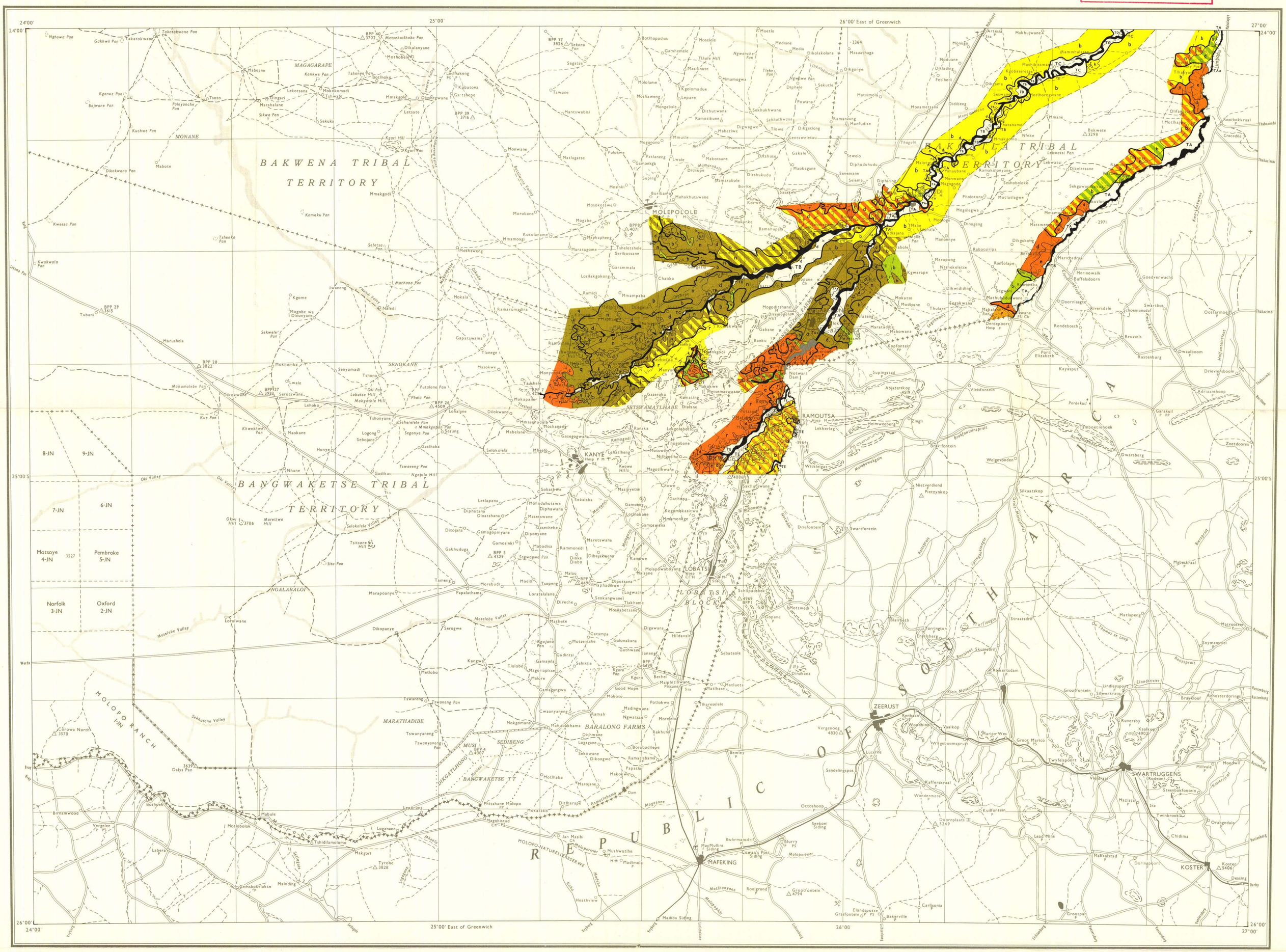
subject : Africa
scale : 1/500,000
map ref. : Bot 3.3
libr. ref. : AF 6 - 24

