

Trip Kit Index

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JeppView for Windows

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Airport Information For URMM
Terminal Charts For URMM
Revision Letter For Cycle 26-2020
Change Notices
Notebook

General Information

Location: MINERALNYE VODY RUS
ICAO/IATA: URMM / MRV
Lat/Long: N44° 13.6', E043° 05.0'
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
Repair Types: Minor Airframe, Minor Engine
Customs: Yes
Airport Type: IFR
Landing Fee: Yes
Control Tower: Yes
Jet Start Unit: No
LLWS Alert: No
Beacon: No

Sunrise: 0443 Z
Sunset: 1335 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
Mineralnyye Vody Krug Tower: 120.700
Mineralnyye Vody Start Tower: 128.000
Mineralnyye Vody Taxiing Ground: 121.900
Mineralnyye Vody Taxiing Ground: 124.000 Secondary
Mineralnyye Vody Taxiing Ground: 129.000 Secondary
Mineralnyye Vody Zemlya Ramp/Taxi: 118.900
Mineralnyye Vody Approach: 119.300
Mineralnyye Vody Transit Operations: 118.000

URMM/MRV

JEPPESEN MINERALNYYE VODY, RUSSIA

MINERALNYYE VODY

27 NOV 20

10-1P

Eff 3 Dec

AIRPORT BRIEFING

1. GENERAL

1.1. ATIS

ATIS 125.25
127.4 (Russian)

1.2. LOW VISIBILITY PROCEDURES (LVP)

1.2.1. GENERAL

LVP shall come into force, when RWY visibility values are less than 550m.

The commencement of LVP will be broadcasted by ATIS: "Low visibility procedures in progress".

The term "Low visibility procedure" means, that an interval shall be maintained between arriving ACFT to provide ILS critical area clear of other ACFT, when ACFT is on final approach.

1.2.2. ARRIVAL

Vacating of RWY 12 via TWY A or B.

When the flight crew has doubts in taxiing safety, the pilot shall stop the ACFT and request Follow-me car.

ACFT arriving on RWY 12 shall be met after landing 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 Ground controller.

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

1.2.3. DEPARTURE

Towing of ACFT shall be carried out with navigation and flashing lights switched on.

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 Tower permission.

1.3. TAXI PROCEDURES

Taxiing out to RWY, crossing RWY and along RWY by Tower permission only.

Taxiing or towing on apron under supervision of Ground controller.

Taxiing and towing into stands as well as towing out of stands to start-up points shall be carried out by marshaller's instruction.

In the DAYTIME when visibility is 2000m or less and at NIGHT taxiing via TWY C (on the segment from unserviceable RWY to TWY M) and then via TWY M to apron 1 by Follow-me car.

Taxiing along TR1 through the apron MAX wingspan 166'/50.5m.

Taxiing into stand 27A shall be executed via stand 28. When stand 27A is occupied, stands 26 thru 28 are closed.

1.4. PARKING INFORMATION

Stands 1 thru 5 and 14 thru 27 and 28 available for helicopters.

Stand 5 is available for de-icing.

1.5. OTHER INFORMATION

TWY D is available as a RWY turn pad.

Birds in vicinity of APT.

URMM/MRV

MINERALNYYE VODY

27 NOV 20

JEPPESEN MINERALNYYE VODY, RUSSIA

10-1P1

Eff 3 Dec

AIRPORT BRIEFING

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 VORDME 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 205°/25°, descend to FL 70 and hold to burn out (dump) fuel. Afterwards land according to IAP.

2.2. NOISE ABATEMENT PROCEDURES

RWY 30

Noise abatement procedures shall be executed by all ACFT. If special meteorological conditions, such as considerable wind, cumulo-nimbus clouds etc. are present in arrival and approach sectors, ATC unit may, if it is considered necessary for safety reasons, at its own discretion or by a pilot-in-command's request deviate from the provisions stated below.

Restrictions

The required noise abatement procedures shall not be observed over the overflown areas in the following cases:

- if there is ice, slush, water, mud, rubber, oil etc on RWY and friction coefficient is 0.4 or less;
- when ceiling is less than 150m or VIS is less than 1800m;
- when crosswind component (including gusts) on RWY exceeds 7m/sec;
- when tailwind component on RWY exceeds 2.5m/sec;
- when wind shear is forecasted or reported, or when it is expected that unfavourable weather conditions may influence ACFT approach and landing.

During instrument as well as visual approach it is not allowed to fly below ILS GP.

No noise abatement procedure shall envisage the increasing of indicated air speed during descent.

A displacement of THR shall not be used as a noise abatement measure.

AIR-GROUND communication shall be kept to a minimum.

Downwind landing of ACFT taking into account friction coefficient shall be allowed in cases when this direction is optimal for noise abatement over the city or in cases when upwind landing does not provide safety or is prohibited. A tailwind component shall correspond to the norms established in Airplane Flight Manual.

Reverse thrust power (with the exception of idle thrust) shall be used only for safety reasons.

2.3. CAT II OPERATIONS

RWY 12 approved for CAT II operations, special aircrew and ACFT certification required.

URMM/MRV

MINERALNYYE VODY

27 NOV 20

JEPPesen

MINERALNYYE VODY, RUSSIA

10-1P2

Eff 3 Dec

AIRPORT BRIEFING

3. DEPARTURE

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

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

ACFT crews shall activate transponder (Mode S) before request for push-back or engines start-up and deactivate it after parking into stand.

3.2. NOISE ABATEMENT PROCEDURES

Noise abatement procedures during take-off and climbing phase shall be executed by all ACFT, except in case of reduction of flight safety and in case of engine failure.

Restrictions

Downwind take-off taking into account friction coefficient shall be cleared in cases when the direction is optimal for noise abatement over the city or in cases when upwind take-off does not ensure safety or is prohibited. The tailwind component shall correspond to the norms established in the Flight Manual.

The minimum indicated air speed during climb shall not be less than $V_2 + 10$ KT or less than prescribed in the Flight Manual if higher.

Maintaining the minimum indicated air speed of climb is not required if it leads to the exceeding of the minimum permissible angle of attack.

The reduction of power shall not be applied until:

- reaching 2030' (300m);
- the established standard power mode enables to maintain the established climb gradient of not less than 4% at the above specified speed and with maximum certified take-off mass;
- take-off flight path provides overflying of all obstacles located under the flight path with sufficient clearance when all engines are operating normally and also taking into account possible engine failure and time period necessary for the rest engines to develop full power.

Special Take-off Procedure

Apply two special take-off procedures, NADP 1 and NADP 2. Use any of them for reaching necessary effect (ICAO Doc 8168, Vol I, Part VII, Chapter 3).

3.3. COMMUNICATION FAILURE PROCEDURES

3.3.1. COMMUNICATION FAILURE AFTER TAKE-OFF OR MISSED APPROACH

If at 1700' (200m) communication with MINERALNYYE VODY-Krug is not established continue climbing to 4000' (900m), 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 VORDME MNW (NDB/MKR MD) at 3000' (600m) or after going around ACFT has the right to 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;
- to 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 (FL 140 - FL 150 or FL 240 - FL 250) along departure route climbing to the indicated FL;
- to holding area MM003 or MM011, depending on active RWY heading climbing to FL 70. After passing MM003/MM011, execute racetrack pattern on heading 205°/025° and hold to burn out (dump) fuel. Afterwards land according to IAP.

URMM/MRV

MINERALNYYE VODY

27 NOV 20

JEPPESEN MINERALNYYE VODY, RUSSIA

10-1P3

Eff 3 Dec

AIRPORT BRIEFING

3. DEPARTURE

3.3.2. COMMUNICATION FAILURE DURING CLIMB TO ALTITUDE (FL)

Maintain the last FL (altitude) assigned and acknowledged until CTA exit point. After that pilot has the right:

- to 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;
- to 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 (FL 140 - FL 150 or FL 240 - FL 250).

After passing VORDME MNW (NDB/MKR MD) proceed to holding area MM003 or MM011 depending on active RWY. After passing MM003/MM011 execute race-track pattern on heading 205°/25°, descend to FL 70 and hold to burn out (dump) fuel. Afterwards land according to IAP.

URMM/MRV



MINERALNYE VODY, RUSSIA

MINERALNYE VODY

18 DEC 20

10-1R

RADAR MINIMUM ALTITUDES

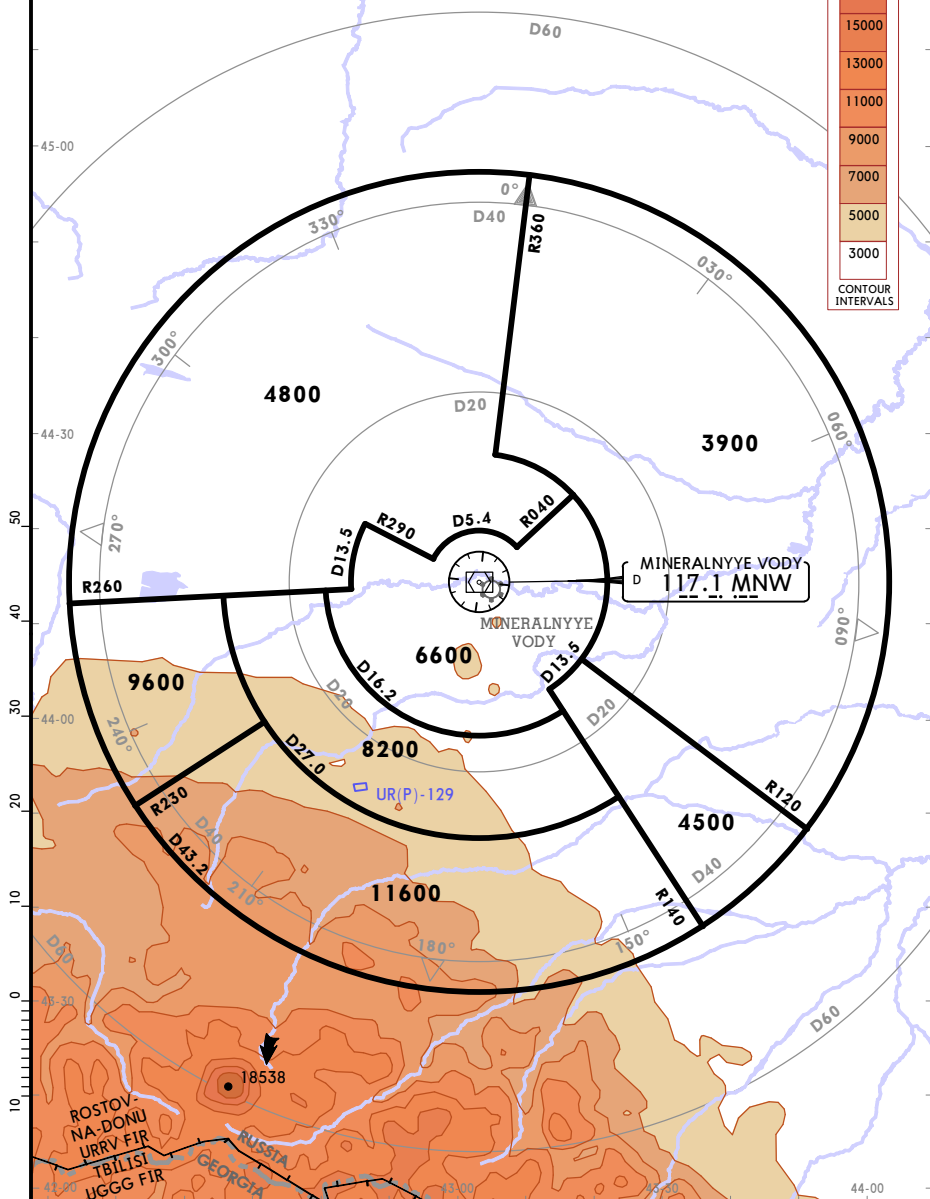
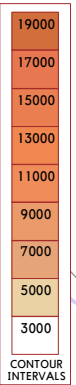
MINERALNYE VODY
Krug (TWR/R)
120.7

Apt Elev
1047

Alt Set: hPa (MM on request)
Trans level: FL80
FL90 if pressure is less than 1013 hPa (760 mm)
FL100 if pressure is less than 977 hPa (735 mm)

- Trans alt: 7000
- This chart may only be used for cross-checking of altitudes assigned while under RADAR control.
 - When vectoring is carried out under low-temperature conditions, minimum vectoring altitudes for IFR flight must be temperature corrected.

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



CHANGES: Chart completely revised.

URMM/MRV
MINERALNYE VODY
RUSSIA
RNAV STAR

27 NOV 20 (10-2) **EFIS Data** **RNAV STAR**
 ATIS 125.25 (Russian 127.4)
 Apt Elev 1047

All Set: RPA (MM on request)
 FL90 ft pressure is less than 1013 hPa
 Trans level: FL80
 Contour interval: 300 ft
 FL100 ft pressure is less than 977 hPa
 (733 mm)

1. GNS required.
 2. RNAV 1.

DEPSO 5A [DEP55A] 0
OGEMO 5A [OGEM5A] 0
 BY ATC

LARIN 5A [LAR15A] 0
OKARU 5A [OKAR5A] 0
URLLU 5A [URL5A] 0
RNAV ARRIVALS
(RWY 12)

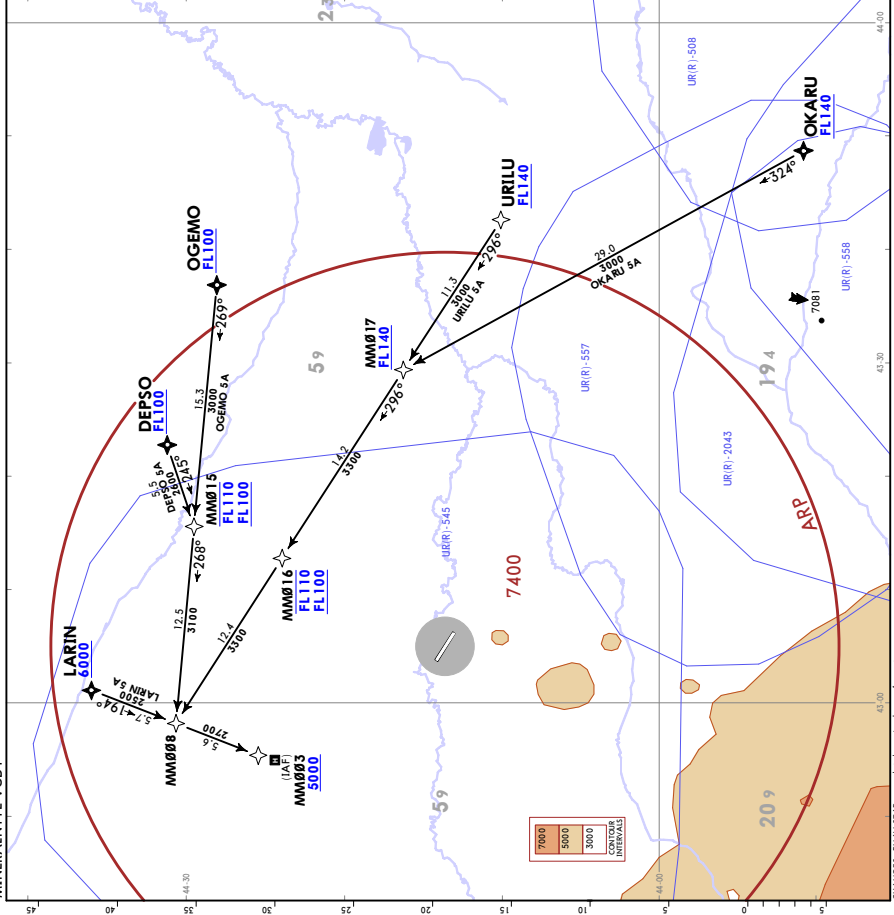
HOLDING OVER
MM803

MAX FL100
 MHA 3900

205°
 205°

FEET METERS
 OHN (QFE)
 7400 (1940)
 5000 (1520)

Refer to 10-1P page 5.



URMM/MRV MINERALNYYE VODY

JEPPESEN MINERALNYYE VODY, RUSSIA

27 NOV 20

10-2A

Eff 3 Dec

RNAV STAR

ATIS
125.25 (Russian **127.4**)

Apt Elev
1047

Alt Set: hPa (MM on request)
Trans level:

FL80
FL90 if pressure is less than 1013 hPa (760 mm)
FL100 if pressure is less than 977 hPa (733 mm)

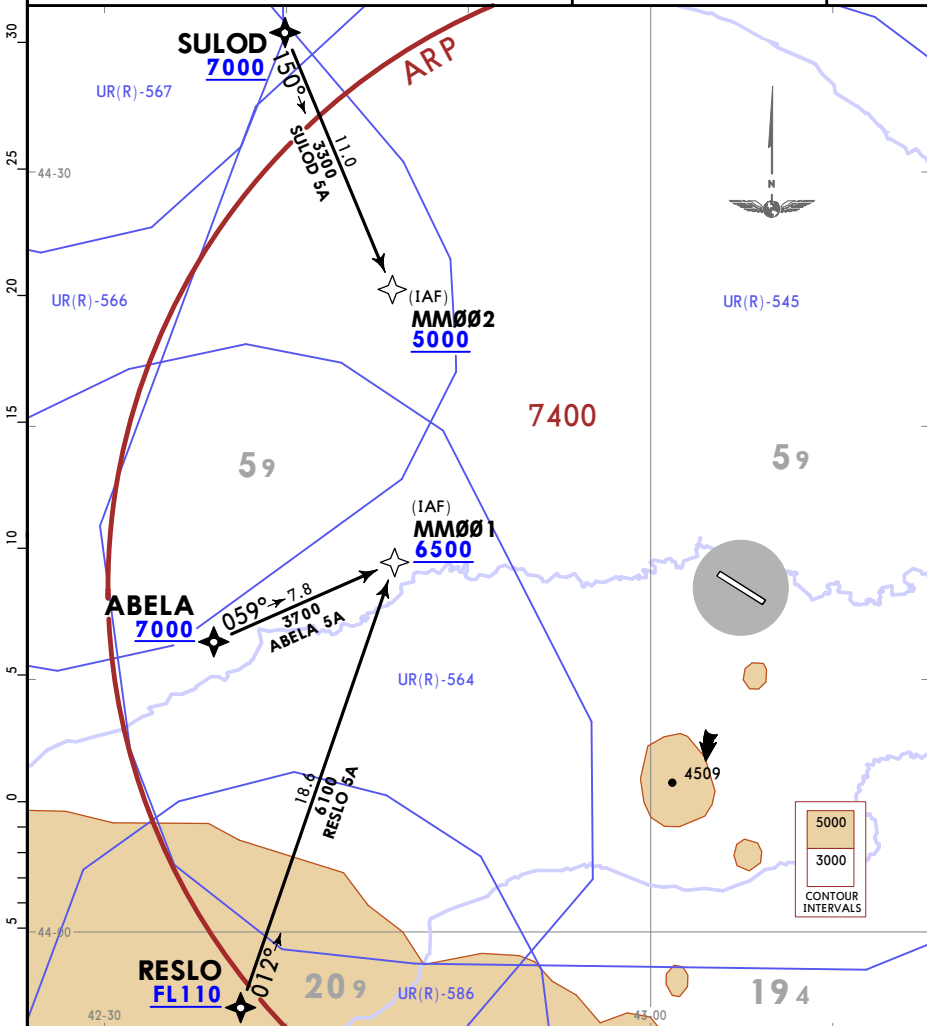
1. GNSS required.
2. RNAV 1.

ABELA 5A [ABEL5A] ①
RESLO 5A [RESL5A] ②
SULOD 5A [SULO5A] ③
RNAV ARRIVALS
(RWY 12)

- ① Not available when UR(R)-545, UR(R)-564, UR(R)-566 active.
- ② Not available when UR(R)-545, UR(R)-564, UR(R)-586 active.
- ③ Not available when UR(R)-545, UR(R)-566, UR(R)-567 active.

LOST COMMS ▼ LOST COMMS ▼ LOST COMMS ▼
COMMS Refer to 10-IP pages. COMMS
LOST COMMS ▲ LOST COMMS ▲ LOST COMMS ▲

FEET	METERS
QNH	(QFE)
7400	(1940)
7000	(1820)
6500	(1670)
5000	(1210)



CHANGES: RNAV STARs completely revised; new format.

