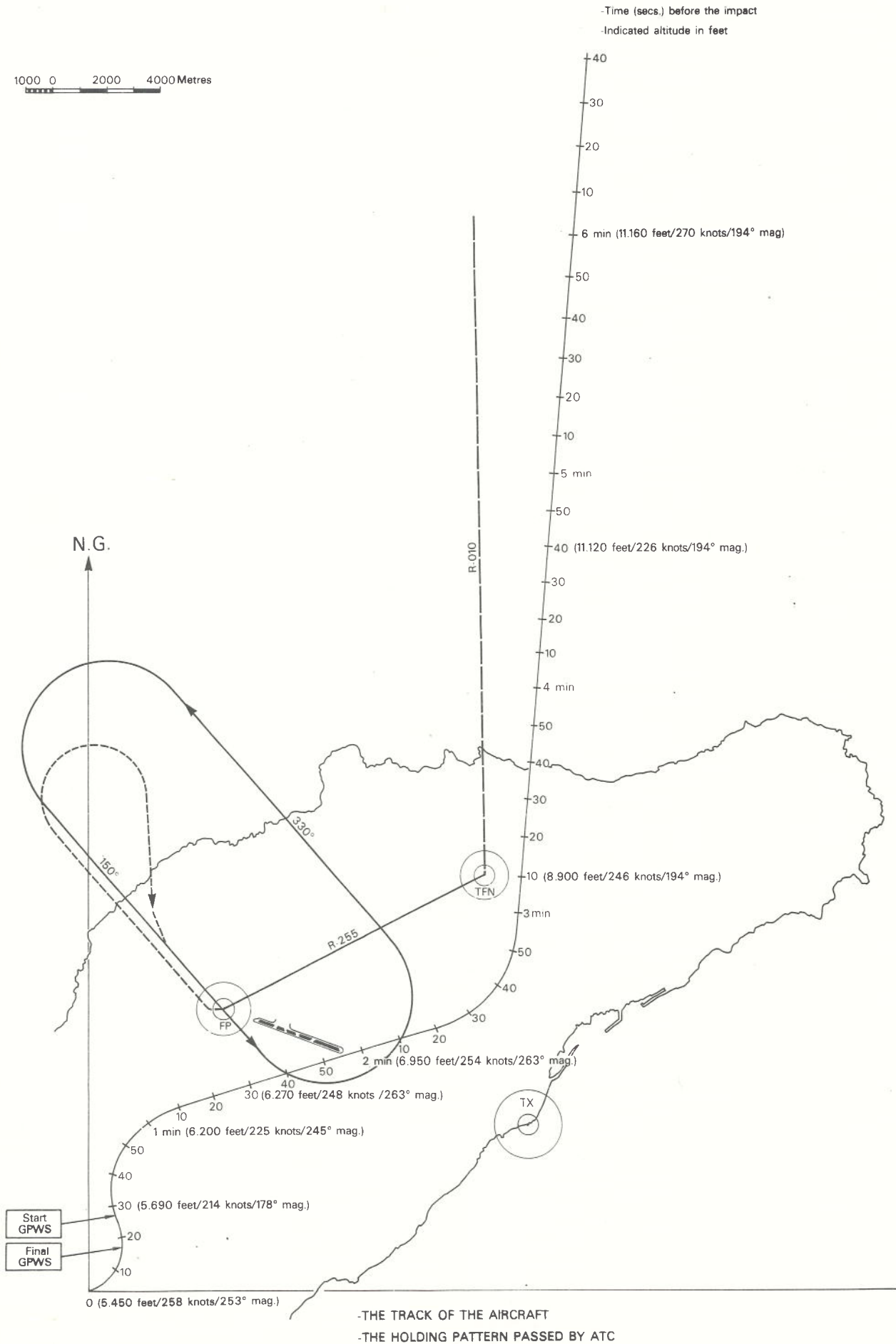


THE ACCIDENT WHICH OCCURRED ON TENERIFE ON 25-4-80  
TO THE B-727 AIRCRAFT G-BDAN



## COCKPIT VOICE RECORDER TRANSCRIPT

<i>Time to Impact</i>	<i>GMT</i>	<i>ATC Communications</i>	<i>Cockpit Conversation</i>
5:00	13.16:18	APP Dan-Air one zero zero eight descend and maintain flight level six zero.	
4:55	13.16:23	DAN Roger leaving one one zero for six zero.	
4:54	13.16:24		FE Coming off with the power then.
4:52	13.16:26	APP Report your DME reading please.	
4:50	13.16:28	DAN Er we're reading seven DME Tango Fox November and requesting the QFE please.	
4:44	13.16:34	APP Nine four three.	
4:42	13.16:36	DAN Nine four three many thanks.	
			P2 Humming.
4:19	13.16:59		P2 Seventy millibars .....
4:15	13.17:03		P2 You're happy with that.
			P1 Yeh.
4:09	13.17:09		P1 It's about right on this one. P2
4:08	13.17:10		P1 Ten for six then. P2 Ten for six. FE Ten for six.
4:00	13.17:18		P1 You can put the ILS on your side, might get it on a back beam for a lead in.
3:49	13.17:29		P2 And it's three oh two isn't it? P1 Yeh.
3:45	13.17:33	APP One zero zero eight for your information Foxtrot Echo on runway one two is nine four one.	
3:39	13.17:39	DAN Roger nine four one for one two thanks.	

<i>Time to Impact</i>	<i>GMT</i>	<i>ATC Communications</i>	<i>Cockpit Conversation</i>
3:37	13.17:41		FE That's what I reckoned it should be by calculation.
3:26	13.17:52		P1 I won't go out the full procedure if you know because it takes you way out to sea on this.
3:20	13.17:58	APP Iberia siete uno uno, notifique completando curva de procedimiento.	
3:16	13.18:02	IB Notificard, Iberia siete uno uno.	
3:13	13.18:05		(Morse code ITF ILS audio ident).
3:08	13.18:10		P2 ITF three oh five is in my box.
3:05	13.18:13		P2 Three oh two I'm sorry excuse me.
3:03	13.18:15		P1 Just about to go overhead going for.
2:59	13.18:19		P2 Two five out of here.
			P2 Humming.
2:40.5	13.18:37.5	HP Tenerife buenas tardes Hapag-Lloyd five four two.	
2:37	13.18:41	APP Five four two good afternoon report ready.	
2:34.5	13.18:43.5	HP Wilco.	
2:30	13.18:48	DAN Dan-Air one zero zero eight has just passed the Tango Fox November heading to the er Fox Papa.	
2:24	13.18:54	APP Roger the er standard holding overhead Foxtrot Papa is inbound heading one five zero turn to the left call you back shortly.	
2:17	13.10:01	DAN Roger Dan-Air one zero zero eight.	
2:15	13.19:03		P1 Inbound one five zero to your left.
2:12.5	13.19:05.5		P2 One five zero left yeh.
2:11	13.19:07		P1 That's an odd sort of one the runway .....

