

ARTCC ARGENTINO AD 2.SANT

NO VALIDO PARA NAVEGACION REAL. ADAPTADO PARA SU UTILIZACION EN UN AMBITO VIRTUAL
SANT – TUCUMAN / TTE. BENJAMIN MATIENZO

AD 2.17 ESPACIO AEREO ATC

Zona de Control:

1. Designación: Zona de Control Tucumán
2. Límites verticales: FL 045
GND
3. Clasificación del espacio aéreo: C
4. Distintivo de llamada: TUCUMAN TORRE
5. Altitud de transición: 6500 FT.
6. Nivel de transición:
QNH de 977 a 994 FL 085
QNH de 995 a 1013 FL 080
QNH de 1014 a 1031 FL 075
QNH de 1032 a 1050 FL 070

Area de Control Terminal:

1. Designación: Area de Control Terminal Tucumán
2. Límites verticales: FL 245
2000 FT
3. Clasificación del espacio aéreo: A: FL 245 / FL 165
B: FL 165 / FL 145
C: FL 145 / 2000 FT
4. Distintivo de llamada: TUCUMAN TORRE

AD 2.18 INSTALACIONES DE COMUNICACIONES ATS

SERVICIO	DISTINTIVO DE LLAMADA	FRECUENCIA	OBSERVACIONES
APP	Tucumán Torre	119.500	-

AD 2.19 CARTAS AERONAUTICAS

- Plano de aeródromo: SAZS.APT
- Cartas IAC:
SAZS.IAC NO.1 RWY 01
SAZS.IAC NO.2 RWY 01 (WITHOUT HOLD / SIN ESPERA)
SAZS.IAC NO.3 RWY 01
SAZS.IAC NO.4 RWY 01 (WITHOUT HOLD / SIN ESPERA)
SAZS.IAC NO.5 RWY 01
SAZS.IAC NO.6 RWY 01
SAZS.IAC NO.7 RWY 01
SAZS.IAC NO.8 RWY 19 Exclusivamente (WITHOUT HOLD / SIN ESPERA)
SAZS.IAC NO.9 RWY 19 Exclusivamente
- Cartas SID:
SAZS.SID BITIS1A IMBOL1A PUBER1A SORTI1A (RWY 01)
SAZS.SID BITIS1B IMBOL1B PUBER1B SORTI1B (RWY 19)
SAZS.SID ILPAR1A KONRI1A PONPI1A (RWY 01)
SAZS.SID ILPAR1B KONRI1B PONPI1B (RWY 19)
- Cartas STAR:
SAZS.STAR BITIS1A IPLAR1A IMBOL1A KONRI1A (RWY 01)
SAZS.STAR BITIS2B ILPAR2B IMBOL1B KONRI2B (RWY 19)
SAZS.STAR PONPI2B PUBER1B SORTI1B (RWY 19)
SAZS.STAR PONPI1A PUBER1A SORTI1A (RWY 01)

(DEJADO EN BLANCO INTENCIONALMENTE)

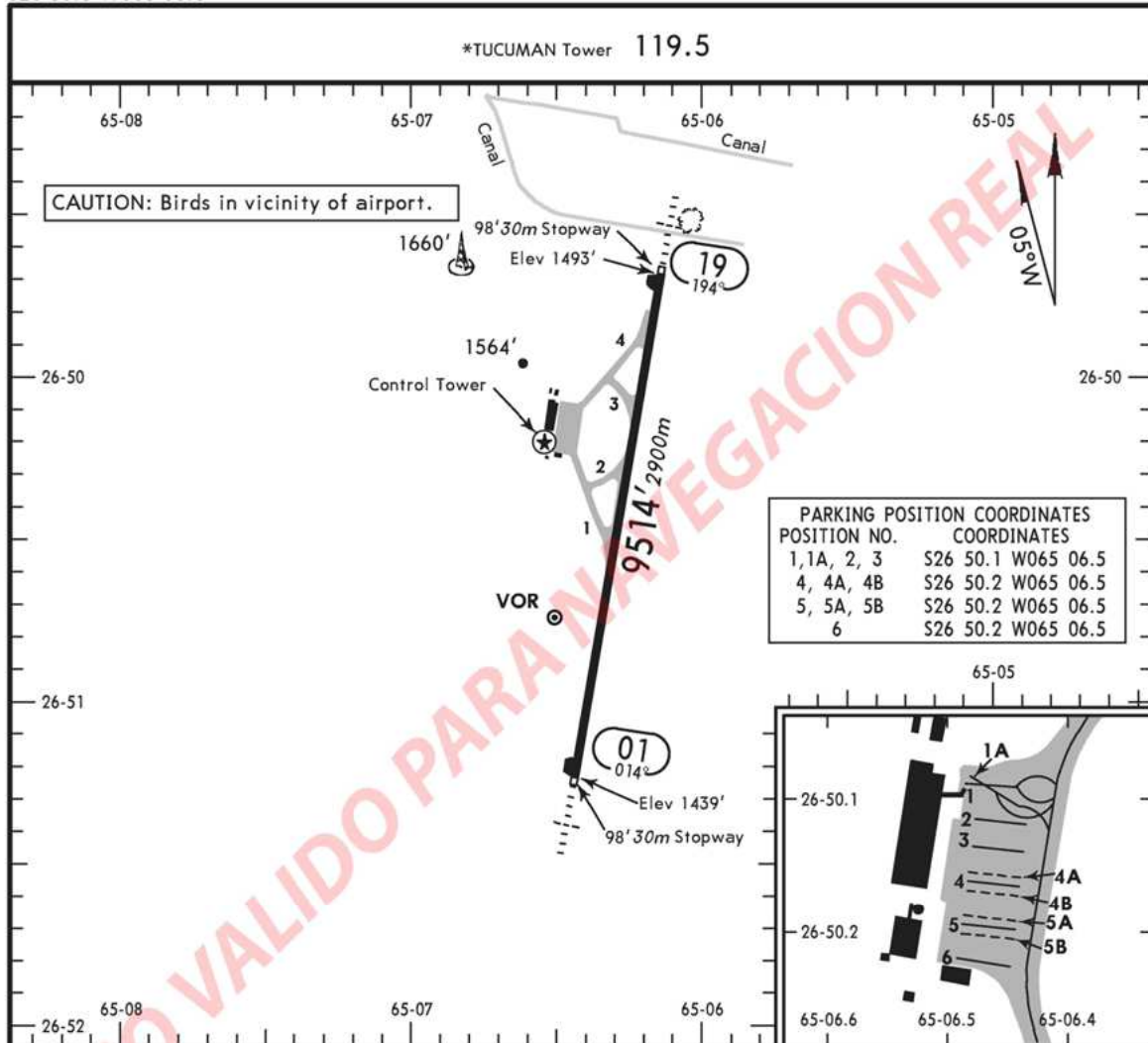
APT

SANT

Apt Elev 1493'
S26 50.5 W065 06.3

TUCUMAN, ARGENTINA

BENJAMIN MATIENZO



ADDITIONAL RUNWAY INFORMATION

RWY		USABLE LENGTHS		TAKE-OFF	WIDTH
		Threshold	Landing Beyond		
01	RL SALS PAPI (angle 3.0°)		8430' 2569m		148'
19	RL SALS				45m

SANT

TUCUMAN, ARGENTINA

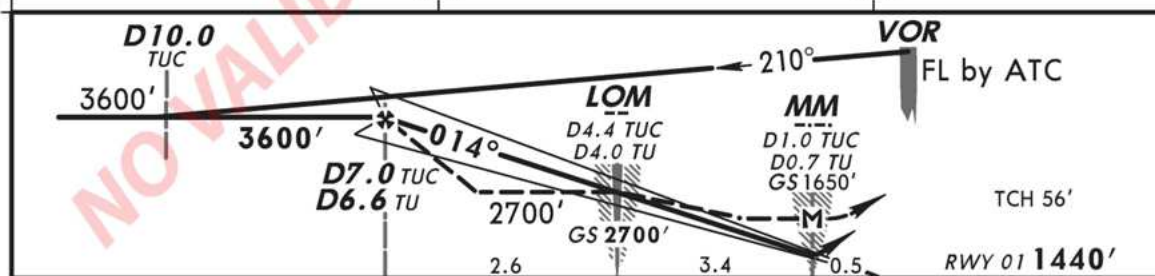
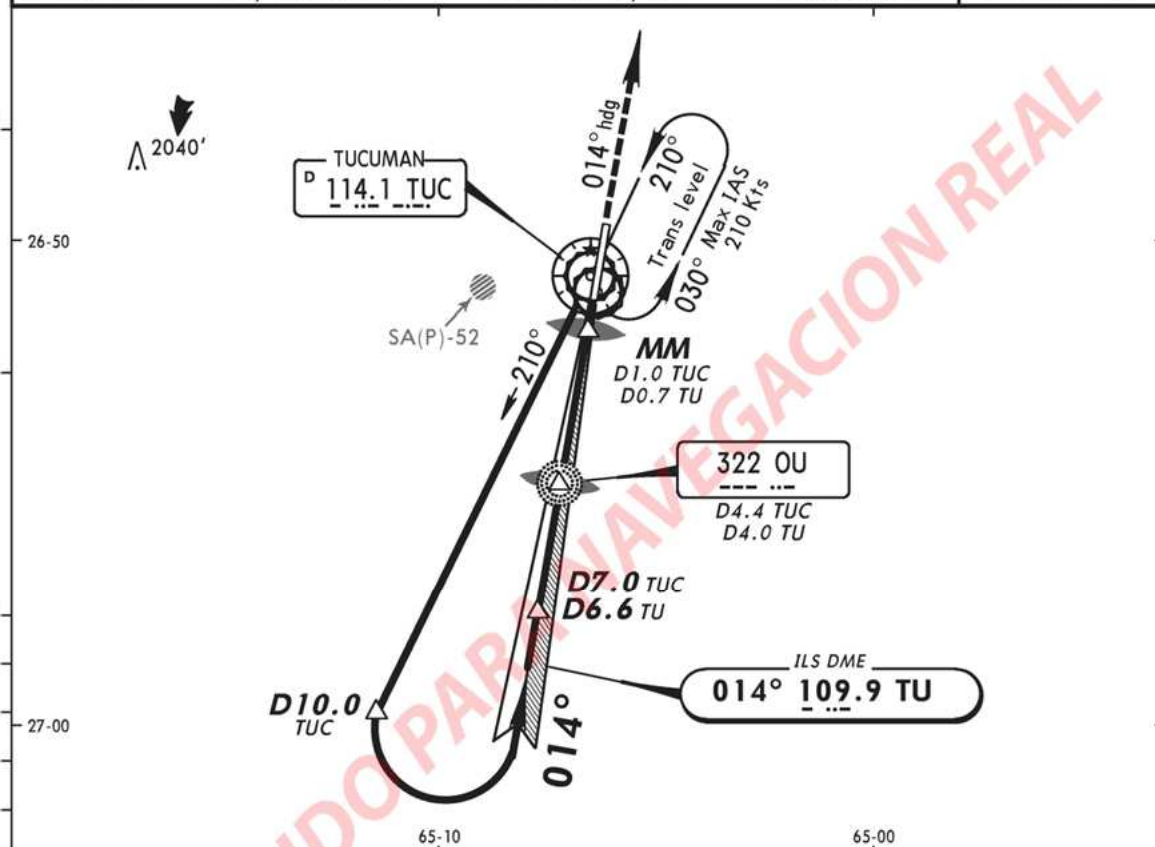
No.1

