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17 / 2010

07 OCT

AIRAC

KOTA KINABALU FLIGHT INFORMATION REGION
TAWAU AIRPORT, SABAH

a) REVISION ON ATS ROUTE W425 AND W424

b) REVISION OF TAWAU CONTROL ZONE

c) ESTABLISHMENT OF HOLDING AREAS

d) ESTABLISHMENT OF ATC SURVEILLANCE MINIMUM AREA

e) ESTABLISHMENT OF NEW INSTRUMENT FLIGHT PROCEDURES

f) ESTABLISHMENT OF VFR ROUTES

1. INTRODUCTION

1.1 This AIP Supplement provides details on the revised Tawau Control Zone and the establishment of new holding areas and instrument flight procedures for Tawau Airport.

1.2 To facilitate the implementation of the new procedures, ATS Routes W425 and W424 are revised.

2. REVISIONS ON ATS ROUTE W425 AND W424

2.1 Details on the revision of the ATS route W425 and W424 are shown in tabular format as AIP ENR 3.1:

Route Designator Significant Points Coordinates	Track (MAG) Dist(NM)	Upper Limits Lower Limits Minimum Flight Altitude	Direction of CruisIng Levels			Remarks Controlling Unit
			Lateral Limits (NM)	Odd	Even	
1	2	3	4	5		6
W425						
▲ TAWAU DVOR/DME (VTW) 041928.3N 1180823.7E	307° 127° 45 NM 307° 127° 113 NM	FL 460 6500 FT ALT **MNM 7000FT**	20	↑	↓	**Controlling Authority:** Kinabalu ACC (PRI) 126.1 MHz, Within Tawau CTR : Tawau APP – 123.55(PRI), 122.50(SRY)
▲ AKDEM 044620N 1173225E RDL307/45D VTW						
▲ KOTA KINABALU DVOR/DME (VJN) 055357.3N 1160202.3E		FL 460 10500 FT ALT **MNM 11000FT**				
W424						
▲ LAHAD DATU LOCATOR (LHD) 050129.1N 1182010.8E	196° 016° 44NM	FL 460 4500 FT ALT **MNM 5000FT**	20	↑	↓	**Controlling Authority:** Kinabalu ACC (P) 126.1 MHz, Within Tawau CTR : Tawau APP – 123.55(PRI), 122.50(SRY)
▲ TAWAU DVOR/DME (VTW) 041928.3N 1180823.7E						
Changes: W425 Reporting Point AKDEM, W424 Minimum Flight Altitude and Controlling Unit						

3. REVISED TAWAU CONTROL ZONE (CTR)

3.1 Details of the new Tawau CTR are as follows:.

WBKW AD 2.17 ATS AIRSPACE		
1	Designation and lateral limits	Tawau CTR Commencing from 040800N 1173000E, clockwise along an arc of a circle 40NM radius centered on VTW DVOR/DME 041928.3N 1180823.7E, to 045841N 1175930E thence a straight line to 044247N 1184102E, hence along the arc of a circle 40NM radius centered on VTW DVOR/DME 041928.3N 1180823.7E to 040002N 1184327E thence along the Malaysian/Indonesian National boundary to 040800N 1173000E
2	Vertical limits	Gnd / Sea Level to 11,500FT.
3	Airspace classification	C
4	ATS unit call sign Language(s)	Tawau Approach / Tower English.
5	Transition altitude	11000 FT
6	Remarks	Nil

3.2 Tawau Control Zone Chart is shown in Appendix 1

4. ESTABLISHMENT OF HOLDING AREAS

4.1 New holding areas over following reporting points are established and shall be used as an entry point for regulating air traffic flow. The details are as follows:

Holding Area	INBD TR (°M)	Direction	Max IAS (KTS)	MNM/MAX HLDG LVL(MSL) FT	TIME (Min)
W441 **AGIGI** 04° 27' 27.6"N 117°44' 39.9"E RDL289/25VTW	109	Right	230	7000 to 11000	1
W425 **ANGUR** 04°31'28.2" N 117°52"19.6"E RDL307/20VTW	127	Left	230	7000 to 11000	1
W424 **BILUK** 04°37'50.69"N 118°13'32.42"E RDL016/19VTW	196	Right	230	5000 to 11000	1
MAMUD 04°26'53.21" 118°20'18.46" RDL058/14VTW	238	Left	230	3300 to 9000	1
ANDAR 04°11'48.1" N 118°13'10.1"E RDL148/9VTW	148	Right	190	2500 to 9000	1

4.2 Holding areas Chart is shown in Appendix 1

5. ATC SURVEILLANCE MINIMUM ALTITUDE AREAS

5.1 ATC Surveillance Minimum Altitude Areas (ATC SMA) for the Tawau Control Zone (CTR) are established within an area of 40NM radius of VTW VOR/DME.

5.2 Tawau ATC SMA is sectorised to gain relief from obstacles clearance and all sector bearings and distances are taken from VTW VOR/DME for user positional awareness purposes.

5.3 The pre-determined minimum altitude within each sector boundary in the ATC SMA will ensures a minimum of 1000FT clearance above the highest obstacles within 5 NM of an aircraft's position.

5.4 Information on the ATC SMA will shows the following:

a. Extent of the ATC Surveillance Minimum Altitude Area

b. Radar minimum altitude sectors defined by bearings and radials from VTW VOR/DME to the nearest degree

c. Significant spot elevations

d. Aerodrome elevation

e. Radio communications failure procedure

5.5 Tawau ATC SMA Chart is shown in Appendix 2.

6. WAY-POINTS

6.1 The following way-points will be established:

WAYPOINT NAME CODE	LAT(N)	LONG(E)	RADIAL/DME from VTW VOR/DME
AKDEM	04° 46’ 20”	117° 32’ 25”	RDL307/45D
ANGUR	04° 31’ 28.2”	117° 52” 19.6”	RDL307/20D
AGIGI	04° 27’ 27.6”	117° 44’ 39.9”	RDL289/25D
BILUK	04° 37’ 50.7”	118° 13’ 32.4”	RDL016/19D
BELMO	04° 32’ 00.9”	118° 17’ 08.4”	RDL035/15D
MALIM	04° 21’ 45.9”	118° 23’ 28.2”	RDL081/15D
MAMUD	04° 26’ 53.2”	118° 20’ 18.5”	RDL058/14D
DUDOL	04° 30’ 34.2”	118° 06’ 50.9”	RDL352/11D
ANDAR	04° 11’ 48.1”	118° 13’ 10.1”	RDL148/9D

6.2 The following way-points will be withdrawn:

1. AGRAB
2. DABMI
3. GOPRO
4. GUSDO
5. ODIVO
6. DOGAT
7. KETOX
8. EGARO
9. IDUKI
10. BEGRO

11. LOSKO
12. AKAGO
13. KAKBO
14. IDADU

7. INSTRUMENT FLIGHT PROCEDURES (IFP)

7.1 The following Standard Instrument Departures (SIDs) will be implemented and are illustrated on the following SID Charts.

7.1.1 SIDs Runway 06 (see Appendix 3)

a) TAWAU 1B DEPARTURE (W425, W441)

b) BAXAL 1B DEPARTURE (A211)

c) BILUK 1B DEPARTURE (W424)

7.1.2 SIDs Runway 24 (see Appendix 4)

a) AGIGI 1A DEPARTURE (W441)

b) AKDEM 1A DEPARTURE (W425)

c) BAXAL 1A DEPARTURE (A211)

d) BILUK 1A DEPARTURE (W424)

7.1.3 Standard Radar Departure (see Appendix 5)

7.1.3.1 A Standard Radar Departure (SRD) is an instrument departure procedure introduced as an alternative to a SID to improve the traffic flow.

7.1.3.2 TAWAU SRD will be identified as *"*TAWAU RADAR ONE DEPARTURE*".*

7.1.3.3 The description of SRD clearance and procedures is available in AIP Malaysia Volume 1, Page ENR 1.5 – 17, paragraph 3.2.11.