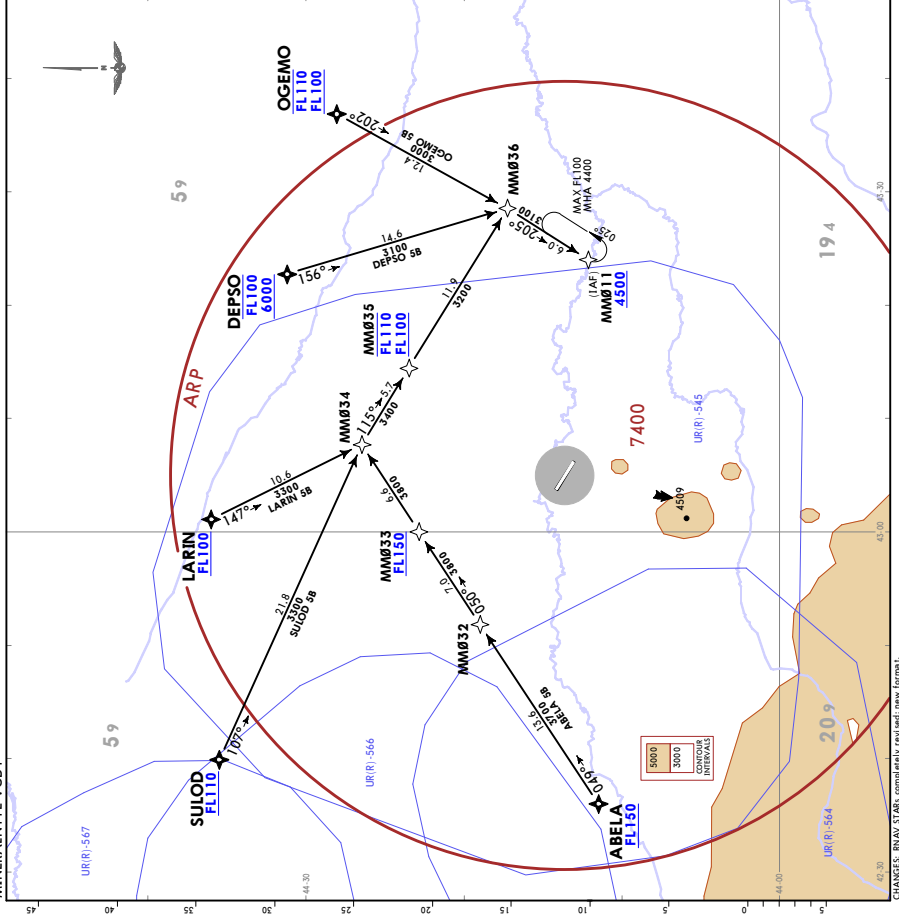
MINERALNYE VODY RUSSIA
URMM / MRV MINERALNYE VODY
JEPPesen **RNAV STAR**
 27 NOV 20 (10.2B) **EFIS Data**

ATIS
 125.25 (Russian 127.4)
 Apt Elev 1047
 Alt Set: MPA (MM on request)
 Trans level: FL80
 FL90 if pressure is less than 1013 hPa
 FL100 if pressure is less than 977 hPa
 (733 mm)
 1. GNS required.
 2. RNAV 1.

DEPSO 5B [DEPS5B] ●
OGEMO 5B [OGE5B] ●
 BY ATC
ABELA 5B [ABEL5B] ●
LARIN 5B [LAR15B] ●
SULOD 5B [SULO5B] ●
RNAV ARRIVALS
(RWY 30)

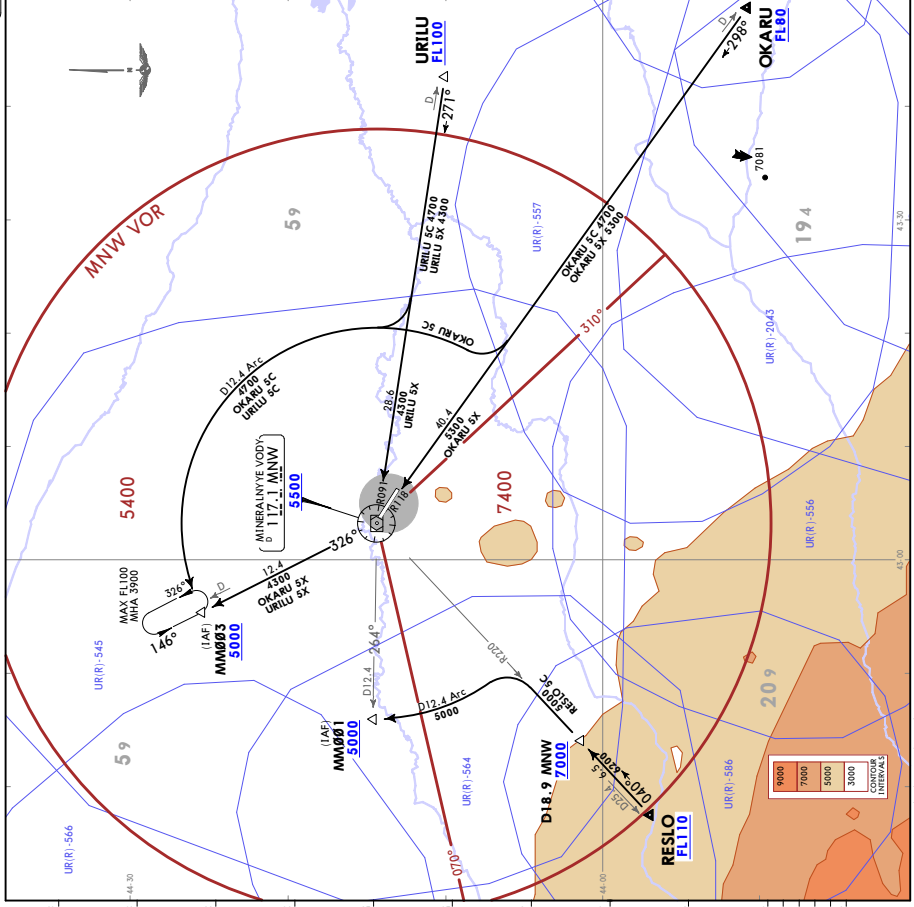
● Not available when UR(R)-545 active.
 ● Not available when UR(R)-545, UR(R)-564, UR(R)-566 active.
 ● Not available when UR(R)-545, UR(R)-566, UR(R)-567 active.

FEET METERS
 FT ONH (QFE) 6000 (1815)
 6000 (1815)
 4500 (1055)
 Refer to 10-1P page 1.
 DEST COMMS DEST COMMS DEST COMMS DEST COMMS



URMM/MRV MINERALNYE VODY
JEPPSEN MINERALNYE VODY, RUSSIA
 27 NOV 20 (10-2E) **EIF 3 5000** **STAR**

ATS	125.25 (Route 127.4)	Appt Elev	1047
Alt Set: hPa (mm on request) Trans level: FL80 (if pressure is less than 1013 hPa) FL100 (760 mm) FL100 if pressure is less than 977 hPa (733 mm) DME required.			
OKARU 5C [OKAR5C] 1 OKARU 5X [OKAR5X] 1 RESLO 5C [RESL5C] 1 URILU 5C [URIL5C] 1 URILU 5X [URIL5X] 1 ARRIVALS (RWY 12)			
1 Not available when UR(R)-508, UR(R)-545, UR(R)-556, UR(R)-557, UR(R)-558, UR(R)-2043 active. 2 Not available when UR(R)-545, UR(R)-556, UR(R)-564, UR(R)-586 active. 3 Not available when UR(R)-545, UR(R)-557 active. 4 Not available when UR(R)-545, UR(R)-557, UR(R)-564, UR(R)-586 active.			
COMMS Refer to 10-1P pages. COMMS COMMS COMMS COMMS		FEET METERS OMN (OP) 7000 (1820) 5500 (1365) 5000 (1210) 5000 (1210)	



CHANGES: 2 AAs completely revised; new format.

URMM / MRV
MINERALNYE VODY
RUSSIA
STAB

27 NOV 20 (10-2H) **EFIS Doc**

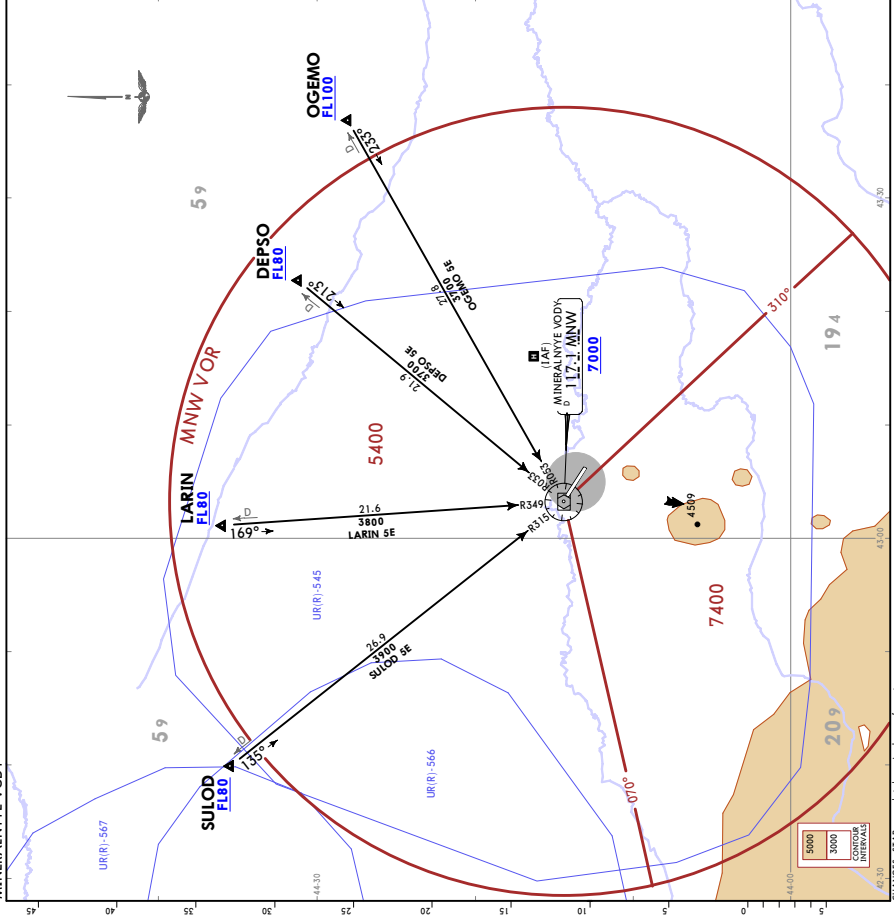
ATIS
 125.25 (Russian 127.4)
 Apt Elev 1047
 Alt Srv: HPa (MM on request)
 FL80 if pressure is less than 1013 hPa
 Trans level: FL80
 FL100 if pressure is less than 977 hPa
 (733 mm)
 DME required.

DEPSO 5E [DEPS5E] ●
OGEMO 5E [OGEM5E] ●
 BY ATC
LARIN 5E [LARISE] ●
SULOD 5E [SULO5E] ●
 ARRIVALS
 (RWYS 12, 30)

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

FEET METERS
 CNH (OFF)
 7000 (1820)
 7000 (1820)
 8400 (1330)
 8400 (1330)
 Refer to 10-1P pages.

HOLDING OVER
MNW
 25°
 113°
 MAX FL100
 MHA 6600



URMM / MRV
 MINERALNYE VODY

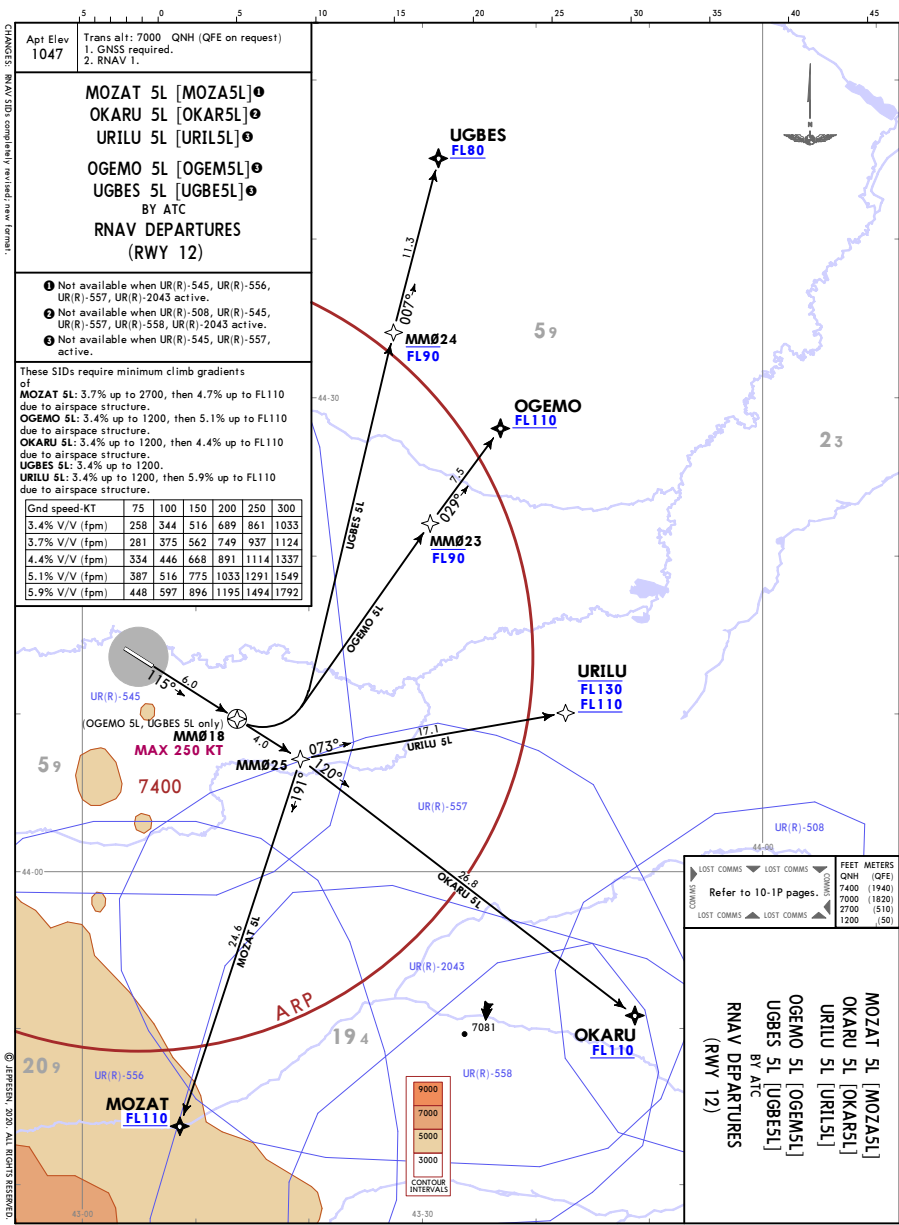
ATIS
 125.25 (Russian 127.4)
 Apt Elev 1047
 Alt Srv: HPa (MM on request)
 FL80 if pressure is less than 1013 hPa
 Trans level: FL80
 FL100 if pressure is less than 977 hPa
 (733 mm)
 DME required.

DEPSO 5E [DEPS5E] ●
OGEMO 5E [OGEM5E] ●
 BY ATC
LARIN 5E [LARISE] ●
SULOD 5E [SULO5E] ●
 ARRIVALS
 (RWYS 12, 30)

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

FEET METERS
 CNH (OFF)
 7000 (1820)
 7000 (1820)
 8400 (1330)
 8400 (1330)
 Refer to 10-1P pages.

HOLDING OVER
MNW
 25°
 113°
 MAX FL100
 MHA 6600



MOZAT 5L [MOZASL]
OKARU 5L [OKAR5L]
URILU 5L [URIL5L]
OGEMO 5L [OGEM5L]
UGBES 5L [UGBESL]
 BY ATC
RNAV DEPARTURES (RWY 12)

Refer to 10-IP pages.

LOST COMMS LOST COMMS LOST COMMS LOST COMMS

FEET METERS QNH (QFE)

7400 (1940)

7000 (1820)

2700 (510)

1200 (50)

27 NOV 20 (10-3) EFB 3.06

JEPPESSEN MINERALNYE VODY RUSSIA RNAV SID

Api Elev 1047
1. GNSS required.
2. RNAV R.

Trans alt: 7000 QNH (OFF on request)

- ABELA 5L [ABELSL] ①
- LARIN 5L [LARISL] ②
- RESLO 5L [RESLSL] ③
- SULOD 5L [SULOSL] ④
- RNAV DEPARTURES (RWY 12)

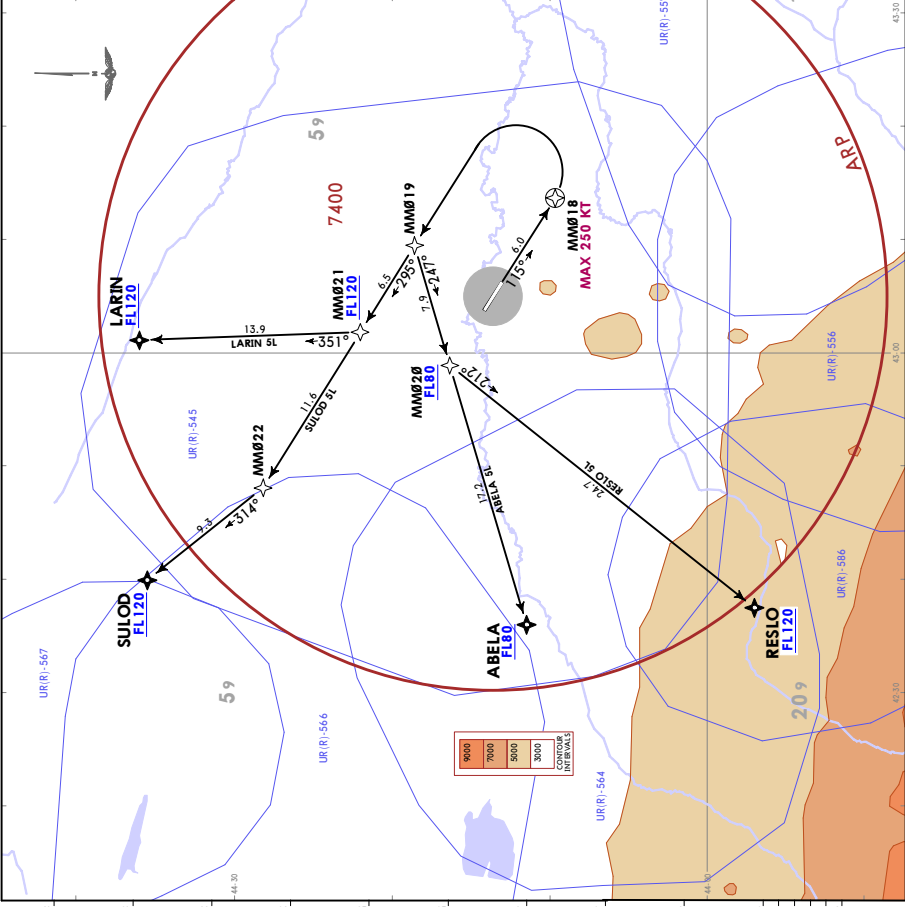
- ① Not available when UR(R)-545, UR(R)-556, UR(R)-557, UR(R)-564, UR(R)-566 active.
- ② Not available when UR(R)-545, UR(R)-557, active.
- ③ Not available when UR(R)-545, UR(R)-557, UR(R)-564, UR(R)-566 active.
- ④ Not available when UR(R)-545, UR(R)-557, UR(R)-566, UR(R)-567 active.

These SIDs require minimum climb gradients 3.4% up to 1200. Then, refer to 10-P pages.

ABELA 5L, RESLO 5L: 3.9% up to FL80 due to airspace structure.
LARIN 5L, SULOD 5L: 6.4% up to FL120 due to airspace structure.

Grd speed-KT	75	100	150	200	250	300
3.4% VV /ft/m	258	344	516	689	861	1033
3.9% VV /ft/m	296	395	592	790	987	1185
6.4% VV /ft/m	486	648	972	1296	1620	1944

FEET METERS
QNH (OFF)
7000 (1820)
7000 (1820)
1200 (360)



URMM/MRV
MINERALNYE VODY

JEPPesen (10-3B) **EFIS Data** **RNAV SID**

27 NOV 20

MINERALNYE VODY
RUSSIA

Trans alt: 7000 QNH (QFE on request)
Act Elev 1047
1. GNS5 required.
2. RNAV 1.

LARIN 5M [LAR15M] **①**
OKARU 5M [OKAR5M] **①**
URILU 5M [URIL5M] **①**
OGEMO 5M [OGEM5M] **①**
UGBES 5M [UGB5M] **①**
BY ATC
RNAV DEPARTURES
(RWY 30)

① Not available when UR(R)-545 active.
② UR(R)-557, UR(R)-558, UR(R)-2043 active.

