

ADD = Added chart, REV = Revised chart, DEL = Deleted chart.

No revision activity since Disc 09-2011

TERMINAL CHART NOTAMs

No Chart NOTAMs for Airport URMM

URMM (Mineralnyye Vody)**General Info**

Mineralnyye Vody, RUS

N 44° 13.5' E 43° 05.0' Mag Var: 5.6°E

Elevation: 1054'

Public, IFR, Control Tower, Customs, Landing Fee

Fuel: Jet A-1

Repairs: Minor Airframe, Minor Engine

Time Zone Info: GMT+3:00 uses DST

Runway Info

Runway 12-30 12795' x 197' concrete

Runway 12 (117.0°M) TDZE 1043'

Lights: Edge, ALS, Centerline, TDZ

Runway 30 (297.0°M) TDZE 1046'

Lights: Edge, ALS, Centerline

Communications InfoATIS **127.4** Non-EnglishATIS **125.25**Mineralnyye Vody Start Tower **128.0**Mineralnyye Vody Taxiing Ground Control **121.9**Mineralnyye Vody Approach Control **119.3**Mineralnyye Vody Krug Radar **120.7****Notebook Info**

URMM/MRV

MINERALNYYE VODY

7 MAY 10

10-2



JEPPESSEN MINERALNYYE VODY, RUSSIA

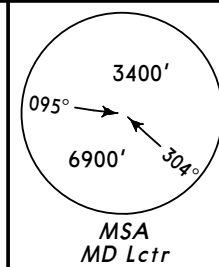
STAR

ATIS
125.25
 (Russian 127.4)

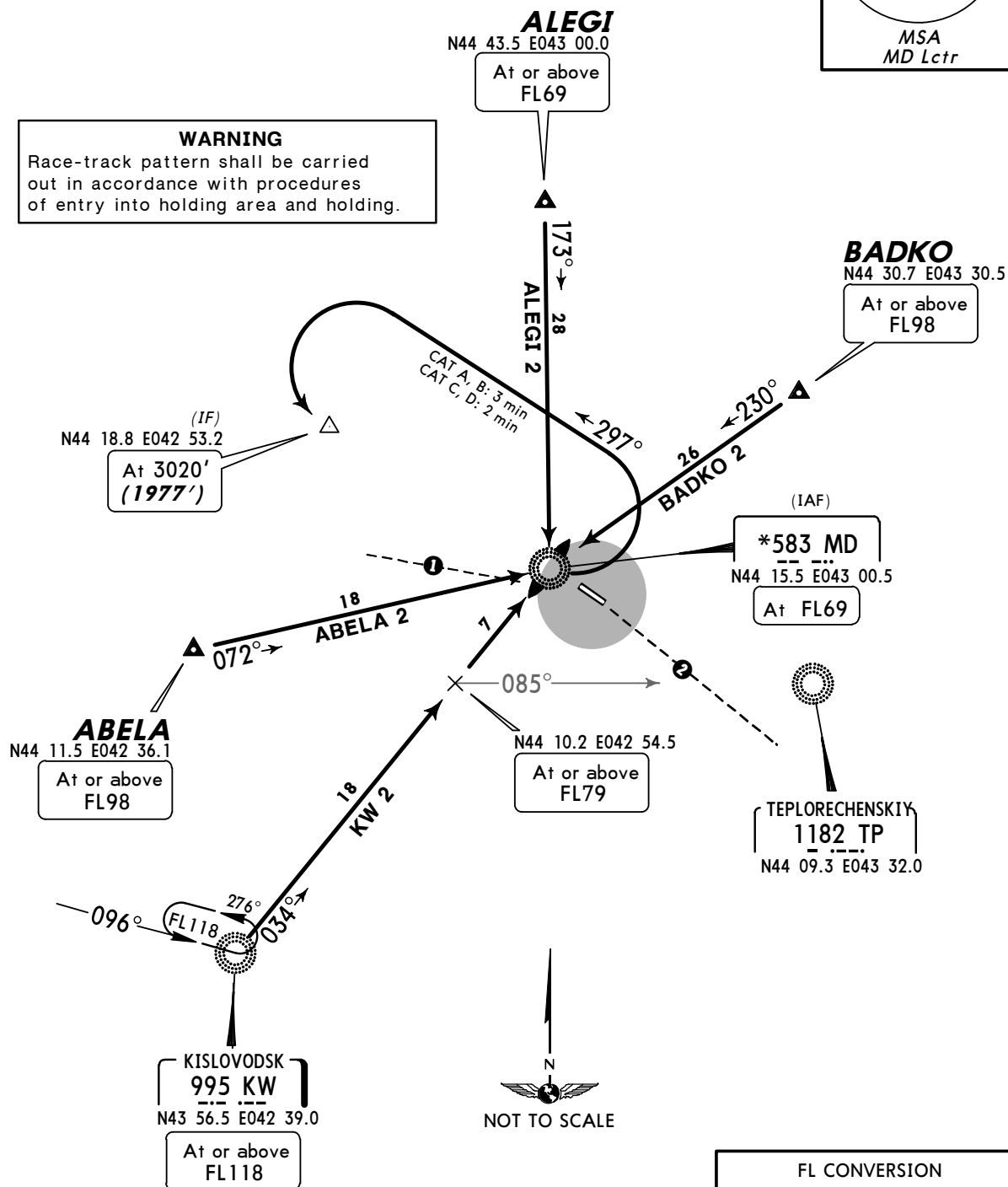
Apt Elev
1054'

Alt Set: MM (hPa on request) QNH on request **(QFE)**
 Trans level: FL59
 FL69 if pressure is less than 704mm (938.6 hPa)
 Trans alt: 4010' **(2967')**

**ABELA 2, ALEGI 2, BADKO 2, KW 2
 RWY 12 ARRIVALS**



WARNING
 Race-track pattern shall be carried out in accordance with procedures of entry into holding area and holding.



- ① 095° to ARP between 11.3 NM and 5.1 NM do not fly south below FL59.
- ② 304° to ARP between 12.1 NM and 1.9 NM do not fly south below FL59.

FL CONVERSION	
FL118	FL3600m
FL98	FL3000m
FL79	FL2400m
FL69	FL2100m
FL59	FL1800m

ALT/HEIGHT CONVERSION	
QNH	(QFE)
4010'	(2967' - 900m)
3020'	(1977' - 600m)

URMM/MRV
MINERALNYYE VODY

7 MAY 10

(10-2A)

JEPPESEN MINERALNYYE VODY, RUSSIA

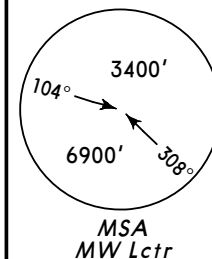
STAR

ATIS
125.25
(Russian 127.4)

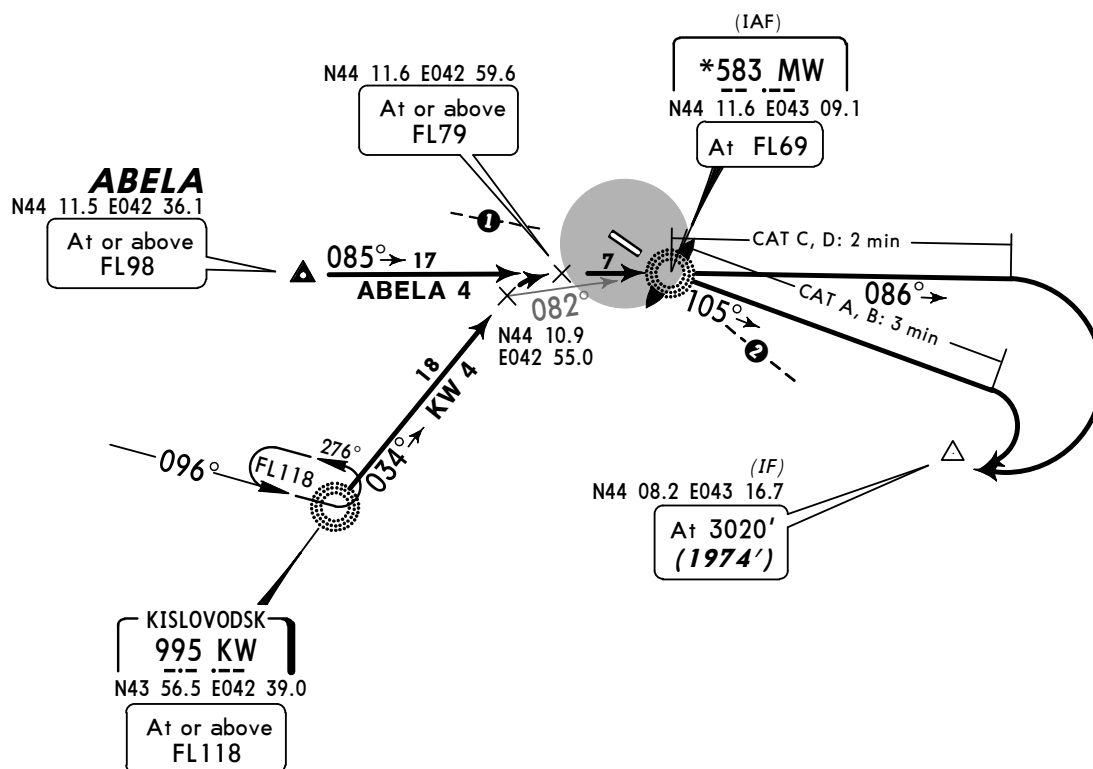
Apt Elev
1054'

Alt Set: MM (hPa on request) QNH on request **(QFE)**
Trans level: FL59
FL69 if pressure is less than 704mm (938.6 hPa)
Trans alt: 4010' **(2964')**

ABELA 4, KW 4
RWY 30 ARRIVALS



- ① 095° to ARP between 11.3 NM and 5.1 NM do not fly south below FL59.
- ② 304° to ARP between 12.1 NM and 1.9 NM do not fly south below FL59.



FL CONVERSION	
FL118	FL3600m
FL98	FL3000m
FL79	FL2400m
FL69	FL2100m
FL59	FL1800m

ALT/HEIGHT CONVERSION	
QNH	(QFE)
4010'	(2964' - 900m)
3020'	(1974' - 600m)

URMM/MRV

MINERALNYYE VODY

7 MAY 10

10-2B

JEPPESSEN MINERALNYYE VODY, RUSSIA

STAR

ATIS
125.25
 (Russian 127.4)

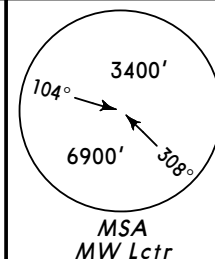
Apt Elev
1054'

Alt Set: MM (hPa on request) QNH on request **(QFE)**
 Trans level: FL59
 FL69 if pressure is less than 704mm (938.6 hPa)
 Trans alt: 4010' **(2964')**

**ALEGI 4C [ALEG4C]
 BADKO 4C [BADK4C]
 RWY 30 ARRIVALS**

WARNING

Race-track pattern shall be carried out in accordance with procedures of entry into holding area and holding.



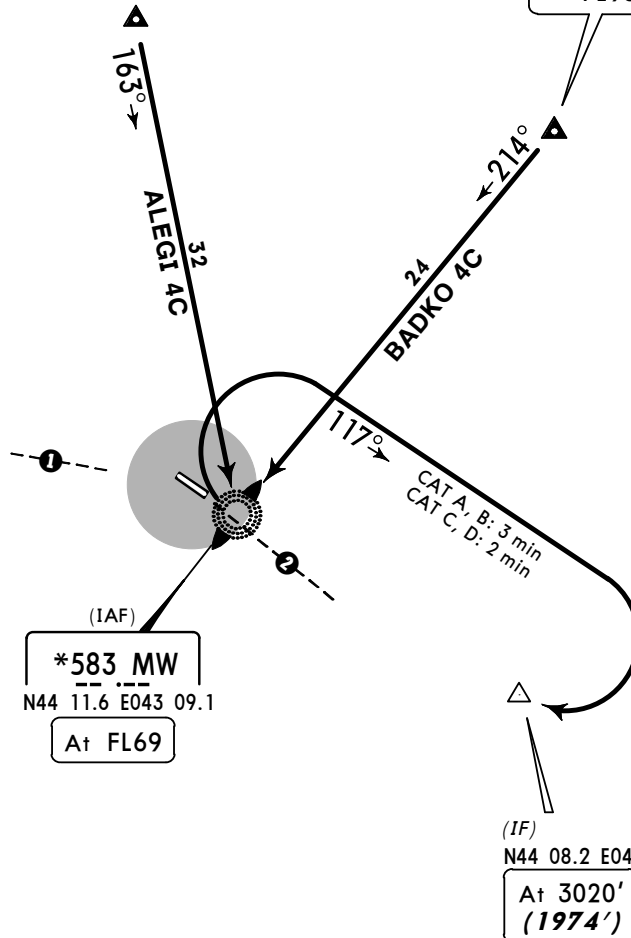
ALEGI
 N44 43.5 E043 00.0

At or above
 FL69

BADKO

N44 30.7 E043 30.5

At or above
 FL98



FL CONVERSION
 FL98 **FL3000m**
 FL69 **FL2100m**
 FL59 **FL1800m**

ALT/HEIGHT CONVERSION
 QNH **(QFE)**
 4010' **(2964' - 900m)**
 3020' **(1974' - 600m)**

- ① 095° to ARP between 11.3 NM and 5.1 NM do not fly south below FL59.
- ② 304° to ARP between 12.1 NM and 1.9 NM do not fly south below FL59.