REPUBLIC OF BOTSWANA 1:500,000

LAND FACETS ALONG THE MAIN RIVERS OF EASTERN BOTSWANA

SHEET 3



D.O.S. (L.R.) 3067.
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SCALE 1:500,000

Miles 10 8 6 4 2 0 10 20 30 40 50 60 70 80 Miles
Kilometres 10 8 6 4 2 0 10 20 30 40 50 60 70 80 90 100 110 120 Kilometres

Field investigation and related aerial photographic interpretation by A. J. B. Mitchell, Land Resources Division, 1965-67.
Base map derived from Botswana 1:500,000 (D.O.S. 847).
Drawn and photographed by Directorate of Overseas Surveys 1969.
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9/69/4593/D.S.

ROCK TYPES

Rock Type 1:	Acid granites and gneisses (Basement Complex and intrusive)
Rock Type 2:	Basic gneisses and schists (Basement Complex)
Rock Type 3:	Dolerite, Gabbro (intrusive)
Rock Type 4:	Mixed schists, marble and quartzite (Messina System)
Rock Type 5:	Central Gaberones Granite (intrusive, post-Dominion Reef System)
Rock Type 6:	Basalt (Karroo System)
Rock Type 7:	Quartz sands and sandstones (Waterberg, Karroo and Kalahari systems)
Rock Type 8:	Miscellaneous sandstones, grits and shales (Karroo and other systems)

Boundary between Uplands and Valley Sides
Boundary of Land facets
Boundary of Survey Area

INDEX TO SHEETS
1 (D.O.S. 847 Sheet 5)
2 (D.O.S. 847 Sheet 8)
3 (D.O.S. 847 Sheet 11)

Main Town, Town, Village
Main Road, Railway
Track, Minor Track
Prominent Hill
International Boundary
Pan
River, Ephemeral River
Dry Valley

LAND FORMS

EROSIONAL SURFACES

Land form Unit	Map Symbol	Amplitude of Relief	Range of slopes	Type of slopes	Drainage density (distance apart of drainage lines)	Type of drainage (whether clearly defined streambeds or diffuse areas where water flows)
UPLANDS						
Very gently undulating upland	a	Very low	Less than 1%	—	Wide; 1·6-3·2 km (1-2 mi)	Very diffuse; not visible on the ground
Gently undulating upland	b	6 m (20 ft)	Up to 2%	Concave	Wide; 1·6-3·2 km (1-2 mi)	Diffuse areas
Gently undulating upland with incised valleys	q	6-9 m (20-30 ft)	2% on interfluves, break to 5% on valley sides	Concave on interfluves; break to even slopes on valley sides	Wide; 1·6-3·2 km (1-2 mi)	Clearly defined stream beds
Undulating upland	k	Up to 30 m (100 ft)	Up to 5%	Concave	Wide; 1·6-3·2 km (1-2 mi)	Diffuse areas
Undulating upland with incised valleys	c	18-30 m (60-100 ft)	5% on interfluves; break to steeper valley sides	Concave on interfluves; break to even slopes on valley sides	Medium; 0·4-1·6 km (0·25-1 mi)	Clearly defined stream beds
Moderately dissected upland	m	Up to 30 m (100 ft)	Plateaux with slopes up to 2%; steep scarps; pediments with slopes up to 10%	Concave on plateaux and pediments	Close to medium; 200-600 m (200-600 yd) on pediments	Clearly defined stream beds
Undulating to rolling upland with scattered rock outcrops	h	Up to 30 m (100 ft)	Up to 10%	Predominantly convex	Medium; up to 1·6 km (1 mi)	Clearly defined stream beds
Rolling to rugged upland with many rock outcrops	r	Up to 150 m (500 ft)	Over 10%	Broken, rocky land with uneven slopes	Variable	Variable
VALLEY SIDES						
Gently undulating valley sides	n	Up to 6 m (20 ft)	Up to 2%	Even to concave with convex ridge crests	Medium; up to 1·6 km (1 mi)	Diffuse areas or clearly defined stream beds
Undulating valley sides	d	Up to 9 m (30 ft)	Usually 2%, occasionally up to 5%	Even to concave with convex ridge crests	Close to medium; 300-600 m (300-600 yd)	Clearly defined stream beds
Moderately dissected valley sides	e	Up to 15 m (50 ft)	2-10%	Even to concave with rounded to sharp ridge crests	Close; 200-400 m (200-400 yd)	Clearly defined stream beds
Moderately dissected valley sides with many rock outcrops	f	Up to 15 m (50 ft), but rock outcrops may be higher	2-10%	Even to concave with rounded to sharp ridge crests	Close; 200-400 m (200-400 yd)	Clearly defined stream beds
Dissected valley sides	g	Up to 30 m (100 ft)	5-20%	Even to concave with sharp ridge crests	Close; 200-400 m (200-400 yd)	Clearly defined stream beds