7.1.4 All departing aircraft will be cleared on the appropriate SID

Example: <Callsign> cleared to KOTA KINABALU via W425 FL 260, AKDEM 0NE BRAVO DEPARTURE SQUAWK A1234

7.1.5 The following existing SID procedures will be withdrawn from publication. They are:

a) STANDARD DEPARTURE CHART INSTRUMENT-ICAO- DEPARTURE RWY24 (RNAV) - AIP Page WBKW AD 2 – 50

b) STANDARD DEPARTURE CHART INSTRUMENT-ICAO- DEPARTURE RWY06 (RNAV) - AIP Page WBKW AD 2 – 51

c) STANDARD DEPARTURE CHART INSTRUMENT-ICAO- DEPARTURE RWY24 - AIP Page WBKW AD 2–52

d) STANDARD DEPARTURE CHART INSTRUMENT-ICAO- DEPARTURE RWY06 - AIP Page WBKW AD 2 – 53

7.2 New RNAV Standard Arrival Routes (STARs) for RWY 24 will be introduced. They are:

a) AGIGI 1A ARRIVAL(W441)

b) ANGUR 1A ARRIVAL(W425)

c) BAXAL 1A ARRIVAL(A211)

d) BILUK 1A ARRIVAL(W424)

7.2.1 The STAR Chart is illustrated in the Appendix 6.

7.2.2 Essential elements on the STARs chart will include the following:

(a) Tracks, distances and Vertical restrictions.

(b) Minimum safe altitude (MSA) within 25NM of VTW DVOR/DME.

7.2.3 The STAR will connect from the entry point to a point where standard instrument approach procedures RWY24 can be executed.

7.2.4 STAR Clearances shall be issued by ATC in the following order:

Example:
< Call sign> cleared to TAWAU via AGIGI ONE ALPHA ARRIVAL, Runway 24, maintain/descend to altitude Seven Thousand , QNH.

7.2.5 The following existing STAR procedures will be withdrawn from publication. They are:

a) STANDARD ARRIVAL CHART INSTRUMENT-ICAO- ARRIVAL RWY24 (RNAV) - AIP Page WBKW AD 2 – 61

b) STANDARD ARRIVAL CHART INSTRUMENT-ICAO- ARRIVAL RWY06 (RNAV) - AIP Page WBKW AD 2 – 62

c) STANDARD ARRIVAL CHART INSTRUMENT-ICAO- ARRIVAL RWY24 VOR/DME – AIP Page WBKW AD 2–63

d) STANDARD ARRIVAL CHART INSTRUMENT-ICAO- ARRIVAL RWY06 VOR/DME – AIP Page WBKW AD 2 – 64

7.3 New Instrument Approach Procedures are introduced. They are as follows:

a) ILS RWY24 (see Appendix 7)

b) VOR RWY24 (see Appendix 8)

c) VOR RWY06 (see Appendix 9)

7.3.1 The following Instrument Approach Charts will be withdrawn from publication:

a) INSTRUMENT APPROACH CHART -ICAO-RWY06 VOR/DME (CAT A,B,C&D) - WBKW AD 2 – 81

b) INSTRUMENT APPROACH CHART -ICAO-RWY24 VOR/DME (CAT A,B,C&D) - WBKW AD 2 – 83

c) INSTRUMENT APPROACH CHART -ICAO-RWY06 ILS/DME(CAT A,B,C&D) - WBKW AD 2 – 85

8. VFR ROUTES

8.1 VFR Routes systems catering for the operations of light fixed wing aircrafts and helicopters within the Control zones are introduced.

8.2 VFR Routes details are as follows:

VFR ROUTE DESIGNATION	ROUTINGS
Route 1	Tass Andrassy – Old Airport – Sebatik Island
Route 2	Old Airport – Kalabakan
Route 3	Balung – Kawa Hill – Baturong - Danum
Route 4	Balung – Junction(Km 49) – Kg. Aman – Tg. Batai
Route 5	Saddle Hill – Nagos – Semporna - Gaya Island
Route 6	Saddle Hill – Sipadan Island

8.3 Geographical reporting points used for VFR routes as follows:

Geographical Point	Coordinates	
	Lat (° ’ ” N)	**Long(° ’ “ E)**
Tass Andrassy	04 19 17	118 01 17
Old Airport	04 16 01	117 53 12
Sebatik Island	04 13 23	117 46 50
Kalabakan	04 23 56	117 29 42
Balung	04 21 52	118 07 40
Kawa Hill	04 23 38	118 05 13
Mt. Pyramid	04 28 24	118 04 09
Baturong	04 41 58	118 00 09
Danum	04 51 07	117 47 11
Junction(Km 49)	04 25 36	118 10 42
Kg. Aman	04 36 13	118 11 23
Tg. Batai	04 50 19	118 10 04
Saddle Hill	04 17 56	118 11 08
Nagos	04 20 52	118 23 35
Semporna	04 26 59	118 35 47
Gaya Island	04 37 20	118 44 25
Sipadan Island	04 08 26	118 38 38

8.4 Tawau VFR Routes Chart is shown in Appendix 10.

9. IMPLEMENTATION

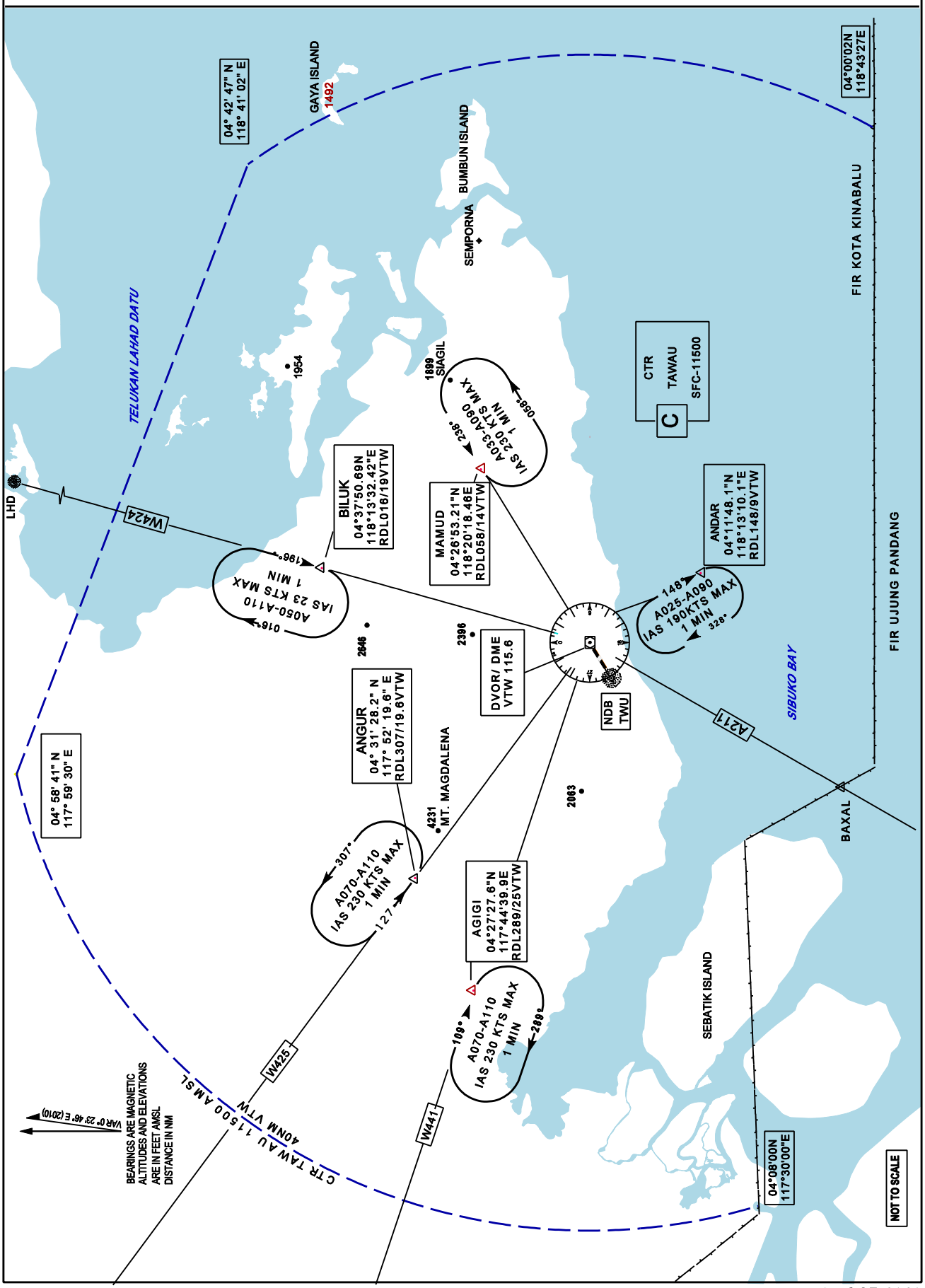
9.1 This AIP Supplement will be effective on 16 December 2010. A trigger NOTAM will be issued.

