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Trip Kit Index

Airport Information For URMM

Terminal Charts For URMM

Revision Letter For Cycle 08-2013

Change Notices

Notebook

General Information

Location: Mineralnyye Vody Rus
IATA Code: MRV
Lat/Long: N44° 13.6' E043° 05.0'
Elevation: 1047 ft

Airport Use: Public
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: 0225 Z
Sunset: 1551 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: 1044 ft
Lighting: Edge, ALS, Centerline

Communication Information

ATIS 127.4 Non-English
ATIS 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
Mineralnyye Vody Transit Operations 118.0

ATIS
125.25 (Russian 127.4)

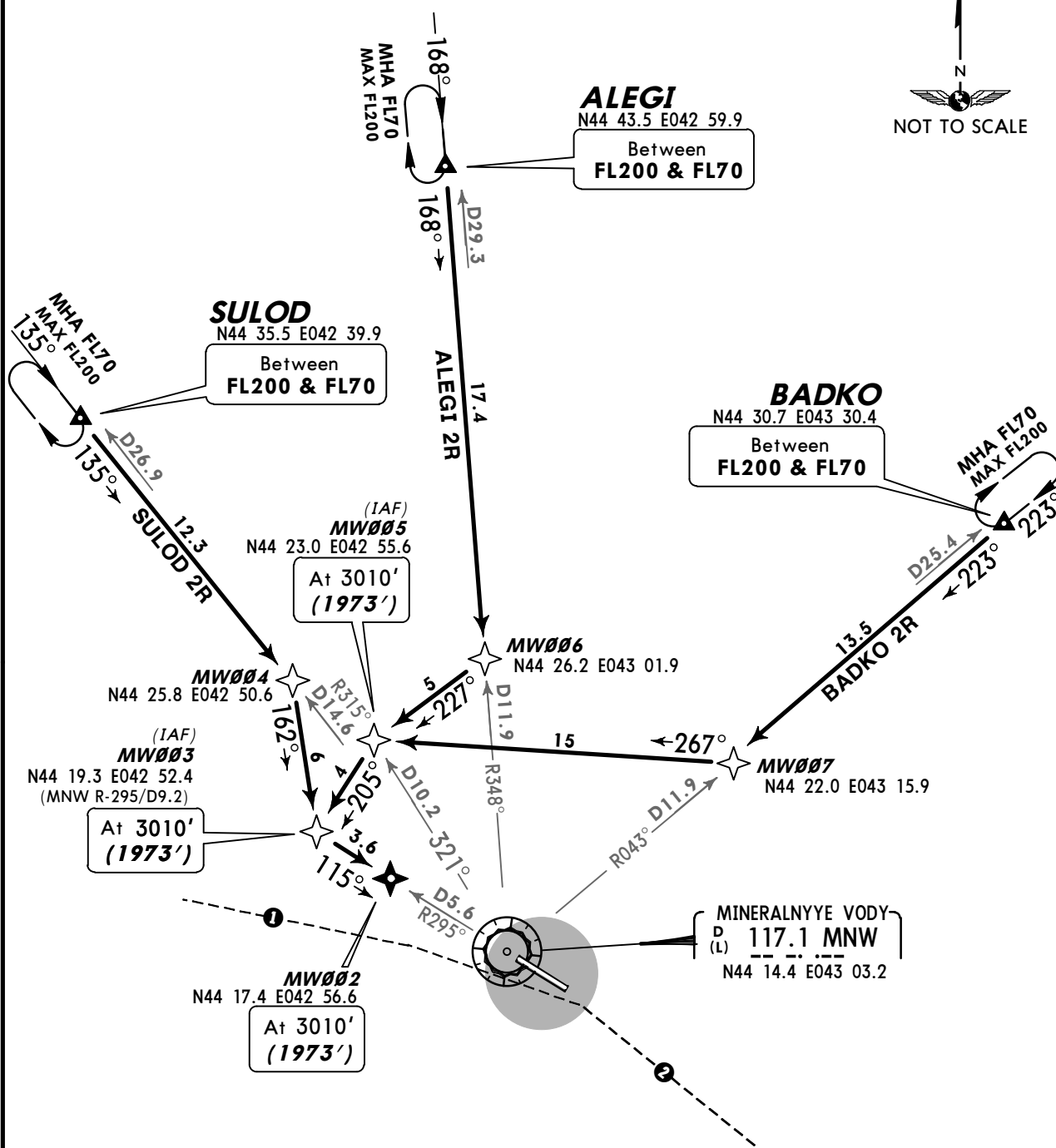
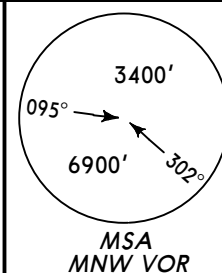
Apt Elev
1047'

Alt Set: MM (hPa on request) QNH on request (QFE)
Trans level: FL60
FL70 if pressure is less than 704mm (938.6 hPa)
Trans alt: 4000' (2963')

ALEGI 2R [ALEG2R]
BADKO 2R [BADK2R]
SULOD 2R [SULO2R]
RWY 12 RNAV ARRIVALS

RNAV (GNSS)

SPEED: MAX 250 KT BELOW FL100



- ① 095° to ARP between 11.3 NM and 5.1 NM do not fly south below FL60.
- ② 302° to ARP between 12.1 NM and 1.9 NM do not fly south below FL60.

ALT/HEIGHT CONVERSION	
QNH	(QFE)
4000'	(2963' - 900m)
3010'	(1973' - 600m)

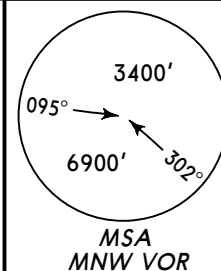
ATIS
125.25 (Russian 127.4)

Apt Elev
1047'

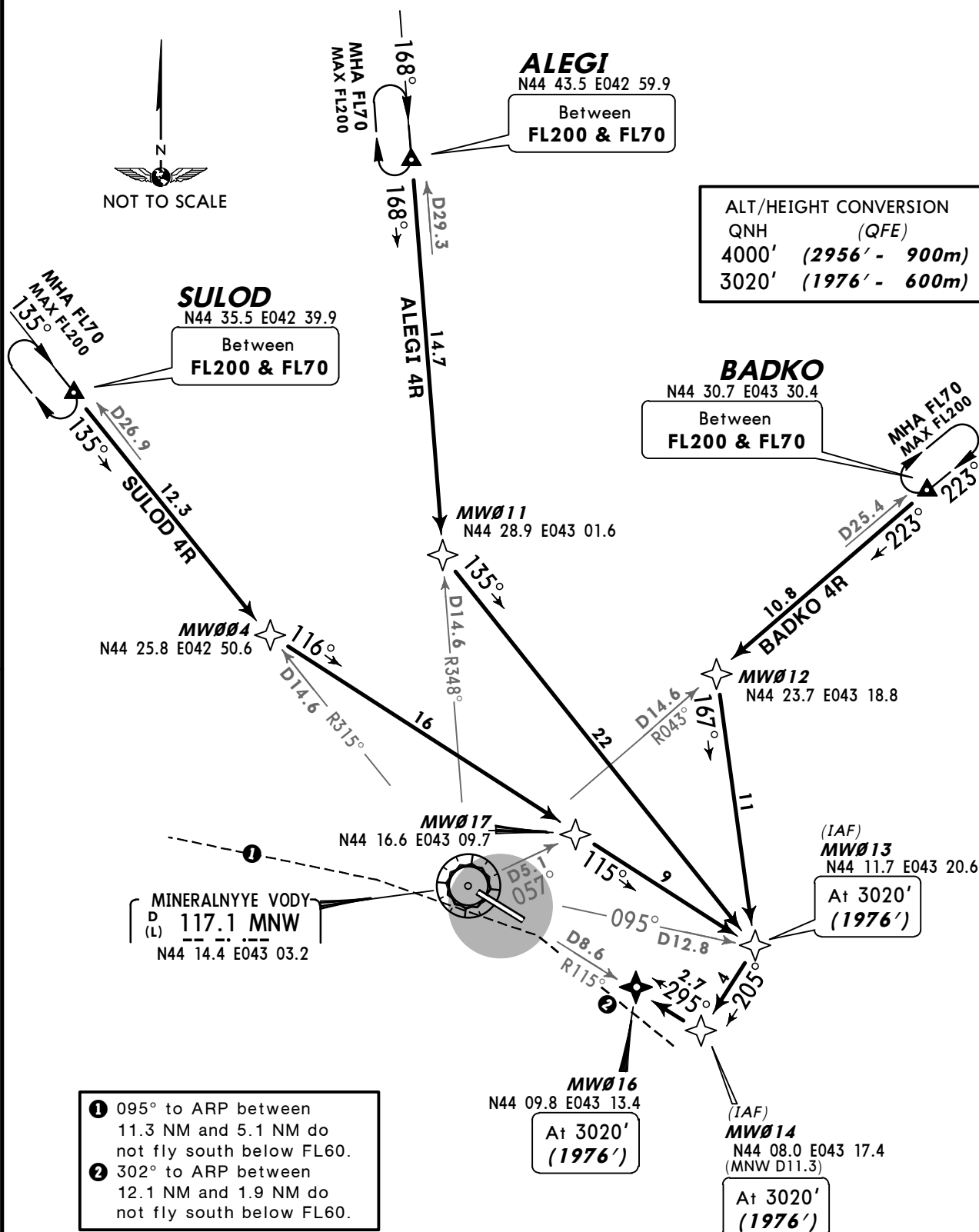
Alt Set: MM (hPa on request) QNH on request (QFE)
Trans level: FL60
FL70 if pressure is less than 704mm (938.6 hPa)
Trans alt: 4000' (2956')

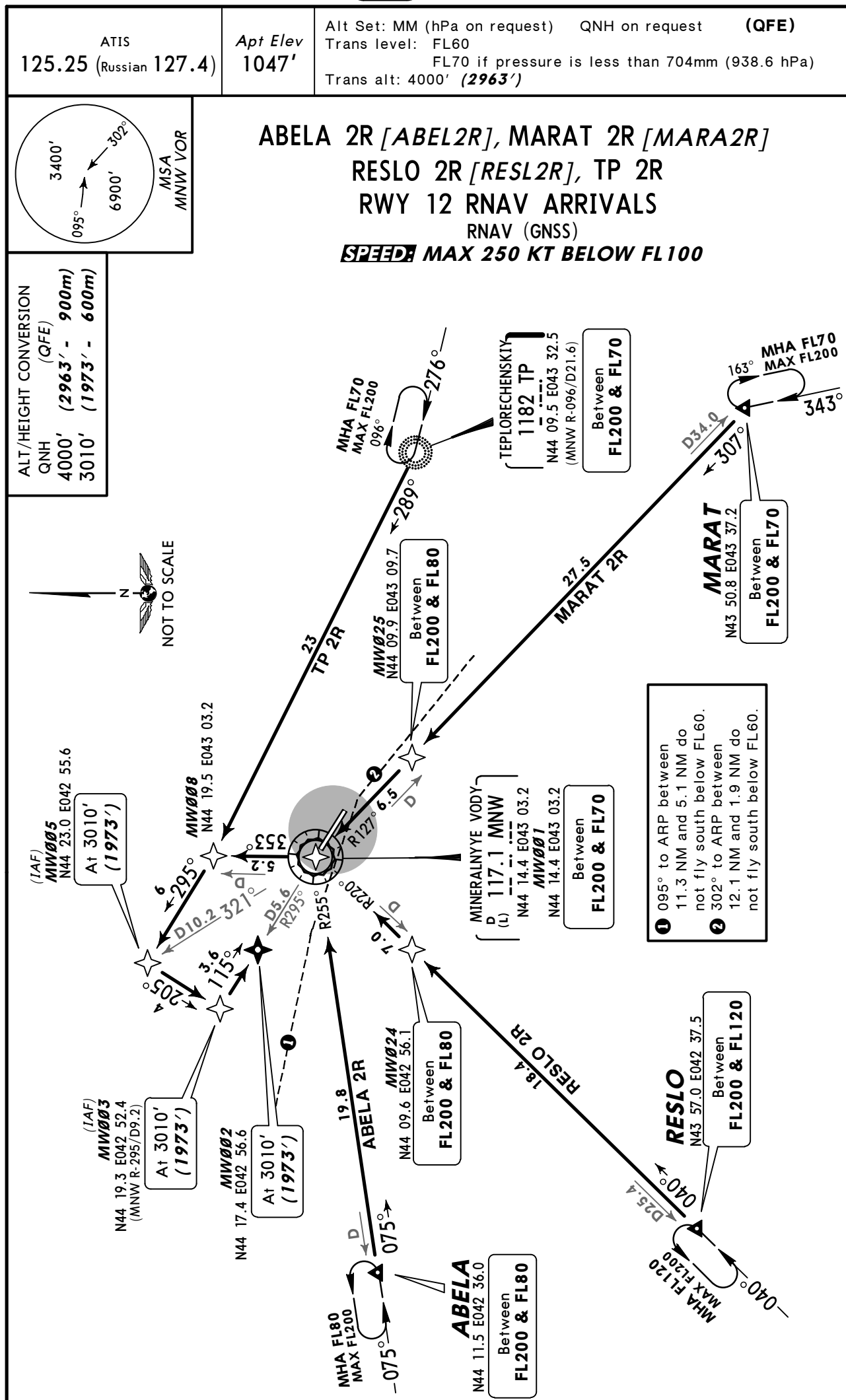
ALEGI 4R [ALEG4R]
BADKO 4R [BADK4R]
SULOD 4R [SULO4R]
RWY 30 RNAV ARRIVALS
RNAV (GNSS)

SPEED: MAX 250 KT BELOW FL100



ALT/HEIGHT CONVERSION
QNH (QFE)
4000' (2956' - 900m)
3020' (1976' - 600m)

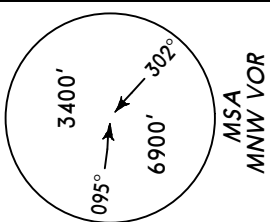




ATIS
125.25 (Russian 127.4)

Apt Elev
1047'

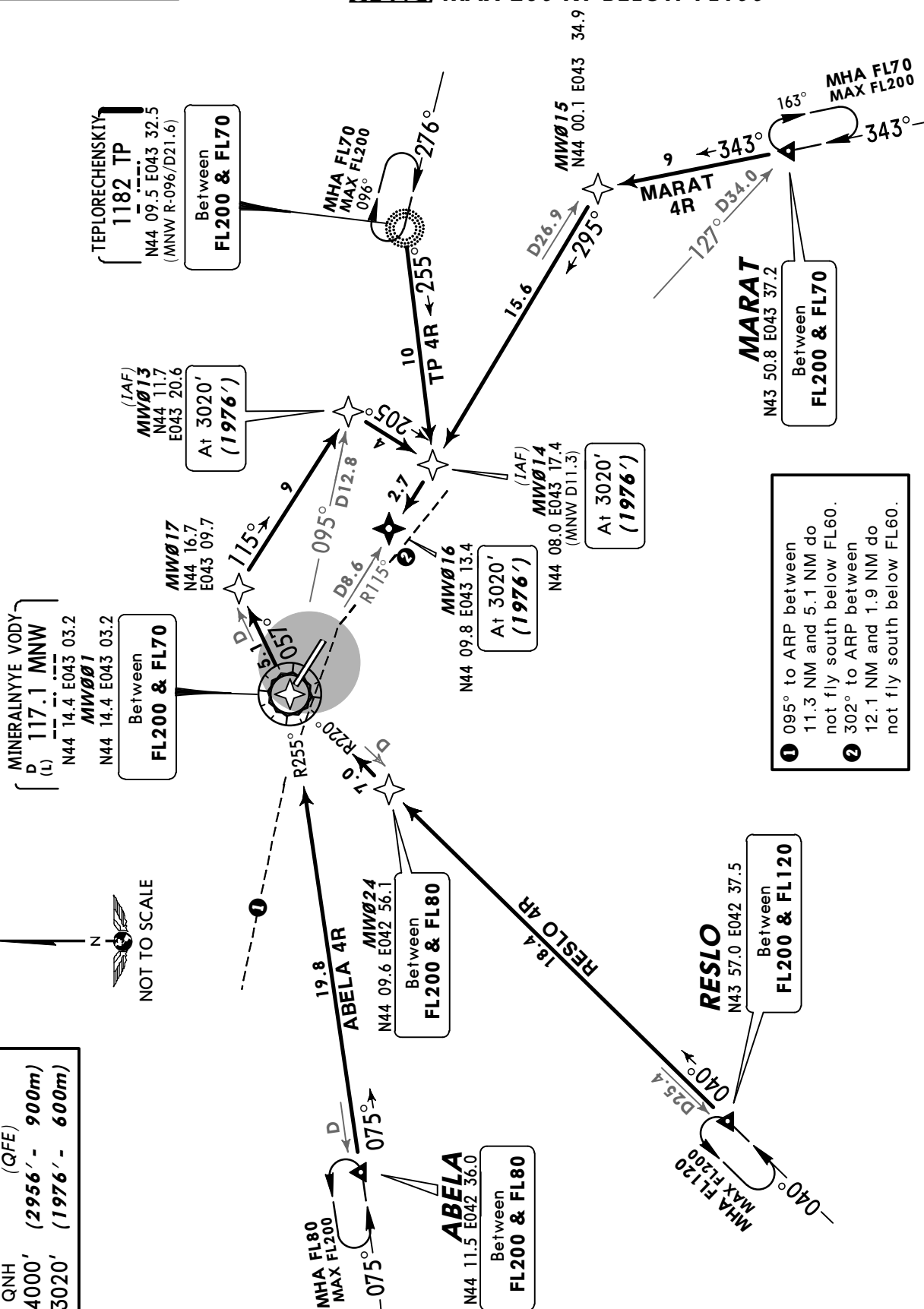
Alt Set: MM (hPa on request) QNH on request (QFE)
Trans level: FL60
FL70 if pressure is less than 704mm (938.6 hPa)
Trans alt: 4000' (2956')



ABELA 4R [ABEL4R], MARAT 4R [MARA4R] RESLO 4R [RESL4R], TP 4R RWY 30 RNAV ARRIVALS

RNAV (GNSS)

SPEED: MAX 250 KT BELOW FL100



- 095° to ARP between 11.3 NM and 5.1 NM do not fly south below FL60.
- 302° to ARP between 12.1 NM and 1.9 NM do not fly south below FL60.