URMM/MRV
MINERALNYYE VODY

7 MAY 10

JEPPESSEN MINERALNYYE VODY, RUSSIA

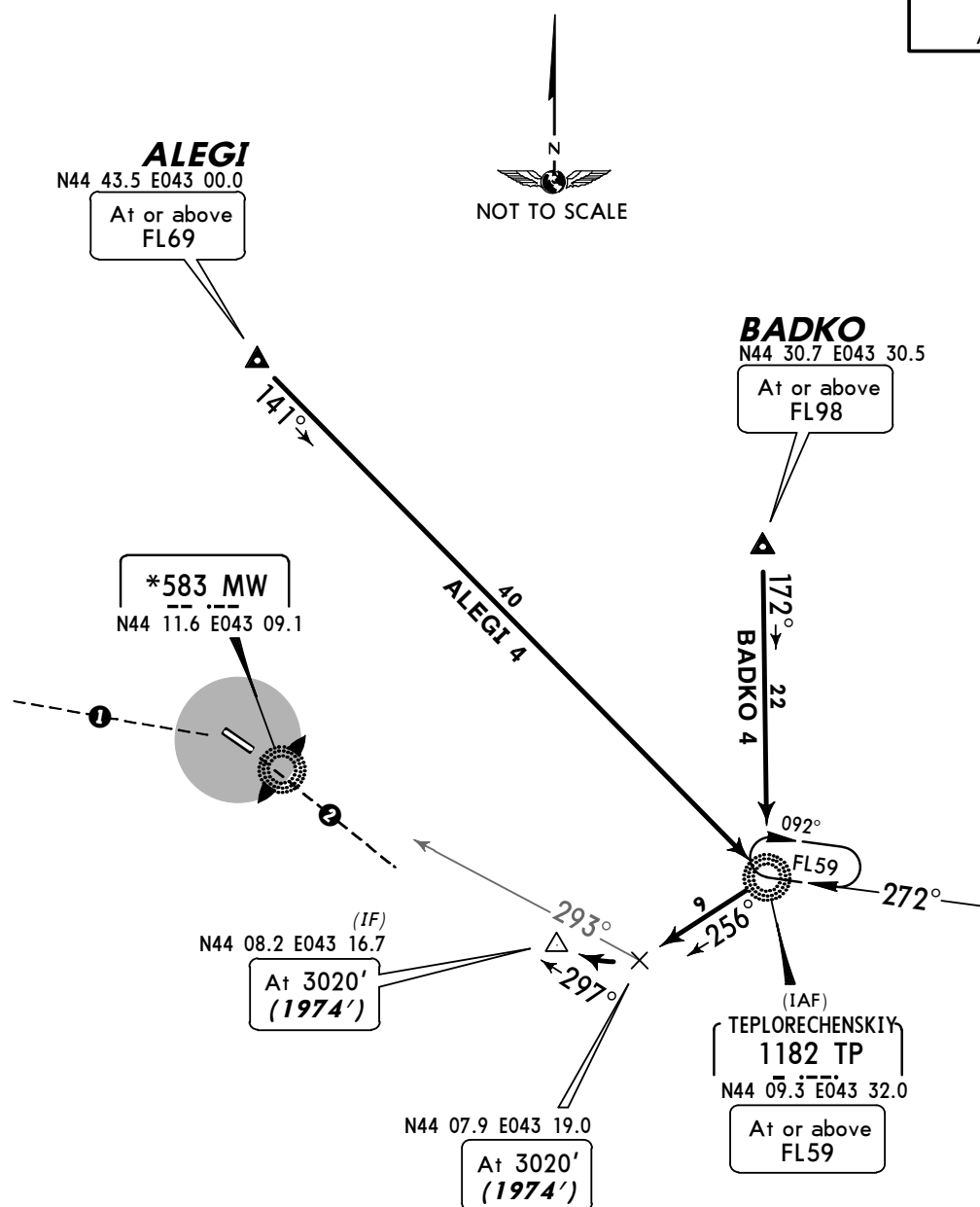
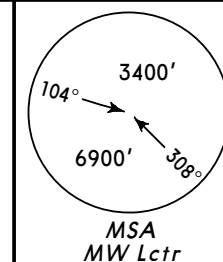
STAR

ATIS
125.25
(Russian 127.4)

Apt Elev
1054'

Alt Set: MM (hPa on request) QNH on request **(QFE)**
Trans level: FL59
FL69 if pressure is less than 704mm (938.6 hPa)
Trans alt: 4010' **(2964')**

ALEGI 4, BADKO 4 RWY 30 ARRIVALS



- 1 095° to ARP between 11.3 NM and 5.1 NM do not fly south below FL59.
- 2 304° to ARP between 12.1 NM and 1.9 NM do not fly south below FL59.

FL CONVERSION
FL98 ***FL3000m***
FL69 ***FL2100m***
FL59 ***FL1800m***

ALT/HEIGHT CONVERSION
QNH (QFE)
4010' (2964' - 900m)
3020' (1974' - 600m)

URMM/MRV

MINERALNYYE VODY

7 MAY 10

10-2D



JEPPESSEN MINERALNYYE VODY, RUSSIA

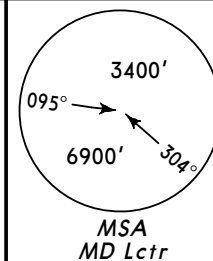
STAR

ATIS
125.25
(Russian **127.4**)

Apt Elev
1054'

Alt Set: MM (hPa on request) QNH on request **(QFE)**
Trans level: FL59
FL69 if pressure is less than 704mm (938.6 hPa)
Trans alt: 4010' **(2967')**

MARAT 2, NL 2 RWY 12 ARRIVALS



- ① 095° to ARP between 11.3 NM and 5.1 NM do not fly south below FL59.
- ② 304° to ARP between 12.1 NM and 1.9 NM do not fly south below FL59.

(IF)
N44 18.8
E042 53.2
At 3020'
(1977')

CAT A, B:
1.5 min
CAT C, D:
1 min

(IAF)
***583 MD**
N44 15.5 E043 00.5
At FL69

TEPLORECHENSKIY
1182 TP
N44 09.3 E043 32.0

N44 09.3 E043 06.5
**At or above
FL79**

MARAT
N43 50.8 E043 37.3
**At or above
FL89**



FL CONVERSION
FL89 **FL2700m**
FL79 **FL2400m**
FL69 **FL2100m**
FL59 **FL1800m**

ALT/HEIGHT CONVERSION
QNH **(QFE)**
4010' **(2967' - 900m)**
3020' **(1977' - 600m)**

NALCHIK
718 NL
N43 32.0 E043 41.6
**At or above
FL89**

URMM/MRV
MINERALNYYE VODY

7 MAY 10

10-2E

JEPPesen MINERALNYYE VODY, RUSSIA

STAR

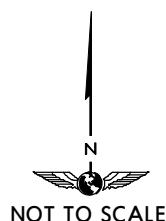
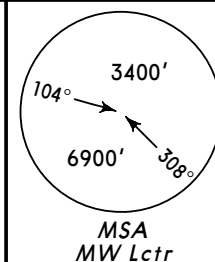
ATIS
125.25
(Russian 127.4)

Apt Elev
1054'

Alt Set: MM (hPa on request) QNH on request **(QFE)**
Trans level: FL59
FL69 if pressure is less than 704mm (938.6 hPa)
Trans alt: 4010' **(2964')**

MARAT 4C [MARA4C]
NIRGA 4C [NIRG4C]
NL 4C
RWY 30 ARRIVALS

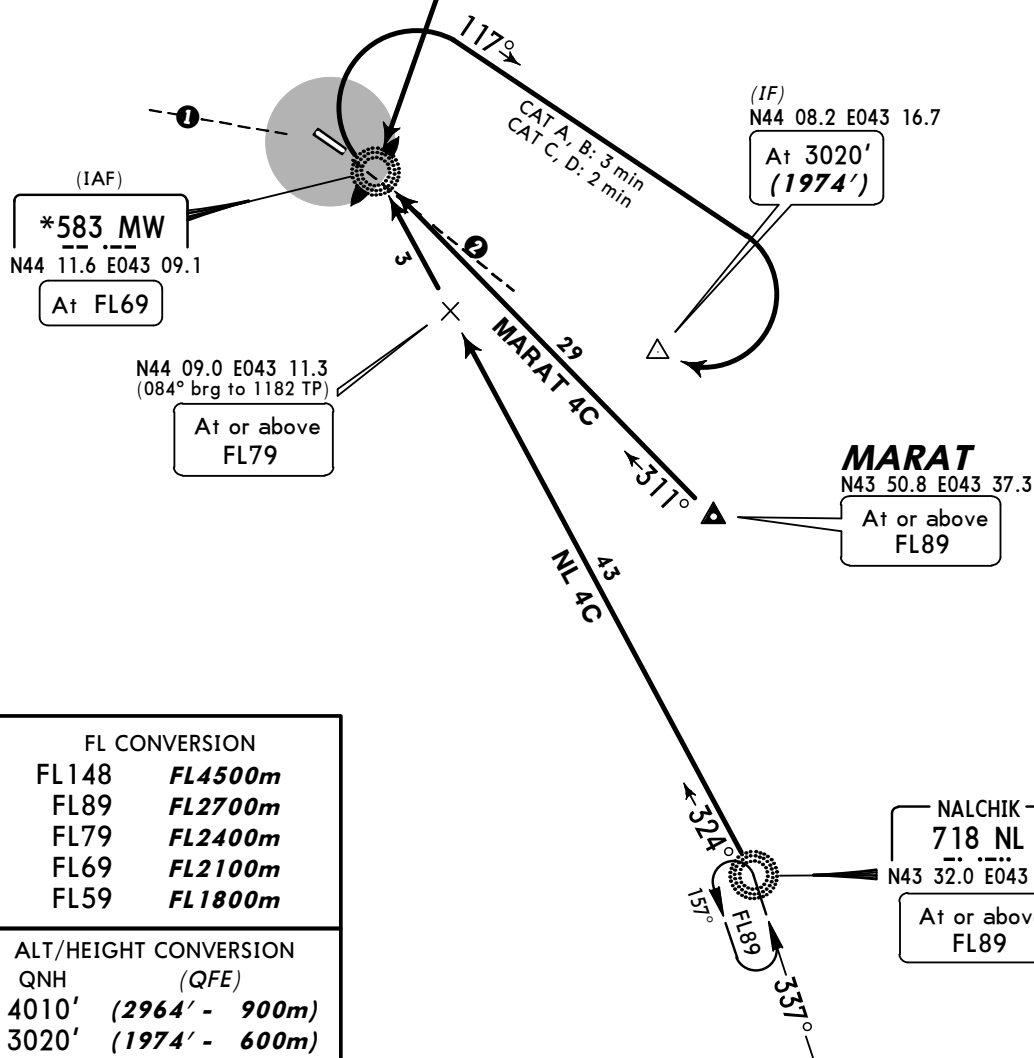
NIRGA
N45 05.1 E043 25.0
At or above
FL148



WARNING

Race-track pattern shall be carried out in accordance with procedures of entry into holding area and holding.

- ① 095° to ARP between 11.3 NM and 5.1 NM do not fly south below FL59.
- ② 304° to ARP between 12.1 NM and 1.9 NM do not fly south below FL59.



URMM/MRV MINERALNYE VODY

7 MAY 10

10-2F

JEPPesen MINERALNYE VODY, RUSSIA

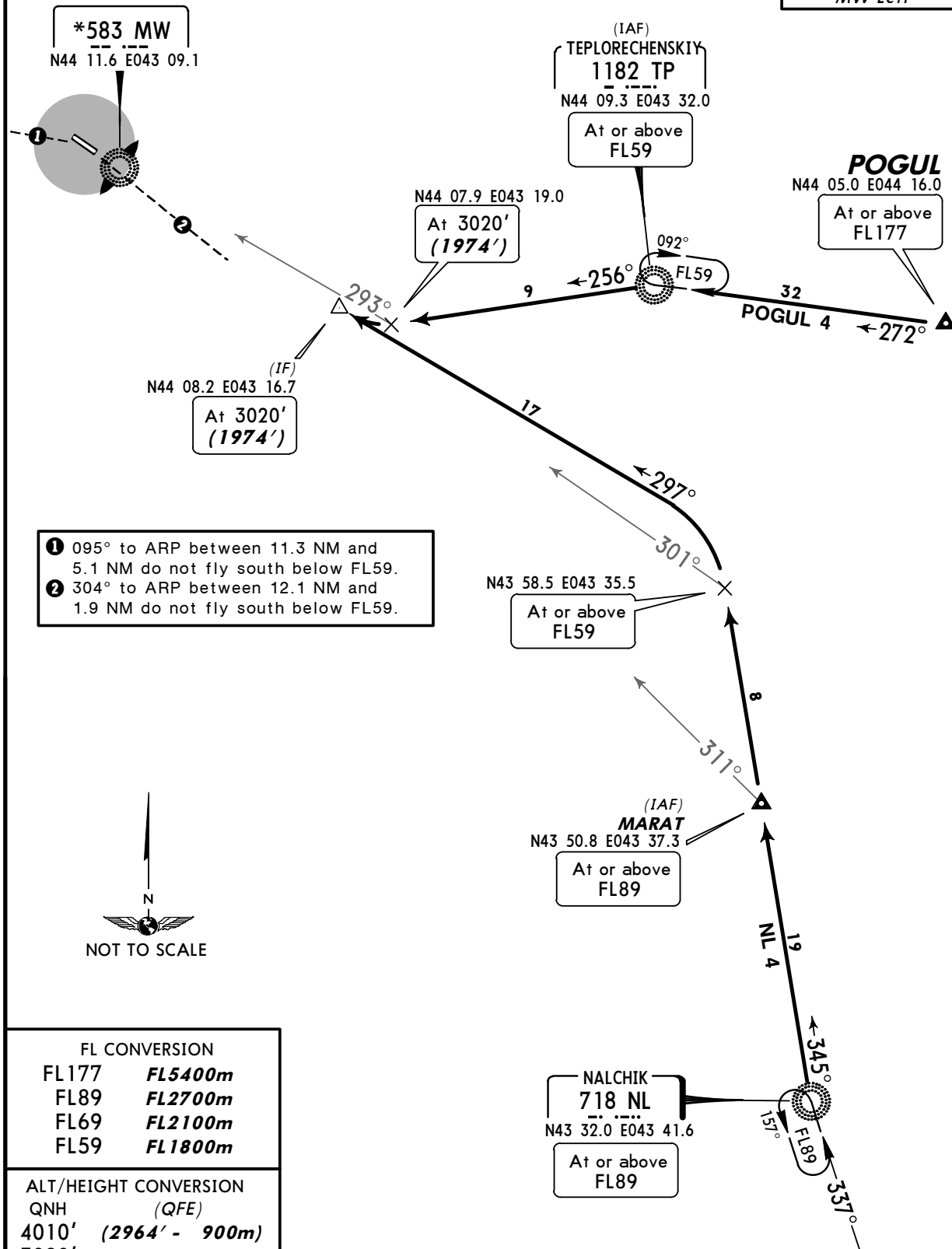
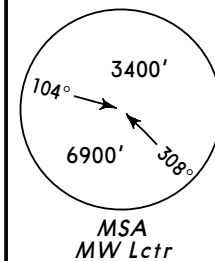
STAR

ATIS
125.25
 (Russian 127.4)

Apt Elev
1054'

Alt Set: MM (hPa on request) QNH on request (QFE)
 Trans level: FL59
 FL69 if pressure is less than 704mm (938.6 hPa)
 Trans alt: 4010' (2964')

NL 4, POGUL 4 RWY 30 ARRIVALS



URMM/MRV
MINERALNYYE VODY

7 MAY 10

(10-2G)

JEPPESEN MINERALNYYE VODY, RUSSIA

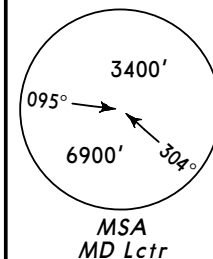
STAR

ATIS
125.25
(Russian 127.4)

Apt Elev
1054'

Alt Set: MM (hPa on request) QNH on request **(QFE)**
Trans level: FL59
FL69 if pressure is less than 704mm (938.6 hPa)
Trans alt: 4010' **(2967')**

SULOD 2
RWY 12 ARRIVAL



SULOD
N44 35.5 E042 40.0

At or above
FL69

139°

25

WARNING

Race-track pattern shall be carried out in accordance with procedures of entry into holding area and holding.