These SIDs require minimum climb gradients of 4.4% up to 1700, then 6.8% up to 1700.

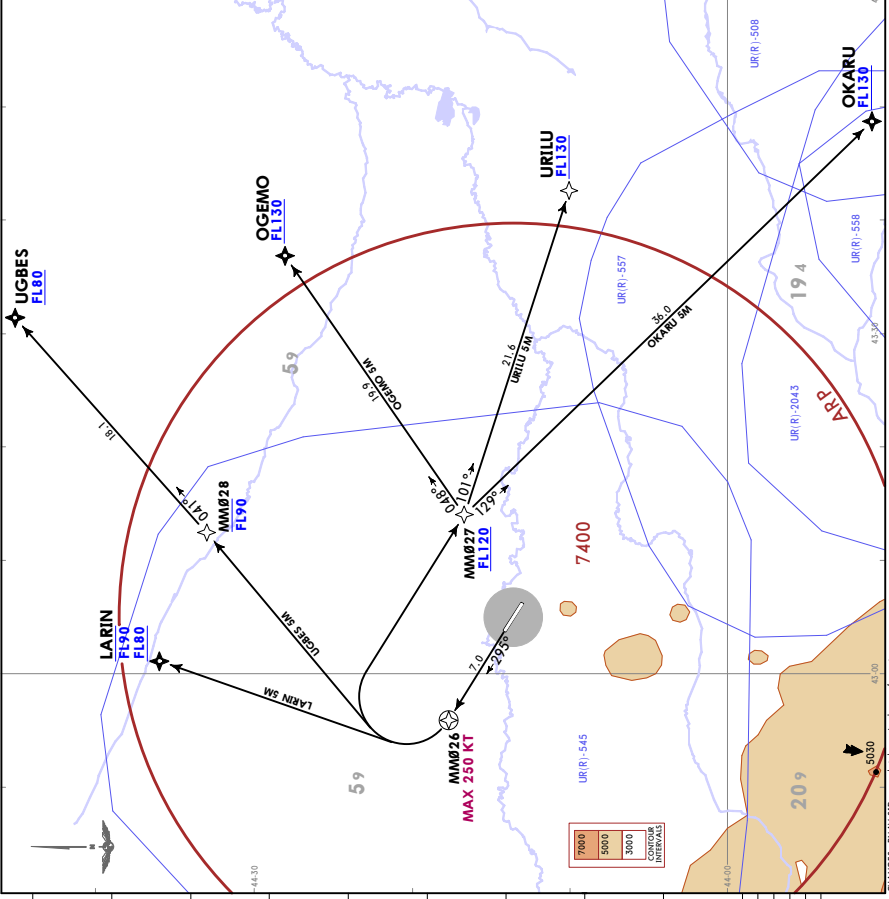
LARIN 5M: 4.4% up to FL80 due to airspace structure.
OKARU 5M, URILU 5M: 4.4% up to FL110 due to airspace structure.
OGEMO 5M, OKARU 5M, URILU 5M: 6.8% up to FL110 due to airspace structure.

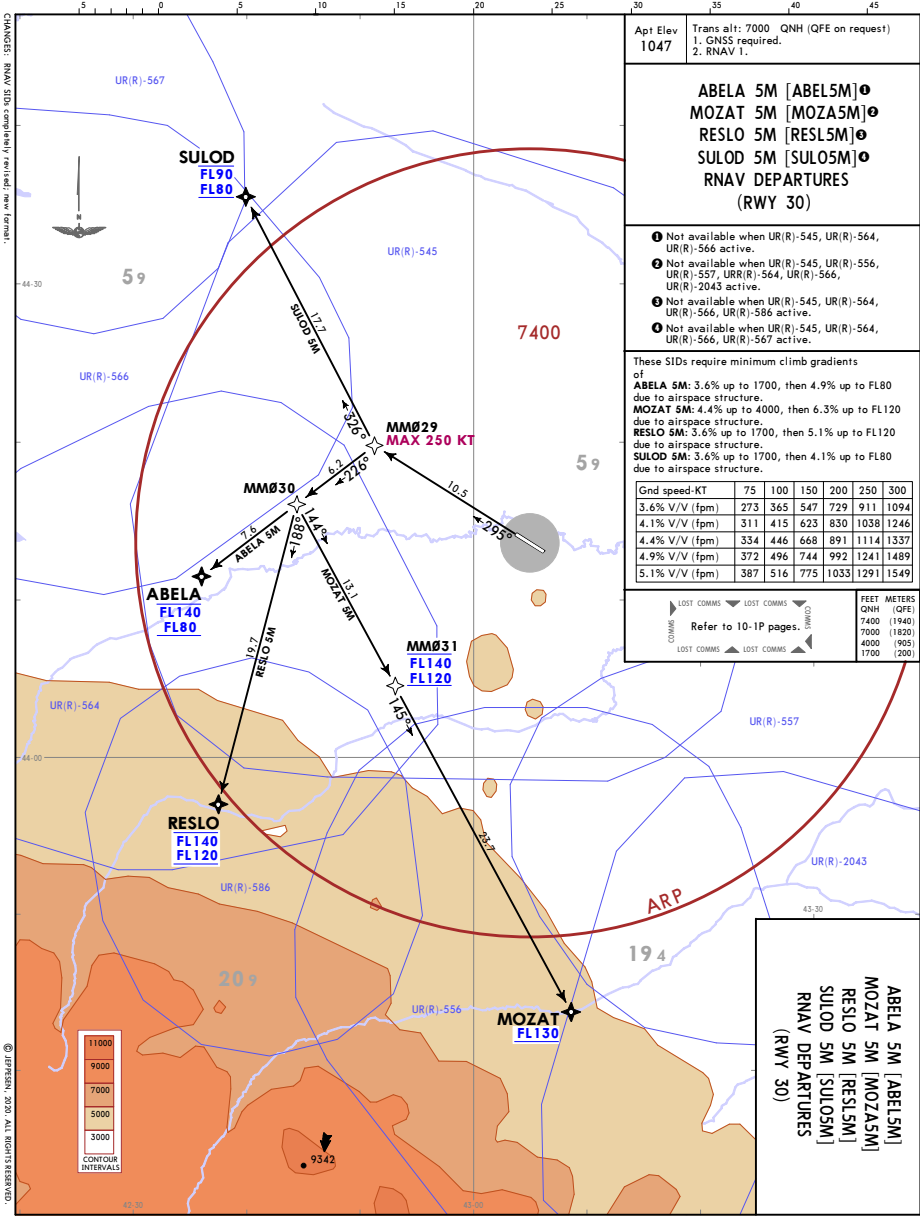
Grd speed-KT	75	100	150	200	250	300
3.6% V/V (fpm)	273	365	547	729	911	1094
4.4% V/V (fpm)	334	446	668	891	1114	1337
6.8% V/V (fpm)	516	689	1033	1377	1722	2066

FEET METERS
7000 (1840)
7400 (1820)
7800 (1800)
7900 (1780)

Refer to 10-1P page

OST COMMS **LOST COMMS** **COMMS**
OST COMMS **LOST COMMS** **COMMS**
OST COMMS **LOST COMMS** **COMMS**





CHANGES: RNAV SIDs completely revised; new format.

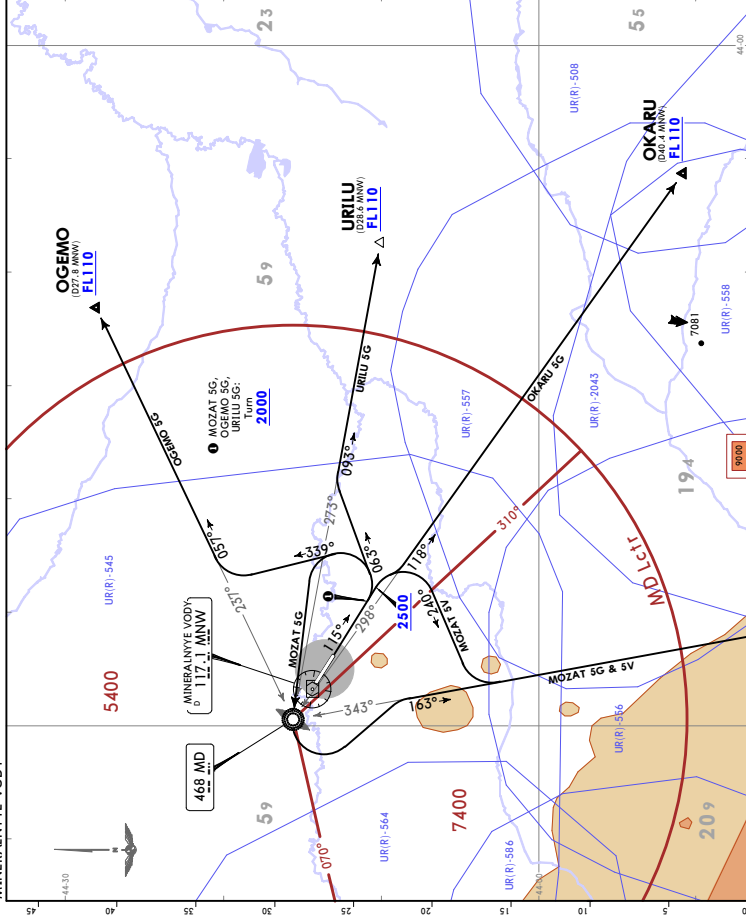
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URMM/MRV
MINERALNYE VODY

JEPPESSEN (10-3D) **EFIS 262** **SID**

MINERALNYE VODY
RUSSIA

27 NOV 20
 Aes Elev: 1047
 1. DME required.
 2. Turn before DER is PROHIBITED.



ROUTING

FEET	METERS	SID	Notes
7000	2000	MOZAT 5G	Climb straight ahead, at 2000 or above turn LEFT, turn LEFT, intercept 163° bearing from MD to MOZAT.
5000	1500	MOZAT 5V	Climb straight ahead, at 2500 or above turn RIGHT, 240° track, intercept 163° bearing from MD to MOZAT.
3000	900	OGE MO 5G	Climb straight ahead, at 2000 or above turn LEFT, 339° track, intercept 057° bearing from MD to OGE MO.
1000	300	OKARU 5G	Climb straight ahead, at 2500 or above intercept 118° bearing from MD to OKARU.
2000	600	URILU 5G	Climb straight ahead, at 2000 or above turn LEFT, 045° track, intercept 095° bearing from MD to URILU.

GRADIENTS

GRD	GRD	GRD	GRD	GRD	GRD	GRD	GRD
3.2%	VV (fpm)	258	344	516	697	861	1033
3.6%	VV (fpm)	273	365	547	729	911	1094
4.2%	VV (fpm)	319	425	638	851	1063	1276
4.4%	VV (fpm)	334	446	668	891	1114	1337
5.1%	VV (fpm)	387	516	775	1033	1291	1549
5.4%	VV (fpm)	410	547	820	1094	1367	1641
6.1%	VV (fpm)	463	618	927	1235	1544	1853
10.0%	VV (fpm)	760	1013	1519	2025	2532	3038

These SID's require minimum climb gradients

MOZAT 5G: 5.4% up to 6100.

MOZAT 5V: 10.0% up to 4900, then 3.6% up to FL110 due to airbase structure.

OGE MO 5G: 3.4% up to 2000, then 5.1% up to FL110 due to airbase structure.

OKARU 5G: 4.2% up to 3000, then 4.4% up to FL110 due to airbase structure.

URILU 5G: 5.4% up to 2000, then 6.1% up to FL110 due to airbase structure.

Refer to 10-1P pages: COMMS, LITE, COMMS, GDT, COMMS, COMMS, SPT, COMMS, GDT, COMMS.

CHANGES: SID's completely revised, new format.

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URMM/MRV MINERALNYE VODY, RUSSIA
 27 NOV 20 (10-3E) **E1E3 D0E** **STD**

Trans alt: 7000 QNH (QFE on request)
 1. DME required.
 2. Turn before D/R is PROHIBITED.

ABELA 5G [ABEL5G] 0
LARIN 5G [LAR15G] 0
RESLO 5G [RESL5G] 0
SULOD 5G [SULO5G] 0
UGRES 5G [UGRES5G] 0
DEPARTURES (RWY 12)

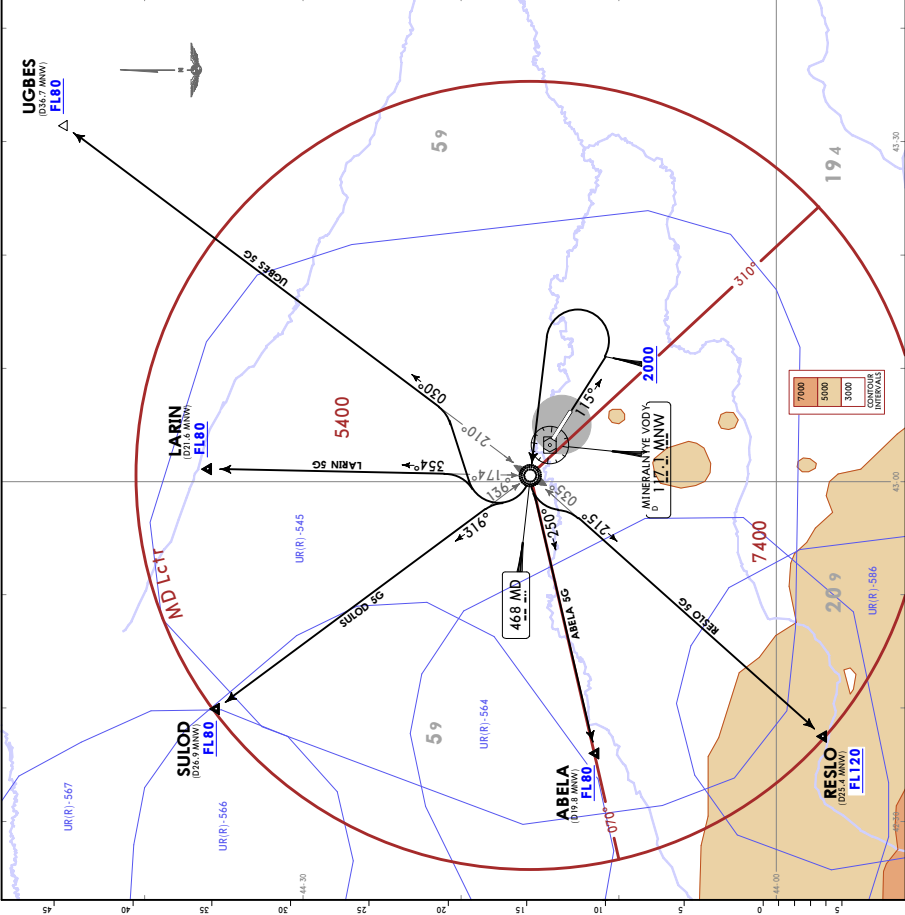
0 Not available when UR(R)-545, UR(R)-564, UR(R)-567 active.
 1 Not available when UR(R)-545, UR(R)-564, UR(R)-567, UR(R)-586 active.
 2 Not available when UR(R)-545, UR(R)-564, UR(R)-566, UR(R)-567 active.

FEET	METERS
5000	1524
7000	2130
10000	3048
15000	4572
20000	6096

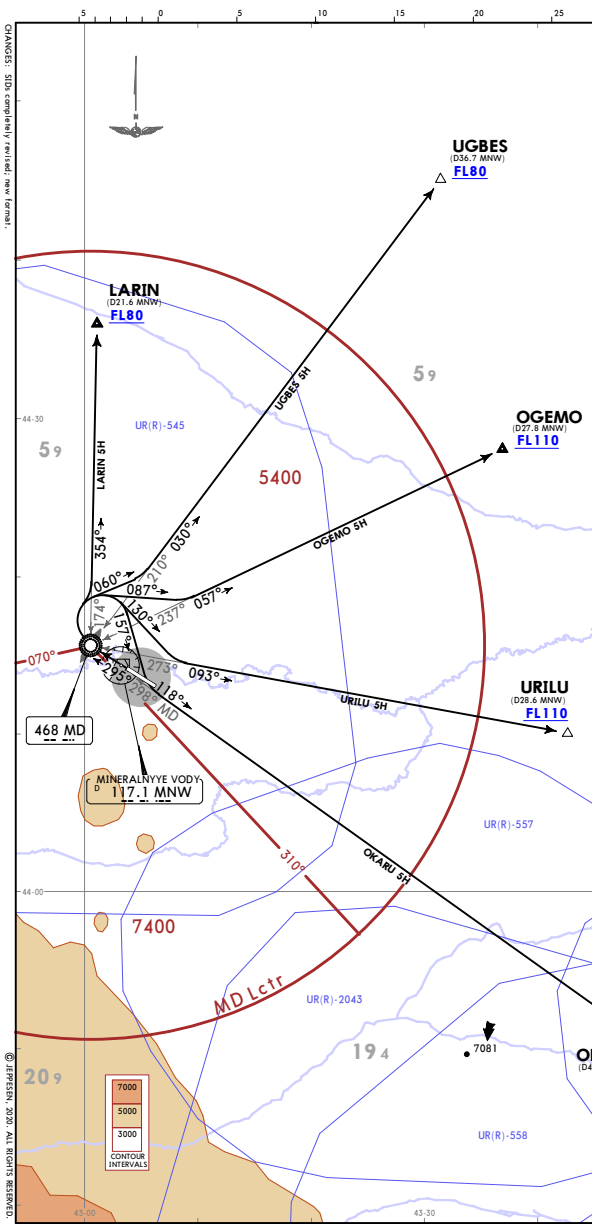
These SID's require minimum climb gradients of
ABELA 5G, LARIN 5G, SULOD 5G, UGRES 5G: 5.4% up to FL120 due to airspace structure.
RESLO 5G: 5.4% up to 2600, then 3.9% up to FL120 due to airspace structure.

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

SID	ROUTING
ABELA 5G	Climb straight ahead, at 2000 or above turn LEFT to intercept 250° bearing from MD to ABELA.
LARIN 5G	Climbs straight ahead, at 2000 or above turn LEFT to MD, turn RIGHT, intercept 354° bearing from MD to LARIN.
RESLO 5G	Climbs straight ahead, at 2000 or above turn LEFT to intercept 215° bearing from MD to RESLO.
SULOD 5G	Climbs straight ahead, at 2000 or above turn LEFT to MD, intercept 316° bearing from MD to SULOD.
UGRES 5G	Climbs straight ahead, at 2000 or above turn LEFT to MD, turn RIGHT, intercept 030° bearing from MD to UGRES.



CHANGES: SID's completely revised; new format.



Apt Elev 1047
 Trans alt: 7000 QNH (QFE on request)
 DME required.

LARIN 5H [LARI5H] ●
OGEMO 5H [OGEM5H] ●
OKARU 5H [OKAR5H] ●
UGBES 5H [UGBE5H] ●
URILU 5H [URIL5H] ●

DEPARTURES (RWY 30)

- 1 Not available when UR(R)-545 active.
- 2 Not available when UR(R)-508, UR(R)-545, UR(R)-557, UR(R)-558, UR(R)-2043 active.
- 3 Not available when UR(R)-545, UR(R)-557, active.

LOST COMMS	LOST COMMS	FEET	METERS
COMMS	Refer to 10-1P pages.	QNH	(QFE)
LOST COMMS	LOST COMMS	7400	(1940)
LOST COMMS	LOST COMMS	7000	(1820)
LOST COMMS	LOST COMMS	5400	(1330)
LOST COMMS	LOST COMMS	4200	(965)
LOST COMMS	LOST COMMS	1900	(265)
LOST COMMS	LOST COMMS	1800	(235)

These SIDs require minimum climb gradients of

LARIN 5H: 4.7% up to 1800, then 4.9% up to FL80 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
4.9% V/V (fpm)	372	496	744	992	1241	1489
5.1% V/V (fpm)	387	516	775	1033	1291	1549
6.0% V/V (fpm)	456	608	911	1215	1519	1823

SID	ROUTING
LARIN 5H	Climb straight ahead to MD, turn RIGHT, intercept 354° bearing from MD to LARIN.
OGEMO 5H BY ATC	Climb straight ahead to MD, turn RIGHT, intercept 087° bearing from MD to OGEMO.
OKARU 5H	Climb straight ahead to MD, turn RIGHT, 157° track, intercept 118° bearing from MD to OKARU.
UGBES 5H BY ATC	Climb straight ahead to MD, turn RIGHT, 060° track, intercept 030° bearing from MD to UGBES.
URILU 5H	Climb straight ahead to MD, turn RIGHT, 130° track, intercept 093° bearing from MD to URILU.

