country : South Africa
subject : Soils
scale : 1:250.000
map ref. : SA 13 3
libr. ref. :

DEPARTMENT OF AGRICULTURAL TECHNICAL SERVICES
DEPARTEMENT VAN LANDBOU-TEGNIESE DIENSTE
Secretary-W A Verbeek DSc Agric-Sekretaris

HEIGHTS IN METRES

1:250 000 LAND TYPE SERIES

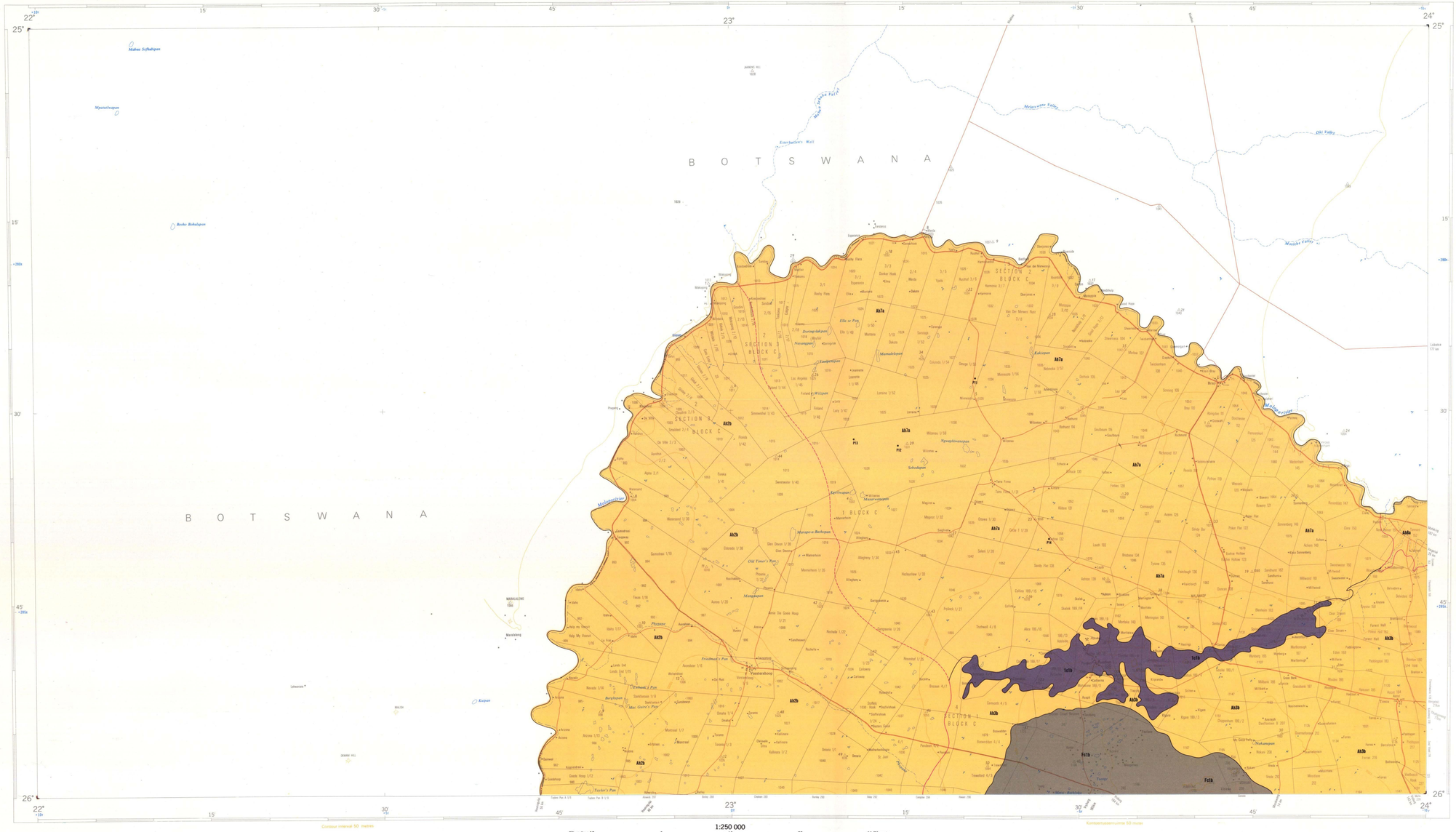
REPUBLIC OF SOUTH AFRICA — REPUBLIEK VAN SUID-AFRIKA

2522 BRAY

1:250 000 LANDTIPEREEKS

HOOGTES IN METER

SOIL AND IRRIGATION RESEARCH INSTITUTE
NAVORSINGSINSTITUUT VIR GROND EN BESPROEIING
Director-M C F du Plessis PhD-Direkteur