Alt Set: MM (hPa on request) QNH on request **(QFE)**
Trans level: FL60
 FL70 if pressure is less than 704mm (938.6 hPa)
Trans alt: 4000' **(2963')**

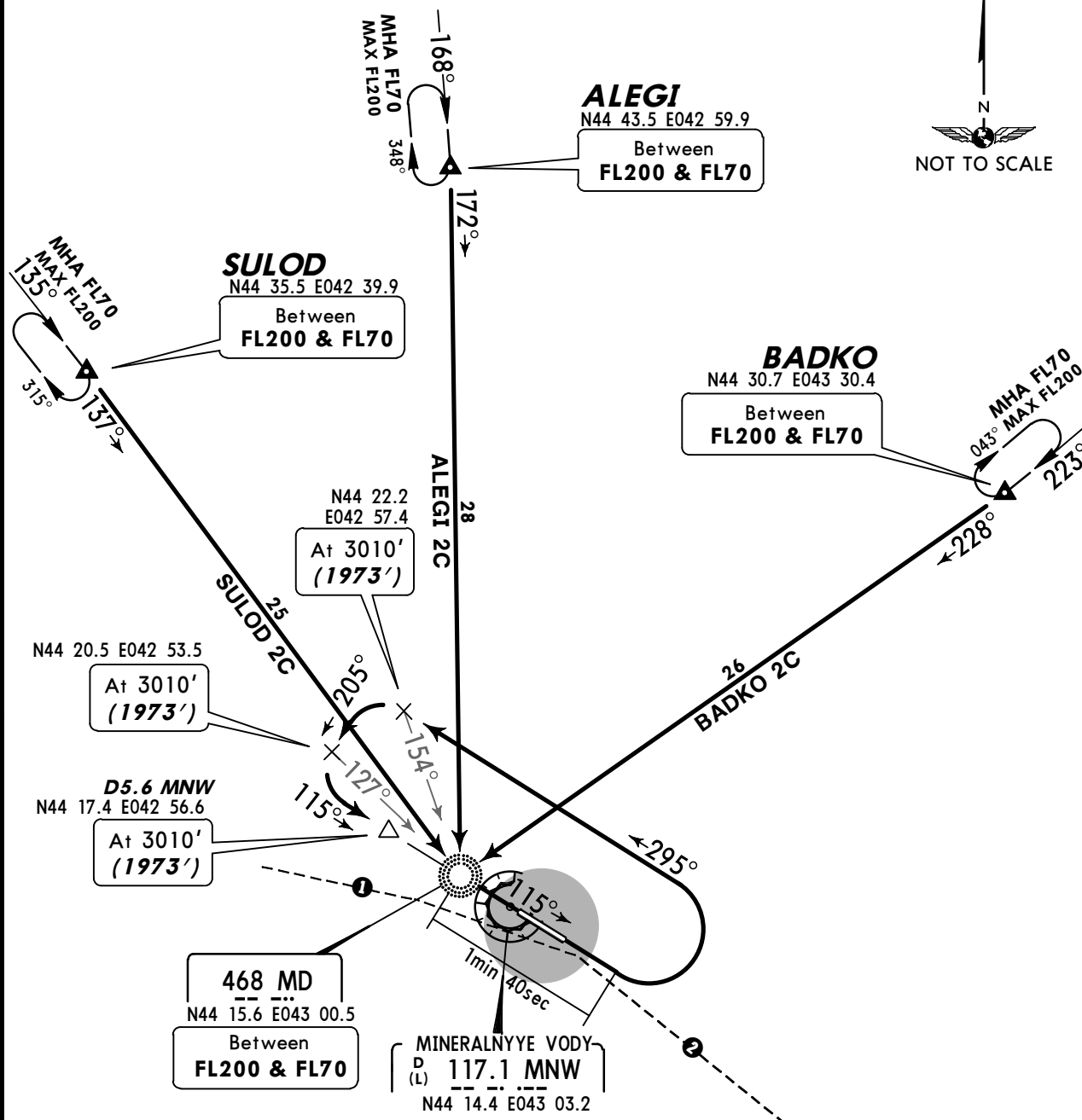
3400'

086° →

6900'

← 301°

MSA
MD NDB



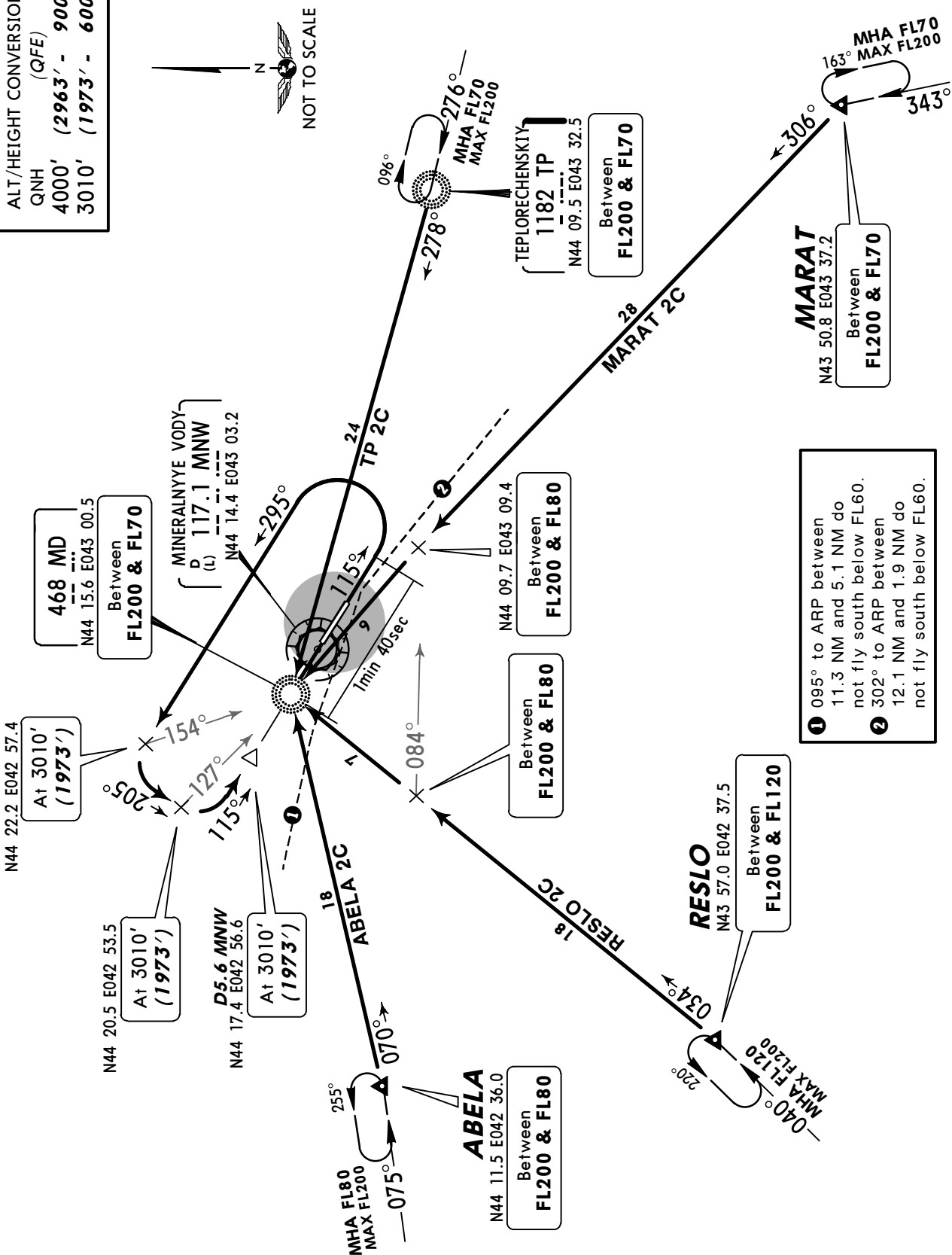
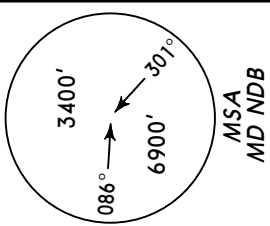
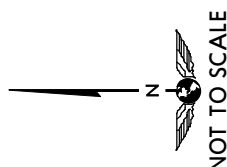
- 1 095° to ARP between 11.3 NM and 5.1 NM do not fly south below FL60.
- 2 302° to ARP between 12.1 NM and 1.9 NM do not fly south below FL60.

ALT/HEIGHT CONVERSION

QNH	(QFE)
4000'	(2963' - 900m)
3010'	(1973' - 600m)

ABELA 2C [ABEL2C], MARAT 2C [MARA2C]
RESLO 2C [RESL2C], TP 2C
RWY 12 ARRIVALS
~~SPEED~~ MAX 250 KT BELOW FL100

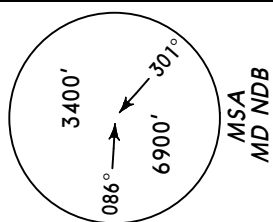
ALT/HEIGHT CONVERSION
QNH (QFE)
4000' (2963' - 900m)
3010' (1973' - 600m)



ATIS
125.25 (Russian 127.4)

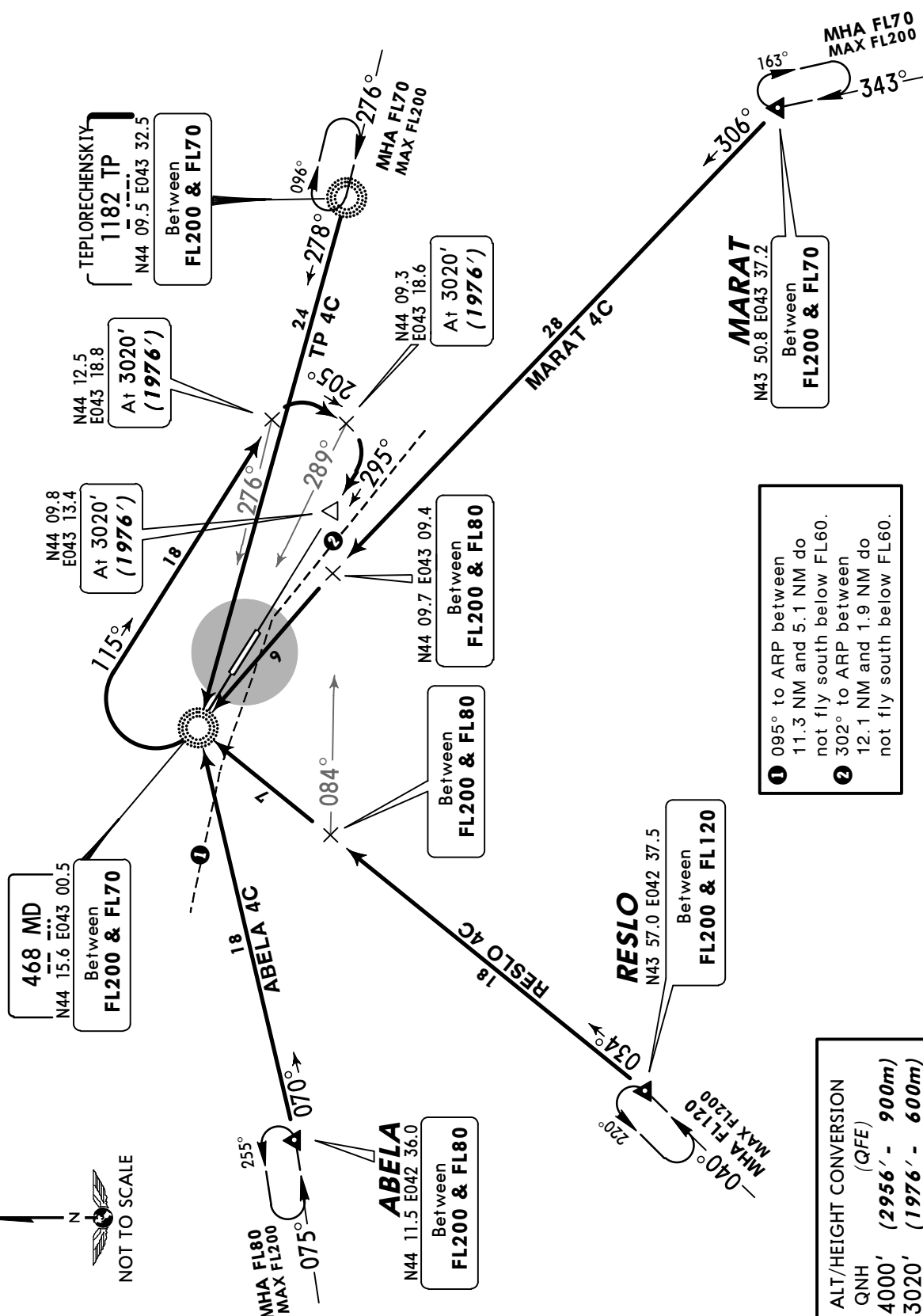
Apt Elev
1047'

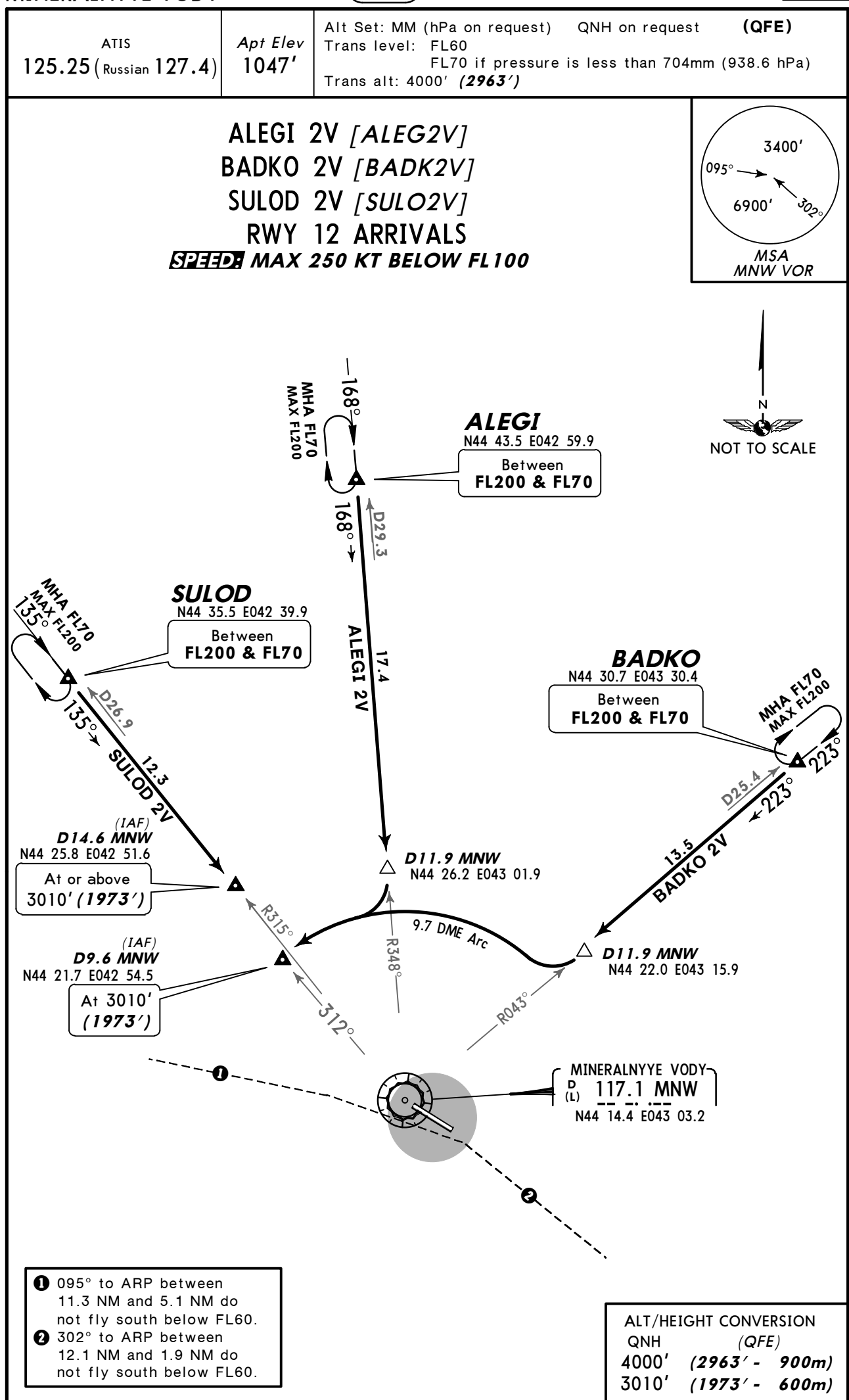
Alt Set: MM (hPa on request) QNH on request (QFE)
Trans level: FL60
FL70 if pressure is less than 704mm (938.6 hPa)
Trans alt: 4000' (2956')



