



International Boundary Study

No. 119 – February 14, 1972

Angola – Zambia Boundary

(Country Codes: AO-ZA)

**The Geographer
Office of the Geographer
Bureau of Intelligence and Research**

INTERNATIONAL BOUNDARY STUDY

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ANGOLA - ZAMBIA BOUNDARY

I. BOUNDARY BRIEF

The Angola - Zambia boundary is approximately 690 miles in length. It is demarcated by pillars or streams throughout the entire distance. From the tripoint with Zaire, the boundary utilizes various rivers and straight-line segments for about 165 miles southward to the 13th parallel south, extends westward along the 13th parallel for 135 miles to the 22nd meridian east, and then continues southward for 220 miles along the 22nd meridian. The remainder of the boundary from the 22nd meridian to the South-West Africa tripoint consists of straight-line segments which "follow the normal limit of the River Kwando on its Eastern side when the river is in flood."

II. HISTORICAL BACKGROUND

Immediately prior to the end of the 15th century, Portuguese Captain Diogo Cao explored the coast of present-day Angola and navigated the Congo (Zaire) inland from its mouth to the first cataract. He also established friendly relations with the King of Kongo who ruled the territory on both sides of the river between the coast and Stanley Pool. Shortly thereafter, the Portuguese sent missionaries, skilled workers, and settlers to the Kongo. In 1575 the King of Portugal granted a charter for a crown colony which initially included the territory between the Congo river and the Rio Cuanza. Ultimately the colony was expanded both southward and eastward by the addition of large tracts of land. Portugal and the United Kingdom established a boundary between their spheres of influence in central Africa by treaty during 1891. An award by the King of Italy in 1905 modified the initial line and determined the basic alignment of the present Angola - Zambia boundary.

By constitutional amendment in 1951, the colony of Angola (also commonly referred to as Portuguese West Africa) became an overseas province, and as such is considered by the Portuguese Government to be legally part of Portugal. The provincial government is administered by a governor general who is nominated by the Overseas Ministry and appointed by the Council of Ministers. The governor general exercises both executive and legislative authority under the guidance of the Overseas Minister in Lisbon.

In 1888 the tract later to be known as Northern Rhodesia was proclaimed to be within the British sphere of influence. The operations of the British South Africa company were extended north of the Zambezi in 1891, and the territory was organized as Northern Rhodesia in 1911. The administration of Northern Rhodesia was transferred to the British Colonial Office as a protectorate in 1924.

Between August 1, 1953, and December 31, 1963, Northern Rhodesia, along with Southern Rhodesia and Nyasaland, was a member of the Federation of Rhodesia and Nyasaland. Northern Rhodesia became independent from the United Kingdom as the Republic of Zambia on October 24, 1964.

III. BOUNDARY TREATIES

An Anglo - Portuguese treaty of June 11, 1891, delimited a boundary between their respective spheres of influence in central Africa as follows:

Art. IV. It is agreed that the western line of division separating the British from the Portuguese sphere of influence in Central Africa shall follow the centre of the channel of the Upper Zambezi, starting from the Katima Rapids (Katima Molilo Rapids)^[1] up to the point where it reaches the territory of the Barotse Kingdom.

That territory [Barotse Kingdom] shall remain within the British sphere; its limits to the westward, which will constitute the boundary between the British and Portuguese spheres of influence, being decided by a Joint Anglo - Portuguese Commission, which shall have power, in case of difference of opinion, to appoint an Umpire.

Between May 31 - June 5, 1893, an Anglo - Portuguese Agreement recorded an understanding for a modus vivendi to remain in force until July 1, 1896, pending the demarcation of the boundary.

Art. V. Pending the delimitation of a boundary line as laid down in Article IV of the treaty of the 11th June 1891, the line formed by the course of the Zambezi from the cataracts at Katima up to the confluence with the Cabompo [Kabompo] River, and thence by the course of the Cabompo, shall be the provisional boundary between the respective spheres of influence in that region, and the provisions of Article VIII of the treaty above referred to shall be applicable to the territories separated by the said provisional boundary until a definitive boundary shall have been substituted in its stead.

A second agreement on January 20, 1896, prolonged the modus vivendi for an additional two years until July 1, 1898. An Anglo - Portuguese declaration of August 12, 1903, agreed to arbitration of the Barotse boundary question by the King of Italy within the meaning of Article IV of the treaty of 1891. The territory of the Barotse Kingdom was defined as that over which the King of Barotse was paramount ruler on June 11, 1891.

Victor Emmanuel III, King of Italy, announced the following boundary in his award of May 30, 1905, which in the southern part shifted the line from the Zambezi to the Rio Cuando [Kwando].

The straight line between the Katima Rapids, on the Zambezi, and the village of Andara, on the Okovango, as far as the point where it meets the River Kwando;

^[1] In a declaration between Germany and Portugal of December 30, 1886, the boundary separating their respective territorial claims inland from the Atlantic Ocean was terminated at the Katima Molilo Rapids.

