

**BELGIQUE  
ET GRANDE-BRETAGNE  
ET IRLANDE DU NORD**

Echange de notes relatif à la délimitation de la frontière entre la Rhodésie du Nord et le Congo belge, Londres, les 4 avril et 3 mai 1927, avec annexes; et

Echange de notes relatif à la frontière ci-dessus mentionnée, Bruxelles, le 7 avril 1933, avec annexes.

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**BELGIUM  
AND GREAT BRITAIN  
AND NORTHERN IRELAND**

Exchange of Notes respecting the Delimitation of the Boundary between Northern Rhodesia and the Belgian Congo, London, April 4, and May 3, 1927, with Annexes; and

Exchange of Notes regarding the above-mentioned Boundary, Brussels, April 7, 1933, with Annexes.

No. 3229. — EXCHANGE OF NOTES<sup>1</sup> BETWEEN THE BELGIAN GOVERNMENT AND HIS MAJESTY'S GOVERNMENT IN THE UNITED KINGDOM RESPECTING THE DELIMITATION OF THE BOUNDARY BETWEEN NORTHERN RHODESIA AND THE BELGIAN CONGO. LONDON, APRIL 4 AND MAY 3, 1927.

*French and English official texts communicated by His Majesty's Secretary of State for Foreign Affairs in Great Britain. The registration of this Exchange of Notes took place September 20, 1933.*<sup>2</sup>

No. I.

<sup>3</sup> TRADUCTION. — TRANSLATION.

BARON MONCHEUR TO SIR AUSTEN CHAMBERLAIN.

BELGIAN EMBASSY.

LONDON, *April 4, 1927.*

SIR,

The Conference arranged by the Government of the King, my august Sovereign, and the Government of His Britannic Majesty to prepare instructions for the commission to delimit the frontier between the Congo and Northern Rhodesia met in Brussels, as your Excellency is aware, from the 16th to the 19th March, 1927.

The agreement of the Belgian and British delegates having been made subject to the approval of their respective Governments, I have the honour, on instructions from my Government, to inform your Excellency that the Belgian Government accepts the conclusions of the Conference<sup>4</sup>.

I avail, etc.

Bn. MONCHEUR.

No 2.

<sup>5</sup> TRADUCTION. — TRANSLATION.

SIR AUSTEN CHAMBERLAIN AU BARON MONCHEUR.

FOREIGN OFFICE.

LONDRES, *le 3 mai 1927.*

MONSIEUR L'AMBASSADEUR,

Dans votre note du 4 du mois dernier, vous avez bien voulu me faire savoir que le Gouvernement belge avait accepté les conclusions de la Conférence<sup>4</sup> qui s'est réunie à Bruxelles du 16 au 19 mars

<sup>1</sup> Came into force April 7, 1933.

<sup>2</sup> The Secretariat publishes, in the Series, the Exchange of Notes of April 4 and May 3, 1927, presented for registration on September 20, 1933, at the same time as the Exchange of Notes of April 7, 1933, presented for registration on July 19, 1933, the two Exchanges of Notes being registered under the same number.

<sup>3</sup> Traduction du Foreign Office de Sa Majesté britannique.

<sup>3</sup> Translation of His Britannic Majesty's Foreign Office.

<sup>4</sup> See No. 3.

<sup>5</sup> Traduit par le Secrétariat de la Société des Nations, à titre d'information.

<sup>5</sup> Translated by the Secretariat of the League of Nations, for information.

16th to the 19th March with a view to prepare instructions for the commission which is to delimit the frontier between the Belgian Congo and Northern Rhodesia.

2. I have the honour on behalf of His Majesty's Government in Great Britain to inform you that they also accept the conclusions of the above-mentioned Conference.

I have, etc.

(For the Secretary of State :)

R. H. CAMPBELL.

No. 3.

AGREEMENT SIGNED AT BRUSSELS ON MARCH 19, 1927, RESPECTING APPOINTMENT OF A COMMISSION FOR DEMARCATION OF KATANGA-NORTHERN RHODESIA BOUNDARY.

The British and Belgian delegates appointed to agree, subject to the approval of their respective Governments, upon the scope and composition of a Mixed Commission to carry out the demarcation of the boundary between Katanga, a part of the Belgian Congo, and Northern Rhodesia, and upon the text of the instructions to be given to that Commission, met at the Ministry for Foreign Affairs, Brussels, from the 16th to the 19th March, 1927, inclusive.

The British delegate was Colonel H. St. J. L. WINTERBOTHAM of the War Office.

The Belgian delegates were M. LOUWERS, of the Ministry for Foreign Affairs, MM. HALEWYCK DE HEUSCH and MAURY of the Ministry of Colonies.

The decisions arrived at are given below in English and French, and shall be included in the instructions to be given to the respective Commissioners.

Of the two appendices attached to this document, Appendix I<sup>1</sup> gives a short and signed résumé of the agreement already reached on the subject of the whole Anglo-Belgian boundary from Lake Tanganyika to Pillar 46. Appendix II<sup>2</sup> shows the type of boundary pillars agreed to.

I.

A mixed Anglo-Belgian Commission will be appointed to demarcate precisely that portion of the boundary between the Congo and Northern Rhodesia lying between Boundary Pillars 1 and 46, erected by the Anglo-Belgian (Rhodesia-Congo) Boundary Commission of 1911-1914.

Throughout this portion the boundary is defined as the ideal watershed dividing the basins of the rivers Congo and Zambesi.

II. — *Powers of the Commission.*

1. The Commissioners shall have authority, generally, to make such minor rectifications, and adjustments, to the ideal watershed as are necessary to avoid the troubles which might arise from a literal interpretation of the Treaty.

2. The present position of the boundary pillars shall be accepted where they lie not farther than 200 metres from the ideal watershed. In exceptional circumstances, and in areas of no

<sup>1</sup> See page 82, of this Volume.

<sup>2</sup> Not reproduced.

particular known economic value, errors of position up to 500 metres may be allowed. In adjusting such departures from the ideal watershed to the general run of the boundary, no sharp re-entrants will be formed.

3. Where there are alternative ideal watersheds, including undrained basins, the Commissioners shall agree upon, and demarcate, a compromise line.

4. In all cases of encroachment by the nationals of either party, the Commissioners will be guided by the following general principles :

(a) Properties and enclosures which lie athwart the ideal watershed shall be left undivided as far as possible, whether they be State, corporation, tribal or individual, in character.

(b) The good faith and economic importance of any encroachment shall be taken into account.

(c) No encroachment of a date subsequent to the signature of this agreement shall be considered.

5. In the possible event of a difference of opinion, each Commissioner will forward an immediate report embodying the views of both parties to :

(a) The home authority.

(b) The local authority, together with a request that local views may be represented as early as possible to the home authority.

In the above case the ideal watershed will be marked temporarily, but adequately, during the progress of discussion.

6. The Commissioners shall consider the question of the Belgian Railway, north and north-west of Mokambo station, with a view to establishing whether a modification of the boundary, such as to allow of shortening the railway, can be arranged.

### III.

The general report of the Commission shall include :

(a) (1) A general description of the line.

(2) A plan, cadastral in nature, showing all field measurements, both linear and angular, the positions of all boundary pillars, main and auxiliary, the levels and spot heights, and the relative positions of artificial detail, such as railways and buildings, lying within 500 metres of the actual boundary. The scale of this plan shall be 1/10,000.

(3) A special report, accompanied by its own topographical plan (at the scale of 1/10,000), to illustrate any important deviation from the ideal watershed considered necessary under the terms of paragraph II.

(4) A list of boundary pillars descriptive of construction, and tabulating the bearings and check measurements necessary for restoration.

- (b) (1) A diary of the work and conclusions of the Commission.  
 (2) A technical report on methods and instruments.

## IV.

1. Main boundary pillars shall include Nos. 1 to 46 as already established, or as altered by the present Commission, amplified by the insertion of additional pillars at a mean interval of 5 kilometres.

2. Auxiliary boundary pillars, at a mean interval of 500 metres, shall be inserted to define change of bearing, and in such a fashion as to allow of a definition of the boundary by the straight lines joining them.

3. Successive pillars shall be intervisible between instrument (taken as 1.40 metres) and stave (taken as 3 metres).

## V.

1. Main boundary pillars shall be established with reference to the ruling triangulation, except in cases where natural difficulties make it necessary to traverse.

2. Auxiliary pillars shall be points of a continuous traverse, except where ranges or hill features make direct recourse to triangulation easier and cheaper.

## VI.

Trigonometrical heights will be obtained for all boundary pillars, main and auxiliary ; the actual position of the ideal watershed being obtained, where necessary, by levelling sections perpendicular to the boundary.

## VII.

The error of triangular closure shall not exceed 12 seconds, and of traverses a closing discrepancy, angular  $\sqrt{n} \times 30''$  (where  $n$  is the number of summits), and linear  $\frac{\sqrt{d}}{1,000}$  metres (where  $d$  is the distance in kilometres).

The British field measures shall be in feet and the Belgian in metres.

## VIII.

The tables used shall be based on Clarke's 1880 figure. Main boundary pillars shall be defined by their geographical co-ordinates, and auxiliary pillars shall be defined in rectangular co-ordinates referred to the main pillar lying next to the east as origin.

All values shall be the mean of the British and Belgian results and shall be given in metres

## IX.

All boundary pillars, main or auxiliary, shall be marked in iron, concrete, cement or stone.

For main pillars the general type of the attached diagram<sup>1</sup> shall be adhered to wherever possible. At auxiliary pillars a section of iron piping, 3 feet in length and 2 inches in diameter, may be driven in flush with the surface, and marked by a cairn or pillar, and trench, above. In addition to the marks as defined above, a line of 5 metres in width will be cleared along the boundary.

## X.

The Commission shall allocate responsibility for the upkeep of boundary pillars, and of cleared boundary lines, to the respective local Governments in such a fashion as to halve the labour and cost in the most convenient way. A joint perambulation and inspection of the boundary shall be made every ten years, and during this inspection the position of any restored point shall be verified. Repairs considered necessary will be brought to the notice of the responsible official, who shall be authorised to undertake them as a matter of routine.

## XI.

The Mixed Commission shall consist of British and Belgian elements similar in strength and composed as under :

- One Chief Commissioner.
- Two Assistant Commissioners.
- Four Technical Assistants.

## XII.

The Commission shall assemble at Elisabethville on or about the 15th July, 1927, and shall start with the demarcation between Boundary Pillars 22 and 29.

