

**STANDARD DEPARTURE CHART -  
INSTRUMENT (SID) - ICAO**

**TRANSITION ALTITUDE**  
**5000**

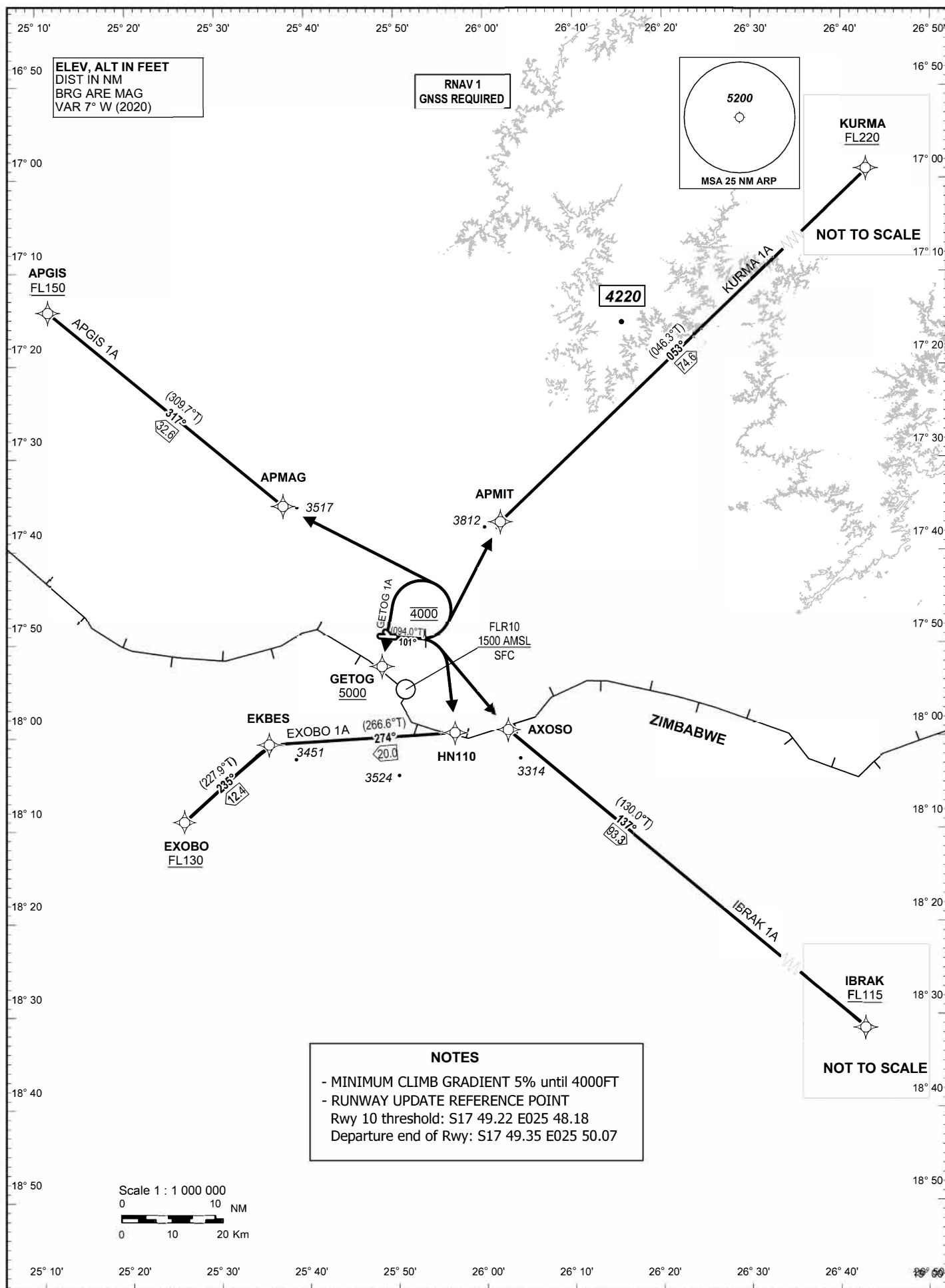
APP 124.300  
TWR 118.100

**HARRY MWAANGA NKUMBULA INTL/Livingstone**

**(FLHN)**

**RNAV SID RWY 10**

APGIS 1A, EXOBO 1A, GETOG 1A, IBRAK 1A, KURMA 1A



STANDARD DEPARTURE CHART -  
INSTRUMENT (SID) - ICAO

HARRY MWAANGA NKUMBULA INTL/Livingstone  
(FLHN)  
RNAV SID RWY 10  
APGIS 1A, EXOBO 1A, GETOG 1A, IBRAK 1A, KURMA 1A

TABULAR DESCRIPTION

RNAV SID RWY 10  
APGIS 1A

Serial Number	Path Descriptor	Waypoint Identifier	Fly-over	Course M°(T°)	Magnetic Variation (°)	Distance (NM) / Duration	Turn Direction	Altitude (FT)	Speed Limit (KT)	VPA (%)	Rec Navaids	Navigation Specification
010	CA	-	-	101 (094.0)	-7.2	-	-	@4000	-	-	-	RNAV 1
020	DF	APMAG	-	-	-	-	-	-	-	-	-	RNAV 1
030	TF	APGIS	-	317 (309.7)	-	32.6	-	+FL150	-	-	-	RNAV 1

