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No. 704.

NORTHERN NIGERIA.

REPORT FOR 1910-11.

(For Report for 1909, *see* No. 674.)

Presented to both Houses of Parliament by Command of His Majesty.
January, 1912.

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No. 704.

NORTHERN NIGERIA.

(For Report for 1909, *see* No. 674.)

THE GOVERNOR to THE SECRETARY OF STATE.

Government House,
Zungeru,
17th November, 1911.

SIR,

I HAVE the honour to forward, herewith, the usual Annual Report on the Blue Book of the Protectorate for the financial year 1910-11, compiled in the Chief Secretary's office. The main points of progress may, I think, be summed up in the following paragraphs.

2. The year under review was one of complete peace. There was an entire absence of punitive expeditions, and several new districts have been occupied without the slighest opposition on the part of the natives. A few patrols were necessary among some of the very primitive hill tribes in Bauchi and Nassarawa, but there was practically no fighting and the peaceful state of the whole country bears striking testimony to the universal acceptance, by the natives, of a system of government which is sympathetic to them. When it is considered that the whole of the revenue, raised locally, is derived from direct taxation, the complete absence of disturbances is the more remarkable.

3. The energies of the civil staff during the year under review were mainly devoted to the consolidation of our administration. Barely eight years have elapsed since the Fulani States were conquered and included within our Protectorate, and if our influence over them is to be lasting and beneficial it is essential that the principles of good government should rest on a solid basis and on a sound organisation. We can only govern these people satisfactorily through their natural leaders, and it is essential that we should train up a native civil service which, under our guidance and supervision, could adopt the principles of honest administration in such a way as to conflict as little as possible with the traditions, customs, and religion of the country.

4. The most important step taken in that direction during the year was the establishment in each native State of a Treasury, locally known as a "Beit-el-Mal." This institution regulates the expenditure of that portion of the local revenue which is anually assigned to the native administration of each Emirate for its support and maintenance. The establishment of a *Beit-el-Mal* consolidates the rank and authority of the Emirs and Chiefs in each province. It strengthens the position of the native judiciary

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and diminishes extortion and corruption. The grant of a definite rank and office in their own administrations will rally to the cause of peace and good government a number of influential natives whose attitude might otherwise become a matter of anxiety. They will be given a permanent stake in the stability of the Government and in the event of trouble will probably be found on the side of law and order.

5. To each Emir has been assigned a fixed civil list proportionate to the population and importance of the country. The native judges and magistrates will, in future, receive definite salaries, punctually paid, instead of being dependent on the spasmodic generosity of the Emirs or on less reputable sources of profit. A fixed percentage of the taxes will be paid, as commission, to the district administrations, and every native holding a recognised office will receive remuneration commensurate with his services. To Mr. Temple and Mr. Palmer is largely due the credit of initiating this system.

6. Though the Beit-el-Mal organisation is still in its earliest infancy, its merits are already being keenly appreciated by most of the members of the native administrations. It is, perhaps, too much to expect the Beit-el-Mal to be a very popular institution with the Emirs. Under the old régime, and provided he managed to satisfy the demands of his Suzerain at Sokoto, the Emir of a feudatory state practically had the unfettered disposal of all the imposts levied on his people. He thus possessed the means of rewarding personal service with a lavish hand, and the degree of his power and popularity depended greatly on the munificence of his largesse. Though the establishment of a Beit-el-Mal now places a check upon their personal extravagance, limits their patronage, and requires them to account for the expenditure of public funds, most of the Emirs have acquiesced, if not enthusiastically at all events with a good grace, in the proper regulation of their finances. They are not slow to appreciate the advantages of receiving a good income, regularly paid, and of being free from the constant demands of clamourous parasites who, in many cases, left their rulers very little for their own personal expenditure.

7. Much attention is being given to the organisation of the native courts. Every effort is being made to secure upright and honest judges, and the remarkable decrease in crimes of violence is a very satisfactory evidence of the general improvement of the Protectorate. The orders of the native courts are enforced by police constables, known as "Dogarai," and there is reason to believe that these men, in general, do not unduly abuse their authority. The native courts not only deal efficiently with crimes, but attend to a vast number of civil cases. It is interesting to note that out of some 19,000 cases tried in the native courts of the Kano Emirate during 1910, no less than 9,020 were classed under the heading "Matrimonial."

8. Good progress was also made during the year under review in a direction which will probably have an important effect upon the improvement and general well-being of the people of this Protectorate. I refer to the planning and laying out of new towns and villages.

9. Under the improved conditions which now exist, as to the security of life and property, the natives are gradually moving out of their walled cities into the open places around, and villages and small towns are springing up in many directions. The advent of railways is a new and important factor in this connection, and we find small settlements growing up with extraordinary rapidity at numbers of spots along the line from Baro to Kano wherever opportunities for trade and traffic present themselves.

10. It is most important that these new settlements should not reproduce the noisome and insanitary features which, unfortunately, characterise most of the great centres of population in Nigeria. Of vacant land there is an abundance, and we are in a position to start new towns and villages under conditions which it would be difficult to parallel in other countries. There are but few vested interests and the necessity for paying compensation rarely arises. Most of the land in Northern Nigeria is open, well drained, and free from high bush. We have practically a *tabula rasa* to work upon, and the task of laying out new towns is, in most cases, an easy and very interesting one.

11. In consultation with the Senior Sanitary Officer and other officials, I have devised a plan for native towns which has been fortunate enough to meet with your approval. The main principles of the design are straight lines, broad avenues, large open spaces, and a uniform size of building plot. Such towns could be extended almost indefinitely, and, if the design be carefully followed, large open spaces, suitable for parks, gardens, or recreation grounds, would automatically be provided. Each building plot faces on a broad thoroughfare and the back of each lot is divided from the next by a lane 15 feet wide, which is intended principally for the removal of rubbish and night soil.

12. Three townships, on those lines, have already been laid out at various points on the Baro-Kano Railway. They are proving very attractive to the natives, and some difficulty, in fact, is being experienced in laying out, with sufficient rapidity, the building plots that are applied for. It is proposed to pursue this project not only in regard to new townships but also with a view to the improvement of old centres of population, and there seems to be no reason why, without undue interference with the traditions and customs of the natives, the people of Northern Nigeria should not be induced to live under conditions which will conduce to their good health and material improvement.

13. In spite of a considerable influx of Europeans, mostly in connection with the mines and many of whom have had no previous experience of the tropics, the proportion of deaths and the invaliding rate show a most satisfactory improvement. Greater care in matters affecting health, and better precautions as regards exposure and manner of life generally, are having a marked effect on medical statistics, and the death-rate of 15·35 per 1,000 among the resident European population is the lowest on record since the Government assumed the administration of the territory.

14. The general health of the natives during 1910 appears to have been fairly good, and no epidemic of a serious nature occurred. Leprosy, however, has been found to be terribly rife

among the natives of the Moslem States. It is estimated that, in the Sokoto Emirate alone, there are more than 6,000 lepers, and that in the whole Protectorate there are probably some 80,000. The problem is one that requires vigorous action, due consideration being at the same time paid to native susceptibilities.

15. Considerable attention was paid to sanitation during the year. A senior and junior sanitary officer were appointed, and have already done much excellent work in advising on the measures necessary to improve the general health not only of Europeans but also of the native communities.

16. In dealing with the salient points of progress in the Protectorate, one's thoughts naturally turn at once to the construction of the Baro-Kano Railway. Railhead reached Zaria on the 20th of January, and the first train steamed into Kano on the 29th of March. Though the line is not yet entirely completed, the whole cost of the project will only exceed by a very moderate extent the original estimate of £3,000 a mile. The construction of this railway is a triumph of economy and reflects immense credit on all who have been connected with the project. Not only is the capital cost far below that of any other tropical railway of similar gauge, but the working expenses on open-line basis are showing an equally satisfactory comparison. The Imperial Parliament is now providing the funds required for the construction of a branch line towards the tin-fields of Bauchi, and earthworks are proceeding rapidly.

17. Our railways will revolutionize the conditions of the Protectorate and the day is not very far distant when they will render the territory self-supporting. Not only is the construction of the Baro-Kano Railway already having a great effect on markets and districts within a wide radius, but it has also had a remarkable educative influence on the primitive inhabitants of districts which had never before come in touch with Europeans and their methods. One of the Residents in this connection writes: "A few sections of low-grade Pagans arrived on the work stark naked, with their wives clad in circlets of leaves; but they returned to their homes with clothes on their bodies and money in their hands." It is perhaps too early to say what the effect on their morals has been.

18. Reports of a steady increase in trade come from almost all our provinces, and the demand for articles of European origin is rapidly growing. Cotton goods are eagerly bought and fancy articles are in brisk request. In my despatch covering the report on the Blue Book for 1909 I wrote as follows:—

> "Unlike his position in most other parts of British Africa, the English trader can, so far, have it all his own way in Northern Nigeria. Such trade as there is is almost entirely in the hands of British firms, and it is earnestly to be hoped that the start which they already possess will enable them to maintain their advantage against the foreign competitors who are certain, sooner or later, to turn their attention to this Protectorate."

19. I regret to have to report that the situation is already less satisfactory. I took the occasion of a recent visit to one of our

principal markets to inspect personally the stock in trade of a typical native merchant and it was anything but comforting to find that more than half of the various kinds of goods exposed for sale were evidently of German manufacture. Though most of the articles were goods of small value and of trumpery quality, the appearance of these foreign manufactures in markets which we are creating at the cost of much money and many lives is neither satisfactory nor encouraging. Our foreign competitors in trade do not think it derogatory to meet the taste of primitive peoples by offering them trade goods which our high class manufacturers would probably disdain to produce, and they seem to realise that the trader who "nurses" his primitive markets will probably reap the benefit when the customers have been trained to appreciate the value of expensive goods of sound quality. The remarkable success of the foreign manufacturer in developing his trade among the natives of Africa lies largely in the fact that he is always ready to adapt himself to the requirements and purse of his primitive customer, and that if the native cannot afford to pay for anything better than "shoddy" he will provide him with the most attractive and the cheapest "shoddy" procurable. The few British commercial firms which are now trading in Northern Nigeria appear to be so satisfied with their operations in a few standard articles that they practically show no enterprise in other directions. The stock in trade of most of those firms usually does not comprise more than a dozen different articles. Several of those goods, indeed, are used solely for purposes of "barter." They are given a fictitious value and may almost be considered in the light of "tokens." French as well as German firms are beginning to apply for trading plots in the various commercial centres that are now being created along the Nigerian railways, and I fear that unless the attention of British capitalists be soon turned to the possibilities of trade in this, our latest, Protectorate, the commercial development of the country will largely benefit those who have contributed nothing towards the cost of our enterprise.

20. I am happy to draw your attention to the very satisfactory increase in the local revenue of the Protectorate, shown in the accompanying report. The Government share of the taxes or rents on land in 1910-11 was £180,489, being £17,729 more than the estimate, and £35,396 in excess of the amount collected during the previous year. Seven years ago the receipts from this source were only £8,255, and the steady increase that has marked each successive year is the surest sign of the growing prosperity and productiveness of the country. The total revenue, excluding the Imperial grant and the contribution from Southern Nigeria, was £275,000, while the expenditure, which amounted to £565,760, inclusive of railway charges and interest on loans, was well within the limit sanctioned.

21. The exploitation of the tin-fields in Bauchi has already attained very important proportions, and a large amount of capital has been invested in the various enterprises. By the end of March last more than fifty syndicates and companies had obtained interests in Northern Nigeria, while the aggregate declared capital of the various concerns amounted to at least

£2,500,000. The stanniferous areas are undoubtedly large and valuable, but in several cases company promoters and others have expressed hopes and forecasts which can never be fulfilled. The permanent interests of the tin-field are likely to be adversely affected by over-capitalisation and exaggerated anticipations. The quantity of tin exported during 1910-11 amounted to 800 tons.

22. Strenuous efforts are being made to encourage the natives to grow cotton on a large scale. Experimental plots were established in various centres and the relative merits of three different varieties of cotton were tested. An excessive period of drought militated not only against the success of those experiments but also against the whole normal output of cotton, and the crops almost everywhere were below the average. Buying depôts are now being opened by the British Cotton Growing Association in the chief cotton-growing centres, and a ginnery on a very large scale is in course of construction at Zaria.

23. As soon as the natives begin to realise that cotton is a crop which is not affected by the local supply and demand, and for which there is always a ready sale to an unlimited extent, they will embark largely in its cultivation. Although I cannot share the extremely roseate views that have been expressed in the past concerning the rapid development of an immense output of cotton from this Protectorate, I believe that, under proper guidance and encouragement, there will be a steady and continuous increase of production and that the industry will have a marked effect on the prosperity of the territory. The people have for centuries been accustomed to the growing of cotton, and have little to learn as regards methods of cultivation. The success of the problem lies in the improvement of the local varieties of cotton and in the discovery of means by which the productiveness of the plants can be enhanced. I am of opinion that though the outlook in the Hausa States is distinctly hopeful the prospects of cotton-growing on a very large scale are much more promising in the fertile lands of the provinces bordering on the Niger and Benue.

24. In bringing this despatch to a close, I desire to express my gratitude to all my officers for the loyal assistance they have given me during the year under review, and to record my appreciation of the fine spirit and enthusiasm shown by the entire staff of the Protectorate.

I have, &c.,

H. Hesketh Bell,
Governor.

The Right Honourable
Lewis Harcourt, P.C., M.P.,
Secretary of State for the Colonies,
&c., &c., &c.

REPORT ON THE BLUE BOOK FOR THE FINANCIAL YEAR 1910-11.

I.—FINANCIAL.

REVENUE AND EXPENDITURE.

The revenue of the Protectorate during the years ended March 31st, 1910, and March 31st, 1911, was:—

	1909-10.	1910-11.
	£	£
Local and Internal Revenue	213,436	274,989
Contribution from Southern Nigeria ...	70,000	70,000
Imperial Grant-in-Aid	237,000	275,000
	520,436	619,989
Total Expenditure	£566,842	£565,760

The revenue collected locally during the year under review exceeded the estimate by £37,439. This increase was mainly due to a closer and more comprehensive assessment of the land revenues, which brought in £17,729 more than the estimate. Customs receipts exceeded the estimate by over £6,000; the postal revenue about £5,500; and the railway earnings by about £4,000. The collections under almost every head during the latter part of the year greatly exceeded anticipations, and a supplementary grant of £29,000, which was given in anticipation of a possible deficit on the year's working, was not actually required. The net excess of revenue from all sources over the amount originally estimated was £66,439.