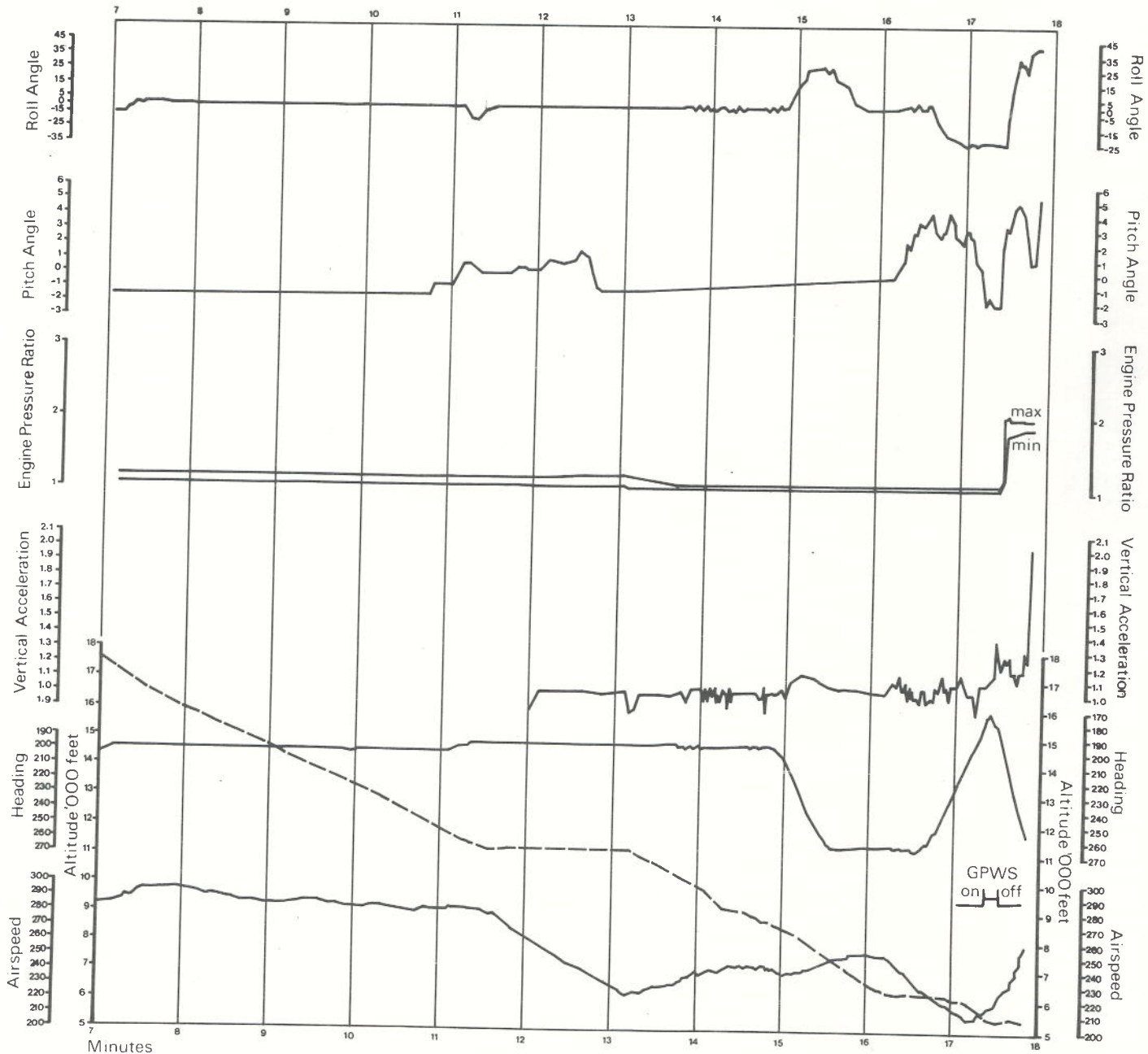
<i>Time to Impact</i>	<i>GMT</i>	<i>ATC Communications</i>	<i>Cockpit Conversation</i>
2:08	13.19:10		P1 One to go.
2:06	13.19:12		P2 One to go.
2:05	13.19:13		FE One to go.
2:00.5	13.19:17.5		P2 No I'm not er suppose it's alright.
1:51	13.19:27		P1 I'll just turn straight round left onto one five zero when I go overhead then. P2 Yes.
1:45	13.19:33		P1 The only thing is we're humm we're just about to miss it ha ha it's too close.
1:40.5	13.19:37.5		P2 Would you like the other one on the Fox Papa as well for this?
1:38	13.19:40		P1 If you put them both on as we're going to hold yeh.
1:32	13.19:46		P1 That's er that's the Foxtrot Papa now. P2 Yep.
1:27	13.19:51	DAN	Dan-Air one zero zero eight is the Foxtrot Papa level at six zero taking up the hold.
1:20.5	13.19:57.5	APP	Roger.
1:16	13.20:02		FE That's the fuel.
1:06	13.20:12		P2 Bloody strange hold, isn't it?
1:03.5	13.20:14.5		P1 Yes doesn't isn't parallel with the runway or anything.
1:00.5	13.20:17.5	APP	Iberia siete uno uno notifique abandonando cinco mil.
0:58	13.20:20		P2 It's that way isn't it?
0:57	13.20:21	IB	Libre cinco mil, ahora, estamos en curva de procedimiento. FE That is a three isn't it? P2 Hmm.