EXOBO 1A

Serial Number	Path Descriptor	Waypoint Identifier	Fly-over	Course M°(T°)	Magnetic Variation (°)	Distance (NM) / Duration	Turn Direction	Altitude (FT)	Speed Limit (KT)	VPA (%)	Rec Navaids	Navigation Specification
010	CA	-	-	101 (094.0)	-7.2	-	-	@4000	-	-	-	RNAV 1
020	DF	HN110	-	-	-	-	-	-	-	-	-	RNAV 1
030	TF	EKBES	-	274 (266.6)	-	20.0	-	-	-	-	-	RNAV 1
040	TF	EXOBO	-	235 (227.9)	-	12.4	-	+FL130	-	-	-	RNAV 1

GETOG 1A

Serial Number	Path Descriptor	Waypoint Identifier	Fly-over	Course M°(T°)	Magnetic Variation (°)	Distance (NM) / Duration	Turn Direction	Altitude (FT)	Speed Limit (KT)	VPA (%)	Rec Navaids	Navigation Specification
010	CA	-	-	101 (094.0)	-7.2	-	-	@4000	-	-	-	RNAV 1
020	DF	GETOG	-	-	-	-	L	+5000	-	-	-	RNAV 1

IBRAK 1A

Serial Number	Path Descriptor	Waypoint Identifier	Fly-over	Course M°(T°)	Magnetic Variation (°)	Distance (NM) / Duration	Turn Direction	Altitude (FT)	Speed Limit (KT)	VPA (%)	Rec Navaids	Navigation Specification
010	CA	-	-	101 (094.0)	-7.2	-	-	@4000	-	-	-	RNAV 1
020	DF	AXOSO	-	-	-	-	-	-	-	-	-	RNAV 1
030	TF	IBRAK	-	137 (130.0)	-	93.3	-	+FL115	-	-	-	RNAV 1

KURMA 1A

Serial Number	Path Descriptor	Waypoint Identifier	Fly-over	Course M°(T°)	Magnetic Variation (°)	Distance (NM) / Duration	Turn Direction	Altitude (FT)	Speed Limit (KT)	VPA (%)	Rec Navaids	Navigation Specification
010	CA	-	-	101 (094.0)	-7.2	-	-	@4000	-	-	-	RNAV 1
020	DF	APMIT	-	-	-	-	-	-	-	-	-	RNAV 1
030	TF	KURMA	-	053 (046.3)	-	74.6	-	+FL220	-	-	-	RNAV 1

WAYPOINT LIST  
RNAV SID RWY 10

WaypointIdentifier	Coordinates	
APGIS	S 17 14 13.0	E 025 11 11.6
APMAG	S 17 35 09.6	E 025 37 23.7
APMIT	S 17 36 56.4	E 026 01 45.9
AXOSO	S 17 59 22.1	E 026 02 33.8
EKBES	S 18 00 50.3	E 025 35 40.0
EXOBO	S 18 09 09.0	E 025 26 02.7
GETOG	S 17 52 30.0	E 025 48 24.0
HN110	S 17 59 39.6	E 025 56 34.0
IBRAK	S 18 59 15.8	E 027 17 59.3
KURMA	S 16 45 04.0	E 026 57 59.0

ROUTING

NAME	TEXT
APGIS 1A	Minimum climb gradient 5.0% to 4000 FT. After take-off climb on course 101° to 4000 FT, turn LEFT direct to APMAG, then track 317° to APGIS.  MCA/MCL: APGIS AT or ABOVE FL150.
EXOBO 1A	Minimum climb gradient 5.0% to 4000 FT. After take-off climb on course 101° to 4000 FT, turn RIGHT direct to HN110, track 274° to EKBES, then track 235° to EXOBO.  MCA/MCL: EXOBO AT or ABOVE FL130.
GETOG 1A	Minimum climb gradient 5.0% to 4000 FT. After take-off climb on course 101° to 4000 FT, turn LEFT direct to GETOG.  MCA/MCL: GETOG AT or ABOVE 5000'.
IBRAK 1A	Minimum climb gradient 5.0% to 4000 FT. After take-off climb on course 101° to 4000 FT, turn RIGHT direct to AXOSO, then track 137° to IBRAK.  MCA/MCL: IBRAK AT or ABOVE FL115.
KURMA 1A	Minimum climb gradient 5.0% to 4000 FT. After take-off climb on course 101° to 4000 FT, turn LEFT direct to APMIT, then track 053° to KURMA.  MCA/MCL: KURMA AT or ABOVE FL220.