Of the Imperial grant-in-aid, £25,000 was earmarked for the maintenance and running of the Baro-Kano Railway and £46,000 to meet the interest due on the loan for construction of that railway; making a total of £71,000 provided to meet expenses in this connection.

The revenue from all sources during the past three years, under the separate classified heads adopted by the Treasury, was as follows:—

—	1908-09.	1909-10.	1910-11.
	£	£	£
Land and internal revenue	130,054	153,436	191,236
Payments for specific services, fees, &c.	15,658	14,030	3,711
Marine earnings	—	15,926	17,679
Post office and telegrams	8,596	9,015	12,822
Customs dues	20,255	18,602	25,434
Rents of Government property ...	2,513	1,649	2,323
Miscellaneous receipts	1,366	755	1,160
Railway earnings	—	—	20,621
Total Local Revenue...	178,444	213,436	274,989
Imperial Grant-in-aid	290,000	237 000	246,000
Supplementary Grant-in-aid ...	—	—	29,000
Contribution from Southern Nigeria	70,000	70,000	70,000
Total	538,444	520,436	619,989

The expenditure under the separate classified heads adopted by the Treasury during the past three years was:—

—	1908–09.	1909–10.	1910–11.
	£	£	£
Governor's office and Government House...	6,732	5,207	5,875
Governor's special map compilation staff ...	66	410	1,122
Secretariat and printing	7,352	8,016	8,782
Political	70,533	77,382	76,515
Freed Slaves Home, Zungeru	1,671	967	57
Judicial	2,601	3,102	3,737
Treasury	7,058	7,010	6,636
Postal and telegraphs	14,190	16,043	17,455
Medical	30,080	30,942	32,715
Audit	2,398	3,033	2,974
Police	24,366	25,007	23,929
Prisons...	9,695	9,912	10,399
Transport	26,249	29,389	26,842
West African Frontier Force	152,812	157,807	147,921
Marine	42,596	50,638	52,285
Customs	1,455	1,549	2,137
Agricultural and Forestry	1,001	1,360	2,654
Mines and Mineral Survey	2,189	1,809	911
Mines Deyartment	156		
Miscellaneous	27,913	31,989	27,445
Pensions and gratuities	—	2,241	2,575
Education	—	—	923
Cantonments	1,757	1,768	1,902
Public Works Department	10,228	11,170	11,533
Barijuko-Zungeru Tramway	2,091	2,683	1,975
Public works recurrent	3,801	6,142	7,319
Baro-Kano Railway	—	—	24,443
	449,002	485,587	501,072
Public works extraordinary	83,847	54,916	22,769
Special survey (Capt. Ommanney's party)	158	—	—
Interest on loan	7,634	26,338	41,917
Total Aggregate Expenditure ...	540,643	566,842	565,760

The following statement shows the total revenue and expenditure for the past seven years:—

Year.	Local Revenue.	Total Revenue including Grant-in-aid.	Expenditure.	Imperial Grant-in-aid.
	£	£	£	£
1904–5	94,026	559,526	520,546	405,500
1905–6	110,544	505,544	498,260	320,000
1906–7	142,087	532,087	498,848	315,000
1907–8	143,005	508,005	498,302	295,000
1908–9	178,445	538,445	540,644	290,000
1909–10	213,436	520,436	566,843	237,000
1910–11	274,989	619,989	565,760	246,000

The expenditure during the year under review fell short of the estimate by £15,600.

The principal savings were under heads:—

	£
Public Works (Extraordinary	5,500
Public Works (Recurrent)	2,000
Public Works (Emoluments)	1,500
Provincial Administration	5,500
Medical	2,000

and £4,000 on the provision to meet the interest on the loan. There was an excess of £4,000 under head Transport due to the necessity of employing hired transport and expenses in connection with the Inspector-General's visit to the Protectorate; £1,000 under head West African Frontier Force; £2,000 under head Miscellaneous; 1,000 under head Barijuko Tramway; and £800 under head Pensions and Gratuities.

The financial position of the Protectorate on March 31st was:—

	£
Asset balance from 1909-10	41,093
Subtract liabilities outstanding on March 31st, 1910	29,000
Actual balance available March 31st, 1911 ...	12,093
Add savings in 1910-11, *i.e.*, excess revenue on expenditure	54,229
(*a.*) Actual balance available March 31st, 1911	66,322

The position, which is in every way a satisfactory one, is due to a conservative estimate of revenue and strict economy in expenditure.

N.B.—(*a.*) The cash balance on March 31st, 1911, was £95,322, but this does not allow for liabilities incurred during 1910-11 to be discharged during 1911-12.

II.—TRADE AND CUSTOMS.

The trade returns and statistics available are not sufficiently complete or accurate to render it possible to gauge the trade of the Protectorate with any great measure of accuracy. The Government of Southern Nigeria kindly furnishes a return of imports and exports which pass through Idah on the River Niger.

Imports.—From the figures which are quoted below it will be seen that there is a steady increase in the value of articles imported viâ the river by commercial firms.

Imports viâ Idah.

1909-10.	1910-11.
£175,870	£258,600

and by Government—

1909-10.	1910-11.
(figures not available)	£262,560

The origin and values of these imports are shown in the following table:—

	£
United Kingdom	477,752
Southern Nigeria and Gold Coast	24,163
Germany	18,278
Holland	295
Other countries	672
	£521,160

The following table shows the principal articles imported by commercial firms viâ Idah and their values:—

	1909-10.	1910-11.
	£	£
Bags and sacks	1,750	4,550
Flour	1,650	2,050
Provisions (native) ... / Provisions (European) ...	12,500	13,550
Rice	1,400	2,500
Specie	nil	nil
Sugar	1,850	5,150
Beads	3,550	2,650
Cotton goods	63,700	107,200
Haberdashery	1,700	2,100
Hardware	5,350	5,700
Silk goods	50	7,200
Soap	1,500	1,800
Wearing apparel	2,050	1,900
Cigarettes	8,150	12,200
Kola nuts	17,450	20,900
Salt	13,150	15,350
Wines	250	900
Kerosene	3,000	2,400

The increase in cotton goods, sugar, and cigarettes is remarkable. As all are luxuries the purchasing power of the natives is thereby indicated.

Exports.—It is regrettable to note that a slight diminution has apparently taken place in the exports by commercial firms viâ the river as shown by the following figures:—

Exports viâ Idah (Niger River)

1909-10.	1910-11.
£309,742	£308,700

The following table shows the principal articles exported viâ Idah by commercial firms and their values:—

	1909-10.	1910-11.
	£	£
Live stock	1,300	3,750
Beniseed	4,000	2,300
Cotton goods (native) ...	1,450	1,250
Cotton lint	4,400	1,850
Ground-nuts	16,350	8,150
Gum (Arabic and copal) ...	6,650	9,750
Palm kernels	41,750	66,100
Potash	3,550	8,050
Provisions (native)... ...	4,450	5,900
Rubber	40,000	37,900
Shea butter	2,200	2,050
Shea nuts	90,850	41,100
Tin oxide	26,350	71,750

The falling off in the exportation of shea nuts was due to a failure of the crop, and is understandable, but the diminished export of rubber and ground-nuts and beniseed is disappointing. It is quite possible, however, that the figures returned may be inaccurate and misleading. The increased export of palm kernels, potash, and gums is satisfactory. Owing to lack of rain during the early months of the year and to a sharp harmattan in October the cotton crop was so damaged that little was available for export.

The following table shows the value of articles imported and exported by commercial firms viâ Lagos Railway and Offa:—

	1909-10.	1910-11.
	£	£
Imports	96,980	199,458
Exports	(unknown)	44,270

The figures are, however, but rough approximations.

The value of imports over the inland frontiers, French and German, was as follows:—

	1909-10.	1910-11.
Imports (frontier posts) ...	£58,624	£71,715

Here again the figures are approximate only.

The increased return is due to the more rigorous collection of duty on the frontiers. At the same time, owing to the difficulty of protecting frontiers which are not defined by well-marked geographical features a large proportion of the imports probably escapes taxation.

The total value of imports by commercial firms as shown by the returns is as follows:—

	1909-10.	1910-11.
	£	£
Imports viâ Idah	175,870	258,600
Imports viâ Offa	96,980	109,458
Imports viâ frontier posts ...	58,624	71,715
Total	£331,474	£439,773

The total value of imports by Government viâ Idah was:—

	1910-11. £
Government stores, &c.	262,557
Railway material	400,000
Specie	272,100
Total	£934,657

The total value of exports as shown by the returns was:—.

	1910-11. £
Viâ Idah	308,711
Viâ Offa	44,270
Total	£352,981

The annual return of customs revenue (imports and royalties) is shown in the following table:—

Province.	Value. £	Duty. £
Bornu	19,184	7,433
Ilorin	14,422	1,180
Kabba	43,428	8,658
Kano	25,210	4,449
Kontagora	2,272	222
Muri	430	67
Sokoto	20,084	1,544
Yola	4,535	404
Parcel Post	18,742	1,874
Total	£148,313	£25,831

	Tons.	Value.	Royalty.
Royalty on tin oxide exported	795	£103,350	£5,167

The following table shows the amounts collected in regard to the various articles imported during 1910-11 as compared with 1909-10:—

—	1909-10.		1910-11.	
	Value.	Duty.	Value.	Duty.
	£	£	£	£
Salt	75,410	16,865	97,243	21,451
Kolas	25,390	1,384	21,113	1,359
Parcel Post	—	—	18,732	1,874
Sundries	4,681	483	11,218	1,147
Total	105,481	18,732	148,306	25,831

The increase during 1910-11 is mainly due to the reopening of the stations on the northern border of Kano which brought in £3,000 more this year than last, and an increase of about £3,700 collected at the other frontier stations.

III. LEGISLATION AND JUDICIAL.

During the year four new laws were enacted and numerous additions and amendments were made to existing Proclamations and Regulations. The Statute Laws Revision Proclamation was enacted. This measure repeals all existing legislation and re-enacts, in an amended and codified form, the whole of the laws which have been enacted since the commencement of the Administration, superseding the edition of the laws published in 1905 and providing a complete code of the statute laws of the Protectorate up to the end of 1910. It also embodies a measure which has been the subject of much discussion and consideration for several years, *i.e.*, the Land and Native Rights Proclamation, a law based upon the recommendations of a committee appointed by the Secretary of State to report on the subject, and designed to define and secure the rights of the natives to the use of the land whilst providing opportuntities for development on modern lines. As now enacted the law consolidates and invests with the force of the law those native customs regarding land tenure which are essential to the well-being of the natives themselves and which do not hinder such development.

Assizes of the Supreme Court were held five times at Zungeru, and once at Lokoja; but as usual the vast majority of criminal cases which come before the British Courts have been tried in the Provincial Courts, the cause lists being under the supervision of the Chief Justice.

During the year a Puisne judgeship was created in place of the Solicitor-Generalship.

IV.—CANTONMENTS.

The native quarter of Zungeru, which had become congested and had developed on no settled plan, has been removed to a suitable site on the south of that originally occupied. The new town, with broad avenues, a spacious market place, and building plots of uniform size, has been laid out in accordance with a type-plan, suitable for all native towns, designed by the Governor, and approved by the Senior Sanitary Officer. No difficulty was experienced in inducing the people to move from their old insanitary quarters into the new town, and more than 200 building plots, 50 feet by 100 feet, have already found occupiers. The new town has spread so much to the south that the village of Kworra,

formerly tributary to the Emir of Wushishi, is now being incorporated with it and placed under the jurisdiction of the Cantonment magistrate.

In view of the uncertainty as to whether Zungeru will remain the headquarters of the Protectorate very few improvements were made in the Cantonment during the year under review. In spite of the measures taken to keep down bush in the vicinity of the station, the climate of Zungeru remains enervating; it is certainly a trying and depressing station.

The sanitation and conservancy of the Cantonment have been carried out, as in the past, partly by paid labourers and partly by convict labour, and have been satisfactory.

The Barijuko Tramway has been dismantled and part of the material has been used for the Bauchi Light Railway. A section of the line has, however, remained *in situ* and will be utilised for the conservancy work of the Cantonment.

Supplies have, as usual, not been plentiful, and prices have been high. It is hoped that the completion of the railway to Kano and of the Lagos Railway (Northern extension) will ameliorate this condition.

In the Zungeru Cantonment Court 258 criminal cases were tried, being an increase of 30 on the number during the former year. Sixty civil cases were tried, all of which concerned debt, showing a decrease of 39 on the last year's record.

Of the criminal cases 60 were charges of larceny and 18 of assault.

Lokoja is the oldest centre of European activity in Northern Nigeria, and the large native town in the proximity of the Cantonment has been until recently one of the most insanitary places in the Protectorate. So many vested interests existed in the old town that any radical improvement has always appeared to be a most difficult matter. Early in March, 1910, a large portion of the settlement was destroyed by fire, and advantage was taken of the opportunity for laying out broad streets and squares on lines similar to those adopted at Zungeru. The population of Lokoja is so large that many difficulties have supervened in carrying out the project, and progress has not been as rapid as might be desired. One broad avenue, cutting the town in half, has, however, been completed and another almost finished. A great space has been cleared for the market, and a number of booths of substantial construction have been built.

Experiments were made during the year with the view to testing the possibility of obtaining a good supply of drinking water from a spring issuing from Mount Patti, and it is believed that the flow will prove sufficient to provide a fair supply for the European Cantonment as well as for the troops and police. Investigations are being continued in the hope of finding a more copious supply which might be conducted to the native town.

V.—EDUCATION.

The Government school at Nassarawa near Kano continues to make good progress. The principles governing the education of natives in the Egyptian Soudan are being closely followed in the Protectorate. Secular instruction only is compulsory.

The teaching in the Mussulman native schools, which are numerous throughout the Northern Provinces, is confined to the study of the Koran and the books of the various Arab commentators which contain both the religious and secular law of the Mahommedan communities. The syllabus in the Government school includes reading, writing (Hausa in Roman characters), arithmetic, geography, history, hand and eye training, crafts and agriculture. These additional courses for the pupils in the Government school who are not debarred from attending the Mussulman schools at the same time, will adequately equip and qualify the pupils trained at Nassarawa to become teachers in charge of the vernacular schools which the Government proposes to establish at a later date.