- ① 095° to ARP between 11.3 NM and 5.1 NM do not fly south below FL59.
- ② 304° to ARP between 12.1 NM and 1.9 NM do not fly south below FL59.

(IF)
N44 18.8 E042 53.2

At 3020'
(1977')

CAT A, B: 3 min
CAT C, D: 2 min

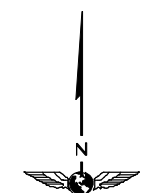
297°

(IAF)

***583 MD**

N44 15.5 E043 00.5

At FL69



NOT TO SCALE

FL CONVERSION
FL69 **FL2100m**
FL59 **FL1800m**

ALT/HEIGHT CONVERSION
QNH **(QFE)**
4010' **(2967' - 900m)**
3020' **(1977' - 600m)**

URMM/MRV
MINERALNYYE VODY

7 MAY 10

(10-2H)

JEPPESEN MINERALNYYE VODY, RUSSIA

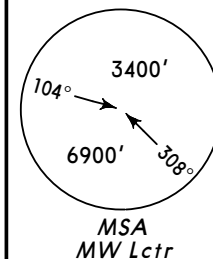
STAR

ATIS
125.25
(Russian 127.4)

Apt Elev
1054'

Alt Set: MM (hPa on request) QNH on request **(QFE)**
Trans level: FL59
FL69 if pressure is less than 704mm (938.6 hPa)
Trans alt: 4010' **(2964')**

SULOD 4
RWY 30 ARRIVAL



SULOD
N44 35.5 E042 40.0

At or above
FL69

135°
3.2

(IAF)

***583 MW**

N44 11.6 E043 09.1

At FL69

CAT A, B:
1.5 min
CAT C, D:
1 min

072°

(IF)
N44 08.2 E043 16.7

At 3020'
(1974')



252°

- ① 095° to ARP between 11.3 NM and 5.1 NM do not fly south below FL59.
- ② 304° to ARP between 12.1 NM and 1.9 NM do not fly south below FL59.



NOT TO SCALE

FL CONVERSION
FL69 **FL2100m**
FL59 **FL1800m**

ALT/HEIGHT CONVERSION
QNH **(QFE)**
4010' **(2964' - 900m)**
3020' **(1974' - 600m)**

URMM/MRV

MINERALNYE VODY

7 MAY 10

10-2J

JEPPesen MINERALNYE VODY, RUSSIA

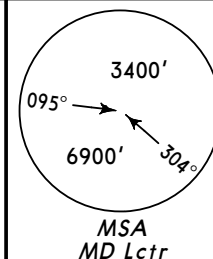
STAR

ATIS
125.25
(Russian **127.4**)

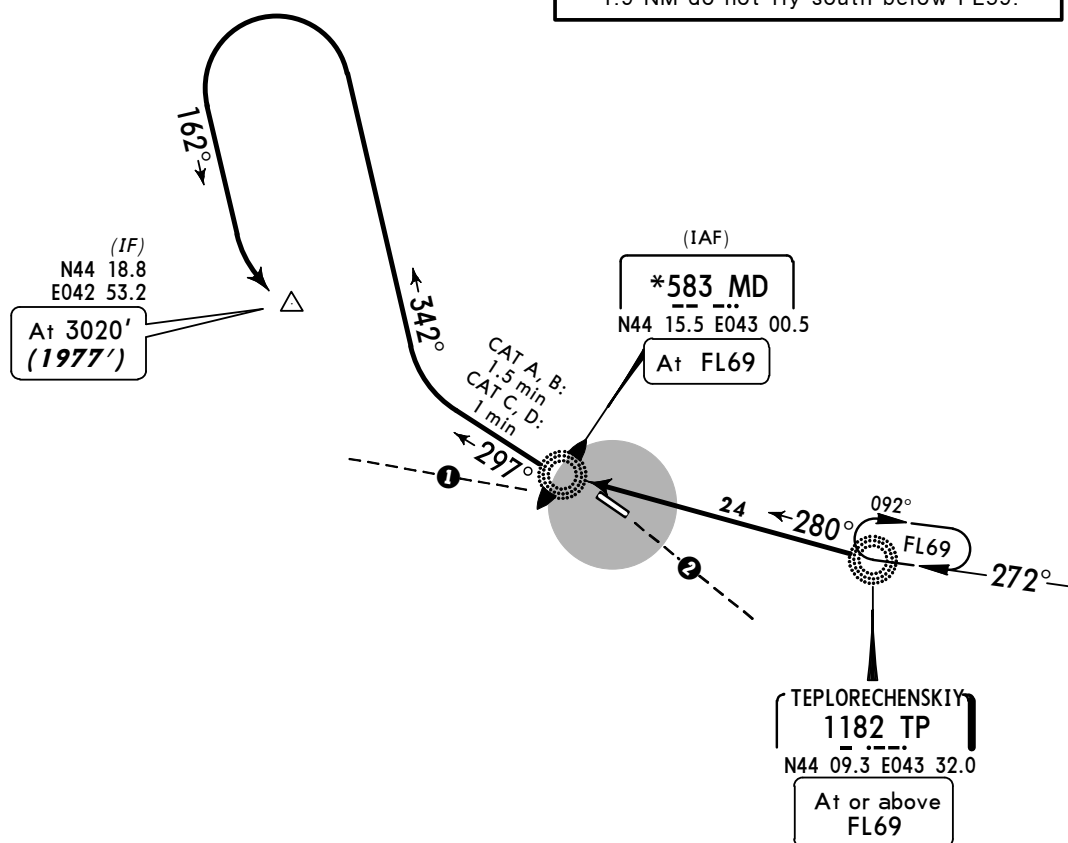
Apt Elev
1054'

Alt Set: MM (hPa on request) QNH on request **(QFE)**
Trans level: FL59
FL69 if pressure is less than 704mm (938.6 hPa)
Trans alt: 4010' **(2967')**

TP 2
RWY 12 ARRIVAL



- ① 095° to ARP between 11.3 NM and 5.1 NM do not fly south below FL59.
- ② 304° to ARP between 12.1 NM and 1.9 NM do not fly south below FL59.



FL CONVERSION
FL69 **FL2100m**
FL59 **FL1800m**

ALT/HEIGHT CONVERSION
QNH **(QFE)**
4010' **(2967' - 900m)**
3020' **(1977' - 600m)**



URMM/MRV
MINERALNYYE VODY

JEPPESEN MINERALNYYE VODY, RUSSIA
16 JUL 10 **(10-2K)** **Eff 29 Jul**

STAR

ATIS
125.25
(Russian **127.4**)

Apt Elev
1054'

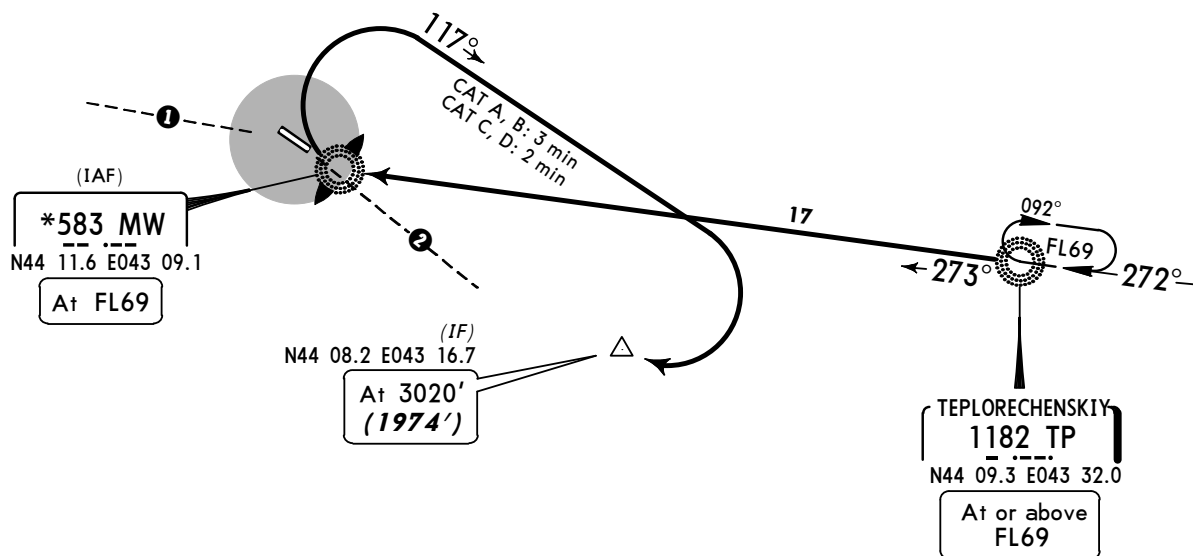
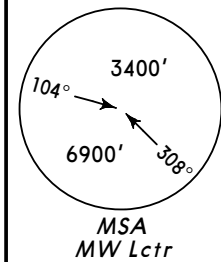
Alt Set: MM (hPa on request) QNH on request **(QFE)**
Trans level: FL59
FL69 if pressure is less than 704mm (938.6 hPa)
Trans alt: 4010' **(2964')**

TP 4C
RWY 30 ARRIVAL

WARNING

Race-track pattern shall be carried out in accordance with procedures of entry into holding area and holding.

- ① 095° to ARP between 11.3 NM and 5.1 NM do not fly south below FL59.
- ② 304° to ARP between 12.1 NM and 1.9 NM do not fly south below FL59.



FL CONVERSION
FL69 **FL2100m**
FL59 **FL1800m**

ALT/HEIGHT CONVERSION
QNH **(QFE)**
4010' **(2964' - 900m)**
3020' **(1974' - 600m)**

URMM/MRV
MINERALNYE VODY

16 JUL 10

10-2L

Eff 29 Jul

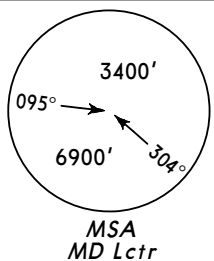
STAR

JEPPESEN MINERALNYE VODY, RUSSIA

ATIS
125.25
(Russian 127.4)

Apt Elev
1054'

Alt Set: MM (hPa on request) QNH on request **(QFE)**
Trans level: FL59
FL69 if pressure is less than 704mm (938.6 hPa)
Trans alt: 4010' **(2967')**



ALEGI 2W [ALEG2W]
BADKO 2W [BADK2W]
NIRGA 2W [NIRG2W]
SULOD 2W [SULO2W]
RWY 12 ARRIVALS

FROM NORTH
UNDER RADAR CONTROL

- ① 095° to ARP between 11.3 NM and 5.1 NM do not fly south below FL59.
- ② 304° to ARP between 12.1 NM and 1.9 NM do not fly south below FL59.

(IAF)
ALEGI
N44 43.5 E043 00.0

At or above
FL69

(IAF)
NIRGA
N45 05.1 E043 25.0
At or above
FL148

FL CONVERSION	
FL148	FL4500m
FL69	FL2100m
FL59	FL1800m

ALT/HEIGHT CONVERSION	
QNH	(QFE)
4010'	(2967' - 900m)
3020'	(1977' - 600m)

(IAF)
SULOD
N44 35.5 E042 40.0

At or above
FL59

(IAF)
BADKO
N44 30.7 E043 30.5

At or above
FL69

N44 21.8 E042 51.3
At 3020' **(1977')**

N44 22.8 E042 53.0
At or above
3020' **(1977')**

N44 21.4 E042 51.1
At 3020' **(1977')**

N44 20.2 E042 51.2
At 3020' **(1977')**

(IF)
N44 18.8 E042 53.2
At 3020' **(1977')**

***583 MD**
N44 15.5 E043 00.5



URMM/MRV
MINERALNYYE VODY

16 JUL 10

10-2M

Eff 29 Jul

JEPPESEN MINERALNYYE VODY, RUSSIA

STAR

ATIS
125.25
(Russian 127.4)

Apt Elev
1054'

Alt Set: MM (hPa on request) QNH on request **(QFE)**
Trans level: FL59
FL69 if pressure is less than 704mm (938.6 hPa)
Trans alt: 4010' **(2964')**

ALEGI 4W [ALEG4W], BADKO 4W [BADK4W]
NIRGA 4W [NIRG4W], SULOD 4W [SULO4W]
RWY 30 ARRIVALS
FROM NORTH
UNDER RADAR CONTROL

FL CONVERSION

FL148	<i>FL4500m</i>
FL69	<i>FL2100m</i>
FL59	<i>FL1800m</i>

ALT/HEIGHT CONVERSION	
QNH	(QFE)
4010'	(2964' - 900m)
3020'	(1974' - 600m)

- ① 095° to ARP between 11.3 NM and 5.1 NM do not fly south below FL59.
- ② 304° to ARP between 12.1 NM and 1.9 NM do not fly south below FL59.