BENJAMIN MATIENZO

MISSED APCH CLIMB
GRADIENT MIM 3.5%

VOR DME ILS DME Rwy 01

				*TUCUMAN Tower 119.5	
LOC TU 109.9	Final Apch Crs 014°	GS LOM 2700' (1260')	ILS DA(H) 1650' (210')	Apt Elev 1493'	
MISSED APCH: Maintain 014° heading climbing to 3500', then climbing RIGHT turn to 5300' and follow instructions from CONTROL.				Rwy 01 1440'	
Alt Set: hPa	Rwy Elev: 52 hPa	Trans level: By ATC	Trans alt: 6500'	MSA TUC VOR	



Gnd speed-Kts	70	90	100	120	140	160	SALS		014°		3500'
GS	3.00°	372	478	531	637	743	PAPI	PAPI	hdg		↑
MAP at MM or											
LOM to MAP	3.4	2:55	2:16	2:02	1:42	1:27					

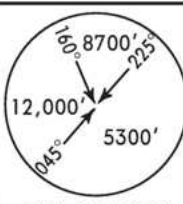
STRAIGHT-IN LANDING RWY01					CIRCLE-TO-LAND				
Missed apch climb gradient mim 3.5%					Not Authorized West of Rwy 01/19 Centerline				
ILS		LOC (GS out)							
DA(H) 1650' (210')		MDA(H) 1890' (450')							
FULL	ALS out	ALS out			Max Kts	MDA(H)			
A					100	2000' (507') -2000m			
B					135	2000' (507') -2800m			
C	800m	1200m	1600m	2000m	180	2130' (637') -3700m			
D			2000m	2400m	205	2130' (637') -4600m			

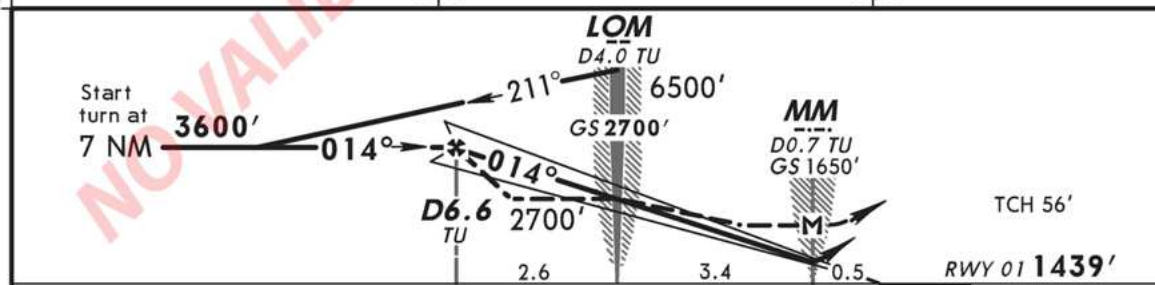
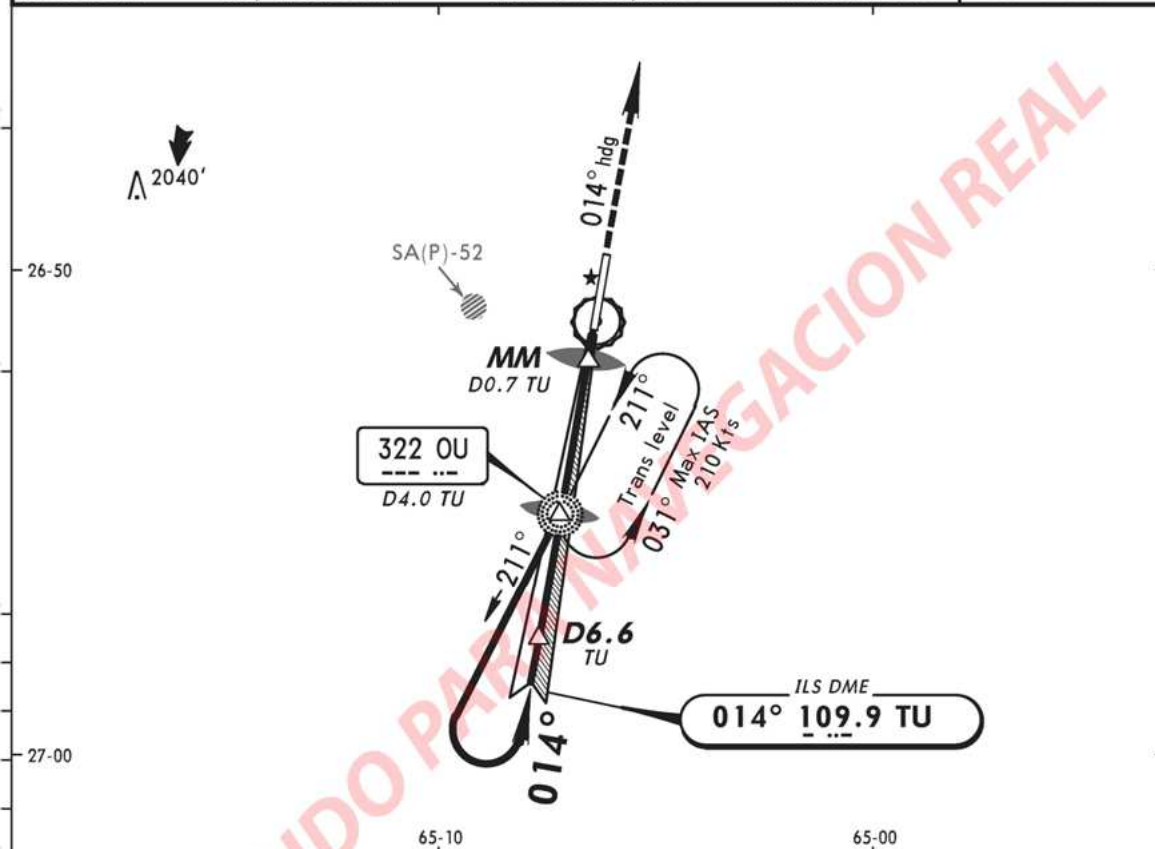
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TUCUMAN, ARGENTINA

BENJAMIN MATIENZO

MISSED APCH CLIMB
GRADIENT MIM 3.5%No.3
LCTR ILS DME Rwy 01

				*TUCUMAN Tower 119.5	
LOC TU 109.9	Final Apch Crs 014°	GS LOM 2700' (1261')	ILS DA(H) 1650' (211')	Apt Elev 1493' Rwy 01 1439'	
MISSED APCH: Maintain 014° heading climbing to 3500', then climbing RIGHT turn to 5300' and follow instructions from CONTROL.					
Alt Set: hPa	Rwy Elev: 52 hPa	Trans level: By ATC	Trans alt: 6500'	MSA OU LOM	



Gnd speed-Kts		70	90	100	120	140	160	<div>SALS</div> <div>AVASI</div> <div>AVASI</div>		<div>014°</div> <div>hdg</div>		<div>3500'</div> <div>↑</div>		
GS		3.00°	377	484	538	646	753							861
MAP at MM or														
LOM to MAP		3.4	2:55	2:16	2:02	1:42	1:27							1:16
STRAIGHT-IN LANDING RWY01								CIRCLE-TO-LAND						
Missed apch climb gradient mim 3.5%								Not Authorized West of						
ILS								Rwy 01/19 Centerline						
LOC (GS out)														
DA(H) 1650' (211')				MDA(H) 1890' (451')				Max Kts		MDA(H)				
FULL				ALS out										
A	800m		1200m		1600m		2000m		100	2000' (507') - 2000m				
B					2000m		2400m		135	2000' (507') - 2800m				
C					2000m		2400m		180	2130' (637') - 3700m				
D					2400m		2800m		205	2130' (637') - 4600m				

IAC NO.4 RWY 01 (WITHOUT HOLD / SIN ESPERA)