DEPOSITIONAL SURFACES
ALLUVIAL TERRACES AND FLOOD PLAINS

Land form Unit	Map Symbol	Topography	Associated Soils
Old terraces derived from mixed, mainly igneous or metamorphic rocks	TA	Gently sloping with a convex cross-section and slopes up to 2%	Mature siallitic, well-drained, predominantly medium textured soils
Old terraces derived from mixed, igneous rocks and quartz sandstones	TB	Gently sloping with a convex cross-section and slopes up to 2%	Mature siallitic well drained soils, with a high proportion of sandy textures
Old terraces derived mainly from quartz sandstones	TC	Gently sloping with a convex cross-section and slopes up to 2%	Predominantly excessively permeable sands with small areas of medium textured soils
Old terraces derived from quartz sandstones	TD	Gently sloping with a convex cross-section and slopes up to 2%	Excessively permeable sands
Old terraces derived from mixed, predominantly sedimentary rocks, and underlain by shales	TE	Gently sloping with a convex cross-section and slopes up to 2%	Mature siallitic and fersiallitic soils with poor surface structure and impeded drainage
Terraces formed in association with still or slowly moving water	TF	Almost flat, with slopes of less than 1%	Fine textured siallitic soils with impeded drainage, and vertisols
Recent terraces derived from mixed, predominantly igneous or metamorphic rocks	TG	Gently sloping with a convex cross-section and slopes up to 2%	Young siallitic, well drained, predominantly medium textured soils
Recent terraces derived mainly from basalt and sedimentary rocks	TH	Gently sloping with a convex cross-section and slopes up to 2%	Young siallitic, well drained, predominantly medium textured soils, which are moderately to strongly alkaline
Recent terraces derived mainly from basalt and sedimentary rocks	TJ	Gently sloping with a convex cross-section and slopes up to 2%	Young siallitic, well drained, moderately to strongly alkaline soils with a high proportion of excessively permeable sands
Present floodplains and some recently formed terraces	✈	Variable	Regosols, young siallitic soils, vertisols and halomorphic soils

MISCELLANEOUS

Land form Unit	Map Symbol	Topography	Associated Soils
Piedmonts	j	Sloping land with even slopes of up to 5%, and diffuse drainage	Deep siallitic soils with textures varying according to the parent rocks, and usually with impeded drainage
Pans	P	Broad shallow depressions a few feet deep and up to a mile across, subject to annual flooding	Topomorphic vertisols and clay alluvium

Land facets on uplands, valley sides, and piedmonts are denoted by a colour indicating rock type and a letter indicating the land forms.
Pans and alluvial terraces are denoted by letters only e.g. P, TA.
Additional letter x denotes exceptionally eroded land forms.

Agents for the sale of this map are:- Edward Stanford Ltd., 12/14 Long Acre, London, W.C.2. Price Code 3. Copies can also be obtained from the Director, Department of Surveys and Lands, Republic of Botswana.