(IAF)
NIRGA
N45 05.1 E043 25.0
At or above
FL148

(IAF)
SULOD
N44 35.5 E042 40.0
At or above
FL59

(IAF)
ALEGI
N44 43.5 E043 00.0
At or above
FL69

(IAF)
BADKO
N44 30.7 E043 30.5
At or above
FL69

At or above
3020' (1974')

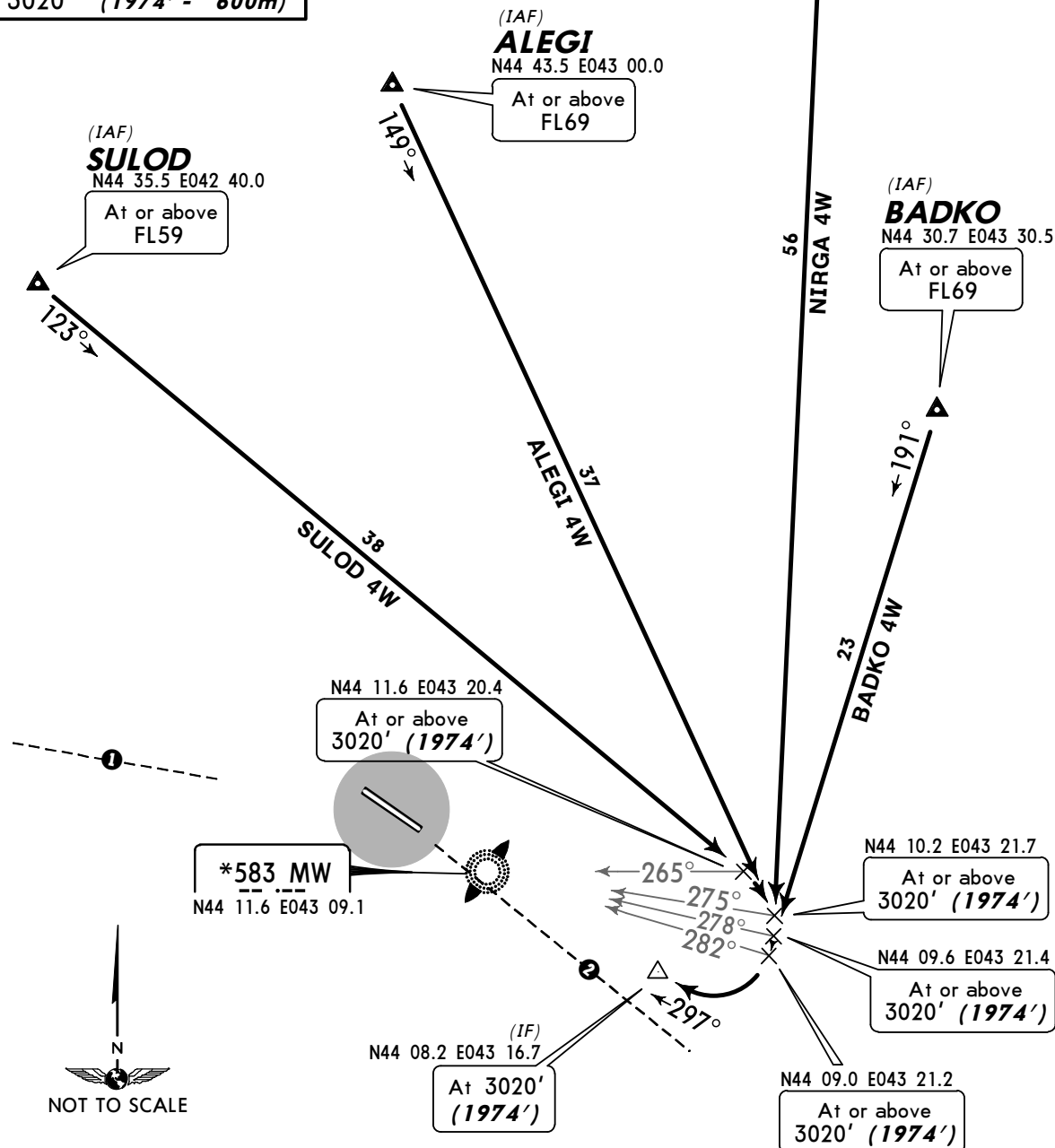
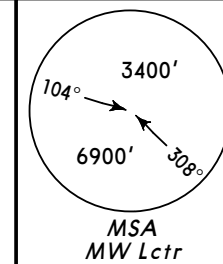
*583 MW
N44 11.6 E043 09.1

At or above
3020' (1974')

N44 09.6 E043 21.4
At or above
3020' (1974')

At or above
3020' (1974')

(IF)
N44 08.2 E043 16.7
At 3020'
(1974')



NOT TO SCALE

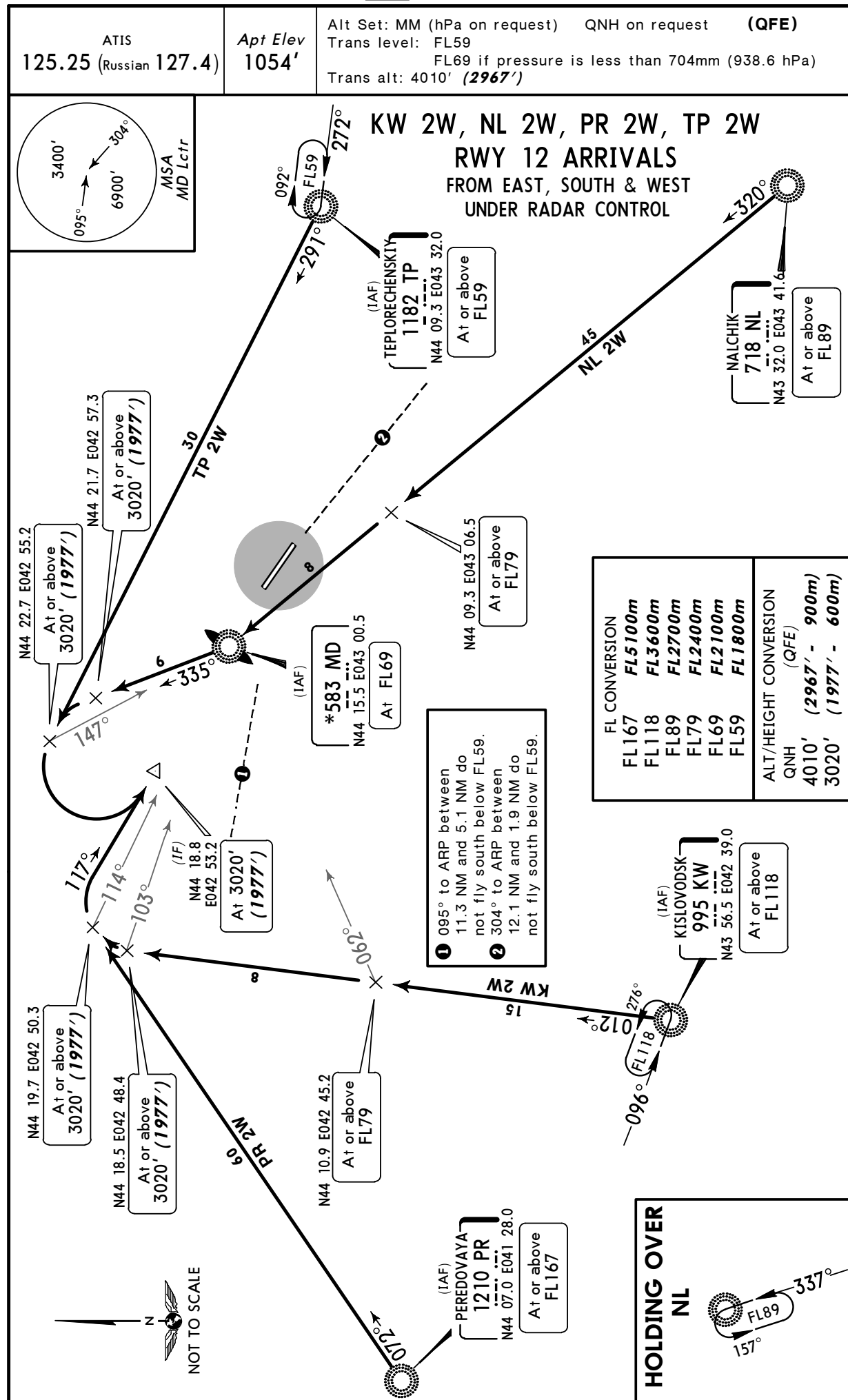
URMM/MRV MINERALNYYE VODY

16 JUL 10

10-2N

Eff 29 Jul

STAR



URMM/MRV

MINERALNYE VODY

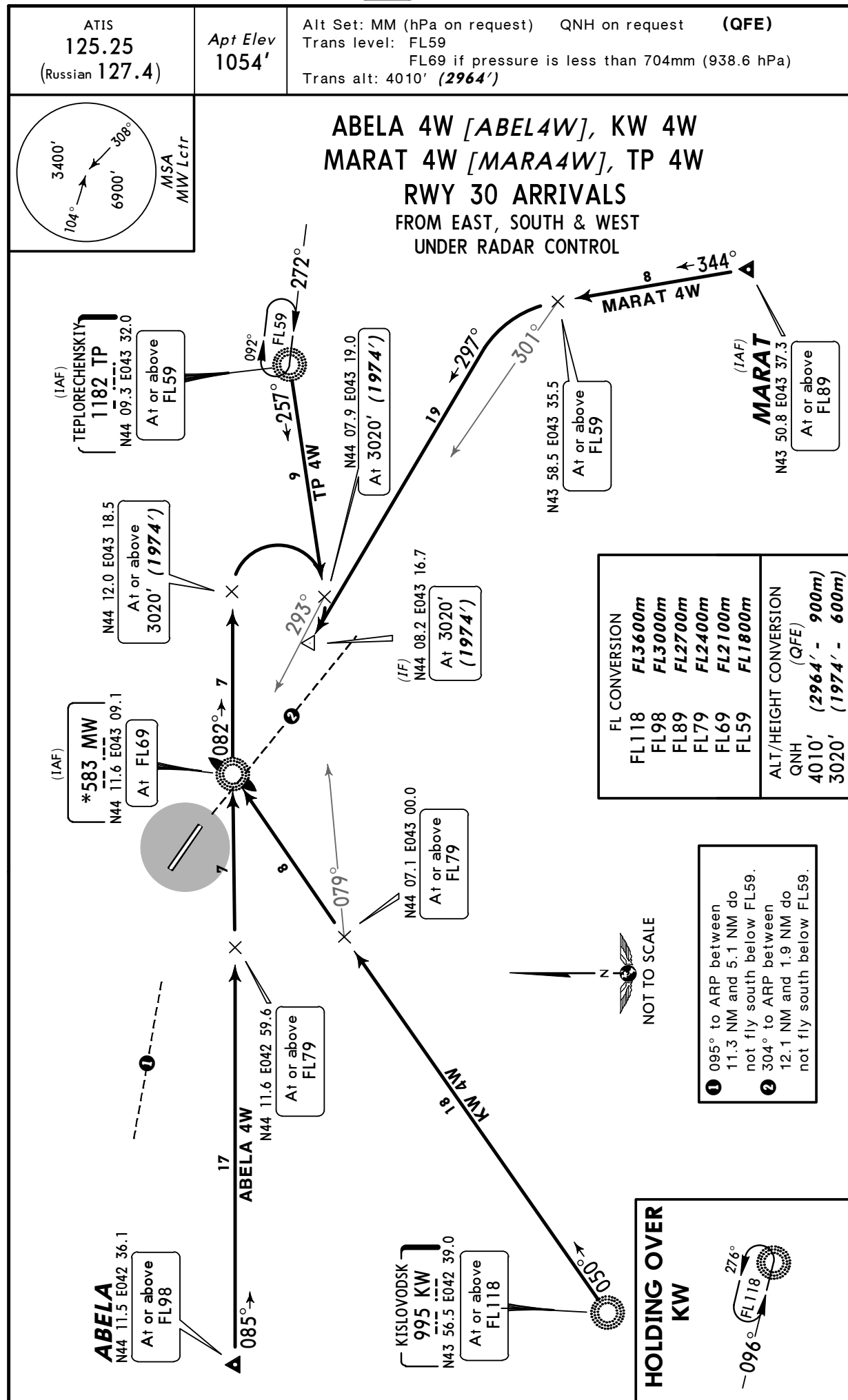
16 JUL 10

10-2P

Eff 29 Jul

STAR

JEPPesen MINERALNYE VODY, RUSSIA



URMM/MRV

MINERALNYE VODY

7 MAY 10

10-3

JEPPesen MINERALNYE VODY, RUSSIA

SID

Apt Elev
1054'

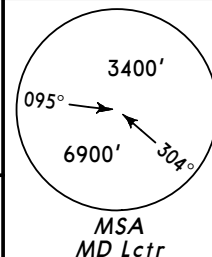
QNH on request **(QFE)**

Trans level: FL59

FL69 if pressure is less than 704 mm (938.6 hPa)

Trans alt: 4010' **(2967')**

Take-off should be carried out with noise abatement procedures according to Flight Operation Manual.



ABELA 1, ALEGI 1, BADKO 1

NIRGA 1

BY ATC

RWY 12 DEPARTURES

ALT/HEIGHT CONVERSION

QNH **(QFE)**

1440' **(397' - 120m)**

4010' **(2967' - 900m)**

FL CONVERSION

FL59 **FL1800m**

FL69 **FL2100m**

FL79 **FL2400m**

FL98 **FL3000m**

FL148 **FL4500m**

1 124° from ARP between 1.9 NM and 12.1 NM do not fly south below FL59.

ABELA

N44 11.5 E042 36.1
(167° brg to 995 KW)

At or above
FL98

***583 MD**

N44 15.5 E043 00.5

At or above
FL79

NIRGA

N45 05.1 E043 25.0

At or above
FL148

ALEGI

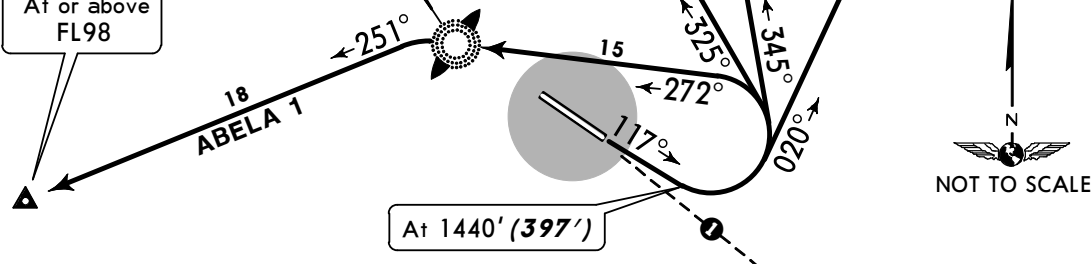
N44 43.5 E043 00.0

At or above
FL148

BADKO

N44 30.7 E043 30.5

At or above
FL98



These SIDs require minimum climb gradients of

ABELA 1: 510' per NM (8.4%) until MD.

ALEGI 1: 377' per NM (6.2%).

BADKO 1: 334' per NM (5.5%).

NIRGA 1: 237' per NM (3.9%).

If unable to comply advise ATC.

Gnd speed-KT	75	100	150	200	250	300
510' per NM	638	851	1276	1701	2127	2552
377' per NM	471	628	942	1256	1570	1884
334' per NM	418	557	835	1114	1392	1671
237' per NM	296	395	592	790	987	1185

URMM/MRV

MINERALNYE VODY

7 MAY 10

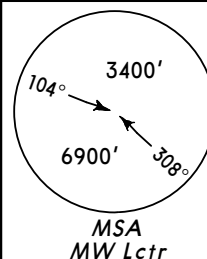
(10-3A)

JEPPESSEN MINERALNYE VODY, RUSSIA

SID

Apt Elev
1054'

QNH on request **(QFE)**
 Trans level: FL59
 FL69 if pressure is less than 704 mm (938.6 hPa)
 Trans alt: 4010' **(2964')**
 Take-off should be carried out with noise abatement procedures according to Flight Operation Manual.



