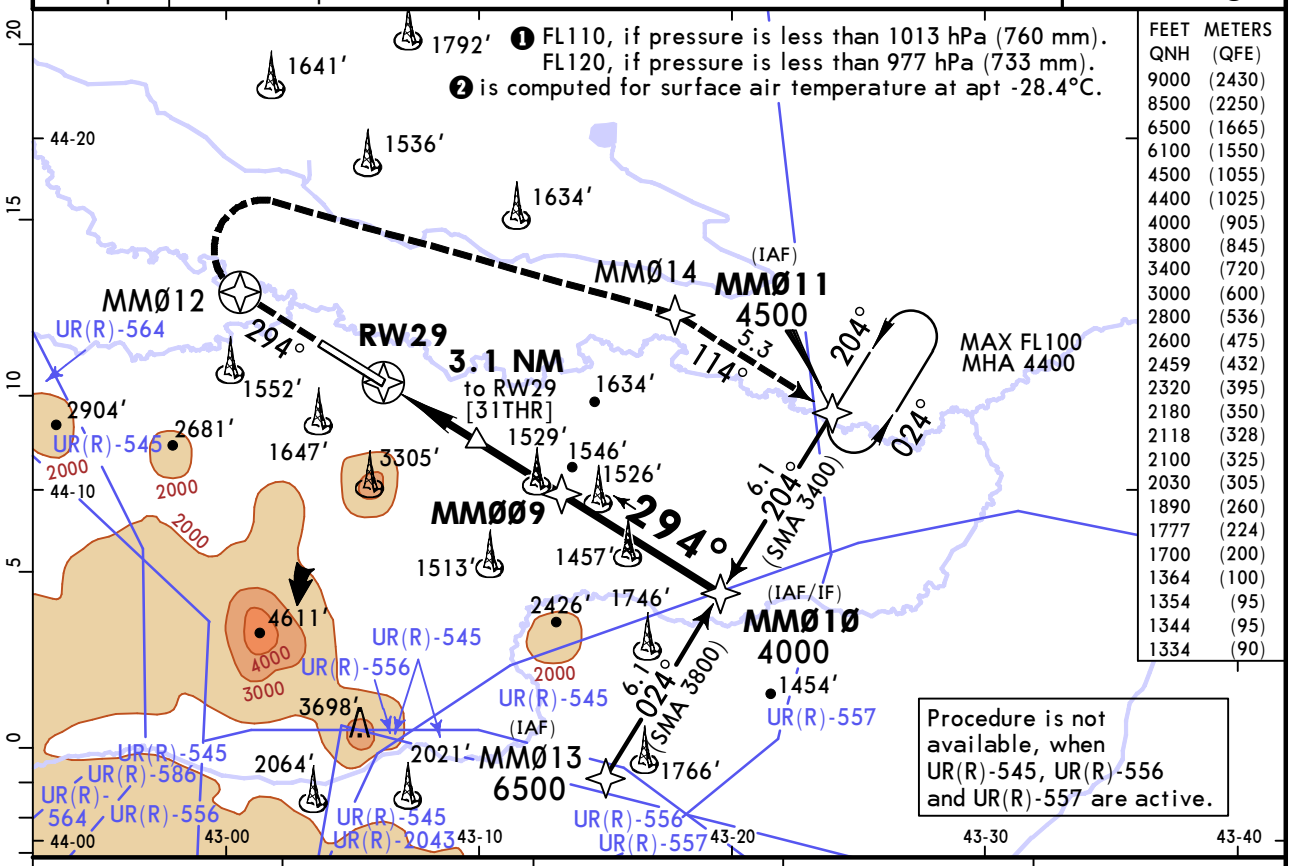
Alt Set: hPa (mm on req) Rwy Elev: 37 hPa Trans level: FL100 ❶ Trans alt: 9000′

RNP apch. 1. GNSS required. 2. Baro-VNAV not authorized below -32°C.

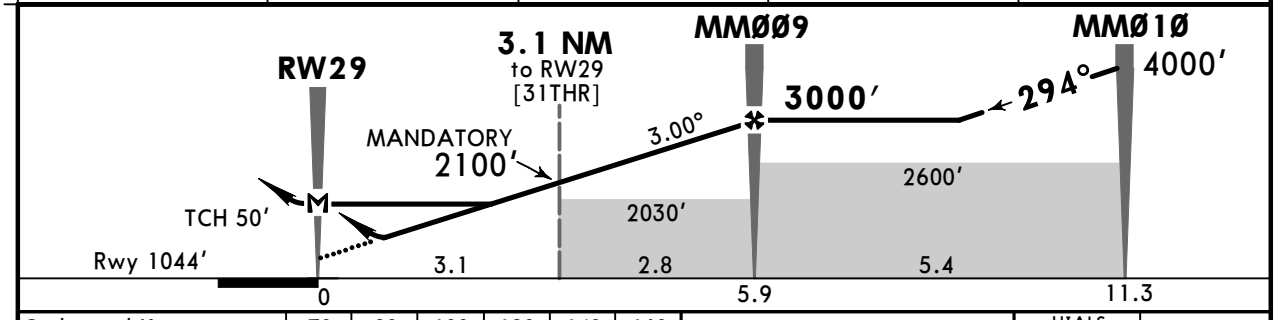
6100 070° 310° 8500 MSA ARP ❷

❶ FL110, if pressure is less than 1013 hPa (760 mm). FL120, if pressure is less than 977 hPa (733 mm).
❷ is computed for surface air temperature at apt -28.4°C.

FEET QNH	METERS (QFE)
9000	(2430)
8500	(2250)
6500	(1665)
6100	(1550)
4500	(1055)
4400	(1025)
4000	(905)
3800	(845)
3400	(720)
3000	(600)
2800	(536)
2600	(475)
2459	(432)
2320	(395)
2180	(350)
2118	(328)
2100	(325)
2030	(305)
1890	(260)
1777	(224)
1700	(200)
1364	(100)
1354	(95)
1344	(95)
1334	(90)



DIST to RW29	2.2	3.2	4.3	5.4
ALTITUDE	1777′	2118′	2459′	2800′



Gnd speed-Kts		70	90	100	120	140	160
Glide Path Angle	3.00°	372	478	531	637	743	849
MAP at RW29							

HIALS PAPI MMØ12

Std STRAIGHT-IN LANDING

LNAV/VNAV DA(H)		LNAV CDFA		CIRCLE-TO-LAND
A: 1334′ (290′) C: 1354′ (310′)		❶ DA/MDA(H) 1700′ (656′)		Prohibited South of airport
B: 1344′ (300′) D: 1364′ (320′)				
	ALS out		ALS out	
A	R750m	R1400m	R1500m	
B				
C			R2300m	R2400m
D				

Max KT	MDA(H)
100	1890′ (843′) V1500m
135	1890′ (843′) V1600m
180	2180′ (1133′) V2400m
205	2320′ (1273′) V3600m

PANS OPS

❶ VNAV DA(H) in lieu of MDA(H) depends on operator policy.

CHANGES: Non compulsary fixes.

URMM/MRV
MINERALNYYE VODY

JEPPESEN MINERALNYYE VODY, ~~RUSSIA~~

1 AUG 25 (12-40) **Eff 7 Aug**

GLS Rwy 11

BRIEFING STRIP™

ATIS	MINERALNYYE VODY Approach	MINERALNYYE VODY Radar (TWR)	MINERALNYYE VODY Start (TWR)	Ground
125.250 (Russian 127.4)	125.9	120.7	128.0	121.9

GBAS	Final Apch Crs	MMØØ5	GLS DA(H)	Apt Elev 1047′
Ch 20665 G11A	**114°**	**3000′** (1963′)	**1237′** (200′)	Rwy 1037′

MISSED APCH: Climb STRAIGHT AHEAD to MMØØ6, then turn LEFT to MMØØ7, then proceed to MMØØ3 climbing to 5000′ or above.

Alt Set: hPa (mm on req) Rwy Elev: 37 hPa Trans level: FL100 ❶ Trans alt: 9000′

RNAV 1 for initial and missed approach. GNSS required.