SANT

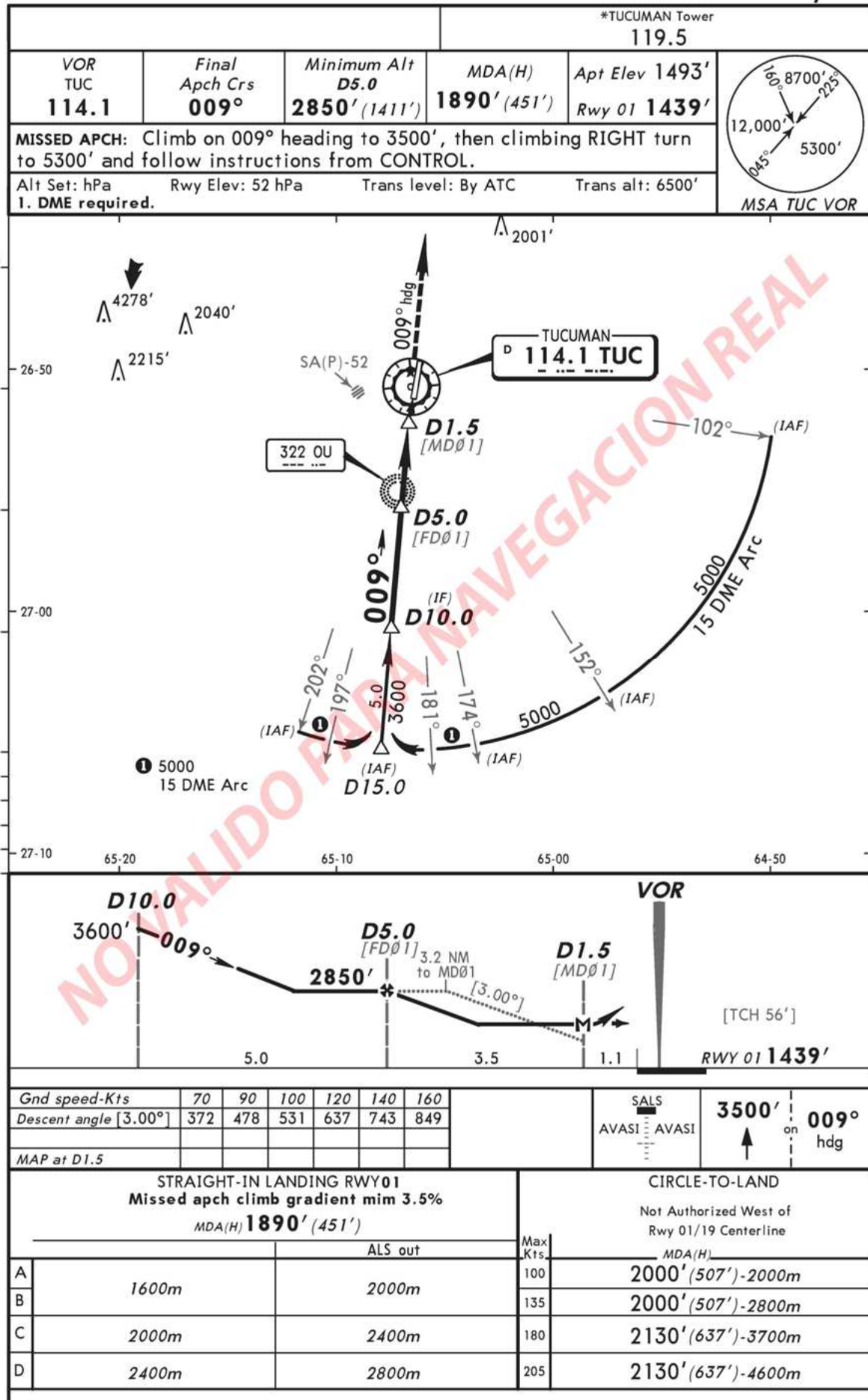
TUCUMAN, ARGENTINA

No.4

BENJAMIN MATIENZO

MISSED APCH CLIMB
GRADIENT MIM 3.5%

VOR DME Rwy 01



SANT

TUCUMAN, ARGENTINA

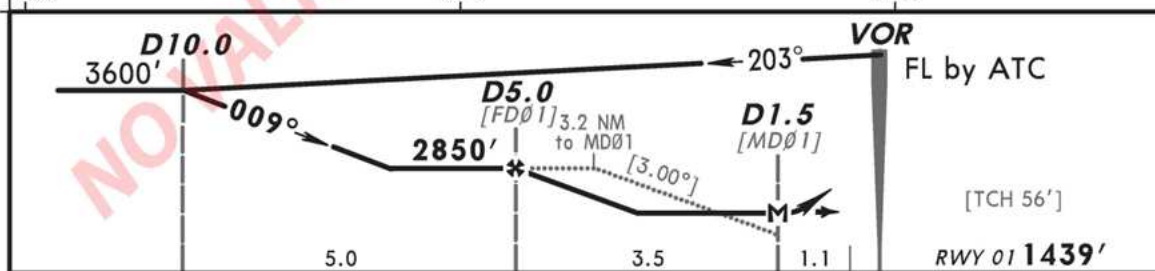
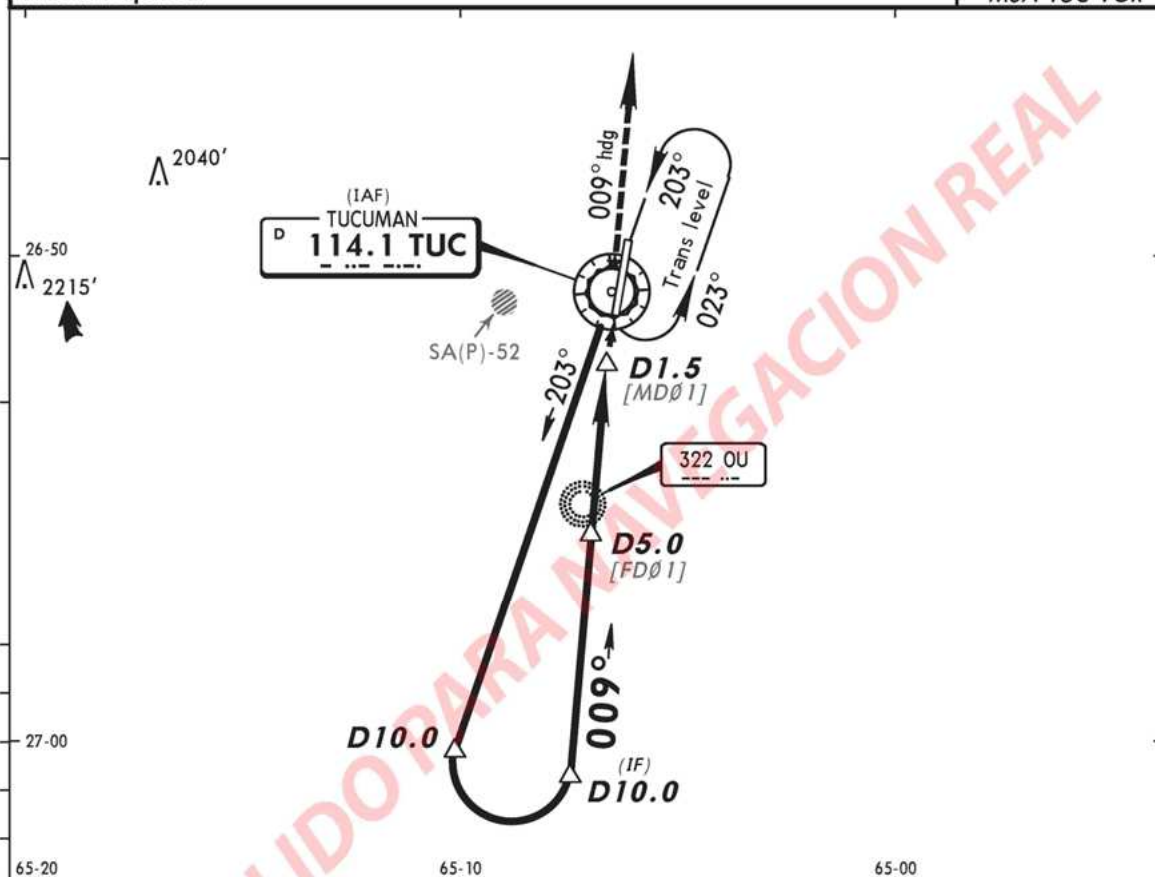
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BENJAMIN MATIENZO

MISSED APCH CLIMB
GRADIENT MIM 3.5%

VOR DME Rwy 01

				*TUCUMAN Tower 119.5	
VOR TUC 114.1	Final Apch Crs 009°	Minimum Alt D5.0 2850' (1411')	MDA(H) 1890' (451')	Apt Elev 1493' Rwy 01 1439'	 MSA TUC VOR
MISSED APCH: Climb on 009° heading to 3500', then climbing RIGHT turn to 5300' and follow instructions from CONTROL.					
Alt Set: hPa Rwy Elev: 52 hPa Trans level: By ATC Trans alt: 6500'					
1. DME required.					



Gnd speed-Kts	70	90	100	120	140	160	SALS		3500'	009°
Descent angle [3.00°]	372	478	531	637	743	849	AVASI		↑	hdg
MAP at D1.5										

STRAIGHT-IN LANDING RWY01				CIRCLE-TO-LAND	
Missed apch climb gradient mim 3.5%				Not Authorized West of Rwy 01/19 Centerline	
MDA(H) 1890' (451')				MDA(H)	
ALS out			Max Kts		
A	1600m	2000m	100	2000' (507')-2000m	
B			135	2000' (507')-2800m	
C	2000m	2400m	180	2130' (637')-3700m	
D	2400m	2800m	205	2130' (637')-4600m	