With the accommodation and staff now available only a limited number of pupils can be accepted. For the time being these are being selected for the most part from the sons of Chiefs and men holding administrative appointments under the Native Administrations. In addition to these a number of poor "Mallamai" (Moslem scholars) who have shown special aptitude for acquiring knowledge are receiving instruction. It is important for the future welfare and success to the Native Administrations that the men on whom the responsibilities of office will later naturally devolve should be well qualified to undertake their duties.

When the system has been further developed it is intended that the Government should educate natives of this Protectorate to a standard that will enable them to undertake duties now being performed by clerks imported from the coast colonies. For the present, however, as clerks can readily be obtained from those colonies the more urgent and important needs of the Native Administrations are receiving first consideration.

During the year employment has been found for a certain number of "Mallamai" as assistants in the Survey Department. These men are engaged in Bauchi in traversing and filling in detail work between points which have been fixed by triangulation. Their aptitude for this work has been favourably reported upon by the Chief Surveyor. A large number of "Mallamai" trained at Nassarawa are also employed in assisting political officers in carrying out rough surveys and land measurement in connection with the assessment of land revenue. Many are employed in keeping the accounts of the native treasuries.

A difficulty up to the present has been the lack of text books for use in the schools. This is being remedied, and the Director of Education (Mr. Vischer) is now compiling suitable text books on various subjects in Hausa which will be printed in Roman character for use in the schools.

A garden has been started at Nassarawa where various products that can be successfully grown in the country are being cultivated.

Particular attention is being given to the cultivation of products which may later form the staples of an export trade. So far as local requirements are concerned the natives are already expert agriculturists, though their methods are, generally speaking, somewhat extravagant owing to the fact that in most parts of the Protectorate there has been no scarcity of land. In the neighbourhood of Kano, however, where there is a population of some 500 inhabitants to the square mile, intensive cultivation is extensively employed, the ground is carefully manured, and the theory of the rotation of crops thoroughly understood and practised.

In addition, technical and industrial education is given. A skilled carpenter, blacksmith, and leather-worker are employed in teaching the rudiments of their crafts to the pupils. The readiness with which the latter pick up their branch of their studies augurs well for future progress in arts and crafts.

The Emir of Kano continues to take a great interest in the school, and the annual subsidy of £1,000 from Beit-el-Mal (Native Treasury) funds is being maintained. The Shehu of Bornu and the Emirs of Bauchi and Muri have also expressed a wish to be allowed to contribute towards the maintenance of the school, and sums of £120, £100, and £50 respectively are being paid from the Native Treasuries of these Emirates.

The Church Missionary Society, the Soudan Interior Mission, the Soudan United Mission, and the Roman Catholic Missions continue to do good work among Pagan tribes in education and dispensary and medical relief. Considerable success has attended their efforts in the neighbourhood of Pateji, Ilorin Province, and amongst the Sura Pagans on the Bauchi plateau.

Numbers of apprentices are being trained in the different workshops of the Government departments and the printing office.

VI.—HOSPITALS.

Zungeru.—The number of Europeans admitted to hospital was 75; one death took place.

1,140 natives were admitted to the native hospital. The number of deaths was 18.

The number of out-patients treated was 2,533.

Lokoja.—The number of Europeans admitted to hospital was 95; one death took place.

The number of natives admitted to the native hospital was 898; 27 deaths took place.

The number of out-patients treated was 2,134.

European nursing sisters are in attendance at the Zungeru and Lokoja hospitals, and at the Baro temporary hospital.

VII.—MINES DEPARTMENT.

The exploitation of the stanniferous areas has proceeded apace during the year under review. Alluvial deposits of cassiterite have been found to occur over a larger extent of country than had been anticipated. As far as is known at present, tin is to be found in more or less paying quantities over 9,000 square miles of territory, extending from Ningi to the extreme east to Duchin Wei, situated about 40 miles east of Zaria, to the extreme west; and from Lirue-n-Kano in the north, to the Ninkada and Mada Districts in the south. It should be noted that the latter two districts are at present closed to prospectors, being unsettled.

There are 59 companies engaged in this industry, with a total share capital of more than two and a half millions sterling.

Mining leases have been granted over about 12,000 acres, and exclusive prospecting licences over about 355 square miles. Prospecting rights have been granted to 149 prospectors.

During the year under review, 800 tons of cassiterite were exported. Opinions vary as to the probable future prospects of the tin field. It is safe to say, however, that the existence of tin over a large area has been proven, but that up to the present time sufficient prospecting work has not been effected to render it possible to draw any conclusion regarding the value of the field as a whole.

Rich reefs of galena (Tozali), carrying a considerable silver return, are known to exist in the Province of Muri. These reefs, which have been to some extent worked by the natives, are now being closely prospected by European engineers. Pockets of native silver have from time to time been discovered in the vicinity of Orufu and Wukari.

VIII.—POLICE.

The authorised establishment of the force during 1910 was 18 officers and 701 men. The figures do not include 97 men who were employed in connection with railway construction, and paid for from the capital funds of the Baro-Kano Railway and Lagos Railway (Northern extension).

The total actual strength, including supernumerary police, on December 31st, 1910, consisted of 18 officers and 780 non-commissioned officers and constables.

The force was distributed through the nine southern provinces, along the railway line as far as Zaria, and in the two Cantonments of Zungeru and Lokoja, in numbers proportionate to the local requirements. The principal duties upon which the police have been engaged were prevention, investigation, and detection of crime, the arrest and prosecution of offenders, escorting political and other officers on tour, gaol and treasury guards, convict escorts, serving summonses, executing warrants and judicial writs, suppressing slavery and illicit liquor trade. The police affected to the railway are employed in the prevention and detection of

crime within railway areas, providing escorts for specie, and in preserving peace and good order at railway stations. The Residents, who are directly responsible for the control of the police in the provinces, have reported favourably on their discipline and conduct throughout the year.

In the northern provinces of Bornu, Kano, and Sokoto, and in the Mahommedan Emirates of Bauchi, Gombe, Zaria, Bida, and Ilorin, all police work is being done by "dogarai," *i.e.*, native police employed by the native administrations and paid from the funds of the "Beit-el-Mal" (native treasuries). By this means the native administrations are enabled to maintain their authority, and the danger of damaging their prestige amongst the people by the employment of a police force dressed in an alien uniform, trained on lines which are strange to the native mind, and responsible to European officers who do not form part of those administrations, is averted.

Further, the "dogarai" cost about £20 per annum per unit, in place of £35, the cost of each constable in the police force.

IX.—PRISONS.

The total number of prisoners admitted to the central and provincial gaols during the year was 2,328, as compared with 2,400 during the preceding year.

A total number of 1,592 prisoners was admitted to the various provincial prisons during the year, in comparison with 1,725 admitted during 1909.

The daily average number of prisoners in the provincial gaols during the year was 400, and that in the gaols at Zungeru and Lokoja was 297 and 164, respectively, making a total daily average prison population of 861, as against 812 in 1909.

The prisoners have been for the most part employed on making and maintaining roads, clearing the neighbourhood of provincial stations, conservancy work, and the work of the prison farms. The latter have been very much extended during the past year. They provide a healthy form of convict labour, cheapen the cost of the prisoners' maintenance, and furnish a supply of fresh vegetables for Europeans.

At several stations in the provinces fruit trees have been successfully introduced, and are tended by convict labour. The prison farm at Zungeru has been particularly successful in this direction, many plants of economic value having been successfully cultivated, amongst others, Ceara rubber and sisal hemp. In the Lokoja and Zungeru gaols, industries such as shoemaking, repairing and general leatherwork, tailoring, carpentry, and smiths' work are practised.

The Cantonment magistrates have had at their disposal convict gangs, which have been employed in the construction of new roads and drains. Substantial stone workshops, built entirely by prison labour, have been erected at Zungeru. The gaol at Lokoja was considerably enlarged during the year by the addition of a new wing. A considerable saving to the general revenue on

this account has been effected, and it is proposed to further extend the system of employing convict labour on such work.

The health of the convicts has been, on the whole, fair. The mortality among Pagan convicts, however, has been heavy in the gaols at Lokoja and Bauchi.

X.—CRIMINAL STATISTICS.

The number of persons brought before the Protectorate courts by arrests, warrants, and summonses, was 3,106, as against 2,873 in 1909; the number convicted was 2,783. Offences against the person and property are the most prevalent forms of crime. There were 134 convictions for offences against the law for the suppression of slavery, as compared with 137 in 1909 and 194 in 1908.

The following is a classified summary of the criminal cases dealt with in the Supreme and Provincial Courts:—

Offences against the person	450
Offences against the Slavery Law ...	155
Offences against property	807
Miscellaneous offences	1,694
	3,106

XI.—VITAL STATISTICS.

The average number of Europeans resident in the Protectorate during the year, including officials and non-officials, but excluding those engaged on the Lagos Railway (Northern extension), was 637, of whom 424 were officials and 213 non-officials. The large increase in the non-official population was due to the extension of the mining industry, and the decrease in the official population results from the reduction of the construction staff of the Baro-Kano Railway.

The native population is roughly estimated at 10,000,000, but until a careful assessment of land revenue and population has been completed throughout the Protectorate this figure can only be considered as approximate. It will probably prove to be under the actual number.

There were 13 deaths from all causes among Europeans during the year, seven officials and six non-officials; of these, 12 were due to disease, and one to an accident. The total crude European death-rate, calculated on the average resident population, and not corrected for age and sex, was 20·41 per thousand. The rates from all causes amongst officials and non-officials were 16·51 and 28·17 per thousand respectively.

The number of Europeans invalided during the year was 48; of these, 31 were officials and 17 were non-officials. The invaliding rate per thousand was 75·35, that amongst officials being 73·1, and amongst non-officials 79·8.

Last year the average resident European population was 544, and the number of deaths, 13, the crude death-rate being 23·89 per thousand.

There has been an increase in the European population over that of last year of 93, and a decrease in the death-rate from all causes of 3·48 per thousand.

The invaliding rate was lower than that of the preceding year by 47·81 per thousand—the rate, 15·35 per thousand, being the lowest recorded since the Government assumed the administration of the territories.

Taking the statistics for seven previous years (1903-09) as a basis, the death-rate from all causes during the year under review was below the average by 13·48 per thousand, and the invaliding rate by 65·55 per thousand, the average rates for the preceding years stated being 33·89 and 140·90 per thousand respectively.

The general character of the prevalent diseases has been maintained. Malaria still accounts for the greatest number of cases of illness in the Protectorate. The total number of admissions to hospitals of Europeans suffering from malaria during the year was 250, a decrease of 193 cases, notwithstanding that the European population increased from 544 to 637.

The number of cases of mortality from blackwater fever was lower by ·87 per cent. than last year, and by ·44 per cent. than the average of the last seven years. The number of cases during the year was the lowest that has yet been recorded, being 14·12 per thousand of the population, as against an average of 52·61 for seven preceding years. The actual number of admissions to hospitals on account of blackwater fever was nine, and there were two deaths.

There were 1,039 cases of sickness recorded amongst Europeans during the year throughout the Protectorate, a decrease of 345 on the figures for the preceding year.

There was a further increase in the number of natives under treatment at the Government hospitals and dispensaries, the total being 23,770, exclusive of 4,951 cases treated by the Railway Medical Staff at Baro. The number of pauper patients treated during the year was 3,899, an increase of 432 in the number for the preceding year.

During the year, eight cases of sleeping sickness, all amongst natives, were noted; one of these ended fatally. The individuals affected were sent for segregation to a camp in the neighbourhood of Zaria, a district free from tsetse flies.

The following table shows the number of invalidings and deaths which have occurred during the past 8 years:—

Invalidings and Deaths.

—	1903.	1904.	1905.	1906.	1907.	1908.	1909.	1910.
Average European population.	309	322	342	347	424	499	544	637
No. of deaths ...	18	13	10	17	7	10	13	13
Death rate per 1,000	58·25	40·37	29·23	48·99	16·50	20·04	23·89	20·41
No. of invalids ...	43	67	49	55	50	48	67	48
Invaliding rate per 1,000.	139·15	208·15	143·27	158·5	117·92	96·19	123·16	75·35

Cases of Blackwater Fever.

—	1903.	1904.	1905.	1906.	1907.	1908.	1909.	1910.
No. of cases... ...	17	35	18	25	12	14	13	9
Rate per 1,000 of average population.	54·69	108·69	52·63	72·04	28·32	28·05	23·89	14·12
No. of deaths ...	8	6	4	5	—	4	3	2
Case mortality, per cent.	47·05	17·14	22·2	20·0	—	28·57	23·07	22·2

From these tables it will be seen that a marked improvement in the health of the Europeans living in the Protectorate appears to have taken place.

XII.—SANITATION.

A new sub-department has been created under the supervision of the Medical Department to deal with questions affecting sanitation. The officers of this section have been principally employed in visiting different stations, reporting on sanitary matters, water supply, and other questions relating to conditions affecting health.

Early European activity in the Protectorate was principally commercial. It was to the interest of commerce to attract as many natives as possible to the neighbourhood of the trading factories. Little or no regard, however, was paid to sanitary considerations, and although wonderful improvements have been effected, lack of funds renders it impossible, at present, to entirely reconstruct the older stations on sanitary lines such as would meet with general approval.

New stations are now carefully planned to guard against the recurrence of past errors. All new native towns are being laid out, so far as may be possible, in accordance with a plan designed by the Governor and approved by the Senior Sanitary Officer, the main features of which are described in the despatch covering this report.

Sites leased to European companies are as large as is conveniently possible, so that the residence of the necessary native servants within the compounds may not result in too close an intermingling of natives with Europeans in the European quarters. At all new towns, and in places where European firms are for the first time being established, sites for European occupation are being allotted outside the native towns, and, as far as it is found possible to do so, at a minimum distance of 400 yards from the nearest native quarter. Provision is being made for the incineration and burial of refuse, for the disposal of the contents of latrine buckets, and for the erection of latrines for the use of the native population.