The eastern side of the bed of the upper waters of the Kwando,^[2] as far as the point of intersection with the 22nd meridian east of Greenwich;

The 22nd meridian east of Greenwich as far as the point of intersection with the 13th parallel;

The 13th parallel as far as the point of intersection with the 24th meridian east of Greenwich;

The 24th meridian east of Greenwich as far as the frontier of the Independent State of the Congo [now Zaire].

Signed at Cape Town on March 5, 1915, an Anglo - Portuguese protocol demarcated the boundary from the Zaire tripoint to the "le bord oriental du lit hautes eaux du Kwando." The demarcation was in accordance with the alignment of the award of 1905, except in the north between the Zaire tripoint and the 13th parallel south where a number of slight variations were made from the 24th meridian east to utilize natural features. Notes exchanged between Portugal and the United Kingdom on November 3, 1925, confirmed the protocol of 1915. The demarcation of 1915 constitutes the present alignment of this sector of the Angola - Zambia boundary.

Two agreements were signed by Portugal and the United Kingdom on November 18, 1954, both of which dealt with the Rio Cuando sector. The first agreement was concerned with the alignment and demarcation of the boundary adjacent to the Rio Cuando, and the second with the movements and rights of peoples living along the river sector.

The award of May 30, 1905, by the King of Italy left some doubt as to the exact alignment of the Rio Cuando sector as indicated in the boundary agreement of 1954.

And whereas difficulties were still encountered in the delimitation of the boundary owing to a difference of opinion as regards the interpretation of the expression "le bord oriental du lit des hautes eaux du Kwando" in the above-mentioned Award, the Portuguese Government contending that this expression meant the line on the east bank of the River Kwando reached by the waters of the river in the times of normal flood, and adducing in support of their view its entire agreement with the definition of "hautes eaux" adopted by writers who are authorities on river hydraulics and the Government of the United Kingdom considering that the expression meant the upper waters of the River Kwando at their normal level and adducing in support of their view the necessity of certain tribes of the Barotse Kingdom to make use of the waters of the River Kwando in the dry season.

Therefore, it was agreed in the boundary convention of November 18, 1954, that the line "shall follow the normal limit of the waters of the River Kwando on its Eastern side

^[2] Written in the French language as "le bord oriental du lit des hautes eaux du Kwando," the exact meaning of the expression was subject to various interpretations.

when the river is in flood." It also was agreed that the boundary would be demarcated with pillars by a joint boundary commission.

The report of the demarcation of the boundary was signed by the commissioners at Lisbon on October 12, 1964. Portugal and the United Kingdom informed the Republic of South Africa of their decision on the location of the tripoint (known as the Triune) with South-West Africa by notes on October 14 and October 16, respectively. Notification was made in accordance with the agreement of August 16, 1931, signed by South Africa in its capacity as Mandatory Power, by Portugal, and by Northern Rhodesia, relative to demarcating the boundary between the portion of the Mandated Territory of South-West Africa known as the Caprivi Zipfel (Strip) on the one side, and Angola and Northern Rhodesia on the other side.

On October 21, 1964, an exchange of notes between Portugal and the United Kingdom accepted the commission report as being in accordance with the terms of the boundary agreement of 1954. The agreement of 1954 and the demarcation of 1964 determine the present alignment of the Rio Cuando boundary sector from the 22nd meridian east to the South-West Africa tripoint.

IV. ALIGNMENT

The Anglo - Portuguese protocol of March 5, 1915, as confirmed by an exchange of notes on November 3, 1925, demarcates the Angola - Zambia boundary southward from the Zaire tripoint marked by boundary pillar No.1 to the Rio Cuando sector marked by pillar No. M37 (C1).

1. A straight line from Boundary Pillar No. 1, built in masonry on the watershed of the rivers Congo and Zambesi (Zambese), in astronomical latitude 10°53'18-1/2" south and approximate longitude 23°59'58-1/2" east of Greenwich to Boundary Pillar No. II, built in masonry near the source of the river Chinyasi (Tchenaje), in astronomical latitude 10°54'43" south and approximate longitude 23°58'51" east of Greenwich.

2. The thalweg of the river Chinyasi (Tchenaje), tributary on the right bank of the river Jimbe, to its junction with that river.

The thalweg of the river Jimbe from its junction with the river Chinyasi (Tchenaje) to its junction with the river Zambesi (Zambese).

The thalweg of the river Zambesi (Zambese) from its junction with the river Jimbe to its junction with the river Kanyanda (Kanhandanda [Kamiweri]), its tributary on the left bank.

The thalweg of the river Kanyanda (Kanhandanda) from its junction with the river Zambesi (Zambese) to its junction with the stream Kamarengo (Kamrengo), its tributary on the left bank.