SANT

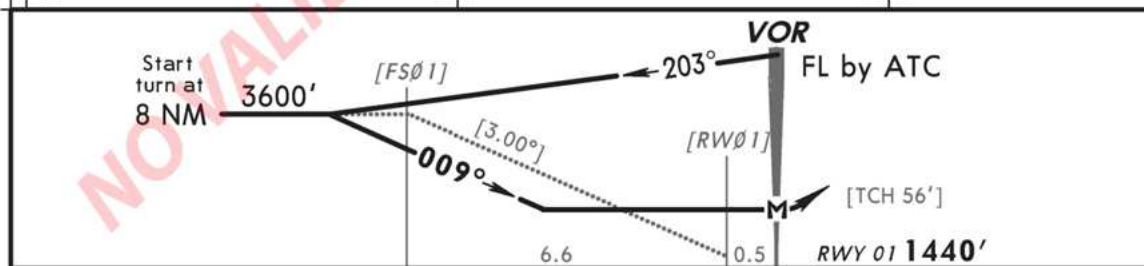
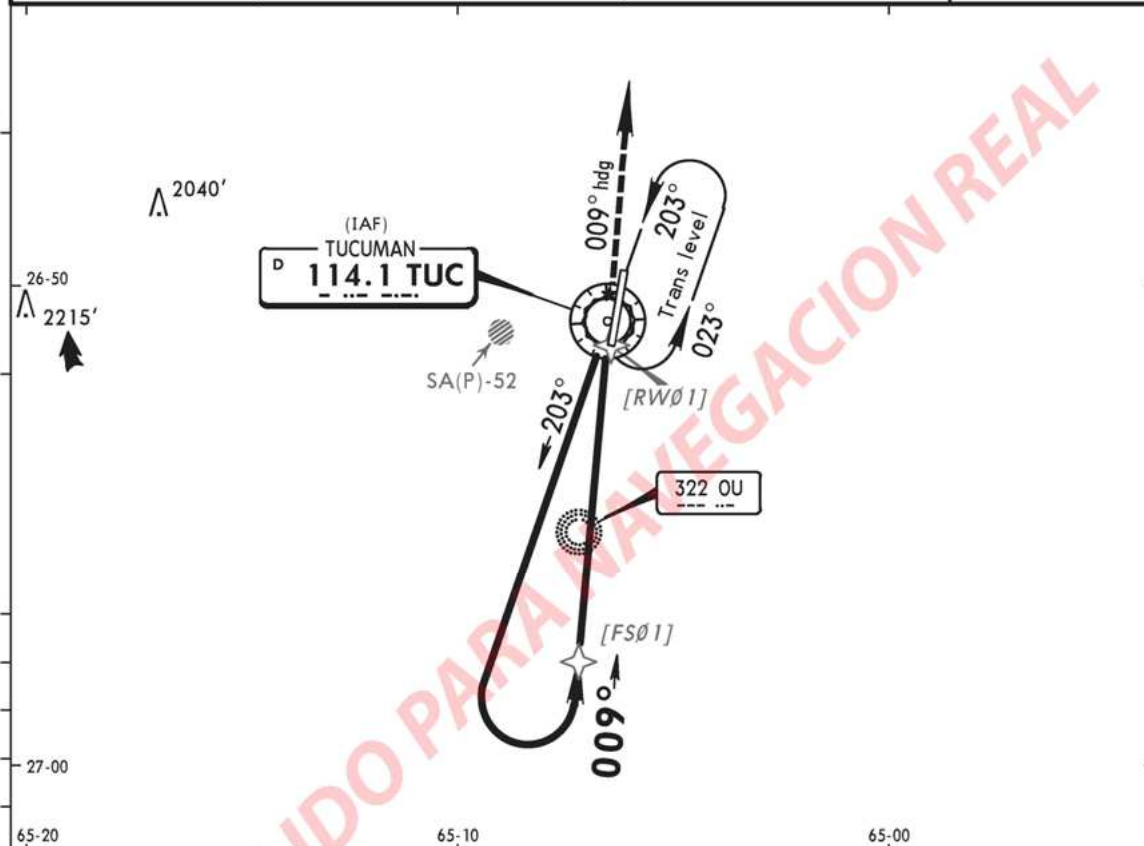
BENJAMIN MATIENZO

TUCUMAN, ARGENTINA

No.6

MISSED APCH CLIMB
GRADIENT MIM 3.5% VOR Rwy 01

				*TUCUMAN Tower	
				119.5	
VOR TUC 114.1	Final Apch Crs 009°	No FAF	MDA(H) 1940' (500')	Apt Elev 1493' Rwy 01 1440'	<p>12,000' 8700' 225° 045° 5300'</p>
MISSED APCH: Maintain 009° heading climbing to 3500', then RIGHT climbing turn to 5300' and follow instructions from CONTROL.					
Alt Set: hPa		Rwy Elev: 52 hPa	Trans level: By ATC	Trans alt: 6500'	
MSA TUC VOR					



Gnd speed-Kts	70	90	100	120	140	160		SALS AVASI = AVASI	009° hdg	3500' ↑
Descent angle [3.00°]	372	478	531	637	743	849				
MAP at VOR										
STRAIGHT-IN LANDING RWY01 Missed apch climb gradient mim 3.5% MDA(H) 1940' (500')							CIRCLE-TO-LAND Not Authorized West of Rwy 01/19 Centerline MDA(H)			
		ALS out				Max Kts				
A	1600m				2000m		100	2000' (507')-2000m		
B							135	2000' (507')-2800m		
C	2000m				2400m		180	2130' (637')-3700m		
D	2800m				3200m		205	2130' (637')-4600m		