## XIII.

It will be necessary to arrange for a medical officer, for transport, labour and porters, and for suitable escort. The Governments of Northern Rhodesia and Katanga shall be asked to consider, to decide and to provide what may be necessary under the above headings.

## XIV.

Each nationality shall bear the expense of its own Commission, transport, stores, etc., and the Mixed Commission shall endeavour, by equitable division in the field, to avoid subsequent accounting.

<sup>1</sup> Not reproduced.

## XV.

The decisions and conclusions of the Commissioners shall be submitted for ratification by the two Governments, and the delimitation shall, thereby, become authoritative.

Signed in duplicate at Brussels on the 19th day of March, 1927.

H. S. WINTERBOTHAM, *Colonel*.  
HALEWYCK DE HEUSCH.  
O. LOUWERS.  
MAURY.

## APPENDIX I TO No. 3.

## RÉSUMÉ OF AGREEMENT RESPECTING WHOLE ANGLO-BELGIAN BOUNDARY FROM LAKE TANGANYIKA TO PILLAR 46.

In order to facilitate negotiations for the final delimitation and demarcation of the Anglo-Belgian Boundary included in the following four sectors, viz. :

- I. Congo-Zambesi Watershed Section,
- II. Bangweulu Section (Mpanta Meridian),
- III. Luapula River and Lake Mweru Section,
- IV. Mweru-Tanganyika Section,

The conference take occasion to define the points on which agreement has already been reached.

I. — *Congo-Zambesi Watershed Section.*

It is agreed in principle that this boundary is defined upon the ground by the ideal watershed between boundary pillars 1 and 46. Small adjustments to the ideal watershed are envisaged, but pillars 1 and 46 are both already fixed for the following reasons :

(a) *Pillar 1.* — The meridian of Mpanta has been agreed to, and actually provides the only definite point of departure for Sections I and II. The meridian is partially cleared on the ground and the position is known to be substantially correct.

(b) *Pillar 46.* — The position of this point should be agreed to simultaneously by Great Britain, Belgium and Portugal, forming as it does a common point. Great Britain and Portugal have already ratified the treaty dealing with the Angola-Rhodesia boundary and have, therein, agreed to the present position of this pillar. It remains therefore to include that position, as it exists, in the demarcation now to be undertaken.

II. — *Bangweulu Section (Mpanta Meridian).*

There is, for this section, an agreement as to the longitude of the Mpanta Meridian, and upon the fact that the river Luapula does not issue from Lake Bangweulu, and is cut by the Mpanta Meridian south of the Lake.

III. — *Luapula River-Lake Mweru.*

The agreed upon line — the thalweg of the Luapula River to its debouchment into Lake Mweru and the line through Lake Mweru to the point where the river Luvua leaves the Lake, leaving the Island of Kilwa to Rhodesia — is agreed to.

IV. — *Mweru-Tanganyika Section.*

Practically no agreement has been reached in this section. The straight line, defined by treaty, extending from the point where the River Luvua issues from Lake Mweru (on the west) to the Cape Akalunga (on the east) is not possible of demarcation without further agreement.

The western terminal point, chosen with difficulty, and subsequently agreed upon by the Commission of 1913, denies access to the Lake to the town of Pweto — a *modus vivendi* establishes that access temporarily. The eastern terminal point has not so far been agreed to. Cape Akalunga cannot be established. It appears that no such name is recognised, and the intention of the treaty is interpreted in different ways by the parties interested.

O. LOUWERS.

HALEWYCK DE HEUSCH.

MAURY.

H. S. WINTERBOTHAM, *Colonel.*



N<sup>o</sup> 3229. — ÉCHANGE DE NOTES <sup>1</sup> ENTRE LE GOUVERNEMENT BELGE ET LE GOUVERNEMENT DE SA MAJESTÉ DANS LE ROYAUME-UNI RELATIF A LA FRONTIÈRE ENTRE LA RHODÉSIE DU NORD ET LE CONGO BELGE. BRUXELLES, LE 7 AVRIL 1933.

*Textes officiels français et anglais communiqués par le secrétaire d'Etat aux Affaires étrangères de Sa Majesté en Grande-Bretagne. L'enregistrement de cet échange de notes a eu lieu le 19 juillet 1933.*

(1)

LORD GRANVILLE TO M. PAUL HYMANS.

BRITISH EMBASSY.

BRUSSELS, April 7, 1933.

M. LE MINISTRE,

I have the honour to inform your Excellency that His Majesty's Government in the United Kingdom of Great Britain and Northern Ireland, having noted the protocols signed on the 1st October, 1929, and the 24th February, 1930, containing the decisions of the Commissioners appointed to delimit and demarcate a section of the boundary between the Belgian Congo and Northern Rhodesia, declare that they approve these protocols and consider as being the exact boundary between these two territories the boundary resulting from the text of the said protocols as printed and annexed hereto and the accompanying maps <sup>2</sup>.

2. At the end of the protocol of the 1st October, 1929, is an undertaking which may be summarised as follows :

" It was not found possible to effect a modification of the boundary north-west of Mokambo which would have allowed the Belgian railway to construct in this area a short portion of the railway with the object of facilitating the working of the line, but it is agreed that, if at some future date the British interest in that portion of Rhodesian territory which would have to be ceded to Belgium to enable this alteration to be effected should admit, the question of the possibility of a modification of the boundary between the main pillars 22 and 22.II might be considered."

3. His Majesty's Government in the United Kingdom confirm this undertaking. On the other hand, they note the renunciation previously agreed to by the Belgian Government of the

<sup>1</sup> Entré en vigueur le 7 avril 1933.

<sup>2</sup> Non reproduites.

No. 3229. — EXCHANGE OF NOTES<sup>1</sup> BETWEEN THE BELGIAN GOVERNMENT AND HIS MAJESTY'S GOVERNMENT IN THE UNITED KINGDOM REGARDING THE BOUNDARY BETWEEN NORTHERN RHODESIA AND THE BELGIAN CONGO. BRUSSELS, APRIL 7, 1933.

*French and English official texts communicated by His Majesty's Secretary of State for Foreign Affairs in Great Britain. The registration of this Exchange of Notes took place July 19, 1933.*

N° 1.

<sup>2</sup> TRADUCTION, — TRANSLATION.

LORD GRANVILLE A M. PAUL HYMANS.

AMBASSADE DE GRANDE-BRETAGNE.

BRUXELLES, le 7 avril 1933.

MONSIEUR LE MINISTRE,

J'ai l'honneur de vous informer que le Gouvernement de Sa Majesté dans le Royaume-Uni de Grande-Bretagne et d'Irlande du Nord, ayant pris connaissance des protocoles signés le 1<sup>er</sup> octobre 1929 et le 24 février 1930, et contenant les décisions des commissaires désignés pour la délimitation et la démarcation d'une section de la frontière entre le Congo belge et la Rhodésie septentrionale, approuve ces protocoles et entend considérer comme étant la frontière exacte entre ces deux territoires celle qui résulte du texte desdits protocoles, tels qu'ils sont imprimés et annexés à la présente note, et des cartes qui les accompagnent<sup>3</sup>.

2. Le protocole du 1<sup>er</sup> octobre 1929 contient, à la fin, un engagement qui peut être résumé comme suit :

« Il n'a pas été possible d'établir au nord-ouest de Mokambo une frontière qui eût permis au chemin de fer belge de construire dans cette région une courte variante destinée à faciliter l'exploitation de la ligne, mais il est entendu que si, dans l'avenir, les intérêts britanniques pouvant être en cause dans la portion de territoire rhodésien qui devrait être cédée à la Belgique pour la réalisation de cette variante le permettaient, la question de la possibilité d'une modification de la frontière entre les bornes principales 22 et 22.II pourrait être envisagée. »

3. Le Gouvernement de Sa Majesté dans le Royaume-Uni confirme cet engagement. D'autre part, il prend acte de la renonciation à laquelle le Gouvernement belge a précédemment consenti

<sup>1</sup> Came into force April 7, 1933.

<sup>2</sup> Traduit par le Secrétariat de la Société des Nations, à titre d'information.

<sup>3</sup> Maps not reproduced.

<sup>2</sup> Translated by the Secretariat of the League of Nations, for information.

facilities which the Commissioners had decided to offer it, pending the contemplated rectification of the boundary, so as to allow the Belgian railway to pass through Rhodesian territory.

4. I have the honour to propose that the present note and your Excellency's reply in similar terms shall be regarded as placing on record the agreement arrived at between the two Governments in this matter.

I avail, etc.

GRANVILLE.

N° 2.

M. PAUL HYMANS TO LORD GRANVILLE.

MINISTÈRE DES AFFAIRES ÉTRANGÈRES.

BRUXELLES, le 7 avril 1933.

MONSIEUR L'AMBASSADEUR,

Votre Excellence m'a fait l'honneur de m'informer que le Gouvernement de Sa Majesté britannique au Royaume-Uni de Grande-Bretagne et d'Irlande du Nord, ayant pris connaissance des protocoles signés le 1<sup>er</sup> octobre 1929 et le 24 février 1930 et contenant les décisions des Commissaires désignés pour la délimitation et la démarcation d'une section de la frontière entre le Congo belge et la Rhodésie du Nord, approuve ces protocoles et entend considérer comme étant la frontière exacte entre les deux territoires en cause celle qui résulte du texte de ces protocoles, tels qu'ils sont ici annexés et des cartes qui les accompagnent. Je remercie Votre Excellence de cette communication.

De mon côté, j'ai l'honneur de lui faire savoir que le Gouvernement du Roi approuve les mêmes protocoles et entend aussi considérer comme étant la frontière exacte entre le Congo belge et la Rhodésie du Nord celle qui résulte desdits protocoles et des cartes qui les accompagnent.

La lettre de Votre Excellence rappelle que le protocole du 1<sup>er</sup> octobre 1929 porte *in fine* une stipulation qui peut être résumée comme suit :

« Il n'a pas été possible d'établir au nord-ouest de Mokambo une frontière qui eût permis au chemin de fer belge de construire dans cette région une courte variante destinée à faciliter l'exploitation de la ligne, mais il est entendu que si, dans l'avenir, les intérêts britanniques pouvant être en cause dans la portion de territoire rhodésien qui devrait être cédée à la Belgique pour la réalisation de cette variante le permettaient, la question de la possibilité d'une modification de la frontière entre les bornes principales 22 et 22.II pourrait être envisagée. »

Votre Excellence a bien voulu me dire que le Gouvernement britannique prend à son compte cette promesse ; le Gouvernement du Roi lui en est reconnaissant. Je tiens, d'autre part, à donner acte à Votre Excellence de la renonciation à laquelle le Gouvernement belge a précédemment consenti, au sujet de facilités que les Commissaires avaient décidé de lui offrir en attendant la rectification de frontière envisagée pour permettre au chemin de fer belge de passer en territoire rhodésien.