LARIN 5H [LARI5H]
OGEMO 5H [OGEM5H]
OKARU 5H [OKAR5H]
UGBES 5H [UGBE5H]
URILU 5H [URIL5H]

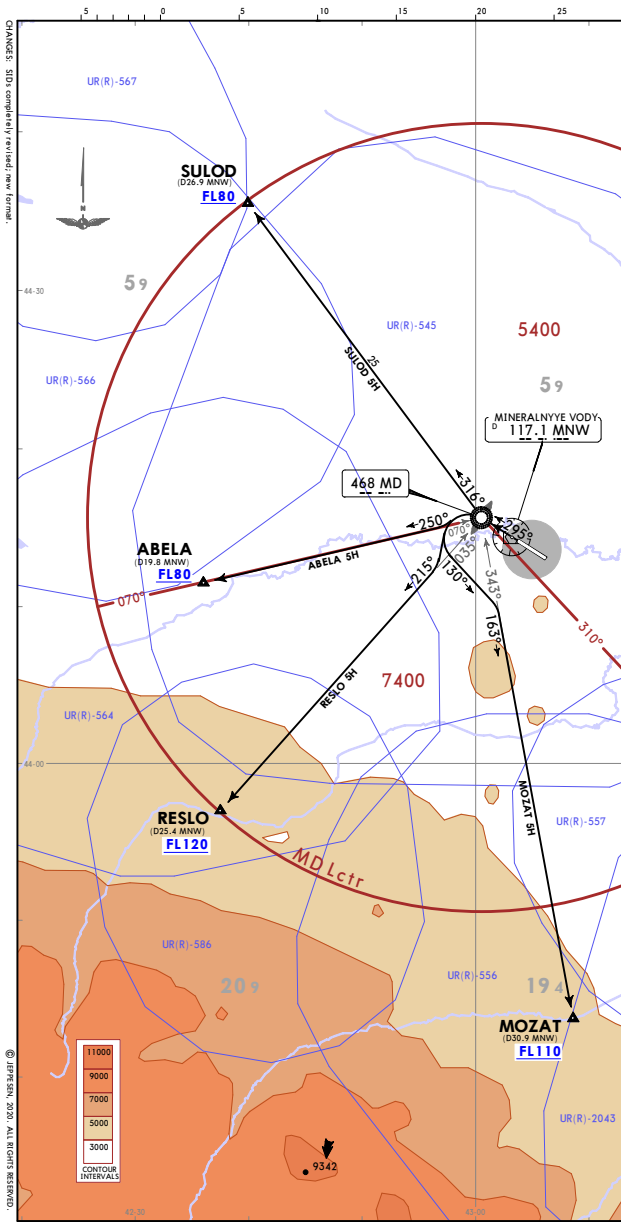
DEPARTURES (RWY 30)

CHANGES: SIDs completely revised, new format.

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URMM/MRV
MINERALNYE VODY

27 NOV 20 (10-3F) E113 DME
JEPPESEN
MINERALNYE VODY
RUSSIA
SID



Apt Elev 1047 Trans alt: 7000 QNH (QFE on request) DME required.

ABELA 5H [ABEL5H] ●
MOZAT 5H [MOZA5H] ●
RESLO 5H [RESL5H] ●
SULOD 5H [SULO5H] ●

DEPARTURES (RWY 30)

- 1 Not available when UR(R)-545, UR(R)-564, UR(R)-566 active.
- 2 Not available when UR(R)-545, UR(R)-556, UR(R)-557, URR(R)-564, UR(R)-2043 active.
- 3 Not available when UR(R)-545, UR(R)-564, UR(R)-586 active.
- 4 Not available when UR(R)-545, UR(R)-566, UR(R)-567 active.

LOST COMMS	LOST COMMS	FEET METERS
Refer to 10-1P pages.		QNH (QFE)
		7400 (1940)
		7000 (1820)
		5700 (1420)
		5400 (1330)
		3700 (810)
		3500 (730)
		1900 (1265)

These SIDs require minimum climb gradients of

ABELA 5H: 5.2% up to 3700, then 5.5% up to FL80 due to airspace structure.

MOZAT 5H: 6.8% up to 5700, 7.4% up to FL80 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.

SULOD 5H: 5.1% up to 1900, then 4.1% up to FL80 due to airspace structure.

Gnd speed-KT	75	100	150	200	250	300
4.1% V/V (fpm)	311	415	623	830	1038	1246
5.1% V/V (fpm)	387	516	775	1033	1291	1549
5.2% V/V (fpm)	395	527	790	1053	1316	1580
5.5% V/V (fpm)	418	557	835	1114	1392	1671
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
7.1% 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 250° bearing from MD to ABELA.
MOZAT 5H	Climb straight ahead to MD, turn LEFT, 130° track, intercept 163° bearing from MD to MOZAT.
RESLO 5H	Climb straight ahead to MD, turn LEFT, intercept 213° bearing from MD to RESLO.
SULOD 5H	Climb straight ahead to MD, intercept 316° bearing from MD to SULOD.

ABELA 5H [ABEL5H]
MOZAT 5H [MOZA5H]
RESLO 5H [RESL5H]
SULOD 5H [SULO5H]

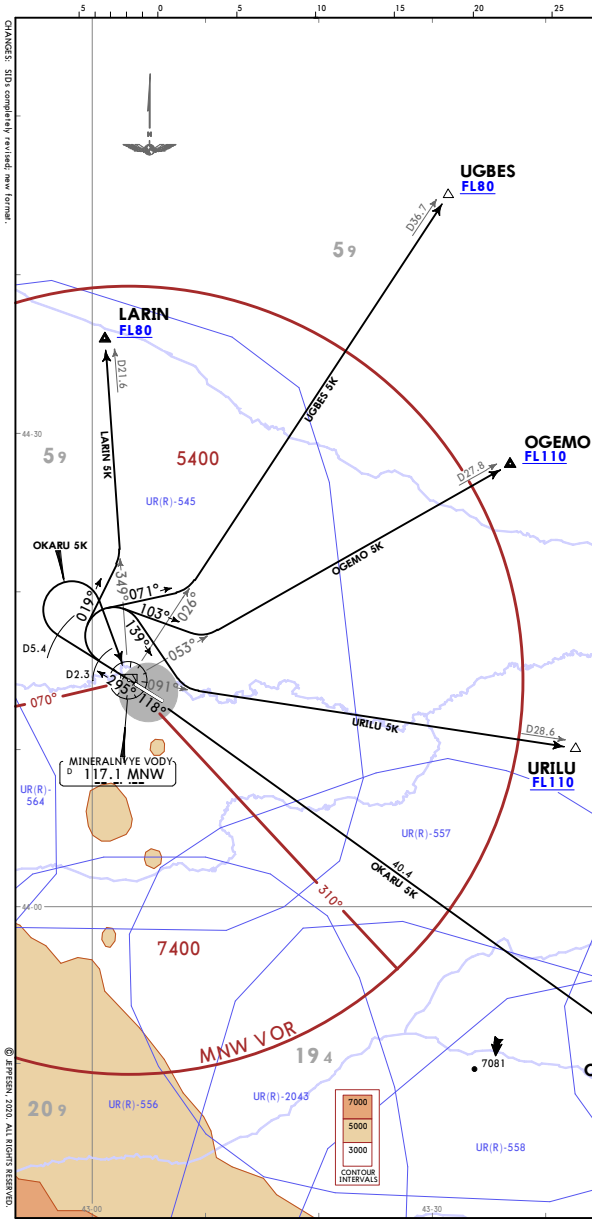
DEPARTURES (RWY 30)

URRM, MRV
 MINERALNYE VODY

JEPPSEN MINERALNYE VODY, RUSSIA
 27 NOV 20 (10-35) E1813/20 SID

CHANGES: SID completed/revised/new format

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Apt Elev
1047

Trans alt: 7000 QNH (QFE on request)
DME required.

LARIN 5K [LARI5K] ●
OGEMO 5K [OGEM5K] ●
OKARU 5K [OKAR5K] ●
UGBES 5K [UGBE5K] ●
URILU 5K [URIL5K] ●

DEPARTURES
(RWY 30)

- 1 Not available when UR(R)-545 active.
- 2 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.
- 3 Not available when UR(R)-545, UR(R)-557 active.

COMMS	LOST COMMS	THROUS	FEET	METERS
Refer to 10-1P pages.			QNH (QFE)	
			7400 (1940)	
			7000 (1820)	
			6200 (1575)	
			5400 (1330)	
			1900 (265)	

These SIDs require minimum climb gradients of

LARIN 5K: 5.1% up to 1900, then 4.8% up to FL80 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

SID	ROUTING
LARIN 5K	Climb straight ahead to D2.3 MNW, turn RIGHT, 019° track, intercept MNW R349 to LARIN.
OGEMO 5K BY ATC	Climb straight ahead to D2.3 MNW, turn RIGHT, 103° track, intercept MNW R053 to OGEMO.
OKARU 5K	Climb straight ahead to D5.4 MNW, turn RIGHT to MNW, intercept MNW R118 to OKARU.
UGBES 5K BY ATC	Climb straight ahead to D2.3 MNW, turn RIGHT, 071° track, intercept MNW R026 to UGBES.
URILU 5K	Climb straight ahead to D2.3 MNW, turn RIGHT, 139° track, intercept MNW R091 to URILU.

LARIN 5K [LARI5K]
OGEMO 5K [OGEM5K]
OKARU 5K [OKAR5K]
UGBES 5K [UGBE5K]
URILU 5K [URIL5K]

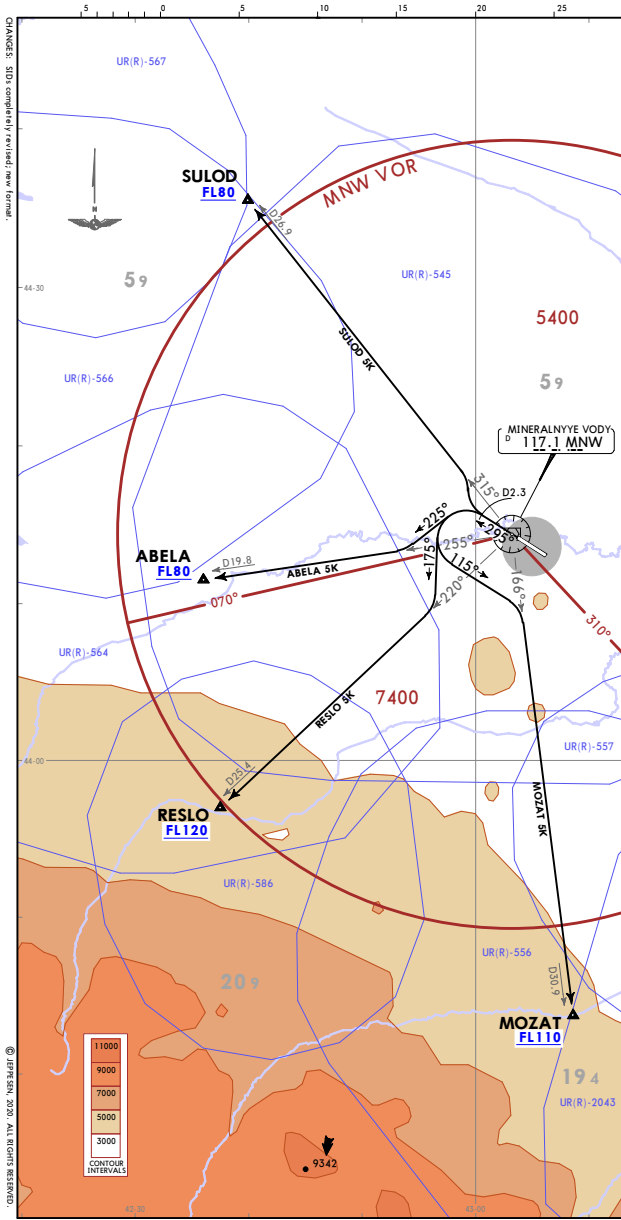
DEPARTURES
(RWY 30)

URMM/MRV
MINERALNYE VODY

JEPPesen
RUSSIA
27 NOV 20 (10-3K) E13-3026
SID

CHANGES: SID completely revised, new format.

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Apt Elev 1047 Trans alt: 7000 QNH (QFE on request) DME required.

ABELA 5K [ABEL5K] ●
MOZAT 5K [MOZA5K] ●
RESLO 5K [RESL5K] ●
SULOD 5K [SULO5K] ●

DEPARTURES
(RWY 30)

- Not available when UR(R)-545, UR(R)-564, UR(R)-566 active.
- Not available when UR(R)-545, UR(R)-556, UR(R)-557, UR(R)-564, UR(R)-2043 active.
- Not available when UR(R)-545, UR(R)-564, UR(R)-586 active.
- Not available when UR(R)-545, UR(R)-566, UR(R)-567 active.

COMMS	FEET	METERS
Refer to 10-1P pages.	7000	(1820)
	5700	(1420)
	5400	(1330)
	3700	(810)
	3400	(720)
	1900	(265)

These SIDs require minimum climb gradients of

ABELA 5K: 5.4% up to 3700, then 5.5% up to FL80 due to airspace structure.
MOZAT 5K: 7.0% up to 5700.
RESLO 5K: 5.8% up to 3400, then 6.2% up to FL120 due to airspace structure.
SULOD 5K: 5.1% up to 1900, then 4.1% up to FL80 due to airspace structure.

Grnd speed-KT	75	100	150	200	250	300
4.1% V/V (fpm)	311	415	623	830	1038	1246
5.1% V/V (fpm)	387	516	775	1033	1291	1549
5.4% V/V (fpm)	410	547	820	1094	1367	1641
5.5% V/V (fpm)	418	557	835	1114	1392	1671
5.8% V/V (fpm)	441	587	881	1175	1468	1762
6.2% V/V (fpm)	471	628	942	1256	1570	1884
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, 225° track, intercept MNW R255 to ABELA.
MOZAT 5K	Climb straight ahead to D2.3 MNW, turn LEFT, 115° track, intercept MNW R166 to MOZAT.
RESLO 5K	Climb straight ahead to D2.3 MNW, turn LEFT, 175° track, intercept MNW R220 to RESLO.
SULOD 5K	Climb straight ahead to D2.3 MNW, intercept MNW R315 to SULOD.

ABELA 5K [ABEL5K]
MOZAT 5K [MOZA5K]
RESLO 5K [RESL5K]
SULOD 5K [SULO5K]

DEPARTURES
(RWY 30)

URRM / MRY
MINERALNYE VODY

27 NOV 20 (10-3)

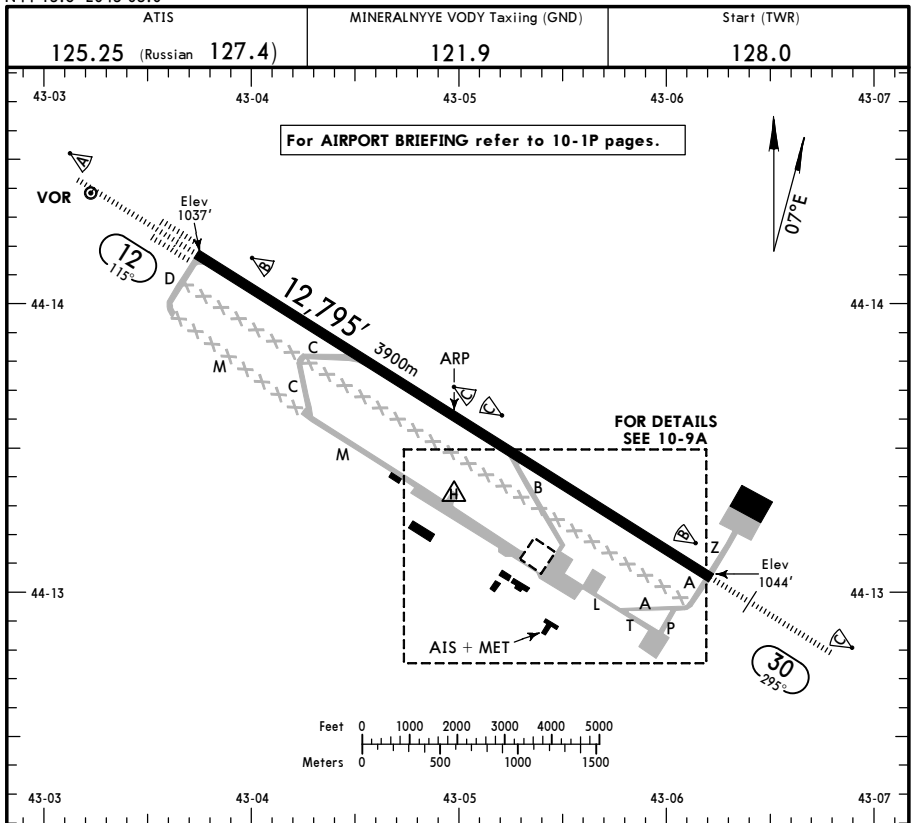
JEPPSEN MINERALNYE VODY, RUSSIA
E1813202

CHANGES: SID completed/revised/new format

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URMM/MRV
 Apt Elev **1047'**
 N44 13.6 E043 05.0

JEPESEN MINERALNYE VODY, RUSSIA
 27 NOV 20 **(10-9) Eff 3 Dec**
MINERALNYE VODY



ADDITIONAL RUNWAY INFORMATION

RWY	HIRL(59m) CL(15m) HIALS-II TDZ	RVR	USABLE LENGTHS LANDING BEYOND			WIDTH
			Threshold	Glide Slope	TAKE-OFF	
12	HIRL(59m) CL(15m) HIALS-II TDZ ① ②	RVR		11,762' 3585m	①	197' 60m
30	HIRL(59m) CL(15m) HIALS PAPI-L(3.0°) ③	RVR		11,823' 3604m		

① PAPI-L (angle 3.0°).

② HST-B with HSTIL.

③ HST-C with HSTIL.