SANT

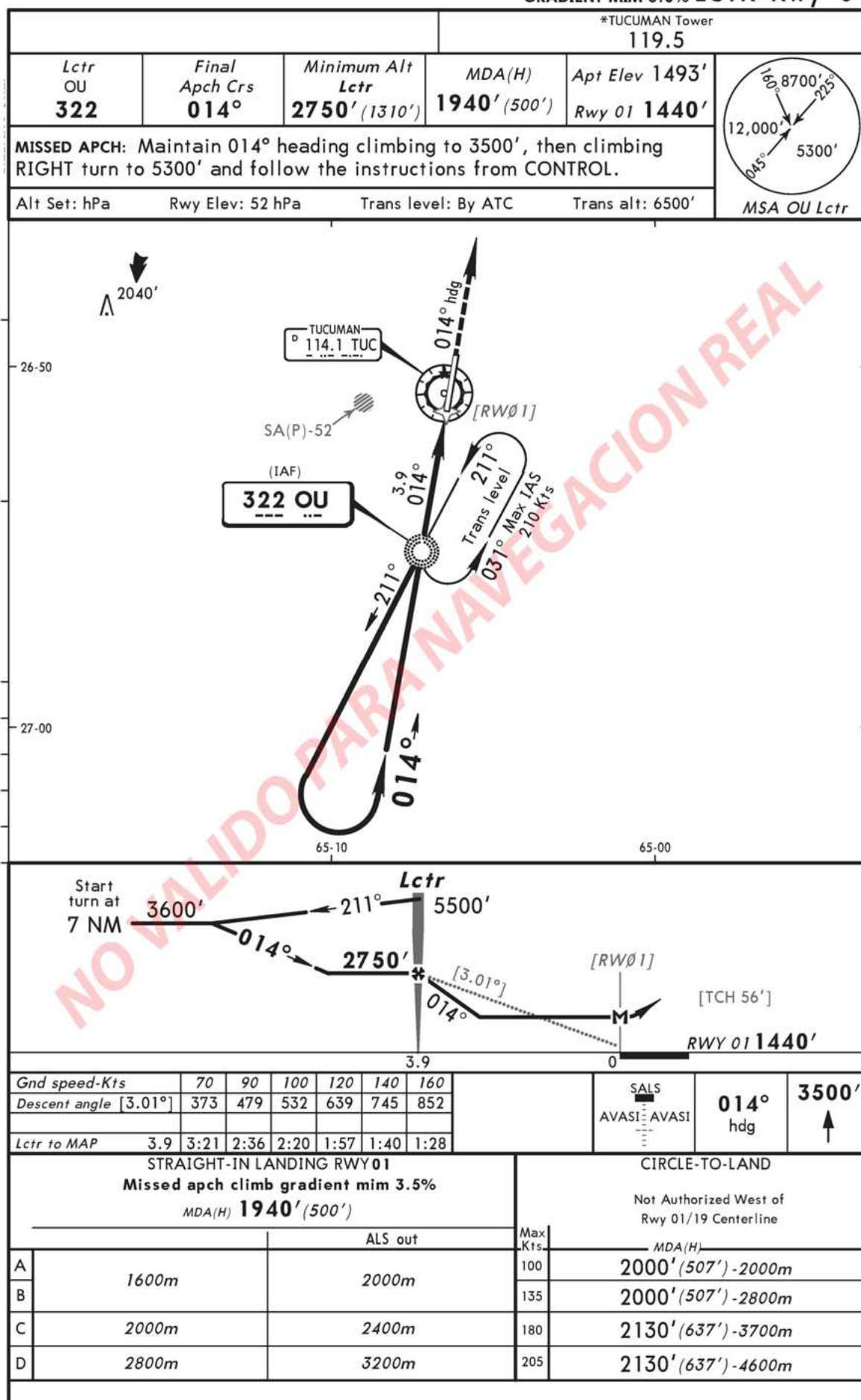
BENJAMIN MATIENZO

TUCUMAN, ARGENTINA

No.7

MISSED APCH CLIMB
GRADIENT MIN 3.5%

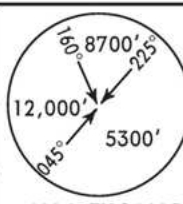
LCTR Rwy 01

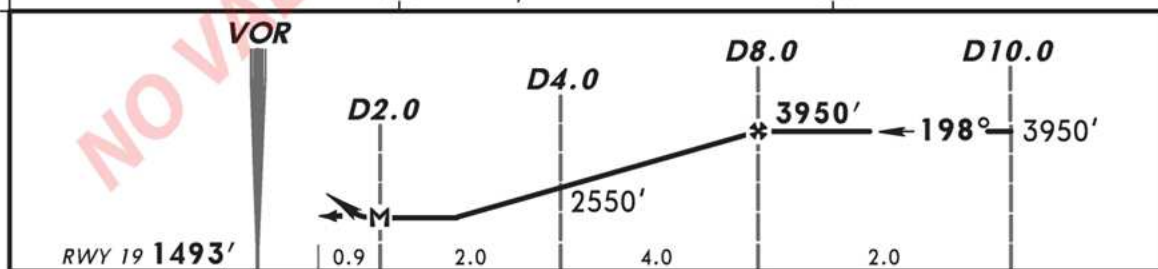
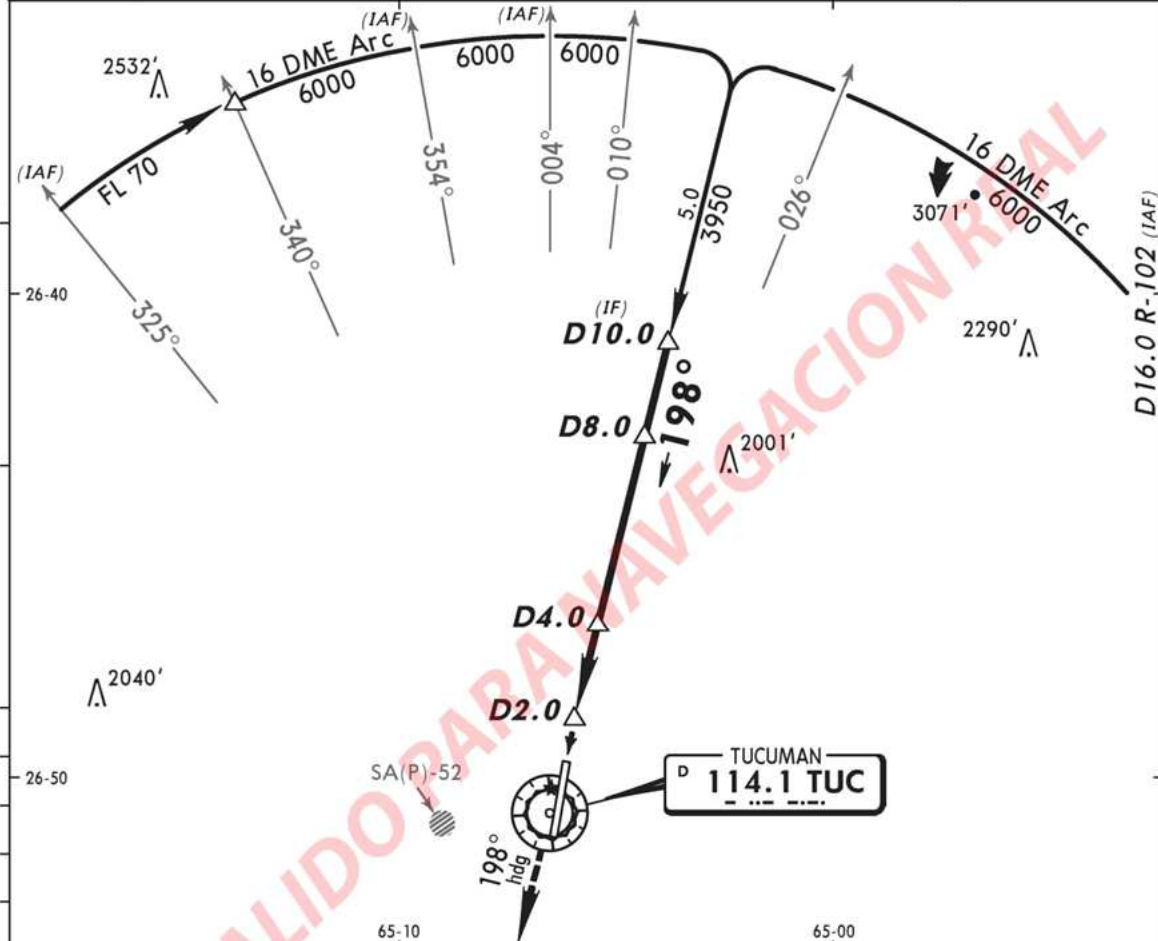


IAC NO.8 RWY 19 (WITHOUT HOLD / SIN ESPERA)

SANT
BENJAMIN MATIENZO

TUCUMAN, ARGENTINA
No.8 VOR DME Rwy 19

				*TUCUMAN Tower 119.5	
VOR TUC 114.1	Final Apch Crs 198°	Minimum Alt D8.0 3950' (2457')	MDA(H) 2100' (607')	Apt Elev 1493' Rwy 19 1493'	 MSA TUC VOR
MISSED APCH: Maintain 198° heading climbing to 5300' and follow instructions from CONTROL.					
Alt Set: hPa 1. DME required.		Rwy Elev: 53 hPa	Trans level: By ATC	Trans alt: 6500'	

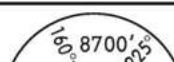


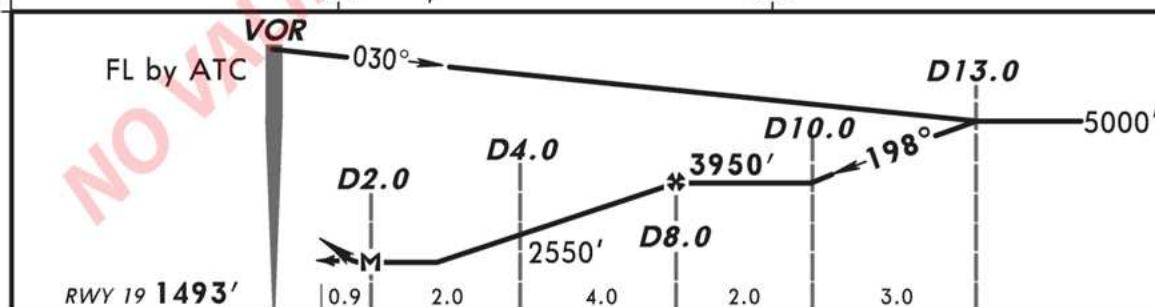
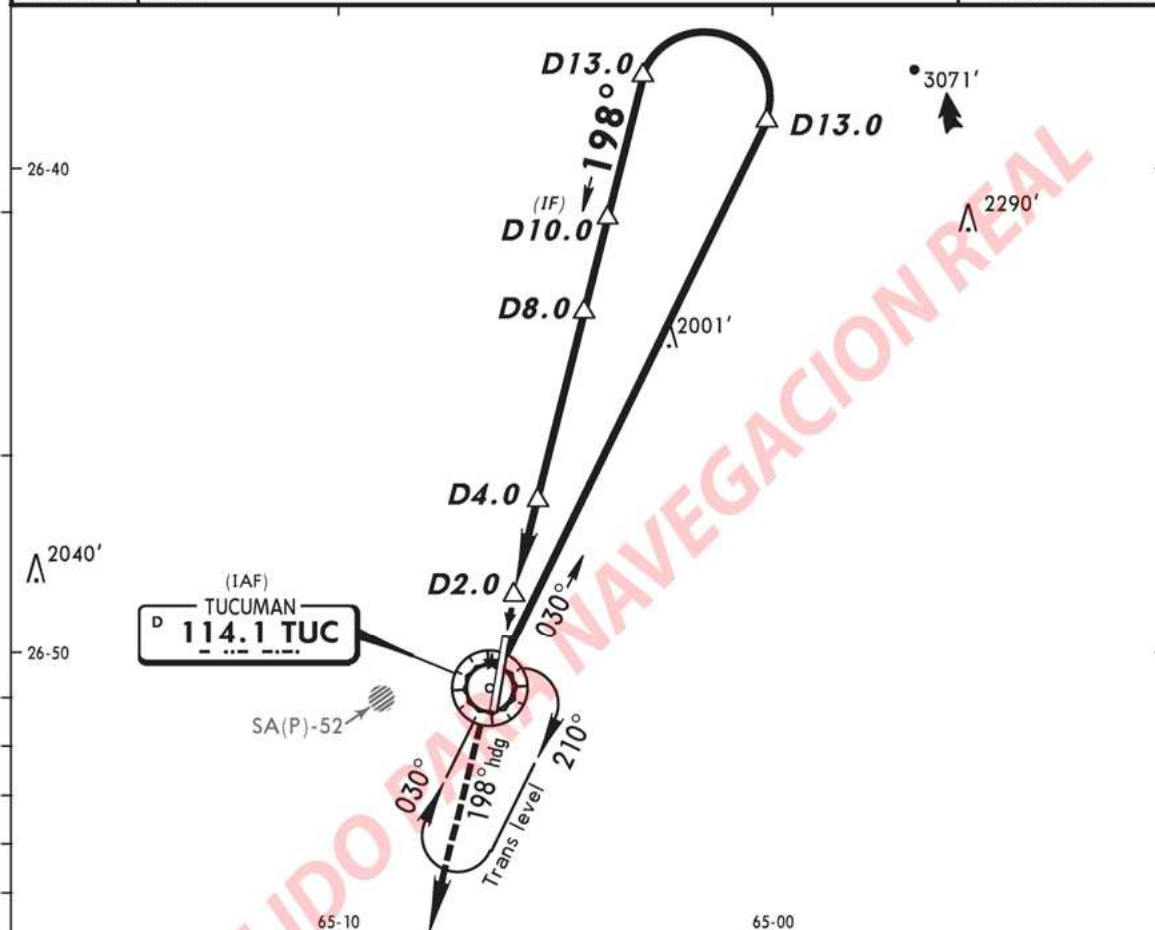
Gnd speed-Kts	70	90	100	120	140	160		
Descent Gradient 5.7%	404	520	577	693	808	924		
MAP at D2.0 or D8.0 to MAP	6.0	5:09	4:00	3:36	3:00	2:34	2:15	

STRAIGHT-IN LANDING RWY 19				CIRCLE-TO-LAND			
MDA(H) 2100' (607)							
ALS out							
A	1600m		2000m		A	NA	
B					B		
C	2800m		3200m		C		
D	3200m		3600m		D		

SANT
BENJAMIN MATIENZO

TUCUMAN, ARGENTINA
No.9 VOR DME Rwy 19

				*TUCUMAN Tower 119.5	
VOR TUC 114.1	Final Apch Crs 198°	Minimum Alt D8.0 3950' (2457')	MDA(H) 2100' (607')	Apt Elev 1493' Rwy 19 1493'	
MISSED APCH: Maintain 198° heading climbing to 5300' and follow instructions from CONTROL.					
Alt Set: hPa Rwy Elev: 53 hPa Trans level: By ATC Trans alt: 6500'					
1. DME required.					