<i>Time to Impact</i>	<i>GMT</i>	<i>ATC Communications</i>		<i>Cockpit Conversation</i>
0:54	13.20:24			FE That is a three isn't it?
0:52.5	13.20:25.5	APP	Recibido, Break	P2 Yes well the hold's going to be here isn't it?
0:52	13.20:26	APP	Dan-Air one zero zero eight recleared to five thousand on the Quebec Foxtrot Echo and Quebec November Hotel.	
0:45	13.20:33	DAN	Roger cleared down to five thousand feet on the one zero one three Dan-Air one zero zero eight.	
0:39	13.20:39	APP	Roger.	
0:37	13.20:41			P1 Hey ..... did he say it was one five zero inbound?
0:32	13.20:46			P2 Inbound yeh.
				P1 That's .....
0:31.5	13.20:46.5	APP	Hapag-Lloyd five four two are you ready?	
0:30	13.20:48			P1 I don't like that.
0:29	13.20:49			P2 They want us to keep going more round don't they?
0:28.5	13.20:49.5	HP	Affirmative Hapag-Lloyd five four two is ready.	
0:27.6	13.20:50.6			— GPWS audio commences.
0:26	13.20:52	APP	The wind is one three zero zero five cleared for take-off runway one two.	P1 OK, overshoot.
0:23	13.20:56			P1 He's taking us round to the high ground.
0:21	13.20:57	HP	Hapag-Lloyd five two is cleared for take off runway one two.	
0:20.5	13.20:57.5			P2 Yeh.
0:17.5	13.21:00.5			— GPWS audio ceases.
0:17	13.21:01			P1 Watch my er eepers.