ABELA 4C [ABEL4C], MARAT 4C [MARA4C]
RESLO 4C [RESL4C], TP 4C
RWY 30 ARRIVALS

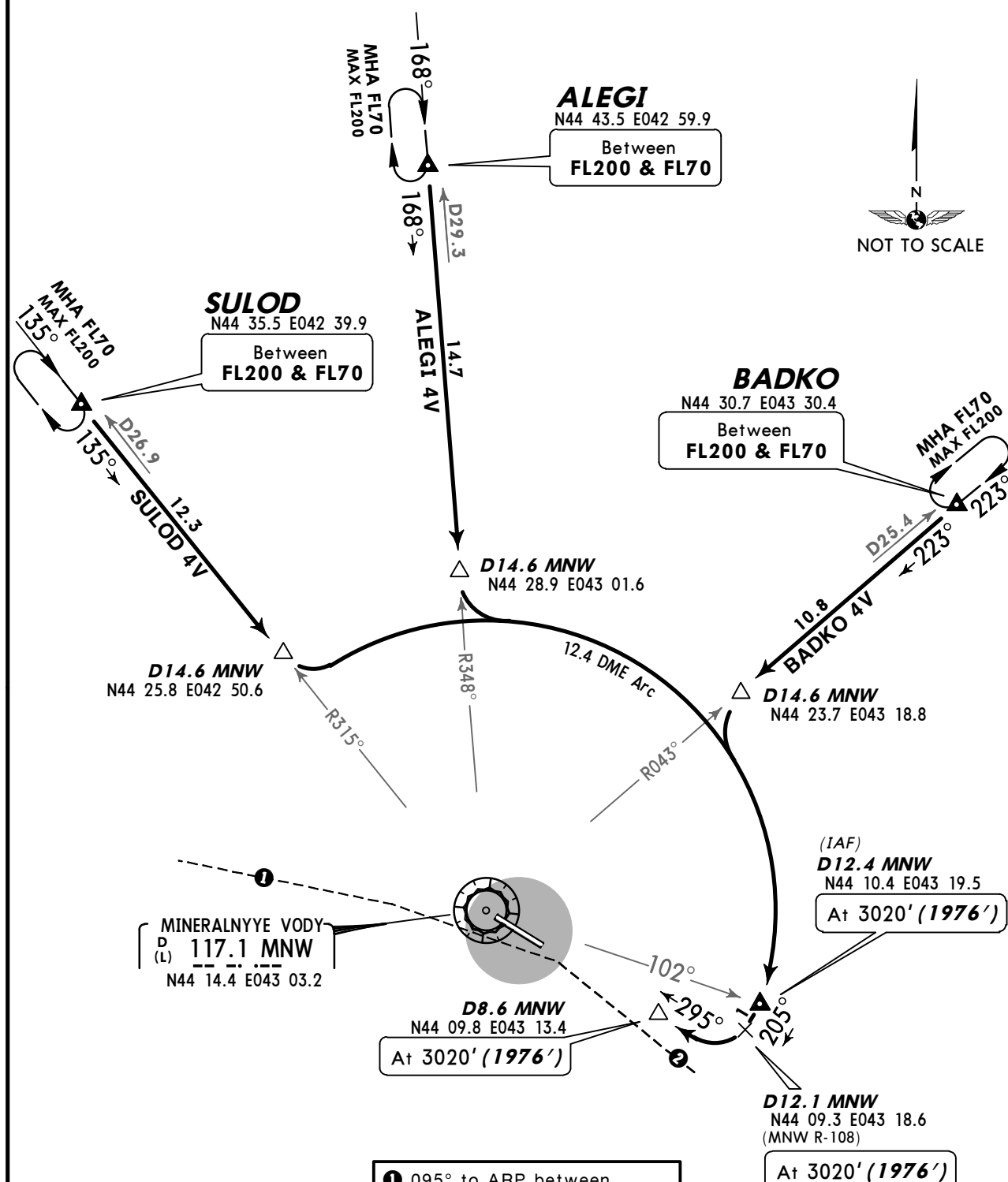
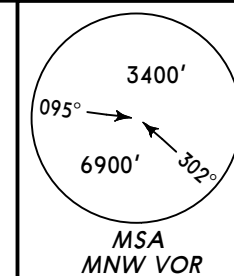
SPEED: MAX 250 KT BELOW FL100





ATIS 125.25 (Russian 127.4)	Apt Elev 1047'	Alt Set: MM (hPa on request) QNH on request (QFE) Trans level: FL60 FL70 if pressure is less than 704mm (938.6 hPa) Trans alt: 4000' (2956')
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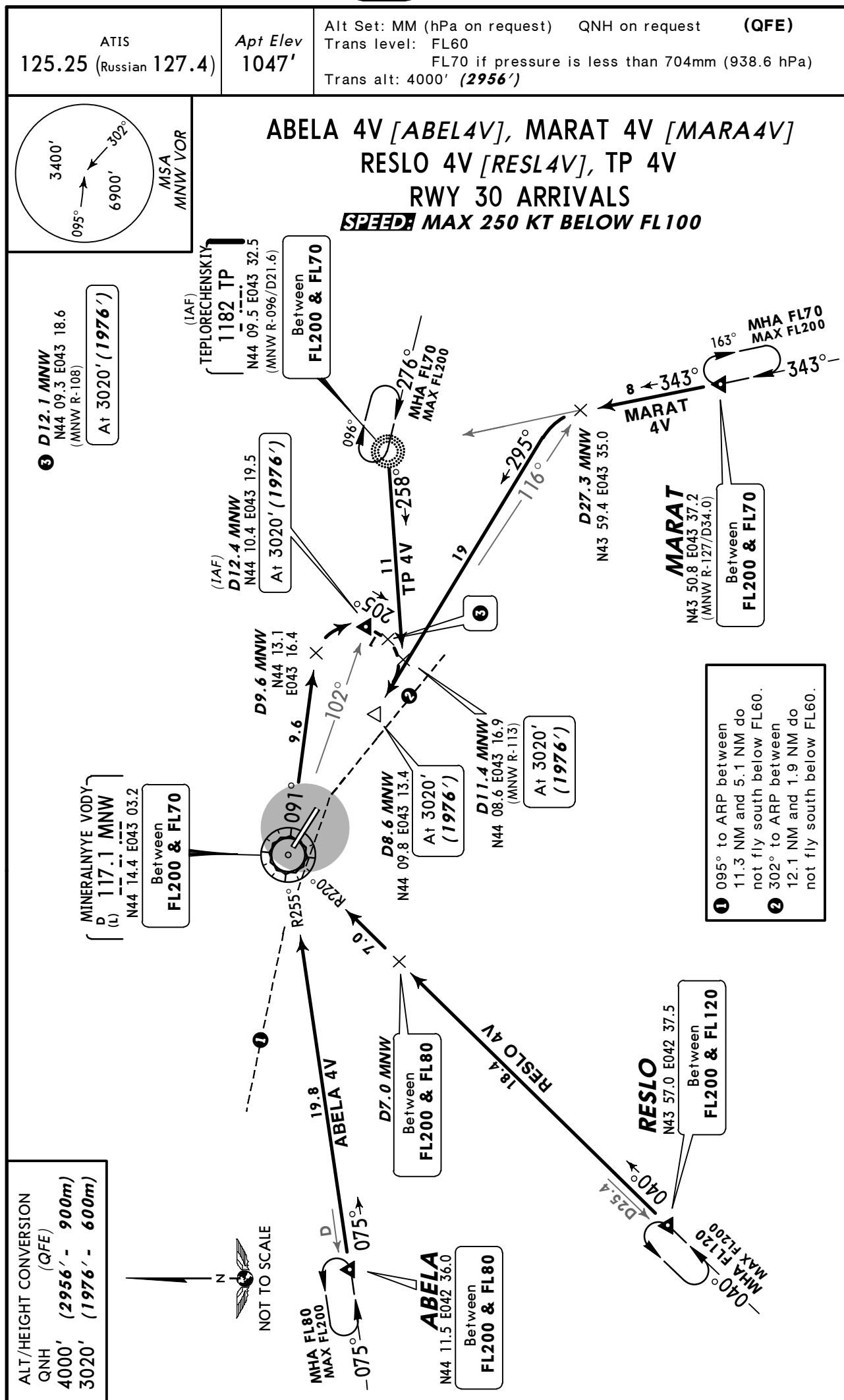
ALEGI 4V [ALEG4V]
BADKO 4V [BADK4V]
SULOD 4V [SULO4V]
RWY 30 ARRIVALS
SPEED MAX 250 KT BELOW FL100

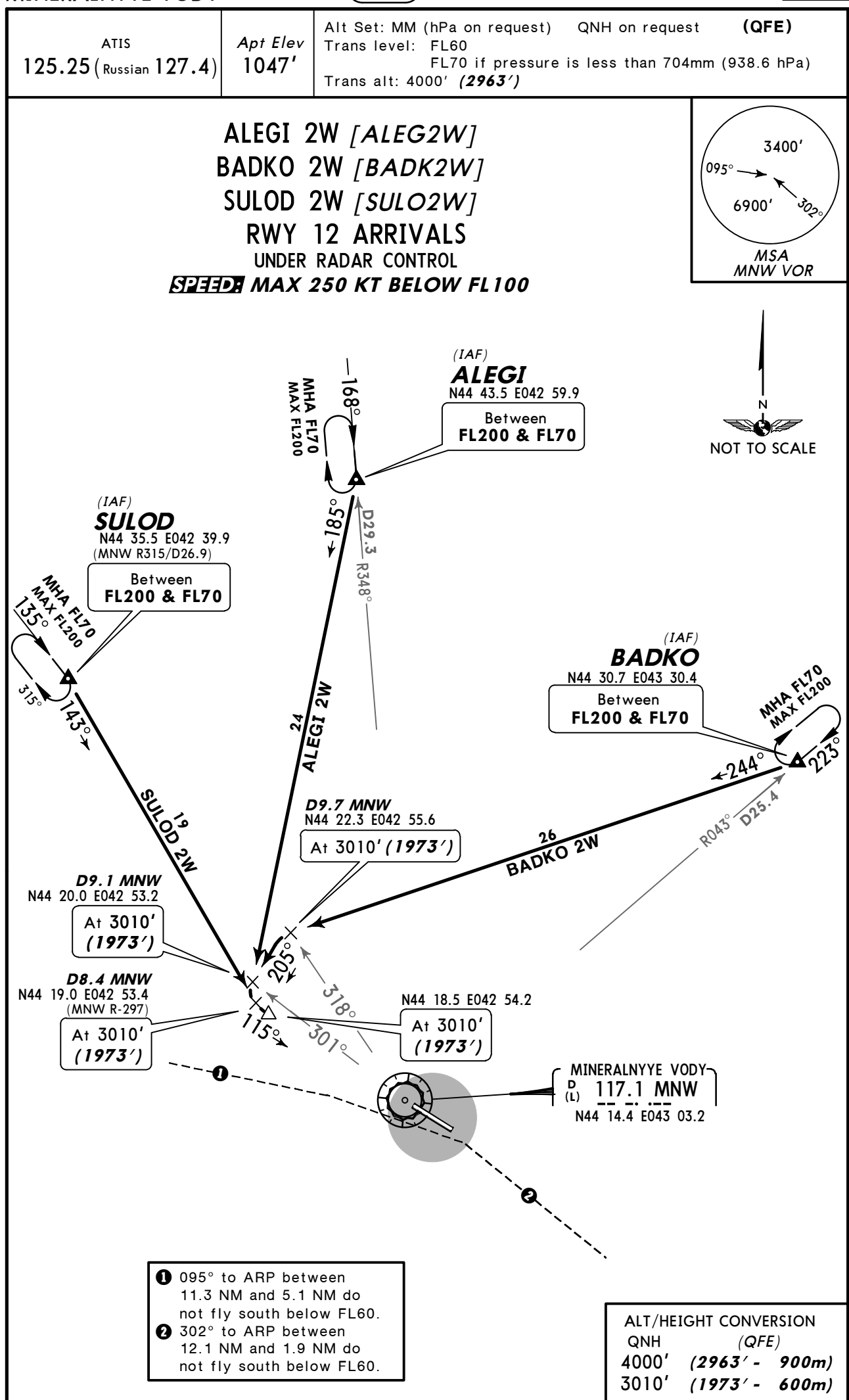


ALT/HEIGHT CONVERSION
QNH (QFE)
4000' (2956' - 900m)
3020' (1976' - 600m)

- 095° to ARP between 11.3 NM and 5.1 NM do not fly south below FL60.
- 302° to ARP between 12.1 NM and 1.9 NM do not fly south below FL60.

095° to ARP between 11.3 NM and 5.1 NM do not fly south below FL60. 3302° to ARP between 12.1 NM and 1.9 NM do not fly south below FL60.





ATIS 125.25 (Russian 127.4)	Apt Elev 1047'	Alt Set: MM (hPa on request) QNH on request (QFE) Trans level: FL60 FL70 if pressure is less than 704mm (938.6 hPa) Trans alt: 4000' (2956')
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ALEGI 4W [ALEG4W]

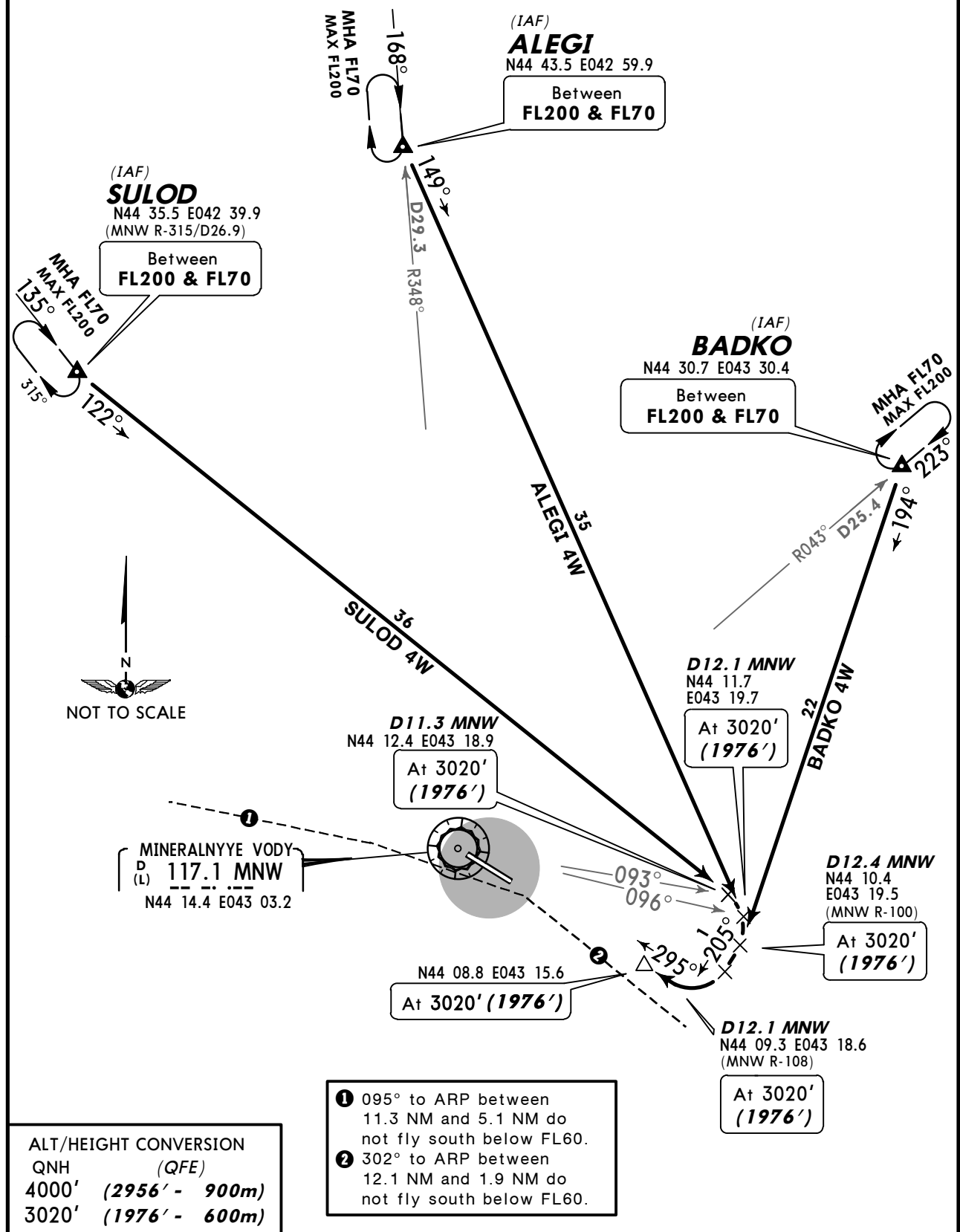
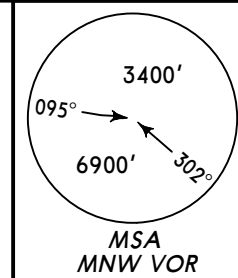
BADKO 4W [BADK4W]

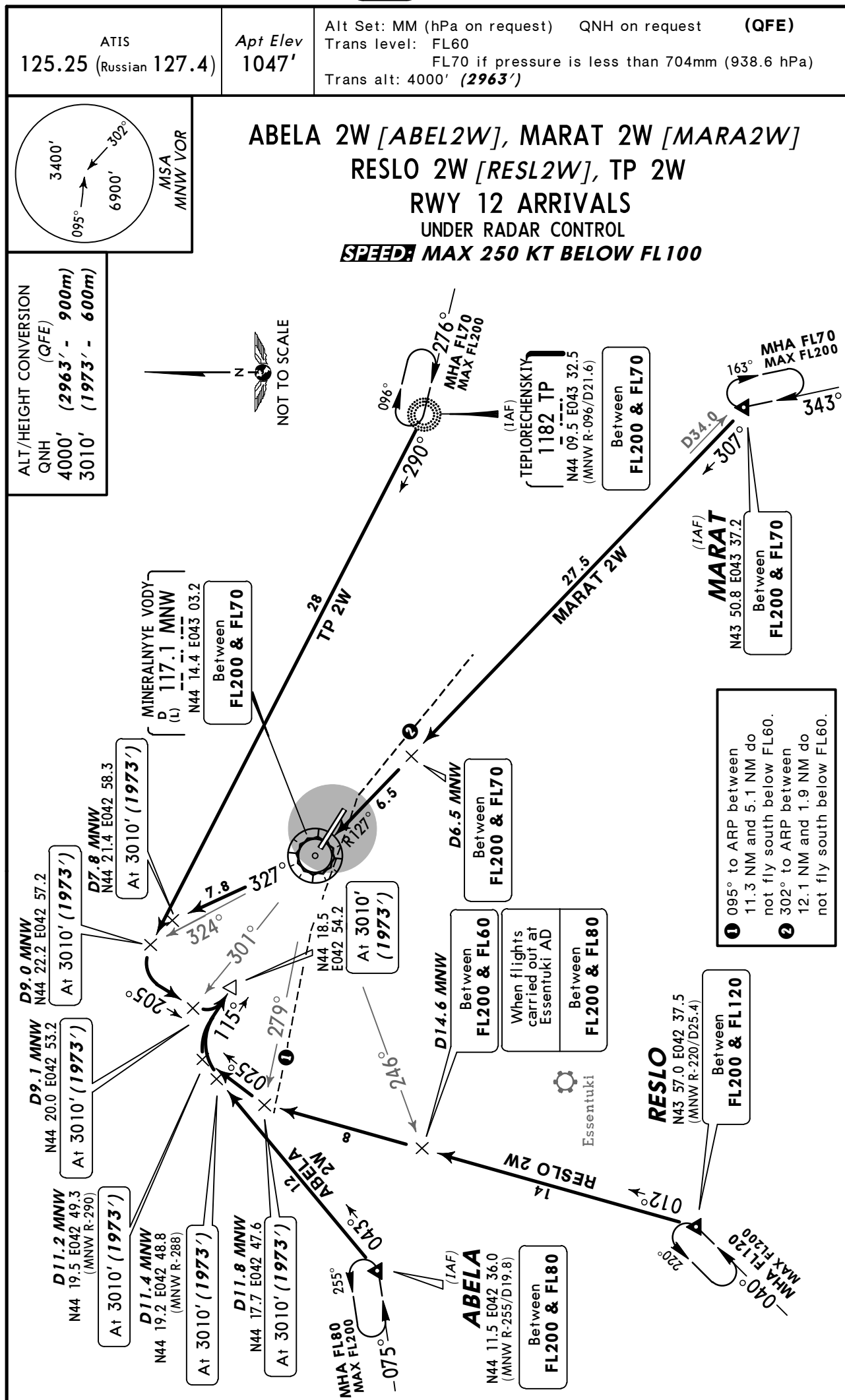
SULOD 4W [SULO4W]