10. CANCELLATION

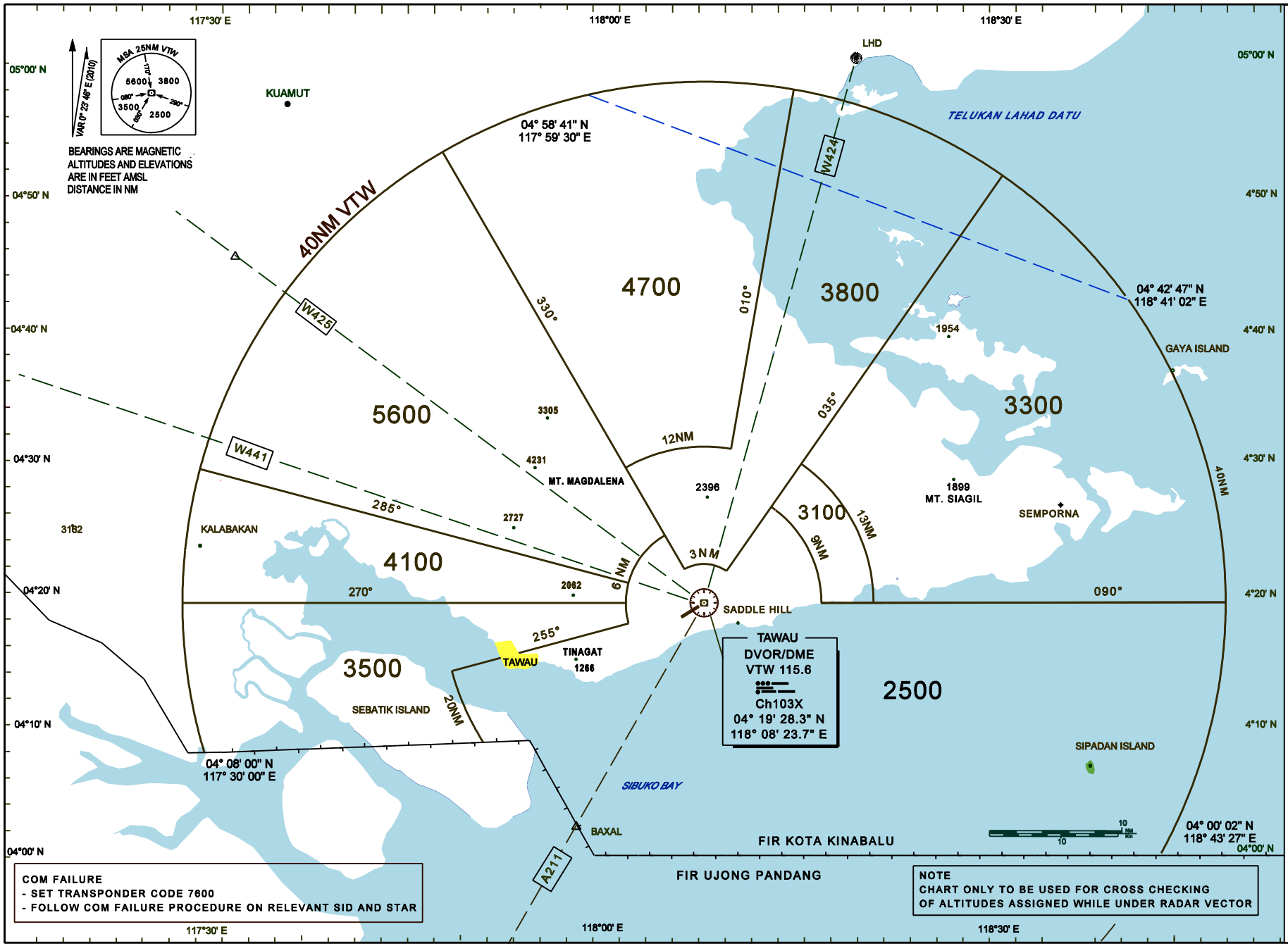
10.1 This AIP Supplement will remain current until the information is published in AIP Malaysia.

DATO' AZHARUDDIN ABDUL RAHMAN
Director General
Department of Civil Aviation
Malaysia

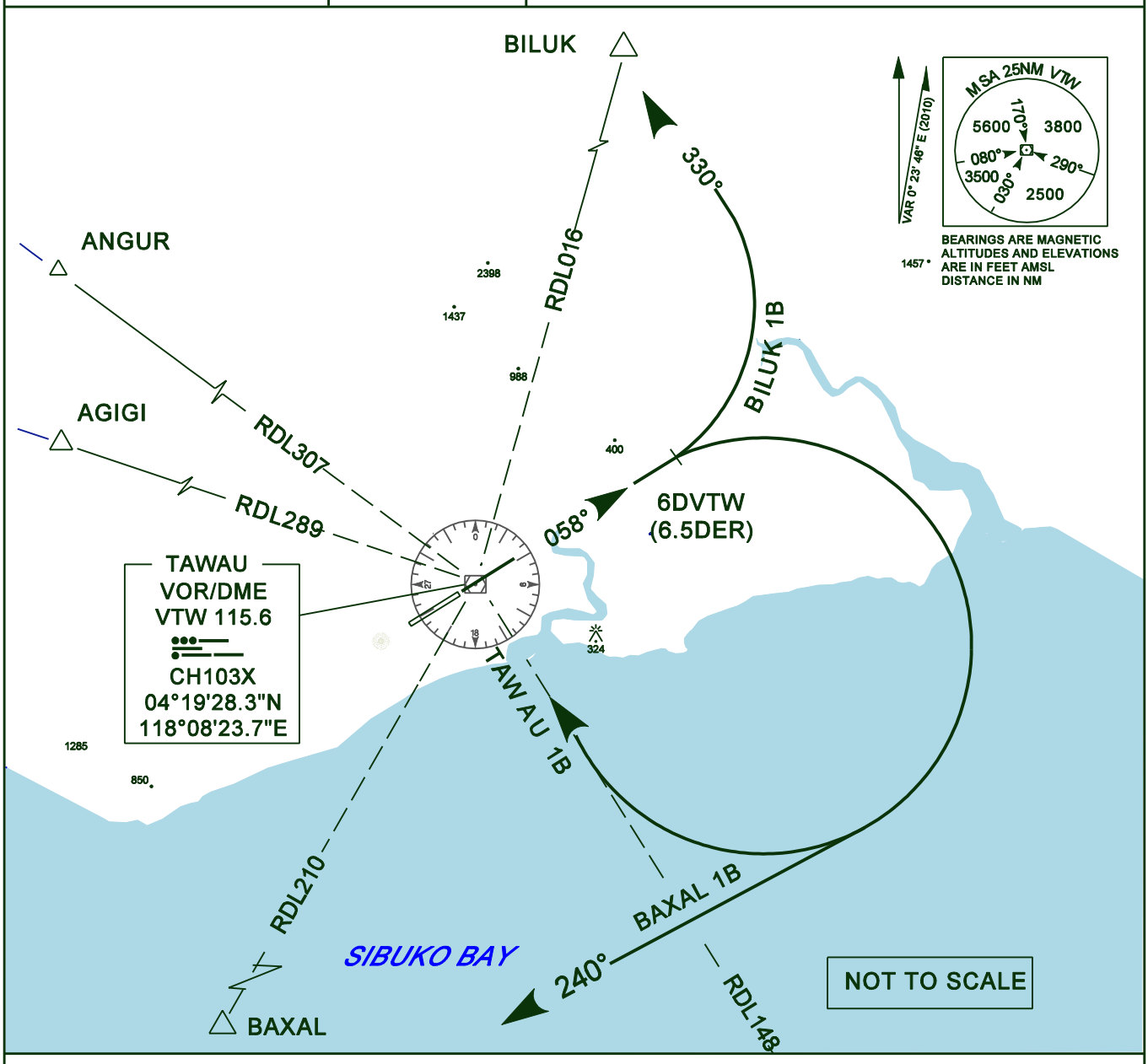
TAWAU CONTROL ZONE AND HOLDING AREAS



TAWAU ATC SURVEILLANCE MINIMUM ALTITUDE CHART



AERODROME ELEV 57FT TRANSITION ALTITUDE 11 000FT	APP 123.55 TWR 122.50 GND 121.9 ATIS 126.25	TAWAU/TAWAU RWY06 TAWAU 1B BAXAL 1B BILUK 1B