<i>Time to Impact</i>	<i>GMT</i>	<i>ATC Communications</i>	<i>Cockpit Conversation</i>
0:15	13.21:03		P2 I suggest a heading of one two two actually and er take us through the overshoot ha.
			FE Let's get out of here.
0:11	13.21:07		P1 He's taking us round to high ground.
0:09.5	13.21:08.5		P2 Yeh.
0:04.5	13.21:13.5	APP Er Dan-Air one zero zero eight we've had a ground proximity warning.	
0:01.5	13.21:16.5		FE Bank angle.
0:01.2	13.21:16.2		FE Bank angle.
0:00	13.21:18		— Impact.

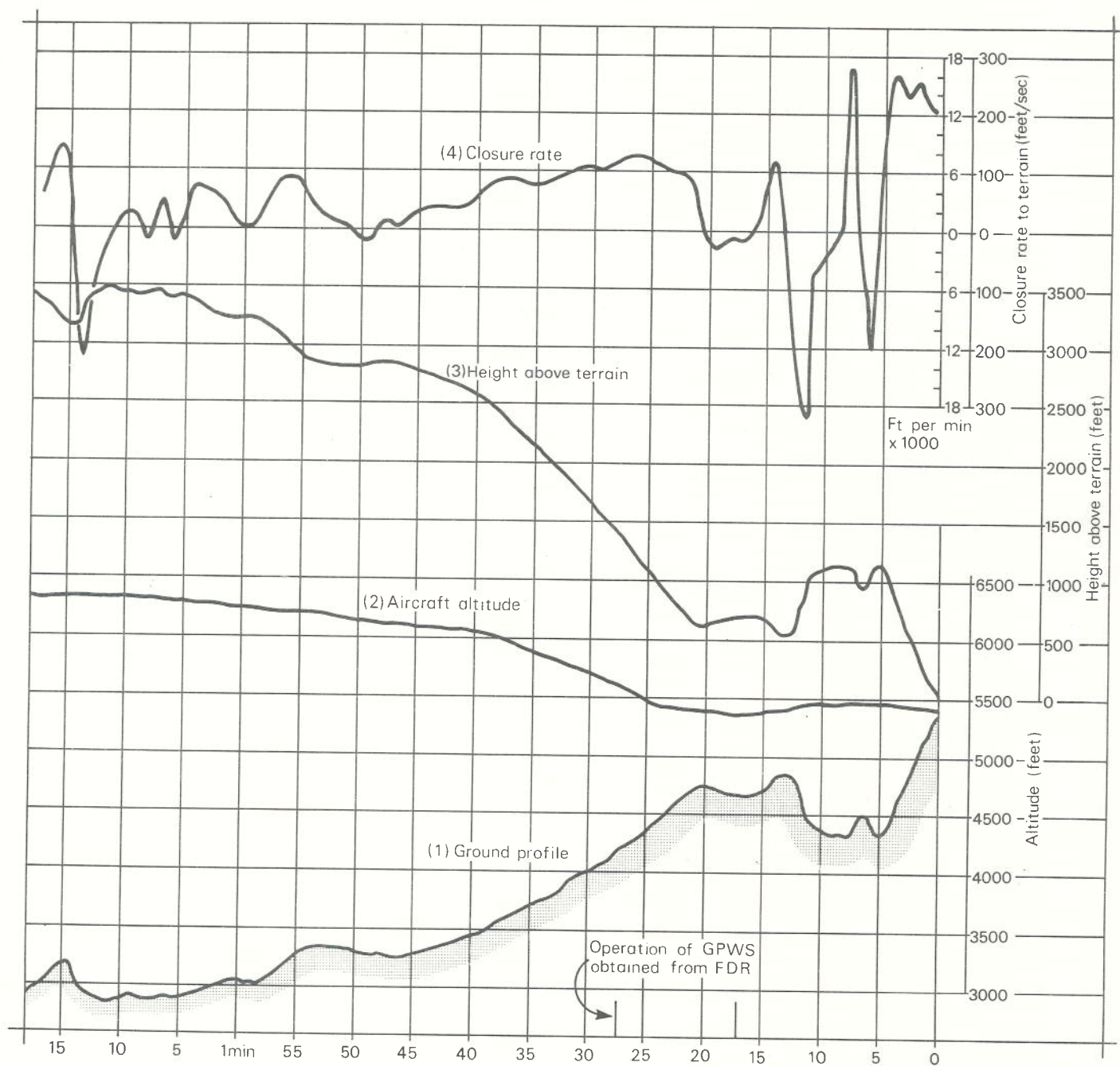
# FLIGHT DATA RECORDER READOUT

Accident in Tenerife on 25.4.80





## GRAPHS SHOWING RELATIVE HEIGHTS IN THE ACCIDENT AT TENERIFE



Graph 1  
Section through terrain below the flight path

Graph 2  
Aircraft altitude (feet)

Graph 3  
Differences of values between graphs 2 and 1

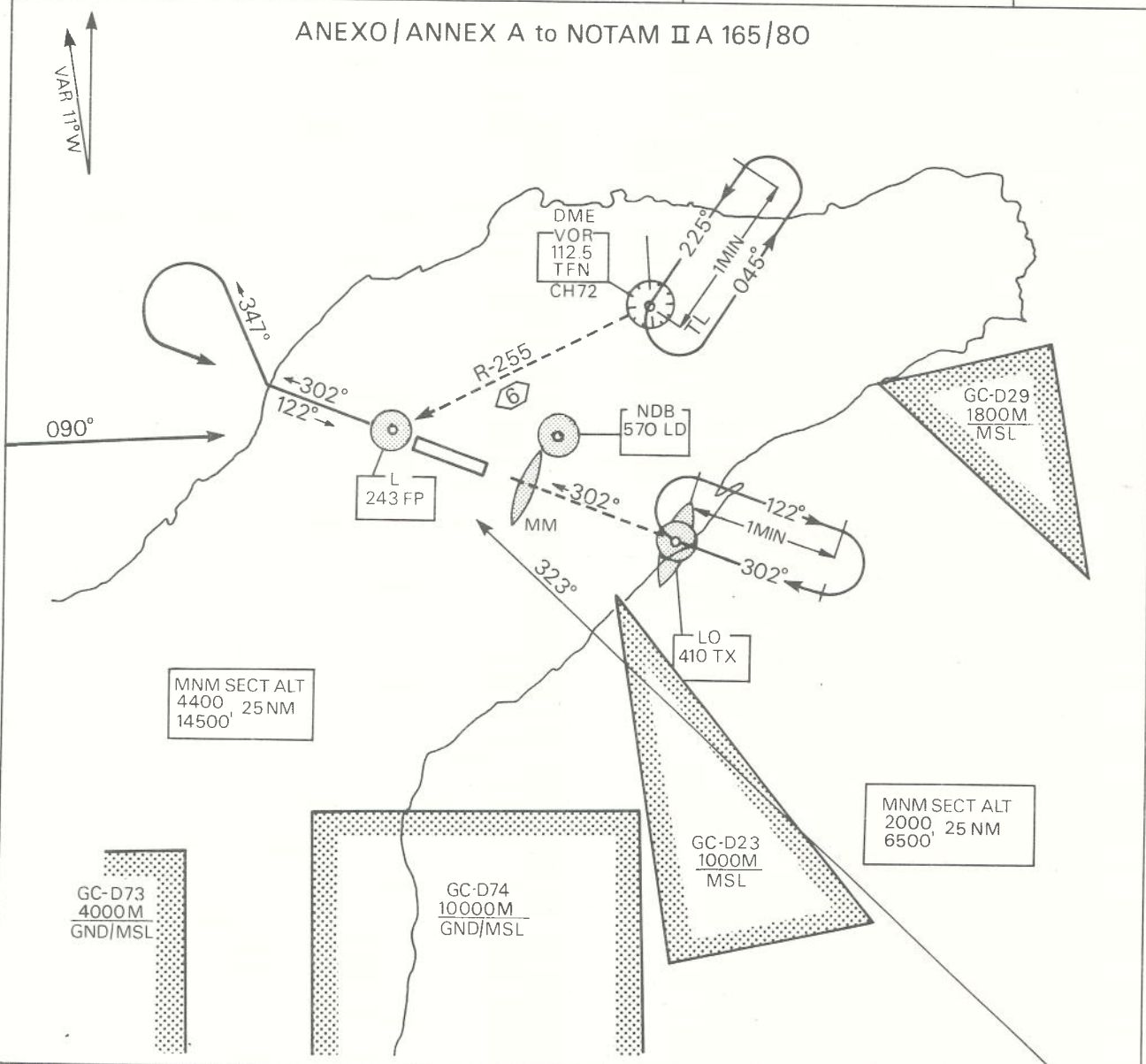
Graph 4  
Closure rate of aircraft to the ground