④ TAKE-OFF RUN AVAILABLE

RWY 12:

From rwy head 12,795' (3900m)
 twy C int 8317' (2535m)

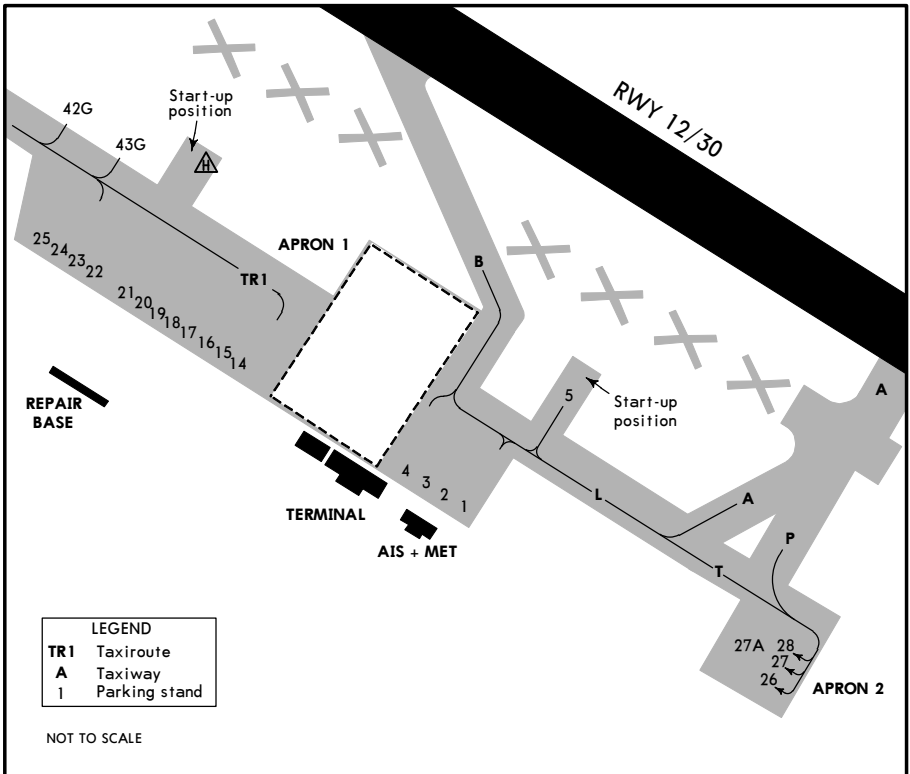
RWY 30:

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		Adequate Vis Ref	
			DAY	NIGHT	DAY	NIGHT	DAY	NIGHT
TDZ R125m Mid R125m Rollout R125m	TDZ R150m Mid R150m Rollout R150m	R200m	R300m		R400m		R/V500m	NA

URMM/MRV

JEPPESEN MINERALNYE VODY, RUSSIA
 27 NOV 20 **(10-9A)** **Eff 3 Dec** MINERALNYE VODY



LEGEND	
TR1	Taxiroute
A	Taxiway
1	Parking stand

NOT TO SCALE

INS COORDINATES

STAND No.	COORDINATES	STAND No.	COORDINATES
1, 2	N44 13.0 E043 05.5	20 thru 22	N44 13.3 E043 04.9
3, 4	N44 13.0 E043 05.4	23 thru 25	N44 13.3 E043 04.8
5	N44 13.0 E043 05.6	26 thru 27A	N44 12.8 E043 05.9
14 thru 16	N44 13.2 E043 05.1	28	N44 12.8 E043 06.0
17 thru 19	N44 13.2 E043 05.0	42G	N44 13.3 E043 04.9
		43G	N44 13.3 E043 05.0

URMM/MRV


JEPPesen
27 NOV 20
Eff 3 Dec

10-9S

MINERALNYYE VODY, RUSSIA

EASA AIR OPS

MINERALNYYE VODY

STRAIGHT-IN RWY		A	B	C	D
12	CAT 2 ILS Z, Y or X	1137' (100')	1137' (100')	1137' (100')	1149' (112')
		RA115' R300m	RA115' R300m	RA115' R300m	RA129' R300m
	ILS Z, Y or X	1237' (200')	1237' (200')	1237' (200')	1237' (200')
	FULL	R550m	R550m	R550m	R550m
	TDZ or CL out	② R550m	② R550m	② R550m	② R550m
	ALS out	R1200m	R1200m	R1200m	R1200m
	GLS	1237' (200')	1237' (200')	1237' (200')	1237' (200')
	FULL	R550m	R550m	R550m	R550m
	TDZ or CL out	② R550m	② R550m	② R550m	② R550m
	ALS out	R1200m	R1200m	R1200m	R1200m
	③ LOC Z or Y with D2.7 IMD	1720' (683')	1720' (683')	1720' (683')	1720' (683')
		R1500m	R1500m	R2400m	R2400m
	③ LOC Z or Y w/o D2.7 IMD	1820' (783')	1820' (783')	1820' (783')	1820' (783')
		R1500m	R1500m	R2400m	R2400m
	③ LOC X	1820' (783')	1820' (783')	1820' (783')	1820' (783')
		R1500m	R1500m	R2400m	R2400m
	RNP LNAV/VNAV	1397' (360')	1407' (370')	1427' (390')	1457' (420')
		R900m	R1000m	R1100m	R1200m
	ALS out	R1500m	R1500m	R1800m	R1900m
	③ RNP LNAV	1730' (693')	1730' (693')	1730' (693')	1730' (693')
		R1500m	R1500m	R2400m	R2400m
	③ VOR Z with D2.5	1790' (753')	1790' (753')	1790' (753')	1790' (753')
		R1500m	R1500m	R2400m	R2400m
	③ VOR Z w/o D2.5	1820' (783')	1820' (783')	1820' (783')	1820' (783')
		R1500m	R1500m	R2400m	R2400m
	③ VOR Y	2190' (1153')	2190' (1153')	2190' (1153')	2190' (1153')
		R1500m	R1500m	R2400m	R2400m
	VOR Y	2190' (1153')	2190' (1153')	2190' (1153')	2190' (1153')
		R4800m	R4800m	R5000m	R5000m
	③ NDB Z or Y	1960' (923')	1960' (923')	1960' (923')	1960' (923')
		R1500m	R1500m	R2400m	R2400m
30	ILS Z, Y or X	1244' (200')	1244' (200')	1244' (200')	1244' (200')
	FULL	② R550m	② R550m	② R550m	② R550m
	ALS out	R1200m	R1200m	R1200m	R1200m
	GLS	1237' (200')	1237' (200')	1237' (200')	1237' (200')
	FULL	② R550m	② R550m	② R550m	② R550m
	ALS out	R1200m	R1200m	R1200m	R1200m
	③ LOC Z or Y with D3.1 IMW/ D5.7 MNW ALS out	1660' (616')	1660' (616')	1660' (616')	1660' (616')
		R1500m	R1500m	R2100m	R2100m
		R1500m	R1500m	R2400m	R2400m
	③ LOC X with D3.1 IMW/ D5.7 MNW ALS out	1700' (656')	1700' (656')	1700' (656')	1700' (656')
	R1500m	R1500m	R2300m	R2300m	
	R1500m	R1500m	R2400m	R2400m	
③ LOC Z, Y or X w/o D3.1 IMW/ D5.7 MNW	2040' (996')	2040' (996')	2040' (996')	2040' (996')	
	R1500m	R1500m	R2400m	R2400m	

① Without autoland: R350m.

② R750m when a Flight Director or Autopilot or HUD to DA is not used.

③ Continuous Descent Final Approach.

URMM/MRV

JEPPESSEN

EASA AIR OPS

27 NOV 20
Eff 3 Dec (10-9S)

MINERALNYYE VODY, RUSSIA
MINERALNYYE VODY

30 (contd)	RNP	1334' (290')	1344' (300')	1354' (310')	1364' (320')
	LNAV/VNAV	R750m	R750m	R750m	R750m
	ALS out	R1400m	R1400m	R1400m	R1400m
	① RNP	1700' (656')	1700' (656')	1700' (656')	1700' (656')
	LNAV	R1500m	R1500m	R2300m	R2300m
	ALS out	R1500m	R1500m	R2400m	R2400m
	① VOR Z with D5.7	1800' (756')	1800' (756')	1800' (756')	1800' (756')
		R1500m	R1500m	R2400m	R2400m
	① VOR Z w/o D5.7	2040' (996')	2040' (996')	2040' (996')	2040' (996')
		R1500m	R1500m	R2400m	R2400m
	① VOR Y	2140' (1096')	2140' (1096')	2140' (1096')	2140' (1096')
		R1500m	R1500m	R2400m	R2400m
	VOR Y	2140' (1096')	2140' (1096')	2140' (1096')	2140' (1096')
		R4300m	R4300m	R4500m	R4500m
	ALS out	R5000m	R5000m	R5000m	R5000m

① Continuous Descent Final Approach.

CIRCLE-TO-LAND ②	100 KT	135 KT	180 KT	205 KT
	1890' (843')	1890' (843')	2180' (1133')	2330' (1283')
after VOR Y 12	2190' (1143')	2190' (1143')	2190' (1143')	2330' (1283')
after NDB Z or Y 12	1960' (913')	1960' (913')	2180' (1133')	2330' (1283')
NDB B or A 12	2210' (1163')	2210' (1163')	2210' (1163')	2330' (1283')
after VOR Z 30	2040' (993')	2040' (993')	2180' (1133')	2330' (1283')
after VOR Y 30	2140' (1093')	2140' (1093')	2180' (1133')	2330' (1283')
NDB C 30	2170' (1123')	2170' (1123')	2180' (1133')	2330' (1283')
	V1500m	V1600m	V2400m	V3600m

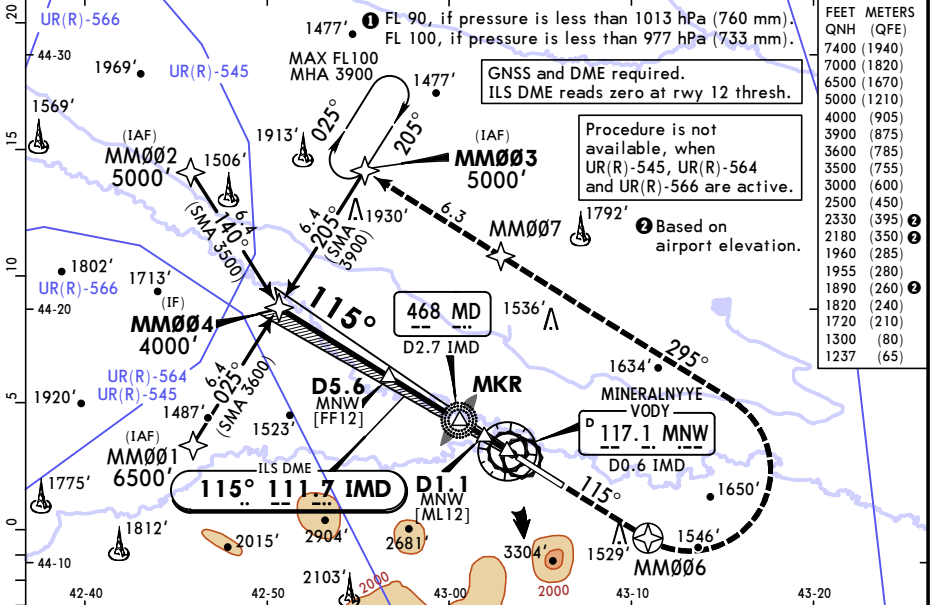
② Prohibited South of airport.

TAKE-OFF

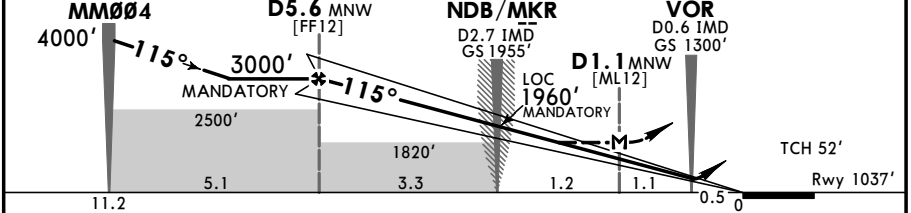
		Low Visibility Take-off				RL or RCLM		RL or CL		Adequate Vis Ref	
HIRL & CL (spacing 15m or less) & relevant RVR		RL & CL & relevant RVR		RL & CL	RL & RCLM	RL or CL	DAY	NIGHT	DAY	NIGHT	
					DAY	NIGHT	DAY	NIGHT	DAY	NIGHT	
TDZ R125m	TDZ R150m			R200m	R300m		R/V400m		R/V500m	NA	
Mid R125m	Mid R150m		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

URMM/MRV MINERALNYE VODY 27 NOV 20 (11-1) Eff 3 Dec ILS Z or LOC Z Rwy 12

ATIS 125.25 (Russian 127.4)		MINERALNYE VODY Approach 119.3	MINERALNYE VODY Krug (TWR/R) 120.7	MINERALNYE VODY Start (TWR) 128.0	Ground 121.9
LOC IMD 111.7	Final Apch Crs 115°	D5.6 MNW MANDATORY 3000' (1963')	ILS DA(H) 1237' (200')	Apt Elev 1047'	7400
MISSED APCH: Climb STRAIGHT AHEAD to MM006, then turn LEFT to MM007, then proceed to MM003 climbing to 5000' or above.					
Alt Set: hPa (mm on req)		Rwy Elev: 37 hPa	Trans level: FL 80	Trans alt: 7000'	MSA ARP
RNAV 1 for initial and missed approach.					



LOC	MNW DME	5.6	5.4	4.3	3.2	2.2
(GS out)	ALTITUDE	3000'	2950'	2610'	2260'	1920'



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

A B C D	R550m	ILS		STRAIGHT-IN LANDING LOC (GS out)		CIRCLE-TO-LAND		
		DA(H) 1237' (200')		with D2.7 IMD CDFA		Prohibited South of airport		
		FULL	TDZ or CL out	ALS out	ALS out	ALS out	ALS out	Max Kts
								MDA(H)

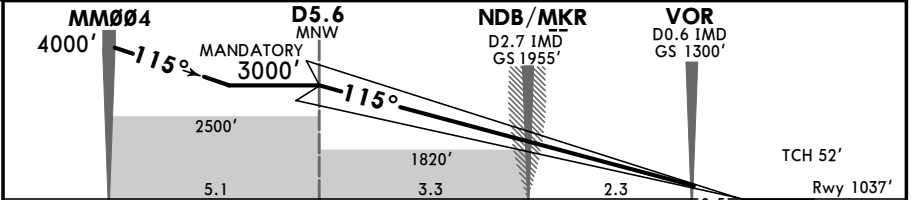
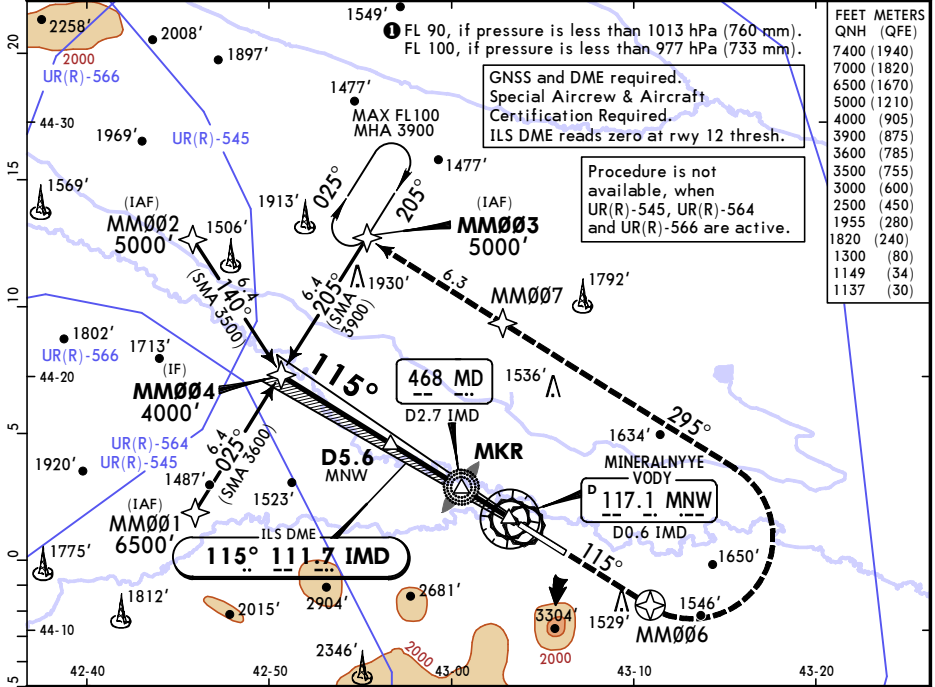
1 R750m when a Flight Director or Autopilot or HUD to DA is not used.
 2 VNAV DA(H) in lieu of MDA(H) depends on operator policy.

PANS OPS

URMM/MRV

MINERALNYE VODY 27 NOV 20 (1-1A) Eff 3 Dec CAT II ILS Z Rwy 12

ATIS 125.25 (Russian 127.4)	MINERALNYE VODY Approach 119.3	MINERALNYE VODY Krug (TWR/R) 120.7	MINERALNYE VODY Start (TWR) 128.0	Ground 121.9
LOC IMD 111.7	Final Apch Crs 115°	D5.6 MNW MANDATORY 3000' (1963')	CAT II ILS RA/DA(H) Refer to Minimums	Apt Elev 1047' Rwy 1037'
MISSED APCH: Climb STRAIGHT AHEAD to MM006, then turn LEFT to MM007, then proceed to MM003 climbing to 5000' or above.				
Alt Set: hPa (mm on req) Rwy Elev: 37 hPa Trans level: FL 80 Trans alt: 7000' RNAV 1 for initial and missed approach.				
				MSA ARP <div style="border: 1px solid black; border-radius: 50%; width: 100px; height: 100px; margin: 0 auto; display: flex; align-items: center; justify-content: center;"> 7400 </div>



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

Std	STRAIGHT-IN LANDING CAT II ILS
ABC RA 115' DA(H) 1137' (100')	D RA 129' DA(H) 1149' (112')

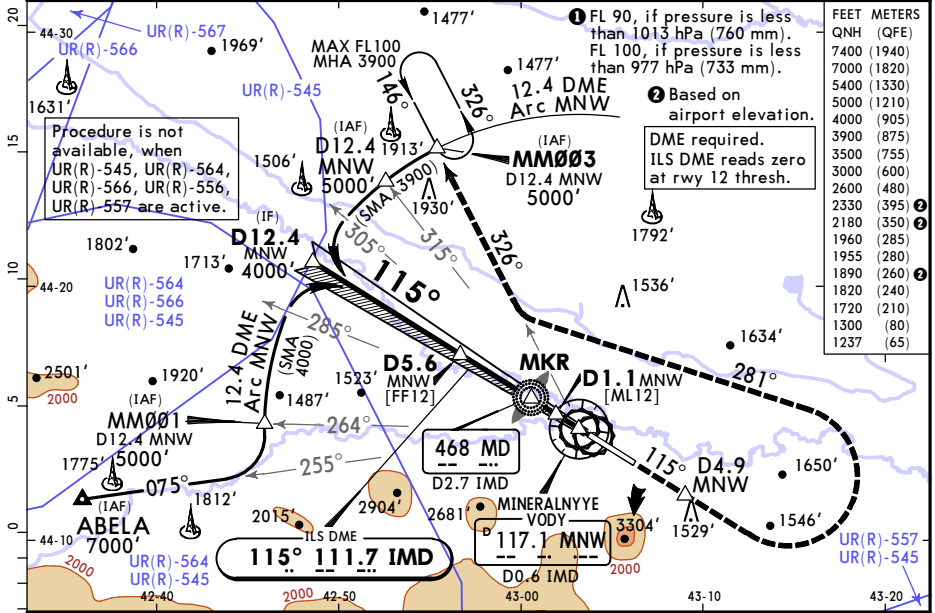
R300m

CAT D without autoland: R350m.

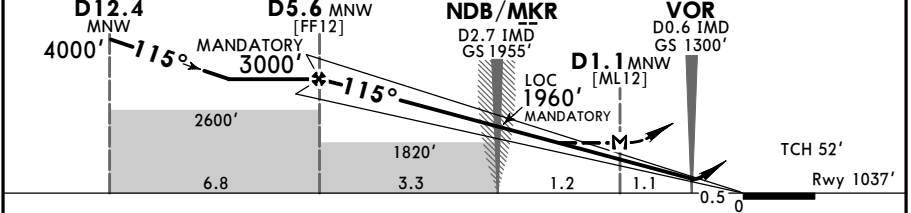
PANS OPS

URMM/MRV MINERALNYE VODY 27 NOV 20 **11-2** Eff 3 Dec ILS Y or LOC Y Rwy 12

ATIS 125.25 (Russian 127.4)		MINERALNYE VODY Approach 119.3	MINERALNYE VODY Krug (TWR/R) 120.7	MINERALNYE VODY Start (TWR) 128.0	Ground 121.9
LOC IMD 111.7	Final Aph Crs 115°	D5.6 MNW MANDATORY 3000' (1963')	ILS DA(H) 1237' (200')	Apt Elev 1047' Rwy 1037'	
MISSED APCH: Climb STRAIGHT AHEAD to D4.9 MNW, after reaching 3500' or above turn LEFT onto track 281° to intercept R-326 MNW, then proceed to D12.4 MNW climbing to 5000' or above.					
Alt Set: hPa (mm on req) Rwy Elev: 37 hPa Trans level: FL 80 1 Trans alt: 7000'					MSA MNW VOR



LOC (GS out)	MNW DME ALTITUDE	5.6	5.4	4.3	3.2	2.2
		3000'	2950'	2610'	2260'	1920'



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

A	ILS		STRAIGHT-IN LANDING LOC (GS out)				CIRCLE-TO-LAND		
	FULL	TDZ or CL out	ALS out	with D2.7 IMD CDFA	DA/MDA(H)	ALS out	w/o D2.7 IMD CDFA	DA/MDA(H)	ALS out
				1237' (200')	1720' (683')		1820' (783')		
A	R550m	R550m	R1200m						
B									
C									
D									

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

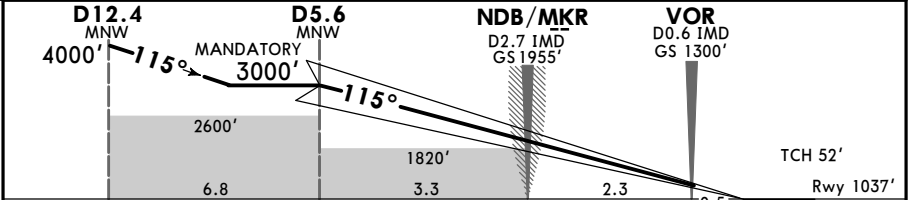
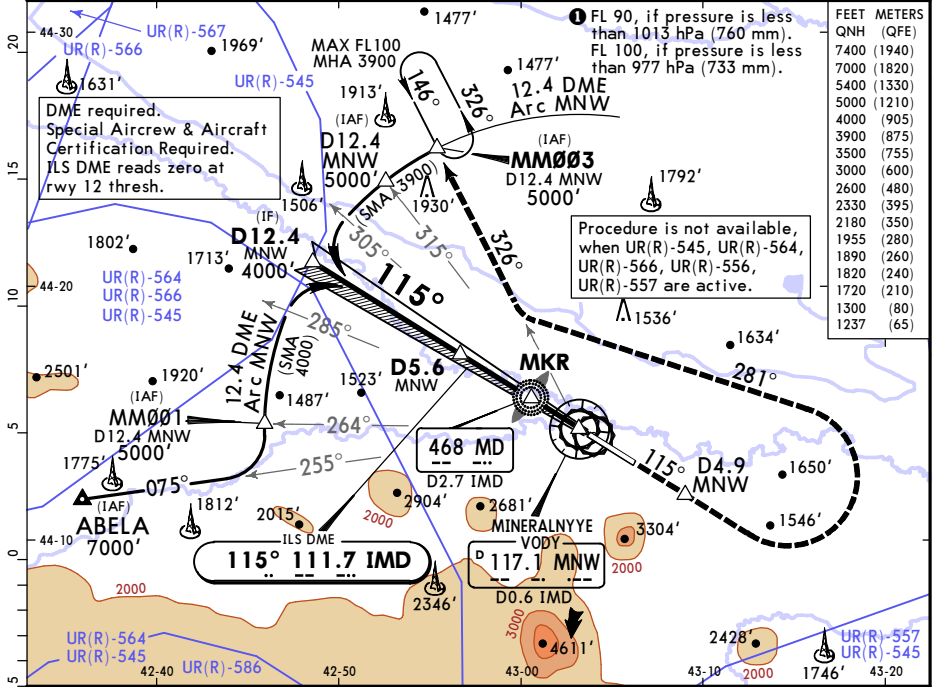
URMM/MRV MINERALNYE VODY 27 NOV 20 **11-2A** Eff 3 Dec CAT II ILS Y Rwy 12

ATIS 125.25 (Russian 127.4)	MINERALNYE VODY Approach 119.3	MINERALNYE VODY Krug (TWR/R) 120.7	MINERALNYE VODY Start (TWR) 128.0	Ground 121.9
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LOC IMD 111.7	Final Apch Crs 115°	D5.6 MNW MANDATORY 3000' (1963')	CAT II ILS RA/DA(H) Refer to Minimums	Apt Elev 1047' Rwy 1037'	
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MISSED APCH: Climb STRAIGHT AHEAD to D4.9 MNW, after reaching 3500' or above turn LEFT onto track 281° to intercept R-326 MNW, then proceed to D12.4 MNW climbing to 5000' or above.