LEGEND/LEGENDE

BROAD SOIL PATTERNS/BREË GRONDPATRONE

RED-YELLOW APEDAL, FREELY DRAINED SOILS
ROOI-GEEL APEDALE, GOED GEDRAINEERDE GRONDE

- **Aa** — With a humic horizon / Met 'n humiese horizon
- **Ab** — Red, dystrophic and/or mesotrophic / Rooi, distrofies en/of mesotrofies
- **Ac** — Red and yellow dystrophic and/or mesotrophic / Rooi en geel distrofies en/of mesotrofies
- **Ad** — Yellow, dystrophic and/or mesotrophic / Geel, distrofies en/of mesotrofies
- **Ae** — Red, high base status, > 300 mm deep (no dunes) / Rooi, hoë basestatus, > 300 mm diep (geen duine)
- **Af** — Red, high base status, > 300 mm deep (with dunes) / Rooi, hoë basestatus, > 300 mm diep (met duine)
- **Ag** — Red, high base status, < 300 mm deep / Rooi, hoë basestatus, < 300 mm diep
- **Ah** — Red and yellow, high base status, usually < 15% clay / Rooi en geel, hoë basestatus, gewoonlik < 15% klei
- **Ai** — Yellow, high base status, usually < 15% clay / Geel, hoë basestatus, gewoonlik < 15% klei

PLINTHIC CATENA: UPLAND DUPLEX AND MARGALITIC SOILS RARE
PLINTIESE KATENA: HOOGLIGGENDE DUPLEKS- EN MARGALITIESE GRONDE SKAARS

- **Ba** — Dystrophic and/or mesotrophic; red soils widespread / Distrofies en/of mesotrofies; rooi gronde wydverspreid
- **Bb** — Dystrophic and/or mesotrophic; red soils not widespread / Distrofies en/of mesotrofies; rooi gronde nie wydverspreid
- **Bc** — Eutrophic; red soils widespread / Eutrofies; rooi gronde wydverspreid
- **Bd** — Eutrophic; red soils not widespread / Eutrofies; rooi gronde nie wydverspreid

PLINTHIC CATENA: UPLAND DUPLEX AND/OR MARGALITIC SOILS COMMON
PLINTIESE KATENA: HOOGLIGGENDE DUPLEKS- EN/OF MARGALITIESE GRONDE KOM ALGEMEEN VOOR

- **Ca** — Undifferentiated / Ongedifferensieerd

PRISMACUTANIC AND/OR PEDOCUTANIC DIAGNOSTIC HORIZONS DOMINANT
PRISMAKUTANIESE EN/OF PEDOKUTANIESE DIAGNOSTIESE HORISONTE DOMINANT

- **Da** — Red B horizons / Rooi B horisonte
- **Db** — B horizons not red / B horisonte nie rooi
- **Dc** — In addition, one or more of: vertic, melanic, red structured diagnostic horizons / Bokomsig, een of meer van: vertiese, melaniese, rooi gestruktuurde diagnostiese horisonte

ONE OR MORE OF: VERTIC, MELANIC, RED STRUCTURED DIAGNOSTIC HORIZONS
EEN OF MEER VAN: VERTIESE, MELANIESE, ROOI GESTRUKTUURDE DIAGNOSTIESE HORISONTE

- **Ea** — Undifferentiated / Ongedifferensieerd

GLENROSA AND/OR MISPAH FORMS (other soils may occur)
GLENROSA- EN/OF MISPAHVORMS (ander gronde mag voorkom)

- **Fa** — Lime rare or absent in the entire landscape / Kalk skaars of afwesig oral in die landskap
- **Fb** — Lime rare or absent in upland soils but generally present in low-lying soils / Kalk skaars of afwesig in hoogliggende gronde maar gewoonlik teenwoordig in laagliggende gronde
- **Fc** — Lime generally present in the entire landscape / Kalk gewoonlik teenwoordig oral in die landskap

SOILS WITH A DIAGNOSTIC FERRIHUMIC HORIZON
GRONDE MET 'N DIAGNOSTIESE FERRIHUMIESE HORISON

- **Ga** — Predominantly deep (Lamotte form) / Oorwegend diep (Lamottevorm)
- **Gb** — Predominantly shallow (Rooiwoek form) / Oorwegend vlak (Rooiwoekvorm)

GREY REGIC SANDS
GRYS REGIESE SANDE

- **Ha** — Regic sands dominant / Regiese sande dominant
- **Hb** — Regic sands and other soils / Regiese sande en ander gronde

MISCELLANEOUS LAND CLASSES
DIVERSE LANDKLASSE

- **Ia** — Undifferentiated deep deposits / Ongedifferensieerde diep afsettings
- **Ib** — Rock areas with miscellaneous soils / Rotsgebiede met diverse gronde
- **Ic** — Rock with little or no soil / Rots met min of geen grond

Land type survey during 1973 by J F Eloff MSc Agric (UOFS) and A T P Bennie MSc Agric (UOFS)

Landtipe-opname gedurende 1973 deur J F Eloff MSc Agric (UOVS) en A T P Bennie MSc Agric (UOVS)

Leader of the national land type survey: C N MacVicar PhD (Natal)
Assistant leader: J F Eloff MSc Agric (UOFS)