At Zungeru, the administrative capital of the Protectorate, great improvements have been effected during the year; many

trees have been cut down, others have had their lower branches lopped off, and the long grass has been cleared along the Dago—the stream which runs through the Cantonment—and in the body of the Cantonment itself; as a consequence of this, flies are much less numerous than was formerly the case. The native town has been radically altered and made to conform with the general principles outlined above. Similar works have been undertaken at Lokoja (*vide* Cantonments, p. 15).

It was decided during the year to dismantle the Zungeru-Barijuko Tramway. Six miles of the track from Zungeru were reserved for sanitary purposes, and shortly all the night soil and non-combustible rubbish will be taken away from the Cantonment on trollies.

Several incinerators for the destruction of combustible rubbish have been erected.

At Baro, a marsh extends along the greater part of the river front, but schemes are now under consideration for filling in and draining the ground. According to all the canons of tropical hygiene, Baro ought to be a notoriously unhealthy spot. Since its occupation by Europeans, however, its health record has not been at all a bad one, and most of the cases treated in the hospitals there are importations.

During the year several cases of trypanosomiasis in natives have been discovered at Baro, and infected persons have been deported to the neighbourhood of Zaria to keep them away from tsetse flies. It is impossible to say if all or any of these cases were importations.

Burutu, at the mouth of the Niger, is an enclave leased by Northern Nigeria to provide facilities for shipment of goods consigned to the Protectorate. It is a swampy beach situated a few miles above Forcados, and during high tide is very nearly awash. The surface water is reached at a depth of about one foot, and the station is backed by a mangrove swamp which encloses it, joining the river immediately above and below it. It is a particularly rainy spot and swarms with mosquitoes, mostly stegomyia. Arrangements have been made with the Government of Southern Nigeria so that the Medical Officer stationed at Forcados, which is only four miles distant, will supervise sanitary requirements at Burutu.

During the year the Senior Sanitary Officer visited most of the Northern Provinces, also Bassa, Yola, and Muri. With the assistance of the political officers he was able to impress upon the native Emirs and Chiefs the necessity for sanitary precautions. The Emir of Kano has issued a proclamation enjoining his people to observe certain simple laws in regard to sanitation, and other Emirs are being induced to follow his example.

XIII.—VACCINATION.

Small-pox is endemic, and takes an epidemic form in some parts of the Protectorate every year. Comparatively few of the cases come under medical observation, but this is not surprising,

having regard to the fact that the number of medical officers actually in residence works out at one to an area of 9,000 square miles. In some places, too, it is difficult to persuade the natives to agree to vaccination, owing to religious or other prejudices.

During the year 43 cases, all among natives, were treated, and three proved fatal. Successful vaccinations, to the number of 3,942 cases, were performed during the year. It is interesting to note that of these 431 were effected at Kano, 60 at Sokoto, 28 at Kontagora, 68 at Zaria, 16 at Birnin Kebbi, 84 at Katagum, 471 at Geidam, 146 at Maiduguri, 48 at Nafada, 501 at Bauchi, 233 at Yola, and 187 at Katsena. It will be seen, therefore, that the majority of successful vaccinations were effected in the interior, where formerly scarcely any success had been met with. This success is largely due to the use of powdered lymph. Small-pox is essentially a dry-weather disease—every outbreak disappearing with the onset of the rains.

Prophylactic inoculation has been practised amongst certain tribes in this Protectorate for many generations.

XIV.—METEOROLOGY.

Detailed monthly reports are submitted from 18 stations, and are accepted as reliable by the Meteorological Society. The Medical Officer at each station is responsible for the record. The highest shade temperature recorded in the Protectorate during the year was 114° F. at Geidam on the 23rd of March, and at Maiduguri on the 26th of March. Both these places are in the Bornu Province. The lowest shade temperature was 39° F., recorded at Sokoto on the 4th of January. The highest mean shade temperature was 84·2° F., recorded at Baro, and the lowest 76·3° F., recorded at Ankpa. The greatest range of temperature was 73° F., recorded at Maiduguri, *i.e.*, 41° F. to 114° F.

The greatest total rainfall was 56·44 inches, recorded at Ankpa, in the Bassa Province, and the lowest 16·87 inches, recorded at Geidam, in the Bornu Province. The greatest rainfall during one day was 5·53 inches, recorded at Zungeru on the 6th of August.

XV.—POST AND TELEGRAPHS SERVICES.

The work performed and the revenue earned by this Department continue to show substantial increase.

The gross revenue collected during 1910 amounted to £12,760, being an increase of £4,160, nearly 50 per cent., on that for 1909. This amount includes a sum of £2,033 collected as Customs dues on parcels, which are now credited to the Customs Department. The earnings for telegraphs and postal services were therefore £10,727. The amount realised from the sale of stamps was £9,350, as compared with £6,000 in 1909 and £4,631 in 1908.

The actual cash transactions representing cash handled by clerks employed in the various post and telegraph offices amounted to £50,000.

The number of letters, postcards, and printed matter dealt with during the year amounted to 543,800, an increase of 63,398 on the figures for the preceding year. The number of inland official letters amounted to 92,000; inland private letters, 15,100; foreign and colonial official letter packages, 10,800; foreign and colonial private letters, 303,000.

The parcel post returns continue to show a large increase, the total for 1910 being 26,554, as against 23,987 during the previous year.

The earnings of the postal order system show a very large comparative increase. In many instances postal orders now take the place of money orders, as the poundage on the former is much smaller than the commission on money orders of equivalent value. This change has not, however, affected the revenue from the combined services, owing to the increase in the number and amounts of remittances.

The number of private telegrams transmitted shows an increase of 3,010 over 1909. The telegraph system is, however, primarily intended and principally used for administrative work. The total number of official messages transmitted during the year was 114,500. Cablegrams are received for transmission at all telegraph offices. The number of private cablegrams transmitted shows an increase of 40 per cent. on 1909; this increase is due principally to the establishment of the tin-mining industry. The number of foreign and colonial official telegrams shows a decrease of approximately 7 per cent. on the previous year; this decrease represents a saving in expenditure, and has been made possible owing to the accelerated mail service.

The increase in the work of the telegraphs branch is mainly due to the growth of the mining industry. The interruptions were neither so numerous nor for such long periods as during the previous year. The section which gave most trouble was, unfortunately, that between Zaria and Bauchi; as the mineral district was served by that line considerable inconvenience was caused. The new lines constructed during 1910 were the Badiko-Naraguta loop, and 100 miles (3 wires) along the Baro-Kano Railway between Minna and Zaria. The total mileage of telegraph wires in use during the year was 3,203 miles, as against 2,557 miles in 1909.

XVI.—MILITARY.

During the year the Northern Nigeria Regiment was inspected by the Inspector-General of the West African Frontier Force (Brigadier-General P. S. Wilkinson), who reported favourably on its efficiency and discipline. The interior economy of the force has been satisfactory throughout. All branches of drill and training show that progress is still being made.

Discipline has been well maintained. There were only two cases in which it was necessary to administer flogging, and these occurred on the line of march. The number of convictions by court martial and civil courts show a considerable decrease—the figures for 1910 being 9 and 9, respectively, as compared with 14 and 27 in 1909.

Further improvement in musketry is recorded.

Lokoja station is equipped with a modern rifle range, and Jeffries targets are being erected at Zungeru. All out-stations possess serviceable ranges.

Training in signalling, by means of heliograph, flag, and lamp, is in a satisfactory state in all units. For a period of ten days during the rains communication was maintained between Zungeru and Minna, a distance of 38 miles, by signallers of the 1st Battalion.

The number of men enrolled for the reserve shows a small but steady increase, and the scheme, it is hoped, is now becoming more generally understood.

XVII.—MEANS OF COMMUNICATION.

Road Transport.

During the year there was an increase in the amount of transport supplied, the increase being in hired transport, which represents 83 per cent. of the whole. There was practically no delay in despatching, but the losses were considerably more numerous than in previous years. Animal transport has again proved more costly than porters, due to the heavy rate of mortality among all classes of animals.

Donkeys have proved the most suitable of the pack animals; the rate of mortality amongst them is lower, they cost less, and require less feeding and care than either bullocks or camels. They are, however, only able to carry small, compact, and well-balanced loads. For the four months during which the Indian artizans were present their work was quite satisfactory. The native drivers proved fairly reliable; most of those who were discharged at the end of the dry season returned to take up the same work when cart transport was resumed.

There was a considerable decrease in the number of carts used during the year, owing to the completion of the Zungeru-Minna link with the Baro-Kano Railway, and the consequent closing of the Zungeru-Zaria road. The four-wheeled wagons are in every way the most suitable and economical.

All necessary repairs to buildings were done by transport officers and transport attendants, and no new permanent buildings were erected. The grain depôts at Ringa and Ruka were most satisfactory; there were no complaints, and the supplies, thanks to the assistance rendered by Residents, were plentiful. Both these depôts were abolished at the end of the dry season on the completion of the railway to Zaria.

Prices of animals remained normal, and there was no difficulty in obtaining the numbers required. The professional carrier, as a class, has disappeared from Zungeru.

At the beginning of the year pleuro-pneumonia was still causing heavy mortality amongst the Government cattle. Tsetse fly, as usual, was very prevalent, and most noticeable on the road between Kano and Katagum, taking heavy toll of the ponies and camels.

A disease known to the natives as "Borr," and somewhat resembling foot-and-mouth disease, broke out among the Government cattle at Kano and Zaria, on their return from convoy. A peculiar and previously unheard of disease broke out among the camels; it was difficult to diagnose, and caused several casualties; subsequently it has yielded readily enough to treatment.

During the year transport was supplied for 72,124 loads, as against 61,005 loads in the previous year; the ton mileage, including the transport of Public Works Department material, and postal matter undertaken by the Political Department, being 187,308, as against 171,967 in the previous year. The ton mileage is divided as follows:—By Government transport 24,582, as against 34,022 in 1909, and by hired transport 162,726, as against 137,945. During such time as it was possible to employ Government transport, 381 carts and 1,679 pack animals were employed. 56,929 carriers and 795 hired pack animals were used during the year.

On the 1st January there were 400 animals on hand. During the year, 141 were purchased, 201 died, 133 were sold; leaving a balance of 207 on hand on the 31st December.

On January 1st, the Indian establishment consisted of 3 veterinary assistants, 2 blacksmiths, and 3 carpenters; total 8. There were no increases during the year, and all were returned to India in May.

The actual expenditure for 1908-9 was £26,249 12*s.* 9*d.*, and that for 1909-10 was £29,389 14*s.* The establishment of the Transport Department was greatly reduced on April 1st, 1911, the pack and draft animals being sold, and the material, such as carts, wagons, &c., was in some cases sold and in some cases handed over to various native Chiefs.

River Transport.

The Niger River afforded exceptional facilities for water transport during the year. During the high river season the water rose to within two feet of the record height established during the preceding year's flood. A good depth of water was available during the low-river period. The crossings between Lokoja and Baro were dredged, and the larger vessels of the marine flotilla were able to reach Baro throughout the year. The lowest water levels recorded were three feet at Baro and six feet nine inches at Lokoja.

The river commenced to rise on the 26th of June, and rapidly attained a height of 36 feet at Lokoja. On account of the early rise of the river, very little Baro-Kano Railway material was discharged at Lokoja, the first branch boats being able to reach Baro.

The Kaduna River also rose well. When the Minna-Zungeru link with the Baro-Kano Railway was completed in May, it was intended to have abolished transport on this river, but owing to a wash-out on the railway during the heavy rains, the Kaduna River transport was necessarily re-opened. The S.W. "Sultan" took up mails and passengers early in August, and was followed by seven other weekly steamers. The last steamer left the Kaduna on the 15th of October.

The Benue River also rose to a good height during the flood, and was navigable for the larger vessels of the marine flotilla during the months of July, August, and September.

The S.W. "Kapelli" ascended the Benue during the first week in July. The last steam craft, the steam canoe "Black Swan," descended the river in December. The total rise recorded at Ibi was 23 feet 6 inches, and the total fall 25 feet. The Katsena and Gongola Rivers were not navigated by Government vessels during the year.

The floating dock which is moored at Burutu has been fully occupied during the year, and has proved very valuable to the Government in helping to keep the hulls of the vessels in a better state of repair than formerly was possible.

During the months of April and May the rocks between Lokoja and Quendon were successfully buoyed. A careful survey was made of this dangerous section of the river, and the additional information obtained is being embodied in the Admiralty charts.

The receipts on account of the transport of private passengers and cargo showed an increase of £1,713 on the figures for the previous year. This increase was principally due to additional work undertaken in connection with the transport of employees and stores belonging to mining companies. The passenger and cargo accommodation for native petty traders is ample on all sections.

A weekly service has been established between Baro and Burutu in conjunction with the Baro-Kano Railway.

XVIII.—BARO-KANO RAILWAY.

Earthwork to Kano was completed in June, 1910, following close on the survey. By the 22nd December the rails had arrived at Rigachikum, mile 227½, the point where the motor road branches off to Naraguta, which is situated on the Bauchi plateau in the neighbourhood of the fields. The construction of this road had been pushed on and completed to allow of cart and light motor traffic between Rigachikum station and Naraguta.

A siding and temporary goods shed were constructed at Rigachikum to meet the needs of the mining companies.

Permanent bridges were completed to mile 215, and the construction of the Kaduna bridge and the bridges north of it towards Zaria were well advanced by the end of the year.

The works carried out during the year were sufficiently advanced to allow of the original programme being adhered to,

viz.: the completion of track-laying to Kano before the rains of 1911, and the completion of the bridging to Kano early in 1912.

Local labour was employed as under:—

Quarter ending	31st March	(average number)	...	14,879
,, ,,	30th June	,, ,,	...	11,911
,, ,,	30th September	,, ,,	...	3,727
,, ,,	31st December	,, ,,	...	3,638

The sawmill continues to turn out timber for bridge-sleepers, the logs being cut locally. In November the output was 2,121 cubic feet.

During the Niger high water, 16,177 tons of material were brought up in branch steamers, and during the year, 1,715 tons in Niger Company's river boats, and 5,257 tons in boats of the marine flotilla. The Government Marine Department carried 5,349 tons of material for the Baro-Kano Railway and Lagos Railway (Northern extension).

Of the 2,120 bags of mails and parcels carried by rail during the last year, 579 were to or from Kano.