TAWAU 1B DEP

TRACK 058°
AT 6DME VTW TURN RIGHT
TRACK TO VTW VOR

BILUK 1B DEP

TRACK 058°
AT 6DME VTW TURN LEFT
TRACK 330° TO INTERCEPT
RDL016 VTW TO BILUK

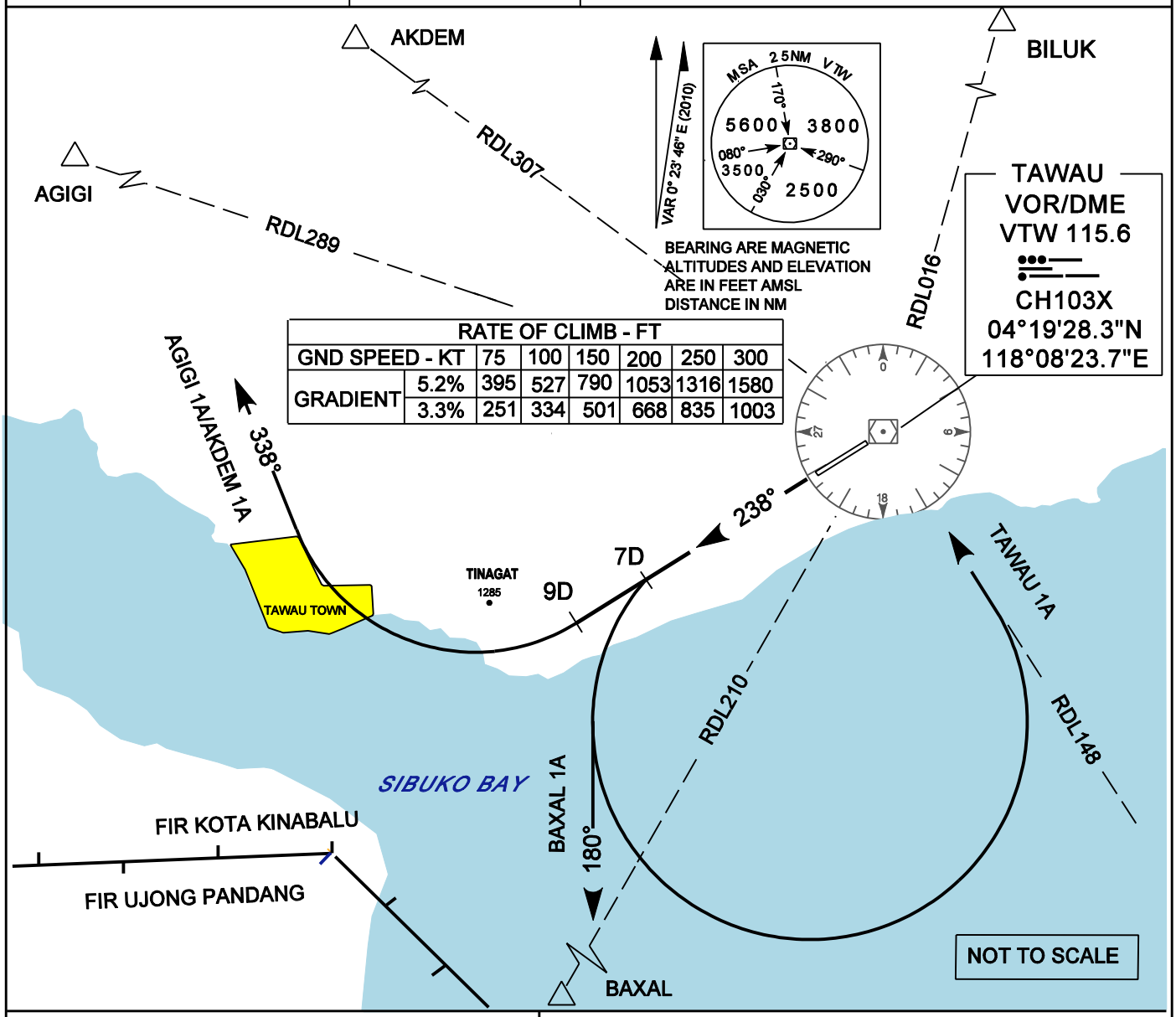
BAXAL 1B DEP

TRACK 058°
AT 6DME VTW TURN RIGHT
TRACK 240° TO INTERCEPT RDL210 VTW
TO BAXAL

COM FAILURE

SET TRANSPONDER CODE 7600
CROSS BILUK/AGIGI/ANGUR/BAXAL CLIMBING TO/AT LAST ASSIGNED AND
ACKNOWLEDGED ALT BUT NOT BELOW MNM ALT CONTINUE TO FPL FL

AERODROME ELEV 57FT TRANSITION ALTITUDE 11 000FT	APP 123.55 TWR 122.50 GND 121.9 ATIS 126.25	TAWAU/TAWAU RWY24 BAXAL 1A AGIGI 1A AKDEM 1A TAWAU 1A



RATE OF CLIMB - FT							
GND SPEED - KT		75	100	150	200	250	300
GRADIENT	5.2%	395	527	790	1053	1316	1580
	3.3%	251	334	501	668	835	1003