Le Gouvernement belge accepte la proposition de Votre Excellence de considérer le présent échange de lettres comme tenant lieu d'instrument de l'accord intervenu entre les deux Gouvernements dans cette matière.

Je saisis, etc.

HYMANS.

PROTOCOLS SIGNED BY THE COMMISSIONERS APPOINTED TO DELIMIT AND DEMARCATÉ THE BOUNDARY BETWEEN NORTHERN RHODESIA AND THE BELGIAN CONGO. OCTOBER 1, 1929, AND FEBRUARY 24, 1930.

No. 1.

PROTOCOL OF OCTOBER 1, 1929, CONTAINING THE DECISIONS OF THE COMMISSIONERS RESPECTING FRONTIER BETWEEN BOUNDARY PILLARS NOS. 11 AND 29.

The undersigned,

Lieutenant-Colonel A. B. CLOUGH, Royal Engineers, Senior British Commissioner, and

F. GENDARME, Lieutenant-Colonel of Colonial Troops, Senior Belgian Commissioner,

Having been duly appointed by their respective Governments to delimit and demarcate the frontier between British and Belgian territory along the Congo-Zambesi watershed, in accordance with the Agreement signed in Brussels between Great Britain and Belgium on the 19th March, 1927 (*vide* Appendix I<sup>1</sup>), have surveyed the boundary in accordance with the instructions laid down and have come to the following agreement :

1. The International Frontier between Northern Rhodesia and the Belgian Congo between Boundary Pillar No. Eleven and Boundary Pillar No. Twenty-Nine shall, except where modified by special agreement between us (*vide* Appendix III<sup>2</sup>), follow as closely as possible the line of ideal watershed separating the River Zambesi from the River Congo.

2. The boundary, as actually demarcated on the ground, consists of a series of straight lines, each of an average length of about 500 metres. These lines have been sited in such a way that they follow, as closely as possible, the line of ideal watershed except where the boundary has been modified (*vide* paragraph 1).

3. At every change of direction between these straight lines a boundary pillar has been erected. The boundary pillars are classified under two heads :

(a) Main boundary pillars (constructed of concrete), at intervals of approximately 5 kilometres along the boundary.

(b) Auxiliary pillars (cairns of stones), at every intermediate point between main pillars.

For details of construction, see Appendix VIII.<sup>3</sup>

In addition, a lane of 5 metres in width has been cut all along the boundary.

4. The existing numbering of the boundary pillars erected by the 1912-14 Commission has been retained.

As these pillars were, in many cases, at a considerable distance apart, it was found necessary to erect a number of extra main pillars, in order to comply with the instructions that there shall be a main pillar every 5 kilometres approximately.

<sup>1</sup> Appendix I has been omitted, as it is merely a reproduction of a previous agreement. See page 74, of this Volume.

<sup>2</sup> See page 110, of this Volume.

<sup>3</sup> Not reproduced.

These extra main pillars have been numbered by adding Roman numerals to the original numbers, *e. g.*, between B.P. 24 and B.P. 25 it was found necessary to insert four extra main boundary pillars.

These were, therefore, numbered as follows :

24.I., 24.II., 24.III. and 24.IV.

The auxiliary boundary pillars have been designated by adding a letter of the alphabet to the number of the main boundary pillar to which their co-ordinates are referred.

To avoid confusion, in no case has the letter " I " been used. The sequence of lettering runs, therefore, direct from " H " to " J," omitting " I."

*e.g.*, between B.P. 24.I. and B.P. 24.II. there are eleven auxiliary pillars, which are numbered as follows :

24.I.A., 24.I.B., &c., to 24.I.L.

All numbering is from east to west along the boundary.

5. The actual positions of the boundary pillars are defined as follows :

(a) *Main Pillars.* — By their geographical co-ordinates.

(b) *Auxiliary Pillars.* — By their rectangular co-ordinates on the Cassini projection, the origin for each bay of the boundary between main boundary pillars being the next main pillar to the eastward along the boundary, and the axes of reference the meridian through that point and the line at right angles to it.

6. In Appendix VI<sup>1</sup> will be found a complete list of all boundary pillars, both main and auxiliary, giving the reduced horizontal distance between successive pillars, and the included angles between the successive legs as obtained from direct field measurement and, in addition, provisional values for their co-ordinates of position and altitudes.

In accordance with Section II. 2. of the Brussels Agreement (1927), the original positions of some of the main boundary pillars as sited by the 1912-14 Commission were altered so as to conform to the actual location of the ideal watershed.

A list of the occasions where these original pillars have not been accepted, and where a new position has therefore been selected, will be found in Appendix V.

7. Twenty-five plans on a scale of 1/10,000 are attached to this Protocol (*vide* Appendix VII).<sup>1</sup>

These cadastral plans illustrate the run of the boundary from B.P. 11 to B.P. 29, and contain sufficient data for re-establishing any boundary pillars which may be destroyed.

In addition, one special plan<sup>1</sup> is attached illustrating the only important deviation from the ideal watershed in this section of the boundary. The special report dealing with this deviation will be found in Appendix III.<sup>2</sup>

8. A general description of the boundary will be found in Appendix II.<sup>3</sup>

9. No fresh determination (by re-survey or re-computation) of the position of any natural feature or boundary pillar mentioned in this Protocol shall alter boundary line as marked on the ground and herein described.

10. Responsibility for the upkeep of boundary pillars and for the clearing of the boundary lines is allocated as follows :

*Government of Northern Rhodesia.*

From B.P. 11 (inclusive) to B.P. 24 (exclusive).

*Government of the Belgian Congo.*

From B.P. 24 (inclusive) to B.P. 29 (inclusive).

<sup>1</sup> Not reproduced.

<sup>2</sup> See page 110, of this Volume.

<sup>3</sup> See page 94, of this Volume.

It is agreed that each Government shall, annually, ensure that the portion of the boundary for which it is responsible shall be cut or cleared in whatever manner appears suitable, and that the boundary pillars shall be maintained in a proper state of repair.

A joint perambulation and inspection of the boundary shall be made every ten years by representatives detailed by the Governments of Northern Rhodesia and the Belgian Congo to ensure that the boundary is kept properly cleared and that the pillars have not been moved.

The first perambulation shall take place during 1938.

11. In accordance with Section II, paragraph 6, of the Agreement<sup>1</sup> signed at Brussels on the 19th March, 1927, the possibility of effecting a modification to the boundary to the north-west of Mokambo has been investigated.

In consequence of mineral development in that area, it has not been found possible at the present time to effect any such modification.

It is agreed, however, that if at some future date it is found that the small area of Rhodesian territory concerned is not required for a commercial development, the question of the possibility of a modification of the boundary between B.P. 22 and B.P.22.II. shall be reconsidered.

In the meantime, by virtue of an Agreement<sup>2</sup> which was signed by the British and Belgian Commissioners on the 15th May, 1929, the Belgian Railway is authorised, under certain conditions, to reconstruct a short portion of the railway through Rhodesian Territory immediately to the south of the Mokambo Hills.

A copy of the above-mentioned agreement is attached to this Protocol (*vide* Appendix IV).<sup>3</sup>

12. The two original copies of the present Protocol, in English for the British Section and in French for the Belgian Section, are signed this first day of October, nineteen hundred and twenty-nine.

F. GENDARME,  
*Lieut.-Colonel,*  
*Senior Belgian Commissioner.*

A. B. CLOUGH,  
*Lieut.-Colonel,*  
*Senior British Commissioner.*

#### APPENDIX I.

##### AGREEMENT SIGNED AT BRUSSELS BETWEEN GREAT BRITAIN AND BELGIUM ON MARCH 19, 1927.

(Omitted, as it is merely a reproduction of a previous agreement.<sup>1</sup>)

#### APPENDIX II.

##### GENERAL DESCRIPTION OF THE BOUNDARY, B.P. 11-B.P. 29.

For practically the entire distance from B.P. 11 to B.P. 29, the boundary passes through "savannah bush". Visibility is restricted to 100 to 200 yards at a maximum. The trees average about 40 feet in height and about 6 inches in diameter. As a general rule the undergrowth is not thick. The prevalence of many large ant-hills is a peculiar feature.

<sup>1</sup> See page 74, of this Volume.

<sup>2</sup> See note on page 114, of this Volume.

Except on rare occasions the watershed ridge is of a flat-topped nature showing very little rise or fall for a considerable distance on either side. In the following description the terms "unmistakable", "well-defined" and "ill-defined" afford a relative idea as to the nature of the actual watershed ridge.

#### *B.P. 11.*

Situated on a prominent summit at the northern extremity at the Kabwa Hills, about 15 miles to the south-east of Ndola.

Its centre point corresponds with the trigonometrical station in the triangulation known as Kabwa.

From B.P. 11 the boundary bears north-north-west for a distance of about 3 miles and then runs due north to B.P. 12. The watershed is ill-defined. Between B.P. 11 and B.P. 12 one additional main boundary pillar has been erected as follows :

*B.P. 11.I.* : Situated at a distance of about  $2\frac{3}{4}$  miles from B.P. 11.

#### *B.P. 12.*

Is situated a short distance north of the sources of the Rivers Mwatesi (Rhodesia) and the Makinka (Congo) and lies about 12 miles to the east of Ndola.

Between B.P. 11 and B.P. 11.I. there are 15 auxiliary boundary pillars.

Between B.P. 11.I. and B.P. 12 there are 13 auxiliary boundary pillars.

From B.P. 12 to B.P. 13 the watershed is ill-defined and traverses a large plateau following a general north-westerly direction for about 6 miles, when it bears west-north-west and after 2 more miles B.P. 13 is reached.

Between B.P. 12 and B.P. 13 two additional main boundary pillars have been erected as follows :

*B.P. 12.I.* : About 3 miles to the north-west of B.P. 12.

*B.P. 12.II.* : A little over 2 miles to the north-west of B.P. 12.I.

Between B.P. 12 and B.P. 12.I. there are 8 auxiliary boundary pillars.

Between B.P. 12.I. and B.P. 12.II. there are 9 auxiliary boundary pillars.

Between B.P. 12.II. and B.P. 13 there are 10 auxiliary boundary pillars.