6100 070° 310° 8500

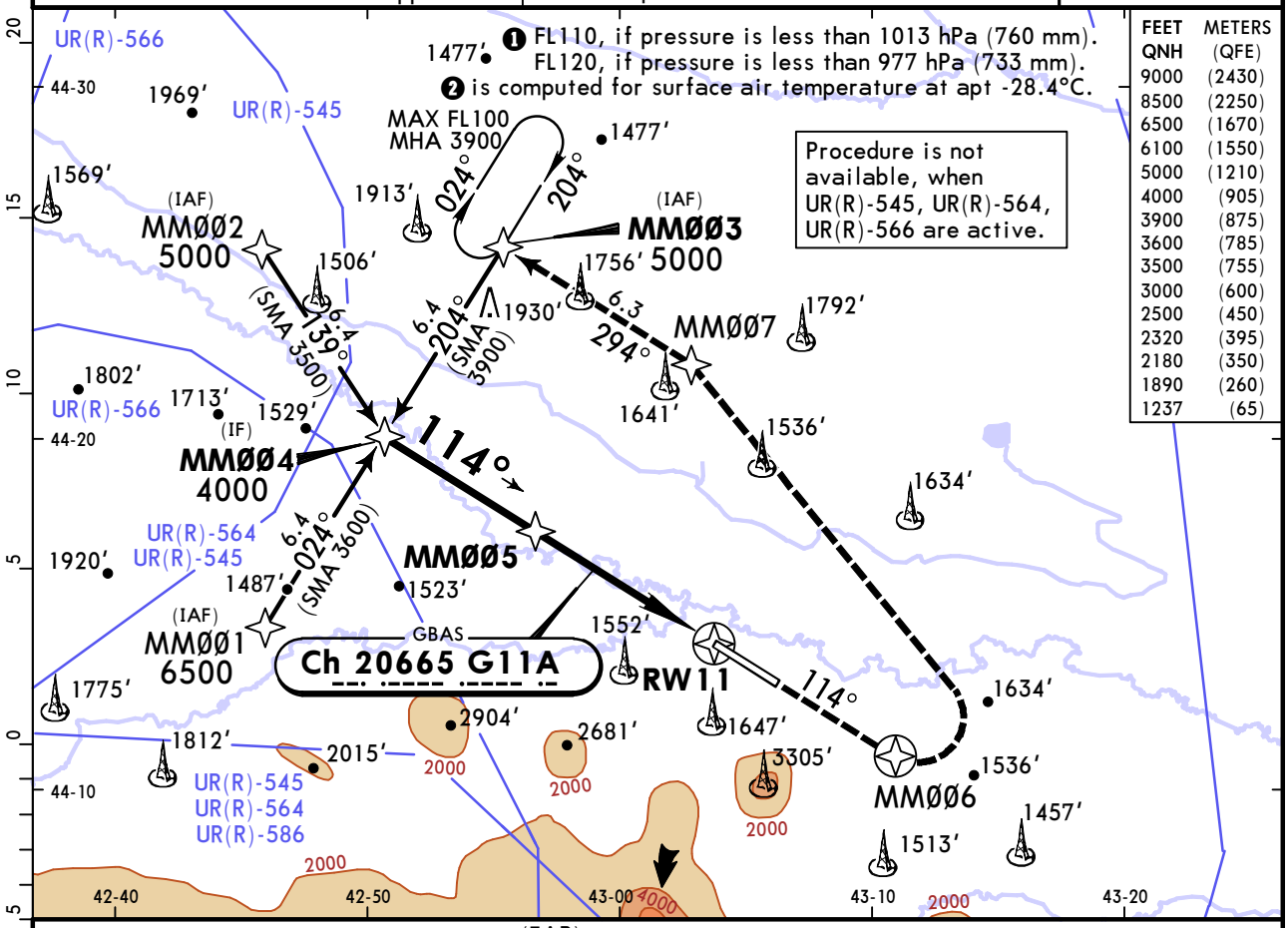
MSA ARP ❷

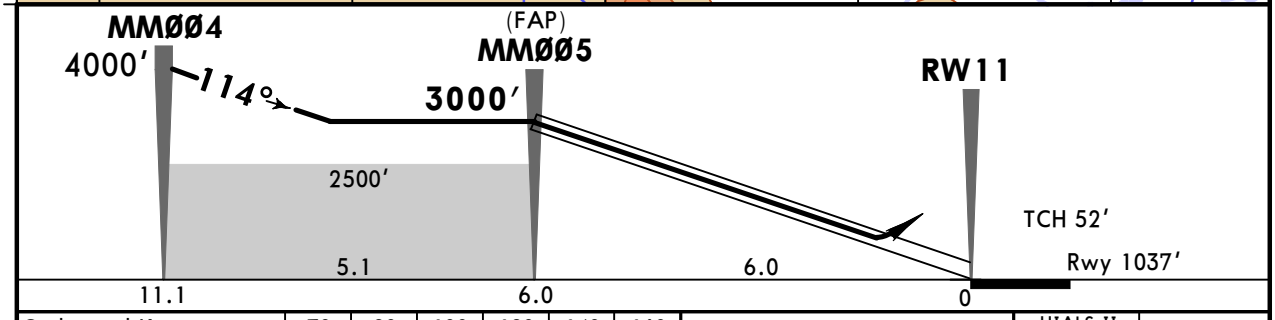
❶ FL110, if pressure is less than 1013 hPa (760 mm).
FL120, if pressure is less than 977 hPa (733 mm).

❷ is computed for surface air temperature at apt -28.4°C.

Procedure is not available, when UR(R)-545, UR(R)-564, UR(R)-566 are active.

FEET QNH	METERS (QFE)
9000	(2430)
8500	(2250)
6500	(1670)
6100	(1550)
5000	(1210)
4000	(905)
3900	(875)
3600	(785)
3500	(755)
3000	(600)
2500	(450)
2320	(395)
2180	(350)
1890	(260)
1237	(65)





Gnd speed-Kts		70	90	100	120	140	160
Glide Path Angle	3.00°	372	478	531	637	743	849

HIALS-II
PAPI

MMØØ6

Std STRAIGHT-IN LANDING

GLS

DA(H) **1237′** (200′)

	TDZ or CL out	ALS out
A B C D	R550m	❶ R550m	R1200m

CIRCLE-TO-LAND

Prohibited South of airport

Max KT	MDA(H)
100	1890′ (843′) V1500m
135	1890′ (843′) V1600m
180	2180′ (1133′) V2400m
205	2320′ (1273′) V3600m

PANS OPS

❶ R750m when a Flight Director or Autopilot or HUD to DA is not used.

CHANGES: Non compulsary fixes.

URMM/MRV
MINERALNYYE VODY

JEPPESEN MINERALNYYE VODY, ~~RUSSIA~~
1 AUG 25 (12-41) Eff 7 Aug
GLS Rwy 29

ATIS	MINERALNYYE VODY Approach	MINERALNYYE VODY Radar (TWR)	MINERALNYYE VODY Start (TWR)	Ground
125.250 (Russian 127.4)	125.9	120.7	128.0	121.9

BRIEFING STRIP

GBAS	Final Apch Crs	MMØØ9	GLS DA(H)	Apt Elev 1047′
Ch 21076 G29A	294°	3000′ (1956′)	1244′ (200′)	Rwy 1044′

MISSED APCH: Climb STRAIGHT AHEAD to MMØ12, turn RIGHT to MMØ14, then proceed to MMØ11 climbing to 4500′ or above.

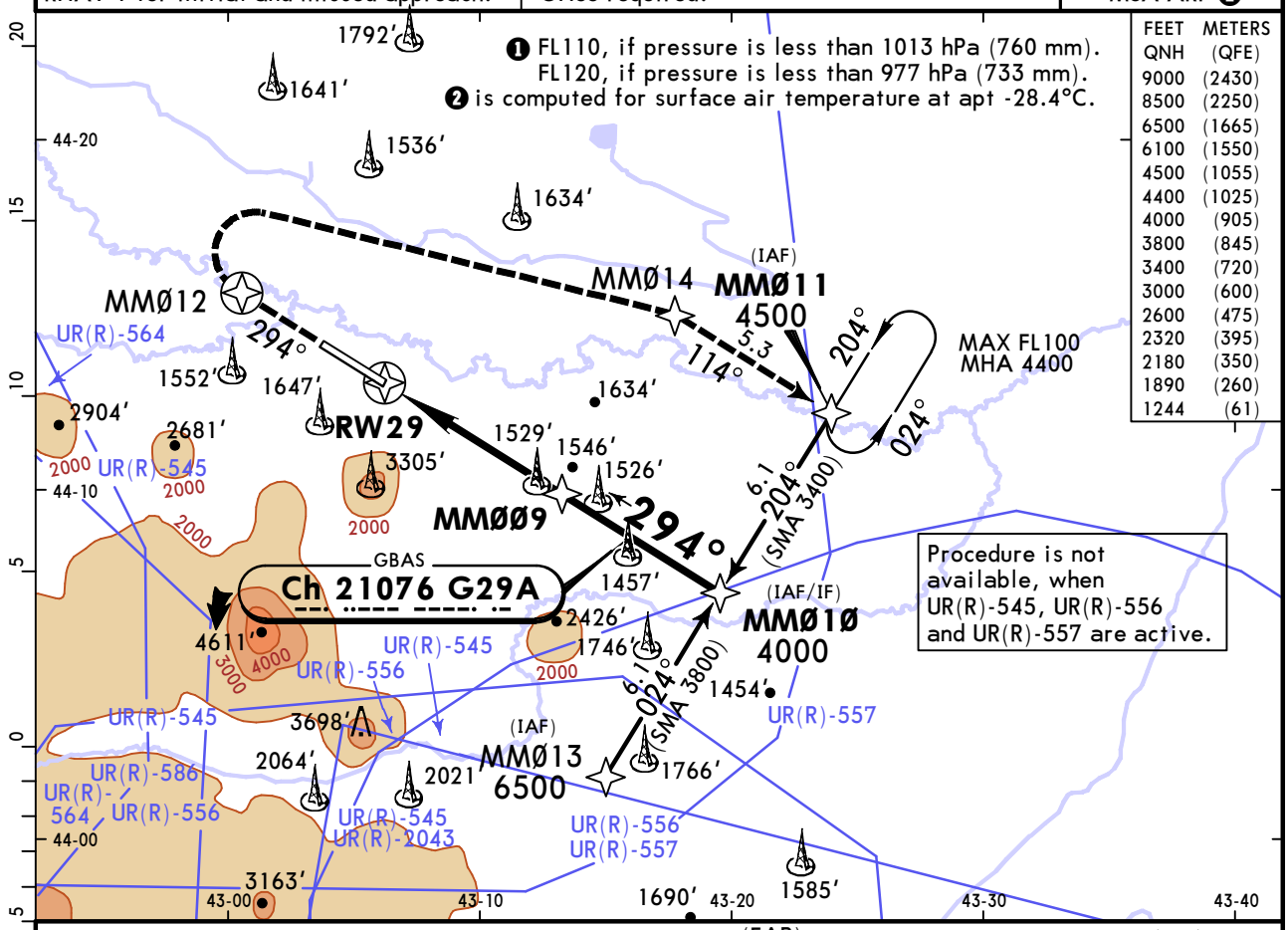
Alt Set: hPa (mm on req) Rwy Elev: 37 hPa Trans level: FL100 ❶ Trans alt: 9000′

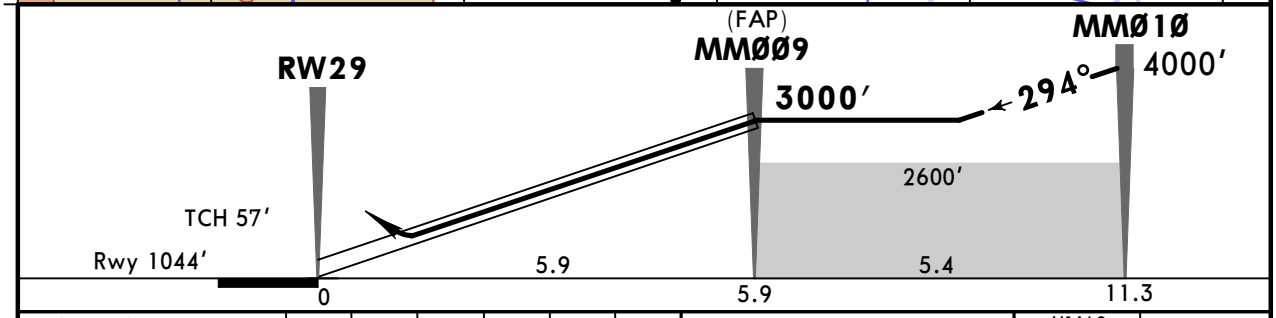
RNAV 1 for initial and missed approach. GNSS required.