BAXAL 1A DEPARTURE

PDG 5.2% UP TO 2500FT
TRACK 238°
AT 7DME TURN LEFT TRACK 180°
INTERCEPT RDL210 VTW TO BAXAL

AGIGI 1A DEPARTURE

PDG 5.2% UP TO 5500FT
TRACK 238°
AT 9DME TURN RIGHT TRACK 338°
INTERCEPT RDL289 VTW TO AGIGI

TAWAU 1A DEPARTURE

PDG 5.2% UP TO 2500FT
TRACK 238*
AT 7DME TURN LEFT
TRACK TO VTW VOR

AKDEM 1A DEPARTURE

PDG 5.2% UP TO 5500FT
TRACK 238°
AT 9DME TURN RIGHT TRACK 338°
INTERCEPT RDL307 VTW TO AKDEM

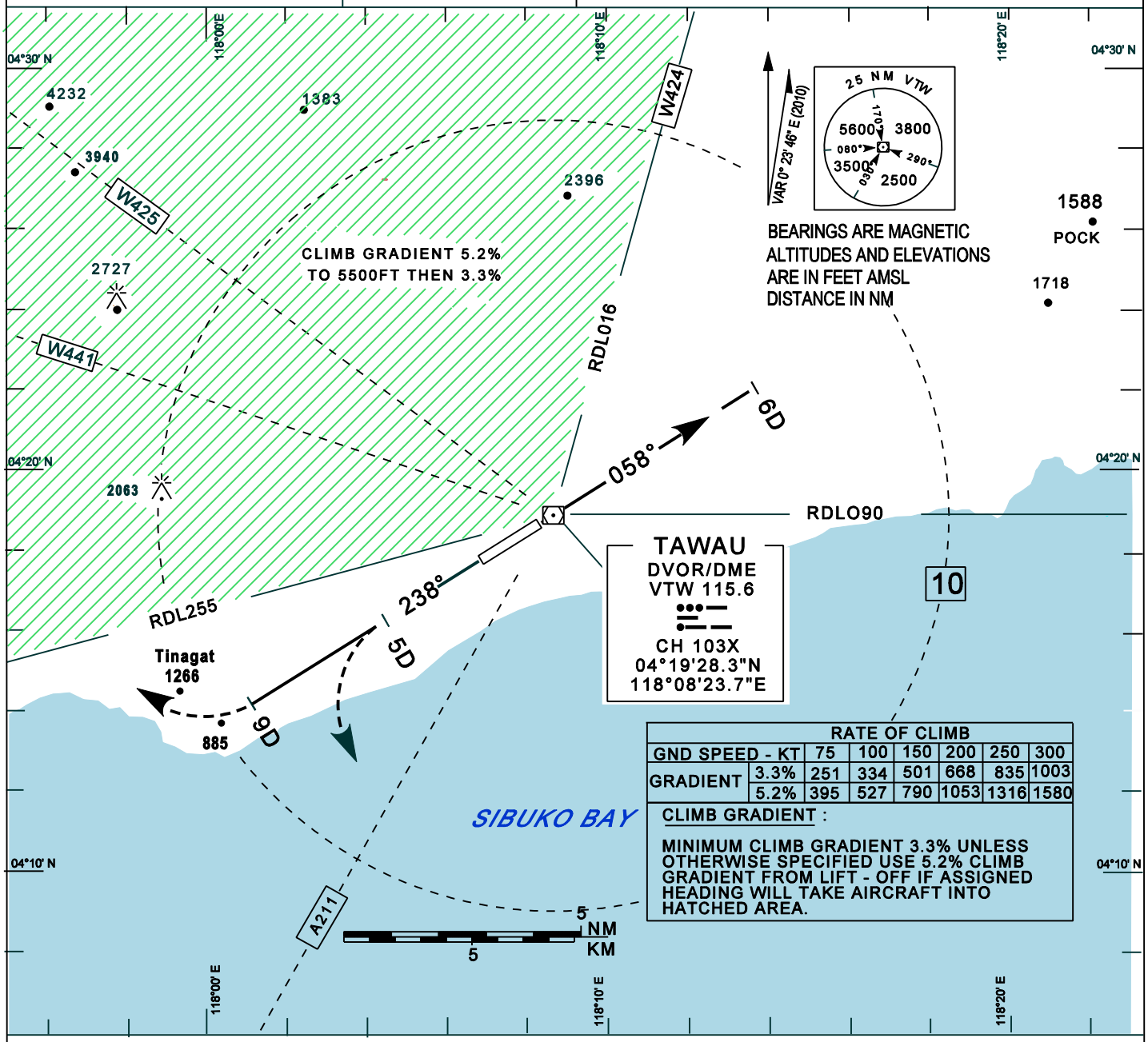
COM FAILURE

SET TRANSPONDER CODE 7600
CROSS BAXAL/AGIGI AKDEM/BILUK CLIMBING TO/AT LAST ASSIGNED AND ACKNOWLEDGED ALT BUT NOT BELOW MNM ALT CONTINUE CLIMB TO FPL FL

AERODROME ELEV 57FT
TRANSITION ALTITUDE
11 000FT

APP 123.55
TWR 122.50
GND 121.90
ATIS 126.25

TAWAU / TAWAU
TAWAU RADAR 1
RWY 06/24



RATE OF CLIMB							
GND SPEED - KT		75	100	150	200	250	300
GRADIENT	3.3%	251	334	501	668	835	1003
	5.2%	395	527	790	1053	1316	1580

CLIMB GRADIENT :

MINIMUM CLIMB GRADIENT 3.3% UNLESS OTHERWISE SPECIFIED USE 5.2% CLIMB GRADIENT FROM LIFT - OFF IF ASSIGNED HEADING WILL TAKE AIRCRAFT INTO HATCHED AREA.

TAWAU RADAR ONE DEPARTURE

RWY06
TRACK HEADING 058° AT 6 DME
TURN TO ASSIGNED HEADING
CONTACT TAWAU APPROACH
WHEN AIRBORNE

RWY24
TRACK HEADING 238° AT 5 DME
TURN LEFT OR AT 9 DME
TURN RIGHT TO ASSIGNED HEADING
CONTACT TAWAU
APPROACH WHEN AIRBORNE

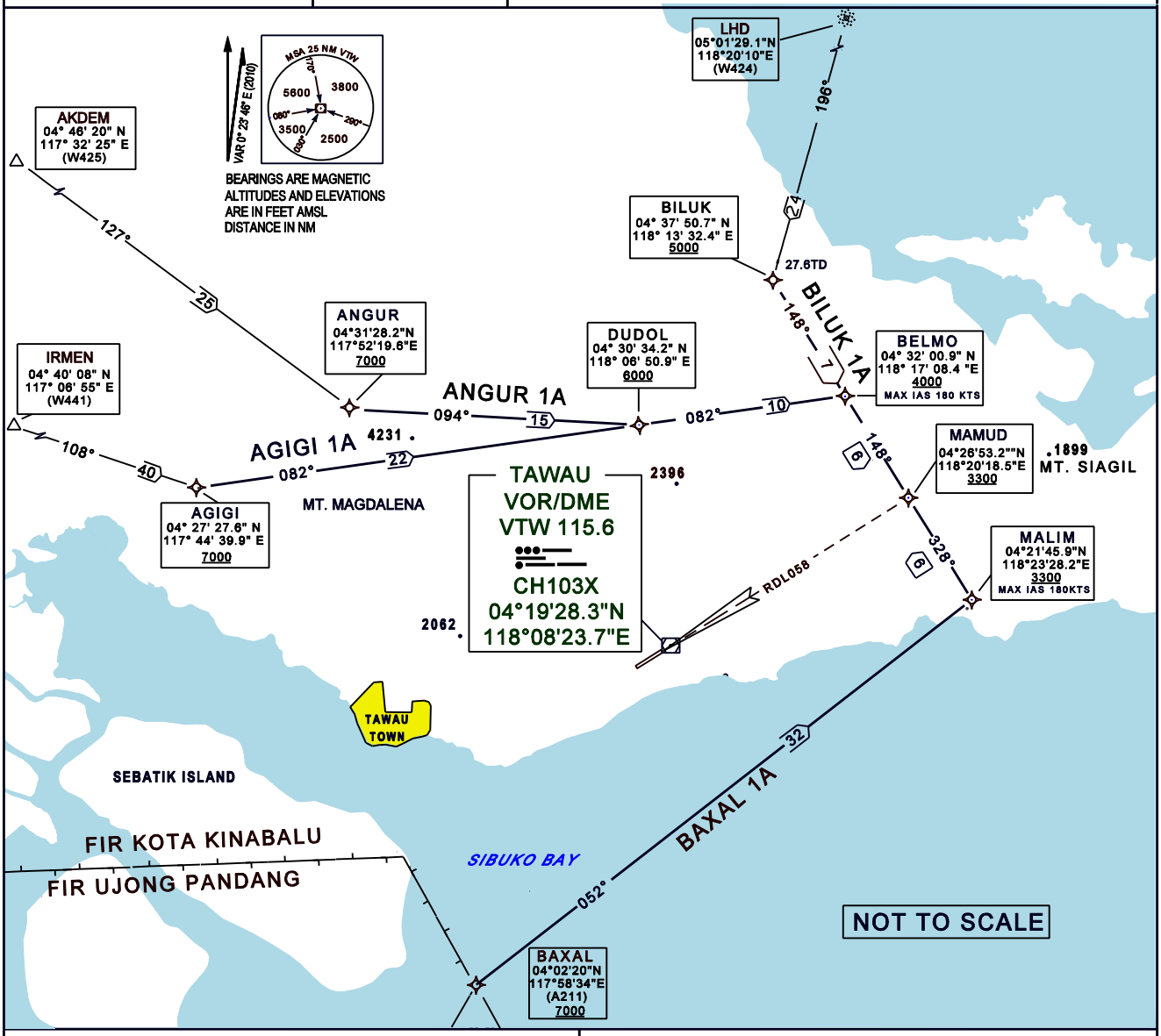
COM FAILURE:
IMEDIATELY SQUAWK 7600
MAINTAIN ASSIGNED HEADING CLIMB TO MSA OR LAST ASSIGNED LEVEL IF HIGHER
MAINTAIN MSA OR ASSIGNED LEVEL AS APPLICABLE FOR 2 MINUTES
THEN CLIMB TO FLIGHT PLANNED LEVEL AND INTERCEPT FLIGHT PLANNED TRACK
(AS AMENDED BY ATC, IF APPLICABLE)

AERODROME ELEV 57FT
TRANSITION ALTITUDE
11 000FT

APP 123.55
TWR 122.50
GND 121.9
ATIS 126.25

TAWAU / TAWAU
RWY24 (RNAV)

AGIGI 1A ANGUR 1A
BILUK 1A BAXAL 1A



AGIGI 1 ALPHA ARRIVAL

- FROM W441 / IRMEN TO AGIGI
- TRACK 082° TO DUDOL AND BELMO
- TURN RIGHT TRACK 148° TO MAMUD
- INTERCEPT LLZ OR RDL058

ANGUR 1 ALPHA ARRIVAL

- FROM W425 / AKDEM TO ANGUR
- TRACK 094° TO DUDOL
- THENCE 082° TO BELMO
- TURN RIGHT TRACK 148° TO MAMUD
- INTERCEPT LLZ OR RDL 058