#### *B.P. 13.*

Situated between the sources of the Rivers Mupatanzi (Rhodesia) and Kaluoza (Congo).

From B.P. 13 the watershed is ill-defined and follows a general north-westerly direction, crossing a large plateau, the slopes of which are gentle towards the Congo but steeper towards the Rhodesian valley of the River Itawa.

B.P. 14 is reached after about 9 miles along the watershed from B.P. 13, the watershed being ill-defined.

Between B.P. 13 and B.P. 14 one supplementary main pillar has been erected as follows :

*B.P. 13.I.* : Which is situated nearly 4 miles to the north-west of B.P. 13.

Between B.P. 13 and B.P. 13.I. there are 16 auxiliary boundary pillars.

Between B.P. 13.I. and B.P. 14 there are 13 auxiliary boundary pillars.

#### *B.P. 14.*

Situated about 3 miles to the east of Misundu (the frontier station of the railway from Ndola to Sakania).

Continuing in a north-westerly direction for about 1 mile after passing B.P. 14, the boundary bears sharp to the west and, swinging round slightly towards the south, reaches B.P. 15, about 3 miles from B.P. 14 measured along the boundary.

Between B.P. 14 and B.P. 15 there are 13 auxiliary boundary pillars.

*B.P. 15.*

Situated immediately to the west of the railway line, just north of Misundu, where the railway crosses from Rhodesia into Congo Territory.

At B.P. 15 the boundary turns sharply towards the south, thus commencing the extensive and very pronounced loop towards Rhodesia, which has a depth of about 5 miles from west to east and is about 15 miles in length from north to south.

The sources of the River Itawa are found a short distance to the south of B.P. s 14 and 15, and the pronounced and marshy valley of the Itawa runs thence in a southerly direction, on the east side of the railway, towards Ndola, 10 miles to the south.

Leaving B.P. 15 in a south-south-westerly direction B.P. 15.I. is reached, about 40 metres north of the Ndola-Nkana road. The actual watershed line is ill-defined. It crosses to the south of the road at this point and, looping first to the west and then northwards, crosses the road again about 1,800 metres farther to the west, at a point which is now B.P. 15.I.D. The boundary here was, however, modified and runs now from B.P. 15.I. to B.P. 15.I.D. at a distance of about 10 metres to the north of the road, thus leaving the road wholly in Rhodesian Territory.

At B.P. 15.I.D. the boundary swings to the north-west away from the road until reaching B.P. 16.

Between B.P. 15 and B.P. 15.I. there are 21 auxiliary boundary pillars.

Between B.P. 15.I. and B.P. 16 there are 15 auxiliary boundary pillards.

*B.P. 16.*

Is situated on the side of the branch road leading from the main Ndola-Nkana road to Sakania, at a distance of approximately 500 metres from the road junction. This road junction is about 11½ miles from Ndola.

From B.P. 16 the boundary follows a general north-north-westerly direction and B.P. 17 is reached after traversing a wide plateau for a distance of about 3½ miles. The watershed is ill-defined.

Between B.P. 16 and B.P. 17 there are 9 auxiliary boundary pillars.

*B.P. 17.*

Situated close to, and just to the north-east of the source of the south branch of the River Mwekera (Rhodesia).

Leaving B.P. 17 the watershed ridge becomes rather more pronounced and turns towards the north-west.

*B.P. 17.I.* : Is reached at a distance of about 3½ miles from B.P. 17. The ridge then becomes less pronounced as the boundary is followed to B.P. 18.

Between B.P. 17 and B.P. 17.I. there are 12 auxiliary boundary pillars.

Between B.P. 17.I. and B.P. 18 there are 10 auxiliary boundary pillars.

*B.P. 18.*

Situated about 6 miles to the north-west of B.P. 17 and in close proximity to the northern branch of the Mwekera River (Rhodesia) and of the River Kamoka (Congo).

This latter stream drains into a small enclosed basin lying to the north-west of Sakania between the boundary and the Katanga Railway.

Old B.P. 18 was situated at a point where now stands B.P. 18. F. This point lies in open ground resembling a "dembo" from which an open clear view is obtained to the south-west and north-east.

Continuing in a north-westerly direction for about 2 miles after leaving B.P. 18, the boundary then swings round to the north-north-east, thus commencing the northern limits of the big loop which originated at B.P. 15 to the southward. The ridge here is ill-defined.

Between B.P. 18 and B.P. 19 one supplementary main boundary pillar has been erected, viz :

*B.P. 18.I.* : Situated about 4 miles north-north-west of B.P. 18.



Immediately after leaving B.P. 18.I. the boundary swings round to the east and at a distance of about 3 miles from B.P. 18.I., B.P. 19 is reached.

Between B.P. 18 and B.P. 18.I. there are 18 auxiliary boundary pillars.

Between B.P. 18.I. and B.P. 19 there are 14 auxiliary boundary pillars.

#### *B.P. 19.*

Shortly after leaving B.P. 19 the boundary swings round to the north approaching close to the railway and reaching B.P. 20 at a distance of about 3 miles along the boundary from B.P. 19.

Between B.P. 19 and B.P. 20 there are 11 auxiliary boundary pillars.

#### *B.P. 20.*

Situated about 300 metres to the west of the railway. The watershed ridge now becomes well-defined. Leaving B.P. 20 the boundary follows a general north-north-easterly direction for about  $1\frac{1}{2}$  miles when it swings round to the north-west and continues thus to B.P. 21 a further distance of about 14 miles. The railway runs more or less parallel to the boundary all the way.

Between B.P. s 20 and 21 four supplementary main boundary pillars have been erected as follows :

*B.P. 20. I.* : In close proximity to Kilometre 28 on the railway.

*B.P. 20. II.* : Close to Kilometre 35 on the railway.

*B.P. 20.III.* : About  $4\frac{1}{2}$  miles north-west of B.P. 20.II.

*B.P. 20.IV.* : Situated on an unmistakable rocky prominence in the vicinity of Kilometre 49 on the railway and about 2 miles to the south-east of Tshofoshi Railway Station.

Between B.P. 20 and B.P. 20. I. there are 11 auxiliary boundary pillars.

Between B.P. 20.I. and B.P. 20.II. there are 22 auxiliary boundary pillars.

Between B.P. 20.II. and B.P. 20.III. there are 19 auxiliary boundary pillars.

Between B.P. 20.III. and B.P. 20.IV. there are 19 auxiliary boundary pillars.

Between B.P. 20.IV. and B.P. 21 there are 25 auxiliary boundary pillars.

#### *B.P. 21.*

Situated on a small hill about 2 miles to the north-west of Tshofoshi Station and in close proximity to Kilometre 54 on the railway.

The Rivers Mutundu (Rhodesia) and Tshofoshi (Congo) have their sources in the vicinity of B.P. 21.

Leaving B.P. 21 the boundary continues along the well-defined watershed ridge towards the foot of the very prominent Mokambo Hills.

B.P.22 is reached at a distance of just over 4 miles from B.P. 21.

Between B.P. 21 and B.P. 22 there are 22 auxiliary pillars.

#### *B.P. 22.*

Situated 150 yards to the west of Mokambo Railway Station.

From B.P. 22 the boundary continues towards the north-west and climbs up the steep shoulder of Mokambo Hill to B.P. 22.I. which corresponds with the Main trigonometrical point " Mokambo South ".

Dropping down to a col at B.P. 21.I.D. the boundary turns in a general westerly direction, and, after a series of three very pronounced bends, reaches B.P. 22.III.

The watershed ridge after leaving Mokambo Hill becomes ill-defined once more.

About half-way between B.P. 22.I. and B.P. 22.III. another supplementary main boundary pillar has been erected, viz., B.P. 22.II.

*B.P. 22.III.* : (A supplementary main pillar) is 100 metres distant from the railway line in the vicinity of Kilometre 86.

From B.P. 22.III. to B.P. 22.IV. the boundary runs towards the west for a distance of about 2 miles and then bends round towards the north reaching B.P. 22.IV. in the close vicinity of Kilometre 91 on the railway. The watershed is ill-defined.

B.P. 22.IV. : (A supplementary main pillar) is situated in the vicinity of Kilometre Post 91 of the railway.

From B.P. 22.IV. the boundary proceeds westwards for about  $1\frac{1}{2}$  miles and then bears to the south-west reaching B.P. 23 after a further 2 miles.

Between B.P. 22 and B.P. 22.I. there are 8 auxiliary boundary pillars.

Between B.P. 22.I. and B.P. 22.II. there are 21 auxiliary boundary pillars.

Between B.P. 22.II. and B.P. 22.III. there are 14 auxiliary boundary pillars.

Between B.P. 22.III. and B.P. 22.IV. there are 12 auxiliary boundary pillars.

Between B.P. 22.IV. and B.P. 23 there are 12 auxiliary boundary pillars.

### B.P. 23.

Situated about 800 metres to the south of the railway in the vicinity of Kilometre 98.

The old traction road from Tshinsenda crosses the railway from the north side at Kilometre 99 and passes close by B.P. 23 proceeding in a south-easterly direction towards Sakania.

At B.P. 23, the watershed ridge turns sharply to the south and forms a most pronounced loop about 3 miles in depth and of an average width of approximately 2 miles.

The eastern and western sides of this loop are well-defined. The base of the loop, at its south end, is, however, ill-defined.

B.P. 23.I. : At the most south-westerly point on the loop.

B.P. 23.II. : About  $1\frac{1}{2}$  miles to the south-west of Lubembe Station.

B.P. 23.III. : The boundary approaches close to the railway once more at Kilometre 108 near which point is situated B.P. 23.III.

From this point the watershed is fairly well-defined and follows a sinuous and roughly westerly direction as far as B.P. 23.VI. which is situated close to Kilometre 118 on the railway, and the railway runs close to and parallel with it all the way. B.P. s 23.IV. and 23.V. are erected in close proximity to, and connected by traverses with, the terminals " B " and " A " respectively of the old Control Base of Tshinsenda.

After leaving B.P. 23.VI. the boundary turns to the south-west for a distance of about  $2\frac{1}{2}$  miles, when it swings round rapidly in the form of a loop and, following a general northerly direction, reaches B.P. 24. Along this section the watershed is less well-defined.

B.P. 23.VII. : Situated about  $2\frac{1}{2}$  miles south-south-west of B.P. 24 and lies about 200 metres to the east of the Tshinsenda-Nchanga road.

Between B.P. 23 and B.P. 23.I. there are 15 auxiliary boundary pillars.

Between B.P. 23.I. and B.P. 23.II there are 15 auxiliary boundary pillars.

