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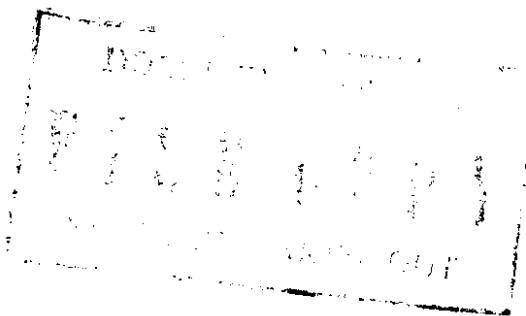
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MICHELIN ROAD MAPS OF AFRICA

(Paper submitted by the French Government)

## MICHELIN ROAD MAPS OF AFRICA

The Michelin Touring Services have long been interested in African cartography; indeed, their first road map for the African countries was produced in 1929.

Michelin publications on Africa are of two kinds:

- I. Africa in 3 sheets, scale 1:4,000,000, which will cover the whole of the African continent.
  - II. Detailed medium-scale maps, scale 1:800,000 to 1:1,000,000, showing one country or State.
- I. Africa in 3 sheets, scale 1:4,000,000 (Fig.I).
- A) Sheet No.155 "Afrique Centre et Sud-Madagascar" ("Central Africa and Southern Madagascar") which extends from the Congo (Leopoldville) to the Cape and from Douala to Somalia. On this sheet, Madagascar is represented by an inset map.

In this type of map, two factors are given particular prominence on a document produced in 5 colours:

- 1) Traffic: the different lines of communication ranging from the track of beaten earth to the asphalt-surfaced road are represented by a series of shades appropriate to the nature of the soil, driving conditions and seasonal climatic variations. Hydrography also figures largely on the map together with the transport facilities it offers. Distances are given in kilometres and miles.

Finally, it should be noted that the main routes across Africa are shown in exergue while picturesque stretches of road are indicated by green edging.

- 2) Resources: these are examined from two aspects:
  - (a) Those that the traveller will require each day for himself and his vehicle (hotels, restaurants, mechanics, petrol filling stations, etc.).

(b) Those which are the direct objects of touring proper and help the traveller to plan a journey under the most favourable conditions (prominent mention of the main sightseeing attractions, representation of national parks with camping sites, climatic information, which appears inset on the map and gives details of rainfall as well as maximum and minimum mean temperatures for each month).

B) The second sheet, No.153, which will appear during the summer of 1964, will cover the North and West of the continent, from Dakar to the Sudan and from Algiers to Abidjan. Part of this region is at present represented on map No.152, which must obviously be withdrawn.

C) The third sheet No.154, for which no publication date can yet be fixed, will cover the North-East of Africa.

II. Detailed maps, on a medium-scale from 1:800,000 to 1:1,000,000 (Fig.2)

(a) Map No.172 of Algeria and Tunisia, scale 1:1,000,000, with enlargements of Algiers, Oran, Tlemcen and Tunis on scales of either 1:300,000 or 1:500,000, together with town plans.

(b) The map of Morocco in two sheets, No.170 (North) and No.171 (South), on a scale of 1:1,000,000, and which also includes enlargements. This map is at present in process of being brought up to date and renovated. It will be published in one single sheet during the course of the summer as No.169.

These two maps are very detailed, although they are on a relatively small scale, as no less than 5 categories of roads, are indicated together with 3 types of highway widths. Conventional signs are numerous and varied (lighthouse, windmill, ksar, souk, marabout, etc.).

In the case of rivers, the type of crossing is always specified: bridge, ferry, ford, etc.

- (c) Map No.175 of the "Cote-d'Ivoire" ("Ivory Coast"), scale 1:800,000, the legend of which approximates to that of map No.155. A plan of Abidjan and a descriptive text complete this map.

#### ORGANIZATION OF THE MICHELIN CARTOGRAPHIC SERVICE

A distinction must be made between the four groups that compose this service: documentation, preparation, drawing and printing.

The documentation department, which is responsible for co-ordinating all items of information, examines the choice of base maps and draws up the questionnaires to be addressed to the various sources of information:

- public works;
- local authorities;
- central administrations (Customs, hydrographic, hydrological and meteorological services, etc.), geographers and ethnologists, tourist offices, and forwarding agents.

The preparation department uses all this information to make up models, which the draughtsman will use to produce his sketch map; the plotting of roads is indicated, the choice of hydrography is made, and the toponymy is shown by an indication of the characters to be employed.