Alt Set: hPa (mm on req) Rwy Elev: 37 hPa Trans level: FL 80 **1** Trans alt: 7000' MSA MNW VOR



Gnd speed-Kts	70	90	100	120	140	160		D4.9 MNW ↑
Gs	3.00°	372	478	531	637	743		

Std		STRAIGHT-IN LANDING CAT II ILS	
ABC RA 115' DA(H) 1137' (100')	D RA 129' DA(H) 1149' (112')		

R300m

1 CAT D without autoland: R350m.

PANS OPS

URMM/MRV MINERALNYYE VODY 27 NOV 20 (11-3) Eff 3 Dec ILS X or LOC X Rwy 12

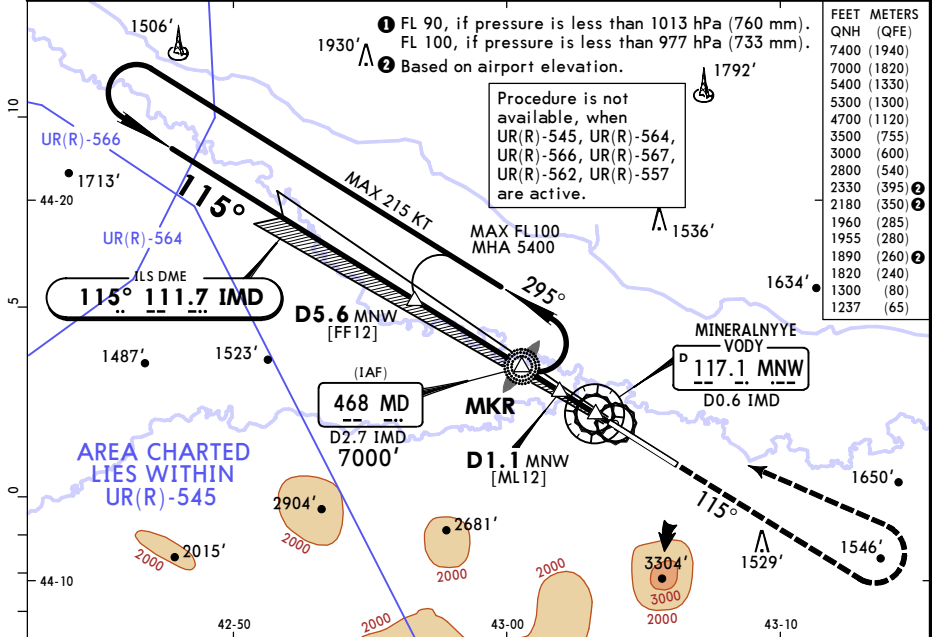
ATIS 125.25 <small>(Russian 127.4)</small>	MINERALNYYE VODY Approach 119.3	MINERALNYYE VODY Krug (TWR/R) 120.7	MINERALNYYE VODY Start (TWR) 128.0	Ground 121.9
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LOC IMD 111.7	Final ApcH Crs 115°	D5.6 MNW MANDATORY 3000' (1963')	ILS DA(H) 1237' (200')	Apt Elev 1047' Rwy 1037'	
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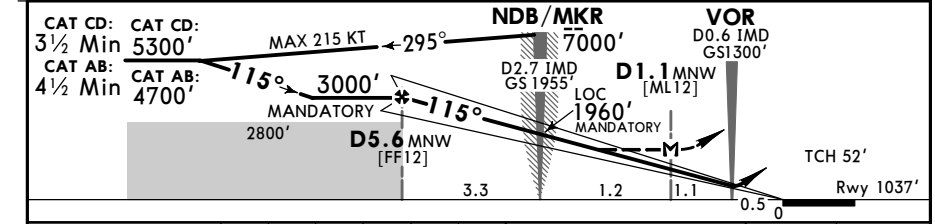
MISSED APCH: Climb STRAIGHT AHEAD to 3500' or above, turn LEFT to NDB/MKR climbing to 5300' or above.

Alt Set: hPa (mm on req) Rwy Elev: 37 hPa Trans level: FL 80 **1** Trans alt: 7000'

1. Radar control and DME required. 2. ILS DME reads zero at rwy 12 thresh. MSA MD NDB/MKR



LOC (GS out)	MNW DME ALTITUDE	5.6 3000'	5.4 2950'	4.3 2610'	3.2 2260'	2.2 1920'
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Gnd speed-Kts	70	90	100	120	140	160	HIALS-II PAPI 3500'
ILS GS or LOC Descent Angle	3.00°						
MAP at D1.1 MNW							

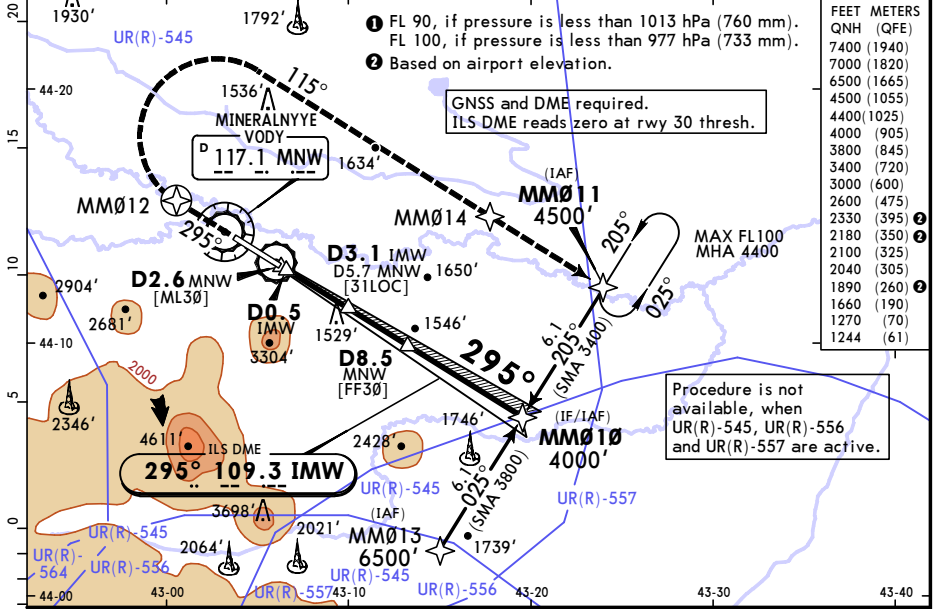
Std		STRAIGHT-IN LANDING				CIRCLE-TO-LAND	
ILS		LOC (GS out) CDFA				Prohibited South of airport	
DA(H) 1237' (200')		2 DA/MDA(H) 1820' (783')					
FULL		TDZ or CL out		ALS out		Max Kts	
R550m		R550m		R1200m		MDA(H)	
A						100	1890' (843') V1500m
B						135	1890' (843') V1600m
C						180	2180' (1133') V2400m
D						205	2330' (1283') V3600m

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

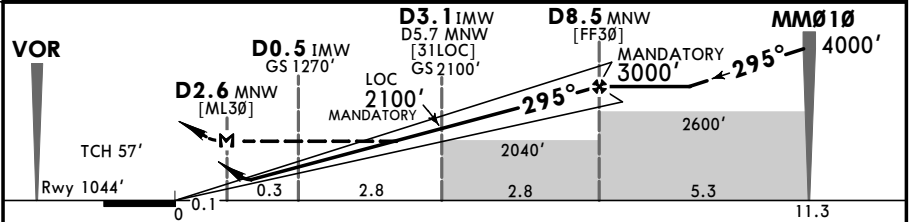
URMM/MRV MINERALNYE VODY, RUSSIA

27 NOV 20 **(11-4) Eff 3 Dec** ILS Z or LOC Z Rwy 30

ATIS 125.25 (Russian 127.4)	MINERALNYE VODY Approach 119.3	MINERALNYE VODY Krug (TWR/R) 120.7	MINERALNYE VODY Start (TWR) 128.0	Ground 121.9
LOC IMW 109.3	Final Apch Crs 295°	D8.5 MNW MANDATORY 3000' (1956')	ILS DA(H) 1244' (200')	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: FL 80 1 Trans alt: 7000' RNAV 1 for initial and missed approach.				7400 MSA ARP
FEET METERS QNH (QFE) 7400 (1940) 7000 (1820) 6500 (1665) 4500 (1055) 4400(1025) 4000 (905) 3800 (845) 3400 (720) 3000 (600) 2600 (475) 2330 (395) 2180 (350) 2100 (325) 2040 (305) 1890 (260) 1660 (190) 1270 (70) 1244 (61)				



LOC (GS out)	MNW DME ALTITUDE	5.9 2190'	7.0 2530'	8.1 2880'	8.5 3000'
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Gnd speed-Kts	70	90	100	120	140	160	HIALS PAPI MMØ12 ↑	
ILS GS or LOC Descent Angle	3.00°	372	478	531	637	743		849
MAP at D2.6 MNW								

Std	STRAIGHT-IN LANDING LOC (GS out)				CIRCLE-TO-LAND	
	ILS		with D3.1 IMW/D5.7 MNW CDFA		w/o D3.1 IMW/D5.7 MNW CDFA	
DA(H) 1244' (200')		DA/MDA(H) 1660' (616')		DA/MDA(H) 2040' (996')		Prohibited South of airport Max Kts MDA(H) 100 1890' (843') V1500m 135 1890' (843') V1600m 180 2180' (1133') V2400m 205 2330' (1283') V3600m
FULL		ALS out		ALS out		
A	R1500m		R1500m			
B	R1500m		R1500m			
C	R550m	R1200m	R2100m	R2400m		
D			R2100m	R2400m		

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

URMM/MRV MINERALNYE VODY, RUSSIA

MINERALNYE VODY 27 NOV 20 11-5 Eff 3 Dec ILS Y or LOC Y Rwy 30

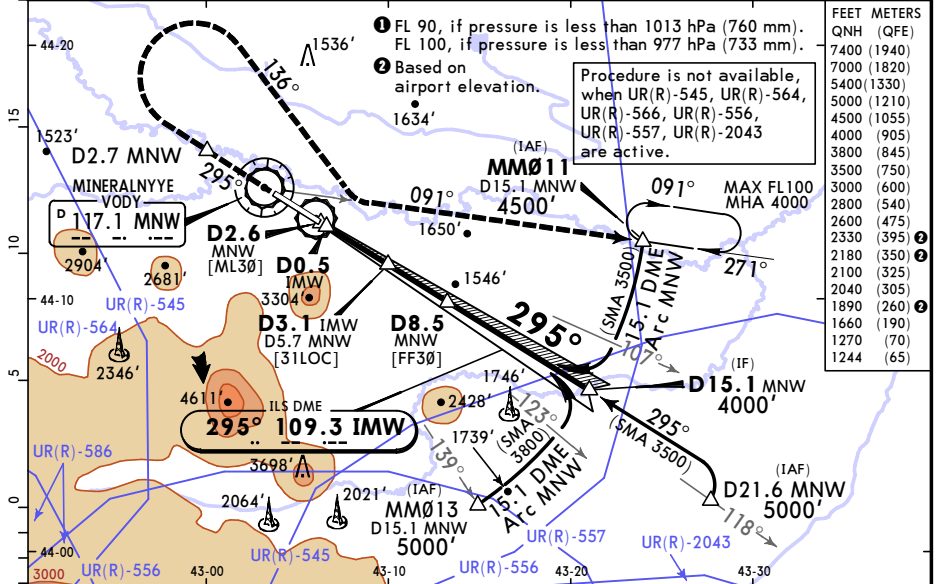
ATIS 125.25 (Russian 127.4)	MINERALNYE VODY Approach 119.3	MINERALNYE VODY Krug (TWR/R) 120.7	MINERALNYE VODY Start (TWR) 128.0	Ground 121.9
LOC IMW 109.3	Final Apch Crs 295°	D8.5 MNW MANDATORY 3000' (1956')	ILS DA(H) 1244' (200')	Apt Elev 1047' Rwy 1044'

MSA
MNNW VOR

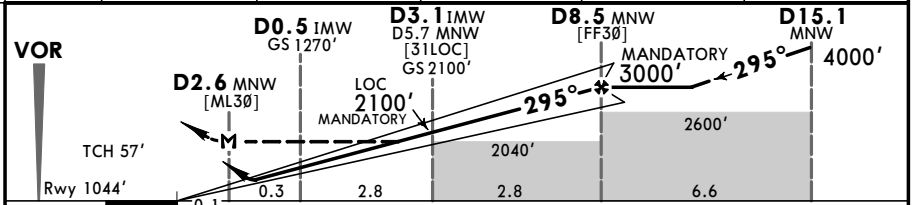
MISSED APCH: Climb STRAIGHT AHEAD to D2.7 MNW, after reaching 2800' or above turn RIGHT onto track 136° to intercept R-091 MNW, then proceed to D15.1 MNW climbing to 4500' or above.

Alt Set: hPa (mm on req) Rwy Elev: 38 hPa Trans level: FL 80 **1** Trans alt: 7000'

1. DME required. 2. ILS DME reads zero at rwy 30 thresh.



LOC (GS out)	MNNW DME ALTITUDE	5.9 2190'	7.0 2530'	8.1 2880'	8.5 3000'
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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 D2.6 MNW												

HIALS PAPI **D2.7 MNW**

Std ILS		STRAIGHT-IN LANDING LOC (GS out)				CIRCLE-TO-LAND	
		with D3.1 IMW/D5.7 MNW CDFA		w/o D3.1 IMW/D5.7 MNW CDFA		Prohibited South of airport	
DA(H) 1244' (200')		2 DA/MDA(H) 1660' (616')		2 DA/MDA(H) 2040' (996')			
		FULL ALS out		ALS out			
A			R1500m		R1500m		Max Kts MDA(H)
B	1 R550m R1200m						100 1890' (843') V1500m
C							135 1890' (843') V1600m
D			R2100m	R2400m	R2400m		180 2180' (1133') V2400m
						205 2330' (1283') V3600m	

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

CHANGES: Procedure ident. MSA. Procedure. New AOM concept. © JEPPESEN, 2015, 2020. ALL RIGHTS RESERVED.

URMM/MRV MINERALNYE VODY 27 NOV 20 **11-6** Eff 3 Dec ILS X or LOC X Rwy 30

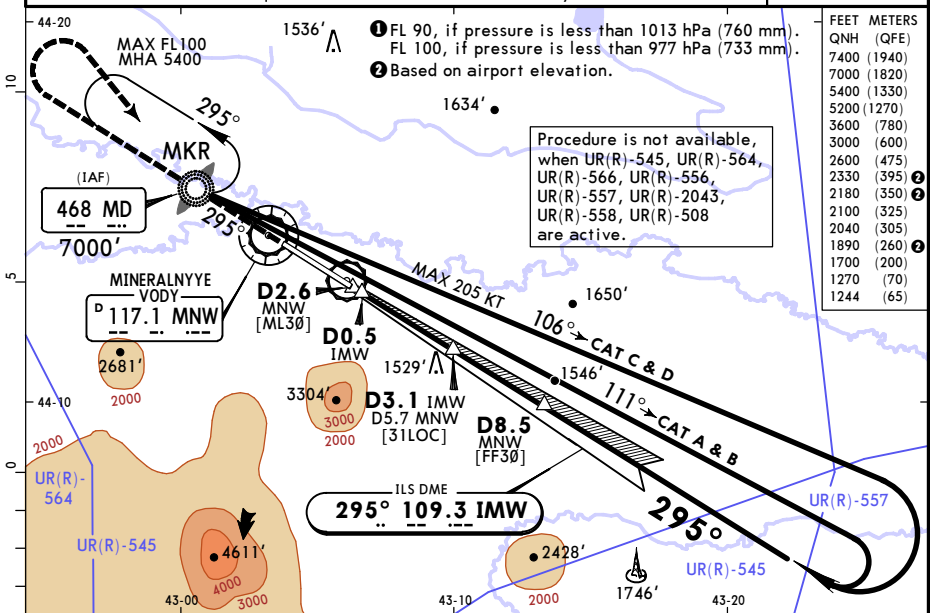
ATIS 125.25 (Russian 127.4)		MINERALNYE VODY Approach 119.3	MINERALNYE VODY Krug (TWR/R) 120.7	MINERALNYE VODY Start (TWR) 128.0	Ground 121.9
LOC IMW 109.3	Final Aptch Crs 295°	D8.5 MNW MANDATORY 3000' (1956')	ILS DA(H) 1244' (200')	Apt Elev 1047' Rwy 1044'	

MISSED APCH: Climb STRAIGHT AHEAD to 3600' or above, then turn RIGHT to NDB/MKR climbing to 5400' or above.

Alt Set: hPa (mm on req) Rwy Elev: 38 hPa Trans level: FL 80 **1** Trans alt: 7000'

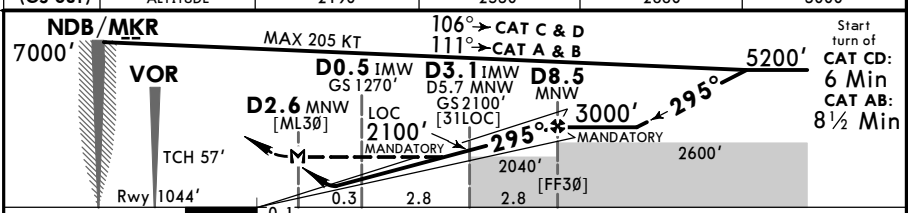
1. Radar control and DME required. 2. ILS DME reads zero at rwy 30 thresh.