The thalweg of the stream Kamarengo (Kamrengo) from its junction with the river Kanyanda (Kanhandanda) to its source where Boundary Pillar No. IIA built in cement, is situated, approximate latitude 11°10' south and approximate longitude 24° 02' east of Greenwich.

3. A straight line from Boundary Pillar No. IIA to Boundary Pillar No. III, built in masonry near the source of the river Chihongolo (Tcheongola), tributary of the river Mujileshe (Mudileje), which is a tributary of the river Zambesi (Zambese), approximate latitude 11°16' south and approximate longitude 24°02' east of Greenwich.

4. A straight line from Boundary Pillar No. III to Boundary Pillar No. IV, built in masonry on the right bank of the river Chamba (Tchamba) a tributary of the river Zambesi (Zambese), approximate latitude 11°18' south and approximate longitude 24°03' east of Greenwich.

5. A straight line from Boundary Pillar No. IV to Boundary Pillar No. V, built in masonry on the top of the hill Nyansongi (Kassongo), astronomical latitude 11°20'56" south and approximate longitude 24°04' east of Greenwich.

6. A straight line from Boundary Pillar No. V to Boundary Pillar No. VI, built in masonry near the source of the river Luisabo (Luizabo), a tributary of the river Zambesi (Zambese), approximate latitude 11°24' south and approximate longitude 24°05' east of Greenwich.

7. The thalweg of the river Luisabo (Luizabo) from Boundary Pillar No. VI to its junction with the river Mujileshe (Mudileje), its tributary on the left bank.

The thalweg of the river Mujileshe (Mudileje) from its junction with the river Luisabo (Luizabo) to its junction with the stream Itete, its tributary on the left bank.

The thalweg of the stream Itete from its junction with the river Mujileshe (Mudileje) to its source where Boundary Pillar No. VIII, built in masonry, is situated approximate latitude 11°51' south and approximate longitude 24°00' east of Greenwich.

8. A straight line from Boundary Pillar No. VIII to Boundary Pillar No. IX, built in masonry on the left bank of the river Lukaya (Lukaia), a tributary of the river Luisabo (Luizabo), approximate latitude 11°54-1/2' south and approximate longitude 23°59' east of Greenwich.

9. A straight line from Boundary Pillar No. IX to Boundary Pillar No. X built in cement at the source of the river Kachiji (Katcheche) which flows into the river Chitoka (Tchetoke), a tributary of the river Luhusa (Luhunza), approximate latitude 11°59-1/2' south and approximate longitude 23°59' east of Greenwich.

10. A straight line from Boundary Pillar No. X to Boundary Pillar No. XI, built in cement at the source of the river Maninga, a tributary of the river Kabompo, approximate latitude $12^{\circ} 4\frac{1}{2}'$ south and approximate longitude $23^{\circ}59'$ east of Greenwich.

11. A straight line from Boundary Pillar No. XI to Boundary Pillar No. XII, built in cement, astronomical latitude $12^{\circ}08'11''$ south and approximate longitude $23^{\circ}58'48''$ east of Greenwich.

12. A straight line from Boundary Pillar No. XII to Boundary Pillar No. XIII, built in cement at the source of the river Kamatete (Kamarese), approximate latitude $12^{\circ}10'$ south and approximate longitude $23^{\circ}59'$ east of Greenwich.

13. The thalweg of the river Kamatete (Kamarese) from Boundary Pillar No. XIII to its junction with the river Muoze.

The thalweg of the river Muoze from its junction with the river Kamatete (Kamarese) to its junction with the stream Muanamuoze, its tributary on the right bank.

The thalweg of the stream Muanamuoze from its junction with the river Muoze to its source where Boundary Pillar No. XIV, built in masonry, is situated, approximate latitude $12^{\circ}19'$ south and approximate longitude $24^{\circ}4'$ east of Greenwich.

14. A straight line from Boundary Pillar No. XIV to Boundary Pillar No. XV, built in cement, at the source of the river Nyela (Niela) a tributary of the river Maninga, approximate latitude $12^{\circ}20'$ south and approximate longitude $24^{\circ}3'$ east of Greenwich.

15. The thalweg of the river Nyela (Niela) from Boundary Pillar No. XV to its junction with the river Maninga.

The thalweg of the river Maninga from its junction with the river Nyela (Niela) to its intersection with the astronomical parallel $13^{\circ}00'00''$ south.

16. A straight line from the intersection of the thalweg of the river Maninga with the astronomical parallel $13^{\circ}00'00''$ south to Boundary Pillar L. 1, built in cement on the right bank of the river Maninga, astronomical latitude $13^{\circ}00'00''$ south and approximate longitude $24^{\circ}2\text{-}3/4'$ east of Greenwich.

17. A straight line from Boundary Pillar No. L. 1 to Boundary Pillar No. L. 1A, built in cement near the right bank of the river Maninga, astronomical latitude $13^{\circ}00'00''$ south and approximate longitude $24^{\circ}2\text{-}1/4'$ east of Greenwich.