ABELA 3, ALEGI 3, BADKO 3

NIRGA 3

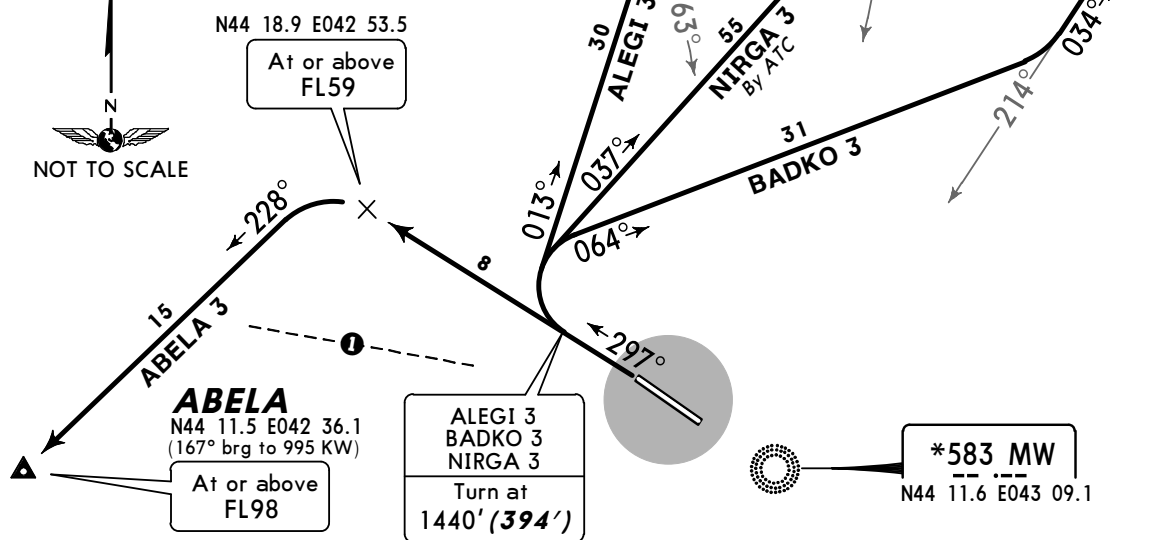
BY ATC

RWY 30 DEPARTURES

ALT/HEIGHT CONVERSION
 QNH **(QFE)**
 1440' **(394' - 120m)**
 4010' **(2964' - 900m)**

FL CONVERSION
 FL59 **FL1800m**
 FL69 **FL2100m**
 FL98 **FL3000m**
 FL148 **FL4500m**

1 275° from ARP between 5.1 NM and 11.3 NM do not fly south below FL59.



These SIDs require minimum climb gradients of

ABELA 3: 547' per NM (9%) until N44 18.9 E042 53.5.
ALEGI 3: 468' per NM (7.7%).
BADKO 3: 304' per NM (5%).
NIRGA 3: 249' per NM (4.1%).
 If unable to comply advise ATC.

Gnd speed-KT	75	100	150	200	250	300
547' per NM	684	911	1367	1823	2279	2734
468' per NM	585	780	1170	1560	1949	2339
304' per NM	380	506	760	1013	1266	1519
249' per NM	311	415	623	830	1038	1246

URMM/MRV

MINERALNYE VODY

7 MAY 10

(10-3B)



JEPPesen MINERALNYE VODY, RUSSIA

SID

Apt Elev
1054'

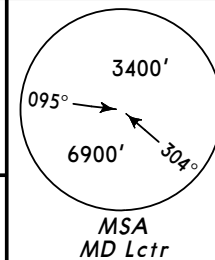
QNH on request **(QFE)**

Trans level: FL59

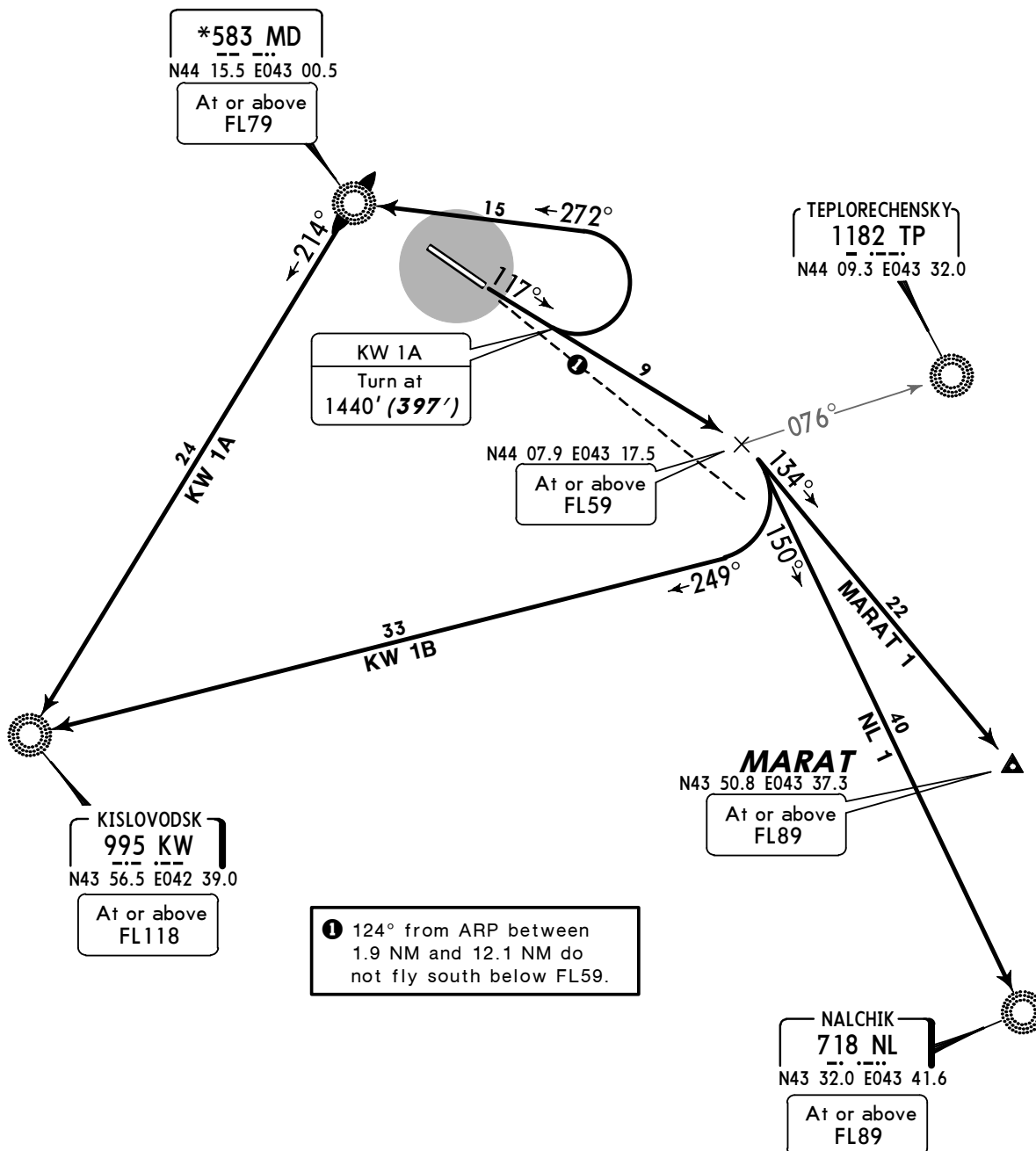
FL69 if pressure is less than 704 mm (938.6 hPa)

Trans alt: 4010' **(2967')**

Take-off should be carried out with noise abatement procedures according to Flight Operation Manual.



**KW 1A, KW 1B, MARAT 1, NL 1
RWY 12 DEPARTURES**



ALT/HEIGHT CONVERSION
QNH **(QFE)**
1440' **(397' - 120m)**
4010' **(2967' - 900m)**

FL CONVERSION
FL59 **FL1800m**
FL69 **FL2100m**
FL79 **FL2400m**
FL89 **FL2700m**
FL118 **FL3600m**



These SIDs require a minimum climb gradient of

KW 1A
510' per NM (8.4%) until MD.
KW 1B, MARAT 1, NL 1
510' per NM (8.4%) until N44 07.9 E043 17.5.

Gnd speed-KT	75	100	150	200	250	300
510' per NM	638	851	1276	1701	2127	2552

If unable to comply advise ATC.

URMM/MRV

MINERALNYE VODY

7 MAY 10

(10-3C)

JEPPESSEN MINERALNYE VODY, RUSSIA

SID

Apt Elev
1054'

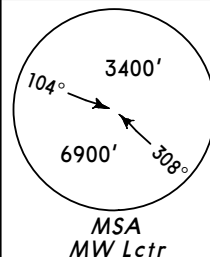
QNH on request **(QFE)**

Trans level: FL59

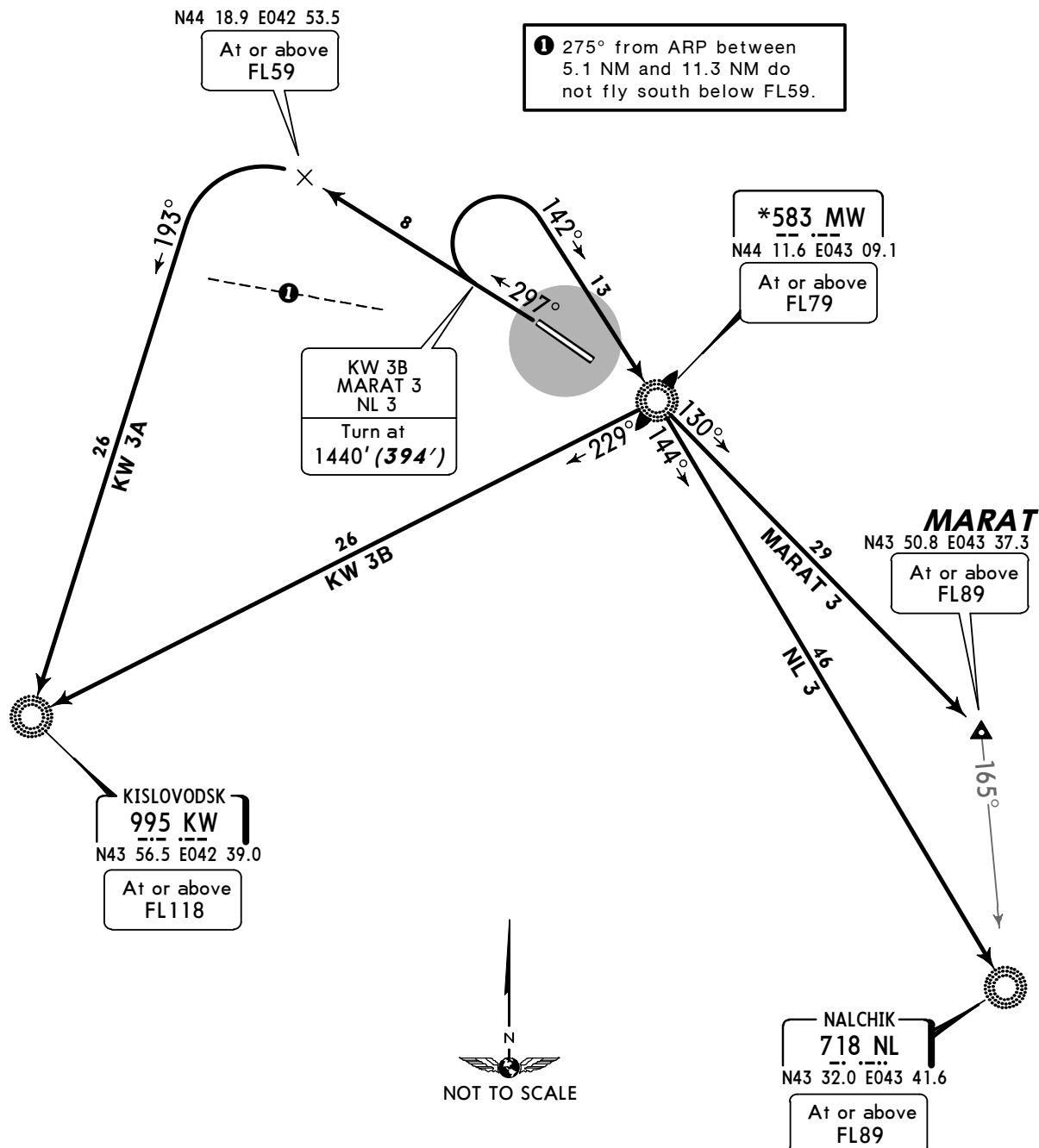
FL69 if pressure is less than 704 mm (938.6 hPa)

Trans alt: 4010 **(2964')**

Take-off should be carried out with noise abatement procedures according to Flight Operation Manual.



**KW 3A, KW 3B, MARAT 3, NL 3
RWY 30 DEPARTURES**



ALT/HEIGHT CONVERSION
QNH **(QFE)**
1440' **(394' - 120m)**
4010' **(2964' - 900m)**

FL CONVERSION
FL59 **FL1800m**
FL69 **FL2100m**
FL79 **FL2400m**
FL89 **FL2700m**
FL118 **FL3600m**

These SIDs require minimum climb gradients of

KW 3A

547' per NM (9%) until N44 18.9 E042 53.5.

KW 3B, MARAT 3, NL 3

529' per NM (8.7%) until MW.

Gnd speed-KT	75	100	150	200	250	300
547' per NM	684	911	1367	1823	2279	2734
529' per NM	661	881	1322	1762	2203	2643

If unable to comply advise ATC.

URMM/MRV

MINERALNYE VODY

7 MAY 10

(10-3D)

JEPPESSEN MINERALNYE VODY, RUSSIA

SID

Apt Elev
1054'

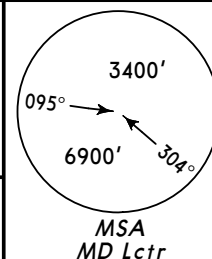
QNH on request **(QFE)**

Trans level: FL59

FL69 if pressure is less than 704 mm (938.6 hPa)

Trans alt: 4010' **(2967')**

Take-off should be carried out with noise abatement procedures according to Flight Operation Manual.