RWY 30 ARRIVALS

UNDER RADAR CONTROL

SPEED: MAX 250 KT BELOW FL100

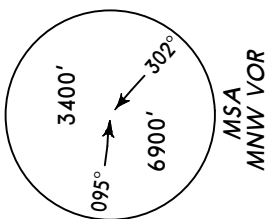




ATIS
125.25 (Russian 127.4)

Apt Elev
1047'

Alt Set: MM (hPa on request) QNH on request (QFE)
Trans level: FL60
FL70 if pressure is less than 704mm (938.6 hPa)
Trans alt: 4000' (2956')

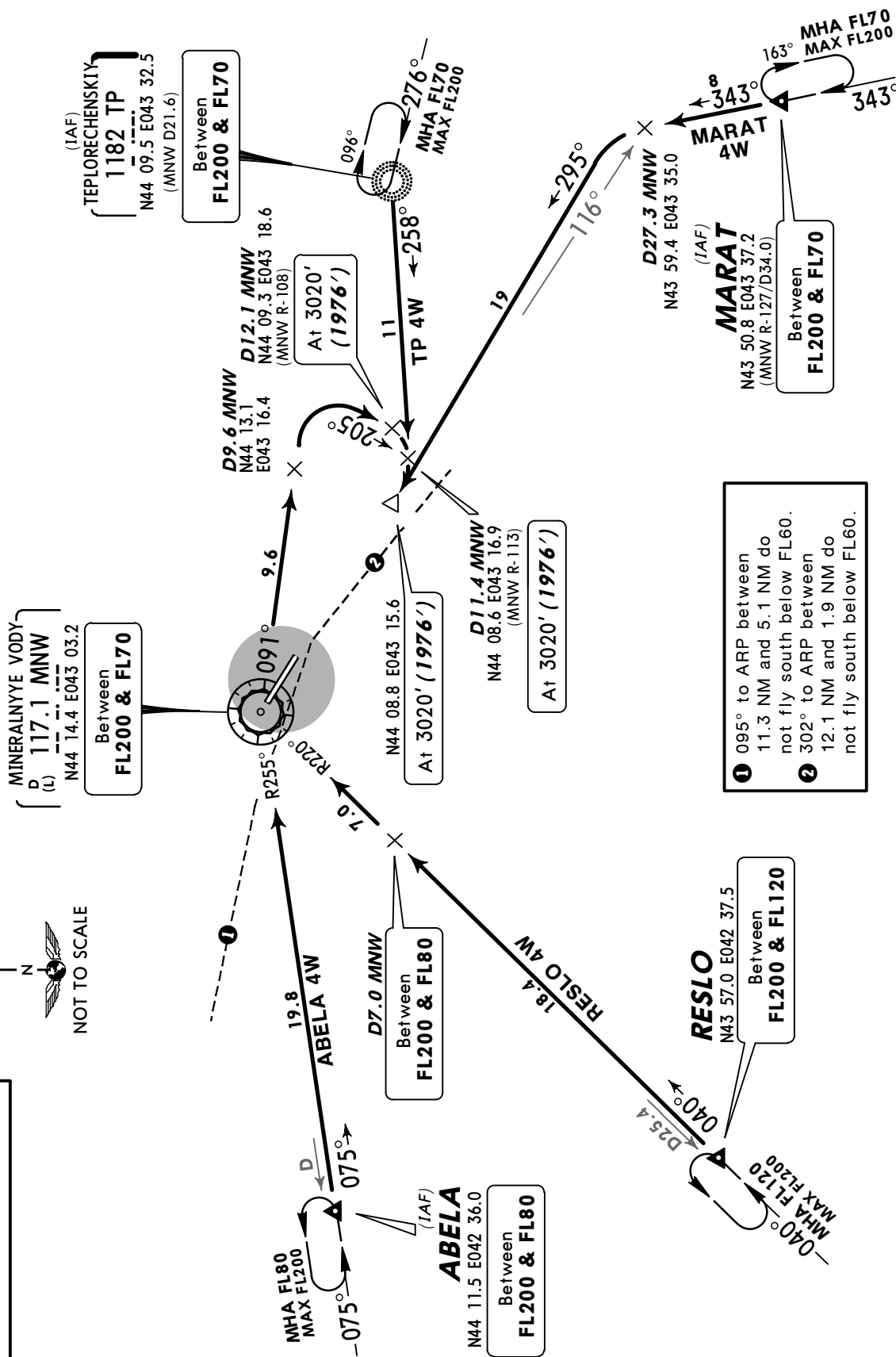


ABELA 4W [ABEL4W], MARAT 4W [MARA4W]
RESLO 4W [RESL4W], TP 4W

RWY 30 ARRIVALS

UNDER RADAR CONTROL

SPEED: MAX 250 KT BELOW FL100

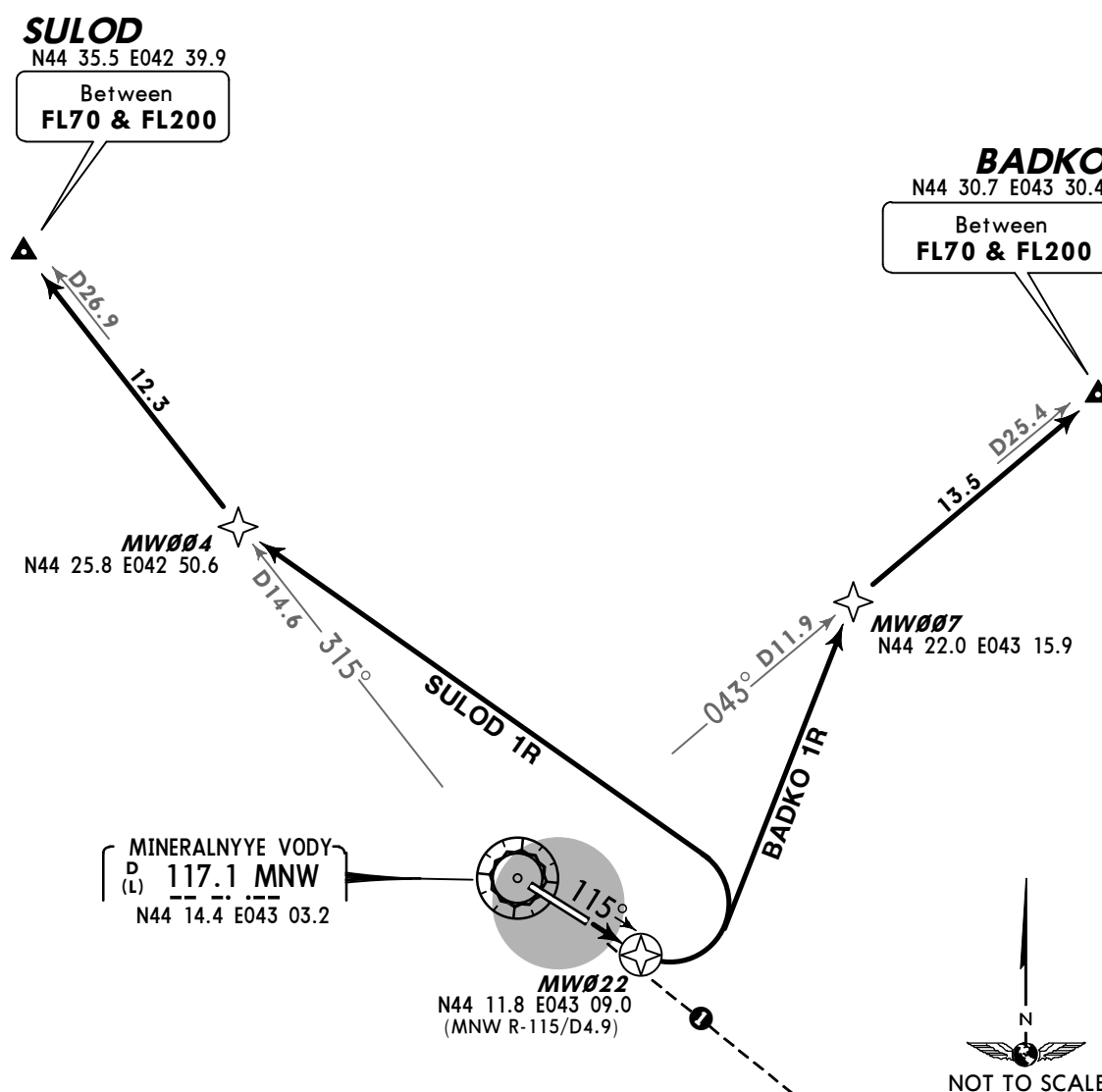


- 095° to ARP between 11.3 NM and 5.1 NM do not fly south below FL60.
- 302° to ARP between 12.1 NM and 1.9 NM do not fly south below FL60.

QNH on request **(QFE)**
Trans level: FL60
FL70 if pressure is less than 704 mm (938.6 hPa)
Trans alt: 4000' **(2963')**

1. Contact MINERALNYE VODY Krug immediately after crossing 1440' (403').
2. Take-off should be carried out with noise abatement procedures according to Flight Operation Manual.

MSA
MNW VOR



If unable to comply advise ATC.

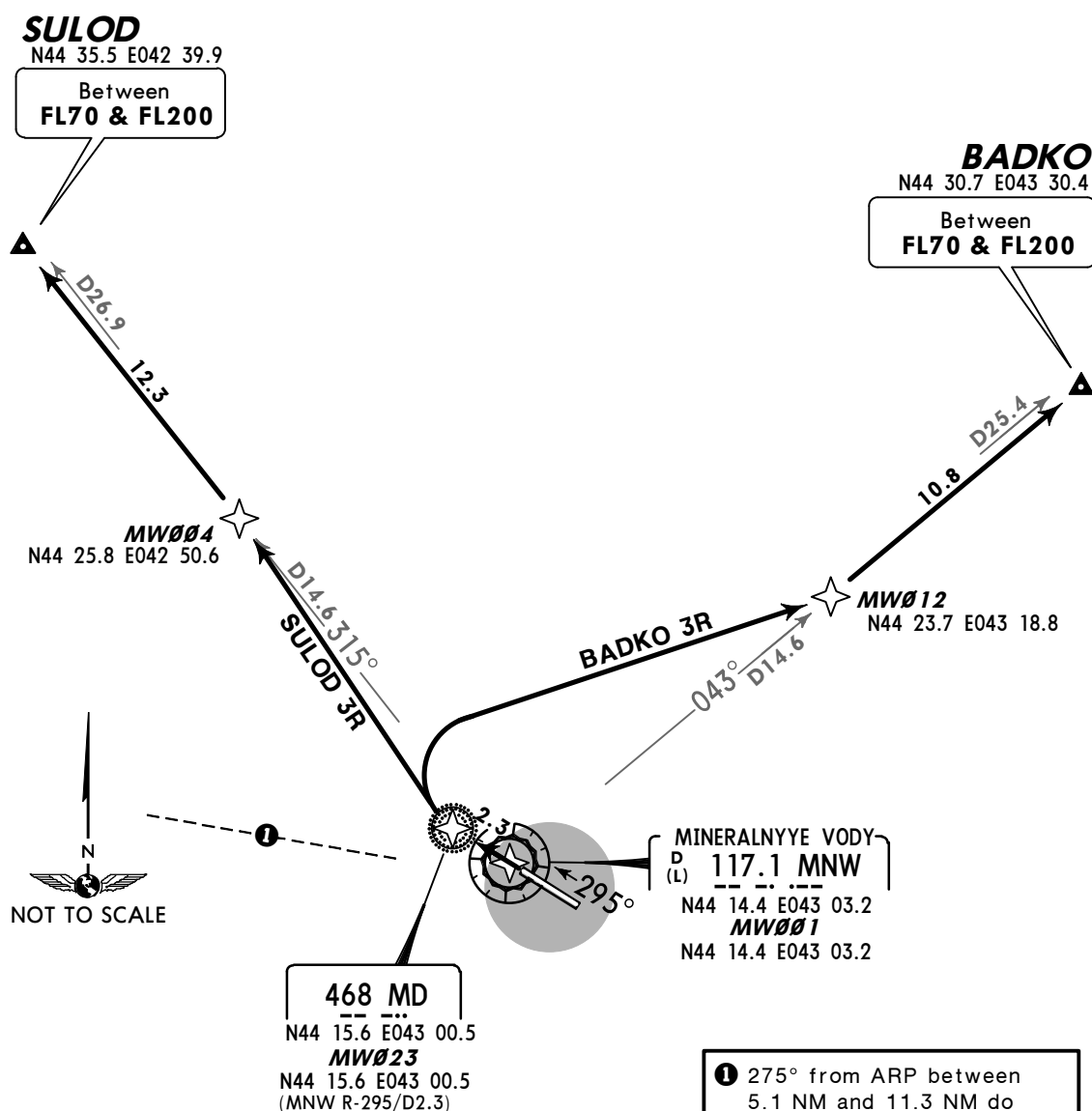
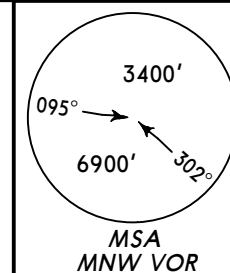
Gnd speed-KT	75	100	150	200	250	300
5.5% (V/V fpm)	418	557	835	1114	1392	1671

① 122° from ARP between 1.9 NM and 12.1 NM do not fly south below FL60.

ALT/HEIGHT CONVERSION
QNH (QFE)
1440' (403' - 120m)
4000' (2963' - 900m)

MINERALNYYE VODY Krug 120.7	Apt Elev 1047'	QNH on request (QFE) Trans level: FL60 FL70 if pressure is less than 704 mm (938.6 hPa) Trans alt: 4000' (2956') 1. Contact MINERALNYYE VODY Krug immediately after crossing 1440' (396'). 2. Take-off should be carried out with noise abatement procedures according to Flight Operation Manual.
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**BADKO 3R [BADK3R]
SULOD 3R [SULO3R]
RWY 30 RNAV DEPARTURES
RNAV (GNSS)**



This SID requires a minimum climb gradient of
BADKO 3R: 5.2%.
If unable to comply advise ATC.

Gnd speed-KT	75	100	150	200	250	300
5.2% (V/V fpm)	395	527	790	1053	1317	1549

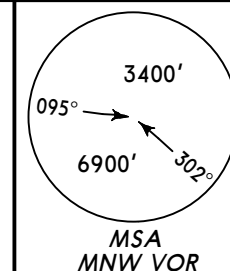
ALT/HEIGHT CONVERSION	
QNH	(QFE)
1440'	(396' - 120m)
4000'	(2956' - 900m)

MINERALNYE
VODY
Krug
120.7

Apt Elev
1047'

QNH on request (QFE)
Trans level: FL60
FL70 if pressure is less than 704 mm (938.6 hPa)
Trans alt: 4000' (2963')
1. Contact MINERALNYE VODY Krug immediately after crossing 1440' (403').
2. Take-off should be carried out with noise abatement procedures according to Flight Operation Manual.

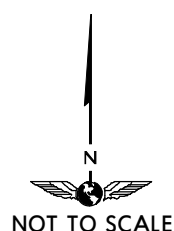
ABELA 1R [ABEL1R], MARAT 1R [MARA1R]
RESLO 1R [RESL1R], SOROL 1R [SORO1R]
TP 1R
RWY 12 RNAV DEPARTURES
RNAV (GNSS)



ABELA

N44 11.5 E042 36.0

Between
FL80 & FL200



RESLO

N43 57.0 E042 37.5

Between
FL120 & FL200



- ① 275° from ARP between 5.1 NM and 11.3 NM do not fly south below FL60.
- ② 122° from ARP between 1.9 NM and 12.1 NM do not fly south below FL60.

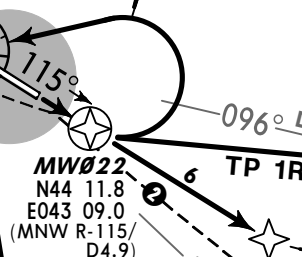
These SIDs require minimum climb gradients of
ABELA 1R, RESLO 1R, SOROL 1R: 7.0% to MNW.
MARAT 1R: 9.6% to MW014.
TP 1R: 4.4%.
If unable to comply advise ATC.