MSA MD NDB/MKR



FEET METERS	
QNH (QFE)	
7400 (1940)	
7000 (1820)	
5400 (1330)	
5200 (1270)	
3600 (780)	
3000 (600)	
2600 (475)	
2330 (395)	
2180 (350)	
2100 (325)	
2040 (305)	
1890 (260)	
1700 (200)	
1270 (70)	
1244 (65)	

LOC (GS out)	MNW DME ALTITUDE	5.9 2190'	7.0 2530'	8.1 2880'	8.5 3000'
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Gnd speed-Kts	70	90	100	120	140	160	HIALS PAPI 3600'	
ILS GS or LOC Descent Angle	3.00°	372	478	531	637	743		849
MAP at D2.6 MNW								

	ILS		STRAIGHT-IN LANDING LOC (GS out)		CIRCLE-TO-LAND	
	FULL	ALS out	with D3.1 IMW/D5.7 MNW CDF A	w/o D3.1 IMW/D5.7 MNW CDF A	Prohibited South of airport	
	DA(H) 1244' (200')		1700' (656')	2040' (996')		
A					Max Kts	MDA(H)
B	1 R550m	R1200m	R1500m	R1500m	100	1890' (843') V1500m
C					135	1890' (843') V1600m
D			R2300m	R2400m	180	2180' (1133') V2400m
					205	2330' (1283') V3600m

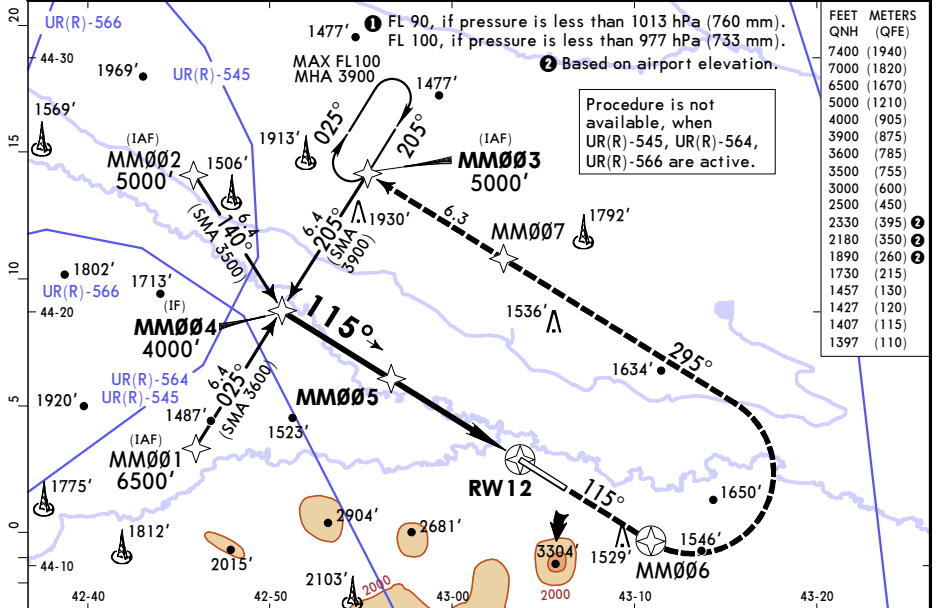
1 R750m when a Flight Director or Autopilot or HUD to DA is not used.
2 VNAV DA(H) in lieu of MDA(H) depends on operator policy.

URMM/MRV MINERALNYE VODY

JEPPESEN MINERALNYE VODY, RUSSIA

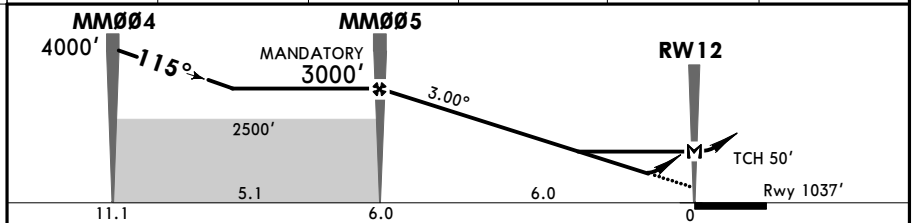
MINERALNYE VODY (12-1) Eff 3 Dec RNP Rwy 12

ATIS 125.25 <small>(Russian 127.4)</small>	MINERALNYE VODY Approach 119.3	MINERALNYE VODY Krug (TWR/R) 120.7	MINERALNYE VODY Start (TWR) 128.0	Ground 121.9
RNAV	Final Aptch Crs 115°	MM005 MANDATORY 3000' (1963')	LNAV/VNAV DA(H) Refer to Minimums	Apt Elev 1047' Rwy 1037'
MISSED APCH: Climb STRAIGHT AHEAD to MM006, then turn LEFT to MM007, then proceed to MM003 climbing to 5000' or above.				
Alt Set: hPa (mm on req) Rwy Elev: 37 hPa Trans level: FL 80 ① Trans alt: 7000' RNP apch. 1. GNSS required. 2. Baro-VNAV not authorized below -32°C.				
				MSA ARP



FEET	METERS
QNH (QFE)	
7400	(1940)
7000	(1820)
6500	(1670)
5000	(1210)
4000	(905)
3900	(875)
3600	(785)
3500	(755)
3000	(600)
2500	(450)
2330	(395) ②
2180	(350) ②
1890	(260) ②
1730	(215)
1457	(130)
1427	(120)
1407	(115)
1397	(110)

DIST TO RWY 12	6.0	5.4	4.3	3.2	2.2
ALTITUDE	3000'	2810'	2460'	2120'	1770'



Gnd speed-Kts	70	90	100	120	140	160	HIALS-II PAPI MM006 ↑
Descent Angle	3.00°	372	478	531	637	849	
LNAV/VNAV: MAP at DA							
LNAV: MAP at RWY 12							

STRAIGHT-IN LANDING				CIRCLE-TO-LAND	
LNAV/VNAV		MANDATORY 3000'		LNAV CDFA	
DA(H)		A: 1397' (360') c: 1427' (390')		Prohibited South of airport	
B: 1407' (370') D: 1457' (420')		① DA/MDA(H) 1730' (693')			
ALS out		ALS out		Max Kts	MDA(H)
A	R900m	R1500m	R1500m	100	1890' (843') V1500m
B	R1000m	R1800m	R2400m	135	1890' (843') V1600m
C	R1100m	R1900m		180	2180' (1133') V2400m
D	R1200m	R1900m		205	2330' (1283') V3600m

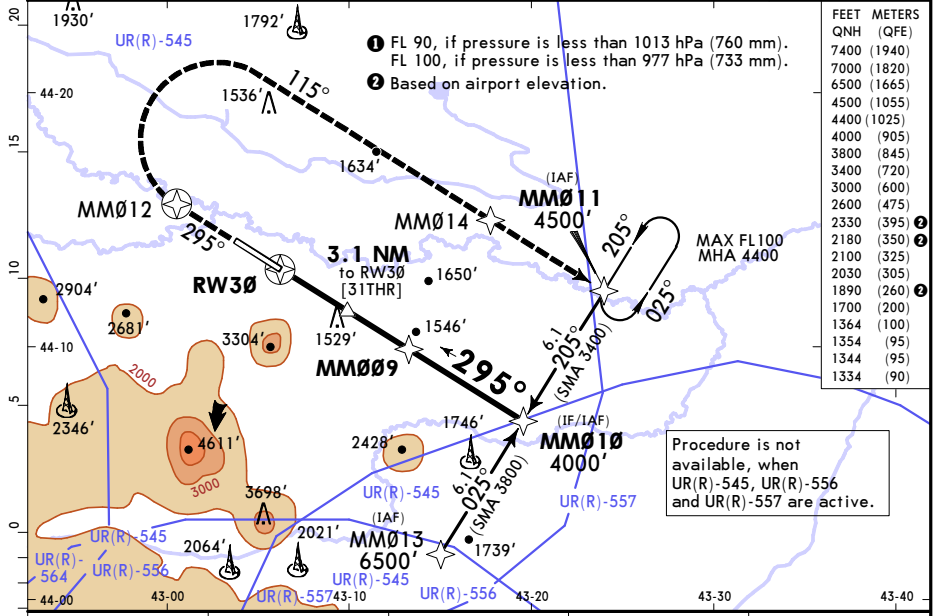
① VNAV DA(H) in lieu of MDA(H) depends on operator policy.

PANS OPS

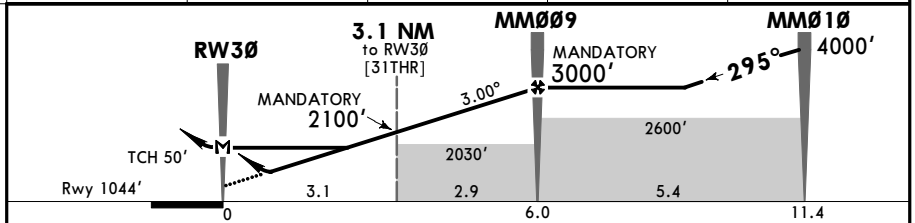
URMM/MRV MINERALNYE VODY 27 NOV 20 (12-2) Eff 3 Dec

JEPPESEN MINERALNYE VODY, RUSSIA RNP Rwy 30

ATIS 125.25 (Russian 127.4)	MINERALNYE VODY Approach 119.3	MINERALNYE VODY Krug (TWR/R) 120.7	MINERALNYE VODY Start (TWR) 128.0	Ground 121.9
RNAV	Final Apch Crs 295°	MMØ09 MANDATORY 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: FL 80 ① Trans alt: 7000'				
RNP apch. 1. GNSS required. 2. Baro-VNAV not authorized below -32°C.				MSA ARP <div style="border: 1px solid black; border-radius: 50%; width: 100px; height: 100px; margin: 0 auto; display: flex; align-items: center; justify-content: center;"> 7400 </div>



DIST to RW30	2.7	3.8	4.9	6.0
ALTITUDE	1960'	2300'	2650'	3000'



Gnd speed-Kts	70	90	100	120	140	160		HIALS PAPI ↑ MMØ12
Descent Angle	3.00°							
LNAV/VNAV: MAP at DA								
LNAV: MAP at RW30								

	STRAIGHT-IN LANDING	CIRCLE-TO-LAND
	LNAV/VNAV DA(H) A: 1334' (290') C: 1354' (310') B: 1344' (300') D: 1364' (320')	LNAV CDFA DA/MDA(H) 1700' (656')
	Prohibited South of airport	
	ALS out	ALS out
A		Max Kts MDA(H) 100 1890' (843') V 1500m
B	R750m	135 1890' (843') V 1600m
C	R1400m	180 2180' (1133') V 2400m
D	R2300m R2400m	205 2330' (1283') V 3600m

① VNAV DA(H) in lieu of MDA(H) depends on operator policy. CHANGES: Procedure ident. MSA. Procedure. New AOM concept. © JEPPESEN, 2011, 2020. ALL RIGHTS RESERVED.

URMM/MRV



JEPPESEN MINERALNYE VODY, RUSSIA

MINERALNYE VODY

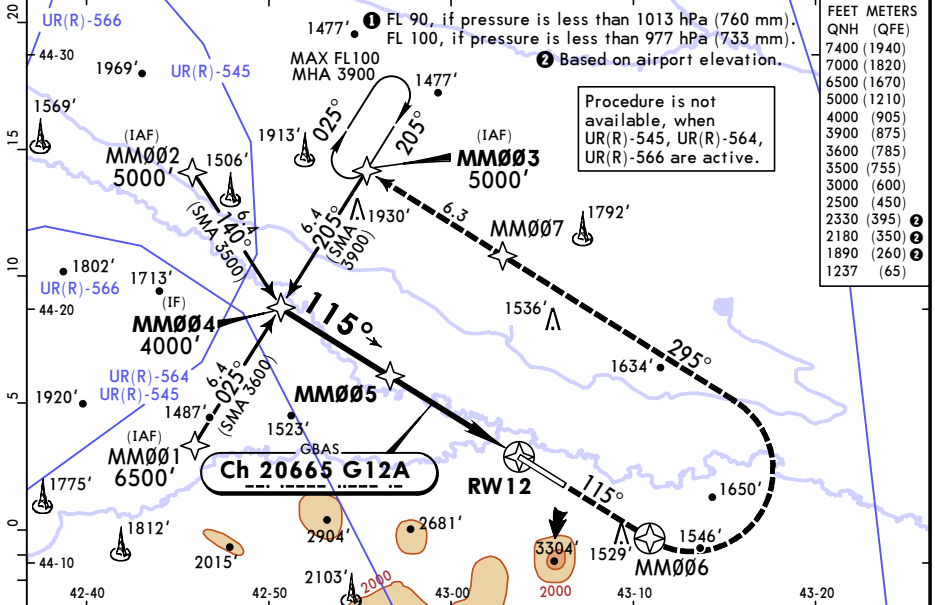
27 NOV 20

(12-40)

Eff 3 Dec

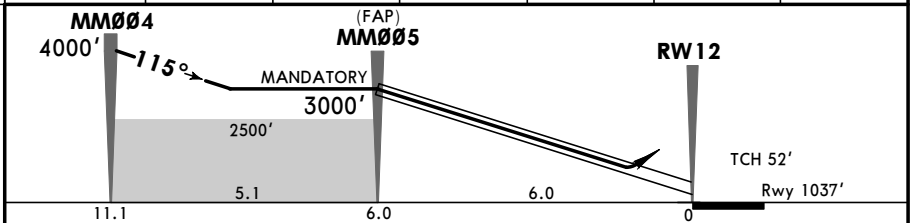
GLS Rwy 12

BRIEFING STRIP™	ATIS 125.25 (Russian 127.4)	MINERALNYE VODY Approach 119.3	MINERALNYE VODY Krug (TWR/R) 120.7	MINERALNYE VODY Start (TWR) 128.0	Ground 121.9	
	GBAS Ch 20665 G12A	Final Aptch Crs 115°	MM005 MANDATORY 3000' (1963')	GLS DA(H) 1237' (200')	Apt Elev 1047' Rwy 1037'	7400
	MISSED APCH: Climb STRAIGHT AHEAD to MM006, then turn LEFT to MM007, then proceed to MM003 climbing to 5000' or above.					
Alt Set: hPa (mm on req) Rwy Elev: 37 hPa Trans level: FL 80 1 Trans alt: 7000' RNAV 1 for initial and missed approach. GNSS required.						
					MSA ARP	



FEET METERS	
QNH	(QFE)
7400	(1940)
7000	(1820)
6500	(1670)
5000	(1210)
4000	(905)
3900	(875)
3600	(785)
3500	(755)
3000	(600)
2500	(450)
2330	(395)
2180	(350)
1890	(260)
1237	(65)

DIST to RW12	6.0	5.4	4.3	3.2	2.2	1.1
ALTITUDE	3000'	2810'	2460'	2120'	1770'	1430'



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

PANS OPS	STRAIGHT-IN LANDING			CIRCLE-TO-LAND	
	GLS				
	Prohibited South of airport				
	DA(H) 1237' (200')				
	FULL	TDZ or CL out	ALS out	Max Kts	MDA(H)
A				100	1890' (843') V1500m
B	R550m	1 R550m	R1200m	135	1890' (843') V1600m
C				180	2180' (1133') V2400m
D				205	2330' (1283') V3600m

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

URMM/MRV MINERALNYE VODY 27 NOV 20 (13-1) Eff 3 Dec

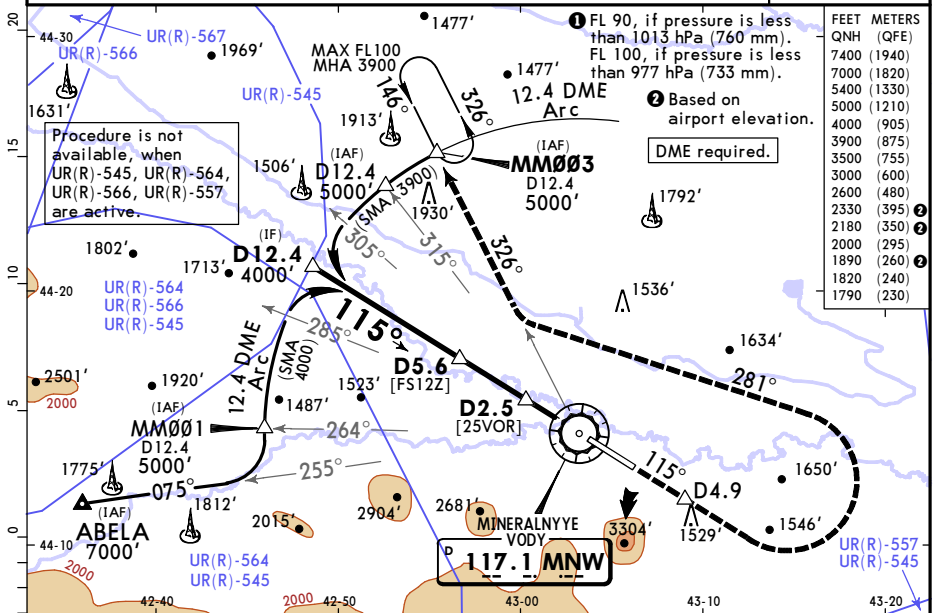
JEPPESEN MINERALNYE VODY, RUSSIA VOR Z Rwy 12

ATIS 125.25 (Russian 127.4)	MINERALNYE VODY Approach 119.3	MINERALNYE VODY Krug (TWR/R) 120.7	MINERALNYE VODY Start (TWR) 128.0	Ground 121.9
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VOR MNW 117.1	Final Apch Crs 115°	D5.6 MANDATORY 3000' (1963')	DA/MDA(H) (CONDITIONAL) 1790' (753')	Apt Elev 1047' Rwy 1037'	
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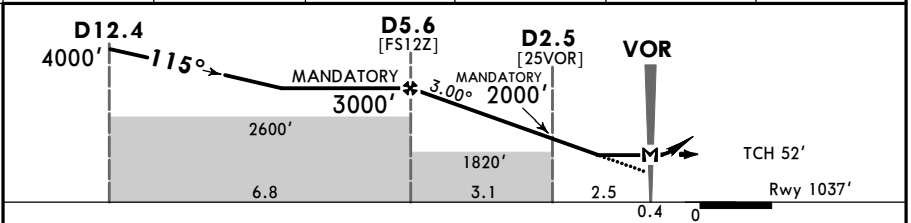
MISSED APCH: Climb on 115° to D4.9, after reaching 3500' or above turn LEFT onto track 281° to intercept R-326, then proceed to D12.4 climbing to 5000' or above.

Alt Set: hPa (mm on req) Rwy Elev: 37 hPa Trans level: FL 80 **1** Trans alt: 7000' MSA MNW VOR



FEET	METERS
7400	(1940)
7000	(1820)
5400	(1330)
5000	(1210)
4000	(905)
3900	(875)
3500	(755)
3000	(600)
2600	(480)
2330	(395)
2180	(350)
2000	(295)
1890	(260)
1820	(240)
1790	(230)

MNW DME	5.6	5.4	4.3	3.2	2.2
ALTITUDE	3000'	2950'	2610'	2260'	1920'



Gnd speed-Kts	70	90	100	120	140	160	HIALS-II PAPI
Descent Angle 3.00°	372	478	531	637	743	849	
MAP at VOR							D4.9 on 115°

	STRAIGHT-IN LANDING		CIRCLE-TO-LAND
	with D2.5 CDFA	w/o D2.5 CDFA	
	1 DA/MDA(H) 1790' (753')	1 DA/MDA(H) 1820' (783')	Prohibited South of airport
	ALS out	ALS out	
A	R1500m	R1500m	100 1890' (843') V1500m
B			135 1890' (843') V1600m
C	R2400m	R2400m	180 2180' (1133') V2400m
D			205 2330' (1283') V3600m

1 VNAV DA(H) in lieu of MDA(H) depends on operator policy.
 CHANGES: Procedure ident. MSA. Procedure. New AOM concept. © JEPPESEN, 2011, 2020. ALL RIGHTS RESERVED.