Leier van die nasionale landtipe-opname: C N MacVicar PhD (Natal)
Assistent-leier: J F Eloff MSc Agric (UOVS)

Assistance with macroclimate mapping: J G Dry and C H Donaldson

Hulp met makroklimaatkartering: J G Dry en C H Donaldson

Land types and the area(ha) of each on this map
Landtipes en die oppervlakte(ha) van elk op hierdie kaart

Ah7b (261 190), Ah3b (111 430), Ah7a (388 380), Ah8a (4 650), Fc1b (33 500), Ic1b (22 340)

Area mapped
Oppervlakte gekarteer — 816 490 ha

Modal profiles on this map
Modale profiele op hierdie kaart — P11–P14

Ah7b — Indicates portion b of land type Ah7
Dui gedeelte b van landtipe Ah7 aan

Land type boundary that is a macroclimate zone boundary plus a terrain form and/or pedological boundary
Landtipegrens wat 'n makroklimaatsonegrens plus 'n terreinvorm en/of pedologiese grens is

Land type boundary that is only a macroclimate zone boundary
Landtipegrens wat alleenlik 'n makroklimaatsonegrens is

Land type boundary that is a terrain form and/or pedological boundary
Landtipegrens wat 'n terreinvorm en/of pedologiese grens is

NOTE
Report on this map obtainable from: Director, Division of Agricultural Information, Department of Agricultural Technical Services, Pretoria

LET WEL
Verslag oor hierdie kaart verkrygbaar van: Direkteur, Afdeling Landbou-inligting, Departement van Landbou-tegniese Dienste, Pretoria

Based on 1° x 3° sheets of the Topo-cadastral Series, scale 1:250 000, of the Director-General of Surveys

Drawn under contract for the Soil and Irrigation Research Institute, Pretoria

Printed by the Government Printer, Pretoria, 1978

Copies obtainable from the Government Printer, Pretoria and Cape Town

Report on this map obtainable from: Director, Division of Agricultural Information, Department of Agricultural Technical Services, Pretoria

Gebaseer op 1° x 3° velle van die Topo-kadastrale Reeks, skaal 1:250 000, van die Direkteur-generaal van Opmetings

Op kontrak geteken vir die Navorsingsinstituut vir Grond en Besproeiing, Pretoria

Gedruk deur die Staatsdrukker, Pretoria, 1978

Eksemplare verkrygbaar van die Staatsdrukker, Pretoria en Kaapstad

Verslag oor hierdie kaart verkrygbaar van: Direkteur, Afdeling Landbou-inligting, Departement van Landbou-tegniese Dienste, Pretoria

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PRICE — PRYS

Local R2,60 Plaaslik
Other Countries R3,25 Buitelands

REFERENCE — VERKLARING

International boundaries	Internasionale grense
Provincial boundaries	Provinsiale grense
Railways	Spoorweg
Narrow gauge railways	Smalspoorlyne
Service railways	Dienspoorlyne
Power lines	Kragtyne
National roads	Nasionale paaie
Main roads	Hoofpaaie
Secondary roads	Sekondêre paaie
Other roads	Ander paaie
Tracks and footpaths	Dowes paaie en voetpaaie
Lighthouses	Vuurtorings
Mines	Myne

1:250 000

Kilometres 10 0 10 20 30 Kilometer
Miles 10 5 0 5 10 15 Myl

Heights are to ground level in metres
Hoogtes is op grondhoogte in meter

Gauss conform projection. Central meridian 23° east. Bessel's spheroid.
Gauss se konforme projeksie. Middelmeridiaan 23° oos. Bessel se sferoïed.

The grid lines of the South African co-ordinate system are indicated in the margin by short black ticks at 50 000 metre intervals, with co-ordinate values in units of 10 000 metres in blue.

Die sorlyne van die Suid-Afrikaanse koördinaatstelsel word in die kantlyne aangedoen deur kort swart streepies 50 000 meter van mekaar met koördinaatwaardes in eenhede van 10 000 meter in blou.

REGISTRATION DISTRICTS — REGISTRASIEDISTRIKTE

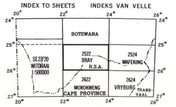
BOTSWANA — VRYBURG

REGISTRASIEDISTRIKGRENSE
REGISTRATION DISTRICT BOUNDARIES

REFERENCE — VERKLARING

Post offices, police stations and stores	Poskantore, polisiestasies en winkels
Schools, churches and hotels	Skole, kerke en hotelle
Mission stations	Sendingstasies
Huts	Hutte
Trig. Beacons with heights and numbers	Trig. Bakens met hoogtes en nommers
Perennial pans	Standhoudende panne
Non-perennial pans	Nie-standhoudende panne
Dry pans	Droë panne
Pipelines and canals	Pyplyne en kanale
Perennial rivers	Standhoudende riviere
Non-perennial rivers	Nie-standhoudende riviere
Marshes and vleis	Moerasse en vleie
Waterpoints	Waterbronne

INDEX TO SHEETS — INDEKS VAN VELLE



ERIC WAGENINGEN
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