Gnd speed-Kts		70	90	100	120	140	160			<div>SALS</div> <div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div></div>	198° hdg	5300' ↑
Descent Gradient 5.7%		404	520	577	693	808	924					
MAP at D2.0 or												
D8.0 to MAP 6.0		5:09	4:00	3:36	3:00	2:34	2:15					
STRAIGHT-IN LANDING RWY 19								CIRCLE-TO-LAND				
MDA(H) 2100' (607')												
				ALS out								
A	1600m			2000m			A	NA				
B							B					
C	2800m			3200m			C					
D	3200m			3600m			D					

SID BITIS1A IMBOL1A PUBER1A SORTI1A (RWY 01)

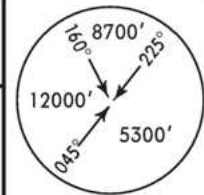
SANT
BENJAMIN MATIENZO

TUCUMAN, ARGENTINA

SID

Apt Elev
1493'

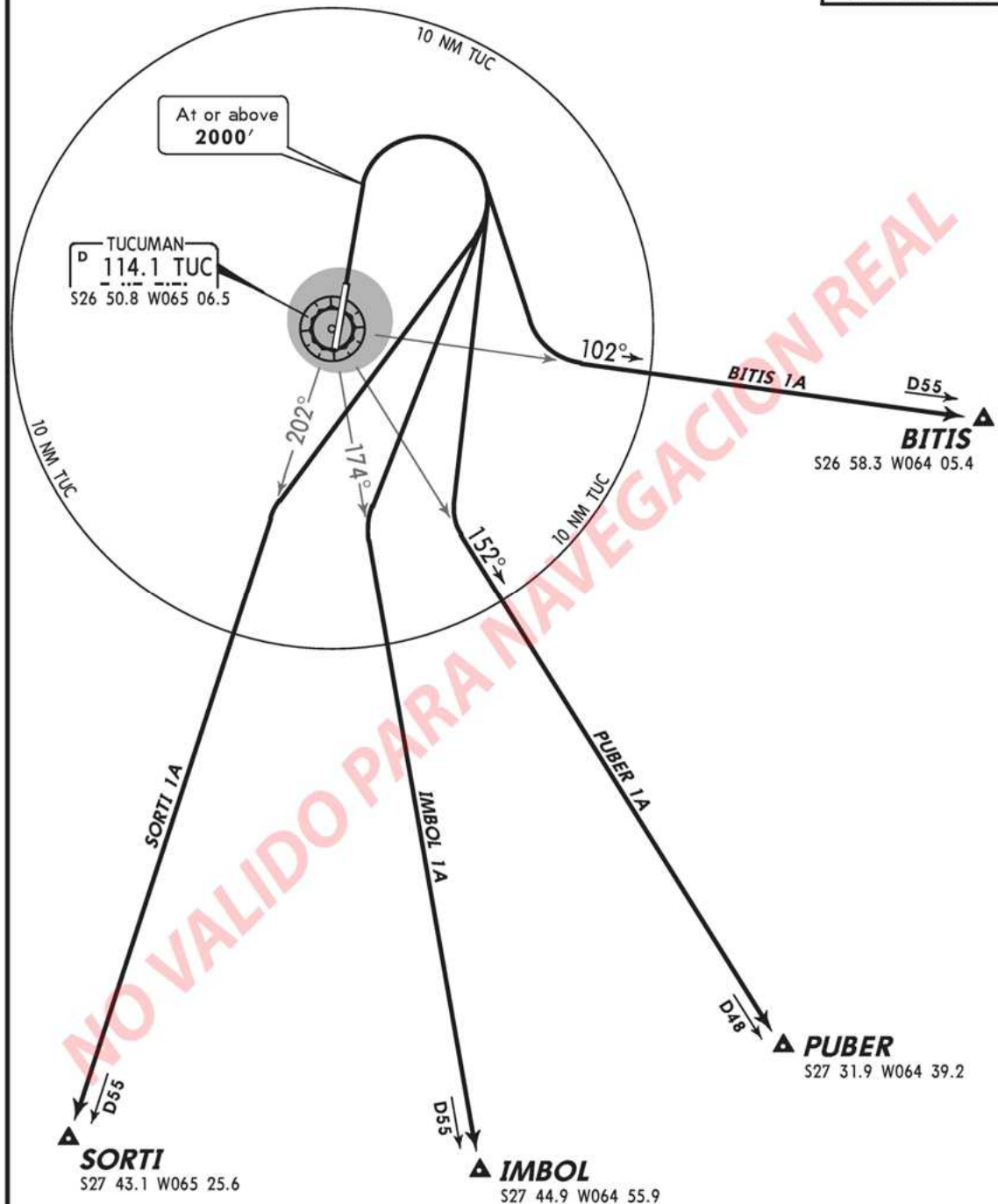
Trans level: BY ATC Trans alt: 6500'



MSA TUC VOR

DEPARTURES RWY 01

BITIS 1A, IMBOL 1A, PUBER 1A, SORTI 1A



These SIDs require a minimum climb gradient of 3.3%.

Gnd speed-KT	75	100	150	200	250	300
3.3% V/V (fpm)	251	334	501	668	835	1003

ROUTING

MAINTAIN runway heading to at or above 2000', then climbing RIGHT turn to intercept and continue on the corresponding radial for the departure being flown.

SID BITIS1B IMBOL1B PUBER1B SORTI1B (RWY 19)

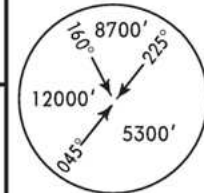
TUCUMAN, ARGENTINA

SANT
BENJAMIN MATIENZO

SID

Apt Elev
1493'

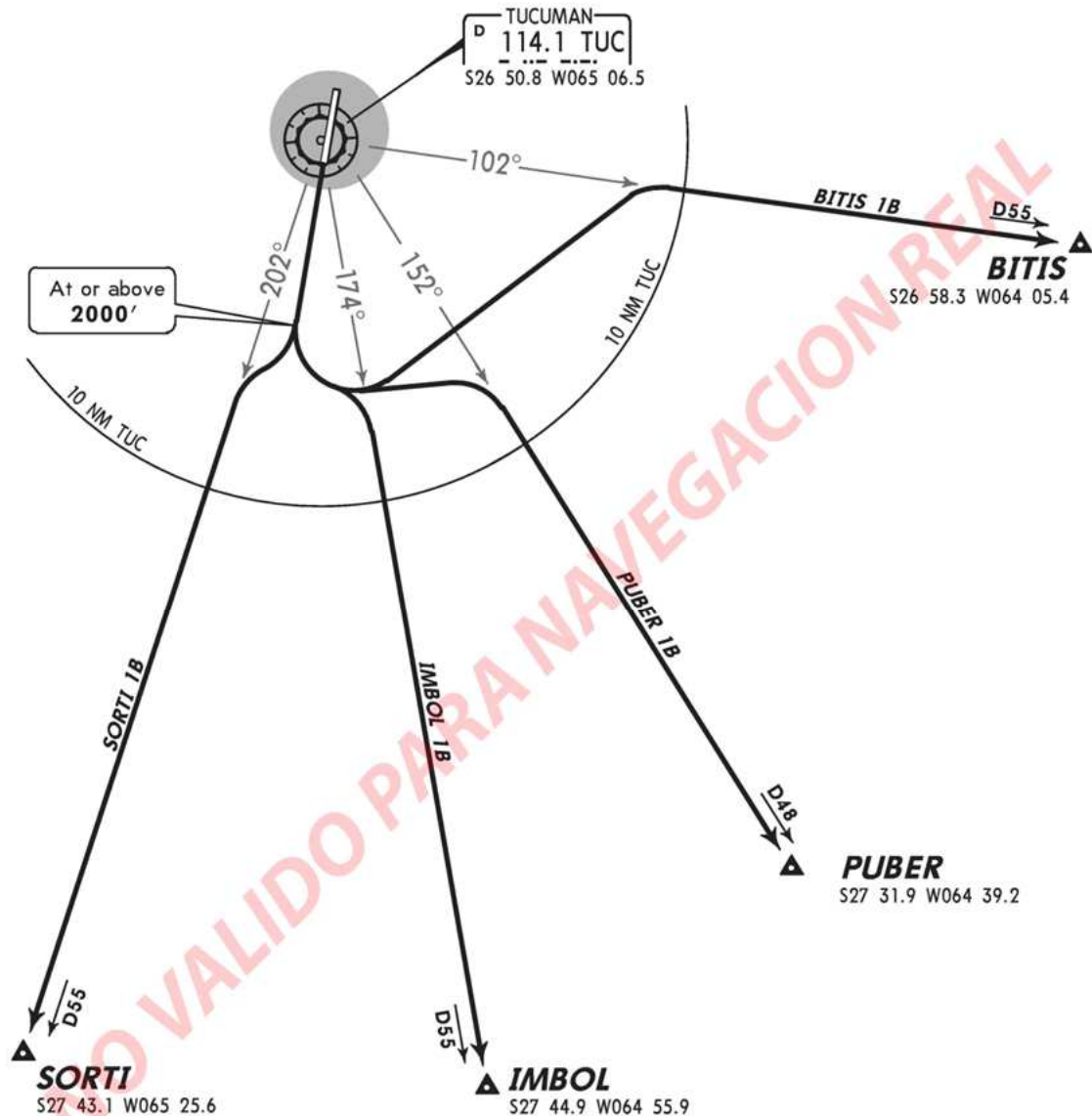
Trans level: BY ATC Trans alt: 6500'



MSA TUC VOR

DEPARTURES RWY 19

BITIS 1B, IMBOL 1B, PUBER 1B, SORTI 1B



These SIDs require a minimum climb gradient of 3.3%.

Gnd speed-KT	75	100	150	200	250	300
3.3% V/V (fpm)	251	334	501	668	835	1003

SID	ROUTING
BITIS 1B IMBOL 1B PUBER 1B	MAINTAIN runway heading to at or above 2000', then climbing LEFT turn to intercept and continue on the corresponding radial for the departure being flown.
SORTI 1B	MAINTAIN runway heading to at or above 2000', then intercept and continue on TUC R-202.