Gnd speed-KT	75	100	150	200	250	300
9.6% (V/V fpm)	729	972	1458	1944	2430	2917
7.0% (V/V fpm)	532	709	1063	1418	1772	2127
4.4% (V/V fpm)	334	446	668	891	1114	1337

MINERALNYE VODY
D 117.1 MNW
(L)
N44 14.4 E043 03.2
MW001
N44 14.4 E043 03.2

Between
FL80 & FL200

ABELA 1R
RESLO 1R
SOROL 1R



**TEPLORECHENSKIY
1182 TP**

N44 09.5 E043 32.5

Between
FL70 & FL200

MW018
N44 10.7 E043 25.2

MW014
(MNW R-115/D11.3)
N44 08.0 E043 17.4

At FL60
or D11.3 MNW
whichever is earlier

MARAT

N43 50.8 E043 37.2

Between
FL70 & FL200

SOROL

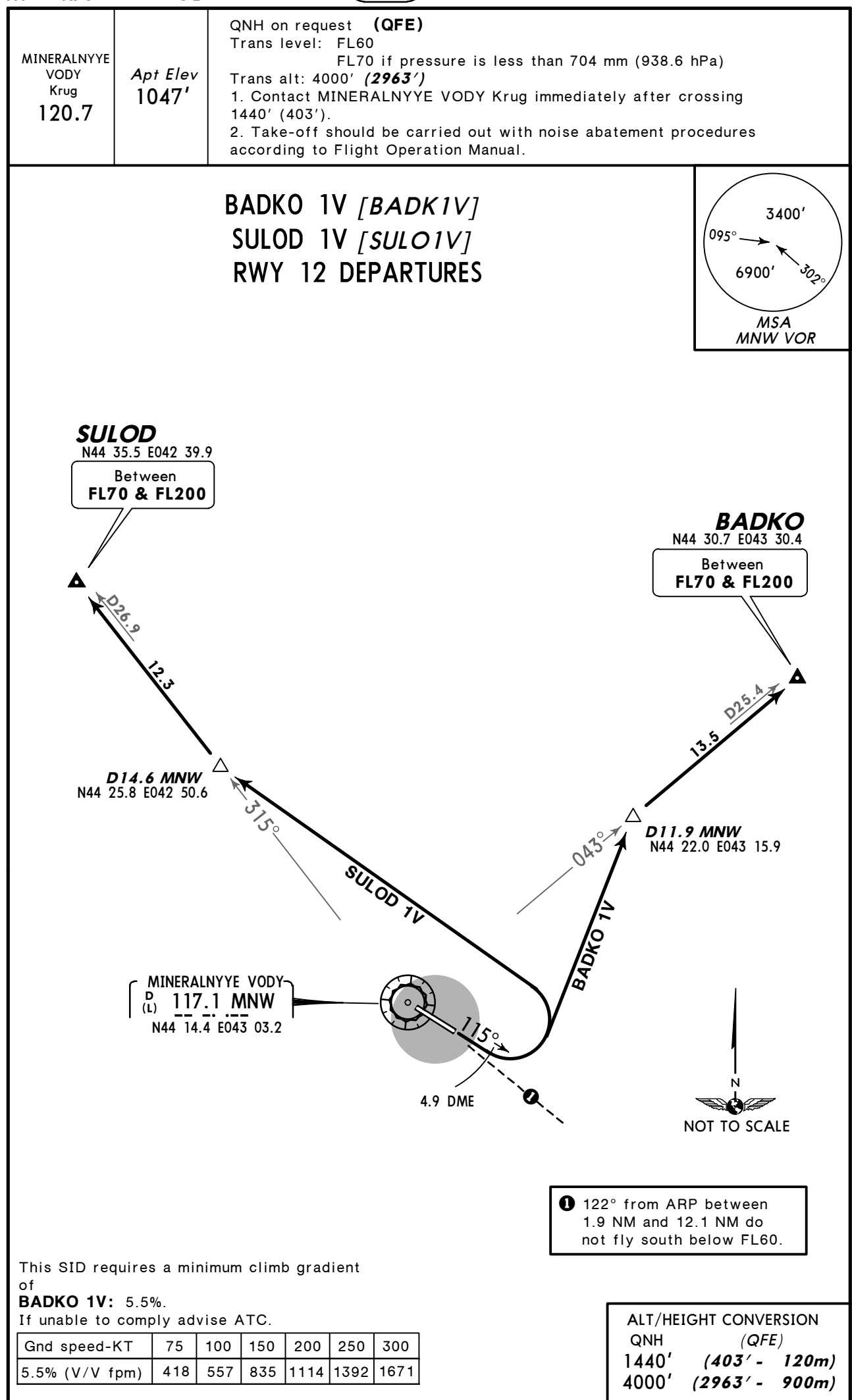
N43 44.0 E043 09.9

Between
FL110 & FL200

ALT/HEIGHT CONVERSION

QNH (QFE)
1440' (403' - 120m)
4000' (2963' - 900m)

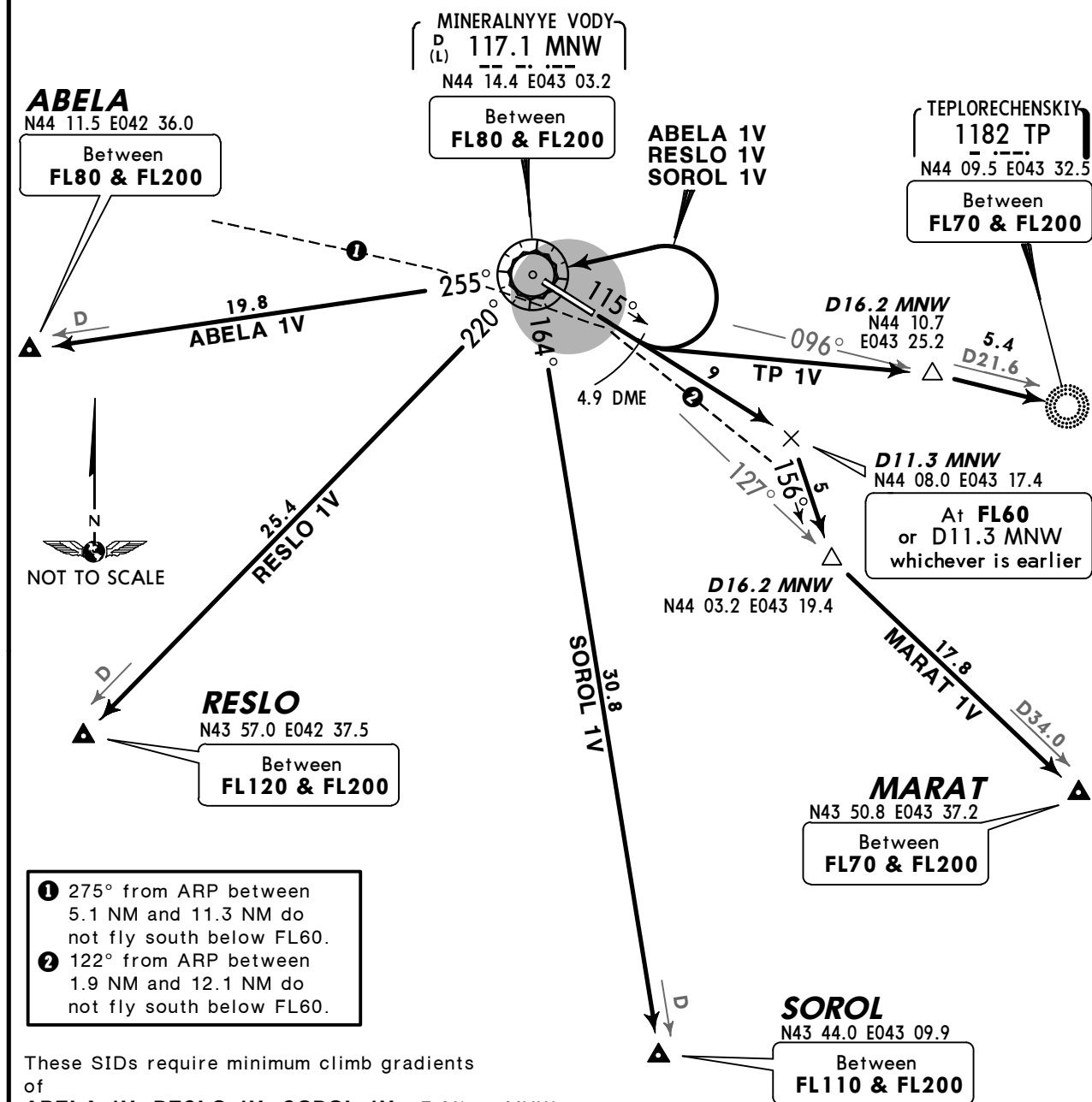
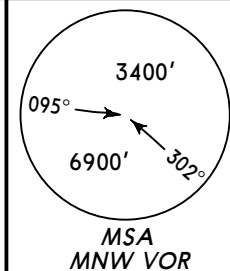
1440' (396' - 120m)
1000' (255' - 80m)



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MINERALNYYE VODY Krug 120.7	Apt Elev 1047'	QNH on request (QFE) Trans level: FL60 FL70 if pressure is less than 704 mm (938.6 hPa) Trans alt: 4000' (2963') 1. Contact MINERALNYYE VODY Krug immediately after crossing 1440' (403'). 2. Take-off should be carried out with noise abatement procedures according to Flight Operation Manual.
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ABELA 1V [ABEL1V], MARAT 1V [MARA1V]
RESLO 1V [RESL1V], SOROL 1V [SORO1V]
TP 1V
RWY 12 DEPARTURES



- 275° from ARP between 5.1 NM and 11.3 NM do not fly south below FL60.
- 122° from ARP between 1.9 NM and 12.1 NM do not fly south below FL60.

These SIDs require minimum climb gradients of

ABELA 1V, RESLO 1V, SOROL 1V: 7.0% to MNW.

MARAT 1V: 9.6% to D11.3 MNW.

TP 1V: 4.4%.

If unable to comply advise ATC.

Gnd speed-KT	75	100	150	200	250	300
9.6% (V/V fpm)	729	972	1458	1944	2430	2917
7.0% (V/V fpm)	532	709	1063	1418	1772	2127
4.4% (V/V fpm)	334	446	668	891	1114	1337

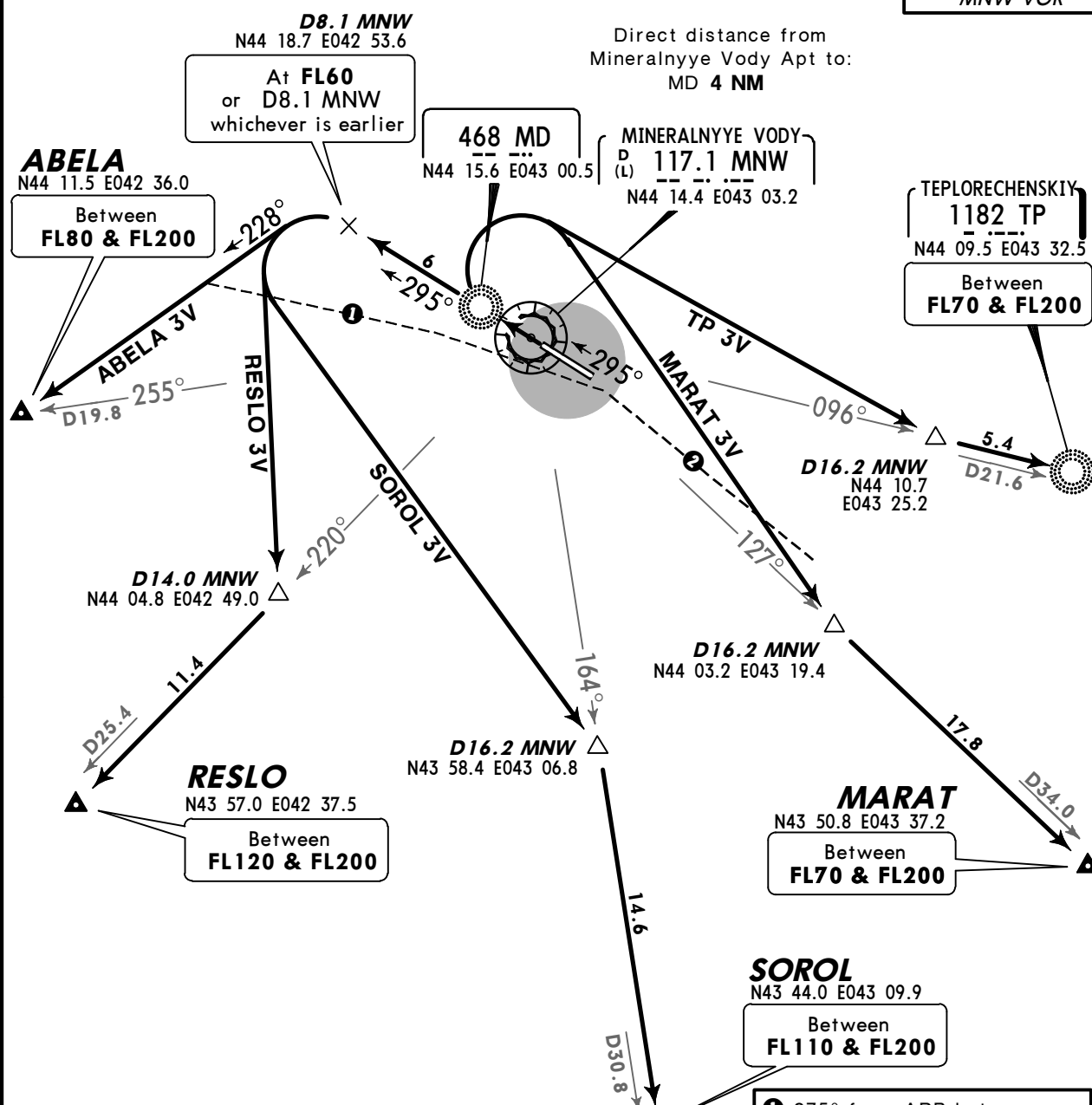
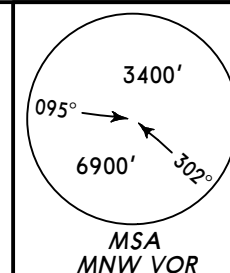
ALT/HEIGHT CONVERSION	
QNH	(QFE)
1440'	(403' - 120m)
4000'	(2963' - 900m)

MINERALNYYE
VODY
Krug
120.7

Apt Elev
1047'

QNH on request (QFE)
Trans level: FL60
FL70 if pressure is less than 704 mm (938.6 hPa)
Trans alt: 4000' (2956')
1. Contact MINERALNYYE VODY Krug immediately after crossing 1440' (396').
2. Take-off should be carried out with noise abatement procedures according to Flight Operation Manual.

ABELA 3V [ABEL3V], MARAT 3V [MARA3V]
RESLO 3V [RESL3V], SOROL 3V [SORO3V]
TP 3V
RWY 30 DEPARTURES



These SIDs require minimum climb gradients of

ABELA 3V: 9.9% to D8.1 MNW, then 7.0%.
RESLO 3V: 9.9% to D8.1 MNW, then 3.9%.
SOROL 3V: 9.9% to D8.1 MNW.

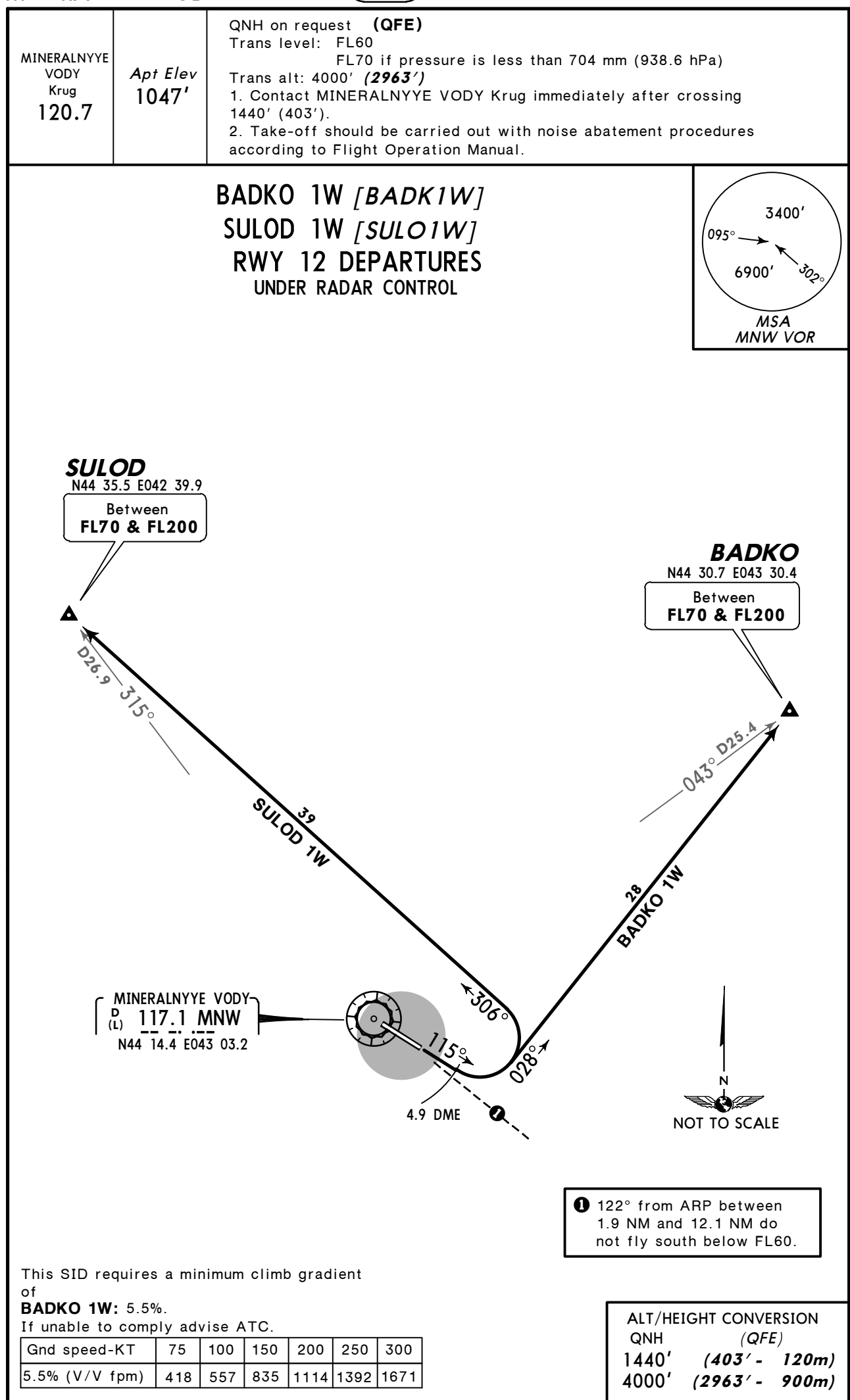
If unable to comply advise ATC.