MSA ARP ❷: 6100 (070°–310°) 8500

❶ FL110, if pressure is less than 1013 hPa (760 mm).
FL120, if pressure is less than 977 hPa (733 mm).
❷ is computed for surface air temperature at apt -28.4°C.

FEET QNH	METERS (QFE)
9000	(2430)
8500	(2250)
6500	(1665)
6100	(1550)
4500	(1055)
4400	(1025)
4000	(905)
3800	(845)
3400	(720)
3000	(600)
2600	(475)
2320	(395)
2180	(350)
1890	(260)
1244	(61)





Gnd speed-Kts		70	90	100	120	140	160
Glide Path Angle	3.00°	372	478	531	637	743	849

HIALS
PAPI
MMØ12

Std STRAIGHT-IN LANDING

GLS

DA(H) 1244′ (200′)

	ALS out
A	❶ R550m
B	
C	
D	

CIRCLE-TO-LAND

Prohibited South of airport

Max KT	MDA(H)
100	1890′ (843′) V1500m
135	1890′ (843′) V1600m
180	2180′ (1133′) V2400m
205	2320′ (1273′) V3600m

PANS OPS

❶ R750m when a Flight Director or Autopilot or HUD to DA is not used.

CHANGES: Non compulsary fixes.

URMM/MRV
MINERALNYYE VODY

6 SEP 24 (13-1)

JEPPESEN MINERALNYYE VODY, ~~RUSSIA~~
VOR Z Rwy 11

ATIS	MINERALNYYE VODY Approach	MINERALNYYE VODY Radar (TWR)	MINERALNYYE VODY Start (TWR)	Ground
125.250 (Russian 127.4)	125.9	120.7	128.0	121.9

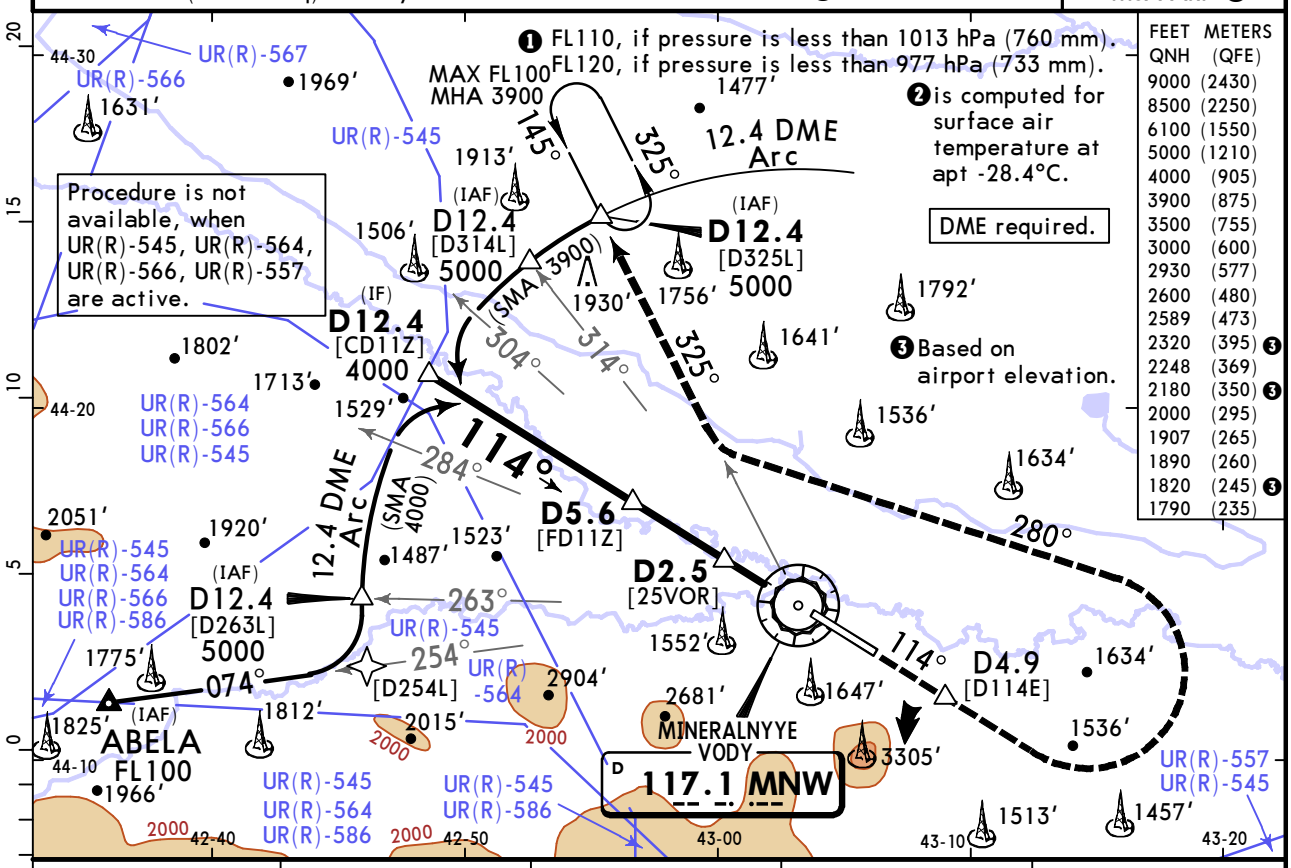
BRIEFING STRIP

VOR	Final Apch Crs	D5.6	DA/MDA(H) (CONDITIONAL)	Apt Elev 1047′
MNW 117.1	114°	3000′ (1963′)	1790′ (753′)	Rwy 1037′

MISSED APCH: Climb on 114° to D4.9, after reaching 3500′ or above turn LEFT onto 280° to intercept R-325, then proceed to D12.4 climbing to 5000′ or above.

Alt Set: hPa (mm on req) Rwy Elev: 37 hPa Trans level: FL100 ❶ Trans alt: 9000′

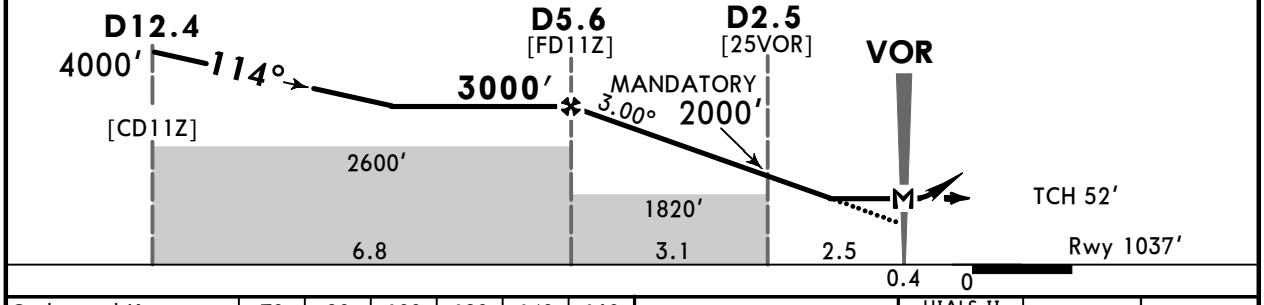
6100 070° 8500 310°
MSA ARP ❷



FEET METERS QNH (QFE)

9000	(2430)
8500	(2250)
6100	(1550)
5000	(1210)
4000	(905)
3900	(875)
3500	(755)
3000	(600)
2930	(577)
2600	(480)
2589	(473)
2320	(395) ❸
2248	(369)
2180	(350) ❸
2000	(295)
1907	(265)
1890	(260)
1820	(245) ❸
1790	(235)

MNW DME	5.4	4.3	3.2	2.2
ALTITUDE	2930′	2589′	2248′	1907′



Gnd speed-Kts		70	90	100	120	140	160
Descent Angle	3.00°	372	478	531	637	743	849
MAP at VOR							

HIALS-II
PAPI
D4.9 on 114°

Std

STRAIGHT-IN LANDING				CIRCLE-TO-LAND
with D2.5 CDFA		w/o D2.5 CDFA		Prohibited South of airport
❶ DA/MDA(H) 1790′ (753′)		❶ DA/MDA(H) 1820′ (783′)		
	ALS out		ALS out	

			Max Kts	MDA(H)
A	R1500m	R1500m	100	1890′ (843′) V1500m
B			135	1890′ (843′) V1600m
C	R2400m	R2400m	180	2180′ (1133′) V2400m
D			205	2320′ (1273′) V3600m

PANS OPS

❶ VNAV DA(H) in lieu of MDA(H) depends on operator policy.

CHANGES: Communications.

URMM/MRV
MINERALNYYE VODY

JEPPESEN 6 SEP 24 (13-2)

MINERALNYYE VODY, ~~RUSSIA~~
VOR Y Rwy 11

BRIEFING STRIP

ATIS	MINERALNYYE VODY Approach	MINERALNYYE VODY Radar (TWR)	MINERALNYYE VODY Start (TWR)	Ground
125.250 (Russian 127.4)	125.9	120.7	128.0	121.9

VOR MNW	Final Apch Crs	[FD11Y]	DA/MDA(H)	Apt Elev 1047′
117.1	114°	5300′ (4263′)	2190′ (1153′)	Rwy 1037′

MISSED APCH: Climb on 114° to 4200′ or above, turn LEFT to VOR climbing to 5300′ or above. Turn before MAP prohibited.

Alt Set: hPa (mm on req) Rwy Elev: 37 hPa Trans level: FL100 ❶ Trans alt: 9000′

6100 070° 310° 8500

MSA ARP ❷

FEET QNH	METERS (QFE)
9000	(2430)
8500	(2250)
7000	(1820)
6100	(1550)
5300	(1300)
4200	(965)
2320	(395) ❸
2190	(355) ❸

❶ FL110, if pressure is less than 1013 hPa (760 mm). FL120, if pressure is less than 977 hPa (733 mm).

❷ is computed for surface air temperature at apt -28.4°C.

❸ Based on airport elevation.