SID ILPAR1A KONRI1A PONPI1A (RWY 01)

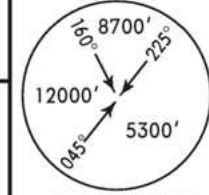
SANT
BENJAMIN MATIENZO

TUCUMAN, ARGENTINA

SID

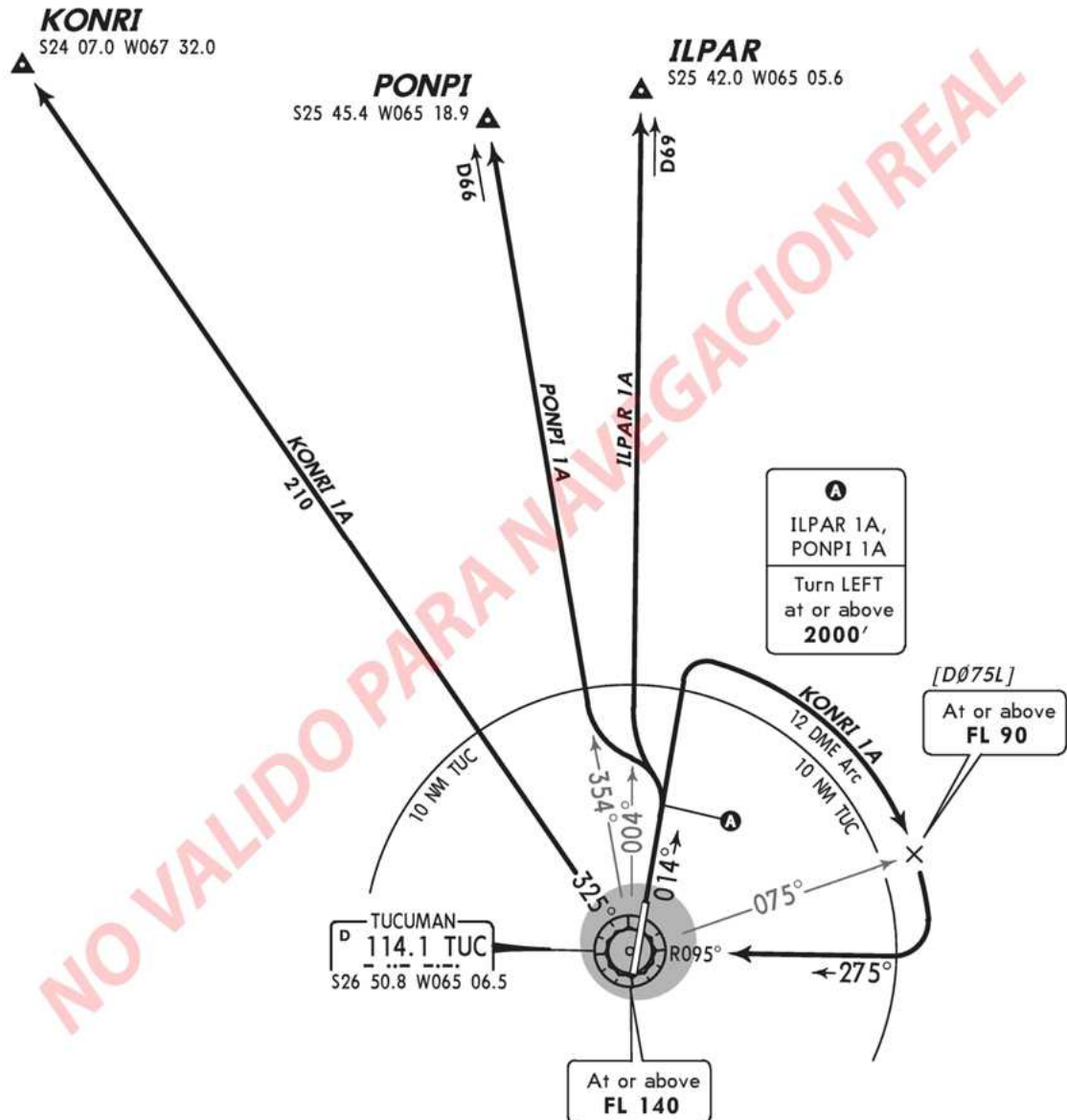
Apt Elev
1493'

Trans level: BY ATC Trans alt: 6500'



MSA TUC VOR

DEPARTURES RWY 01
ILPAR 1A, KONRI 1A, PONPI 1A



These SIDs require minimum climb gradients of:
ILPAR 1A, PONPI 1A: 5.3% to **6200'**, then 3.3% to **FL150**.

KONRI 1A: 5.3% to **FL140**, then 3.3% to **FL250**.

Gnd speed-KT	75	100	150	200	250	300
3.3% V/V (fpm)	251	334	501	668	835	1003
5.3% V/V (fpm)	403	537	805	1073	1342	1610

SID	ROUTING
ILPAR 1A PONPI 1A	MAINTAIN runway heading to at or above 2000' , turn LEFT to intercept and track TUC R-004 or TUC R-354 corresponding to the departure being flown.
KONRI 1A	MAINTAIN runway heading, then climbing RIGHT turn to intercept TUC 12 DME Arc, then intercept TUC R-095 to TUC. Fly outbound on TUC R-325.

SID ILPAR1B KONRI1B PONPI1B (RWY 19)

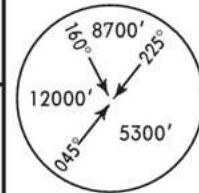
SANT
BENJAMIN MATIENZO

TUCUMAN, ARGENTINA

SID

Apt Elev
1493'

Trans level: BY ATC Trans alt: 6500'

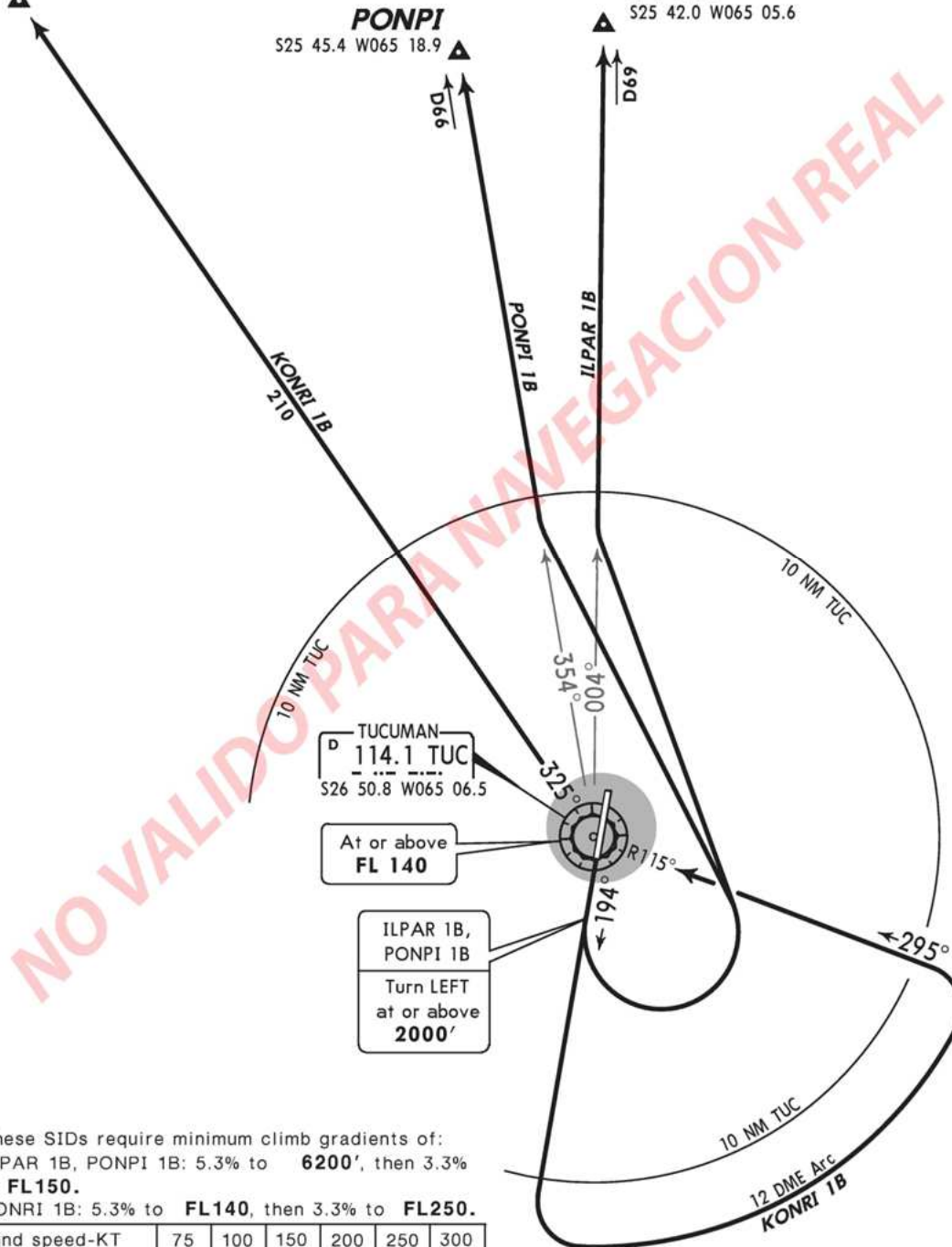


DEPARTURES RWY 19
ILPAR 1B, KONRI 1B, PONPI 1B

KONRI
S24 07.0 W067 32.0

PONPI
S25 45.4 W065 18.9

ILPAR
S25 42.0 W065 05.6



These SIDs require minimum climb gradients of:
ILPAR 1B, PONPI 1B: 5.3% to 6200', then 3.3% to FL150.
KONRI 1B: 5.3% to FL140, then 3.3% to FL250.

Gnd speed-KT	75	100	150	200	250	300
3.3% V/V (fpm)	251	334	501	668	835	1003
5.3% V/V (fpm)	403	537	805	1073	1342	1610

SID	ROUTING
ILPAR 1B PONPI 1B	MAINTAIN runway heading to at or above 2000', turn LEFT to intercept and track TUC R-004 or TUC R-354 corresponding to the departure being flown.
KONRI 1B	MAINTAIN runway heading, then climbing LEFT turn to intercept TUC 12 DME Arc, then intercept TUC R-115 to TUC. Fly outbound on TUC R-325.