From the 1st April up to the end of the year, the Baro-Minna section, 111 miles, was operated as open lines, the total cash receipts from the public being:—

			£
Quarter ending	31st March	... ...	937
,, ,,	30th June	... ...	910
,, ,,	30th September	... ...	1,742
,, ,,	31st December	... ...	2,134
,, ,,	31st March, 1911	... ...	3,085

For a review of work in connection with the construction of the Baro-Kano Railway *vide* Appendix II.

The receipts from the railway were almost entirely due to native passengers with country produce. Public traffic in general shows satisfactory signs of a steady increase.

The Director of Public Works and Railways, after an investigation of the south-eastern portion of the Zaria Province, recommended that a light railway should be built from Zaria towards Naraguta. A sum of £200,000 was granted out of Imperial funds for this purpose, and the road was commenced in February, 1911. It is expected that about 100 miles will be constructed for this sum, the terminus being a locality on the River Kaduna, near Rahamma.

XIX.—PUBLIC WORKS.

Works in Cantonments.

No provision for new buildings at Zungeru was made in the Estimates for 1909-10, and the works carried out were only of a minor nature. These included the erection of eight small incinerators for the destruction of rubbish; the dismantling and re-erection on a more suitable site of the police store; erection of

a small workshop and store for the Post and Telegraph Department; target frames for 1st Battalion, Northern Nigeria Regiment; and the addition of mosquito houses to nearly all bungalows. Repairs to dams and bridges, rendered necessary by very heavy rains, were carried out. Most of the bungalows, offices, staff quarters, &c., were kept in a good state of repair, but several bungalows, notably those originally erected at Jebba and Quendon, are in a very dilapidated condition, and require to be practically rebuilt. The Barijuko-Zungeru tramway station building was dismantled and re-erected in the native town for use as a market.

The ice plant, condenser, and Government House electric light plant have been running without interruption.

At Lokoja, the following works have been completed:—Four blocks of clerks' quarters, three-roomed rest-house on Mount Patti, the steel wharf and approach thereto, target shed for the 2nd Battalion of the Northern Nigeria Regiment, servants' houses to British non-commissioned officers' quarters, a booth containing 10 stalls in the Lokoja native market, extension of the gaol wall, and erection of a large prison cell.

Two new wells were sunk, and careful investigations are being made in the matter of a permanent water supply to be obtained from a spring on Mount Patti.

All buildings were kept in a good state of repair, but it is becoming increasingly difficult to keep bats out of the hollow walls and roofs of old wooden bungalows.

Works at Out-Stations.

The additional works sanctioned were completed:—At Birnin Kebbi, one additional two-roomed brick house and telegraph office; at Minna, a four-roomed brick Residency; at Baro, one two-roomed brick house.

At Zaria the following buildings were well in hand and nearing completion, and it is anticipated that all will be handed over for occupation by the end of June:—one six-roomed brick Residency and Governor's rest-house; one three-roomed, one two-roomed, and two single-roomed bungalows; a large three-roomed Provincial Office; a Post and Telegraph Office, and a strong room.

All works for which provision had been made at Burutu were completed, but the local conditions prevailing at that station call for a large capital expenditure on draining and reclaiming the swamp, erection of frontage wall, raising ground level, and provision of additional latrines. Additional condensers were erected at Katagum, Birnin Kebbi, Zaria, and Burutu. Mosquito houses, constructed in sections for carrier transport, were issued to out-stations.

Bridges and Roads.

Parts of the Kaduna bridge are being utilised by the Lagos Railway (Northern extension).

The Aza bridge, near Ilorin, required small repairs after the rains, which were of exceptional severity.

Grants were made in aid of the clearing and upkeep of roads in provinces.

Bauchi Road.

The survey of the road was completed by engineers temporarily lent by the Baro-Kano Railway. Construction was commenced on 9th June, 1910, and completed to mile 139½ on the 24th January, 1911, at a cost of £2,145 8*s.* 5*d.*, or an average of £15 8*s.* per mile. The line of survey was cleared of all trees and rocks, and was levelled, the gradients eased, and drains cut where required.

Ramps were cut at all streams, and the track generally rendered fit for motor traffic during dry weather.

The journey from Rigachikum to Naraguta, 139½ miles, was made in the Government 18 h.p. motor in two days (17 running hours).

XX.—PROVINCIAL ADMINISTRATION.

The Protectorate is divided for administrative purposes into 13 Provinces. The administrative staff consists of 7 first class, 14 second, 29 third, and 82 assistant Residents, making a total of 132 officers. Allowing that one-third of these are absent on leave, there is in the Protectorate at any given time an average of one administrative officer per 2,500 square miles of territory, and per 10,000 of population.

The policy of ruling through and with the native rulers, which has been referred to in former reports, has been pursued with undeviating fidelity in the Northern Emirates, in practice as well as in theory. In those Pagan districts where, owing to lack of cohesion among the members of the various tribes, it has not been possible, as yet, to adhere strictly to that policy in practice, the principle is kept in view. Continued effort is being made to introduce order, where chaos formerly existed, by developing, and, where necessary, creating tribal organisation, having as its basis the customary law of the tribe, rather than by attempting the introduction of any alien system.

The result which has been secured may be said, with reason, to justify this policy, for, during the past two years, it has not been necessary to employ armed force to effect control on a scale which would justify the use of the term "minor military operation" in any part of the Protectorate. During the same time, important, and even drastic, reforms have been effected in regard to the administration of the Northern States; and in the Southern Provinces a number of Pagan tribes of the most independent character have been made to pay regular taxes. As a result, the Government share of revenue, raised by direct taxation, chiefly in the form of rent for the use of land, has increased from £124,000 to £180,000 in the space of two years.

In the Northern Provinces it is certain that the individual is not paying more now than he did before the occupation, and the fact that the collection shows an increase, clearly indicates great reforms in the administrations responsible for that collection.

Allocation of Native Treasury Funds.

The total amount of the taxes paid by a native unit are divided into four parts. Two of these form the Government share, and are paid into the general revenue. The other two are paid into the Beit-el-Mal (Native Treasury). One of these is earmarked for the payment of fixed emoluments individually to the Emir, his councillors, his police, his official messengers, the officials told off by him to look after roads, buildings, sanitation, and public works generally, and to the payment of the native judges. Also to defray the cost of public works such as markets, gaols, &c., road-making, well-making, of education, and of the subsistence of persons who, according to Muslim tenets, should receive State aid. Also towards establishing a reserve fund, in case at any time, owing to the failure of crops, it should be necessary to remit a portion of the taxes.

The remaining fourth share is divided among the district and village heads in proportion to the amounts of rents and taxes for the collection of which each is responsible.

In some Provinces the district heads have been placed on fixed salaries, notably Bornu, but it has not yet been decided as to whether this system should be adopted generally.

The organisation described in the preceding paragraphs has not been entirely elaborated in the Pagan districts, but in every case efforts are being made, and in many with considerable success, to establish a common fund, administered on the lines described.

Generally speaking, it has been found expedient to pay the native officials on a generous scale, and it must be said in justice to these, that a marked improvement in his work has followed in every case where an official has been granted an assured income. The funds administered by the Beit-el-Mal (Native Treasuries) throughout the Protectorate, amounted to over £200,000 during the year under review.

Native Courts.

The effect of the payment of the native judges deserves special notice. The improved position and growing efficiency of the Native Judiciary, noted in previous reports, has now been established by the institution of Native Treasuries and the payment of regular salaries to the native judges. In former days, the judges (Alkalai) had no fixed stipends, and depended for their livelihood on the generosity of the reigning Emir, or on the fees collected through orders from their own courts. In such circumstances it could hardly be expected that the courts would be efficient, or free from bribery and corruption. It is now generally conceded that the former weakness of the native courts was caused rather by a radically bad system than by any real lack of men who could, if properly supported, efficiently administer justice.

In Kano and Katsena a measure has been adopted which it is hoped it will be found possible to extend elsewhere. In these two Emirates the courts do not execute their own judgments. The court informs the head of the district in which it is situated that an order has been given, and should this entail the payment of a

judgment debt, the Beit-el-Mal is also informed by the court. The district head is responsible for the execution of the order, for the collection of any amount due, and for its payment into the Beit-el-Mal. By this means a complete check on both the judiciary and the executive is established.

At the present time in the Northern Provinces almost every district has a salaried Alkali's Court with considerable, but limited, powers. Minutes of every case tried in the district courts are submitted monthly to the chief native judges at the various capitals of the province. Serious cases are referred to the courts established in the capitals of the Emirates. The rough and ready justice of the district headman has thus, in a literal sense, been replaced by a "rule of law."

It is a remarkable fact that crimes of violence and robbery, which in the early years of the Protectorate were so regrettably numerous, have almost disappeared since the native courts, with their corollary, native police (Dogarai), have been given a free hand.

The civil work of the courts is extensive. In Sokoto the record shows 6,062 cases tried, in Bornu 3,147, while in Kano the return of cases has risen from 15,301 in 1909, to over 20,000 in the present year. The figures for Kano Emirate, with a population of about 2,000,000, are perhaps worth quoting in detail.

They are as follows:—

Criminal Cases—	
Homicide	22
Theft	350
Assault	689
Miscellaneous	206
Total	1,267
Civil Cases—	
Debt	4,529
Matrimonial	9,020
Slavery	1,295
Land and Taxes	1,184
Estates	2,714
Miscellaneous	731
Total	19,473

The bulk of the cases of assault were not of a serious character, and assaults on women form a small proportion of the total.

It will be seen that only ·07 of the population committed any offence which called for judicial action, and that serious crime is so small that even European countries would lose rather than gain by comparison.

As regards the treatment of prisoners, the Native Administrations have radically altered the system in vogue, which assumed that a prisoner was an encumbrance to be got rid of as soon as possible. The native gaols throughout the country are now carefully superintended, and their sanitation is attended to; prisoners

are looked after and, in return, perform useful work for the community.

The strength of this linked system of purely native police, prisons, and judges for the suppression of crime and settlement of disputes, lies primarily in the fact that all are local, are understood by the native mind, and are, therefore, subject to the control of native public opinion.

The moral force of these local services, and their intimate acquaintance with the people among whom they work, forms a far surer guarantee than can be secured by mere physical force and fear of punishment. The judges and police are not only "official," but are in sympathy with the people whom they understand and who understand them. Proof of this is furnished by the ready obedience given by the large crowds of natives which attend at official ceremonies to the native "dogarai," who appear to have no more difficulty in controlling these crowds than have the police in the streets and parks in London; and by the manner in which the orders of the native courts are executed and accepted.

Assessments.

The administrative staff in the provinces has toured the various districts extensively during the year. "Resident assessments," by which is implied a village to village assessment by a European officer, who also compiles a report and a detailed map of such district, have been steadily continued. They have resulted in a large increase of revenue derived from a proper and equitable apportionment of taxation in the northern provinces, and the bringing of a number of hitherto uncontrolled tribes into touch with the administration in the southern provinces.

The system of taxation existing at the time of the initiation of the Protectorate was of a highly complicated nature and differed in each province. It would be beyond the scope of a report such as this to attempt to describe these systems in detail. The various reforms which have been instituted with a view to simplifying them and bringing the system of taxation in each district into conformity with a general scheme for the whole Protectorate can, however, be briefly enumerated.

In Sokoto each village is assessed, after careful inquiries made on the spot by a British official as to the resources of the inhabitants, at a lump sum, and the apportionment of the amount payable by the individual is left to the village head and his council. They are directed to assess the individual in accordance with his wealth from whatever source it may be obtained. In Bassa the individual is assessed at a fixed and universal rate *per capita*.

These two systems represent the extremes of divergence which occur in methods of assessment and are each suited to the conditions existing in the provinces where applied, which differ in a corresponding manner. In Bassa the village heads could not apportion the tax proportionately amongst the individuals, while in Sokoto the native would disapprove of a system which compelled the poor to pay as much as the rich.

Between these two systems fall the various methods of assessment employed in the remaining provinces, excepting in certain cases which will be considered later. In pagan districts such as parts of Southern Bornu, Northern Yola, Southern Zaria, Southern Bauchi, the Gwari districts in the Niger Province, and the greater portion of the Muri and Nassarawa and Kontagora Provinces the method employed is similar to that in Bassa.

In the Emirate of Bornu a system which is a combination of those employed in Sokoto and Bassa has been adopted with excellent results. That is to say a proportion of the tax payable by a village is fixed by a rate demanded on each farm, hut, and individual, whilst a proportion is left to the headmen to assess according to the wealth of the individual.

In the Bauchi, Bida, and Gombe Emirates, and in the Katagum, Hadeija, Gumel, and other small Emirates situated to the east of Kano and in the Provinces of Kabba and Ilorin, the system is similar to that in Sokoto.

In the Zaria Emirate the system approximates to that of Bassa, inasmuch as there is a fixed rate payable per "hoe." This rate varies however in different villages according to the fertility of the soil, proximity to market, &c. Also a fixed rate is charged *per capita* on industrials. The system approximates to that in Sokoto inasmuch as a tithe of all crops is payable to the Government.

In Kano and Katsena the system approximates to Bassa, inasmuch as there is a more or less fixed charge per farm, and to Sokoto, inasmuch as a tithe of grain is payable to the Government.

Land Measurement.

In these Emirates, however, a system has been introduced which it is hoped may be found applicable generally. By this system all the former taxes and tithes are commuted for a rent payable in proportion to land occupied. In the neighbourhood of Kano land is at a premium, and it has been found possible to train Mallamai in the employ of the Native Administration to measure farms with sufficient accuracy to enable an approximately accurate Land Revenue Survey to be undertaken. A rent of 9*d.* to 1*s.* 8*d.* per acre is obtainable, and is willingly paid by the native occupiers. The latter, even the poorest and least educated, have shown remarkable capacity for grasping the principle of square measure since they have observed that their contributions were in proportion to the areas of their farms. They are not slow to call the attention of the authorities should they think that a miscalculation has been made which is not in their favour. The system has the advantage that it affords complete protection of the individual and avoids the necessity for any argument with the tax gatherer as to what amount is due. The danger connected with its application in places where there is a superfluity of land is that the farmers may restrict the size of their farms in order to lower their rents. This result has not occurred, however, in Katsena, where the system was introduced at the request of the Emir, and the natives are accepting it very readily.

In Kano City the compounds are measured as well as the farms. In the out districts, however, it has not been thought advisable to do this in order to avoid the danger of undue restriction of the size of the compound. A fixed charge of 1*s*. 6*d*. per compound is therefore levied.