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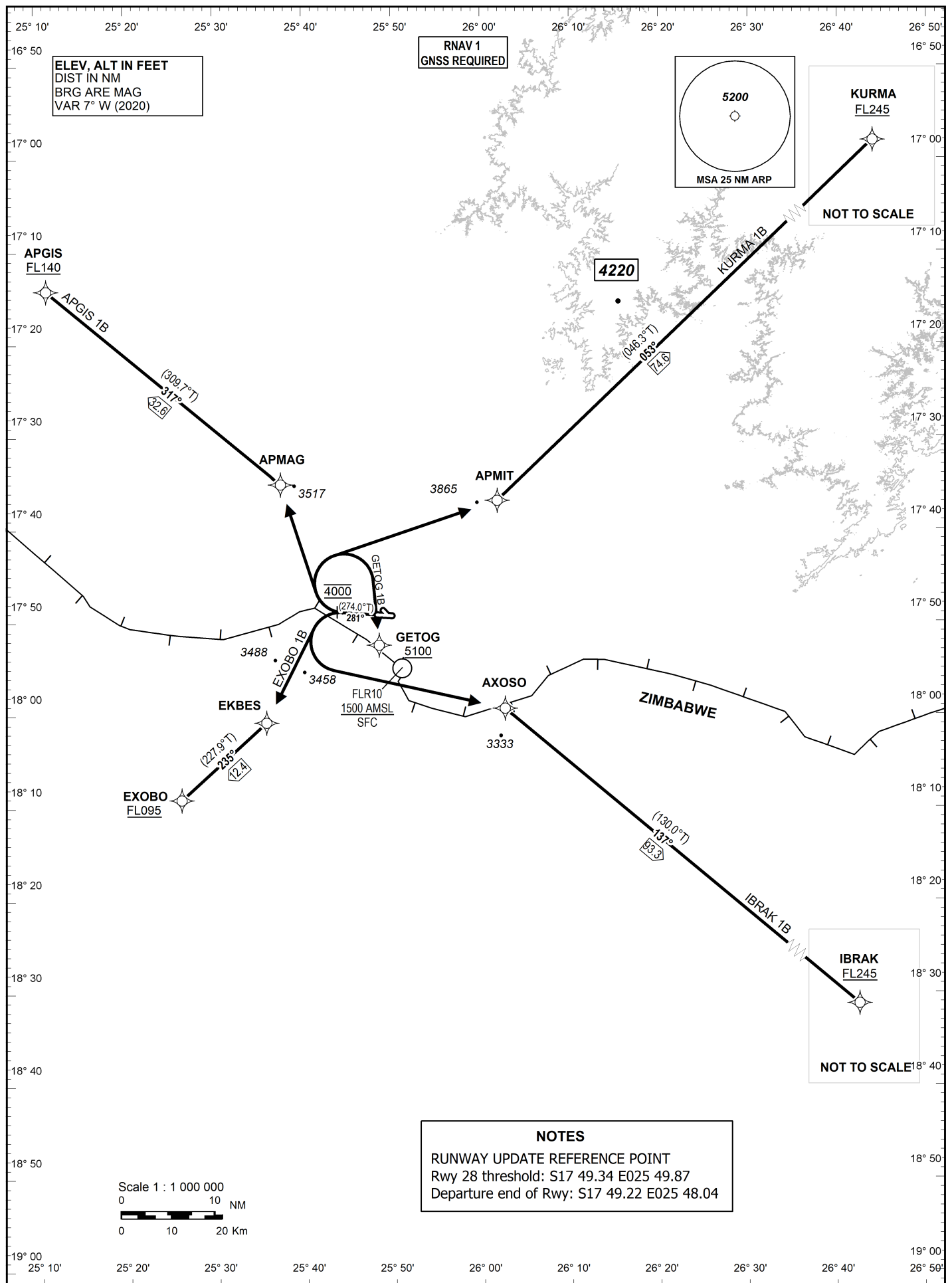
APP 124.300  
TWR 118.100

**HARRY MWAANGA NKUMBULA INTL/Livingstone**

**(FLHN)**

**RNAV SID RWY 28**

APGIS 1B, EXOBO 1B, GETOG 1B, IBRAK 1B, KURMA 1B



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(FLHN)  
RNAV SID RWY 28  
APGIS 1B, EXOBO 1B, GETOG 1B, IBRAK 1B, KURMA 1B