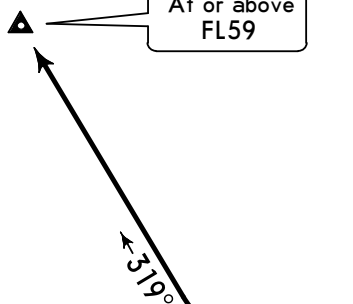


**SOROL 1, SULOD 1, TP 1
RWY 12 DEPARTURES**

SULOD

N44 35.5 E042 40.0

At or above
FL59



***583 MD**

N44 15.5 E043 00.5

SULOD 1

117°

SULOD 1, TP1
Turn at
1440' **(397')**

N44 07.9 E043 17.5

At or above
FL59



SOROL 1

This SID requires a minimum climb gradient of 510' per NM (8.4%) until N44 07.9 E043 17.5.

Gnd speed-KT	75	100	150	200	250	300
510' per NM	638	851	1276	1701	2127	2552

If unable to comply advise ATC.

ALT/HEIGHT CONVERSION

QNH **(QFE)**

1440' **(397' - 120m)**
4010' **(2967' - 900m)**

FL CONVERSION

FL59 **FL1800m**
FL69 **FL2100m**
FL108 **FL3300m**

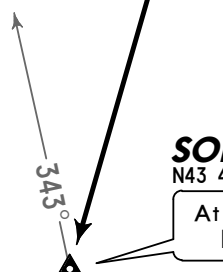
① 124° from ARP between 1.9 NM and 12.1 NM do not fly south below FL59.

TEPLORECHENSKY
1182 TP
N44 09.3 E043 32.0
At or above
FL59

SOROL

N43 44.0 E043 10.0

At or above
FL108



URMM/MRV

MINERALNYE VODY

7 MAY 10

10-3E

JEPPesen MINERALNYE VODY, RUSSIA

SID

Apt Elev
1054'

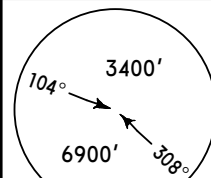
QNH on request **(QFE)**

Trans level: FL59

FL69 if pressure is less than 704 mm (938.6 hPa)

Trans alt: 4010' **(2964')**

Take-off should be carried out with noise abatement procedures according to Flight Operation Manual.



MSA
MW Lctr

ALT/HEIGHT CONVERSION

QNH **(QFE)**

1440' **(394' - 120m)**

4010' **(2964' - 900m)**

FL CONVERSION

FL59 **FL1800m**

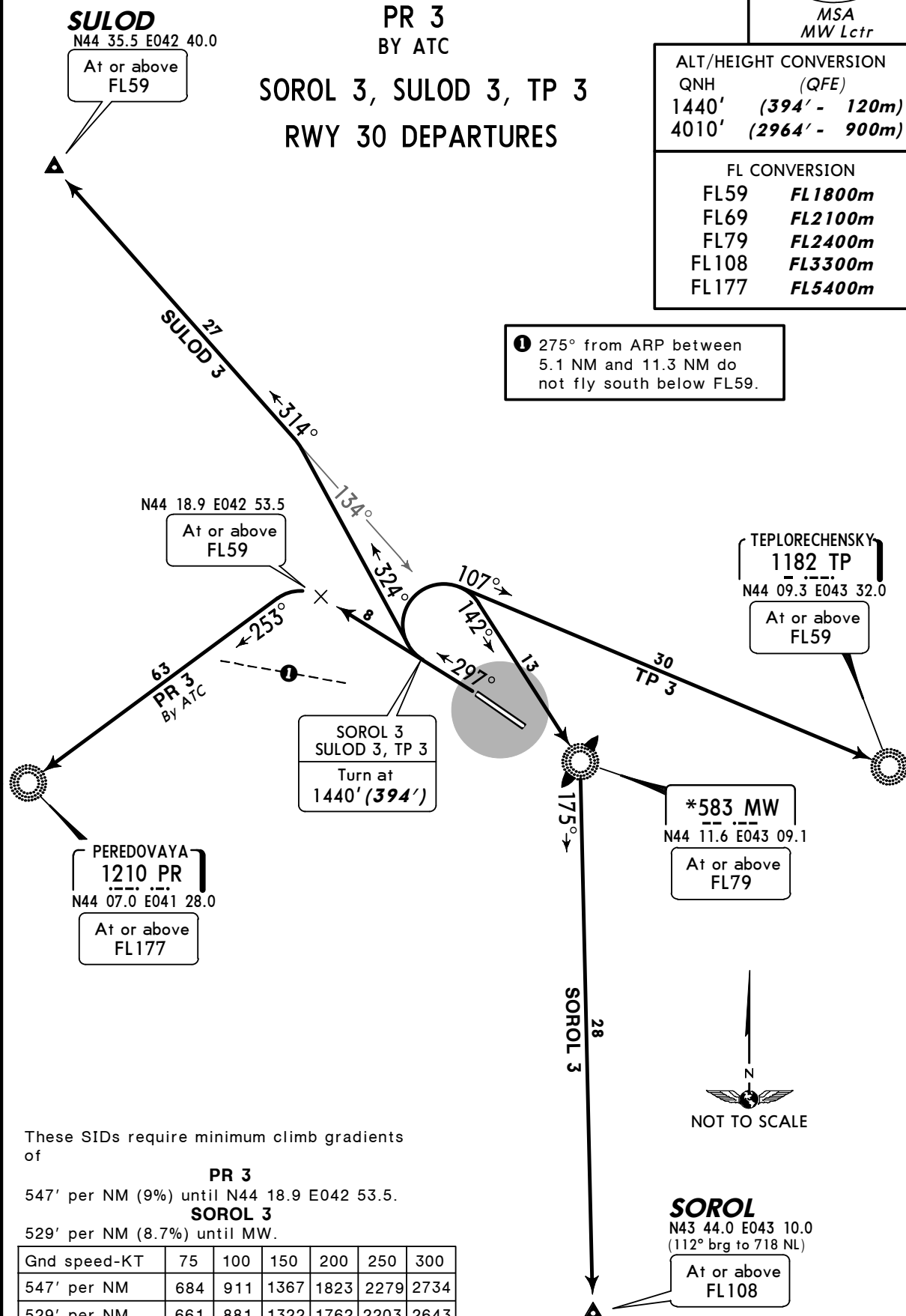
FL69 **FL2100m**

FL79 **FL2400m**

FL108 **FL3300m**

FL177 **FL5400m**

1 275° from ARP between 5.1 NM and 11.3 NM do not fly south below FL59.



These SIDs require minimum climb gradients of

PR 3

547' per NM (9%) until N44 18.9 E042 53.5.

SOROL 3

529' per NM (8.7%) until MW.

Gnd speed-KT	75	100	150	200	250	300
547' per NM	684	911	1367	1823	2279	2734
529' per NM	661	881	1322	1762	2203	2643

If unable to comply advise ATC.

URMM/MRV

MINERALNYE VODY

7 MAY 10

10-3F

MINERALNYE VODY, RUSSIA

SID

Apt Elev
1054'

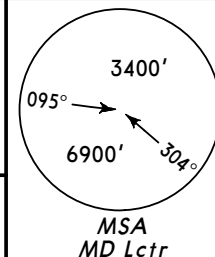
QNH on request **(QFE)**

Trans level: FL59

FL69 if pressure is less than 704 mm (938.6 hPa)

Trans alt: 4010' **(2967')**

Take-off should be carried out with noise abatement procedures according to Flight Operation Manual.



ALEGI 1W [ALEG1W], BADKO 1W [BADK1W]

SULOD 1W [SULO1W]

NIRGA 1W [NIRG1W]

BY ATC

RWY 12 DEPARTURES

UNDER RADAR CONTROL

NIRGA

N45 05.1 E043 25.0

At or above
FL148



ALEGI

N44 43.5 E043 00.0

At or above
FL148

SULOD

N44 35.5 E042 40.0

At or above
FL59

BADKO

N44 30.7 E043 30.5

At or above
FL98

***583 MD**
N44 15.5 E043 00.5

① 124° from ARP between
1.9 NM and 12.1 NM do
not fly south below FL59.

At 1440'
(397')

ALT/HEIGHT CONVERSION
QNH (QFE)
1440' (397' - 120m)
4010' (2967' - 900m)

FL CONVERSION
FL59 **FL1800m**
FL69 **FL2100m**
FL98 **FL3000m**
FL148 **FL4500m**

URMM/MRV

MINERALNYE VODY

7 MAY 10

10-3G



JEPPesen MINERALNYE VODY, RUSSIA

SID

Apt Elev
1054'

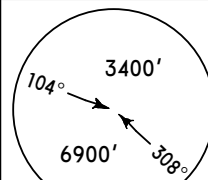
QNH on request **(QFE)**

Trans level: FL59

FL69 if pressure is less than 704 mm (938.6 hPa)

Trans alt: 4010' **(2964')**

Take-off should be carried out with noise abatement procedures according to Flight Operation Manual.



MSA
MW Lctr

ALEGI 3W [ALEG3W], BADKO 3W [BADK3W]

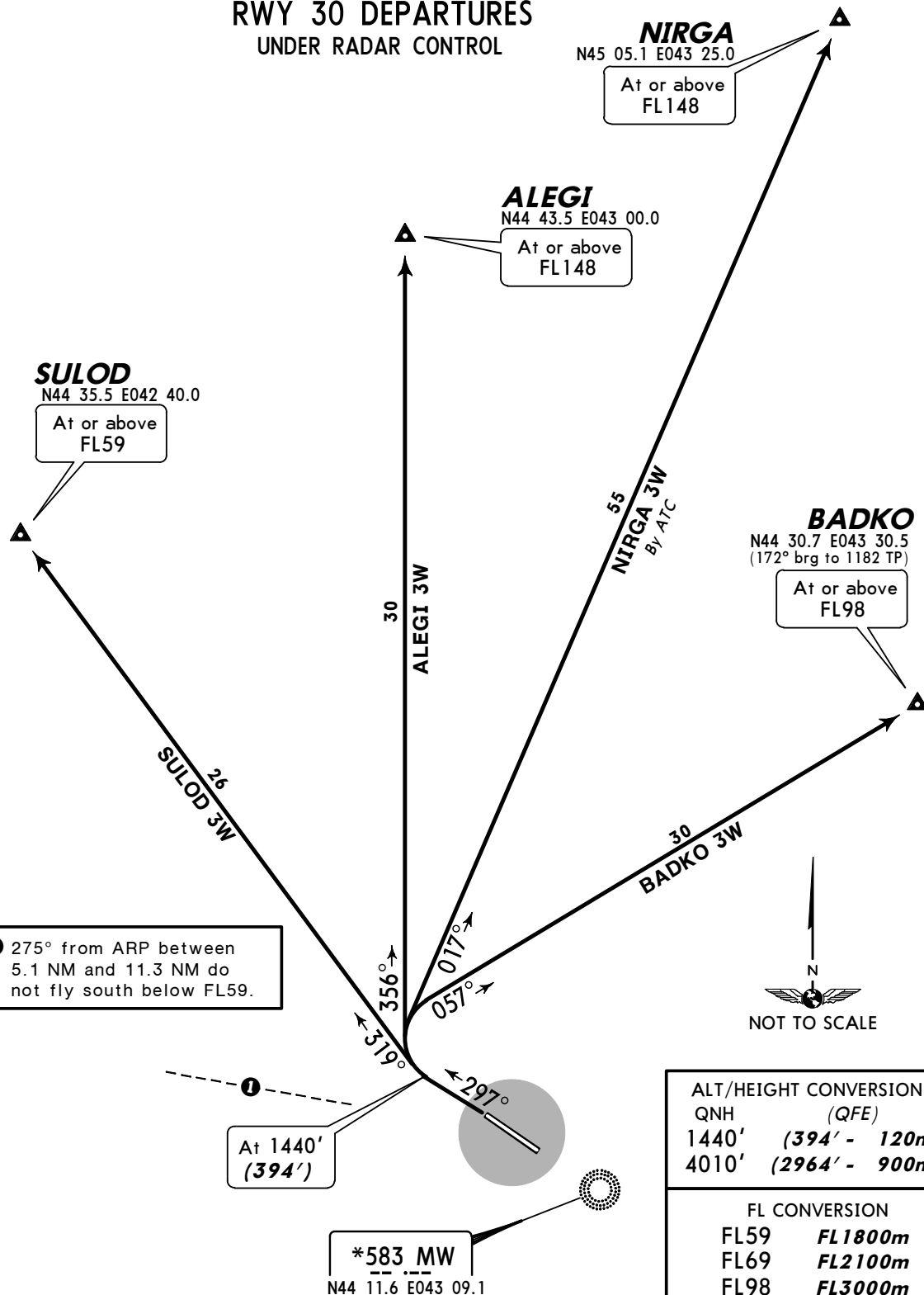
SULOD 3W [SULO3W]

NIRGA 3W [NIRG3W]

BY ATC

RWY 30 DEPARTURES

UNDER RADAR CONTROL



① 275° from ARP between 5.1 NM and 11.3 NM do not fly south below FL59.

At 1440'
(394')

***583 MW**
N44 11.6 E043 09.1



ALT/HEIGHT CONVERSION
QNH (QFE)
1440' (394' - 120m)
4010' (2964' - 900m)

FL CONVERSION
FL59 FL1800m
FL69 FL2100m
FL98 FL3000m
FL148 FL4500m

URMM/MRV**JEPPESEN****MINERALNYYE VODY, RUSSIA****MINERALNYYE VODY**

31 OCT 03

10-4

NOISE**NOISE ABATEMENT****ARRIVALS****Runway 30**

Noise abatement procedures shall be executed by all aircraft. 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 runway and friction coefficient is 0.4 or less
- when ceiling is less than 150m or visibility is less than 1800m
- when crosswind component (including gusts) over runway exceeds 7m/sec
- when tailwind component on runway exceeds 2.5m/sec
- when wind shear is forecasted or reported, or when it is expected that unfavourable weather conditions may influence aircraft approach and landing.

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

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 aircraft 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.

Runway 30 special approach procedure

When reaching a distance of 13.5 ± 1.6 NM from THR pilots shall conduct the flight at 4010' (2964' - 900m) maintaining MAX 210 KT. At a distance of 11.9 NM from THR speed shall be reduced to 185 KT ± 10 KT. At 10.8 NM from THR pilots shall lower the landing gear and wing devices into intermediate position at 15-30° angle (speed and angle of wing devices' settings depend on type and mass of aircraft).

After glide path interception and commencement of descent along glide path pilots shall continue to reduce speed to 155 - 160 KT ± 15 KT by the moment of reaching 2530' (1484' - 450m) at a distance of about 5.2 NM from THR.

At or above 2530' (1484' - 450m) pilots shall terminate to set wing devices into landing position and before reaching 2200' (1154' - 350m) and a distance of 3.8 NM from THR complete the stabilization of aircraft in the landing configuration at final approach speed.