18. A straight line from Boundary Pillar No. L. 1A to Boundary Pillar No. L. 2, built in cement in the centre of the chana^[3] Chikamba (Tchekamba), astronomical latitude 13°00'00" south and approximate longitude 23°53' east of Greenwich.
19. A straight line from Boundary Pillar No. L. 2 to Boundary Pillar No. L. 3, built in masonry at the left edge of the chana of the river Lunyue (Lenhua), a tributary of the Makondo (Macondo), astronomical latitude 13°00'00" south and approximate longitude 23°47' east of Greenwich.
20. A straight line from Boundary Pillar No. L. 3 to Boundary Pillar No. L. 4, built in cement on the left edge of the chana of the river Chito (Tchito), a tributary of the river Lunyue (Lenhua), astronomical latitude 13°00'00" south and 20° 40-1/4' east of Greenwich.
21. A straight line from Boundary Pillar No. L. 4 to Boundary Pillar No. L. 5, built in masonry on the left edge of the chana of the river Makondo (Macondo), a tributary of the Zambesi (Zambese), astronomical latitude 13°00'00" south and approximate longitude 23°32-1/4' east of Greenwich.
22. A straight line from Boundary Pillar No. L. 5 to Boundary Pillar No. L. 6, built in masonry on the right edge of the chana of the river Makondo (Macondo), astronomical latitude 13°00'00" south and approximate longitude 23°31-1/4' east of Greenwich.
23. A straight line from Boundary Pillar No. L. 6 to Boundary Pillar No. L. 7, built in cement, astronomical latitude 13°00'00" south and approximate longitude 23°28' east of Greenwich.
24. A straight line from Boundary Pillar No. L. 7 to Boundary Pillar No. L. 8, built in cement, astronomical latitude 13°00'00" south and approximate longitude 23°21-3/4' east of Greenwich.
25. A straight line from Boundary Pillar No. L. 8 to Boundary Pillar No. L. 9, built in cement on the right edge of the chana of the river Lunkuni (Luncunhe), astronomical latitude 13°00'00" south and approximate longitude 23°13-3/4' east of Greenwich.
26. A straight line from Boundary Pillar No. L. 9 to Boundary Pillar No. L. 10, built in cement in the chana of the river Chibombo (Tchebombo), astronomical latitude 13°00'00" south and approximate longitude 23°07' east of Greenwich.
27. A straight line from Boundary Pillar No. L. 10 to Boundary Pillar No. L. 11, built in cement in the chana of the river Katungo (Catungo), astronomical latitude 13°00'00" south and approximate longitude 23°03-1/4' east of Greenwich.

^[3] The term "chana" refers to plains inundated during the rainy season.

28. A straight line from Boundary Pillar No. L. 11 to Boundary Pillar No. L. 12, built in cement in the chana of the river Katungo (Catungo), astronomical latitude 13°00'00" south and approximate longitude 22°59-1/2' east of Greenwich.
29. A straight line from Boundary Pillar No. L. 12 to Boundary Pillar No. L. 13, built in cement on the right edge of the chana of the river Kalombo (Calumbo), a tributary to the river Zambesi (Zambese), astronomical latitude 13°00'00" south and approximate longitude 22°53-1/2' east of Greenwich.
30. A straight line from Boundary Pillar No. L. 13 to Boundary Pillar No. L. 14, built in masonry on the top of a small hill, astronomical latitude 13°00'00" south and approximate longitude 22°46' east of Greenwich.
31. A straight line from Boundary Pillar No. L. 14 to Boundary Pillar No. L. 15, built in masonry on the left bank of the river Zambesi (Zambese), astronomical latitude 13°00'00" south and approximate longitude 22°43-1/4' east of Greenwich.
32. A straight line from Boundary Pillar No. L. 15 to Boundary Pillar No. L. 16, built in masonry on the right bank of the river Zambesi (Zambese), astronomical latitude 13°00'00" south and approximate longitude 22° 42-3/4' east of Greenwich.
33. A straight line from Boundary Pillar No. L. 16 to Boundary Pillar No. L. 17, built in cement, astronomical latitude 13°00'00" south and approximate longitude 22°39' east of Greenwich.
34. A straight line from Boundary Pillar No. L. 17 to Boundary Pillar No. 18, built in cement in the chana Mugho, astronomical latitude 13°00'00" south and approximate longitude 22° 34-1/2' east of Greenwich.
35. A straight line from Boundary Pillar No. L. 18 to Boundary Pillar No. L. 19, built in cement, astronomical latitude 13°00'00" south and approximate longitude 22°28-3/4' east of Greenwich.
36. A straight line from Boundary Pillar No. L. 19 to Boundary Pillar No. L. 20, built in cement, astronomical latitude 13°00'00" south and approximate longitude 22°24-1/2' east of Greenwich.
37. A straight line from Boundary Pillar No. L. 20 to Boundary Pillar No. L. 21, built in cement, astronomical latitude 13°00'00" south and approximate longitude 22°19-1/4' east of Greenwich.
38. A straight line from Boundary Pillar No. L. 21 to Boundary Pillar No. L. 22, built in cement, astronomical latitude 13°00'00" south and approximate longitude 22°13-3/4' east of Greenwich.