BILUK 1 ALPHA ARRIVAL

- FROM LHD/W424 TO BILUK
- TRACK 148° TO BELMO
- THENCE TO MAMUD
- INTERCEPT LLZ OR RDL 058

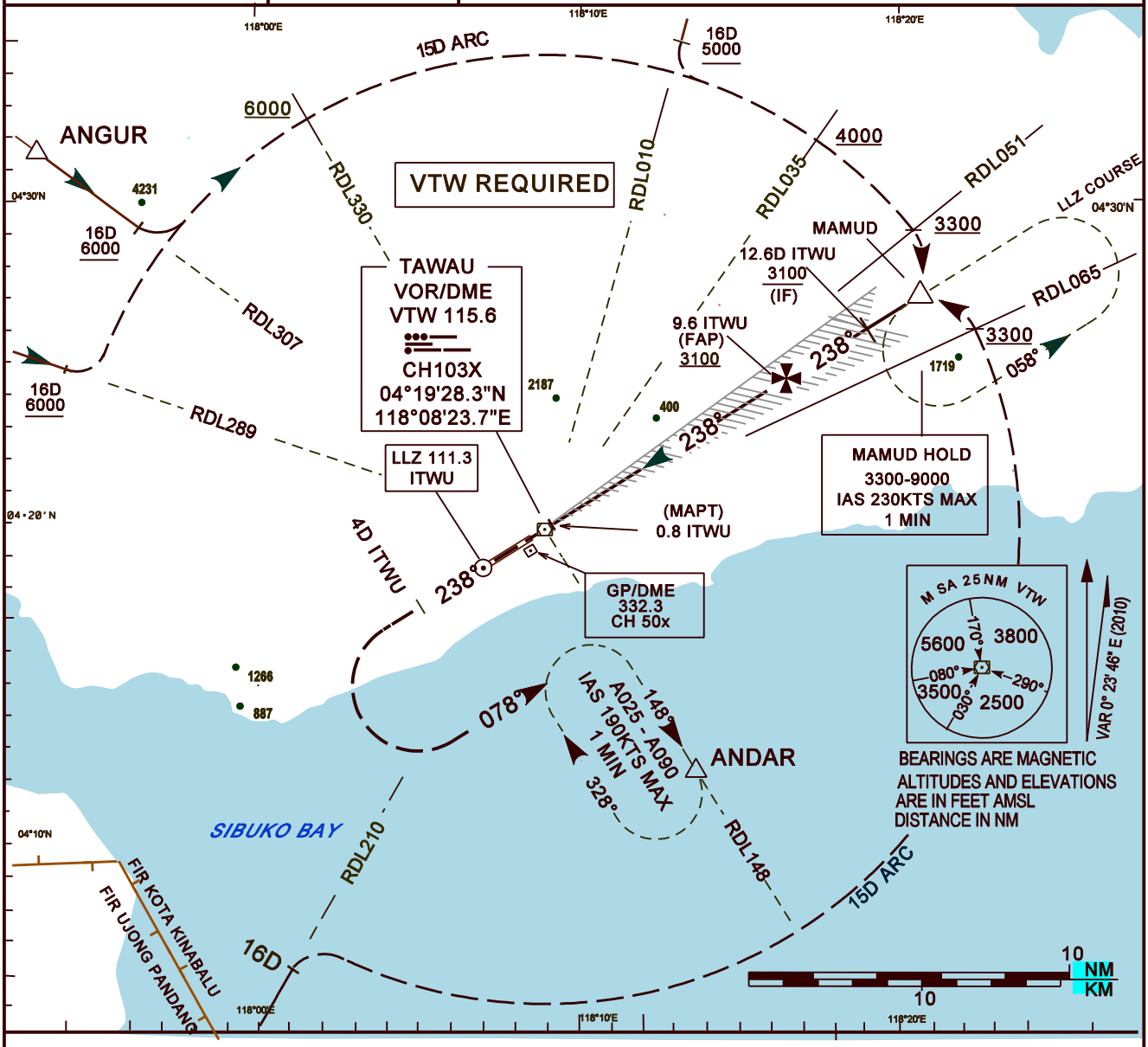
BAXAL 1 ALPHA ARRIVAL

- FROM A211/BAXAL TRACK 052° TO MALIM
- TURN LEFT TRACK 328° TO MAMUD
- INTERCEPT LLZ OR RDL 058

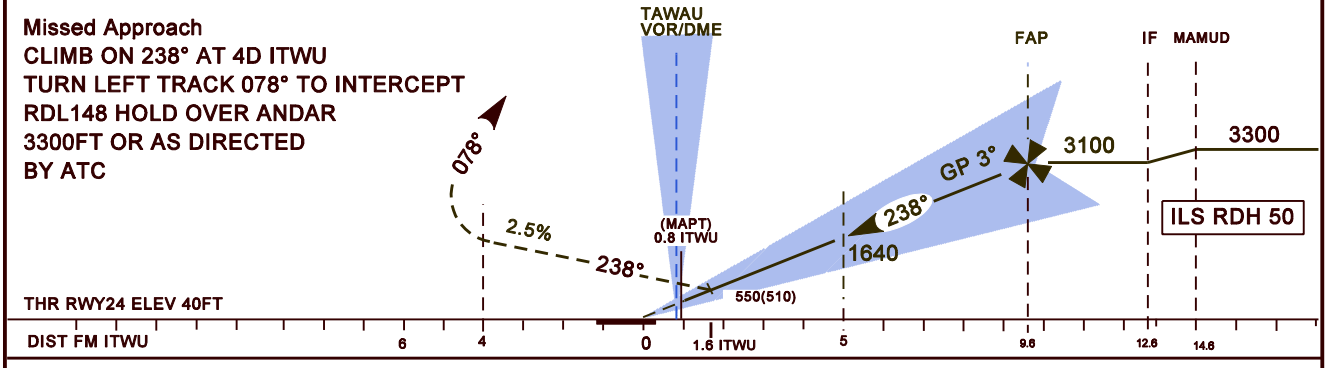
COM FAILURE

SET TRANSPONDER CODE 7600
PROCEED TO MAMUD AT LAST RECEIVED OR ACKNOWLEDGED EAT OR, IF NO EAT HAS BEEN RECEIVED OR ACKNOWLEDGED AT FPL EAT DESCEND IN THE MAMUD HOLDING PATTERN TO 3300FT, CARRY OUT STANDARD INSTRUMENT APPROACH RWY24

AERODROME ELEV 57 FT HEIGHT RELATED TO THR RWY24 ELEV 40FT	APP 123.55 TWR 122.50 GND 121.9 ATIS 126.25	TAWAU / TAWAU ILS OR LLZ RWY24



Missed Approach
CLIMB ON 238° AT 4D ITWU
TURN LEFT TRACK 078° TO INTERCEPT
RDL148 HOLD OVER ANDAR
3300FT OR AS DIRECTED
BY ATC