Graph 5  
Operation of GPWS



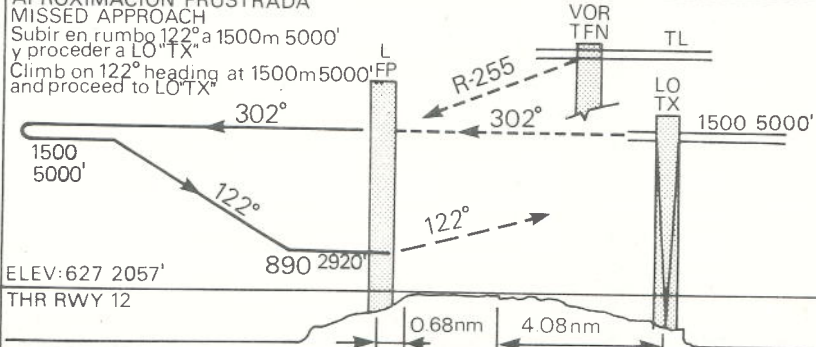
CARTA DE APROXIMACION POR INSTRUMENTOS. OACI

TENERIFE APROX/APPROACH 3023.5 KHz 119.7 MHz	RODADURA / GROUND CONTROL 121.7 MHz	TENERIFE TORRE / TOWER 118.7 MHz 139.3 & 257.8 MHz MIL 121.5 & 243.0 MHz EMERG.	ELEV. 632 M 2073 FT
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APROXIMACION FRUSTRADA

MISSED APPROACH  
Subir en rumbo 122° a 1500m 5000'  
y proceder a LO TX  
Climb on 122° heading at 1500m 5000'  
and proceed to LO TX