39. A straight line from Boundary Pillar No. L. 22 to Boundary Pillar No. L. 23, built in cement at the edge of the chana of the stream Lupinda (Lepinda), a tributary of the river Kachiji (Caxiji), astronomical latitude 13°00'00" south and approximate longitude 22°8-3/4' east of Greenwich.
40. A straight line from Boundary Pillar No. L. 23 to Boundary Pillar No. L. 23 to Boundary Pillar No. L. 24, built in cement, astronomical latitude 13°00'00" south and approximate longitude 22°3' east of Greenwich.
41. A straight line from Boundary Pillar No. L. 24 to Boundary Pillar No. L. 25-M. 1, built in cement, astronomical latitude 13°00'00" south and approximate longitude 22°0'13" east of Greenwich.
42. A straight line in the approximate direction of 0°30' true bearing from Boundary Pillar No. L. 25-M. 1 to Boundary Pillar No. M. 2, built in cement on the north edge of the chana of the river Kachiji (Caxije), a tributary of the Zambesi (Zambese), astronomical latitude 13°6'13" south and approximate longitude 22°00'9" east of Greenwich.
43. A straight line in a direction approximate 0°30' true bearing from Boundary Pillar M. 2 to Boundary Pillar M. 3, built in cement, astronomical latitude 13°12'14" south and approximate longitude 22°00'06" east of Greenwich.
44. A straight line in a direction approximate 0°30' true bearing from Boundary Pillar M. 3 to Boundary Pillar M. 4, built in cement, astronomical latitude 13°18'35" south and approximate longitude 22°00'03" east of Greenwich.
45. A straight line running true south from Boundary Pillar M. 4 to Boundary Pillar M. 5, built in cement, latitude astronomical 13°22'35" south and approximate longitude 22°00'03" east of Greenwich.
46. A straight line running true south from Boundary Pillar M. 5 to Boundary Pillar M. 6, built in cement, on the northern edge of the chana of the river Lunguebungu (Lunguebungo), an affluent of the river Zambesi (Zambese), latitude astronomical 13°25'51" south and approximate longitude 22°00'03" east of Greenwich.
47. A straight line in a direction 0°48'20" true bearing from Boundary Pillar M. 6 to Boundary Pillar M. 7, built in cement on the southern edge of the chana of the river Lunguebungu (Lunguebungo), astronomical latitude 13°28'10" south and approximate longitude 22°00'01" east of Greenwich.
48. A straight line running true south from Boundary Pillar M. 7 to Boundary Pillar M. 8, built in cement, astronomical latitude 13°34'04" south and approximate longitude 22°00'01" east of Greenwich.

49. A straight line running true south from Boundary Pillar M. 8 to Boundary Pillar M. 9, built in cement, astronomical latitude $13^{\circ}39'42''$ south and approximate longitude $22^{\circ}00'01''$ east of Greenwich.
50. A straight line running true south from Boundary Pillar M. 9 to Boundary Pillar M. 10, built in cement at the south of the chana of the river Lutembwe (Lutembue), astronomical latitude $13^{\circ}43'25''$ south and approximate longitude $22^{\circ}00'01''$ east of Greenwich.
51. A straight line running true south from Boundary Pillar M. 10 to Boundary Pillar M. 11, built in cement, astronomical latitude $13^{\circ}49'01''$ south and approximate longitude $22^{\circ}00'01''$ east of Greenwich.
52. A straight line running true south from Boundary Pillar M. 11 to Boundary Pillar M. 12, built in cement, astronomical latitude $13^{\circ}54'58''$ south and approximate longitude $22^{\circ}00'01''$ east of Greenwich.
53. A straight line running true south from Boundary Pillar M. 12 to Boundary Pillar M. 13, built in cement, astronomical latitude $14^{\circ}00'14''$ south and approximate longitude $22^{\circ}00'01''$ east of Greenwich.
54. A straight line running true south from Boundary Pillar M. 13 to Boundary Pillar M. 14, built in cement, astronomical latitude $14^{\circ}05'20''$ south and approximate longitude $22^{\circ}00'01''$ east of Greenwich.
55. A straight line running true south from Boundary Pillar M. 14 to Boundary Pillar M. 15, built in cement in the chana north of the river Luanginga (Luanghinga), an affluent of the river Zambesi (Zambese), astronomical latitude $14^{\circ}08'45''$ south and approximate longitude $22^{\circ}00'01''$ east of Greenwich.
56. A straight line running true south from Boundary Pillar M. 15 to Boundary Pillar M. 16, built in cement on the southern edge of the chana of the river Luanginga (Luanghinga), latitude astronomical $14^{\circ}15'40''$ south and approximate longitude $22^{\circ}00'01''$ east of Greenwich.
57. A straight line running true south from Boundary Pillar M. 16 to Boundary Pillar M. 17, built in cement, latitude astronomical $14^{\circ}21'19''$ south and approximate longitude $22^{\circ}00'01''$ east of Greenwich.
58. A straight line running true south from Boundary Pillar M. 17 to Boundary Pillar M. 18, built in cement on the southern edge of the chana of the river Nengo, an affluent of the river Luanginga (Luanghinga), astronomical latitude $14^{\circ}27'25''$ south and approximate longitude $22^{\circ}00'01''$ east of Greenwich.