Between B.P. 23.II. and B.P. 23.III. there are 10 auxiliary boundary pillars.

Between B.P. 23.III. and B.P. 23.IV. there are 8 auxiliary boundary pillars.

Between B.P. 23.IV. and B.P. 23.V. there are 10 auxiliary boundary pillars.

Between B.P. 23.V. and B.P. 23.VI. there are 7 auxiliary boundary pillars.

Between B.P. 23.VI. and B.P. 23.VII. there are 16 auxiliary boundary pillars.

Between B.P. 23.VII. and B.P. 24 there are 13 auxiliary boundary pillars.

### B.P. 24.

Situated about 190 yards to the west of the main railway track at Tshinsenda Station. The concrete pillar has been constructed alongside and within 2 metres of the small ant-hill in which the pipe, indicating the position, had been fixed by the 1912-14 Commission.

The original pipe has been left *in situ*.

From B.P. 24 and to B.P. 25 the line of watershed separates the waters of the Rivers Muliashi (Rhodesia) and those of the Rivers Tshinsenda and Luina (Congo).

Leaving B.P. 24 it is ill-defined and runs for approximately 5 miles in a north-north-westerly direction, when it makes a sharp bend to the west-north-west and, rising gradually and becoming

well-defined, it reaches a point (B.P. 25) where the very prominent Chiwolere Ridge juts out away to the north-west and the watershed itself turns very sharply to the south-south-west.

Between B.P. 24 and B.P. 25 four supplementary main pillars have been erected as follows :

*B.P. 24.I.* : About 150 metres from the railway line in the vicinity of Kilometre 130.

*B.P. 24.II.* : About 500 metres north of Kawimba Railway Station.

*B.P. 24.III.* : About 3 miles west of B.P. 24.II.

*B.P. 24.IV.* : About  $4\frac{1}{2}$  miles west of B.P. 24.III.

Between B.P. 24 and B.P. 24.I. there are 14 auxiliary boundary pillars.

Between B.P. 24.I. and B.P. 24.II. there are 11 auxiliary boundary pillars.

Between B.P. 24.II. and B.P. 24.III. there are 9 auxiliary boundary pillars.

Between B.P. 24.III. and B.P. 24.IV. there are 19 auxiliary boundary pillars.

Between B.P. 24.IV. and B.P. 25 there are 5 auxiliary boundary pillars.

### *B.P. 25.*

Is situated 750 metres to the south-south-east of the main trigonometrical station on the summit of Chiwolere Hill. It marks the point of intersection of the Congo-Zambesi watershed with the crest of a very prominent ridge and line of hills extending thence in a north-westerly direction and separating the basins of the Rivers Mushosa and Luina (both in the Congo). The concrete pillar is constructed close alongside and within 2 metres of the original pipe inserted by the 1912-14 Commission.

From B.P. 25 the boundary descends sharply towards the south and south-west and continues thus for about 6 miles, separating the head waters of the Rivers Muliashi and Mingomba (Rhodesia) from those of the Chikalonga (Congo). Along this section the watershed is ill-defined. The boundary then runs in a westerly direction, rising quickly to the top of a very prominent ridge which forms the northern limit of the Konkola Hills. Continuing along the crest of this unmistakable ridge, and descending gradually, a point is reached about  $1\frac{1}{2}$  miles north of Konkola trigonometrical point, where the boundary bends, first to the north-west and then again to the west, and rises sharply to the summit of an isolated kopje on which stands B.P. 26.

*Note.* — B.P. 26, as described above, is not situated on the same site or in the vicinity of the original B.P. 26 fixed by the 1912-14 Commission. Old B.P. 26, although within a few metres of the ideal watershed, was not capable of being fixed trigonometrically. An entirely new site was therefore chosen for new B.P. 26.

Between B.P. 25 and B.P. 26, five supplementary main boundary pillars have been erected as under :

*B.P. 25.I.* : About  $3\frac{1}{2}$  miles to the south-west of B.P. 25.

*B.P. 25.II.* : On a rocky kopje about 500 metres south of the old Traction Road between Baya and Tshinsenda, which was opened during 1928, and about  $2\frac{1}{2}$  miles south-west of B.P. 25.I.

*B.P. 25.III.* : On the top of one of the most prominent rocky kopjes on the ridge mentioned above, and about 2 miles to the west-north-west of B.P. 25.II.

*B.P. 25.IV.* : Cannot be defined with any relation to any prominent landmark. It is in the normal bush and about 30 metres north of the old Traction Road from Baya to Tshinsenda. It is about  $2\frac{3}{4}$  miles to the west of B.P. 25.III.

*B.P. 25.V.* : On a steep rocky kopje at the western end of the well-defined ridge mentioned above, and about 300 metres to the north of the road, and about  $2\frac{1}{4}$  miles west of B.P. 25.IV.

Between B.P. 25 and B.P. 25.I. there are 22 auxiliary boundary pillars.

Between B.P. 25.I. and B.P. 25.II. there are 11 auxiliary boundary pillars.

Between B.P. 25.II. and B.P. 25.III. there are 10 auxiliary boundary pillars.

Between B.P. 25.III. and B.P. 25.IV. there are 12 auxiliary boundary pillars.

Between B.P. 25.IV. and B.P. 25.V. there are 8 auxiliary boundary pillars.

Between B.P. 25.V. and B.P. 26 there are 13 auxiliary boundary pillars.

*B.P. 26.*

Situated on a small kopje (as previously described) about 2 miles to the south of Mushoshi Station.

From B.P. 26 the boundary runs first to the north-east for about 2 miles and then turns sharply to the north-west. With many fluctuations the boundary continues in a general north-westerly direction for about 30 miles before reaching B.P. 27. Along the whole of this section the watershed is ill-defined.

Between B.P. 26 and B.P. 27 the boundary runs almost parallel with and at an approximate distance of 10 miles from the River Kafue (Rhodesia).

Nine supplementary main pillars have been erected between B.P. s 26 and 27 as follows :

*B.P. 26.I.* : Just over 3 miles north of B.P. 26 and roughly  $\frac{3}{4}$  mile to the west of the railway in the vicinity of Kilometre 180.

*B.P. 26.II.* : About  $3\frac{1}{2}$  miles to the west-north-west of B.P. 26.I. and about 200 metres to the south of the railway in the vicinity of Kilometre 186.

*B.P. 26.III.* : About  $3\frac{3}{4}$  miles north-west of B.P. 26.II. and 400 metres distant from the railway in the vicinity of Kilometre 193.

*B.P. 26.IV.* : About 4 miles north-north-west of B.P. 26.III. and about 470 metres west of the railway in the vicinity of Kilometre 200.

*B.P. 26.V.* : Just over 3 miles north-north-west of B.P. 26.IV.

*B.P. 26.VI.* : Nearly  $2\frac{1}{2}$  miles north-west of B.P. 26.V.

*B.P. 26.VII.* : Just over  $2\frac{1}{2}$  miles north-north-west of B.P. 26.VI.

*B.P. 26.VIII.* : About 4 miles north-north-east of B.P. 26.VII. and 430 metres to the west of the railway in the vicinity of Kilometre 213.

*B.P. 26.IX.* : Nearly  $3\frac{3}{4}$  miles north-west of B.P. 26.VIII.

From the neighbourhood of Mushoshi Station (north-east of B.P. 26) to a point within 4 miles of B.P. 27 the Belgian Railway runs parallel with and at an average distance of about 1 mile from the boundary.

Between B.P. 26 and B.P. 26.I. there are 18 auxiliary boundary pillars.

Between B.P. 26.I. and B.P. 26.II. there are 13 auxiliary boundary pillars.

Between B.P. 26.II. and B.P. 26.III. there are 14 auxiliary boundary pillars.

Between B.P. 26.III. and B.P. 26.IV. there are 14 auxiliary boundary pillars.

Between B.P. 26.IV. and B.P. 26.V. there are 13 auxiliary boundary pillars.

Between B.P. 26.V. and B.P. 26.VI. there are 13 auxiliary boundary pillars.

Between B.P. 26.VI. and B.P. 26.VII. there are 10 auxiliary boundary pillars.

Between B.P. 26.VII. and B.P. 26.VIII. there are 19 auxiliary boundary pillars.

Between B.P. 26.VIII. and B.P. 26.IX. there are 16 auxiliary boundary pillars.

Between B.P. 26.IX. and B.P. 27 there are 11 auxiliary boundary pillars.

*B.P. 27.*

Is situated nearly 5 miles west-south-west of Baya Station, on the south side of the road leading from Baya to Kipushi.

From B.P. 27 the boundary continues in a roughly north-westerly direction for a distance of about 15 miles when B.P. 28 is reached. At a distance of about 6 miles from B.P. 27 the branch railway from Munama Junction to Kipushi Mine approaches very close to the boundary and continues to run parallel with and about 200 metres from it to within a short distance of Kipushi.

Here the boundary swings away a little to the south-west and then bends sharply again towards the north-west before reaching B.P. 28. The watershed here is ill-defined.

Between B.P. 27 and B.P. 28 five supplementary main pillars have been erected as follows :

*B.P. 27.I.* : About  $3\frac{1}{2}$  miles to the north-west of B.P. 27.

*B.P. 27.II.* : About 6 miles north-west of B.P. 27 at the point where the Kipushi Railway approaches close to the boundary in the vicinity of Kilometre 21, as measured

from Munama. It is at B.P. 27.II. that the Kipushi boundary modification commences. (See Appendix III.)<sup>1</sup>

The railway here is 200 metres to the north of the boundary.

*B.P. 27.III.* : 200 metres south of the railway in the vicinity of Kilometre 26, and about 3 miles west-north-west of B.P. 27.II.

*B.P. 27.IV.* : Nearly 3 miles west-north-west of B.P. 27.III. and 200 metres south of the railway line in the vicinity of Kilometre 30.

*B.P. 27.V.* : On the north side of the Kipushi-Kansanshi road, about 350 metres from the right-angled junction between this road and the old Kipushi Mine-Elisabethville road.

Between B.P. 27 and B.P. 27.I. there are 12 auxiliary boundary pillars.

Between B.P. 27.I. and B.P. 27.II. there are 10 auxiliary boundary pillars.

Between B.P. 27.II. and B.P. 27.III. there are 11 auxiliary boundary pillars.

In addition, an extra pillar has been erected on the boundary line between B.P. 27.II.C. and B.P. 27.II.D., at the point where the road leading towards Baya and Kansanshi crosses the boundary.