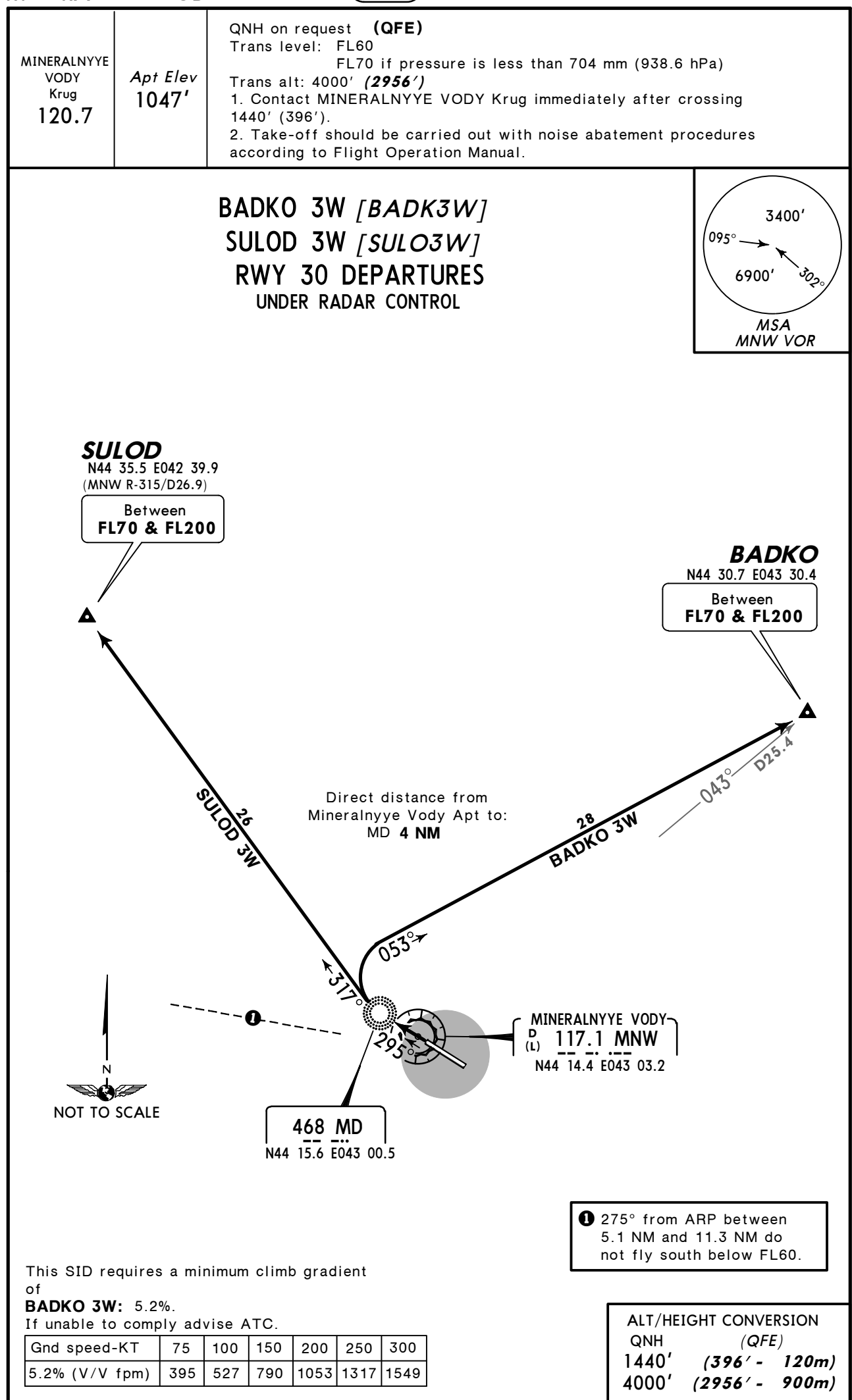
Gnd speed-KT	75	100	150	200	250	300
9.9% (V/V fpm)	752	1003	1504	2005	2674	3209
7.0% (V/V fpm)	532	709	1063	1418	1772	2127
3.9% (V/V fpm)	296	395	592	790	987	1185



- 275° from ARP between 5.1 NM and 11.3 NM do not fly south below FL60.
- 122° from ARP between 1.9 NM and 12.1 NM do not fly south below FL60.

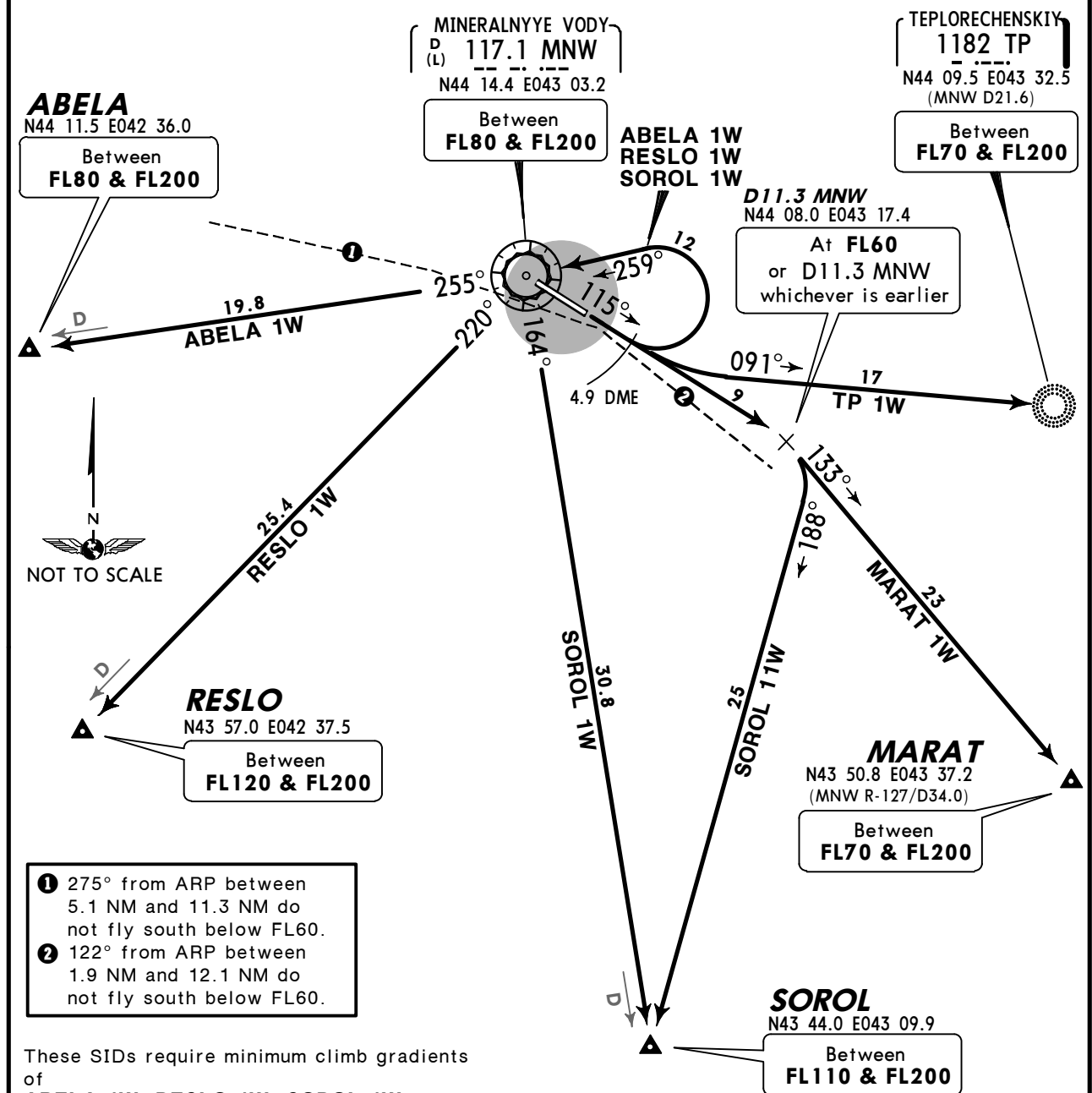
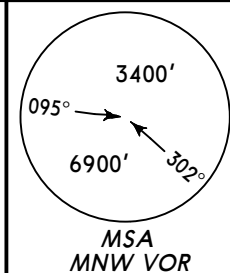
ALT/HEIGHT CONVERSION
QNH (QFE)
1440' (396' - 120m)
4000' (2956' - 900m)





MINERALNYYE VODY Krug 120.7	Apt Elev 1047'	QNH on request (QFE) Trans level: FL60 FL70 if pressure is less than 704 mm (938.6 hPa) Trans alt: 4000' (2963') 1. Contact MINERALNYYE VODY Krug immediately after crossing 1440' (403'). 2. Take-off should be carried out with noise abatement procedures according to Flight Operation Manual.
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**ABELA 1W [ABEL1W], MARAT 1W [MARA1W]
RESLO 1W [RESL1W], SOROL 1W [SORO1W]
SOROL 11W [SOR11W], TP 1W
RWY 12 DEPARTURES
UNDER RADAR CONTROL**



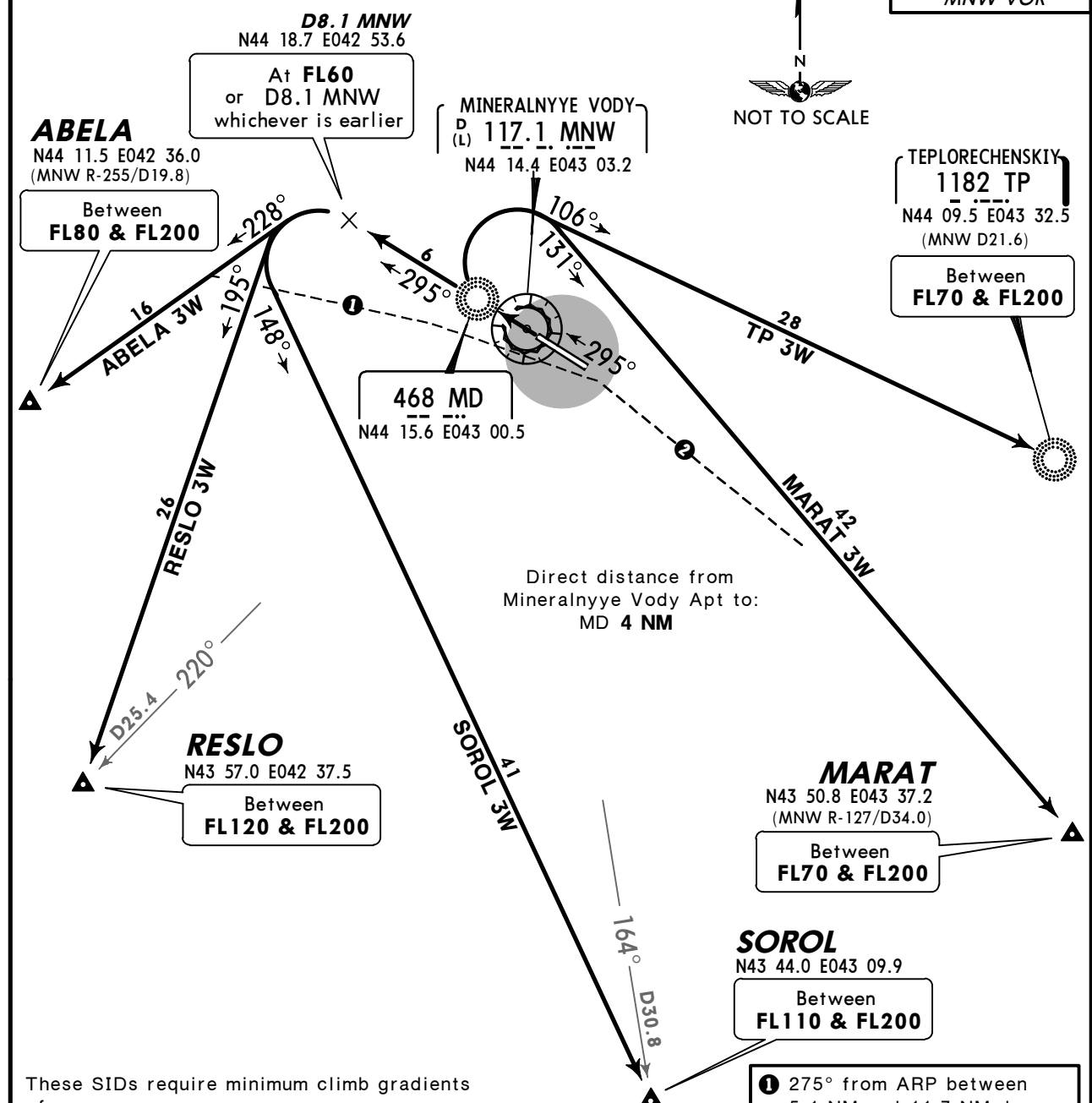
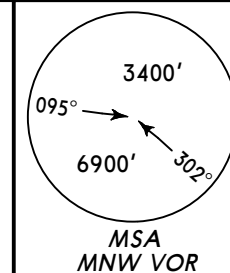
These SIDs require minimum climb gradients of
ABELA 1W, RESLO 1W, SOROL 1W: 7.0% to MNW.
MARAT 1W, SOROL 11W: 9.6% to D11.3 MNW.
TP 1W: 4.4%.
 If unable to comply advise ATC.

Gnd speed-KT	75	100	150	200	250	300
9.6% (V/V fpm)	729	972	1458	1944	2430	2917
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4.4% (V/V fpm)	334	446	668	891	1114	1337

ALT/HEIGHT CONVERSION	
QNH	(QFE)
1440'	(403' - 120m)
4000'	(2963' - 900m)

MINERALNYYE VODY Krug 120.7	Apt Elev 1047'	QNH on request (QFE) Trans level: FL60 FL70 if pressure is less than 704 mm (938.6 hPa) Trans alt: 4000' (2956') 1. Contact MINERALNYYE VODY Krug immediately after crossing 1440' (396'). 2. Take-off should be carried out with noise abatement procedures according to Flight Operation Manual.
-----------------------------------	-------------------	--

ABELA 3W [ABEL3W], MARAT 3W [MARA3W]
RESLO 3W [RESL3W], SOROL 3W [SORO3W]
TP 3W
RWY 30 DEPARTURES
UNDER RADAR CONTROL



These SIDs require minimum climb gradients of

ABELA 3W: 9.9% to D8.1 MNW, then 7.0%.
RESLO 3W: 9.9% to D8.1 MNW, then 3.9%.
SOROL 3W: 9.9% to D8.1 MNW.

If unable to comply advise ATC.

Gnd speed-KT	75	100	150	200	250	300
9.9% (V/V fpm)	752	1003	1504	2005	2674	3209
7.0% (V/V fpm)	532	709	1063	1418	1772	2127
3.9% (V/V fpm)	296	395	592	790	987	1185

- 275° from ARP between 5.1 NM and 11.3 NM do not fly south below FL60.
- 122° from ARP between 1.9 NM and 12.1 NM do not fly south below FL60.

ALT/HEIGHT CONVERSION	
QNH	(QFE)
1440'	(396' - 120m)
4000'	(2956' - 900m)

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) on 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 4000' (2956' - 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' (1486' - 450m) at a distance of about 5.2 NM from THR.

At or above 2530' (1486' - 450m) pilots shall terminate to set wing devices into landing position and before reaching 2200' (1156' - 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 2200' (1156' - 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.

NOISE ABATEMENT

DEPARTURES**General**

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 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 2040' (993' - 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

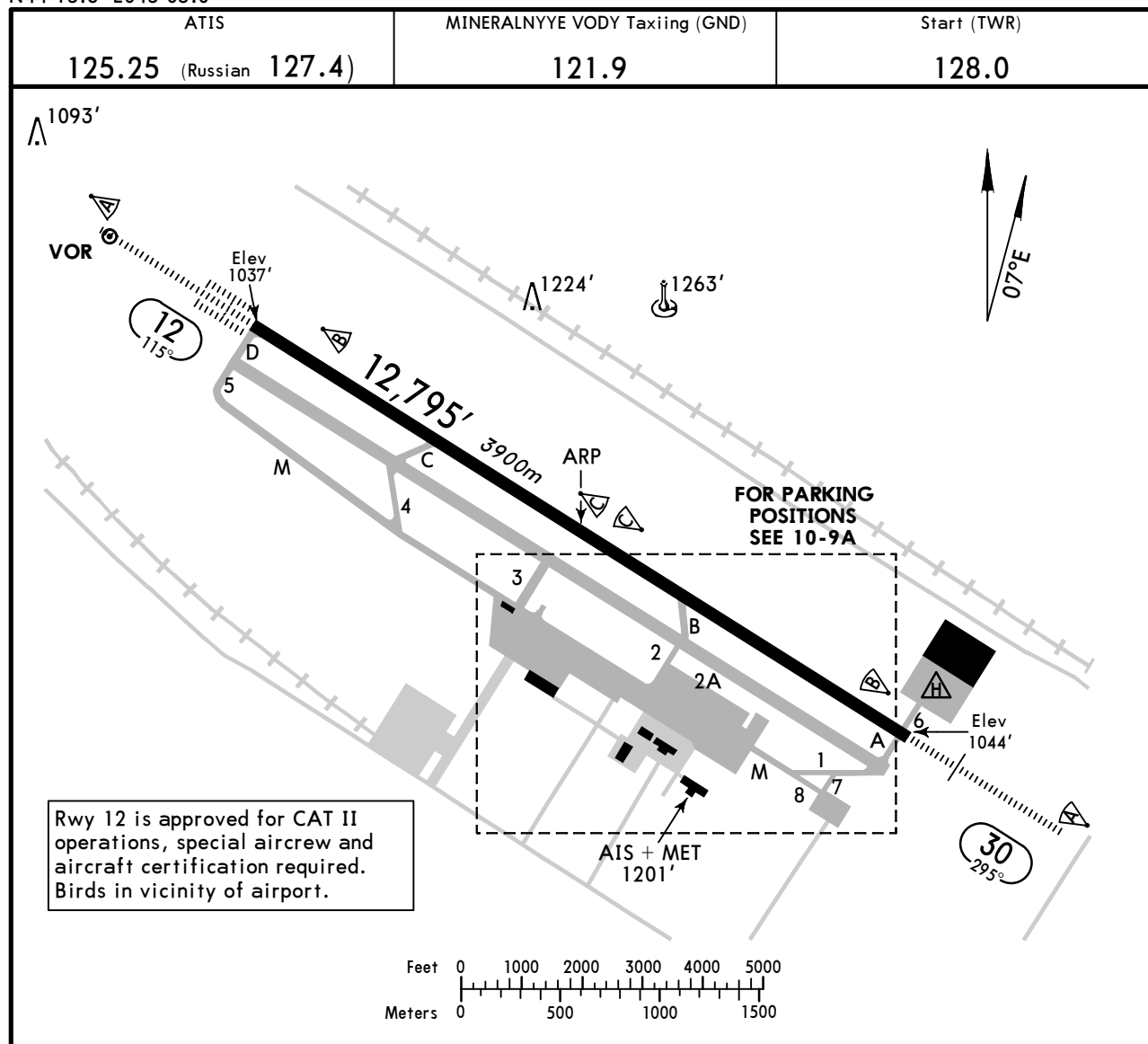
Pilots shall apply two special take-off procedures, NADP 1 and NADP 2. The pilot-in-command may use any of them for reaching necessary effect. (ICAO Doc 8168, Vol I, Part V, Chapter 3).