59. A straight line running true south from Boundary Pillar M. 18 to Boundary Pillar M. 19, built in cement, astronomical latitude $14^{\circ}33'04''$ south and approximate longitude $22^{\circ}00'01''$ east of Greenwich.
60. A straight line running true south from Boundary Pillar M. 19 to Boundary Pillar M. 20, built in cement, astronomical latitude $14^{\circ}38'43''$ south and approximate longitude $22^{\circ}00'01''$ east of Greenwich.
61. A straight line running true south from Boundary Pillar M. 20 to Boundary Pillar M. 21, built in cement, astronomical latitude $14^{\circ}44'18''$ south and approximate longitude $22^{\circ}00'01''$ east of Greenwich.
62. A straight line running true south from Boundary Pillar M. 21 to Boundary Pillar M. 22, built in cement near the southern edge of the chana of the river Nyinda (Ninda), an affluent of river Nyengo (Nhengo), astronomical latitude $14^{\circ}50'20''$ south and approximate longitude $22^{\circ}00'01''$ east of Greenwich.
63. A straight line running true south from Boundary Pillar M. 22 to Boundary Pillar M. 23, built in cement, astronomical latitude $14^{\circ}55'36''$ south and approximate longitude $22^{\circ}00'01''$ east of Greenwich.
64. A straight line running true south from Boundary Pillar M. 23 to Boundary Pillar M. 24, built in cement, astronomical latitude $15^{\circ}01'29''$ south and approximate longitude $22^{\circ}00'01''$ east of Greenwich.
65. A straight line running true south from Boundary Pillar M. 24 to Boundary Pillar M. 25, built in cement, astronomical latitude $15^{\circ}06'39''$ south and approximate longitude $22^{\circ}00'01''$ east of Greenwich.
66. A straight line running true south from Boundary Pillar M. 25 to Boundary Pillar M. 26, built in cement, astronomical latitude $15^{\circ}12'15''$ south and approximate longitude $22^{\circ}00'01''$ east of Greenwich.
67. A straight line running true south from Boundary Pillar M. 26 to Boundary Pillar M. 27, built in cement, astronomical latitude $15^{\circ}18'20''$ south and approximate longitude $22^{\circ}00'01''$ east of Greenwich.
68. A straight line running true south from Boundary Pillar M. 27 to Boundary Pillar M. 28, built in cement, astronomical latitude $15^{\circ}24'24''$ south and approximate longitude $22^{\circ}00'01''$ east of Greenwich.
69. A straight line running true south from Boundary Pillar M. 28 to Boundary Pillar M. 29, built in cement, astronomical latitude $15^{\circ}29'58''$ south and approximate longitude $22^{\circ}00'01''$ east of Greenwich.

70. A straight line running true south from Boundary Pillar M. 29 to Boundary Pillar M. 30, built in cement, on the southern edge of the chana of the river Loeti (Lueti), an affluent of the river Zambesi (Zambese), astronomical latitude 15°35'24" south and approximate longitude 22°00'01" east of Greenwich.

71. A straight line running true south of Boundary Pillar M. 30 to Boundary Pillar M. 31, built in cement, astronomical latitude 15°41'26" south and approximate longitude 22°00'01" east of Greenwich.

72. A straight line running true south from Boundary Pillar M. 31 to Boundary Pillar M. 32, built in cement, astronomical latitude 15°47'12" south and approximate longitude 22°00'01" east of Greenwich.

73. A straight line running true south from Boundary Pillar M. 32 to Boundary Pillar M. 33, built in cement, astronomical latitude 15°53'12" south and approximate longitude 22°00'01" east of Greenwich.

74. A straight line running true south from Boundary Pillar M. 33 to Boundary Pillar M. 34, built in cement, astronomical latitude 15°58'16" south and approximate longitude 22°00'01" east of Greenwich.

75. A straight line running true south from Boundary Pillar M. 34 to Boundary Pillar M. 35, built in cement, astronomical latitude 16°03'07" south and approximate longitude 22°00'01" east of Greenwich.

76. A straight line running true south from Boundary Pillar M. 35 to Boundary Pillar M. 36, built in cement, astronomical latitude 16°08'07" south and approximate longitude 22°00'01" east of Greenwich.