UR(R)-566 1506′ 1930′ 1792′ 1641′ 1536′ 1634′ 1487′ 1523′ 1552′ 1647′ 1634′ 2904′ 2681′ 2015′ 3305′ 1536′ 2944′ 1513′ 1457′

114° [FD11Y] 1529′ MAX 215 KT

AREA CHARTED LIES WITHIN UR(R)-545

MAX FL100 MHA 6600

294°

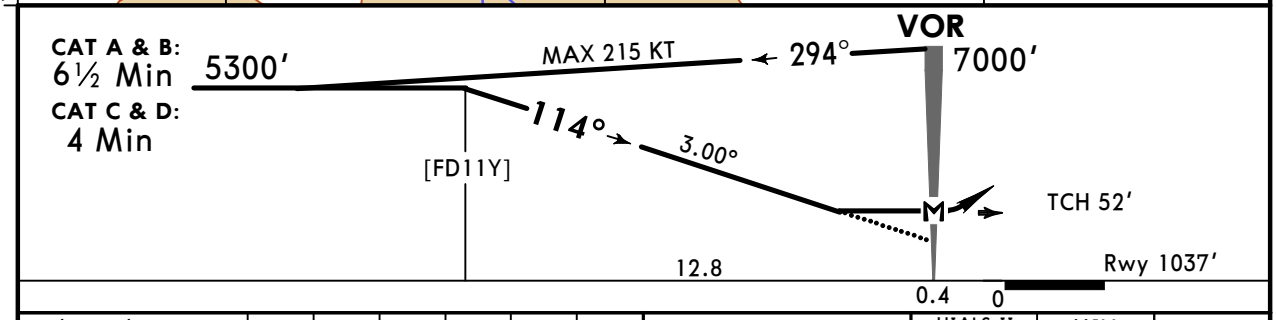
UR(R)-566 UR(R)-564 UR(R)-564 UR(R)-586

(IAF) MINERALNYYE VODY D 117.1 MNW 7000

Procedure is not available, when UR(R)-545, UR(R)-564, UR(R)-566, UR(R)-567, UR(R)-562, UR(R)-557 are active.

2000 3000 44-20 44-10 42-50 43-00 43-10

10 5 0 5



Gnd speed-Kts		70	90	100	120	140	160
Descent Angle	3.00°	372	478	531	637	743	849
MAP at VOR							

HIALS-II PAPI

MIN 4200′ on 114°

Std STRAIGHT-IN LANDING

CDFA

❶ DA/MDA(H) 2190′ (1153′)

ALS out

A	R1500m
B	
C	R2400m
D	

CIRCLE-TO-LAND

Prohibited South of airport

Max Kts	MDA(H)
100	2190′ (1143′) V1500m
135	2190′ (1143′) V1600m
180	2190′ (1143′) V2400m
205	2320′ (1273′) V3600m

PANS OPS

❶ VNAV DA(H) in lieu of MDA(H) depends on operator policy.

CHANGES: Communications.

URMM/MRV
MINERALNYYE VODY

JEPPESEN 6 SEP 24 (13-3)

MINERALNYYE VODY, ~~RUSSIA~~
VOR Z Rwy 29

ATIS	MINERALNYYE VODY Approach	MINERALNYYE VODY Radar (TWR)	MINERALNYYE VODY Start (TWR)	Ground
125.250 (Russian 127.4)	125.9	120.7	128.0	121.9

BRIEFING STRIP ™

VOR MNW	Final Apch Crs	D8.5	DA/MDA(H) (CONDITIONAL)	Apt Elev 1047′
117.1	294°	3000′ (1956′)	1800′ (756′)	Rwy 1044′

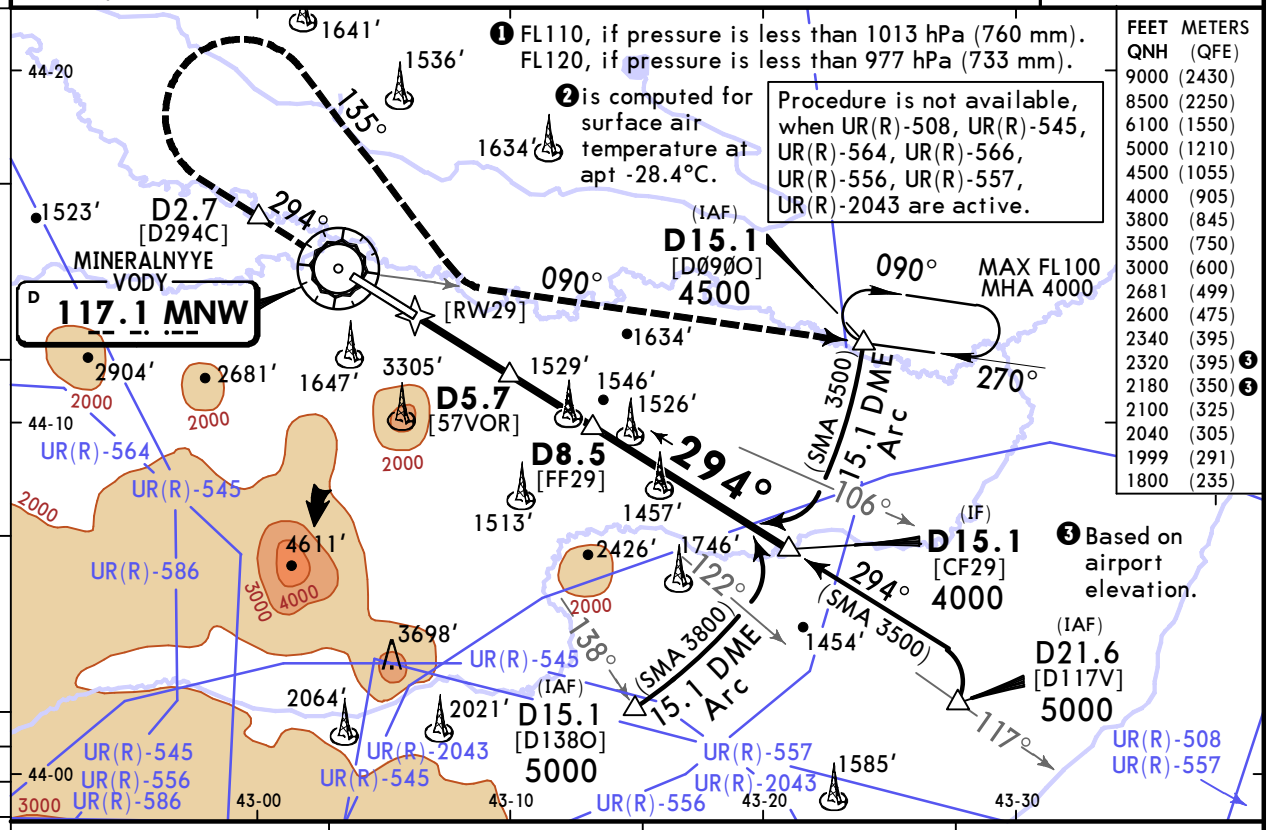
MISSED APCH: Climb STRAIGHT AHEAD to D2.7, after reaching 2800′ or above turn RIGHT onto 135° to intercept R-090, then proceed to D15.1 climbing to 4500′ or above.

Alt Set: hPa (mm on req) Rwy Elev: 38 hPa Trans level: FL100 ❶ Trans alt: 9000′

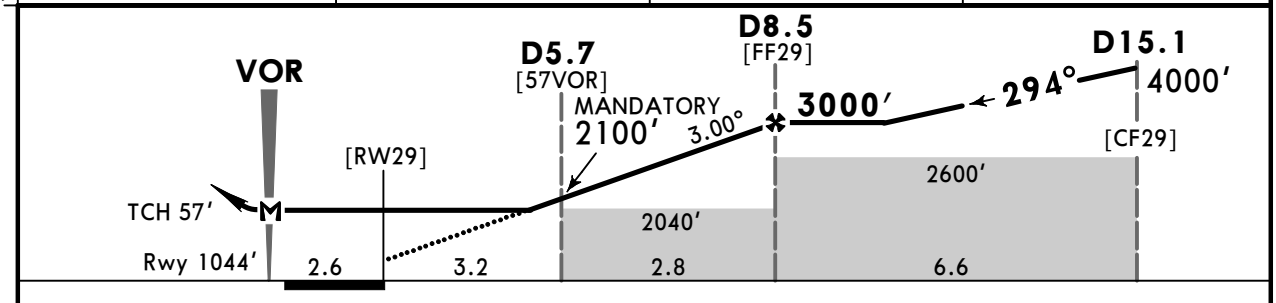
DME required.

6100 070° 310° 8500

MSA ARP ❷



MNW DME	5.4	6.5	7.6
ALTITUDE	1999′	2340′	2681′



Gnd speed-Kts	70	90	100	120	140	160
Descent Angle 3.00°	372	478	531	637	743	849
MAP at VOR						

HIALS PAPI

D2.7

PANS OPS

Std

STRAIGHT-IN LANDING				CIRCLE-TO-LAND	
with D5.7 CDFA		w/o D5.7 CDFA		Prohibited South of airport	
❶ DA/MDA(H) 1800′ (756′)		❶ DA/MDA(H) 2040′ (996′)			
	ALS out		ALS out	Max Kts	MDA(H)
A	R1500m	R1500m		100	2040′ (993′) V1500m
B				135	2040′ (993′) V1600m
C	R2400m	R2400m		180	2180′ (1133′) V2400m
D				205	2320′ (1273′) V3600m

❶ VNAV DA(H) in lieu of MDA(H) depends on operator policy.

CHANGES: Communications.