REVERSE THRUST

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

URMM/MRV
Apt Elev 1047'
N44 13.6 E043 05.0

JEPPESEN MINERALNYE VODY, RUSSIA
28 DEC 12 10-9 Eff 10 Jan
MINERALNYE VODY



ADDITIONAL RUNWAY INFORMATION

RWY				USABLE LENGTHS		TAKE-OFF	WIDTH
				Threshold	Landing Beyond		
12	HIRL (60m) CL (15m) HIALS-II TDZ PAPI-L (3.00°)	RVR			11,762' 3585m		197'
30	HIRL (60m) CL (15m) HIALS PAPI-L (3.00°)	RVR			11,823' 3604m		60m

TAKE-OFF

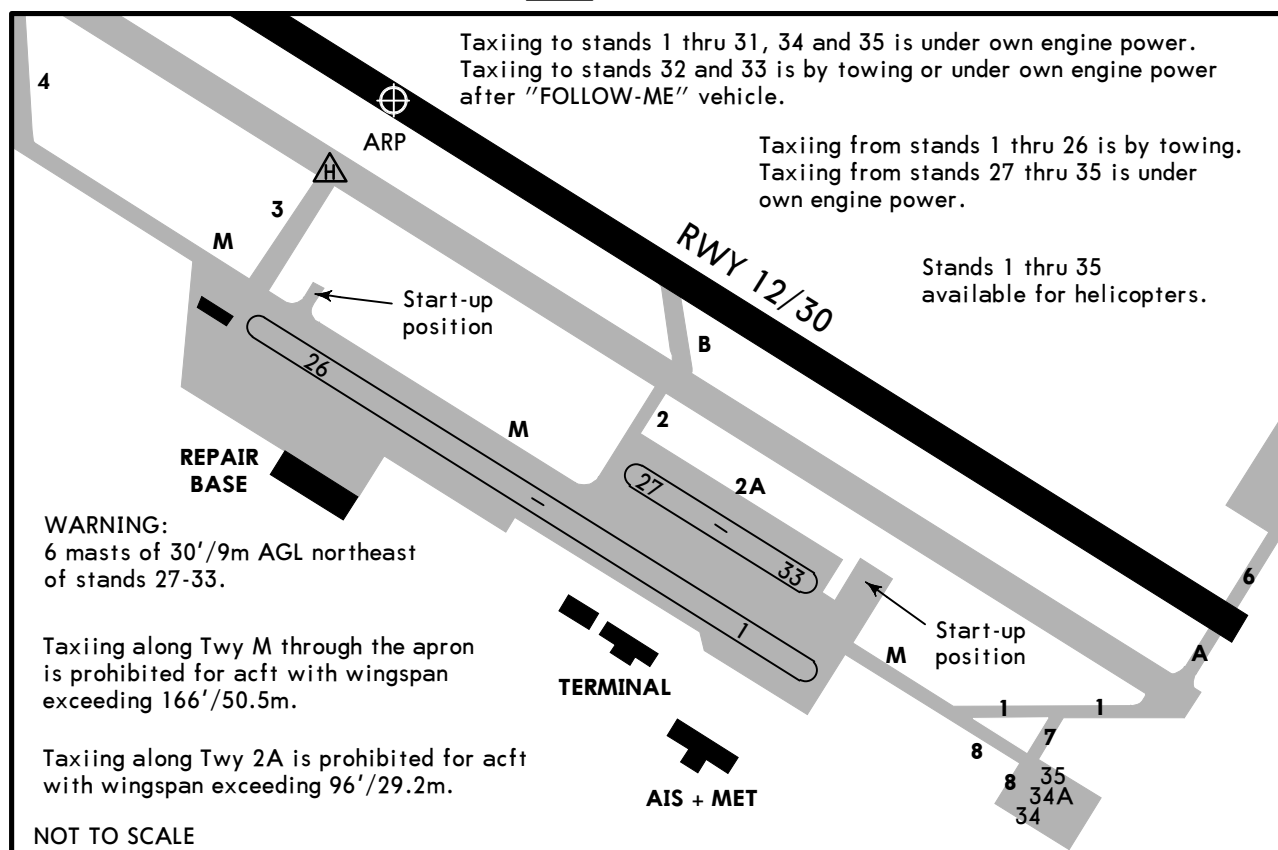
AIR CARRIER (JAA)
All Rwys

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	

CHANGES: New Twy 3.

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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 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 A or B, rwy 30 along twy C or D.

"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 A or B. Acft arriving on rwy 30 shall be met after landing by the "FOLLOW ME" vehicle on twy C or D. 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 rwy holding position line on twys A thru D designated by ILS lighting marking and the established day marking without Tower controller's permission.

STRAIGHT-IN RWY		A	B	C	D
12	CAT 2 ILS	1137'(100') RA115' R350m	1137'(100') RA115' R350m	1137'(100') RA115' R350m	1137'(100') RA115' R350m
	ILS	1237'(200')	1237'(200')	1237'(200')	1237'(200')
	FULL	R550m	R550m	R550m	R550m
	Limited	R750m	R750m	R750m	R750m
	ALS out	R1200m	R1200m	R1200m	R1200m
	LOC ❶	1480'(443') R1400m	1480'(443') R1400m	1480'(443') R1400m	1480'(443') R1400m
	ALS out	C2100m	C2100m	C2100m	C2100m
	RNAV ❶	1480'(443') R1400m	1480'(443') R1400m	1480'(443') R1400m	1480'(443') R1400m
	ALS out	R1500m	R1500m	C2100m	C2100m
	VOR ❶	1480'(443') R1400m	1480'(443') R1400m	1480'(443') R1400m	1480'(443') R1400m
	ALS out	R1500m	R1500m	C2100m	C2100m
30	ILS	1244'(200')	1244'(200')	1244'(200')	1244'(200')
	FULL	R550m	R550m	R550m	R550m
	Limited	R750m	R750m	R750m	R750m
	ALS out	R1200m	R1200m	R1200m	R1200m
	LOC ❷	1560'(516) R1800m	1560'(516) R1800m	1560'(516) R2000m	1560'(516) R2000m
	ALS out	C2600m	C2600m	C2800m	C2800m
	LOC ❸	1850'(806') C3300m	1850'(806') C3300m	1850'(806') C3500m	1850'(806') C3500m
	ALS out	C4000m	C4000m	C4200m	C4200m
	RNAV ❶	1460'(416') R1200m	1460'(416') R1200m	1460'(416') R1200m	1460'(416') R1200m
	ALS out	R1500m	R1500m	R1900m	R1900m
	VOR ❶ ❹	1560'(516') R1500m	1560'(516') R1500m	1560'(516') R1600m	1560'(516') R1600m
	ALS out	R1500m	R1500m	C2400m	C2400m
	VOR ❺	1850'(806') C3300m	1850'(806') C3300m	1850'(806') C3500m	1850'(806') C3500m
	ALS out	C4000m	C4000m	C4200m	C4200m

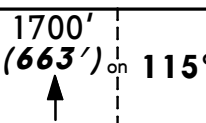
- ❶ Continuous Descent Final Approach.
 ❷ with Radar.
 ❸ w/o Radar.
 ❹ with D8.6.
 ❺ w/o D8.6.

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								
B	125m	150m	200m	250m		400m		500m
C								
D	150m	200m	250m	300m				

SENMINERALNYYE VODY, RUSSIA
CAT I/II ILS DME or NDB Rwy 12

Alt Set: MM (hPa on req) QNH on req (**QFE**) Trans level: FL 60 **1** Trans alt: 4000' (**2963'**)
1. LOC: **NDB required.** 2. CAT II ILS: Special Aircrew & Acft Certification Required.

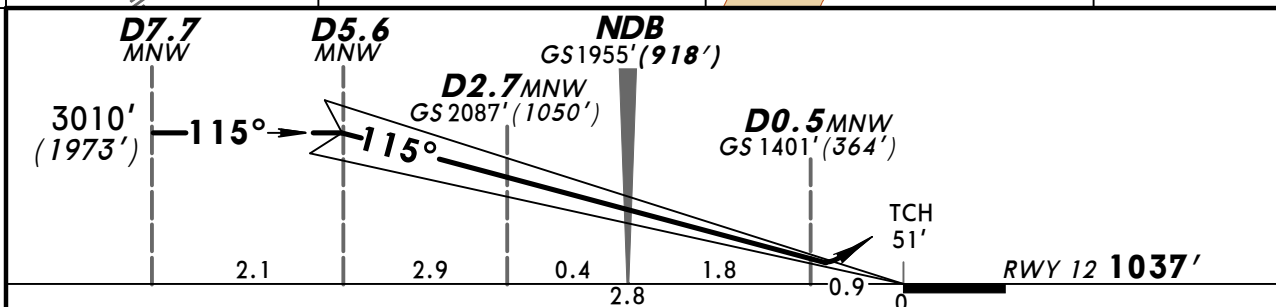
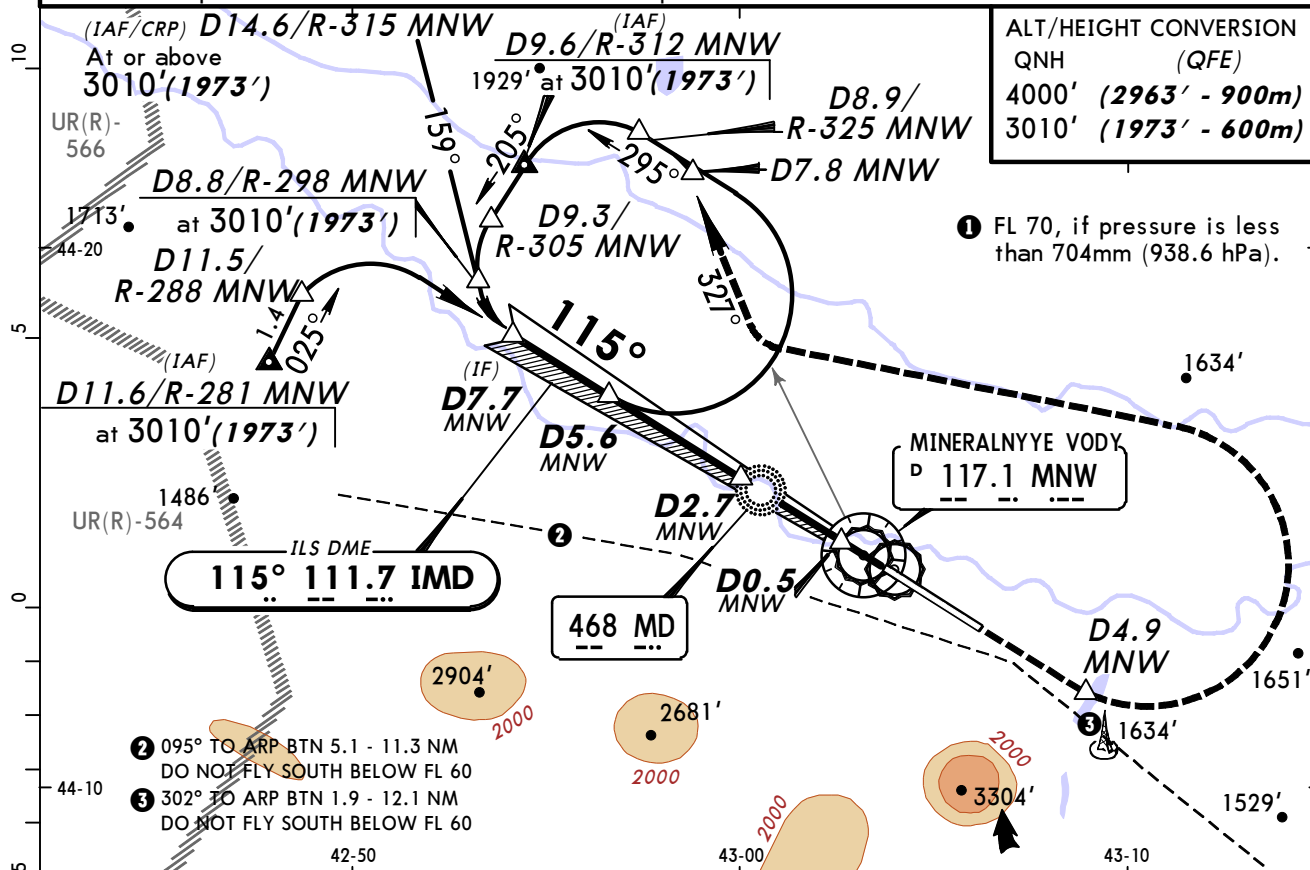


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URMM/MRV MINERALNYYE VODY 1 FEB 13 Eff 7 Feb 11-2 CAT I/II VOR DME ILS Rwy 12

ATIS 125.25 (Russian 127.4)		MINERALNYYE VODY Approach 119.3	MINERALNYYE VODY Krug (R) 120.7	MINERALNYYE VODY Start (TWR) 128.0	Ground 121.9
LOC IMD 111.7	Final Apch Crs 115°	GS NDB 1955' (918')	CAT II ILS RA 115' DA(H) 1137' (100')	CAT I ILS DA(H) 1237' (200')	Apt Elev 1047' RWY 1037'
MISSED APCH: Climb on 115° to D4.9 MNW , then turn LEFT to intercept R-327 climbing to 3010' (1973') then as directed.					

Alt Set: MM (hPa on req) QNH on req (QFE) Trans level: FL 60 ① Trans alt: 4000' (2963')
 CAT II ILS: Special Aircrew & Acft Certification Required.



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

STRAIGHT-IN LANDING RWY 12						
CAT II		CAT I		LOC (GS out)		
RA 115'		DA(H) 1237' (200')				
DA(H) 1137' (100')		FULL	TDZ or CL out	ALS out		
A	RVR 350m	RVR 550m	RVR 720m	1200m	NOT AUTHORIZED	
B		VIS 800m	VIS 800m			
C						
D						

BRIEFING STRIP™

MSA
MD NDB

- 44-20

Trans level: FL 60 **1**Trans alt: 4000' (**2956'**)

ALT/HEIGHT CONVERSION	
QNH	(QFE)
4000'	(2956' - 900m)
3020'	(1976' - 600m)
1440'	(396' - 120m)

**3 095° TO ARP BETWEEN 5.1 - 11.3 NM
DO NOT FLY SOUTH BELOW FL 60**

295°

PANS OPS

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URMM/MRV MINERALNYYE VODY, RUSSIA

VOR DME ILS Rwy 30

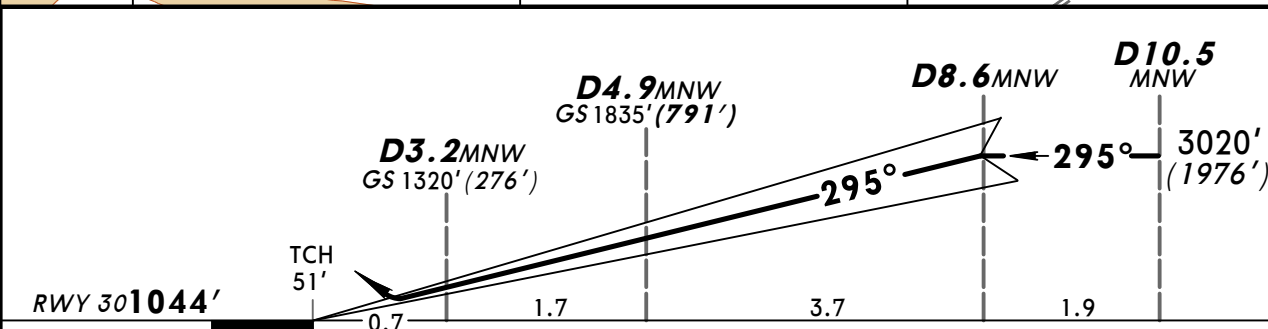
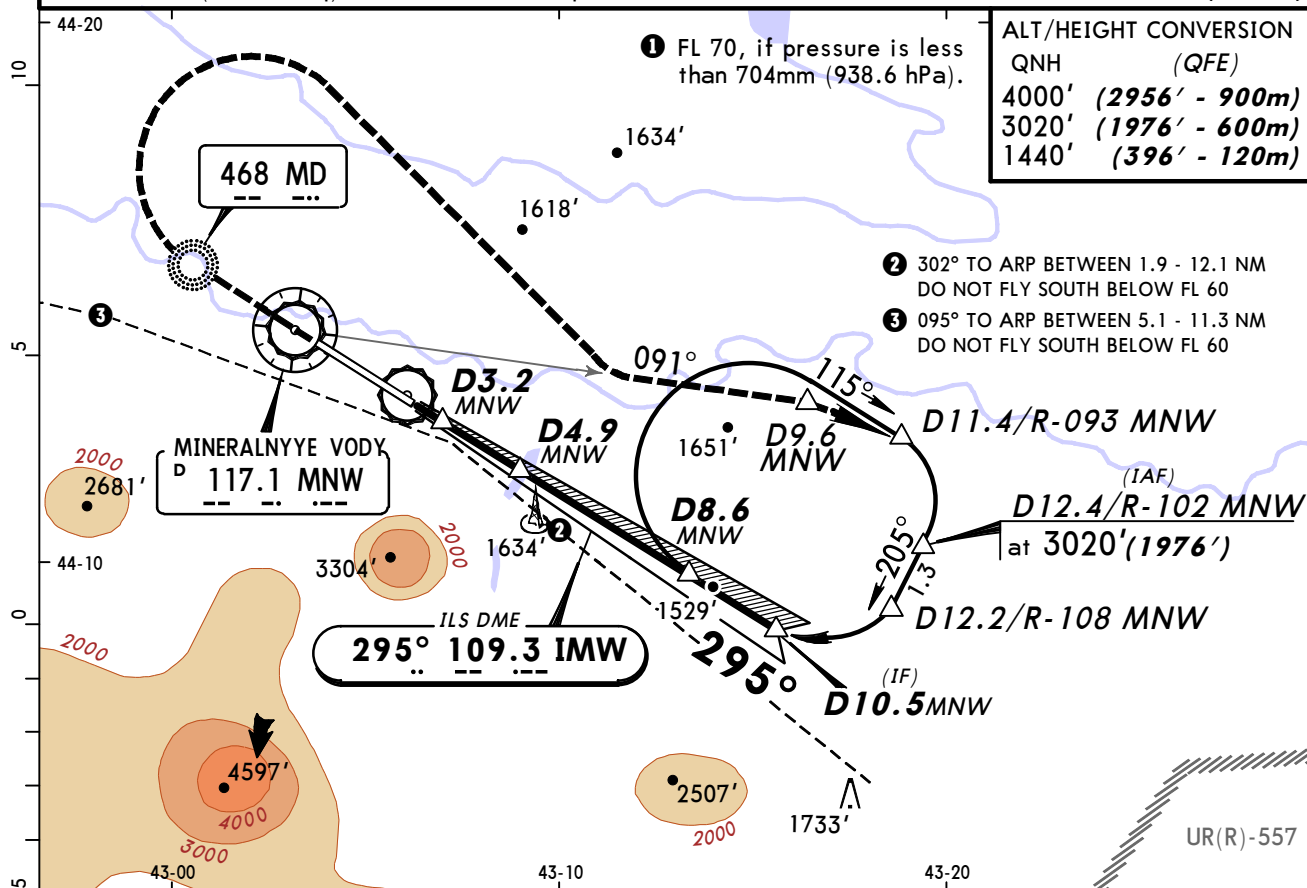
1 FEB 13

11-4

Eff 7 Feb

ATIS 125.25 (Russian 127.4)	MINERALNYYE VODY Approach 119.3	MINERALNYYE VODY Krug (R) 120.7	MINERALNYYE VODY Start (TWR) 128.0	Ground 121.9
LOC IMW 109.3	Final Aptch Crs 295°	GS D4.9 MNW 1835' (791')	ILS DA(H) 1244' (200')	Apt Elev 1047' RWY 1044'
MISSED APCH: Climb on 295° to NDB, then turn RIGHT climbing to 3020' (1976') and intercept R-091, then as directed.				