77. A straight line running true south from Boundary Pillar M. 36 to Boundary Pillar M. 37, built in cement on the northern edge of the marsh of the river Kwando (Cuando), astronomical latitude 16°11'38" south and approximate longitude 22°00'01" east of Greenwich.

78. Boundary Pillar M. 37 is the last Pillar erected, and is at the edge of the marsh north of the river Kwando (Cuando).^[4]

The Rio Cuando boundary sector is determined by the Anglo - Portuguese agreement of November 18, 1954; the demarcation commission report of October 12, 1964, approving the Commission report. Article I of the agreement of 1954 states the following:

^[4] The boundary commission report of October 12, 1964, states "that Beacon No. 37 on the Boundary on the 22nd meridian east of Greenwich which is the 'point d' intersection' referred to in Article 1 of the Agreement of the 18th of November 1954 shall be Beacon No. 1 of the Kwando River Boundary." The coordinates given for boundary pillar No. 1 in the report are 16°11'36.861"S. and 21°59'46.644"E.

1. The portion of the boundary described in the Award [King of Italy, 1905] as "Le bord oriental du lit des hautes eaux du Kwando, jusqu'an point d'intersection avec le 22^e meridiem Est de Greenwich" shall follow the normal limit of the waters of the River Kwando on its Eastern side when the river is in flood, a line which in general can be considered as following the edge of the woods or the so-called "tree-line."

2. For the purposes of this Article and since the true "tree-line" is too winding and raises problems of continuity it shall be replaced by an agreed line which shall so far as possible follow the real edge of the woods eliminating only the more pronounced salients and re-entrants. None of the segments of this line should, however, cut the principal valley of the River Kwando at times of normal flood.

3. The point where a straight line between the Katima Rapids on the Zambesi and the village of Andara on the Okovango meets the Kwando referred to in the first paragraph of the Award of the King of Italy is agreed to be the point marked by Provisional Beacon No. 9^[5] erected by the Representatives of the Governments of the Union of South Africa, Northern Rhodesia and the Portuguese Republic appointed to demarcate the boundary between the Union of South Africa [Caprivi Strip of South-West Africa] Northern Rhodesia and Angola and more particularly described in paragraph 7 of the agreement signed by the said representatives on the 16th of August, 1931, and Schedule B thereto the terms of which are given in the First Annex to the present Agreement.

4. It is agreed that the "point d'intersection" referred to in paragraph 1 of this Article shall be Beacon No. 37, the position of which was agreed upon in accordance with the Exchange of Notes of the 3rd day of November 1925, between the British Ambassador in Lisbon and the Portuguese Minister for Foreign Affairs, the terms of which appear in the Second Annex to the present Agreement.

As stated in the boundary commission report of October 12, 1964, it was "agreed that the Kwando River Boundary shall be a series of straight lines commencing at Beacon No. 37 (Kwando River Boundary Beacon No. 1) and linking 32 main and 218 intermediate beacons in their due order until Beacon No. 9 (Kwando River Boundary No. 32) is reached." Geographic coordinates for the 32 main boundary pillars of the Rio Cuando sector are listed in Part II of the Appendix of this study.

^[5] The boundary commission report October 12, 1964, states "that the point marked by provisional Beacon No. 9 which is also referred to in Article 1 of the Agreement of the 18th of November 1954 shall be the site of Beacon No. 32 of the Kwando River Boundary." The coordinates given for boundary pillar No. 9 (C32) in the report are 17°38'10.600"S. and 23°25'47.604"E.

APPENDIX

I. Documents

1. Note on Rhodesia, being the territory administered by the British South Africa Company. 1889 - 1908. Edward Hertslet, The Map of Africa by Treaty, 3 vols., 3rd Edition (London: Harrison and Sons, 1909). Vol. 1, pp. 265 - 71.
2. Royal Charter of Incorporation granted to the British South Africa Company. October 29, 1889. Ibid., Vol. 1, pp. 271 - 7.
3. Conditions on extending the Field of Operations of the British South Africa Company to the North of the Zambezi. February 13, 1891. Ibid., Vol. 1, pp. 277 - 9.
4. Memorandum of Agreement with the British South Africa Company respecting British Central Africa, supplementary to the Agreement of February - April 1891. November 24, 1894. Ibid., Vol. 1, pp. 280 - 2.
5. Treaty between Her Britannic Majesty and His Majesty the King of Portugal, defining their respective Spheres of Influence in Africa, Lisbon, June 11, 1891. Ibid., Vol. 3, pp. 1016 - 26. Also see Great Britain Treaty Series, Portugal No. 1 (1891), C. 6375.
6. Agreement between Great Britain and Portugal relative to Spheres of Influence north of the Zambezi. May 31 - June 5, 1893. Ibid., Vol. 3, pp. 1027 - 30.
7. Agreement between Great Britain and Portugal prolonging the "Modus Vivendi" of 1893, respecting the Boundaries of their respective Spheres of Influence to the north of the Zambezi. Signed at London, January 20, 1896. Ibid., Vol. 3, pp. 1034 - 5.
8. Declaration between Great Britain and Portugal, respecting the Submission of the Barotse Boundary Question to an Arbitrator. Signed at London, August 12, 1903. British and Foreign State Papers (BFSP), Vol. 97 (1903 - 4), pp. 506 - 7. Also see Great Britain Treaty Series, No. 28 (1907), Cd. 3731.
9. Award of the King of Italy in the Question between Great Britain and Portugal respecting the Western Boundary of the Barotse Kingdom. Rome, May 30, 1905. BFSP, Vol. 98 (1904 - 5), pp. 382 - 5. Also see Great Britain Treaty Series, Africa No. 5 (1905), Cd. 2584 [with map].
10. Notes Exchanged between the United Kingdom and Portugal Confirming the Protocol, signed at Cape Town on March 5, 1915, defining a Section of the Frontier Line between the Portuguese Colony of Angola and Rhodesia. Lisbon,