TABULAR DESCRIPTION

RNAV SID RWY 28  
APGIS 1B

Serial Number	Path Descriptor	Waypoint Identifier	Fly-over	Course M°(T°)	Magnetic Variation (°)	Distance (NM) / Duration	Turn Direction	Altitude (FT)	Speed Limit (KT)	VPA (%)	Rec Navaids	Navigation Specification
010	CA	-	-	281 (274.0)	-7.2	-	-	@4000	-	-	-	RNAV 1
020	DF	APMAG	-	-	-	-	-	-	-	-	-	RNAV 1
030	TF	APGIS	-	317 (309.7)	-	32.6	-	+FL140	-	-	-	RNAV 1

EXOBO 1B

Serial Number	Path Descriptor	Waypoint Identifier	Fly-over	Course M°(T°)	Magnetic Variation (°)	Distance (NM) / Duration	Turn Direction	Altitude (FT)	Speed Limit (KT)	VPA (%)	Rec Navaids	Navigation Specification
010	CA	-	-	281 (274.0)	-7.2	-	-	@4000	-	-	-	RNAV 1
020	DF	EKBES	-	-	-	-	-	-	-	-	-	RNAV 1
030	TF	EXOBO	-	235 (227.9)	-	12.4	-	+FL095	-	-	-	RNAV 1

GETOG 1B

Serial Number	Path Descriptor	Waypoint Identifier	Fly-over	Course M°(T°)	Magnetic Variation (°)	Distance (NM) / Duration	Turn Direction	Altitude (FT)	Speed Limit (KT)	VPA (%)	Rec Navaids	Navigation Specification
010	CA	-	-	281 (274.0)	-7.2	-	-	@4000	-	-	-	RNAV 1
020	DF	GETOG	-	-	-	-	R	+5100	-	-	-	RNAV 1

IBRAK 1B

Serial Number	Path Descriptor	Waypoint Identifier	Fly-over	Course M°(T°)	Magnetic Variation (°)	Distance (NM) / Duration	Turn Direction	Altitude (FT)	Speed Limit (KT)	VPA (%)	Rec Navaids	Navigation Specification
010	CA	-	-	281 (274.0)	-7.2	-	-	@4000	-	-	-	RNAV 1
020	DF	AXOSO	-	-	-	-	L	-	-	-	-	RNAV 1
030	TF	IBRAK	-	137 (130.0)	-	93.3	-	+FL245	-	-	-	RNAV 1

KURMA 1B

Serial Number	Path Descriptor	Waypoint Identifier	Fly-over	Course M°(T°)	Magnetic Variation (°)	Distance (NM) / Duration	Turn Direction	Altitude (FT)	Speed Limit (KT)	VPA (%)	Rec Navaids	Navigation Specification
010	CA	-	-	281 (274.0)	-7.2	-	-	@4000	-	-	-	RNAV 1
020	DF	APMIT	-	-	-	-	R	-	-	-	-	RNAV 1
030	TF	KURMA	-	053 (046.3)	-	74.6	-	+FL245	-	-	-	RNAV 1

WAYPOINT LIST  
RNAV SID RWY 28

WaypointIdentifier	Coordinates	
APGIS	S 17 14 13.0	E 025 11 11.6
APMAG	S 17 35 09.6	E 025 37 23.7
APMIT	S 17 36 56.4	E 026 01 45.9
AXOSO	S 17 59 22.1	E 026 02 33.8
EKBES	S 18 00 50.3	E 025 35 40.0
EXOBO	S 18 09 09.0	E 025 26 02.7
GETOG	S 17 52 30.0	E 025 48 24.0
IBRAK	S 18 59 15.8	E 027 17 59.3
KURMA	S 16 45 04.0	E 026 57 59.0

ROUTING

NAME	TEXT
APGIS 1B	After take-off climb on course 281° to 4000 FT, turn RIGHT direct to APMAG, then track 317° to APGIS . MCA/MCL: APGIS AT or ABOVE FL140.
EXOBO 1B	After take-off climb on course 281° to 4000 FT, turn LEFT direct to EKBES, then track 235° to EKBES. MCA/MCL: EXOBO AT or ABOVE FL095.
GETOG 1B	After take-off climb on course 281° to 4000 FT, turn RIGHT direct to GETOG. MCA/MCL: GETOG AT or ABOVE 5100'.
IBRAK 1B	After take-off climb on course 281° to 4000 FT, turn LEFT direct to AXOSO, then track 137° to IBRAK. MCA/MCL: IBRAK AT or ABOVE FL245.
KURMA 1B	After take-off climb on course 281° to 4000 FT, turn RIGHT direct to APMIT, then track 53° to KURMA. MCA/MCL: KURMA AT or ABOVE FL245.

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