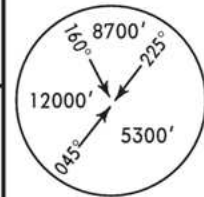
SANT
BENJAMIN MATIENZO

TUCUMAN, ARGENTINA

STAR

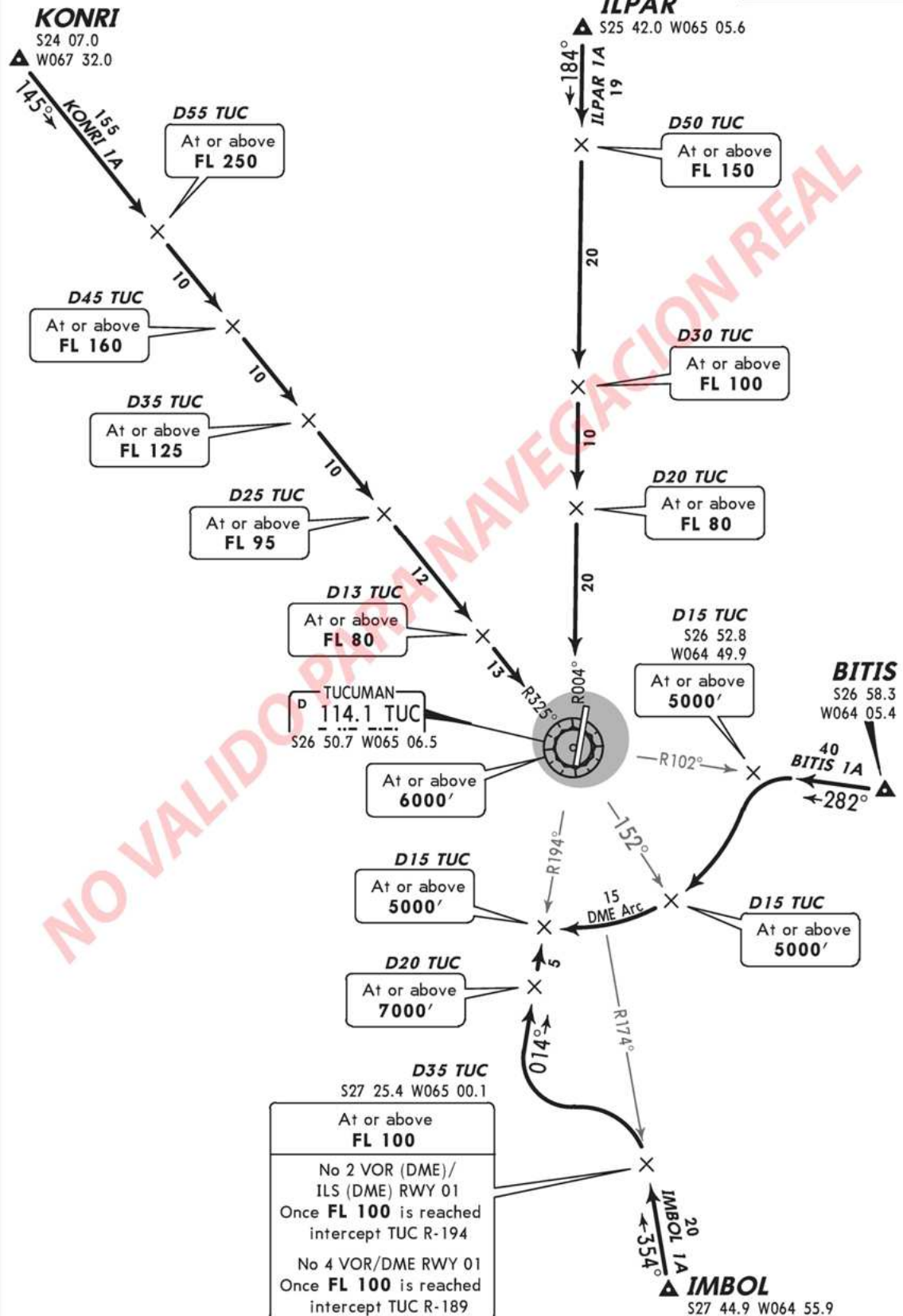
Apt Elev
1493'

Alt Set: hPa Trans level: By ATC Trans alt: 6500'



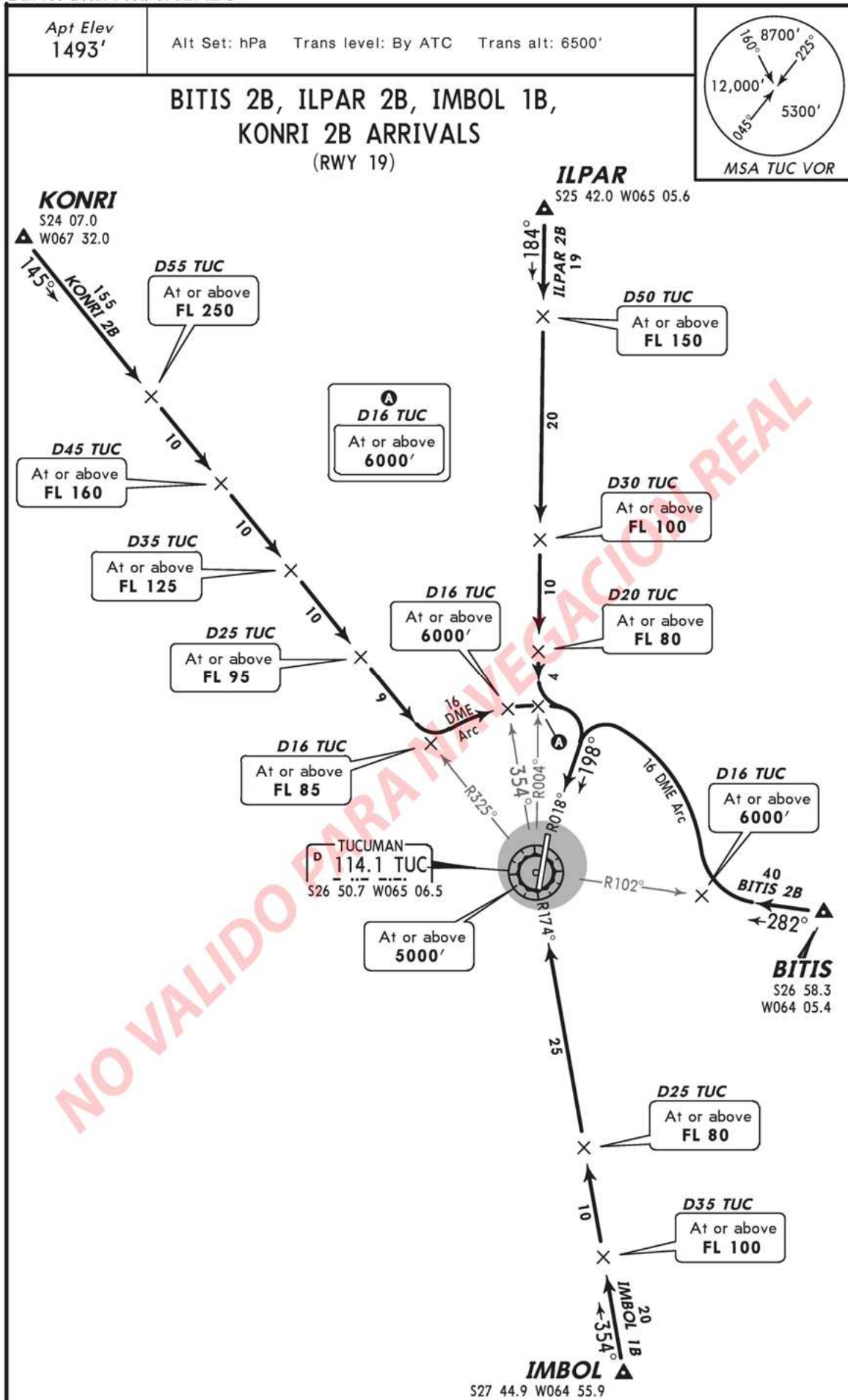
ARRIVALS RWY 01

BITIS 1A, ILPAR 1A, IMBOL 1A, KONRI 1A



TUCUMAN, ARGENTINA

STAR



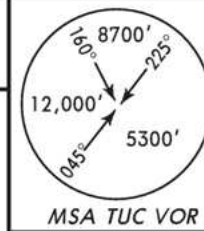
SANT
BENJAMIN MATIENZO

TUCUMAN, ARGENTINA

STAR

Apt Elev
1493'

Alt Set: hPa Trans level: By ATC Trans alt: 6500'

PONPI 2B, PUBER 1B, SORTI 1B ARRIVALS
(RWY 19)**PONPI**
S25 45.4 W065 18.917.4°
PONPI 2B
16D50 TUC
At or above
FL 150D30 TUC
At or above
FL 100D20 TUC
At or above
FL 80D16 TUC
At or above
6000'TUCUMAN
P 114.1 TUC
S26 50.7 W065 06.5At or above
5000'D25 TUC
At or above
FL 80D40 TUC
At or above
FL 120**SORTI**
S27 43.1 W065 25.6022°
SORTI 1B
15D16 TUC
At or above
6000'DME
Arc
16

R018°

R202°

R152°

25

D25 TUC

At or above
FL 80

D40 TUC

At or above
FL 120

SORTI 1B

S27 43.1 W065 25.6

PUBER 1B
48

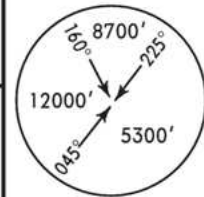
D48

332°

PUBER
S27 31.9
W064 39.2

Apt Elev
1493'

Alt Set: hPa Trans level: By ATC Trans alt: 6500'

ARRIVALS RWY 01
PONPI 1A, PUBER 1A, SORTI 1A