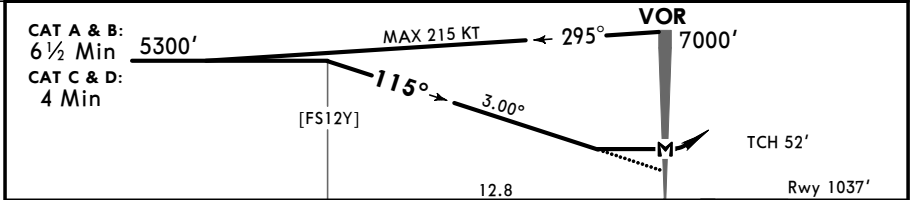
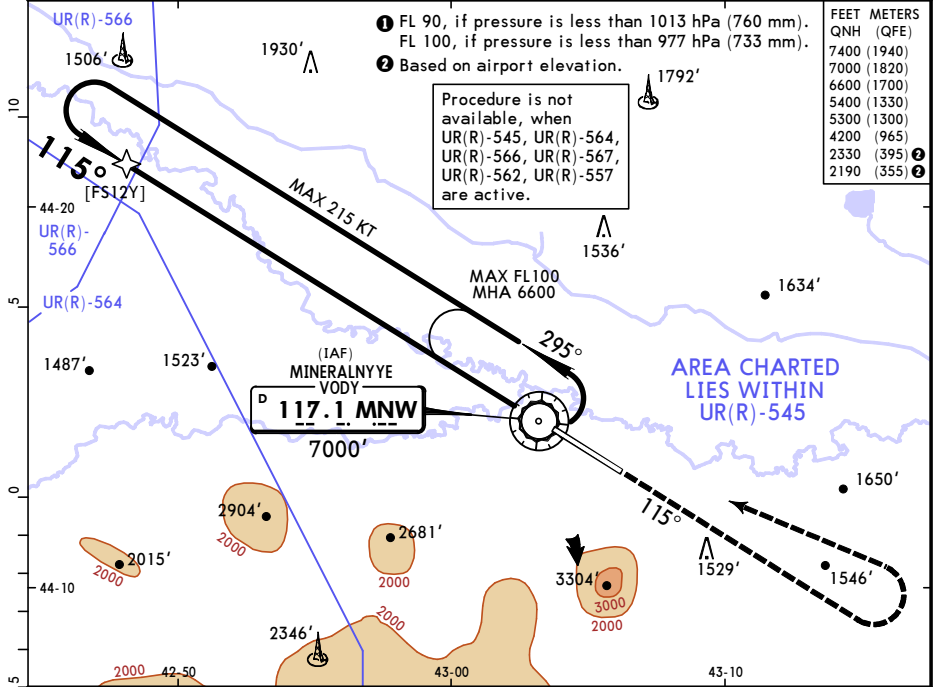
URMM/MRV MINERALNYYE VODY 27 NOV 20 (13-2) Eff 3 Dec

JEPPESEN MINERALNYYE VODY, RUSSIA VOR Y Rwy 12

ATIS 125.25 (Russian 127.4)	MINERALNYYE VODY Approach 119.3	MINERALNYYE VODY Krug (TWR/R) 120.7	MINERALNYYE VODY Start (TWR) 128.0	Ground 121.9
VOR MNW 117.1	Final Apch Crs 115°	No FAF	DA/MDA(H) 2190' (1153')	Apt Elev 1047' Rwy 1037'

MISSED APCH: Climb on 115° 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: FL 80 Trans alt: 7000' MSA MNW VOR



Gnd speed-Kts	70	90	100	120	140	160	HIALS-II PAPI	4200' on 115°
Descent Angle 3.00°	372	478	531	637	743	849		
MAP at VOR								

Std STRAIGHT-IN LANDING	CIRCLE-TO-LAND
CDFA	Prohibited South of airport
DA/MDA(H) 2190' (1153')	
ALS out	Max Kts, MDA(H)
A R1500m	100 2190' (1143') V1500m
B R1500m	135 2190' (1143') V1600m
C R2400m	180 2190' (1143') V2400m
D R2400m	205 2330' (1283') V3600m

① VNAV DA(H) in lieu of MDA(H) depends on operator policy.
 CHANGES: New procedure. © JEPPESEN, 2020. ALL RIGHTS RESERVED.

URMM/MRV MINERALNYE VODY 27 NOV 20 13-3 Eff 3 Dec

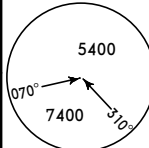
MINERALNYE VODY VOR Z Rwy 30

ATIS 125.25 <small>(Russian 127.4)</small>	MINERALNYE VODY Approach 119.3	MINERALNYE VODY Krug (TWR/R) 120.7	MINERALNYE VODY Start (TWR) 128.0	Ground 121.9
VOR MNW 117.1	Final Aptch Crs 295°	D8.5 MANDATORY 3000' (1956')	DA/MDA(H) (CONDITIONAL) 1800' (756')	Apt Elev 1047' Rwy 1044'

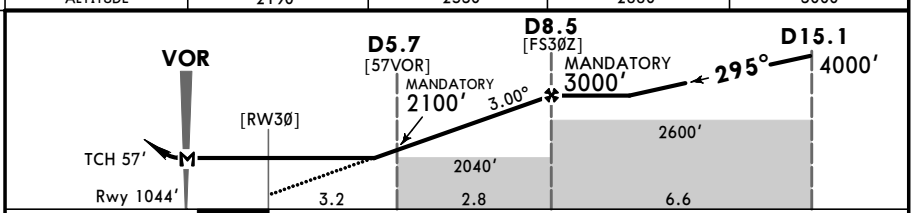
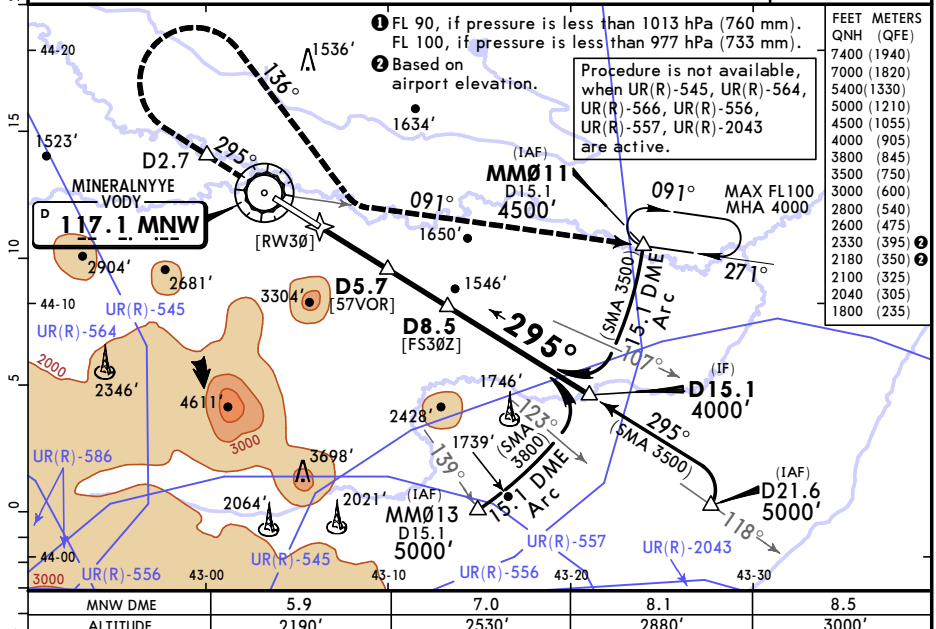
MISSED APCH: Climb STRAIGHT AHEAD to D2.7, after reaching 2800' or above turn RIGHT onto track 136° to intercept R-091, then proceed to D15.1 climbing to 4500' or above.


Alt Set: hPa (mm on req) Rwy Elev: 38 hPa Trans level: FL 80 **1** Trans alt: 7000'

DME required.



MSA
MNW VOR



Gnd speed-Kts	70	90	100	120	140	160		HIALS PAPI 	D2.7 ↑
Descent Angle 3.00°	372	478	531	637	743	849			
MAP at VOR									

STRAIGHT-IN LANDING				CIRCLE-TO-LAND	
with D5.7 CDFA		w/o D5.7 CDFA		Prohibited South of airport	
1 DA/MDA(H) 1800' (756')		1 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			180	2180' (1133') V2400m
D				205	2330' (1283') V3600m

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

CHANGES: Procedure ident. MSA. Procedure. New AOM concept. © JEPPESEN, 2015, 2020. ALL RIGHTS RESERVED.

URMM/MRV MINERALNYE VODY 27 NOV 20 (16-1) Eff 3 Dec

MINERALNYE VODY NDB Z Rwy 12

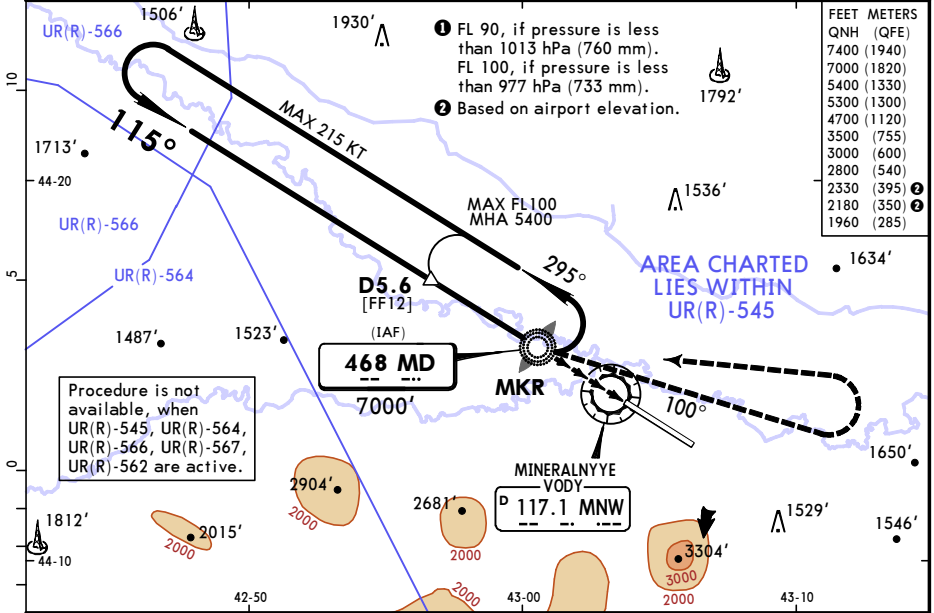
ATIS 125.25 (Russian 127.4)	MINERALNYE VODY Approach 119.3	MINERALNYE VODY Krug (TWR/R) 120.7	MINERALNYE VODY Start (TWR) 128.0	Ground 121.9
NDB MD 468	Final Apch Crs 115°	D5.6 MANDATORY 3000' (1963')	DA/MDA(H) 1960' (923')	Apt Elev 1047' Rwy 1037'

MISSED APCH: Climb on 100° from NDB to 3500' or above, turn LEFT to NDB/MKR climbing to 5300' or above.
 Turn before MAP prohibited.

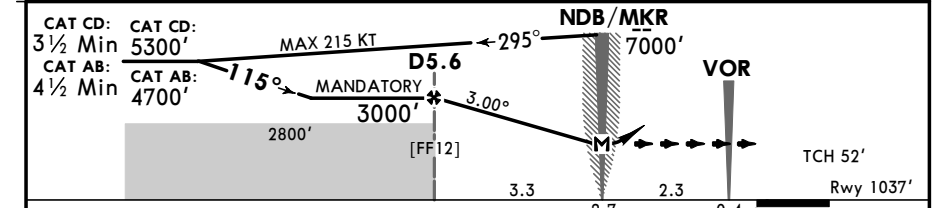
Alt Set: hPa (mm on req) Rwy Elev: 37 hPa Trans level: FL 80 Trans alt: 7000'

Radar control and DME required.

MSA
 MD NDB/MKR



MNW DME	5.6	4.9	3.8	2.7
ALTITUDE	3000'	2780'	2430'	2090'



Gnd speed-Kts	70	90	100	120	140	160	HIALS-II PAPI	3500' on 100° from MD 468
Descent Angle 3.00°	372	478	531	637	743	849		
MAP at NDB/MKR								

Std	STRAIGHT-IN LANDING	CIRCLE-TO-LAND
	CDFA DA/MDA(H) 1960' (923')	Prohibited South of airport
	ALS out	Max Kts MDA(H)
A	R1500m	100 1960' (913') V1500m
B		135 1960' (913') V1600m
C	R2400m	180 2180' (1133') V2400m
D		205 2330' (1283') V3600m

I VNAV DA(H) in lieu of MDA(H) depends on operator policy.
 CHANGES: New procedure. © JEPPESEN, 2020. ALL RIGHTS RESERVED.

URMM/MRV MINERALNYE VODY 27 NOV 20 (16-2) Eff 3 Dec

MINERALNYE VODY NDB Y Rwy 12

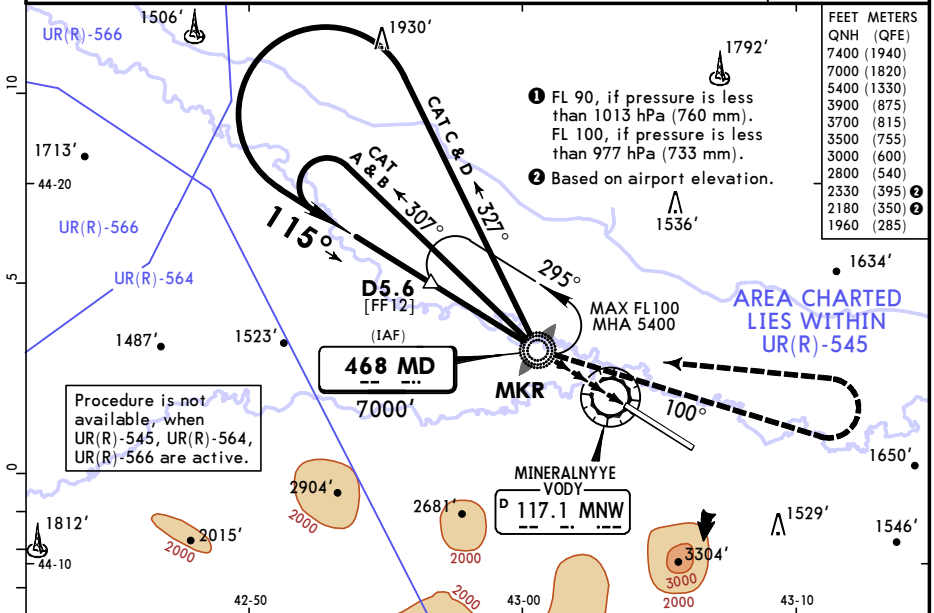
ATIS 125.25 (Russian 127.4)	MINERALNYE VODY Approach 119.3	MINERALNYE VODY Krug (TWR/R) 120.7	MINERALNYE VODY Start (TWR) 128.0	Ground 121.9
NDB MD 468	Final Apch Crs 115°	D5.6 MANDATORY 3000' (1963')	DA/MDA(H) 1960' (923')	Apt Elev 1047' Rwy 1037'

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

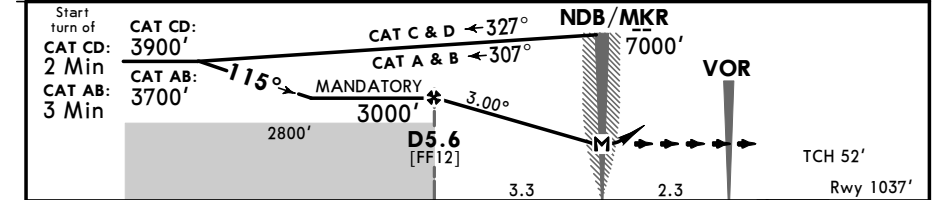
Alt Set: hPa (mm on req) Rwy Elev: 37 hPa Trans level: FL 80 **1** Trans alt: 7000'

Radar control and DME required.

MSA
 MD NDB/MKR



MNW DME	5.6	4.9	3.8	2.7
ALTITUDE	3000'	2780'	2430'	2090'



Gnd speed-Kts	70	90	100	120	140	160	HIALS-II PAPI	3500' onto 100° from MD 468
Descent Angle 3.00°	372	478	531	637	743	849		
MAP at NDB/MKR								

Std	STRAIGHT-IN LANDING	CIRCLE-TO-LAND
	CDFA	Prohibited South of airport
	1 DA/MDA(H) 1960' (923')	
	ALS out	Max Kts MDA(H)
A	R1500m	100 1960' (913') V1500m
B		135 1960' (913') V1600m
C		180 2180' (1133') V2400m
D	R2400m	205 2330' (1283') V3600m

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

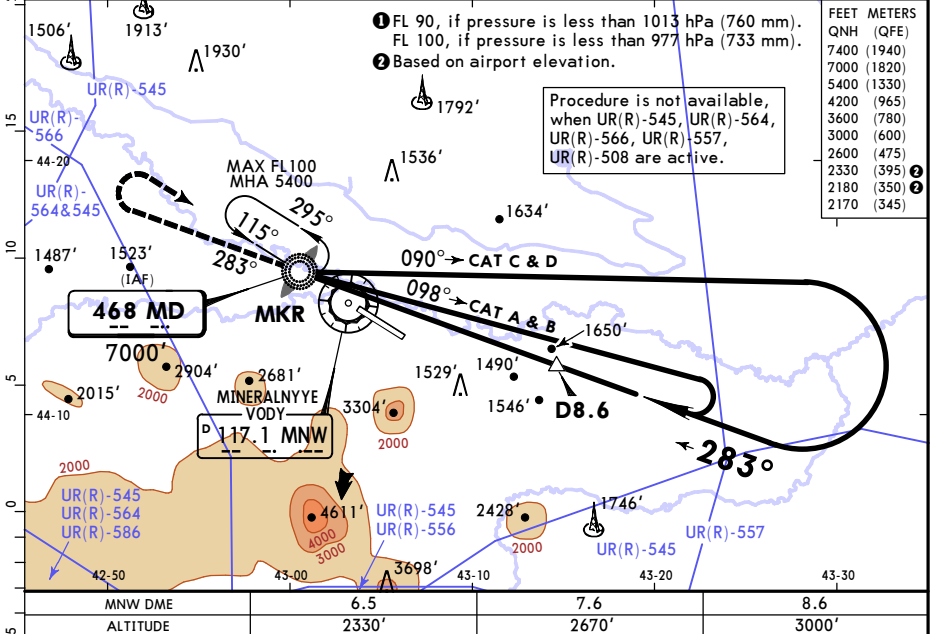
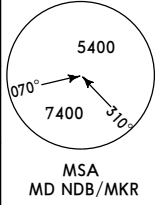
CHANGES: New procedure. © JEPPESEN, 2020. ALL RIGHTS RESERVED.

URMM/MRV MINERALNYYE VODY 27 NOV 20 (16-5) Eff 3 Dec

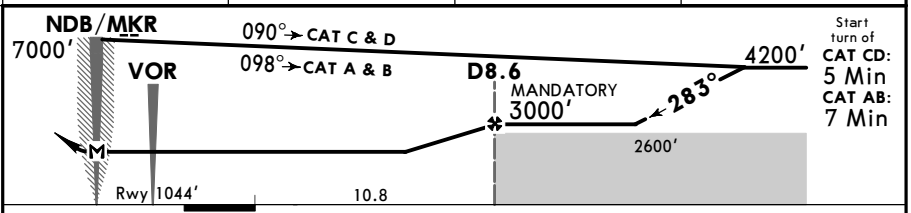
JEPPESEN MINERALNYYE VODY, RUSSIA

MINERALNYYE VODY 27 NOV 20 (16-5) Eff 3 Dec NDB C Rwy 30

BREEZING STRIP™ ATIS 125.25 (Russian 127.4)	MINERALNYYE VODY Approach 119.3	MINERALNYYE VODY Krug (TWR/R) 120.7	MINERALNYYE VODY Start (TWR) 128.0	Ground 121.9
NDB MD 468	Final Apch Crs 283°	D8.6 MANDATORY 3000' (1956')	MDA(H) Refer to Minimums	Apt Elev 1047' Rwy 1044'
MISSED APCH: Climb STRAIGHT AHEAD to 3600' or above, turn RIGHT to NDB/MKR climbing to 5400' or above. Turn before MAP prohibited.				
Alt Set: hPa (mm on req) Rwy Elev: 38 hPa Trans level: FL 80 ① Trans alt: 7000'				
1. Radar control and DME required. 2. Final approach track offset 12° from Rwy centerline.				



FEET	METERS
QNH (QFE)	
7400 (1940)	
7000 (1820)	
5400 (1330)	
4200 (965)	
3600 (780)	
3000 (600)	
2600 (475)	
2330 (395)	
2180 (350)	
2170 (345)	



Gnd speed-Kts	70	90	100	120	140	160	HIALS-II PAPI	3600' ↑	
Descent Angle 3.00°	372	478	531	637	743	849			
MAP at NDB/MKR									

Std		CIRCLE-TO-LAND	
Prohibited South of airport			
	Max Kts	MDA(H)	V
A	100	2170' (1123')	V1500m
B	135	2170' (1123')	V1600m
C	180	2180' (1133')	V2400m
D	205	2330' (1283')	V3600m

PANS OPS



Chart changes since cycle 25-2020

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

ACT	PROCEDURE IDENT	INDEX	REV DATE	EFF DATE
MINERALNYE VODY, (MINERALNYE VODY - URMM)				
REV	RADAR MNM ALTS	10-1R	18 Dec 2020	

TERMINAL CHART CHANGE NOTICES

No Chart Change Notices for Airport URMM

Chart Change Notices for Country RUS

Type: Gen Tmnl

Effectivity: Temporary

Begin Date: 20201203

End Date: Until Further Notice

Due to the extent and complexity of changes within the Russian airspace, not all affected procedures may be published in time for the AIRAC effective date 03rd Dec. Please visit the NOTICES & ALERTS page on www.jepesen.com for more detailed and most current information on affected location and procedures.