November 3, 1925, Great Britain Treaty Series, No. 55 (1925), Cmd. 2568 [with map].

11. Agreement between the Union of South Africa, Northern Rhodesia and Portugal concerning the Boundary between Caprivi Zipfel, Angola and Northern Rhodesia. Signed at Kwando, August 16, 1931. South Africa, Treaty Series, No. 8 (1931).
12. Agreements between the United Kingdom on its own behalf and on behalf of the Federation of Rhodesia and Nyasaland and Portugal with regard to (1) the Northern Rhodesia - Angola Frontier and (2) certain Angolan and Northern Rhodesian Natives living on the Kwando River. Lisbon, November 18, 1954. BFSP., Vol. 161 (1954), pp. 161 - 173. Also see Great Britain Treaty Series, No. 27 (1955), Cmd. 9453; and United Nations Treaty Series, Vol. 210 (1955), No. 2841, 265 - 89.
13. Exchange of Notes between the Government of the United Kingdom of Great Britain and Northern Ireland and the Government of the Portuguese Republic with regard to the Northern Rhodesia - Angola Frontier. Lisbon, October 21, 1964 [with Exchange of Notes between the United Kingdom and South Africa]. Great Britain Treaty Series, No. 18 (1965), Cmd. 2568; and United Nations Treaty Series Vol. 539 (1966), No. 2841, pp. 353 - 6.

II. List of Pillars on Rio Cuando Boundary Sector

Pillars	<u>Geographical coordinates</u>						Altitude (meters)
	Latitude			Longitude			
	(South)			(East)			
	°	'	"	°	'	"	
1 (37)	16	11	36.861	21	59	46.644	1,031.19
2	16	12	18.685	21	59	41.849	1,031.55
3	16	13	15.947	22	01	29.594	1,030.66
4	16	13	58.091	22	02	23.245	1,029.70
5	16	15	35.768	22	04	39.341	1,030.61
6	16	19	02.287	22	05	14.502	1,029.13
7	16	19	58.926	22	06	30.662	1,026.82
8	16	22	58.258	22	06	49.627	1,028.01
9	16	29	19.500	22	07	00.842	1,023.76
10	16	32	54.626	22	12	04.225	1,018.40
11	16	40	53.938	22	21	03.897	
12	16	41	47.632	22	22	02.535	1,014.95
13	16	44	38.452	22	24	55.781	1,011.86
14	16	48	12.536	22	27	59.911	1,007.58
15	16	51	28.192	22	30	57.102	1,006.91
16	16	55	07.747	22	35	43.456	1,003.52
17	16	58	30.026	22	38	15.665	1,000.21
18	17	02	28.916	22	42	40.752	999.67
19	17	04	24.196	22	43	27.814	996.34

II. List of Pillars on Rio Cuando Boundary Sector (cont'd)

Pillars	Geographical coordinates						Altitude (meters)
	Latitude			Longitude			
	(South)			(East)			
	°	'	"	°	'	"	
20	17	06	13.802	22	45	47.439	994.95
21	17	11	21.210	22	50	58.720	990.62
22	17	11	58.400	22	53	35.012	988.34
23	17	15	18.655	22	57	55.924	993.42
24	17	17	48.407	22	59	34.994	989.09
25	17	20	44.026	23	02	23.844	967.35
26	17	25	20.136	23	07	27.388	984.94
27	17	27	55.596	23	07	55.486	983.20
28	17	30	54.149	23	12	15.962	976.75
29	17	32	28.262	23	16	57.861	975.93
30	17	33	07.495	23	20	12.270	974.38
31	17	35	27.625	23	24	09.444	972.52
32 (9)	17	38	10.600	23	25	47.604	970.22

This International Boundary Study is one of a series of specific boundary papers prepared by The Geographer, Office of the Geographer, Directorate for Functional Research, Bureau of Intelligence and Research, Department of State, in accordance with provisions of Bureau of the Budget Circular No. A-16.

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