At or above 2220' (1154' - 350m) and a distance of 4.1 NM the aircraft shall be completely stabilized and the pilot shall maintain final approach speed until landing taking into account the aircraft weight.

URMM/MRV**JEPPESEN****MINERALNYYE VODY**

31 OCT 03

(10-4A)

MINERALNYYE VODY, RUSSIA**NOISE****NOISE ABATEMENT****DEPARTURES****Runway 12**

Noise abatement procedures during take-off and climbing phase shall be executed by all aircraft, 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 allowed in cases when the direction is optimal for noise abatement over the city or in cases when upwind take-off does not provide safety or is prohibited. The tailwind component shall correspond to the norms established in the aircraft Flight Manual.

The minimum indicated air speed during climb shall not be less than $V_2 + 10$ KT or less than that prescribed in the Aircraft 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' (987' - 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

Pilots shall apply two special take-off procedures, NADP 1 and NADP 2. The pilot-in-command may use any of them for reaching necessary effect. (ICAO Doc 8168, Vol 1, Part V, Chapter 3).

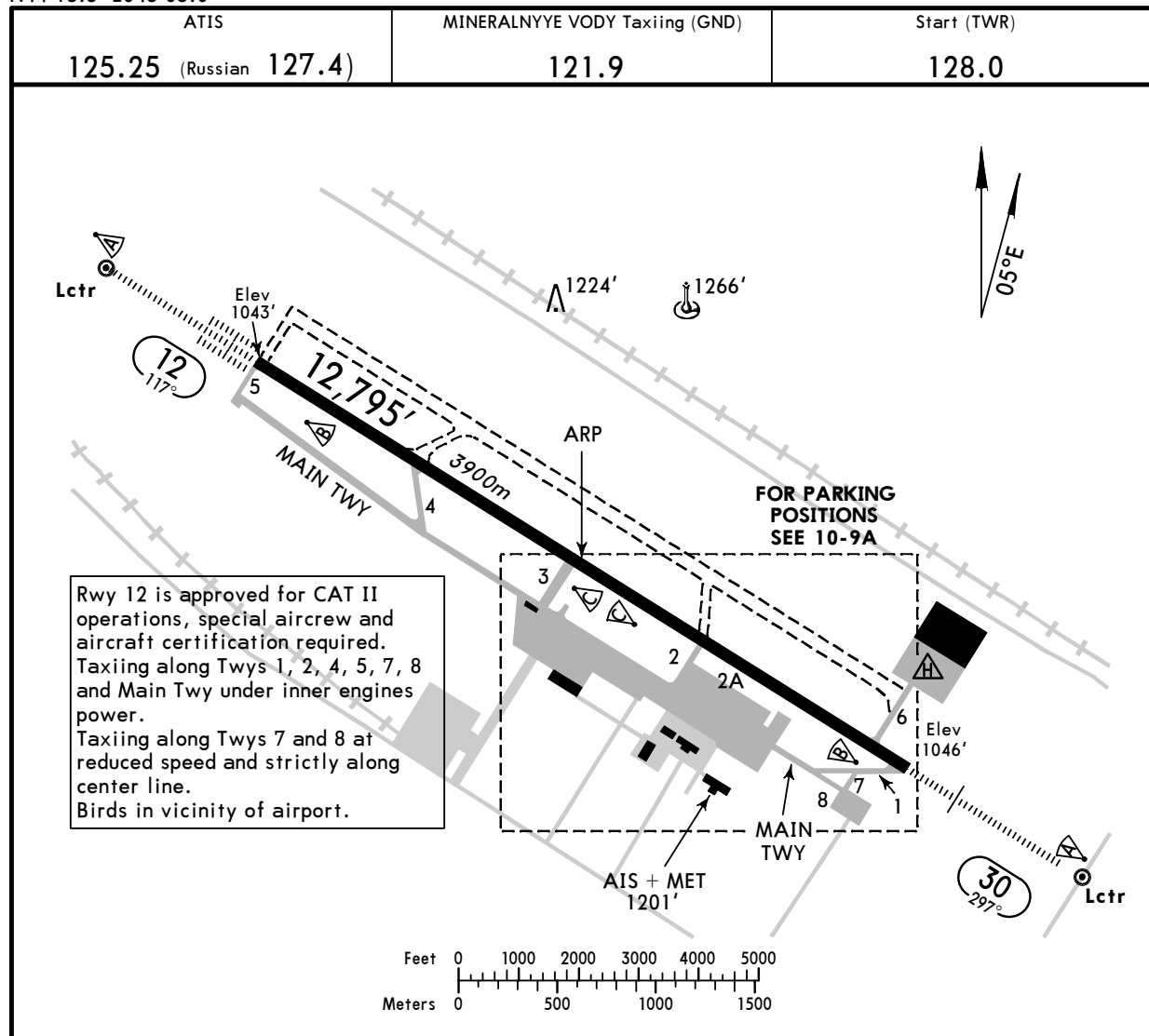
REVERSE THRUST

Reverse thrust power with the exception of reverse idle thrust is used for safety reasons only.

URMM/MRV

Apt Elev **1054'**
N44 13.5 E043 05.0

JEPPESEN MINERALNYE VODY, RUSSIA
11 SEP 09 (10-9) **MINERALNYE VODY**



ADDITIONAL RUNWAY INFORMATION

RWY		USABLE LENGTHS		TAKE-OFF	WIDTH
		Threshold	Landing Beyond		
12	HIRL(60m) CL(15m) HIALS-II TDZ PAPI-L(2.67°) RVR		11,614' 3540m		197'
30	HIRL(60m) CL(15m) HIALS PAPI-L(2.67°) RVR		11,647' 3550m		60m

TAKE-OFF

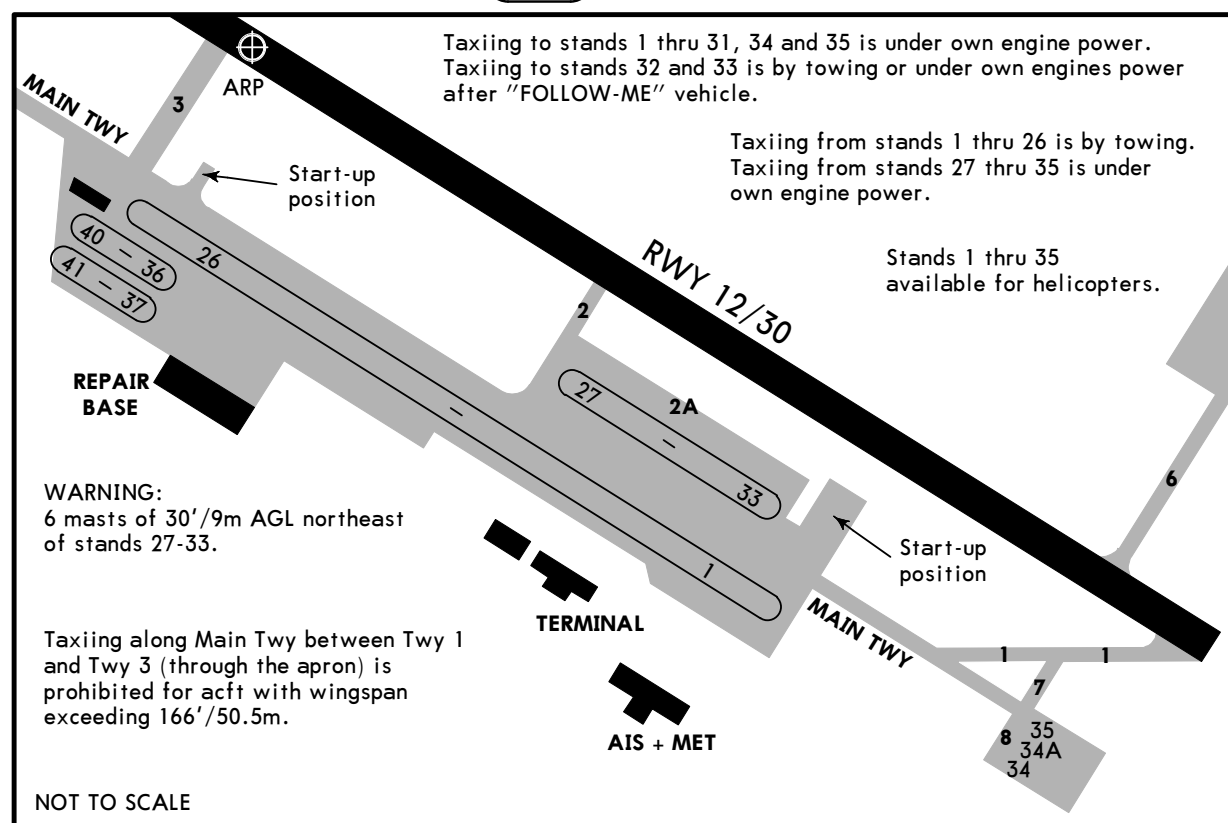
AIR CARRIER (JAA)
All Rwys

LVP must be in force

	RL & CL	RCLM (DAY only) or RL	RCLM (DAY only) or RL
A			
B	200m (150m)	250m	400m
C			
D	250m (200m)	300m	

URMM/MRV

11 SEP 09

10-9A**JEPPESEN MINERALNYYE VODY, RUSSIA**
MINERALNYYE VODY**INS COORDINATES**

STAND No.	COORDINATES	STAND No.	COORDINATES
1 thru 3	N44 13.0 E043 05.6	27, 28	N44 13.2 E043 05.4
4, 5	N44 13.1 E043 05.5	29 thru 32	N44 13.1 E043 05.5
6 thru 9	N44 13.1 E043 05.4	33	N44 13.1 E043 05.6
10, 11	N44 13.1 E043 05.3		
12	N44 13.2 E043 05.3		
13 thru 16	N44 13.2 E043 05.2		
17	N44 13.2 E043 05.1		
18, 19	N44 13.3 E043 05.1		
20 thru 23	N44 13.3 E043 05.0		
24 thru 26	N44 13.3 E043 04.9		

LOW VISIBILITY PROCEDURES (LVP)

Low visibility procedures shall come into force when rwy visibility values are less than 1000m and/or cloud ceiling is below 80m. The implementation of LVP will be broadcasted by ATIS: "Low visibility procedures are in force". "Low visibility procedure" mean that an interval between arriving acft is maintained so that the ILS critical area should be vacant after each landing.

Rwy 12 is equipped for CAT II operations, rwy 30 for CAT I operations.

CAT I and II approach procedures shall be implemented under the following meteorological conditions:

Rwy 12 CAT I - ceiling less than 80m and RVR 1000m but not less than ceiling 60m RVR 550m.

Rwy 12 CAT II - ceiling less than 60m and RVR 550m but not less than ceiling 30m RVR 350m.

Rwy 30 CAT I - ceiling less than 80m and RVR 1000m but not less than ceiling 60m RVR 800m.

Landed acft shall report the vacation of rwy when they have passed ILS critical area.

1. Arrival

Vacating of rwy 12 along twy 2 or 1, rwy 30 along twy 4 or 5.

"FOLLOW ME" vehicle shall be applied during taxiing by request.

When visibility is less than 400m or when the flight crew has doubts in taxiing safety, the pilot shall stop the acft and request for the "FOLLOW ME" vehicle.

Acft arriving on rwy 12 shall be met after landing by the "FOLLOW ME" vehicle on twy 2 or 1. Acft arriving on rwy 30 shall be met after landing by the "FOLLOW ME" vehicle on twy 4 or 5. Further taxiing of acft after the "FOLLOW ME" vehicle shall be carried out under control of the taxiing controller.

2. Departure

Towing of acft shall be carried out with navigation and flashing lights switched on. Taxiing of acft on apron and twy, if an escort vehicle was requested, shall be carried out after the "FOLLOW ME" vehicle.

It is prohibited to cross the holding position line on twys 1 thru 6 designated by ILS lighting marking and the established day marking without Tower controller's permission.

URMM/MRV**JEPPESEN**
17 JUL 09
Eff 30 Jul **10-9S****MINERALNYE VODY, RUSSIA**
MINERALNYE VODY**Standard**

STRAIGHT-IN RWY		A	B	C	D
12	CAT 2 ILS	1143' (100') RA 104' R350m	1143' (100') RA 104' R350m	1143' (100') RA 104' R350m	1143' (100') RA 104' R350m
	ILS	1243' (200')	1243' (200')	1243' (200')	1243' (200')
	<i>FULL</i>	R550m	R550m	R550m	R550m
	<i>Limited</i>	R750m	R750m	R750m	R750m
	<i>ALS out</i>	R1200m	R1200m	R1200m	R1200m
	LOC	NOT AUTH	NOT AUTH	NOT AUTH	NOT AUTH
	NDB ①	1480' (437') R1300m	1480' (437') R1300m	1480' (437') R1300m	1480' (437') R1300m
	<i>ALS out</i>	R2000m	R2000m	R2000m	R2000m
30	ILS	1246' (200')	1246' (200')	1246' (200')	1246' (200')
	<i>FULL</i>	R550m	R550m	R550m	R550m
	<i>Limited</i>	R750m	R750m	R750m	R750m
	<i>ALS out</i>	R1200m	R1200m	R1200m	R1200m
	LOC	NOT AUTH	NOT AUTH	NOT AUTH	NOT AUTH
	NDB ①	1450' (404') R1200m	1450' (404') R1200m	1450' (404') R1200m	1450' (404') R1200m
	<i>ALS out</i>	R1900m	R1900m	R1900m	R1900m

① Continuous Descent Final Approach

TAKE-OFF RWY 12, 30

	Approved Operators HIRL, CL & mult. RVR req	LVP must be in Force			RCLM (DAY only) or RL	RCLM (DAY only) or RL	NIL (DAY only)
		RL, CL & mult. RVR req	RL & CL	RCLM (DAY only) or RL			
A	125m	150m	200m	250m	400m		500m
B							
C	150m	200m	250m	300m			
D							