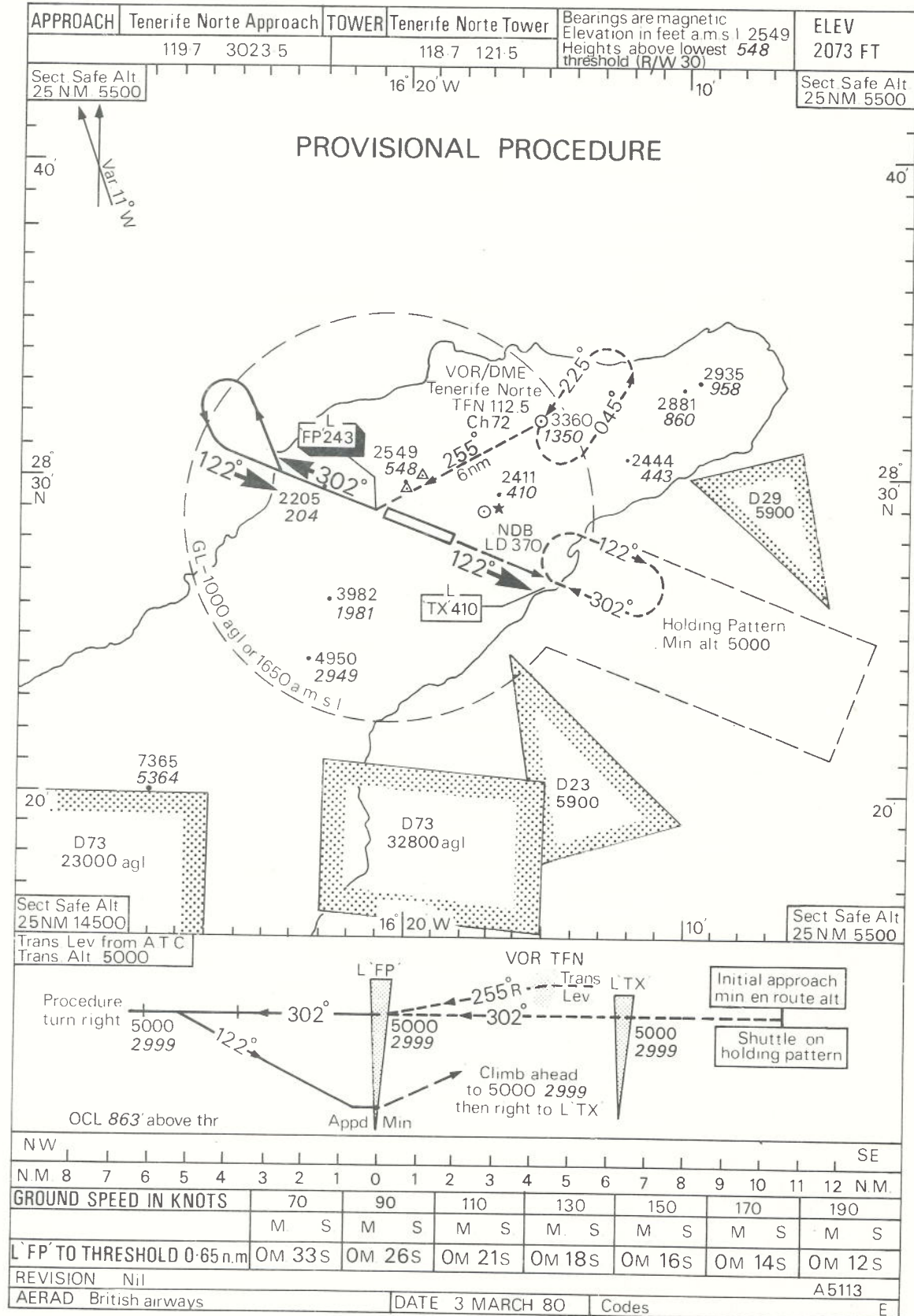


A.T. :1500m 5000'

NOTA/NOTE La aproximación no directa  
tiene una protección de 15 NM  
Circling approach has 15 NM protection

OCL  
263M

ATERRIZAJE	DIA	ALTERNATIVA 1			NOCTURNO	ALTERNATIVA 2			DESDE LA PISTA 12 0.65NM - 1.2Km					
		ALT. MIN.	TECHO	VIS.		ALT. MIN.	TECHO	VIS.	KTS	KPH	MIN BOC	110	125	140
DIRECTO		690 2920'	265 870'	2.2Km	890 2920'	265 870'	2.2Km		90	110	125	140	160	180
NO DIRECTO		1000 3280'	370 1214'	2.4Km	1000 3280'	370 1214'	2.4Km		167	204	235	250	296	333
									0-26	0-21	0-18	0-16	0-14	0-13



NDB R/W 12

D1

TENERIFE NORTE

## ACCIDENT TO BOEING 727 REGISTRATION G-BDAN AT TENERIFE ON 25 APRIL 1980

## TRANSCRIPTION OF THE TOWER TAPE

<i>Time to Impact</i>	<i>GMT</i>	<i>From</i>	<i>Message</i>
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## CO-ORDINATION BETWEEN APPROACH AND AREA CONTROL

35:39	12.45:39	ACC	(Llamada).
		APP	Dime.
		ACC	Mira, Dan-Air uno cero cero siete .....
		APP	Si .....
		ACC	..... Uno tres, uno cinco, uno uno cero por Daisy.
		APP	Confirme es uno cero cero siete o cero ocho?
		ACC	Uno cero cero siete tenemos aqui.
		APP	De donde viene?
		ACC	Este viene de EGCC.
		APP	Es un siete dos siete?
		ACC	Si.
		APP	Vale.
		ACC	(Dos palabras ilegibles) a las uno cinco cero por Daisy.
		APP	A las quince?
		ACC	Eso.
34:26	12.46:52	APP	India Papa.

## MESSAGES

Aircraft	Tenerife, Iberia siete uno uno.
APP	Iberia siete uno uno?
Aircraft	Tenemos trafico por debajo de nosotros?
APP	Afirmativo, habia un trafico a nueve cero, que estaba con la salida trece treinta y uno y estoy coordinando con Canarias para que me de libre trafico para bajarle a Vd.