This road, after crossing the railway at Kilometre 22, rejoins the old road from Kipushi to Elisabethville.

The boundary pillar is constructed of concrete and is similar in all respects to a main pillar. It carries the inscription 27.II.C.-D. and is situated at a distance of 420 metres to the west of 27.II.C.

Between B.P. 27.III. and B.P. 27.IV. there are 11 auxiliary boundary pillars.

Between B.P. 27.IV. and B.P. 27.V. there are 18 auxiliary boundary pillars.

Between B.P. 27.V. and B.P. 28 there are 4 auxiliary boundary pillars.

#### *B.P. 28.*

Is situated on the old traction road from Elisabethville through B.P. 30 to Musofi.

From B.P. 28 to B.P. 29 the watershed is ill-defined and runs in a northerly direction, climbing up towards the Mukambo Hills. The actual watershed runs parallel with and from 1 to 2 miles to the west of the prominent Mukambo ridge. B.P. 29 itself is not on the prominent summit called "Mukambo A," but about 1 mile to the west of it.

Between B.P. 28 and B.P. 29, three supplementary main pillars have been erected as follows :

*B.P. 28.I.* : A little more than 3 miles to the north-north-east of B.P. 28.

*B.P. 28.II.* : About 3 miles to the north of B.P. 28.I.

*B.P. 28.III.* : About 4 miles to the north of B.P. 28.II. The River Kafue (Rhodesia) has its source in the vicinity.

Between B.P. 28 and B.P. 28.I. there are 13 auxiliary boundary pillars.

Between B.P. 28.I. and B.P. 28.II. there are 15 auxiliary boundary pillars.

Between B.P. 28.II. and B.P. 28.III. there are 18 auxiliary boundary pillars.

Between B.P. 28.III. and B.P. 29 there are 11 auxiliary boundary pillars.

#### *B.P. 29.*

Situated about 1 mile to the west of "Mukambo A" trigonometrical point, the most prominent point on the Mukambo Hills.

F. GENDARME,

*Lieut.-Colonel,*

*Senior Belgian Commissioner.*

A. B. CLOUGH,

*Lieut.-Colonel,*

*Senior British Commissioner.*

<sup>1</sup> See page 110, of this Volume.

## APPENDIX III.

SUMMARY OF THE OCCASIONS WHERE THE COMMISSIONERS AGREED TO DEVIATE FROM THE IDEAL WATERSHED WHEN DEMARCATING THE BOUNDARY, SUB-SECTION B.P.II-B.P.29.

## (A.)—MAJOR ADJUSTMENTS.

Only one major modification has been effected, namely, in the vicinity of Kipushi.

*Special Report on the Modification of the Boundary in the Vicinity of Kipushi.*

When locating the line of ideal watershed in the vicinity of Kipushi (approximately 25 kilometres to the south-west of Elisabethville), it was found that the branch railway line running from Munama (a station on the main C.F.K. line at Kilometre 240) to Kipushi crossed over the watershed into Rhodesian territory at varying intervals along the total length of approximately 3 to 4 kilometres.

At the first time of crossing it remained on the Rhodesian side of the watershed for 800 metres, but lay close to it. It then recrossed and remained on the Belgian side for nearly  $5\frac{3}{4}$  kilometres, when it again crossed over into Rhodesia.

This time it remained for 2,600 metres on the Rhodesian side of the watershed, for a considerable part of which it ran close to the watershed line. At the end nearest to Kipushi, however, the watershed makes a re-entrant into the Congo, thus causing the railway to cut off a triangle whose greatest depth was about 530 metres.

The instructions to the Commissioners laid down that properties lying athwart the ideal watershed should be left undivided as far as possible, but the good faith and economic importance of each particular case should be taken into account and no encroachment subsequent to the 19th March, 1927, should be considered.

The portion of the railway under consideration was in operation in April 1926, so this latter contingency did not arise.

Owing to the thickly wooded nature of the country, the actual watershed is nowhere obvious and the good faith of the railway engineers who sited the railway must be acknowledged.

There remains the economic clause to be considered. From the available evidence it would not appear that the land in question had any obvious economic value.

The then Senior British Commissioner, Lieutenant-Colonel D. Cree, R.E., therefore agreed to allow this encroachment to stand and to trace the boundary line so as to run parallel to the railway and at such a distance from it as not to cramp it.

On the suggestion of the Belgian Commissioner, it was agreed that, in compensation for the area thus ceded by the British Commissioner, the boundary should be traced parallel to the railway and at 200 metres from it, from the point where it first crossed over into Rhodesia as far as the point where it finally crossed back into the Congo.

On this basis, the exchanges of area were approximately equal.

The attached plan<sup>1</sup>, drawn on a scale of 1/10,000, shows :

(a) The line of ideal watershed.

(b) The line of railway.

(c) The boundary agreed to by the British and Belgian Commissioners.

We, the undersigned, therefore, being duly authorised, under the provisions of Section II of the Technical Instructions<sup>2</sup>, to make certain modifications and adjustments to the watershed

<sup>1</sup> Not reproduced.

<sup>2</sup> Not reproduced.

boundary as seems desirable for special reasons, do agree that the line of boundary between B.P. 27.II. and B.P. 27.IV. shall be so modified as to leave entirely in Belgian territory the line of railway from Munama to Kipushi, in so far as it existed in the month of August 1927. This modification is to be interpreted as it has been actually marked, on the ground, by boundary pillars and auxiliary beacons, by this present Commission, and as illustrated by the attached plan<sup>1</sup> (scale 1/10,000), which represents the topographical features and line of boundary between B.P. 27.II. and B.P. 27.IV.

F. GENDARME,  
*Lieut.-Colonel,*  
*Senior Belgian Commissioner.*

A. B. CLOUGH,  
*Lieut.-Colonel,*  
*Senior British Commissioner.*

(B.)—MINOR ADJUSTMENTS.

1. Between B. P. 15 and B.P. 16, it was found that the line of ideal watershed made a loop towards the south in such a way that a portion of the main Ndola-Nkana road remained on the Belgian side of the watershed for a length of about 1,800 metres.

In exchange for a series of small concessions at various places along the railway between B.P. 20 and B.P. 23.VII. (see paragraph 2, A, below), the boundary between B.P. 15 and B.P. 16 was modified in such a way as to leave the Ndola-Nkana road entirely in Rhodesian territory.

Along the stretch of road in question the boundary has therefore been demarcated at a distance of 10 metres on the north side of the road. This modification takes effect between B.P. 15.I. and B.P. 15.I.D. on the newly-located boundary. (See attached Sketch Map, "A."<sup>1</sup>.)

2. On locating the line of ideal watershed it was found that at several places between B.P. 20 and B.P. 27 the watershed line approached very close to the railway.

As it is essential, in the case of a railway running through tropical bush country, to be able to cut and clear a width of trees and undergrowth on either side of the track as a fire precaution, the boundary was modified in all such cases in such a way that it should nowhere approach closer than 100 metres to the centre line of the track.

Such minor adjustments were effected as follows :

A.—Between B.P. 20 and B.P. 23.VII.

- (1) In the neighbourhood of Kilometre 31.
- (2) In the neighbourhood of Mokambo Station.
- (3) In the neighbourhood of Kilometres 91, 92 and 94.
- (4) At several places to the east and west of Kilenko Station between B.P. 23.III. and B.P. 23.VII.

In exchange for this series of small concessions, the boundary was modified between B.P. 15 and B.P. 16 (see paragraph 1), where the Ndola-Nkana road was found to lie for a certain distance on the Belgian side of the watershed.

B.—At Tshinsenda Station.

Between B.P. 24 and B.P. 24.C. the watershed line approached so close to the railway that, without modification, much inconvenience would have been caused to the station authorities with regard to the provisions of a fire guard and the erection of station buildings.

<sup>1</sup> Not reproduced.

At the same time, working back from B.P. 24 towards B.P. 23.VII, the watershed line put a stretch of nearly 1,000 metres of the road from Tshinsenda to Nchanga into Belgian territory.

A small local exchange of territory was therefore effected which would :

- (a) Satisfy the requirements of the Belgian Railway.
- (b) Put the Tshinsenda-Nchanga road entirely in Rhodesian territory.

C.—*Between B.P. 24 and B.P. 27.*

On two occasions the boundary was slightly modified so as to be 100 metres from the railway.

Both these small adjustments were taken into account in making the exchange near Tshinsenda Station (see paragraph 2, B).

3. Between B.P. 25 and B.P. 25.D, it was found that an iron claim which had been pegged by the Bwana M'Kubwa Mining Company (Rhodesia) lay athwart the watershed line.

At the request of the British Commissioner and in accordance with Section II, paragraph 4, of the Brussels Agreement (1927), the boundary was slightly modified in order to preserve the claim intact. (See attached Sketch Map "B" <sup>1</sup>.)

F. GENDARME,  
*Lieut.-Colonel,*  
*Senior Belgian Commissioner.*

A. B. CLOUGH,  
*Lieut.-Colonel,*  
*Senior British Commissioner.*

#### APPENDIX IV.

AGREEMENT BETWEEN THE COMMISSIONERS OF MAY 15, 1929, REGARDING CONSTRUCTION OF  
BELGIAN RAILWAY NEAR MOKAMBO.

(Not reproduced, as being of none effect.)

#### APPENDIX V.

DETAILS REGARDING THE BOUNDARY PILLARS WHOSE ORIGINAL (1912-14) POSITIONS HAVE NOT  
BEEN RETAINED.

*B.P. 12.*

The old B.P. 12 lay within 3 metres of the actual watershed, close to what is now B.P. 11.I.K. A new position for B.P. 12 has been selected 1,450 metres farther to the north-west along the watershed where it was found possible to tie in the boundary traverse to a trigonometrically fixed point.

*B.P. 13.*

The old B.P. lay within 50 metres of the actual watershed, between what are now B.P. 12.II.G. and B.P. 12.II.H. A new position for B.P. 13 has been selected for the same reason as applies to B.P. 12 (above) and is about 1,350 metres to the north-west of the old site.

*B.P. 14.*

The old B.P. 14 was found to lie 400 metres on the Rhodesian side of the true watershed line. As this exceeded the limit allowed by our instructions a new position was selected on the actual line of watershed.

<sup>1</sup> Not reproduced.



*B.P. 15.*

No marked pipe was found representing old B.P. 15, but two small pillars on either side of the railway were discovered. It is assumed that these marked the actual dividing line on the railway between Rhodesia and the Belgian Congo.