URMM/MRV
MINERALNYYE VODY

JEPPESEN 6 SEP 24 (13-4)

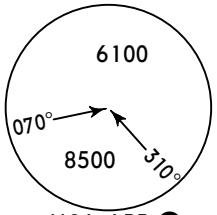
MINERALNYYE VODY, ~~RUSSIA~~
VOR Y Rwy 29

ATIS	MINERALNYYE VODY Approach	MINERALNYYE VODY Radar (TWR)	MINERALNYYE VODY Start (TWR)	Ground
125.250 (Russian 127.4)	125.9	120.7	128.0	121.9

BRIEFING STRIP

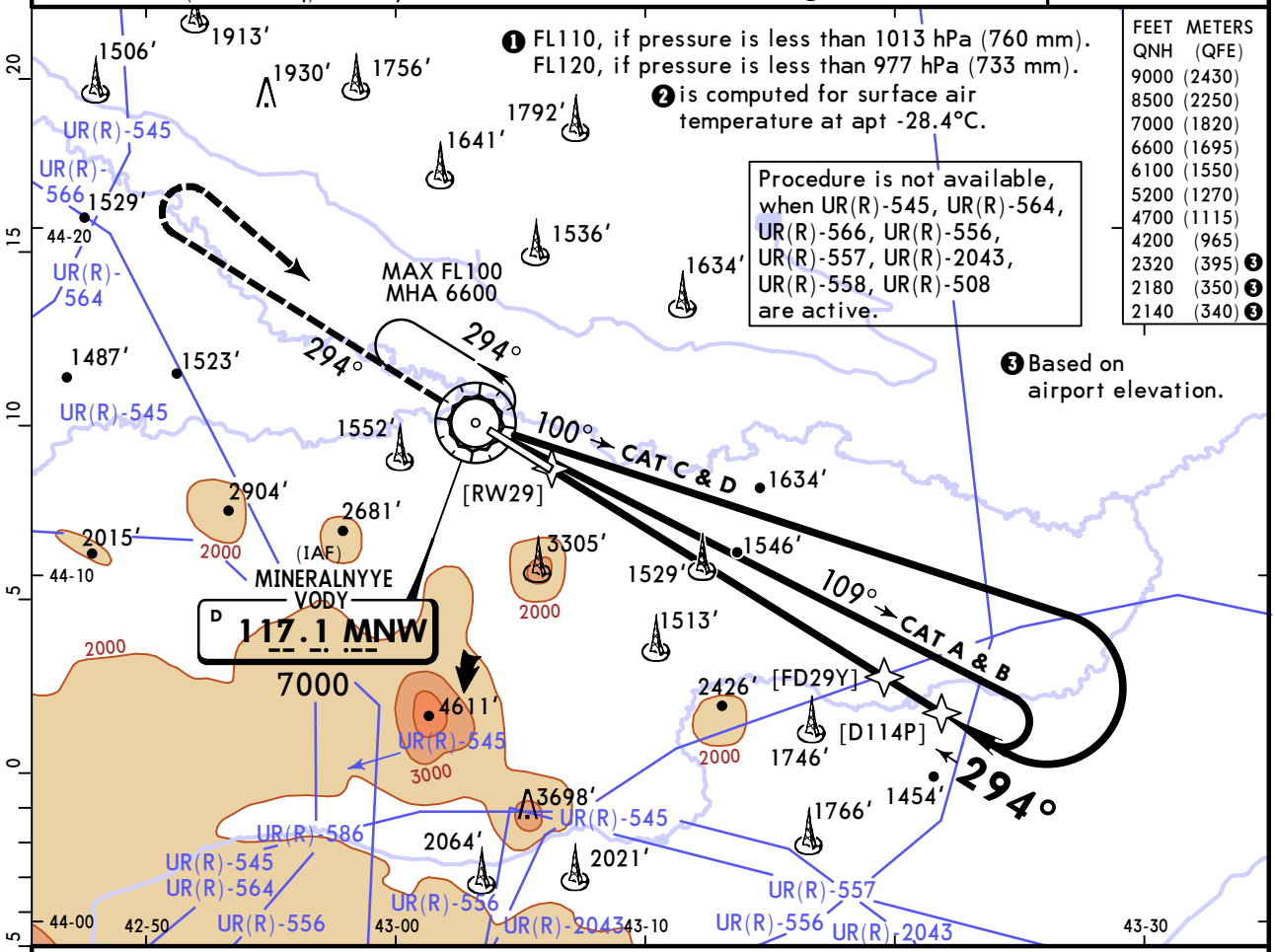
VOR MNW	Final Apch Crs	[FD29Y]	DA/MDA(H)	Apt Elev 1047′
117.1	294°	Refer to Profile	2140′ (1096′)	Rwy 1044′

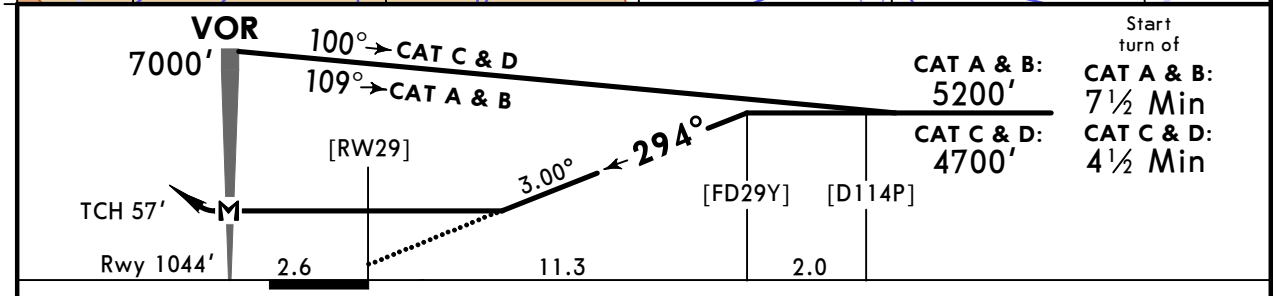
MISSED APCH: Climb STRAIGHT AHEAD to 4200′ or above, then turn RIGHT to VOR climbing to 6600′ or above.
Turn before MAP prohibited.



MSA ARP ❷

Alt Set: hPa (mm on req) Rwy Elev: 38 hPa Trans level: FL100 ❶ Trans alt: 9000′





Gnd speed-Kts	70	90	100	120	140	160
Descent Angle 3.00°	372	478	531	637	743	849
MAP at VOR						

HIALS
PAPI

MIN 4200′

Std STRAIGHT-IN LANDING

CDFA

❶ DA/MDA(H) 2140′ (1096′)

	ALS out
A	R1500m
B	
C	R2400m
D	

CIRCLE-TO-LAND

Prohibited South of airport

Max Kts	MDA(H)
100	2140′ (1093′) V1500m
135	2140′ (1093′) V1600m
180	2180′ (1133′) V2400m
205	2320′ (1273′) V3600m

PANS OPS

❶ VNAV DA(H) in lieu of MDA(H) depends on operator policy.

CHANGES: Communications.

URMM/MRV
MINERALNYYE VODY

JEPPESEN 6 SEP 24 (16-1)

MINERALNYYE VODY, ~~RUSSIA~~
NDB Z Rwy 11

BRIEFING STRIP ™

ATIS	MINERALNYYE VODY Approach	MINERALNYYE VODY Radar (TWR)	MINERALNYYE VODY Start (TWR)	Ground
125.250 (Russian 127.4)	125.9	120.7	128.0	121.9

NDB MD	Final Apch Crs	D5.6	DA/MDA(H)	Apt Elev 1047′
468	114°	3000′ (1963′)	1960′ (923′)	Rwy 1037′

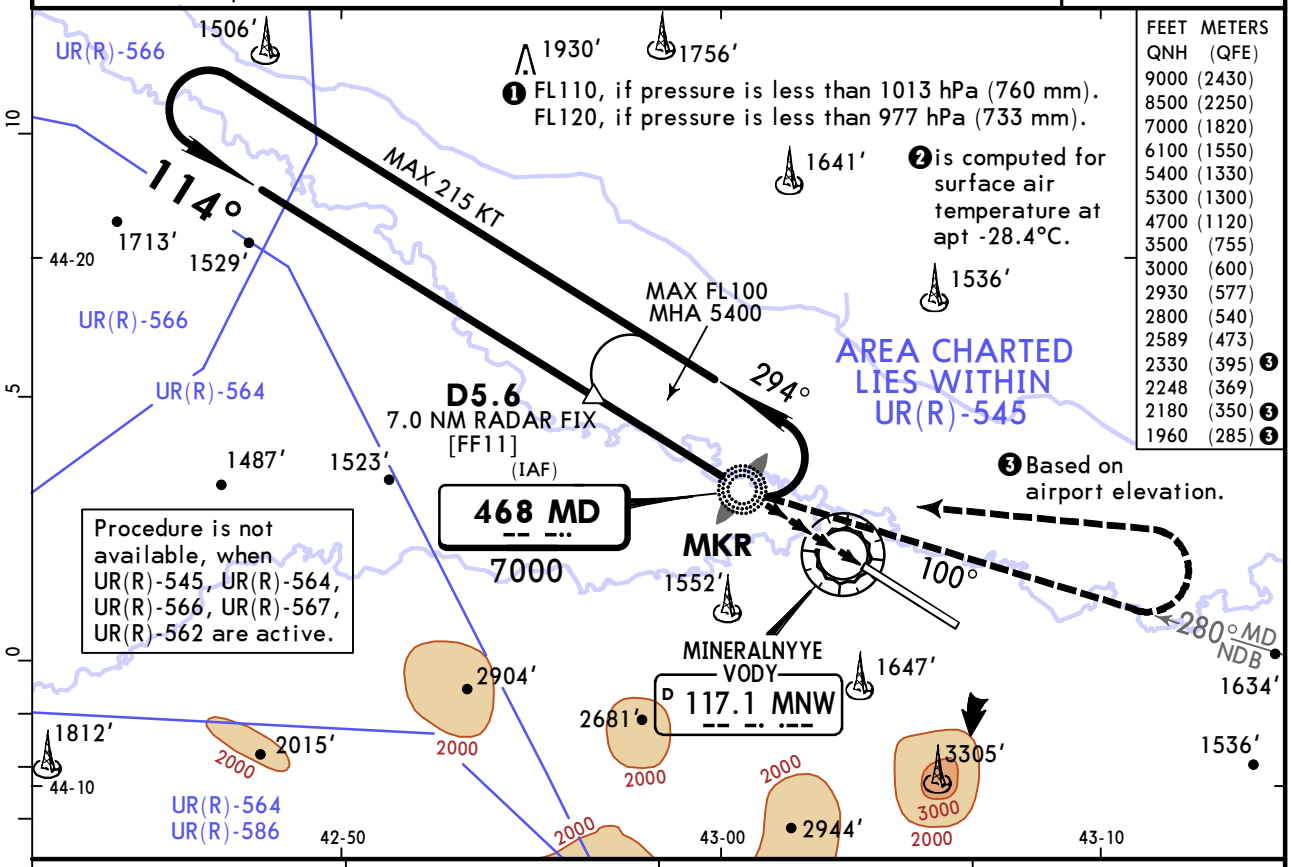
MISSED APCH: Turn onto 100° from NDB climbing to 3500′ or above, turn LEFT to NDB climbing to 5300′ or above.
Turn before MAP prohibited.

Alt Set: hPa (mm on req) Rwy Elev: 37 hPa Trans level: FL100 ❶ Trans alt: 9000′

DME or Radar required.