URMM/MRV

JEPPESEN
 17 JUL 09
 Eff 30 Jul **(10-9X)**
JAA MINIMUMS**MINERALNYYE VODY, RUSSIA****MINERAL'NYYE VODY**

STRAIGHT-IN RWY		A	B	C	D
12	CAT II ILS	1143' (100')	1143' (100')	1143' (100')	1143' (100')
		RA 104' R350m	RA 104' R350m	RA 104' R350m	RA 104' R350m
	ILS	1243' (200')	1243' (200')	1243' (200')	1243' (200')
		R550m	R550m	R550m	R550m
	<i>ALS out</i>	R1000m	R1000m	R1000m	R1000m
	LOC	NOT AUTHORIZED			
30	NDB	1480' (437')	1480' (437')	1480' (437')	1480' (437')
		R900m	R1000m	R1000m	R1400m
	<i>ALS out</i>	R1500m	R1500m	R1800m	R2000m
	ILS	1246' (200')	1246' (200')	1246' (200')	1246' (200')
		R550m	R550m	R550m	R550m
	<i>ALS out</i>	R1000m	R1000m	R1000m	R1000m
	NDB	1450' (404')	1450' (404')	1450' (404')	1450' (404')
		R900m	R1000m	R1000m	R1400m
	<i>ALS out</i>	R1500m	R1500m	R1800m	R2000m
	LOC	NOT AUTHORIZED			
	NDB	1450' (404')	1450' (404')	1450' (404')	1450' (404')
		R900m	R1000m	R1000m	R1400m
	<i>ALS out</i>	R1500m	R1500m	R1800m	R2000m

TAKE-OFF RWY 12, 30

	Approved Operators	LVP must be in Force				RCLM (DAY only) or RL	RCLM (DAY only) or RL	NIL (DAY only)
	HIRL, CL & mult. RVR req	RL, CL & mult. RVR req	RL & CL	RCLM (DAY only) or RL				
A	125m	150m	200m	250m		400m		500m
B								
C								
D	150m	200m	250m	300m				

URMM/MRV

MINERALNYE VODY

16 JUL 10
Eff 29 Jul

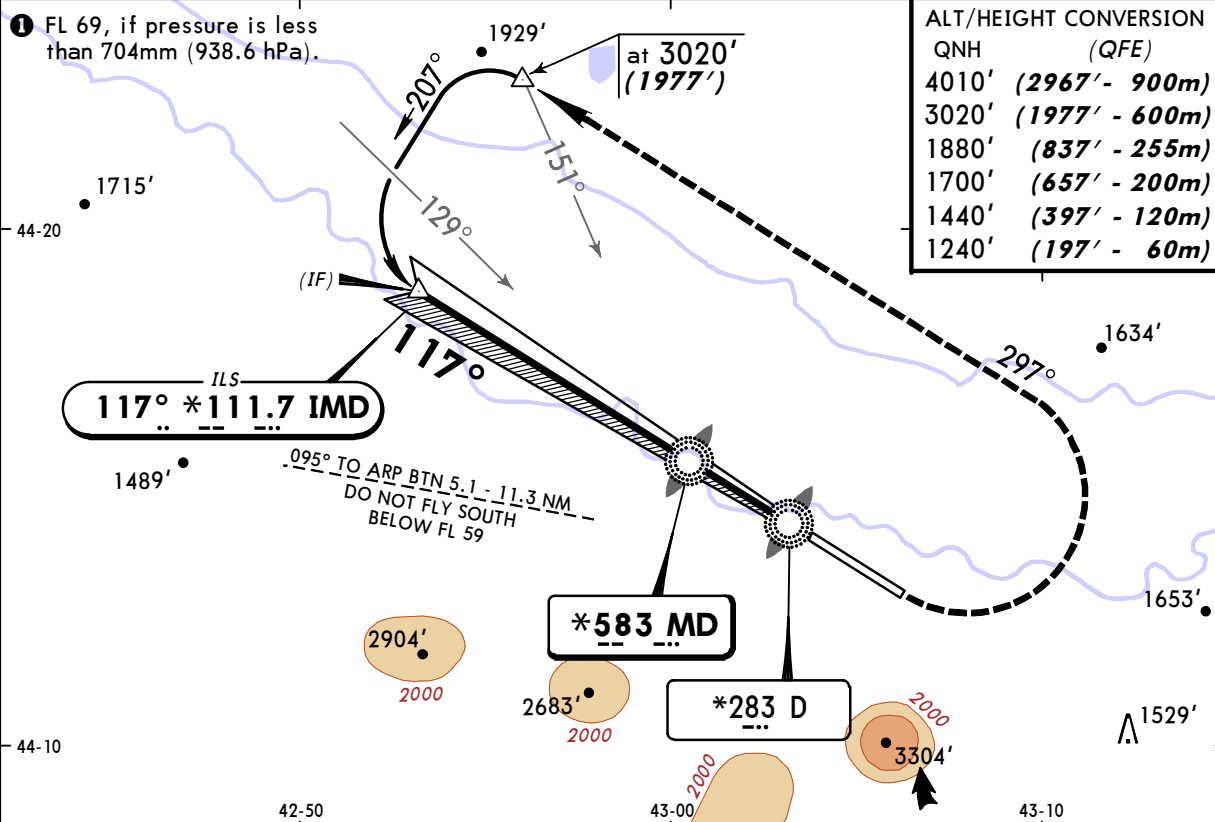
(11-1)

MINERALNYE VODY, RUSSIA
CAT II/I ILS or 2 NDB Rwy 12

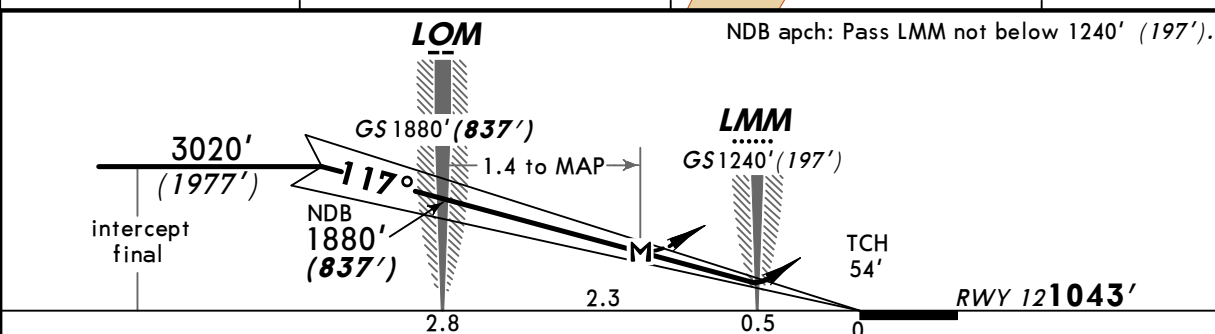
BRIEFING STRIP

ATIS 125.25 (Russian 127.4)	MINERALNYE VODY Approach 119.3	MINERALNYE VODY Krug (R) 120.7	MINERALNYE VODY Start (TWR) 128.0	Ground 121.9
LOC IMD *111.7	Final Apch Crs 117°	GS/ Minimum Alt LOM 1880' (837')	CAT II ILS RA 104' DA(H) 1143' (100')	CAT I ILS DA(H) 1243' (200')
NDB MD *583			NDB MDA(H) 1480' (437')	Apt Elev 1054' RWY 1043'
MISSED APCH: Climb on 117° to 1440' (397') (NDB: 1700' (657')), then turn LEFT onto 297° climbing to 3020' (1977') , then as directed.				
Alt Set: MM (hPa on req) QNH on req (QFE) Trans level: FL 59 1 Trans alt: 4010' (2967') 1. CAT II ILS: Special Aircrew and Acft Certification Required. 2. LOM is 180'/55m LEFT of RCL.				

1 FL 69, if pressure is less than 704mm (938.6 hPa).



ALT/HEIGHT CONVERSION	QNH	(QFE)
4010'	(2967' - 900m)	
3020'	(1977' - 600m)	
1880'	(837' - 255m)	
1700'	(657' - 200m)	
1440'	(397' - 120m)	
1240'	(197' - 60m)	



Gnd speed-Kts	70	90	100	120	140	160	HIALS-II	117°
ILS GS or							PAPI	
NDB Descent Angle 2.67°	336	432	480	576	671	767		
LOM to MAP	1.4	1:12	0:56	0:50	0:42	0:36		

STRAIGHT-IN LANDING RWY 12							
CAT II		CAT I			LOC (GS out)	NDB	
RA 104'		DA(H) 1243' (200')				MDA(H) 1480' (437')	
DA(H) 1143' (100')		FULL	TDZ or CL out	ALS out		ALS out	
A							
B	RVR 350m	RVR 550m	RVR 720m	1200m	NOT AUTH	1700m	2500m
C		VIS 800m	VIS 800m				
D						2100m	

CHANGES: Missed approach.

© JEPPESEN, 2000, 2010. ALL RIGHTS RESERVED.

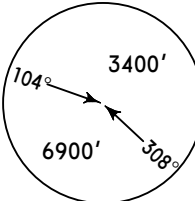
URMM/MRV MINERALNYE VODY

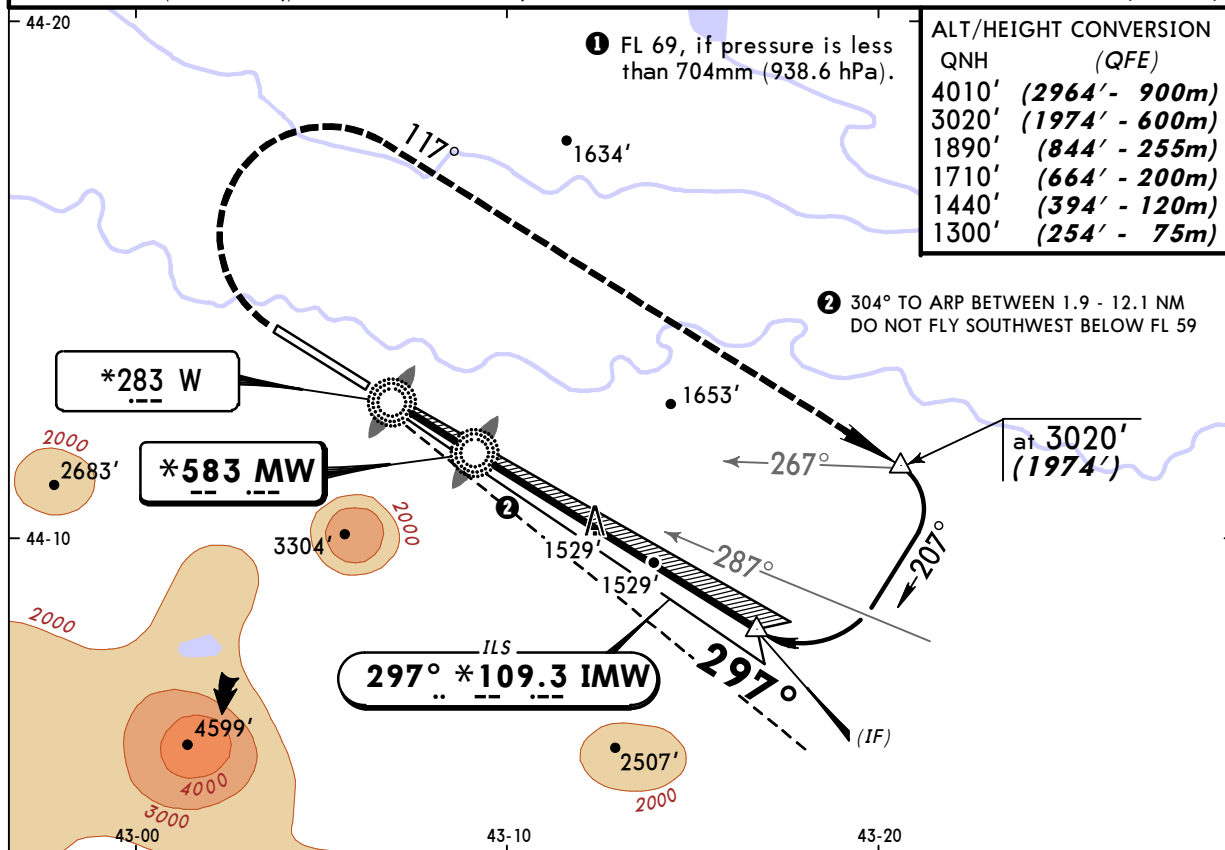
16 JUL 10
Eff 29 Jul

(11-2)

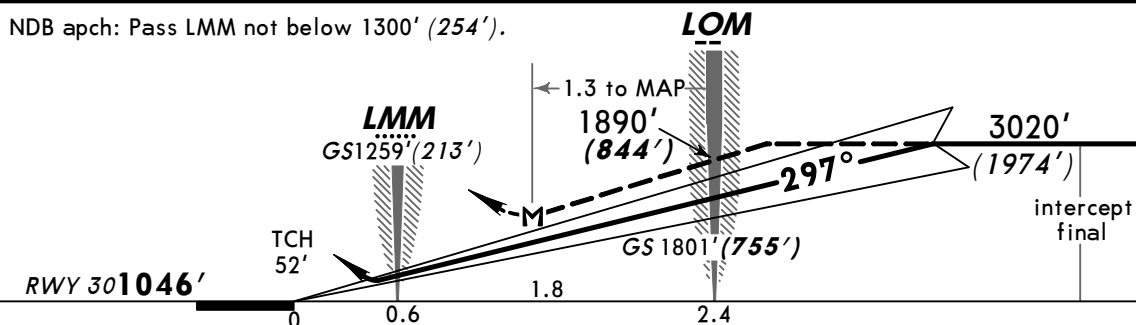
JEPPesen MINERALNYE VODY, RUSSIA ILS or 2 NDB Rwy 30

BRIEFING STRIP

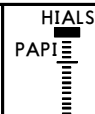
ATIS 125.25 (Russian 127.4)		MINERALNYE VODY Approach 119.3		MINERALNYE VODY Krug (R) 120.7		MINERALNYE VODY Start (TWR) 128.0		Ground 121.9	
LOC IMW *109.3		Final Apch Crs 297°		GS LOM 1801' (755')		ILS DA(H) 1246' (200')		Apt Elev 1054' RWY 1046'	
NDB MW *583				Minimum Alt LOM 1890' (844')		NDB MDA(H) 1450' (404')			
MISSED APCH: Climb on 297° to 1440' (394') (NDB: 1710' (664')). Turn RIGHT onto 117° climbing to 3020' (1974'), then as directed.								 MSA MW NDB	
Alt Set: MM (hPa on req)		QNH on req (QFE)		Trans level: FL 59 ①		Trans alt: 4010' (2964')			



NDB apch: Pass LMM not below 1300' (254').



Gnd speed-Kts	70	90	100	120	140	160
ILS GS	2.67°	336	432	480	576	767
NDB Descent Angle	3.00°	372	478	531	637	849
LOM to MAP	1.3	1:07	0:52	0:47	0:39	0:33



297°

PANS OPS

STRAIGHT-IN LANDING RWY 30						
ILS			LOC (GS out)	NDB		
DA(H) 1246'(200')		MDA(H) 1450'(404')				
FULL	ALS out			ALS out		
A	RVR 720m VIS 800m	1200m	NOT AUTHORIZED	1200m	2000m	
B						
C						
D				1600m		