The system of land measurement is being tried round Sokoto Town, where land is also at a premium, and also in the Ilorin Province. It is too soon, however, to say what results may be expected in those provinces.

In Table I. will be found a statement showing the position in the various provinces in respect to cost of administration, revenue, and population.

Table II. shows the cost of the Provincial Administrations.

Table IV. shows the receipts (Government share) of land revenue during the past eight years.

APPENDIX I.

ECONOMIC INVESTIGATIONS CONDUCTED AT THE IMPERIAL INSTITUTE DURING THE YEAR 1910 FOR THE PROTECTORATE OF NORTHERN NIGERIA.

Reports on the following subjects have been furnished to the Government of Northern Nigeria from the Imperial Institute as the result of investigations conducted in the Scientific and Technical Department, supplemented when necessary by technical trials by manufacturers and commercial experts. In some cases recommendations have been made as to the further action which is required in the Protectorate to develop the production of materials for which there would be a satisfactory commercial demand.

Gums.—A series of samples of gums from the principal gum-yielding trees of Sokoto, Yola, and Bornu Provinces were investigated, and in some cases their botanical sources were ascertained. As a result of this enquiry it has been established that the species which yield gum in Northern Nigeria are the same as those furnishing the Sudan and Senegal gums of commerce. Further, it appears likely that in Northern Nigeria single species of gum-yielding trees frequently occur over considerable areas, so that in many cases it ought to be possible to arrange for the collection of gum from one particular species and thus to avoid the export of mixed gums. From Bornu Province a number of small consignments of graded gum obtained from *Acacia Senegal* and *Acacia Seyal* were received. These were analysed, and in a few cases practical trials were also made with the gums by manufacturing confectioners. A full account of the results of this work on Nigerian gums has been published in the "Bulletin of the Imperial Institute," Vol. VIII (1910), No. 4.

Cotton.—Two samples of native cottons were much stained and of comparatively low value. They had, however, a staple of about an inch, and would probably be capable of considerable improvement under cultivation.

Fibres.—A specimen of Ramma fibre, *Ribiscus lunarii-folius*, was of good length and strength and was valued at £16 to £17 per ton with "first native marks," Calcutta jute at £14 7*s*. 6*d*. per ton. Such fibre would be readily saleable as a substitute for jute. Another sample of fibre, probably of the same botanical origin, was rather shorter and not quite so well-prepared, and was regarded as worth about £14 per ton when "first native marks" Calcutta jute was quoted at £17 per ton.

Silk.—Seven samples of Anaphe silk were examined. Two were of good quality and would be serviceable as substitutes for "tussur" silk, whilst the others were of inferior quality.

Oil Seeds.—The oil expressed from Beniseed (*Moringa pterygosperma*) was tested by manufacturers, who reported that it was suitable for soap-making and for this purpose would be worth a little less than cotton-seed oil. The cake left after expression of the oil was found to compare favourably with cotton-seed cake and linseed cake in nutritive value, but unfortunately it possessed a bitter taste, so that it would probably be unsuitable for use as a feeding-stuff and could only be employed as a manure.

A sample of Beniseed (sesame) was valued at 40*s*. per 384 lbs.

Foodstuffs.—Two samples of wheat were of excellent quality and would be readily saleable in the United Kingdom. They were valued in London at 36*s*. 6*d*. and 37*s*. 6*d*. per quarter. A sample of guinea corn was valued at 23*s*. per quarter. A sample of rice was also received, but being in an unhusked condition it would not be saleable in the United Kingdom.

The leaves and stems of millet and guinea corn were examined in connection with an investigation into their alleged poisonous properties. The guinea corn gave a negative result, and although traces of prussic acid were found in the millet, the quantity was too small to be injurious to cattle.

Drugs.—Three native drugs were received for examination, but none of them proved to contain constituents likely to be of value in European medicine.

Tobacco.—Two samples of tobacco were examined and recommendations were made with regard to tobacco-growing in the Protectorate.

Minerals.—Field work in connection with the Mineral Survey of Northern Nigeria terminated in 1909. The examination at the Imperial Institute of the minerals collected in 1908-09 was completed during 1910, and report on this work was in preparation at the end of the year.

In addition to work in connection with the Mineral Survey, an examination was made of samples of native potash, ironstone, water, and various rock materials, forwarded by Political Officers in the Protectorate.

APPENDIX II.

BARO-KANO RAILWAY.

A cablegram was received in Zungeru from the Secretary of State on the 8th of August, 1907, that it has been announced in Parliament that the construction of a railway in Northern Nigeria from Baro to Kano had been sanctioned. Three years and eight months later, on the 28th of March, 1911, that railway reached Kano, 356 miles from Baro.

The reasons for constructing the railway have been fully described in the various Blue Books. They were, primarily, the development of the country generally and the reduction of military expenditure and transport charges.

The labour for earthworks was recruited locally, and organised by the native Emirs and Chiefs under the direct supervision of the Political Officers attached to the various provinces, who, taking the place of contractors, dealt with the natives through their village heads, thus ensuring that co-operation between all classes of natives which is essential to the successful direction of native affairs. To assist the Political Officers three or four European foremen were attached to each section to assist in laying out the earthwork. It has been a noticeable and satisfactory feature of the work that no single case of ill-treatment of natives has been reported. The duties of the Political Officers were three-fold, namely:—Arranging for labour, arranging and controlling food supplies and the paying of the native labourer personally; the last being an important and necessary precaution to prevent frauds and to indicate to the untrained native the source of the wages paid to him.

Reconnaisance surveys were made by Military Officers of this Protectorate, and further, to secure the services of a thoroughly experienced staff, the High Commissioner of South Africa was asked to assist by engaging surveyors. The first batch of these left Capetown on the 30th of December, 1907. In all eight engineers, five accountants, two store-keepers, and thirty-six foremen from South Africa were engaged. The line runs through a forest in the neighbourhood of mile 18, where there is much valuable timber, and expert timber-men were sent for from Canada. As a result the sawmill is supplying all the wooden sleepers required on the railway.

In order to ensure the health of the staff, condensers were provided, mosquito-proof shelters erected, and extensive works for the draining and clearing of Baro were undertaken.

The Colonial Office, at the request of Sir Percy Girouard, arranged with the Army Council for the employment of three officers and thirty non-commissioned officers and men of the Royal Engineers for erection of engines and rolling stock, and the laying of track and the working of trains.

The earthwork, which followed close on the survey after mile 60, was taken across the, at that time, almost uninhabited and unknown belt which divides the Niger Valley from the southern fringes of the Hausa states. The difficulties experienced in obtaining food and labour on this section were great, but once the Kaduna, at mile 215 from Baro, had been crossed and the Hausa country entered, food was abundant and plentiful. It was on the central section of 150 miles that the work was heaviest.

When it was first proposed to send 30,000 tons up to Baro in one season, it was freely stated by traders well acquainted with the river that it would be impossible to do so. However, by the order of the Secretary of State for the Colonies a consignment of 1,700 tons of permanent way material was diverted from Lagos and successfully landed at Baro in September and October, 1907. During the three years 1908-1910 83,300 tons of material were delivered at Baro in addition to 1,700 tons for the Lagos Railway Northern Extension.

The river transport began disastrously with the wrecking of the S.S. "Bassa," an ocean going steamer of 1,500 tons, near Lokoja, on the 22nd of July, 1908, but this was the only serious accident which occurred.

The principles on which this railway was begun have been adhered to throughout, and by some are considered to be essential to the successful construction of a pioneer railway at a reasonable cost. They assume that the weight of rail should depend on traffic and gradients, and that consequently weight of engine is required. In a pioneer line, where the gradient and weight of rail are limited by financial considerations, it is economical to put on the road the heaviest engine which the rail could stand; and Sir Percy Girouard, who was responsible for introducing into South Africa the American practice of using very heavy engines for the haulage of long trains, ordered five engines of a modified Cape Class VII for the Baro-Kano Railway. As the survey progressed, gradients were decided on the spot. All plotting was done in the field; alternative routes being compared, and alterations in alignment made without hesitation, when it was found to be advisable. Earthworks have been constructed in a manner to permit of a reduction of labour during the sowing and harvesting seasons.

The earthworks as far as Kano, comprising about eight million cubic yards of material varying from hard granite to light sandy soil, were completed in June, 1910, the surveying having been completed in April of that year.

The estimate in regard to bridging proved to be very much below actual requirements. In some cases only five feet per mile were allowed, when over fifty feet per mile were found to be necessary. This was no doubt due to the precedent of the Lagos Railway having been followed, where the steady rainfall does not call for large openings for the outlet of accumulated waters; whereas the rain-storms of Northern Nigeria, accompanying tornados of terrific violence, bring sudden and heavy floods down the deep valleys and gorges by which the country is intersected.

The line rises from Baro, situated about 300 feet above sea level, to a height of 2,400 feet at the divide between the basins of the Niger and Lake Chad.

On the Bauchi plateau many of the large rivers of the Protectorate have their origin, and the Baro-Kano Railway crosses all of those which run in a westerly direction. It was not long before the gravity of the situation became apparent, for £3,000 a mile did not allow a margin of expenditure for costly works. Steel trestle bridges were therefore designed for all except large rivers. In the smaller openings corrugated iron culverts were used. These devices were found to be admirably suited to the needs and difficulties of the country on many sections, as has been reported. But in the places where large bridges were required over streams carrying floating timber, concrete piers with girders of from 40 to 100 feet spans have been employed. Notwithstanding every effort to secure economy, it was found necessary to ask for £70,000 to finish the railway to Kano, and the bridges may be said to have been the cause of this excess. In return the railway possesses a number of large bridges which would be creditable to any railway in India or the Colonies. The cost has been scrupulously cut down and no æsthetic considerations have been allowed to interfere with economy. Bridge sites have been carefully selected and spans have been erected to suit foundations, on the approved principle of equalizing cost of pier and superstructure.

As an instance, the Kaduna bridge, which consists of three spans of 100 feet, two of 55 feet, two of 40 feet and one of 30 feet was completed five months after it was begun, though the concrete piers are 30 feet high and the foundations presented grave difficulties. The cost of the bridge was

£7,765 or £13 12*s*. 0*d*. per foot of length, a rate that would be considered reasonable in India. The bridges are now practically complete to Zaria, and, with the exception of the Shallawa bridge near Kano, the remainder are in hand.

One of the first works undertaken at Baro was the erection of workshops and rolling stock in order that track-laying might be pushed on close behind earthworks, deviations being made at bridges in order to avoid delay in the supply of rails and sleepers.

The work of track-laying was placed in the hands of the Royal Engineer detachment. In order to avoid the overloading of the line with construction rolling stock whilst construction was proceeding, as much material as possible was forwarded during the rainy seasons and worked forward step by step to advance depôts.

The progress of the track-laying, excluding sidings and temporary work, was as follows:—

1908-1909	...	99 miles	
1909-1910	...	151 miles	(including Zungeru link)
1910-1911	...	144 miles.	

Including sidings and deviation the track laid in the three working seasons is approximately 450 miles.

During 1910-1911, with ample labour and food supply, rapid progress was maintained, viz:—

December 12th to 31st	22 miles main line
January	36½ miles
February	37 miles
March	42½ miles.

Zaria was reached on January 25th and Kano on March 28th, 1911. The best week's work (6 days) in track-laying was 12¼ miles. The best day's work was 6⅓ miles of main line, which is believed exceeds by more than a mile previous world-records for telescopic track-laying.

The organization of a Traffic Staff was taken in hand early, as it was necessary to train clerks and raw natives, and to adopt the simplest methods of working. To accustom the natives to the railway, and also to prevent extortion, a simple system was introduced encouraging native passengers to travel at very cheap rates and take their produce with them to neighbouring markets.

On the whole the health of the Europeans employed on the line has been very good, for West Africa. Six deaths have occurred in the country, one being due to an accident. In the first year at Baro nearly everyone suffered more or less from fever, but the scientific methods employed with such success at Panama were equally effective at Baro, where to-day cases of fever are infrequent.

The cost of the railway, inclusive of dredger and open lines suspense account to the 31st March, 1910, when the track had reached Kano, was £1,248,117, the expenditure on the railway proper being less than the original estimate of £1,200,000. The estimated cost to complete exclusive of dredger and suspense account is £1,270,000, or roughly £3,500 per mile.

TABLE I.—

	Name of Province.	Sokoto.	Kano.	Bornu.	Bauchi.	Zaria.	Niger.	Kontagora.
	Area (Total 255,700 sq. miles).	35,400	28,600	32,800	24,700	9,847	18,453	27,000
	Population (Total 9,269,000).	1,300,000	3,500,000	700,000	700,000	402,000	400,000	122,000
Revenue.	Land Revenue (Government share).	£ 28,500	69,700	15,100	10,900	5,700	16,000	3,300
	Land Revenue (native share).	£ 37,800	69,700	12,700	10,300	5,700	13,000	2,200
	Total Land Revenue.	£ 66,300	139,400	27,800	21,200	11,400	29,000	5,500
		£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
	Rate per sq. mile (Government share).	0 16 1	2 8 9	0 9 2	0 8 10	0 11 7	0 17 3	0 2 5
	Rate per sq. mile (native share).	1 1 4	2 8 9	0 7 9	0 8 4	0 11 7	0 14 1	0 1 7
	Total Rate per sq. mile.	1 17 5	4 17 6	0 16 11	0 17 2	1 3 2	1 11 4	0 4 0
	Rate per 1,000 of population (Government share).	21 18 6	19 18 3	21 11 5	15 11 5	14 3 7	40 0 0	27 1 0
	Rate per 1,000 of population (native share).	29 1 6	19 18 3	18 2 10	14 14 3	14 3 7	32 10 0	18 0 8
	Total Rate per 1,000 of population.	51 0 0	39 16 6	39 14 3	30 5 8	28 7 2	72 10 0	45 1 8
Expenditure.	Expenditure (European Administration and military).	£ 35,100	37,100	32,600	18,600	14,600	25,100	13,500
	Expenditure (Native Administration).	£ 37,800	63,800	12,700	10,300	4,200	13,000	2,200
	Total Expenditure.	£ 72,900	100,900	45,300	28,900	18,800	38,100	15,700
		£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
	Rate per sq. mile (European Administration).	0 19 10	1 5 11	0 19 10	0 15 0	1 9 9	1 7 1	0 10 0
	Rate per sq. mile (Native Administration).	1 1 4	2 4 7	0 7 9	0 8 4	0 8 7	0 14 1	0 1 7
	Total Rate per sq. mile.	2 1 2	3 10 6	1 7 7	1 3 4	1 18 4	2 1 2	0 11 7
	Rate per 1,000 of population (European Administration).	27 0 0	10 12 0	46 11 5	26 11 5	36 6 4	62 15 0	110 13 1
	Rate per 1,000 of population (Native Administration).	29 1 6	18 4 6	18 2 10	14 14 3	10 8 11	32 10 0	18 0 8
	Total Rate per 1,000 of population.	56 1 6	28 16 6	64 14 3	41 5 8	46 15 3	95 5 0	128 13 9

PROVINCIAL STATISTICS.