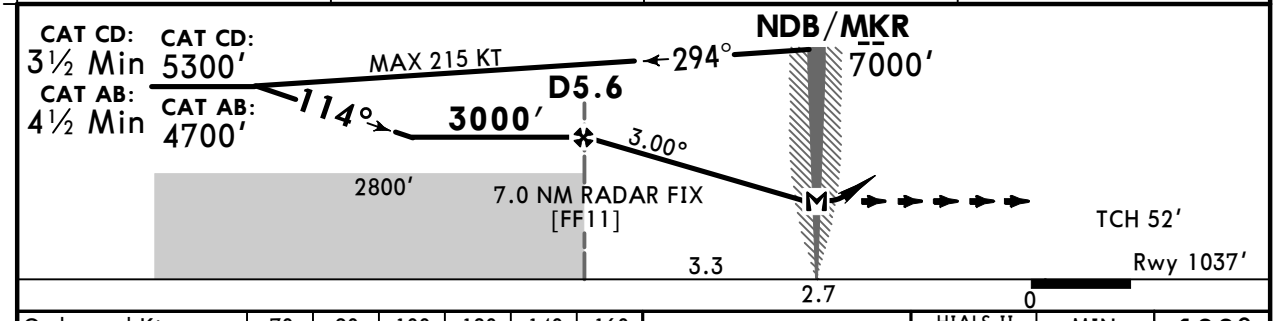
6100 070° 310° 8500

MSA ARP ❷



FEET QNH	METERS (QFE)
9000	(2430)
8500	(2250)
7000	(1820)
6100	(1550)
5400	(1330)
5300	(1300)
4700	(1120)
3500	(755)
3000	(600)
2930	(577)
2800	(540)
2589	(473)
2330	(395) ❸
2248	(369)
2180	(350) ❸
1960	(285) ❸

MNW DME	5.4	4.3	3.2
ALTITUDE	2930′	2589′	2248′



Gnd speed-Kts	70	90	100	120	140	160
Descent Angle 3.00°	372	478	531	637	743	849
MAP at NDB/MKR						

HIALS-II PAPI

MIN 3500′ on LT 100° from MD 468

PANS OPS

Std STRAIGHT-IN LANDING

CDFA

❶ DA/MDA(H) 1960′ (923′)

ALS out

A	R1500m
B	
C	R2400m
D	

CIRCLE-TO-LAND

Prohibited South of airport

Max Kts	MDA(H)
100	1960′ (913′) V1500m
135	1960′ (913′) V1600m
180	2180′ (1133′) V2400m
205	2330′ (1283′) V3600m

❶ VNAV DA(H) in lieu of MDA(H) depends on operator policy.

CHANGES: Communications.

URMM/MRV

JEPPESEN

6 SEP 24 (16-2)

MINERALNYYE VODY, ~~RUSSIA~~

NDB Y Rwy 11

ATIS	MINERALNYYE VODY Approach	MINERALNYYE VODY Radar (TWR)	MINERALNYYE VODY Start (TWR)	Ground
125.250 (Russian 127.4)	125.9	120.7	128.0	121.9

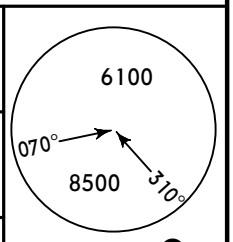
BRIEFING STRIP ™

NDB MD	Final Apch Crs	D5.6	DA/MDA(H)	Apt Elev 1047′
468	114°	3000′ (1963′)	1960′ (923′)	Rwy 1037′

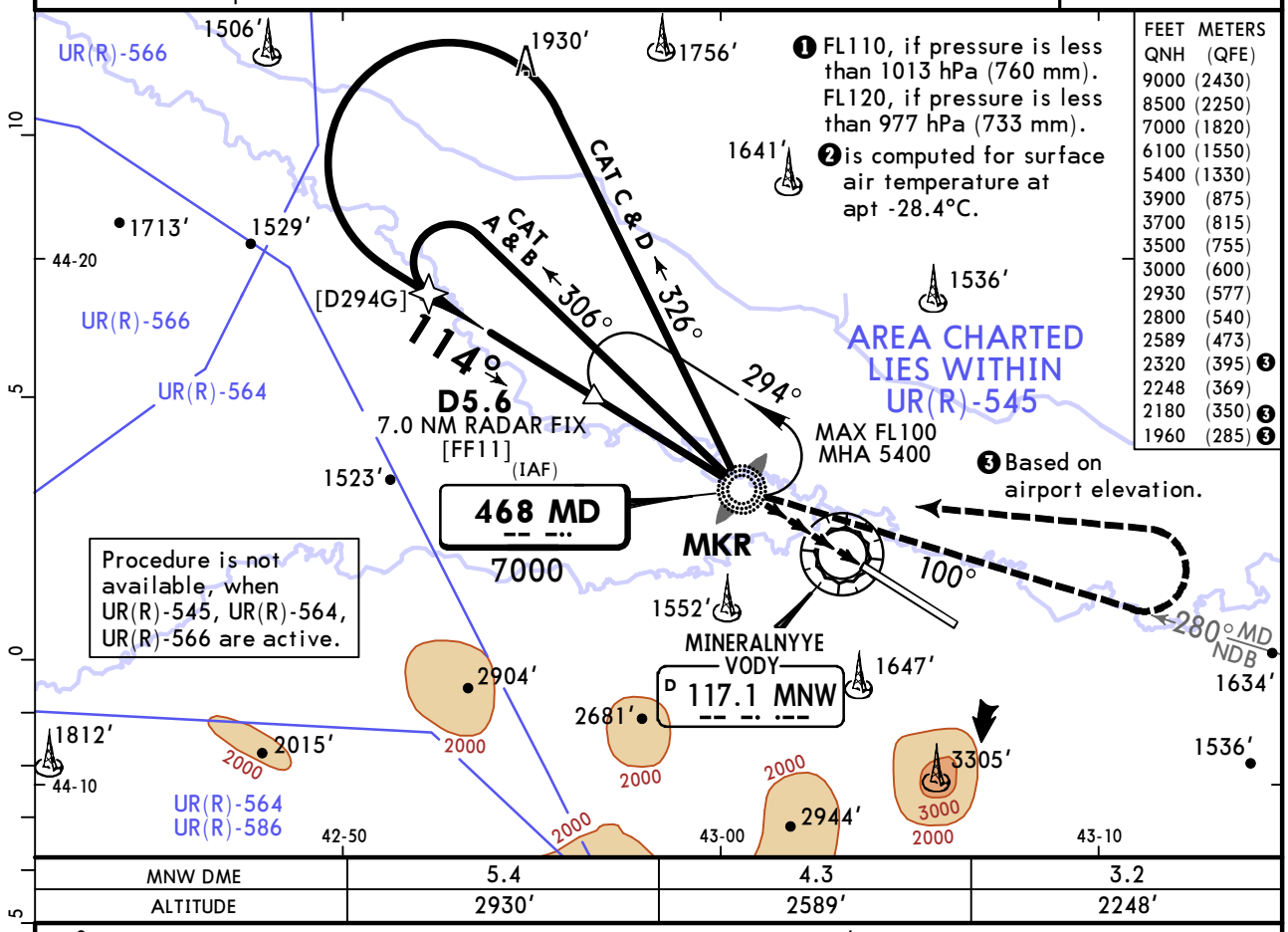
MISSED APCH: Turn onto 100° from NDB climbing to 3500′ or above, turn LEFT to NDB climbing to 5400′ or above.
Turn before MAP prohibited.

Alt Set: hPa (mm on req) Rwy Elev: 37 hPa Trans level: FL100 ❶ Trans alt: 9000′

DME or Radar required.

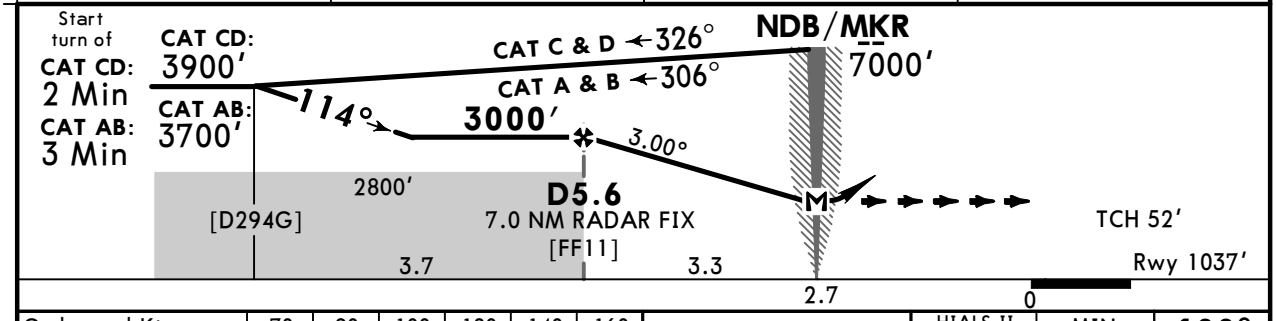


MSA ARP ❷



FEET QNH	METERS (QFE)
9000	(2430)
8500	(2250)
7000	(1820)
6100	(1550)
5400	(1330)
3900	(875)
3700	(815)
3500	(755)
3000	(600)
2930	(577)
2800	(540)
2589	(473)
2320	(395) ❸
2248	(369)
2180	(350) ❸
1960	(285) ❸

MNW DME	5.4	4.3	3.2
ALTITUDE	2930′	2589′	2248′



Gnd speed-Kts	70	90	100	120	140	160
Descent Angle 3.00°	372	478	531	637	743	849
MAP at NDB/MKR						

HIALS-II
PAPI

MIN 3500′ LT onto 100° from MD 468

Std STRAIGHT-IN LANDING

CDFA

❶ DA/MDA(H) 1960′ (923′)

ALS out

A	R1500m
B	
C	R2400m
D	

CIRCLE-TO-LAND

Prohibited South of airport

Max Kts	MDA(H)
100	1960′ (913′) V1500m
135	1960′ (913′) V1600m
180	2180′ (1133′) V2400m
205	2320′ (1273′) V3600m

PANS OPS

❶ VNAV DA(H) in lieu of MDA(H) depends on operator policy.

CHANGES: Communications.