The new position of B.P. 15 is on the actual watershed line immediately on the west side of the railway. The two small pillars referred to above lay within about 10 metres of the true watershed, and from 40 to 50 metres on either side of the railway.

*B.P. 16.*

Old B.P. 16 was found to lie 280 metres on the Congo side of the true watershed. As this exceeded the limiting distance allowed, a new position was selected on the actual watershed line.

*B.P. 17.*

Old B.P. 17 lay correctly on the actual watershed, but was inconveniently situated for tying into a trigonometrically fixed point. Old B.P. 17 is situated in close proximity to what is now B.P. 17.D. on the newly-located boundary.

*B.P. 18.*

Old B.P. 18 was found to lie correctly on the line of ideal watershed, but its position was not suitable for tying into a trigonometrically fixed point.

New B.P. 18 was therefore sited about 2,400 metres farther to the south-east along the watershed.

Old B.P. 18 practically coincides with what is now B.P. 18.F. on the newly-located boundary.

*B.P. 19.*

Old B.P. 19 was found to lie more than 1,000 metres on the Rhodesian side of the watershed.

A new position for B.P. 19 was therefore selected with due regard for ease in tying into a trigonometrically fixed point, about 2,500 metres farther to the east.

Old B.P. 19 lies about 1,300 metres to the north-west of new B.P. 18.I.L.

*B.P. 20.*

Old B.P. 20 was found to lie about 350 metres on the Rhodesian side of the true watershed line. A new site for B.P. 20 was therefore selected on the actual watershed, about 350 metres to the east-south-east of old B.P. 20.

*B.P. 21.*

Old B.P. 21 was correctly sited on the watershed, but a new position for new B.P. 21 was selected 30 metres farther to the north-west so as to facilitate fixation by triangulation.

*B.P. 22.*

Old B.P. 22 was within 50 metres of the watershed, but as its position was less than 100 metres from the railway, a new position was selected at the full distance of 100 metres from the track.

*B.P. 26.*

Old B.P. 26 was found to lie within 50 metres of the true watershed line, but was inconveniently situated for fixing trigonometrically. A new site for B.P. 26 was therefore selected on a small kopje, lying on the watershed, about 1,500 metres to the south-west of old B.P. 26.

*B.P. 27.*

Old B.P. 27 lay about 800 metres on the Rhodesian side of the watershed, thus exceeding the limit allowed. New B.P. 27 lies therefore about 800 metres to the south-east of old B.P. 27.

*B.P. 28.*

Old B.P. 28 lay just over 300 metres on the Congo side of the watershed, thus exceeding the limit allowed. A new site was therefore selected 320 metres west-south-west of old B.P. 28.

*B.P. 29.*

Old B.P. 29 was erroneously sited on top of Mukambo Hill, which is not on the watershed.

A new site has been selected, which is roughly one mile farther to the west on much lower ground, and on the ideal watershed.

F. GENDARME,  
*Lieut.-Colonel,*  
*Senior Belgian Commissioner.*

A. B. CLOUGH,  
*Lieut.-Colonel,*  
*Senior British Commissioner.*

## No. 2.

PROTOCOL OF FEBRUARY 24, 1930, CONTAINING THE DECISIONS OF THE COMMISSIONERS RESPECTING  
FRONTIER BETWEEN BOUNDARY PILLARS Nos. 29 AND 33.

The Undersigned :

Lieutenant-Colonel A. B. CLOUGH, Royal Engineers, Senior British Commissioner ; and

F. GENDARME, Lieutenant-Colonel of Colonial Troops, Senior Belgian Commissioner,

Having been duly appointed by their respective Governments to delimit and demarcate the frontier between British and Belgian territory along the Congo-Zambesi watershed, in accordance with the Agreement signed in Brussels between Great Britain and Belgium on the 19th March, 1927 (*vide* Appendix I<sup>1</sup>), have surveyed the boundary in accordance with the instructions laid down and have come to the following agreement :

1. The International Frontier between Northern Rhodesia and the Belgian Congo between Boundary Pillar Number twenty-nine and Boundary Pillar Number thirty-three shall follow as closely as possible the line of ideal watershed separating the River Zambesi from the River Congo.
2. The boundary, as actually demarcated on the ground, consists of a series of straight lines, each of an average length of about 500 metres. These lines have been sited in such a way that they follow, as closely as possible, the line of ideal watershed.
3. At every change of direction between these straight lines a boundary pillar has been erected. The boundary pillars are classified under two heads :

(a) Main Boundary Pillars (constructed of concrete) at intervals of approximately 5 kilometres along the boundary.

(b) Auxiliary pillars (cairns of stones) at every intermediate point between main pillars.

In addition, a lane of 5 metres in width has been cut all along the boundary.

<sup>1</sup> See page 74, of this Volume.

4. The existing numbering of the boundary pillars erected by the 1912-14 Commission has been retained.

As these pillars were, in many cases, at a considerable distance apart, it was found necessary to erect a number of extra main pillars, in order to comply with the instructions that there shall be a main pillar every 5 kilometres approximately.

These extra main pillars have been numbered by adding Roman numerals to the original numbers : *e.g.*, between B.P. 29 and B.P. 30 it was found necessary to insert six extra main boundary pillars. These were therefore numbered as follows :

29.I., 29.II., 29.III., 29.IV., 29.V., and 29.VI.

The auxiliary boundary pillars have been designated by adding a letter of the alphabet to the number of the main boundary pillar to which their co-ordinates are referred.

To avoid confusion, in no case has the letter " I " been used. The sequence of lettering runs, therefore, direct from " H " to " J ", omitting " I ".

*E.g.* : Between B.P. 29.I. and B.P. 29.II. there are sixteen auxiliary pillars which are numbered as follows :

29.I.A., 29.I.B., etc., to 29.I.Q.

All numbering is from east to west along the boundary.

5. The actual positions of the boundary pillars are defined as follows :

(a) *Main Pillars.* By their geographical co-ordinates.

(b) *Auxiliary Pillars.* By their rectangular co-ordinates on the Cassini projection, the origin for each bay of the boundary between main boundary pillars being the next main pillar to the eastward along the boundary, and the axes of reference the meridian through that point and the line at right angles to it.

6. In Appendix IV<sup>1</sup> will be found a complete list of all boundary pillars, both main and auxiliary, giving the reduced horizontal distance between successive pillars, and the included angles between the successive legs as obtained from direct field measurement and, in addition, provisional values for their co-ordinates of position and altitudes.

In accordance with Section II.2. of the Brussels Agreement (1927), the original positions of some of the main boundary pillars as sited by the 1912-14 Commission were altered so as to conform to the actual location of the ideal watershed.

A list of the occasions where these original pillars have not been accepted, and where a new position has therefore been selected, will be found in Appendix III<sup>2</sup>.

7. 10 plans on a scale of 1/10,000 are attached to this Protocol (*vide* Appendix V)<sup>1</sup>.

These cadastral plans illustrate the run of the boundary from B.P. 29 to B.P. 33, and contain sufficient data for re-establishing any boundary pillars which may be destroyed.

8. A general description of the boundary will be found in Appendix II<sup>3</sup>.

9. No fresh determination (by re-survey or re-computation) of the position of any natural feature or boundary pillar mentioned in this Protocol shall alter the boundary line as marked on the ground and herein described.

10. Responsibility for the upkeep of boundary pillars and for the clearing of the boundary lines is allocated as follows :

*Government of Northern Rhodesia.*

From B.P. 31 (inclusive) to B.P. 33 (inclusive).

<sup>1</sup> Not reproduced.

<sup>2</sup> See page 130, of this Volume.

<sup>3</sup> See page 122, of this Volume.

*Government of the Belgian Congo.*

From B.P. 29 (inclusive) to B.P. 31 (exclusive).

It is agreed that each Government shall, annually, ensure that the portion of the boundary for which it is responsible be cut or cleared in whatever manner appears suitable, and that the boundary pillars be maintained in a proper state of repair.

A joint perambulation and inspection of the boundary shall be made every ten years by representatives detailed by the Governments of Northern Rhodesia and the Belgian Congo to ensure that the boundary is kept properly cleared and that the pillars have not been moved.

The first perambulation shall take place during 1938.

II. The two original copies of the present Protocol, in English for the British Section and in French for the Belgian Section, are signed this twenty-fourth day of February, nineteen hundred and thirty.

F. GENDARME,  
*Lieut.-Colonel,*  
*Senior Belgian Commissioner.*

A. B. CLOUGH,  
*Lieut.-Colonel,*  
*Senior British Commissioner.*

## APPENDIX I.

(Same as Appendix I to the Protocol of October 1, 1929, omitted for the reason given on page 94.<sup>1</sup>)

## APPENDIX II.

## DESCRIPTION OF BOUNDARY, B.P. 29 TO B.P. 33.

From B.P. 29 to B.P. 33 the watershed ridge is covered throughout with "savannah bush". It differs little in aspect or characteristics from the portion of boundary between B.P. 11 and B.P. 29, which was demarcated during 1927-28.

Limited visibility on the watershed itself and the difficulty of getting rays through from points on the watershed to triangulation points on either side of the boundary continued to add to the difficulty of the actual survey work.

From B.P. 29 to B.P. 31, a distance of about 56 miles, the watershed runs approximately north-east-south-west.

At B.P. 31 the direction changes, and from this point as far as B.P. 33, a distance of about 54 miles, the watershed runs approximately east-west. The country on either side is on the whole well watered. There is a great scarcity of villages on or near the watershed ridge. Game is scarce.

The trees average about 40 feet in height and from 6 to 8 inches in diameter.

*B.P. 29.*

Situated about 1 mile to the west of Mukambo, a trigonometric station which is the most prominent point in the Mukambo Hills.

From B.P. 29 the boundary runs south-west for a distance of about 4½ miles as far as B.P. 29.I., at which point it turns due west and continues thus for about 7½ miles, when B.P. 29.III. is reached. Along this stretch of boundary, the watershed separates the head waters of the River Kafue (Rhodesia) from those of the River Lupoto (Congo).

<sup>1</sup> See page 74 of this Volume.

At B.P. 29.III. the boundary commences to turn towards the south, and after following a sinuous course arrives at B.P. 30, about 13 miles to the south of B.P. 29.III.

Between B.P. 29 and B.P. 30, six supplementary main boundary pillars have been erected as follows :

*B.P. 29.I.* : Situated  $4\frac{1}{4}$  miles south-west of B.P. 29. From B.P. 29 to B.P. 29.I. the watershed is ill-defined.

*B.P. 29.II.* : Situated 4 miles to the west of B.P. 29.I. Between B.P. 29.I. and B.P. 29.II. the watershed is ill-defined.