Ilorin.	Muri.	Nassarawa.	Yola.	Kabba.	Bassa.	Total.	Total average rate.	Remarks.
6,300	25,600	17,900	14,300	7,800	7,000	255,700	—	An increase in receipts of 2½d. per head of population would equalise the receipts and expenditure.
200,000	700,000	600,000	300,000	140,000	205,000	9,269,000	—	
5,400	5,700	5,200	4,900	3,200	6,000	179,600	—	
4,400	2,185	2,800	3,700	500	2,100	167,085	—	
9,800	7,885	8,000	8,600	3,700	8,100	346,685	—	
£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.		£ s. d.	
0 17 2	0 4 5	0 5 10	0 6 10	0 8 2	0 17 2	—	—	
0 14 0	0 1 8	0 3 1	0 5 2	0 1 3	0 6 0	—	—	
1 11 2	0 6 1	0 8 11	0 12 0	0 0 5	1 3 2	—	1 7 1	
27 0 0	8 2 10	8 13 4	16 6 8	22 17 2	29 5 4	—	—	
22 0 0	3 2 5	4 13 4	12 6 8	3 11 5	10 4 10	—	—	
49 0 0	11 5 3	13 6 8	28 13 4	26 8 7	39 10 2	—	37 8 0	
7,100	22,300	15,500	17,500	17,000	13,900	269,900	—	
4,400	1,200	2,800	3,700	500	2,100	158,700	—	
11,500	23,500	18,300	21,200	17,500	16,000	428,600	—	
£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.		£ s. d.	
1 2 6	0 17 5	0 17 4	1 4 6	2 3 7	1 19 9	—	—	
0 14 0	0 0 11	0 3 1	0 5 2	0 1 3	0 6 0	—	—	
1 16 6	0 18 4	1 0 5	1 9 8	2 4 10	2 5 9	—	1 13 6	
35 10 0	31 17 2	25 16 8	58 6 8	125 0 0	67 16 1	—	—	
22 0 0	1 14 3	4 13 4	12 6 8	3 11 5	10 4 10	—	—	
57 10 0	33 11 5	30 10 0	70 13 4	128 11 5	78 0 11	—	46 4 9	

TABLE II.

SCHEDULE OF APPROXIMATE COST OF PROVINCIAL ADMINISTRATION, POLICE, PRISONS, &C. DURING THE YEAR 1910–11.

Province.	Provincial Administration (Personal Emoluments).	Police.	Prisons.	Northern Nigeria Regiment.	Transport (Internal).	Total.	Government Share of Land Revenue.	Grants to Native Administrations.
	£	£	£	£	£	£	£	£
Sokoto ...	7,739	—	458	23,682	1,199	33,078	28,500	37,800
Kano ...	9,687	—	689	23,682	1,489	35,547	69,700	69,700
Bornu ...	7,633	—	463	16,143	1,053	25,292	15,100	12,700
Bauchi ...	7,119	1,961	135	15,396	1,014	25,625	10,900	10,300
Zaria... ...	3,157	327	635	8,983	802	13,904	5,700	5,700
Kontagora ...	3,486	1,735	82	5,590	548	11,441	3,300	2,200
Niger ...	8,197	4,162	2,809	8,983	717	24,868	16,000	13,000
Yola	4,527	2,312	81	8,983	617	16,520	4,900	3,700
Muri	6,283	1,765	181	12,374	501	21,104	5,700	1,200
Nassarawa ...	4,302	913	136	8,983	807	15,141	5,200	2,800
Kabba ...	4,193	3,693	2,007	8,983	198	19,074	3,200	500
Bassa ...	2,271	1,916	133	8,983	330	13,633	6,000	2,100
Ilorin ...	3,412	2,487	89	—	278	6,266	5,400	4,400
Total ...	72,006	21,271	7,898	150,765	9,553	261,493	179,600	166,100

TABLE III.

TYPICAL DISTRIBUTION OF FUNDS ALLOCATED TO NATIVE TREASURIES.

—	Sokoto.	Kano.	Katsena.	Bornu.
	£	£	£	£
Salaries, Central Administrations ...	8,344	6,556	4,000	5,000
Salaries, District Administrations ...	9,945	20,910	—	4,040
Salaries, Village Administrations ...	6,630	13,940	—	—
Judicial	552	2,760	1,220	1,248
Police	2,376	1,769	536	322
Prisons	312	1,438	100	325
Public Works Department	300	4,836	1,178	342
Treasury	384	540	408	60
Education	250	1,240	200	300
Land Survey	—	600	60	255
Hospitals and Sanitation	—	1,024	—	1,080
Special Grants for Economic Development.	—	500	300	—
Charity and Entertaining...	300	500	144	25
Miscellaneous Contingencies	—	1,000	—	—
Balances and Reserves	6,406	12,027	6,000	—
Total	36,099	69,640	14,146	13,997

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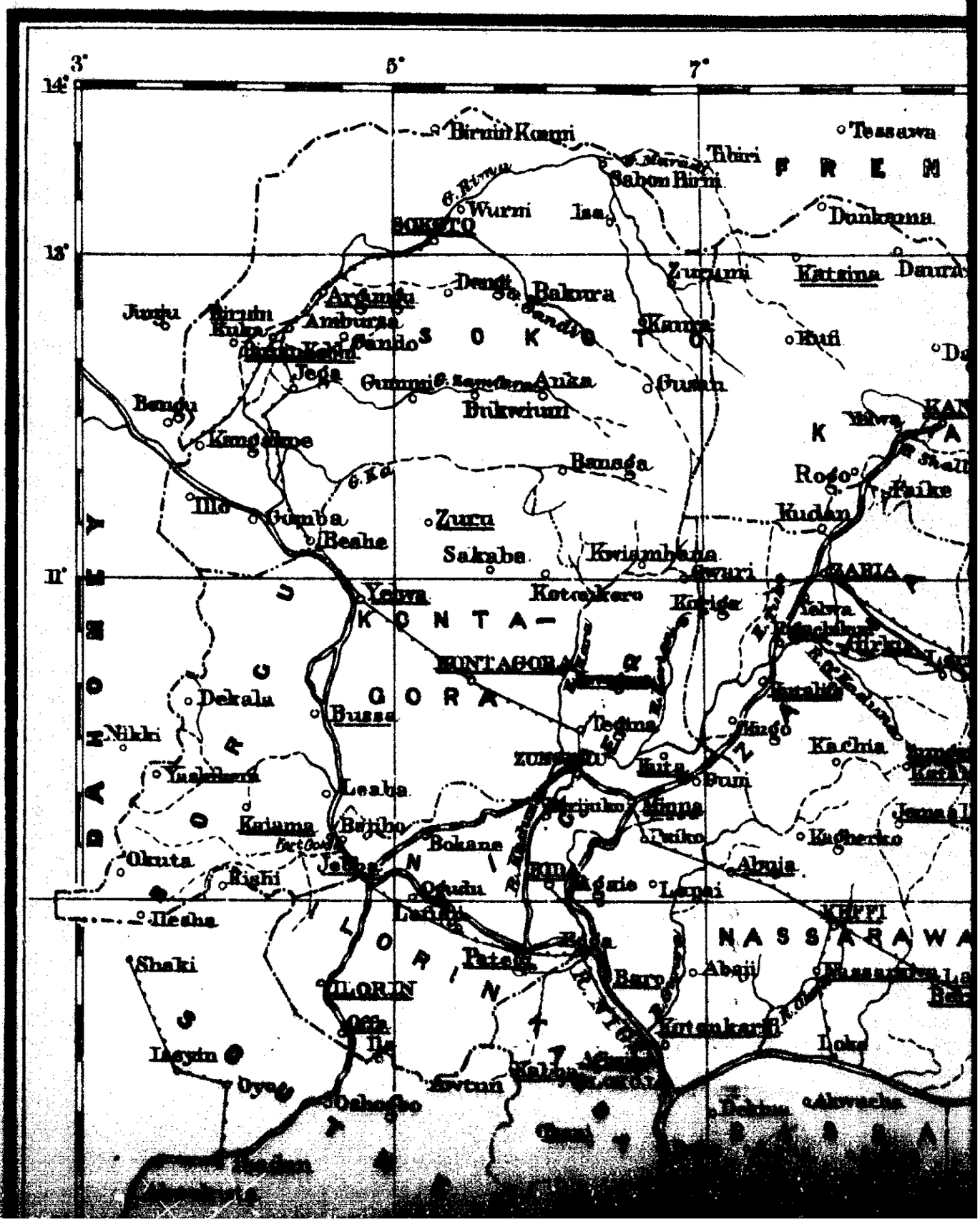
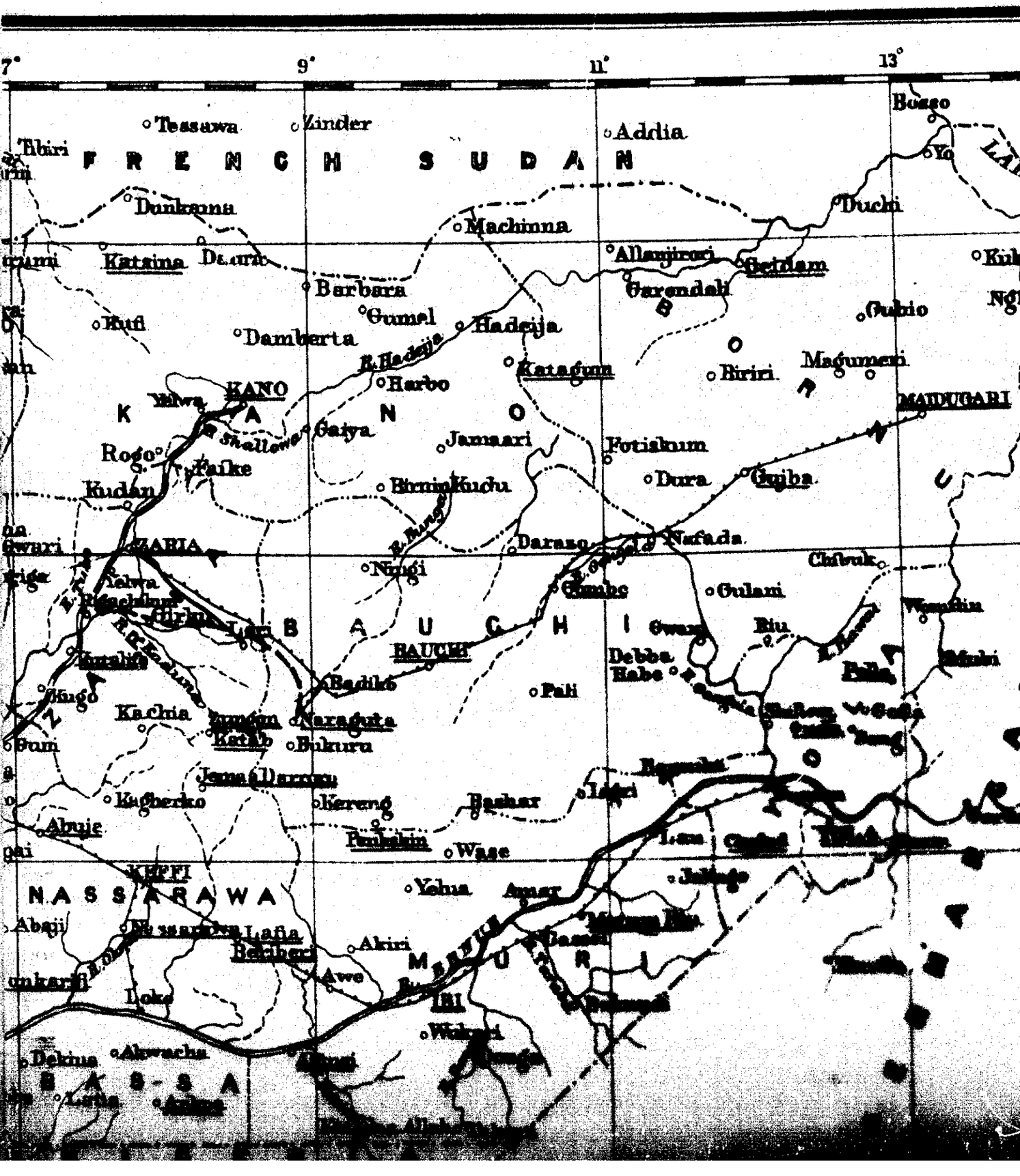
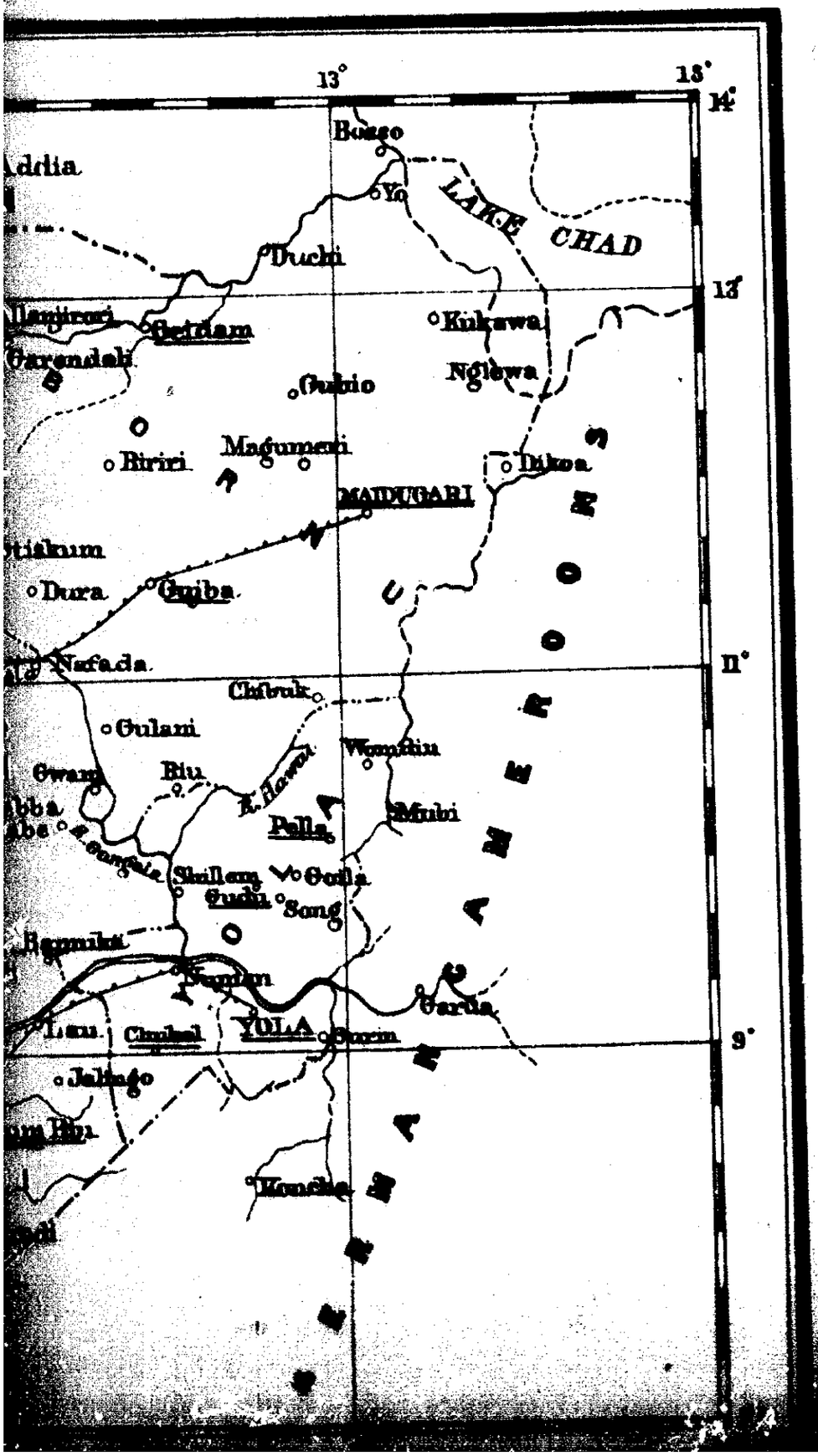