<i>Time to Impact</i>	<i>GMT</i>	<i>From</i>	<i>Message</i>
		Aircraft	Vale, muchas gracias, estamos ahora a dieciocho millas DME de Tango Fox November.
		APP	Iberia siete uno uno autorizado a aproximacion pista uno dos, nivel de transicion seis cero, altimetro uno cero uno tres.
		Aircraft	Autorizada aproximacion a la uno dos, seis cero transicion uno cero uno tres, Iberia siete uno uno.
		Aircraft	Abandonando ahora uno cero cero Iberia siete uno uno.
		APP	Recibido.
		APP	Iberia siete uno uno 1 l ame pasando el Tango Foxtrot November.
		Aircraft	Notificare pasando Tango Fox November.
06:50	13.14:28	Aircraft	Tenerife, good morning, Dan-Air uno cero cero ocho.
06:45	13.14:33	APP	Dan-Air uno cero cero ocho, Tenerife, go ahead.
06:42	13.14:36	Aircraft	Good morning sir, levelled at one one zero, one four miles to Tango Fox November.
06:33	13.14:45	APP	Dan-Air one zero zero eight cleared to the Foxtrot Papa beacon via Tango Foxtrot November, flight level one one zero, expect runway one two, no delay.
06:23	13.14:55	Aircraft	Roger, cleared to the Fox Papa, via Tango Fox November, runway one two. Can we copy the weather?
06:16	13.15:02	APP	Confirm, did you copy the weather?
06:13	13.15:05	Aircraft	I would like to copy the weather and the pressure, please.
06:08	13.15:10	APP	OK runway in use one two, the wind one two zero zero five, visibility six from seven kilometres, clouds: two octas at one two zero metres plus four octas at two five zero metres plus two octas at three five zero metres, November Hotel one zero one three, temperature one six, dew point one one, and drizzle.
05:44	13.15:34	Aircraft	Roger, can we have the Fox Echo, please, for runway one two.
		APP	Iberia siete uno uno nivel?
		Aircraft	Iberia siete uno uno hemos abandonado el VOR y libre seis, ahora cinco mil, cinco mil manteniendo.
		APP	Recibido. Break.



<i>Time to Impact</i>	<i>GMT</i>	<i>From</i>	<i>Message</i>
05:00	13.16:18	APP	Dan-Air one zero zero eight descend and maintain flight level six zero.
04:55	13.16:23	Aircraft	Roger leaving one one zero for six zero.
04:52	13.16:26	APP	Report your DME reading please.
04:50	13.16:28	Aircraft	Er we're reading seven DME Tango Fox November and requesting the QFE please.
04:44	13.16:34	APP	Nine four three.
04:42	13.16:36	Aircraft	Nine four three many thanks.
03:45	13.17:33	APP	One zero zero eight for your information Foxtrot Echo on runway one two is nine four one.
03:39	13.17:39	Aircraft	Roger nine four one for one two thanks.
03:20	13.17:58	APP	Iberia siete uno uno, notifique completando curva de procedimiento.
03:16	13.18:02	Aircraft	Notificare, Iberia siete uno uno.
02:40.5	13.18:37.5	Aircraft	Tenerife buenas tardes Hapag-Lloyd five four two.
02:37	13.18:41	APP	Five four two, good afternoon report ready.
02:34.5	13.18:43.5	Aircraft	Wilco.
02:30	13.18:48	Aircraft	Dan-Air one zero zero eight has just passed the Tango Fox November heading to the er Fox Papa.
02:24	13.18:54	APP	Roger the er standard holding overhead Foxtrot Papa is inbound heading one five zero turn to the left call you back shortly.
02:17	13.19:01	Aircraft	Roger Dan-Air one zero zero eight.
01:27	13.19:51	Aircraft	Dan-Air one zero zero eight is the Foxtrot Papa level at six zero taking up the hold.
01:20.5	13.19:57.5	APP	Roger.
01:00.5	13.20:17.5	APP	Iberia siete uno uno notifique abandonando cinco mil.
00:57	13.20:21	Aircraft	Libre cinco mil, ahora estamos en curva de procedimiento.
00:52.5	13.20:25.5	APP	Recibido. Break.
00:52	13.20:26	APP	Dan-Air one zero zero eight recleared to five thousand on the Quebec Foxtrot Echo and Quebec November Hotel.

<i>Time to Impact</i>	<i>GMT</i>	<i>From</i>	<i>Message</i>
00:45	13.20:35	Aircraft	Roger cleared down to five thousand feet on the one zero one three Dan-Air one zero zero eight.
00:39	13.20:39	APP	Roger.
00:31.5	13.20:46.5	APP	Hapag-Lloyd five four two are you ready?
00:28.5	13.20:49.5	Aircraft	Affirmative Hapag-Lloyd five four two is ready.
00:26	13.20:52	APP	The wind is one three zero zero five cleared for take-off runway one two.
00:21	13.20:57	Aircraft	Hapag-Lloyd five four two is cleared for take-off runway one two.
00:04.5	13.21:13.5	APP	Er Dan-Air one zero zero eight we've had a ground proximity warning.
		APP	Station calling .....
		APP	Iberia siete uno uno notifique establecido en final.
		Aircraft	Notificare.
		Aircraft	Estamos llegando a la costa en final, Iberia siete uno uno.
		APP	Iberia siete uno uno autorizado a aterrizar pista doce, viento uno tres cero cero cinco ..... autorizado a aterrizar Iberia siete uno uno.
		APP	Dan-Air one zero zero eight, your position in the holding?
		APP	Ah, Dan-Air one zero zero eight, Tenerife, request your position in the holding.