URMM/MRV
MINERALNYYE VODY

JEPPESEN 6 SEP 24 (16-3)

MINERALNYYE VODY, ~~RUSSIA~~
NDB B Rwy 11

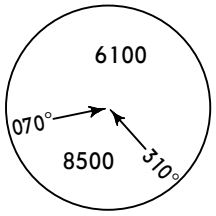
ATIS	MINERALNYYE VODY Approach	MINERALNYYE VODY Radar (TWR)	MINERALNYYE VODY Start (TWR)	Ground
125.250 (Russian 127.4)	125.9	120.7	128.0	121.9

BRIEFING STRIP ™

NDB MD	Final Apch Crs	[FN114]	MDA(H) Refer to Minimums	Apt Elev 1047′ Rwy 1037′
468	114°	3700′ (2663′)		

MISSED APCH: Turn onto 100° from NDB climbing to 3600′ or above, turn LEFT to NDB climbing to 5400′ or above.
Turn before MAP prohibited.

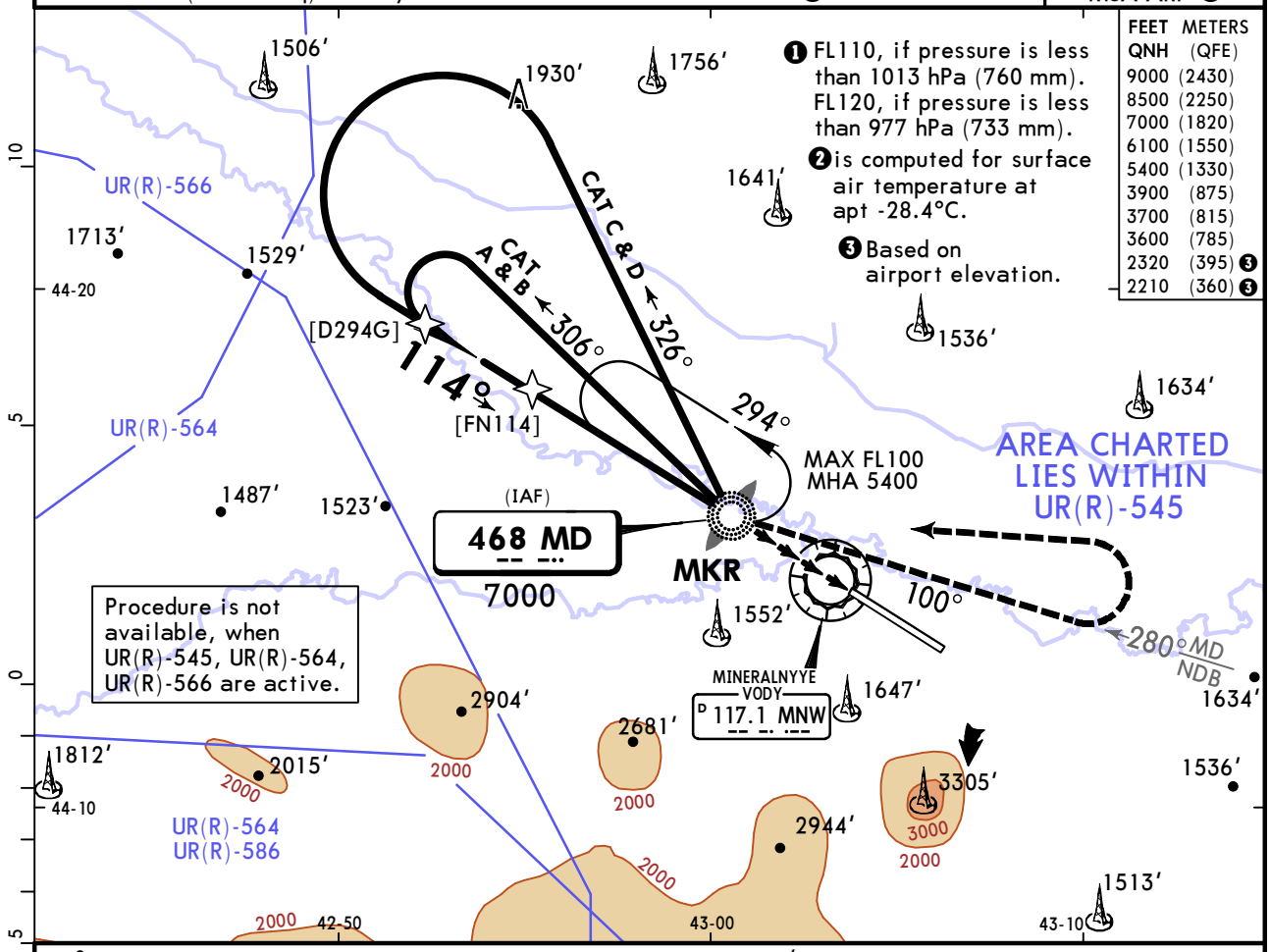
Alt Set: hPa (mm on req) Rwy Elev: 37 hPa Trans level: FL100 ❶ Trans alt: 9000′

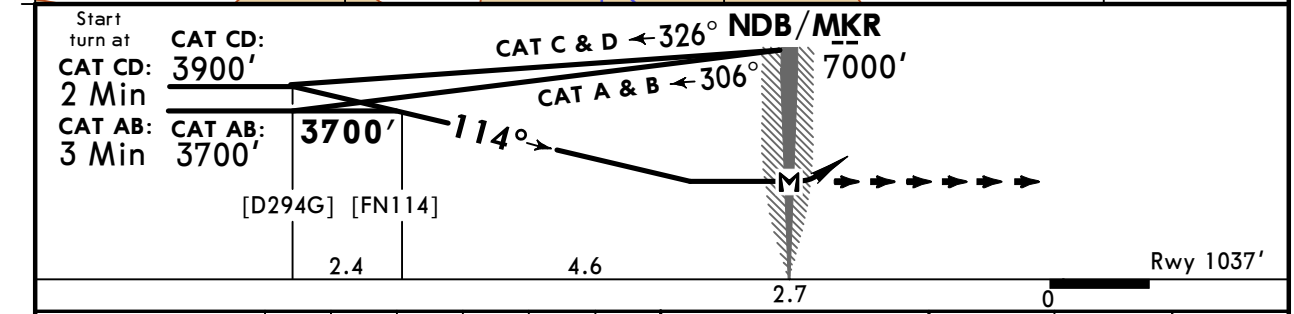


MSA ARP ❷

FEET QNH	METERS (QFE)
9000	(2430)
8500	(2250)
7000	(1820)
6100	(1550)
5400	(1330)
3900	(875)
3700	(815)
3600	(785)
2320	(395) ❸
2210	(360) ❸

❶ FL110, if pressure is less than 1013 hPa (760 mm). FL120, if pressure is less than 977 hPa (733 mm).
❷ is computed for surface air temperature at apt -28.4°C.
❸ Based on airport elevation.





MAP at NDB/MKR								

HIALS-II PAPI

MIN 3600′ LT onto 100° from MD 468

Std CIRCLE-TO-LAND

Prohibited South of airport

PANS OPS

	Max Kts	MDA(H)	
A	100	2210′ (1163′)	V1500m
B	135	2210′ (1163′)	V1600m
C	180	2210′ (1163′)	V2400m
D	205	2320′ (1273′)	V3600m

CHANGES: Communications.

URMM/MRV
MINERALNYYE VODY

JEPPESEN

6 SEP 24 (16-4)

MINERALNYYE VODY, ~~RUSSIA~~
NDB A Rwy 11

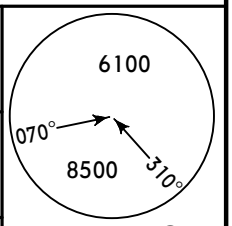
BRIEFING STRIP ™

ATIS	MINERALNYYE VODY Approach	MINERALNYYE VODY Radar (TWR)	MINERALNYYE VODY Start (TWR)	Ground
125.250 (Russian 127.4)	125.9	120.7	128.0	121.9

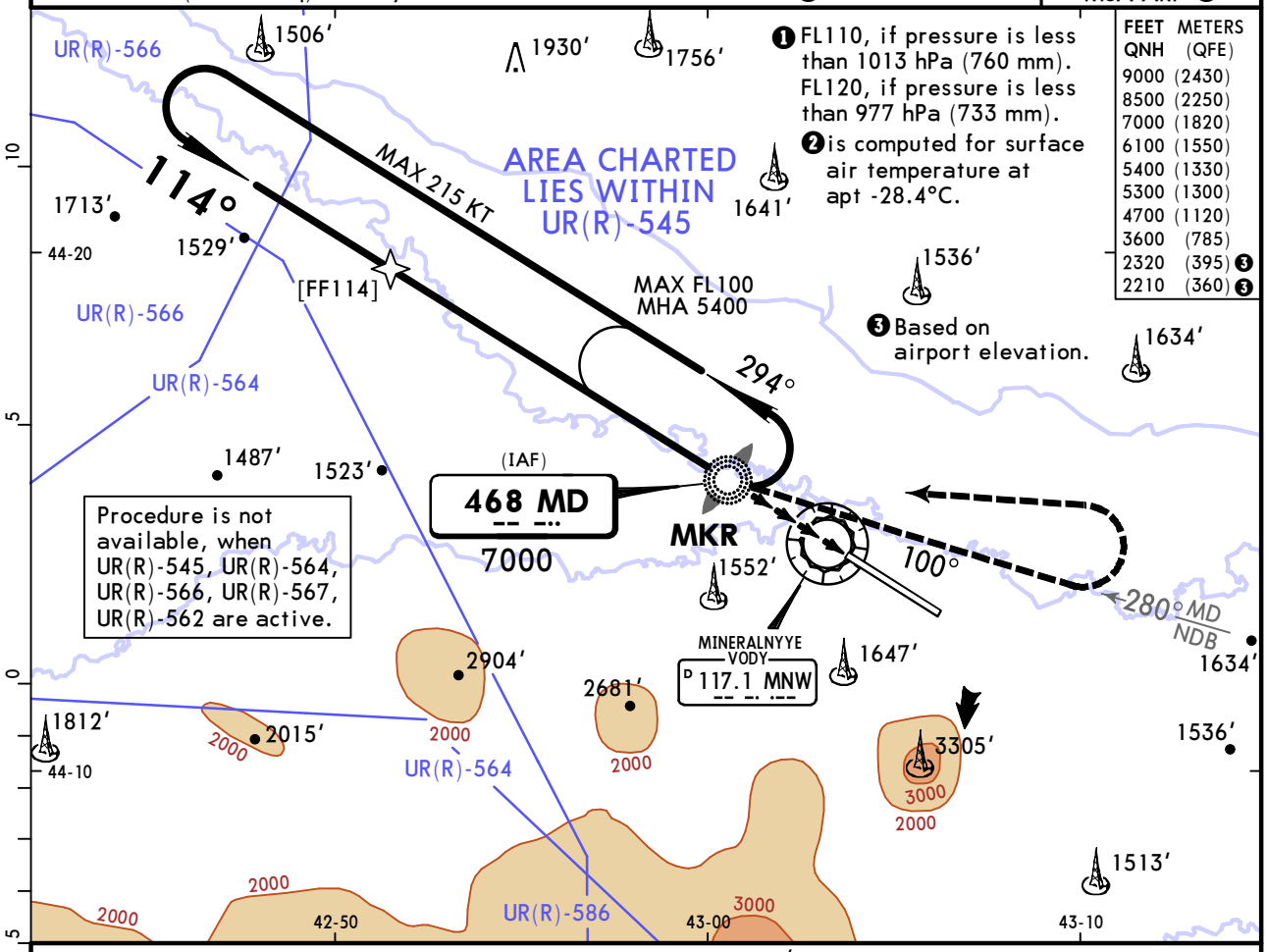
NDB MD	Final Apch Crs	[FF114]	MDA(H)	Apt Elev 1047′
468	114°	4700′ (3663′)	Refer to Minimums	Rwy 1037′