Alt Set: MM (hPa on req) QNH on req (QFE) Trans level: FL 60 1 Trans alt: 4000' (2956')



Gnd speed-Kts	70	90	100	120	140	160	HIALS PAPI	MD 468 on 295°
ILS GS	3.00°	372	478	531	637	743		

STRAIGHT-IN LANDING RWY 30				LOC (GS out)	
ILS		DA(H) 1244' (200')			
FULL		ALS out			
A					
B					
C	RVR 720m VIS 800m		1200m		NOT AUTHORIZED
D					

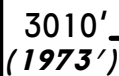
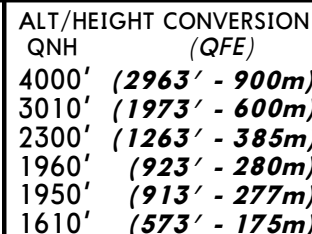
CHANGES: None.

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RNAV (GNSS) Rwy 12

MISSED APCH: Climb on 115° to MW022, then turn LEFT climbing to 3010' (1973') and proceed to MW008, then as directed.

MSA MD NDB

Alt Set: MM (hPa on req) QNH on req (**QFE**) Trans level: FL 60 **1** Trans alt: 4000' (**2963'**)

final

MWØØ2

3.8 NM

2.7 NM
to MW/Ø 10

NM **MWD 10**
A/Ø 10

2.2

94
1

71

31

1

RWY 12 1037'

<i>Gnd speed-Kts</i>	70	90	100	120	140	160
<i>Descent Angle 3.00°</i>	372	478	531	637	743	849

MAP at MWØ1Ø

HIALS-I
PAPI

MWØ22

115°

STRAIGHT-IN LANDING RWY 12

MDA(H) 1480' (443')

ALS out

A	RVR 720m
B	VIS 800m
C	1200m
D	RVR 1500m VIS 1600m

RVR	1500m
VIS	1600m
RVR	1800m
VIS	2000m
2400m	

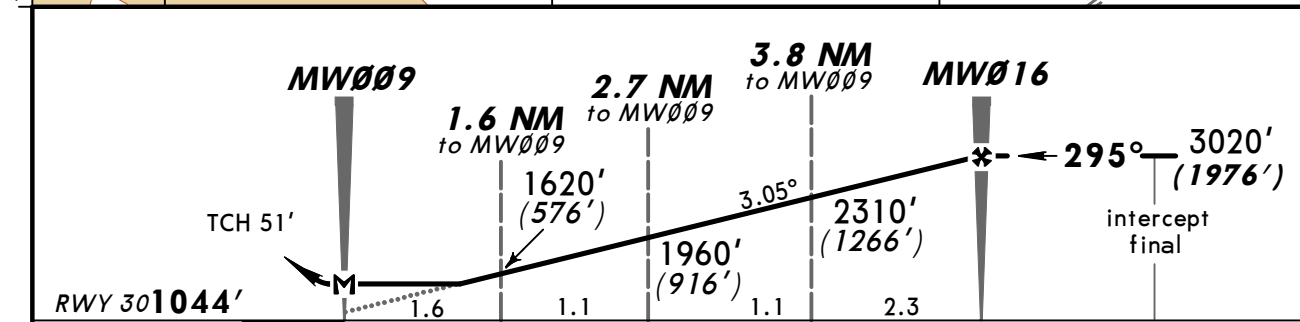
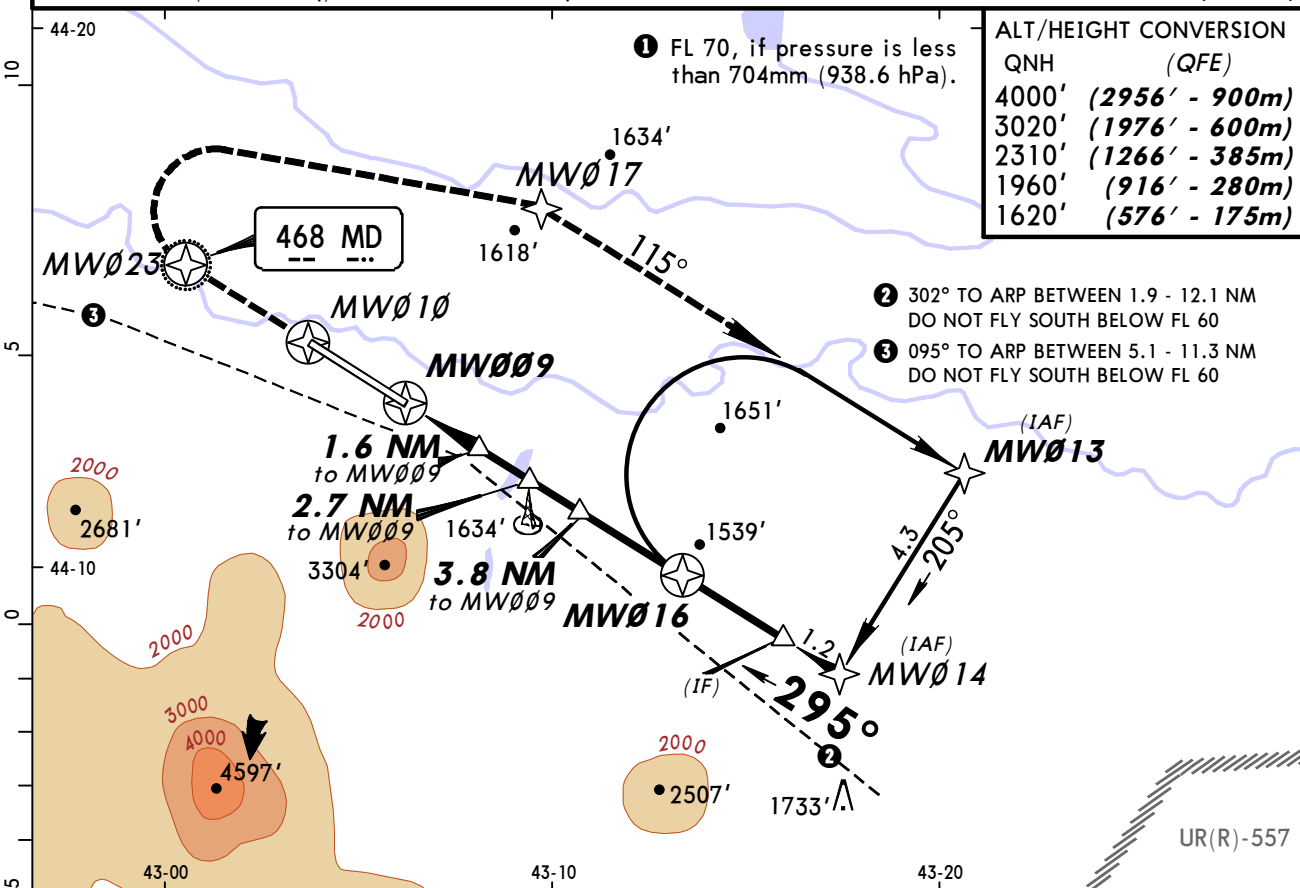
PANS OPS

CHANGES: MSA. Procedure.

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ATIS 125.25 (Russian 127.4)	MINERALNYYE VODY Approach 119.3	MINERALNYYE VODY Krug (R) 120.7	MINERALNYYE VODY Start (TWR) 128.0	Ground 121.9
RNAV	Final Aptch Crs 295°	Minimum Alt MW016 3020' (1976')	MDA(H) 1460' (416')	Apt Elev 1047' RWY 1044'
MISSED APCH: Climb on 295° to MW023, then turn RIGHT climbing to 3020' (1976') and proceed to MW017, then as directed.				
				 MSA MD NDB

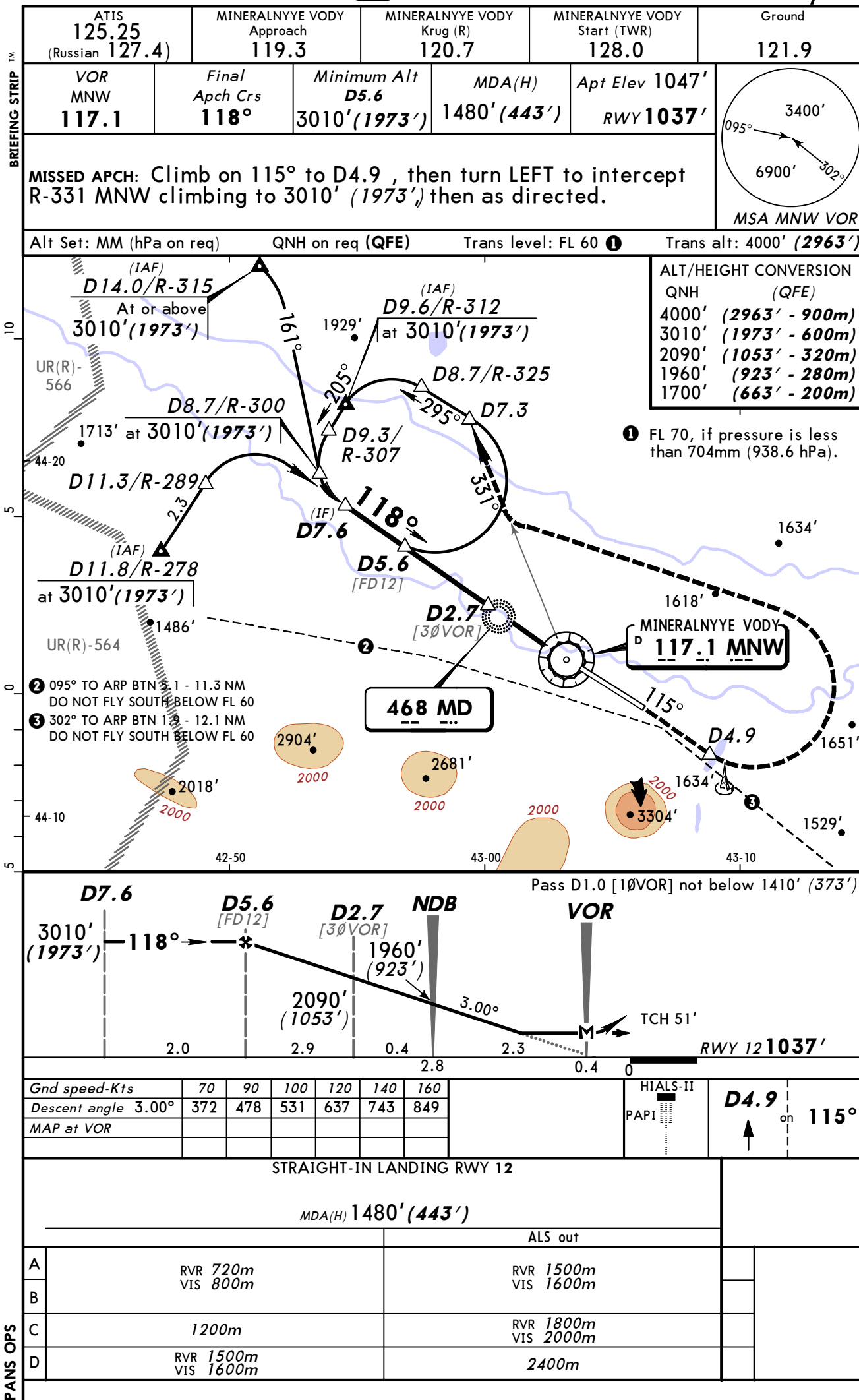
Alt Set: MM (hPa on req) QNH on req (QFE) Trans level: FL 60 1 Trans alt: 4000' (2956')



Gnd speed-Kts	70	90	100	120	140	160
Descent Angle 3.05°	378	486	540	648	755	863
MAP at MW009						

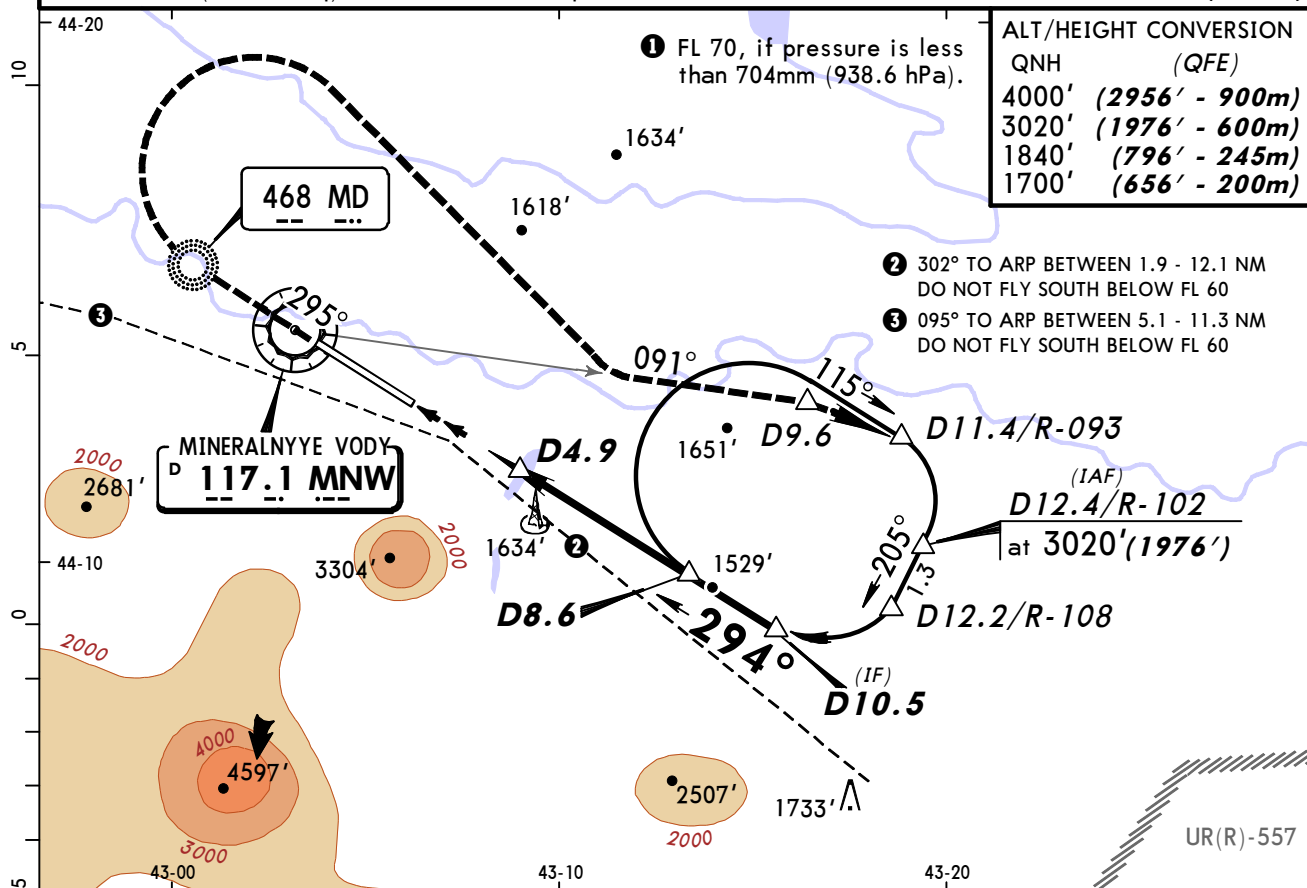
STRAIGHT-IN LANDING RWY 30		ALS out	
MDA(H) 1460' (416')			
A	RVR 720m VIS 800m	RVR 1500m VIS 1600m	
B			
C	1200m	RVR 1800m VIS 2000m	
D	RVR 1500m VIS 1600m		

URMM/MRV MINERALNYYE VODY 28 DEC 12 13-1 Eff 10 Jan VOR DME Rwy 12

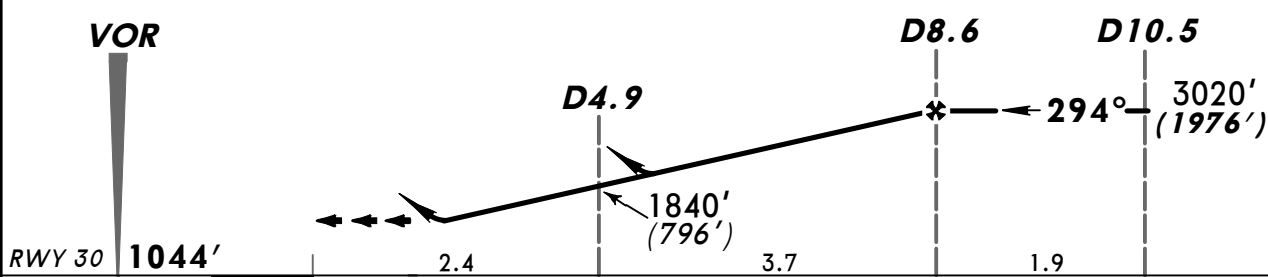


ATIS 125.25 (Russian 127.4)	MINERALNYYE VODY Approach 119.3	MINERALNYYE VODY Krug (R) 120.7	MINERALNYYE VODY Start (TWR) 128.0	Ground 121.9
VOR MNW 117.1	Final Aptch Crs 294°	Minimum Alt D8.6 3020' (1976')	MDA(H) (CONDITIONAL) 1560' (516')	Apt Elev 1047' RWY 1044'
MISSED APCH: Climb on 295° to NDB, then turn RIGHT climbing to 3020' (1976') and intercept R-091, then as directed.				

Alt Set: MM (hPa on req) QNH on req (QFE) Trans level: FL 60 **1** Trans alt: 4000' (2956')



Pass D3.3 not below 1320' (276').



Gnd speed-Kts	70	90	100	120	140	160	HIALS PAPI	MD 468 on 295°
Descent angle 3.00°	372	478	531	637	743	849		

STRAIGHT-IN LANDING RWY 30				
with D8.6		w/o D8.6		
MDA(H) 1560' (516')		MDA(H) 1850' (806')		
ALS out		ALS out		
A	RVR 720m VIS 800m	RVR 1500m VIS 1600m	RVR 720m VIS 800m	RVR 1500m VIS 1600m
B			1200m	RVR 1800m VIS 2000m
C	RVR 1500m VIS 1600m	2400m	2800m	3600m
D	RVR 1800m VIS 2000m	2800m	3200m	4000m

MINERALNYYE VODY, (MINERALNYYE VODY - URMM)

TERMINAL CHART CHANGE NOTICES

No Chart Change Notices for Airport URMM