*B.P. 29.III.* : Situated about 3 miles to the west of B.P. 29.II., at the point where the watershed begins to turn towards the south. The watershed here tends to become better defined.

*B.P. 29.IV.* : Situated about  $2\frac{1}{2}$  miles to the south-west of B.P. 29.III.

Between B.P. 29.III. and 29.IV. the watershed is well-defined, but follows a somewhat tortuous course.

*B.P. 29.V.* : Situated about  $3\frac{1}{2}$  miles south-south-east from B.P. 29.IV., a short distance to the north of the sources of the River Pompono (Congo).

Between B.P. 29.IV. and 29.V. the watershed is well-defined.

*B.P. 29.VI.* : Situated about 4 miles south-south-west from B.P. 29.V. near the sources of the Rivers Maubu (Congo) and Mushindamu (Rhodesia).

Between B.P. 29.V. and 29.VI. the watershed is well-defined.

Auxiliary boundary pillars are erected as follows :

Between B.P. 29 and 29.I. there are 13.

Between B.P. 29.I. and 29.II. there are 16.

Between B.P. 29.II. and 29.III. there are 15.

Between B.P. 29.III. and 29.IV. there are 13.

Between B.P. 29.IV. and 29.V. there are 15.

Between B.P. 29.V. and 29.VI. there are 14.

Between B.P. 29.VI. and 30 there are 19.

#### *B.P. 30.*

Is situated at the point where the old traction road (now overgrown and unused) from Elizabethville to Musofi crosses the watershed. The old B.P. 30 was not on the true line of watershed and lay about 660 yards on the Rhodesian side of the present boundary.

About 3 miles to the south of B.P. 30 the boundary commences a sharp bend towards the south-west and this general direction is maintained for a distance of about 15 miles when, a short distance after reaching B.P. 30.IV., the boundary cuts across the main Kipushi-Kansanshi road. At this point the boundary turns due west and continues thus for a farther distance of about 5 miles when B.P. 31 is reached.

For most of the distance between B.P. 30 and B.P. 31 the watershed is ill-defined.

Between B.P. 30.IV. and B.P. 31 the boundary crosses and recrosses several times the Kipushi-Kansanshi road.

Five additional main boundary pillars have been erected between B.P. 30 and B.P. 31 as follows :

*B.P. 30.I.* : About  $5\frac{1}{2}$  miles from B.P. 30 as measured along the boundary, near the source of the River Sigwibu (Rhodesia).

*B.P. 30.II.* : About 4 miles to the south-west of B.P. 30.I.

*B.P. 30.III.* : About 4 miles to the south-west of B.P. 30.II., and rather less than a mile on the north side of the Kipushi-Kansanshi road.

*B.P. 30.IV.* : About  $3\frac{1}{2}$  miles to the north-east of Luamibanga Hill. It is distant only about 150 yards from the Kipushi-Kansanshi road, and on the north side of it, just before the boundary crosses the above road for the first time.

*B.P. 30.V.* : Immediately due north of Luamibanga Hill and about 300 yards on the north side of the road mentioned above.

Auxiliary boundary pillars have been erected as under :

- Between B.P. 30 and B.P. 30.I. there are 14.
- Between B.P. 30.I. and B.P. 30.II. there are 14.
- Between B.P. 30.II. and B.P. 30.III. there are 13.
- Between B.P. 30.III. and B.P. 30.IV. there are 9.
- Between B.P. 30.IV. and B.P. 30.V. there are 10.
- Between B.P. 30.V. and B.P. 31 there are 12.

*B.P. 31.*

Is situated on a prominent isolated hill which lies about 100 metres on the north side of the Kipushi-Kansanshi road and about 1½ miles to the west of the junction between this road and the road which comes up from Nchanga.

After leaving B.P. 31 the boundary follows a general westerly direction, though forming a series of prominent bends to north and south. Between B.P.s 31 and 32 the watershed separates the numerous headwaters of the rivers Lunga and Chifubwa (Rhodesia) from those of the rivers Moatsi and Nakolwe (Congo).

Immediately after leaving B.P. 31 the boundary takes a sweep to the north towards Selano Hill and then bends down to the south again towards the prominent group of hills called Kapundungoma.

As a result of this latter bend to the south a strip of road about 3 miles in length is left in Congo territory.

Immediately to the north-west of Kapundungoma the boundary recrosses to the north side of the road and follows a general direction west-north-west towards B.P. 32.

From B.P. 31 to B.P. 32 is a distance of approximately 26 miles as measured in a straight line across country.

Between B.P. 31 and B.P. 32, seven supplementary main boundary pillars have been erected as follows :

*B.P. 31.I.* : About 3 miles to the north-west of B.P. 31 near the source of the River Karobwe (Rhodesia).

*B.P. 31.II.* : About 2¾ miles to the north-east of Kapundungoma Hill, near the source of the River Ngoiwa (Rhodesia).

*B.P. 31.III.* : Lies 1¾ miles to the north-north-west of Kapundungoma Hill.

*B.P. 31.IV.* : Is situated about 4 miles to the north-west of Kapundungoma Hill and on the north side of the Kipushi-Kansanshi road. It lies about 3 miles to the west of B.P. 31.III.

*B.P. 31.V.* : About 3 miles to the north-west of B.P. 31.IV., at the head of the River Chifubwa.

*B.P. 31.VI.* : Is situated on high ground a short distance to the east of the sources of the River Cheshale (Rhodesia).

*B.P. 31.VII.* : About 4 miles to the north-west of B.P. 31.VI. and 4½ miles south-east of B.P. 32.

Between B.P. 31 and B.P. 31.IV the watershed is fairly well-defined. From B.P. 31.IV. to 31.V. it is ill-defined. From B.P. 31.V. to B.P. 32 it becomes very well-defined.

Auxiliary boundary pillars have been erected as under :

- Between B.P. 31 and B.P. 31.I. there are 16.
- Between B.P. 31.I. and B.P. 31.II. there are 15.
- Between B.P. 31.II. and B.P. 31.III. there are 11.
- Between B.P. 31.III. and B.P. 31.IV. there are 11.
- Between B.P. 31.IV. and B.P. 31.V. there are 10.
- Between B.P. 31.V. and B.P. 31.VI. there are 13.
- Between B.P. 31.VI. and B.P. 31.VII. there are 21.
- Between B.P. 31.VII. and B.P. 32 there are 17.

*B.P. 32.*

Lies at the most northerly point of the extensive loop in the watershed which separates the headwaters of the Rivers Chimalala-Katandana (Rhodesia) from those of the River Musofi (Congo)

The prominent sugar-loaf hill of Kalungeme lies about  $3\frac{3}{4}$  miles west by north from B.P. 32, and the very prominent massif of Chafugoma lies  $6\frac{3}{4}$  miles south by west from B.P. 32.

After leaving B.P. 32, the boundary follows a south-westerly course and passes within about  $1\frac{1}{2}$  miles of Kalungeme Hill, which lies on the north side of the boundary.

At a distance of about 8 miles south-west of B.P. 32 the boundary meets the old traction road which runs up from Kansanshi. At this point of junction between the boundary and the road, the ground drops away very steeply to the south and there is a fine open view towards the south-south-east with Chafugoma Hill in the distance.

From this point the boundary follows along the edge of this abrupt slope (the slopes to the north being gentle) in a due westerly direction for a distance of about 3 miles, when it bears slightly towards the north and, following a west-north-westerly direction for about a further 9 miles, reaches B.P. 33.

Along this stretch of boundary between B.P. 32 and B.P. 33 the watershed separates the headwaters of the Rivers Katandana, Chafugoma, Solwezi and Mutanda (Rhodesia) from those of the Rivers Musofi, Kianbashi, Musombweshi and Kamalengo (Congo).

The distance from B.P. 32 to B.P. 33, as measured direct across country, is about 16 miles. The watershed throughout is fairly well-defined.

Between B.P.s 32 and 33 five supplementary main boundary pillars have been erected as under :

*B.P. 32.I.* : About  $1\frac{1}{2}$  miles to the south-south-east of Kalungeme Hill and about 3 miles south-west of B.P. 32.

*B.P. 32.II.* : About 3 miles south-west of B.P. 32.I.

*B.P. 32.III.* : About 3 miles to the west of the point where the boundary, coming from B.P. 32, first meets the old traction road. It lies within 100 yards of the road on the south side, and is on the edge of the abrupt slopes to the southward.

*B.P. 32.IV.* : About 2 miles to the north-west of B.P. 32.III. and on the south side of the old traction road.

*B.P. 32.V.* : Is on the summit of a small prominent hill immediately on the south side of the old traction road and rather less than 1 mile to the south-west of Musombweshi Hill.

*B.P. 33.*

Is situated on the summit of Kapaka Hill, which is a point in the ruling triangulation. This hill lies about  $3\frac{3}{4}$  miles to the south-east of the prominent hill and triangulation point of Itembe.

Auxiliary boundary pillars have been erected as under :

Between B.P. 32 and B.P. 32.I. there are 17.

Between B.P. 32.I. and B.P. 32.II. there are 11.

Between B.P. 32.II. and B.P. 32.III. there are 17.

Between B.P. 32.III. and B.P. 32.IV. there are 8.

Between B.P. 32.IV. and B.P. 32.V. there are 13.

Between B.P. 32.V. and B.P. 33 there are 15.

F. GENDARME,  
Lieut.-Colonel,  
Senior Belgian Commissioner.

A. B. CLOUGH,  
Lieut.-Colonel,  
Senior British Commissioner.

## APPENDIX III.

LIST OF MAIN BOUNDARY PILLARS WHOSE ORIGINAL (1912-14) POSITIONS HAVE NOT BEEN RETAINED.

*B.P. 29.*

Old B.P. 29 was erroneously sited on top of Mukambo Hill, which is not on the watershed. A new site was therefore selected on the ideal watershed, about 1 mile farther to the west.

*B.P. 30.*

This was found to be over 600 yards on the Rhodesian side of the actual watershed line. As this distance exceeds the limiting distance allowed by our instructions, a new site for B.P. 30 was selected on the actual watershed line.

*B.P. 33.*

Old B.P. 33 was correctly sited on the watershed. The new position was selected a few metres to the north in order to facilitate its fixation by triangulation.

F. GENDARME,  
*Lieut.-Colonel,*  
*Senior Belgian Commissioner.*

A. B. CLOUGH,  
*Lieut.-Colonel,*  
*Senior British Commissioner.*