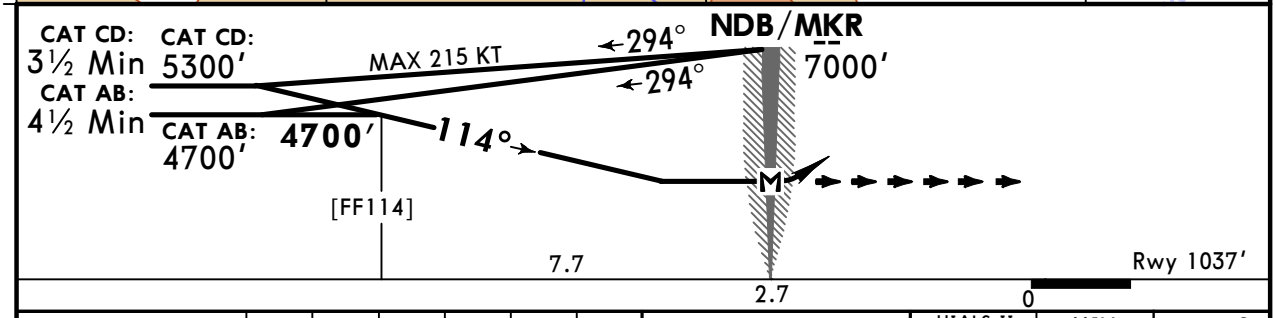
MISSED APCH: Turn onto 100° from NDB climbing to 3600′ or above, turn LEFT to NDB climbing to 5300′ or above.
Turn before MAP prohibited.

Alt Set: hPa (mm on req) Rwy Elev: 37 hPa Trans level: FL100 ❶ Trans alt: 9000′



MSA ARP ❷





MAP at NDB/MKR							HIALS-II PAPI	MIN 3600′ on LT 100° from MD 468

Std CIRCLE-TO-LAND

Prohibited South of airport

	Max Kts	MDA(H)	
A	100	2210′ (1163′)	V1500m
B	135	2210′ (1163′)	V1600m
C	180	2210′ (1163′)	V2400m
D	205	2320′ (1273′)	V3600m

PANS OPS

CHANGES: Communications.

URMM/MRV
MINERALNYYE VODY

JEPPESEN 6 SEP 24 (16-5)

MINERALNYYE VODY, ~~RUSSIA~~
NDB C Rwy 29

ATIS	MINERALNYYE VODY Approach	MINERALNYYE VODY Radar (TWR)	MINERALNYYE VODY Start (TWR)	Ground
125.250 (Russian 127.4)	125.9	120.7	128.0	121.9

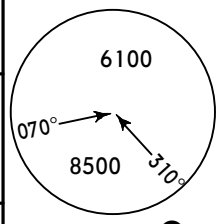
BRIEFING STRIP ™

NDB MD	Final Apch Crs	D8.6	MDA(H) Refer to Minimums	Apt Elev 1047′ Rwy 1044′
468	282°	3000′ (1956′)		

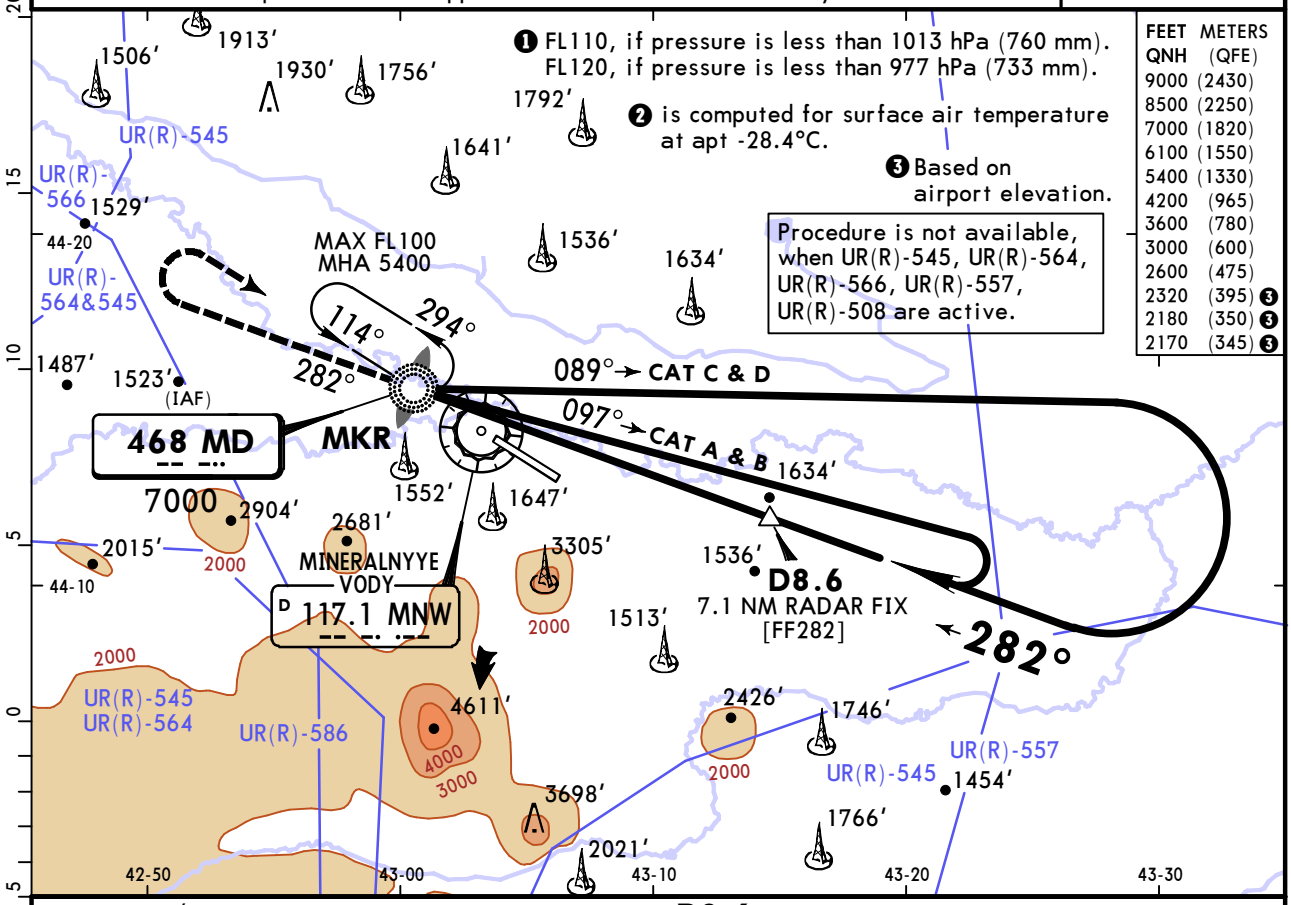
MISSED APCH: Climb STRAIGHT AHEAD to 3600′ or above, turn RIGHT to NDB climbing to 5400′ or above.
Turn before MAP prohibited.

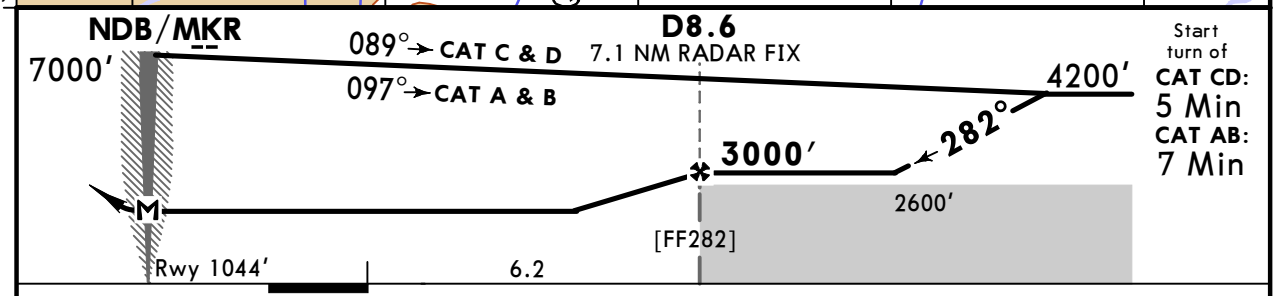
Alt Set: hPa (mm on req) Rwy Elev: 38 hPa Trans level: FL100 ❶ Trans alt: 9000′

1. DME or Radar required. 2. Final approach track offset 12° from Rwy centerline.



MSA ARP ❷





Gnd speed-Kts	70	90	100	120	140	160
Descent Angle 3.00°	372	478	531	637	743	849
MAP at NDB/MKR						

HIALS-II
PAPI

MIN 3600′

Std CIRCLE-TO-LAND

Prohibited South of airport

PANS OPS

	Max Kts	MDA(H)	
A	100	2170′ (1123′)	V1500m
B	135	2170′ (1123′)	V1600m
C	180	2180′ (1133′)	V2400m
D	205	2320′ (1273′)	V3600m

CHANGES: Communications.

Chart changes since cycle 07-2026

ADD = added chart, REV = revised chart, DEL = deleted chart.

ACT	PROCEDURE IDENT	INDEX	REV DATE	EFF DATE

MINERALNYYE VODY, (MINERALNYYE VODY - URMM)

TERMINAL CHART CHANGE NOTICES

No Chart Change Notices for Airport URMM