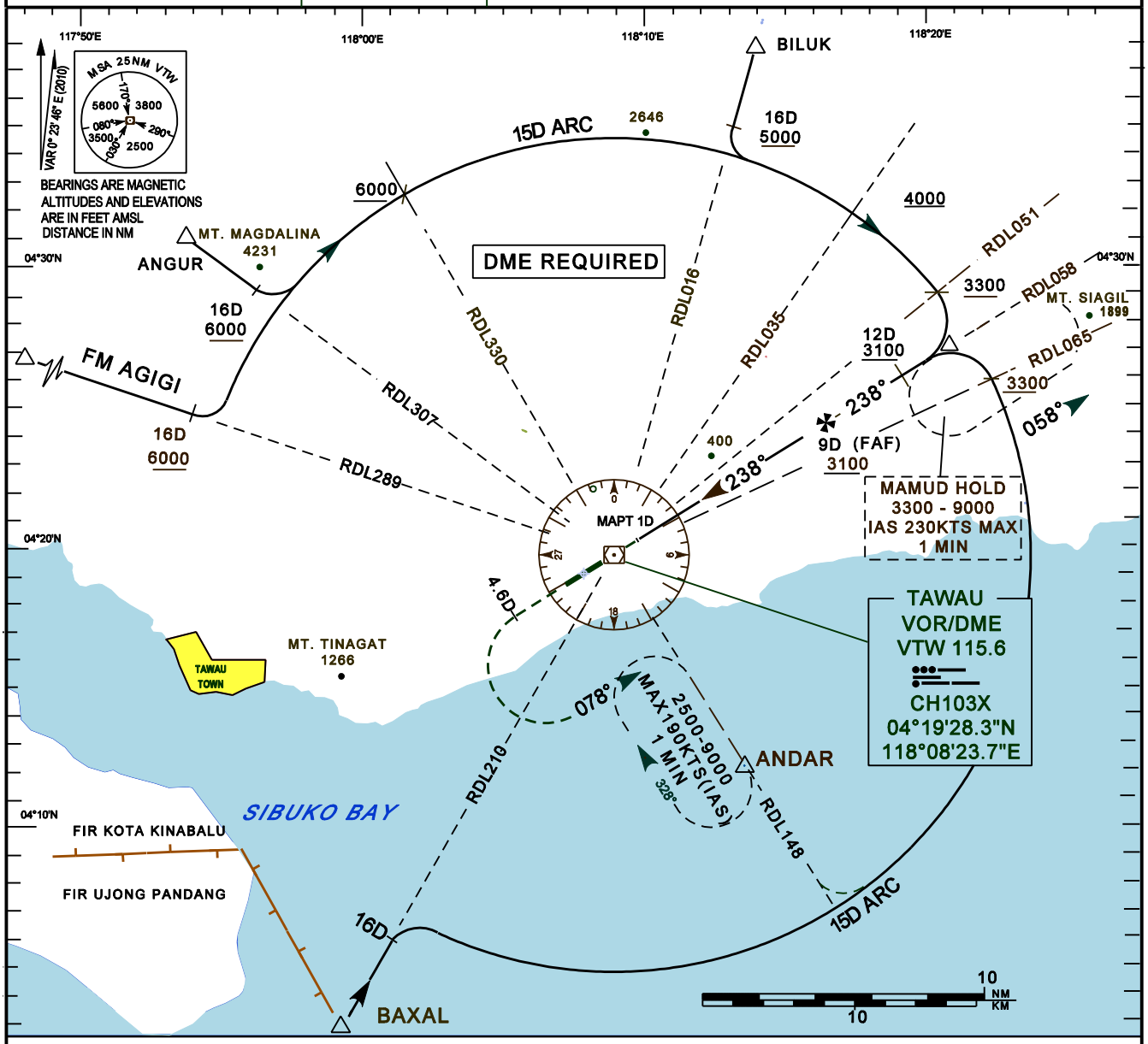


OCA(H)		A	B	C	D		A	B	C	D
STRAIGHT-IN APPROACH	CAT 1	260(220)	270(230)	290(250)	300(260)	CIRCLING	800(760)		*1100(1060)	
	GP INOP	550(510)				VISIBILITY (NM)	1.0	1.5	2.0	2.5

DIST. FM ITWU	9.6	9	8	7	6	5	4	3	2	1.6
ALTITUDE	3100	2910	2590	2270	1960	1640	1320	1000	680	550

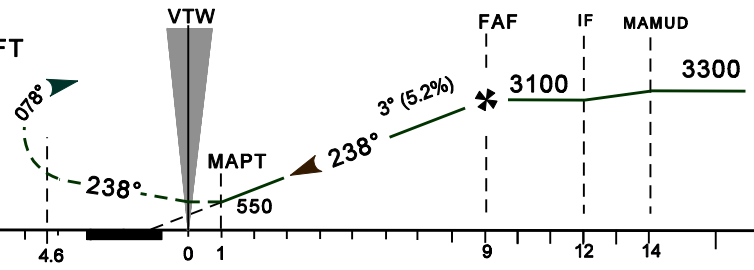
*CAUTIOUN : CIRCLING PROHIBITED IN SECTOR 300° - 045° FOR CAT D AIRCRAFT

AERODROME ELEV 57FT HEIGHT RELATED TO THR RWY06 ELEV 40FT	APP 123.55 TWR 122.50 GND 121.9 ATIS 126.25	TAWAU / TAWAU VOR RWY24



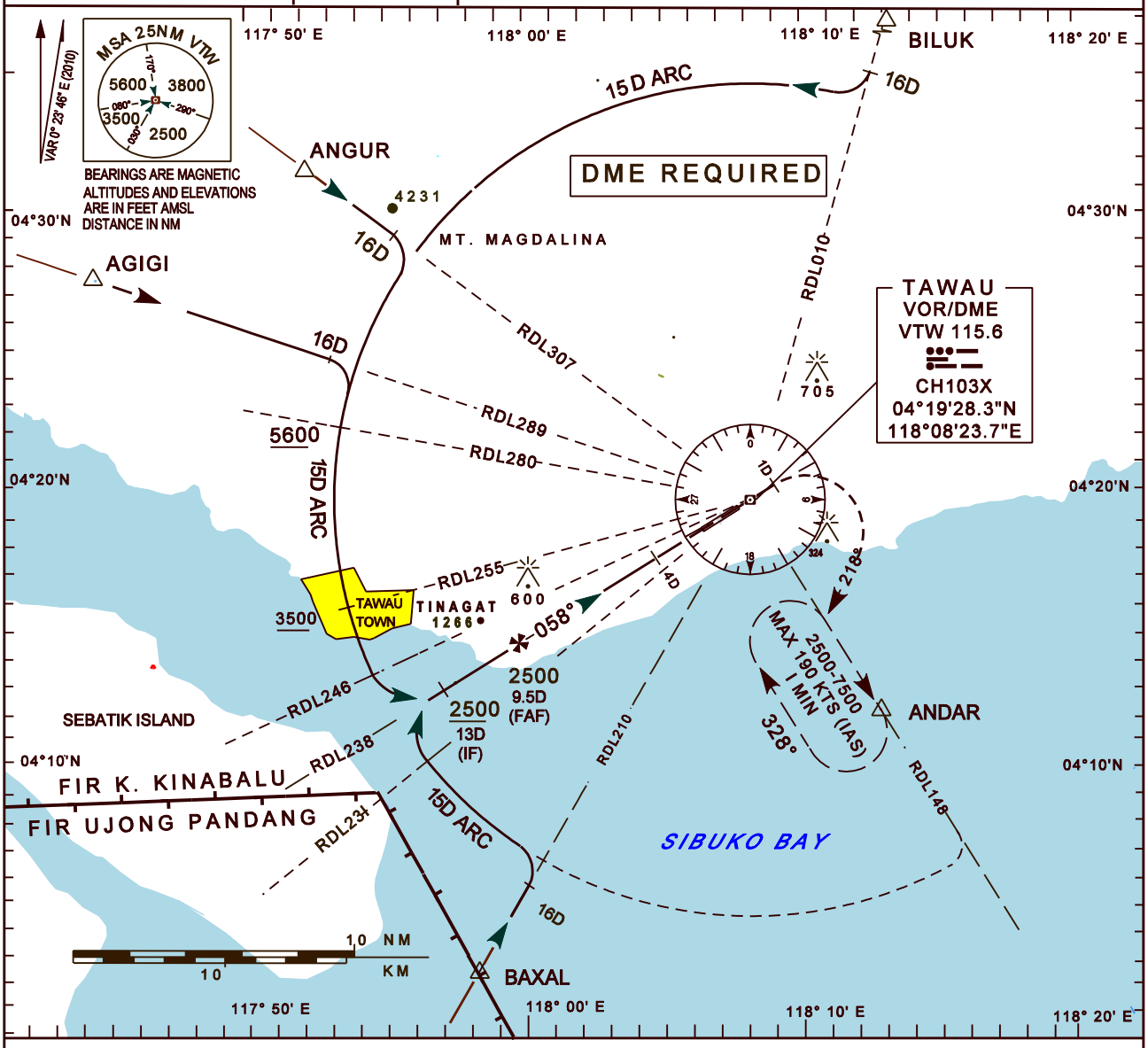
MISSED APPROACH

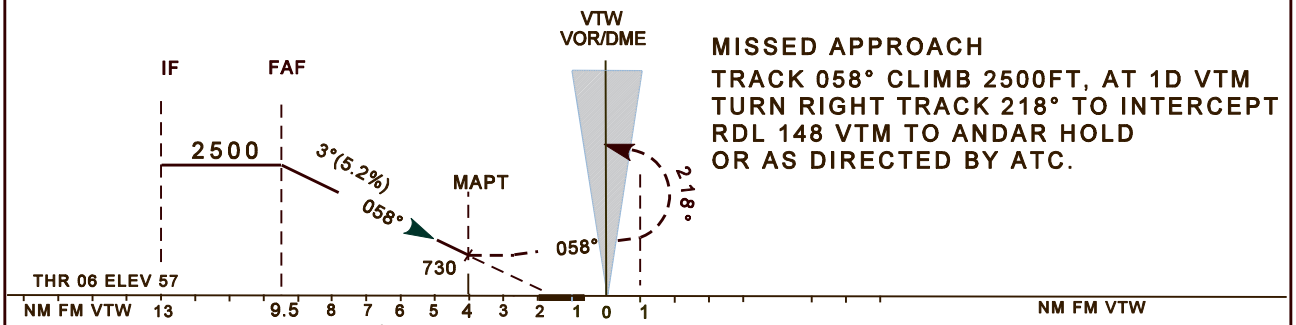
CLIMB ON 238° AT 4.6D VTW TURN LEFT
TRACK 078° TO INTERCEPT RDL 148
HOLD OVER ANDAR 3300FT
OR AS DIRECTED BY ATC