The drawing department produces a sketch based on the preparatory work. This sketch, traced in colours on a stable mount, is the representation of the planimetry of the future map. The lettering is delineated on a transparent mount, which is properly aligned.

Proofs on paper are printed off from the sketch to support the complementary documentation assembled on the spot by the Michelin representatives attached to the Trade and Touring Services. The work is very lengthy and very delicate, entailing long months devoted to research, compilation, investigations and visits.

The drawing is then produced in two stages:

- 1) Photographic composition and projection of the lettering on a bromophoto by means of a special machine called a "Nomaphot".
- 2) Drawing of the outline on this representation of the lettering; the drawings are stereotyped and the films thus obtained are stuck upon glass.

Printing is carried out in offset.

#### CONCLUSIONS

In order to facilitate appreciation of the volume of work involved in producing a map of the type of No.155, of format 110 x 125 in 6 colours, scale 1:4,000,000, we considered that it would be useful to provide this table showing the time spent.

- Conception: 117 days
- Documentation: 188 days
- Preparation 250 days
- Sketch drawing: 105 days
- Investigation on the spot: 137 days
- Corrections applied on receipt of the complementary documentation and reports of the investigators: 140 days
- Drawing: 260 days
- Retouching on glass: colouring: 190 days

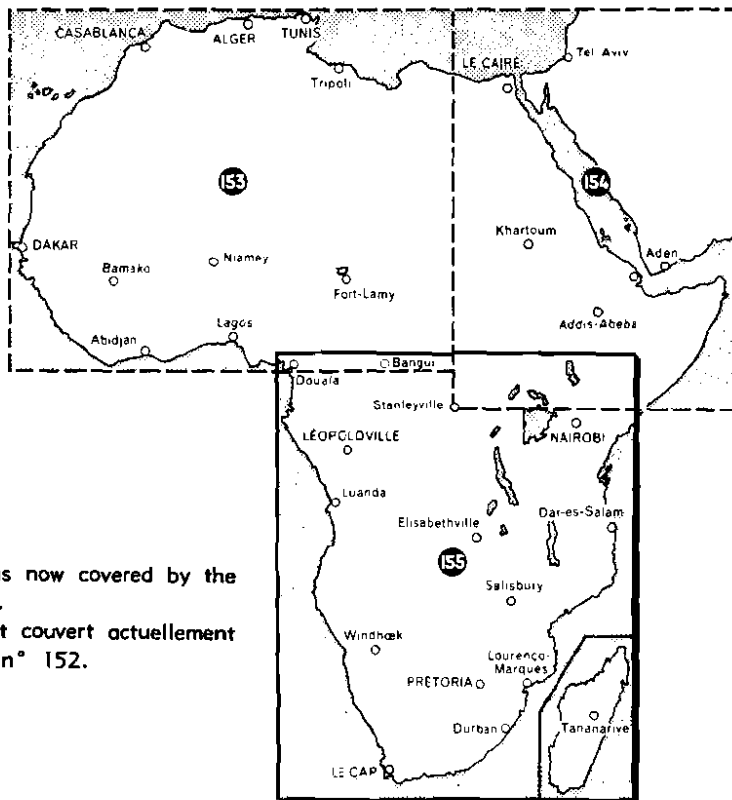
With the various work, let us say about 1,600 days.

The perfecting of one single sheet represents, as we see, a considerable amount of work. It necessitates the close collaboration of all the departments concerned. It proved possible, for example, to produce the map of the Ivory Coast, because all the administrative organs of the country placed their services at the disposal of the Michelin Touring Service, in order to produce with them this national document.

We hope that this collaboration, which is already effective in numerous States, may become general, so that Michelin may be enabled to bring to a successful conclusion the work of co-ordination constituted by the whole range of maps published by the Michelin Touring Service. These publications can, in fact, only be an important factor in the unity and prosperity of the economy of the African States.

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**Figure 1**  
**Map of Africa in 3 sheets (1)**  
 at 1/4,000,000  
**L'Afrique en 3 feuilles (1)**  
 au 1/4.000.000



- (1) The Sahara is now covered by the map n° 152.
- (1) Le Sahara est couvert actuellement par la carte n° 152.

**Figure 2**  
**The detailed maps at scales from**  
 1/800,000 to 1/1,000,000.  
**Les cartes détaillées du**  
 1/800.000 au 1/1.000.000.