	OCA/H								
CAT OF ACFT	A		B		C		D		
STRAIGHT IN APPROACH	550(510)								
CIRCLING	800(760)				*1100(1060)				
VISIBILITY (NM)									
NM FROM VTM	9	8	7	6	5	4	3	2	1
ALTITUDE (FT)	3100	2780	2460	2150	1830	1510	1190	870	550
*CAUTION : CIRCLING PROHIBITED FOR CAT D ACFTIN SECTOR 300 ° - 045°									

AERODROME ELEV 57FT HEIGHTS RELATED TO THR RWY06 ELEV 57FT	APP 123.55 TWR 120.50 GND 121.9 ATIS 126.25	TAWAU/TAWAU VOR RWY06



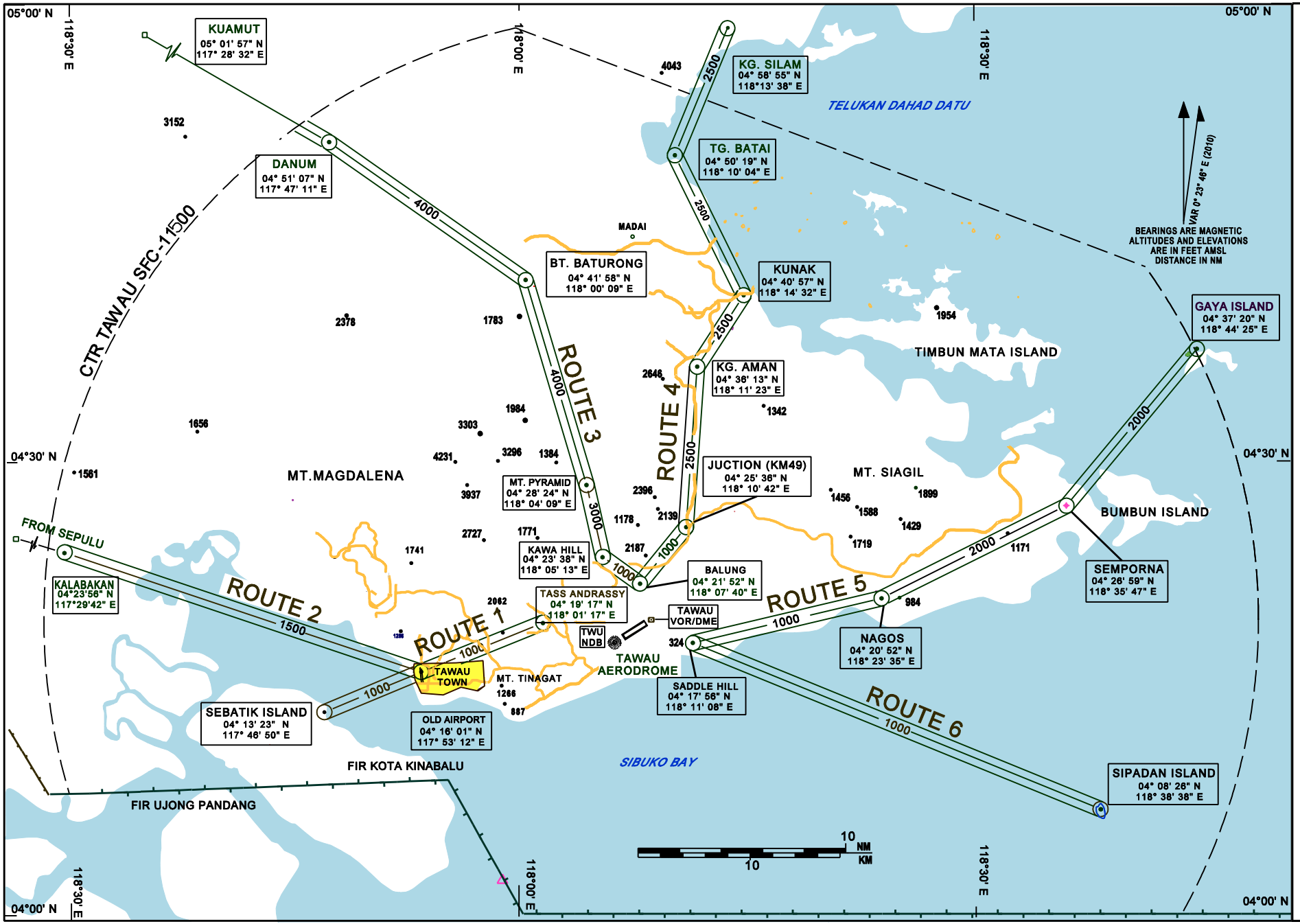


MISSED APPROACH

TRACK 058° CLIMB 2500FT, AT 1D VTM
TURN RIGHT TRACK 218° TO INTERCEPT
RDL 148 VTM TO ANDAR HOLD
OR AS DIRECTED BY ATC.

	OCA/H							
CAT OF ACFT	A		B		C		D	
STRAIGHT-IN APPROACH	730(683)							
CIRCLING	800(743)				*1100(1043)			
VISIBILITY (NM)	1.0		1.5		2.0		2.5	
NM FROM VTM	9.5	9	8	7	6	5	4	
ALTITUDE	2500	2350	2040	1720	1400	1080	730	

*CAUTION : CIRCLING IS PROHIBITED FOR CAT D ACFT IN SECTOR 300° - 045°


VFR ROUTES
05°00' N
04°30' N
04°00' N
118°30' E
118°00' E
KUAMUT
05° 01' 57" N
117° 28' 32" E
DANUM
04° 51' 07" N
117° 47' 11" E
CTR TAWAU SFC-11500
4000
KG. SILAM
04° 58' 55" N
118°13' 38" E
2500
TELUKAN DAHAD DATU
TG. BATAI
04° 50' 19" N
118° 10' 04" E
VAR 0° 23' 46" E (2010)
BEARINGS ARE MAGNETIC
ALTITUDES AND ELEVATIONS
ARE IN FEET AMSL
DISTANCE IN NM
MADAI
BT. BATURONG
04° 41' 58" N
118° 00' 09" E
KUNAK
04° 40' 57" N
118° 14' 32" E
GAYA ISLAND
04° 37' 20" N
118° 44' 25" E
TIMBUN MATA ISLAND
KG. AMAN
04° 36' 13" N
118° 11' 23" E
ROUTE 3
ROUTE 4
JUCTION (KM49)
04° 25' 36" N
118° 10' 42" E
MT.MAGDALENA
MT. SIAGIL
MT. PYRAMID
04° 28' 24" N
118° 04' 09" E
FROM SEPULU
KALABAKAN
04°23'56" N
117°29'42" E
ROUTE 2
ROUTE 1
KAWA HILL
04° 23' 38" N
118° 05' 13" E
BALUNG
04° 21' 52" N
118° 07' 40" E
ROUTE 5
BUMBUN ISLAND
SEMPORNA
04° 26' 59" N
118° 35' 47" E
TASS ANDRASSY
04° 19' 17" N
118° 01' 17" E
TAWAU
VOR/DME
TWU
NDB
NAGOS
04° 20' 52" N
118° 23' 35" E
TAWAU
TOWN
TAWAU
AERODROME
MT. TINAGAT
SADDLE HILL
04° 17' 56" N
118° 11' 08" E
ROUTE 6
SEBATIK ISLAND
04° 13' 23" N
117° 46' 50" E
OLD AIRPORT
04° 16' 01" N
117° 53' 12" E
FIR KOTA KINABALU
SIBUKO BAY
SIPADAN ISLAND
04° 08' 26" N
118° 38' 38" E
FIR UJONG PANDANG
10 NM
10 KM