OUTLINE MAP
OF
NORTHERN NIGERIA

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Guiba
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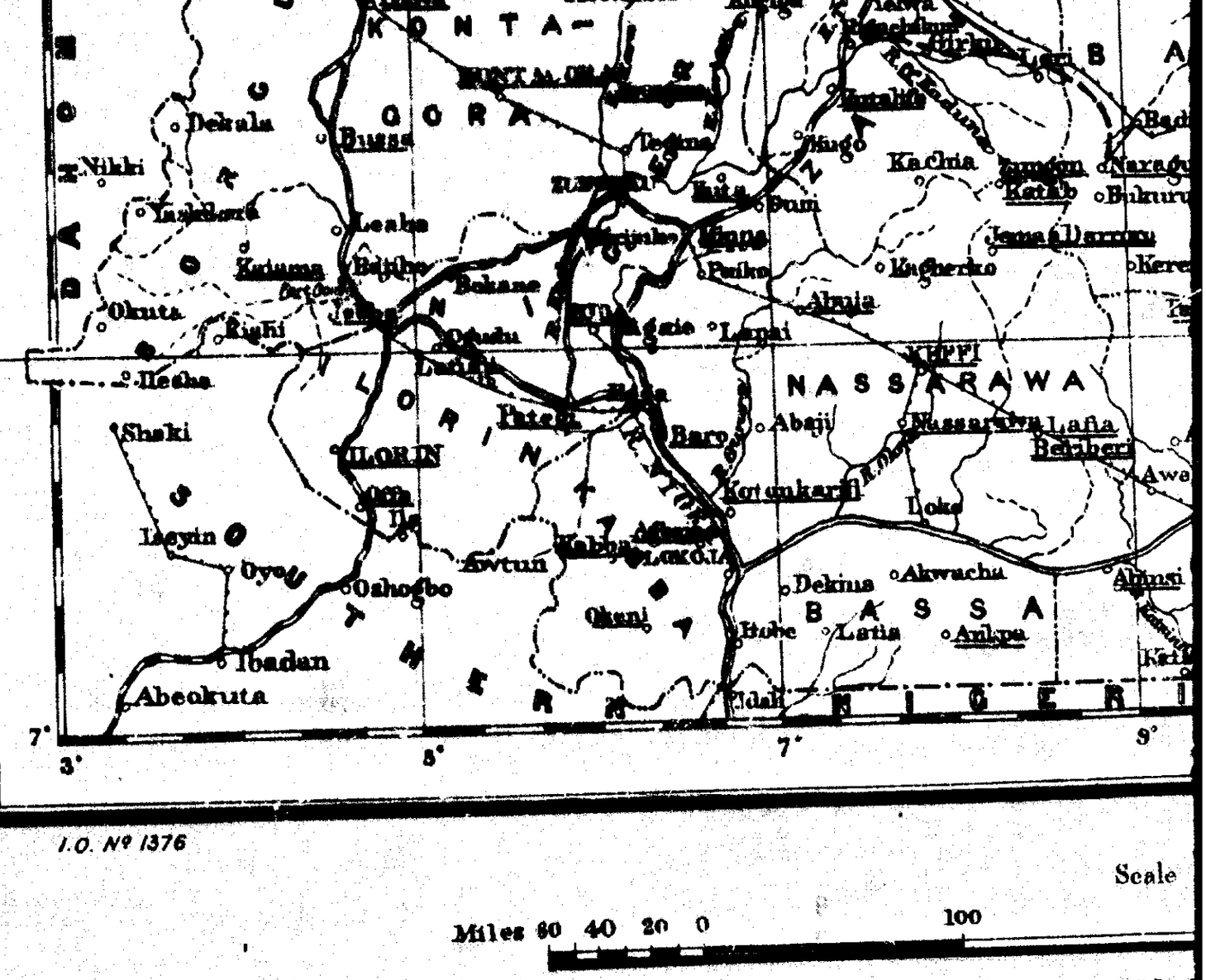
CAMEROONS



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Railway constructed

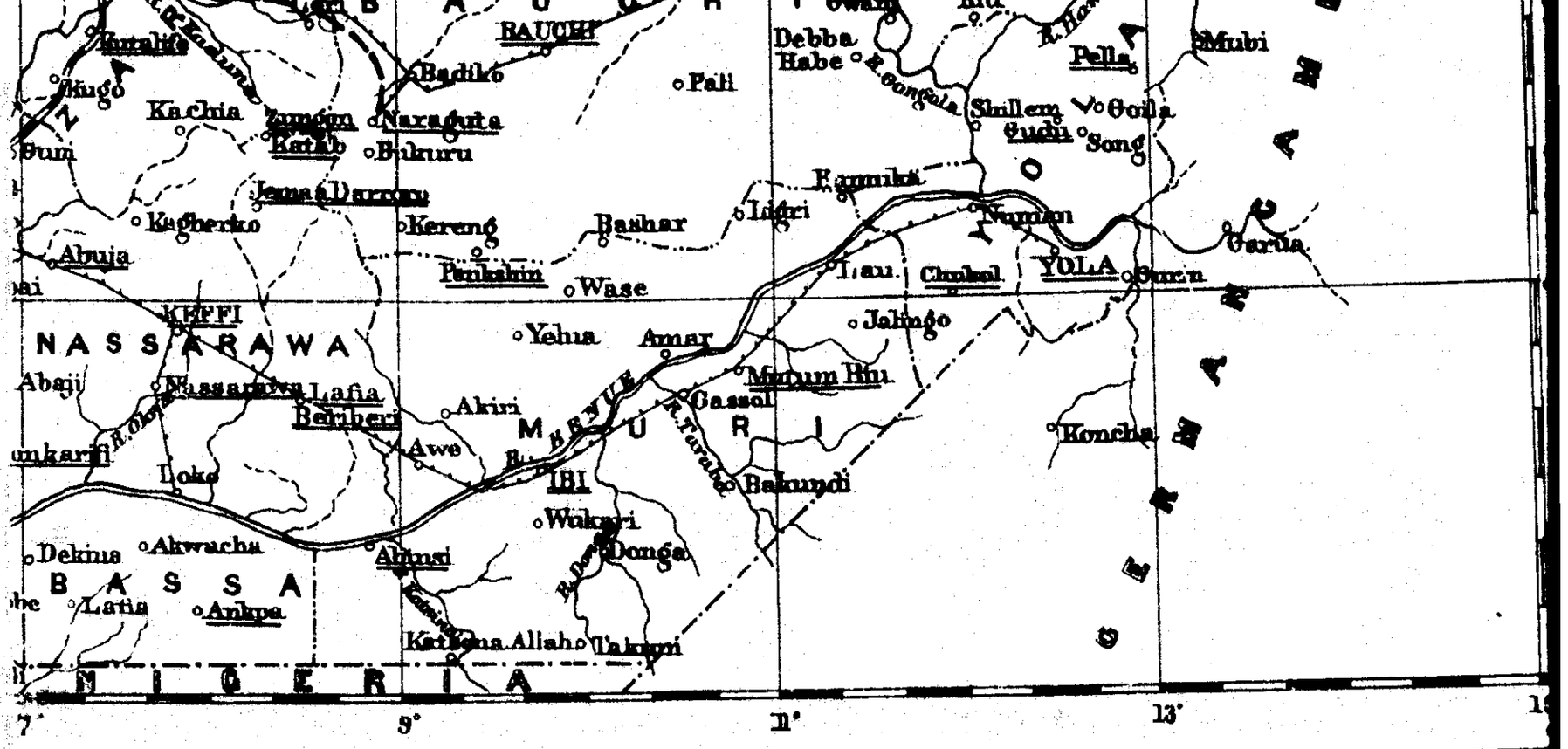
" under construction

Road proposed

Headquarters of Administrativ

Proposed Bauchi Light Rly. thus...

1911.



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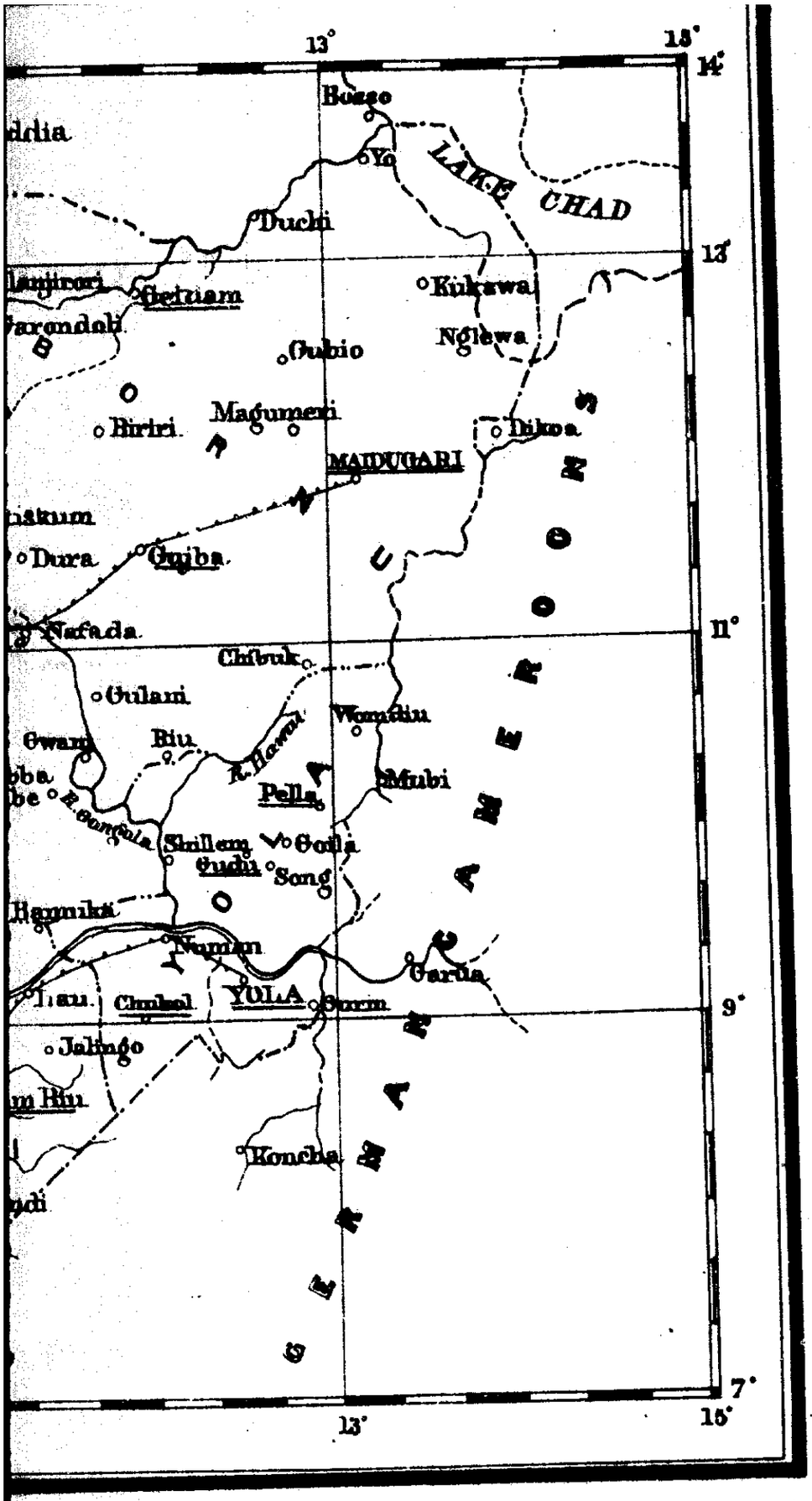
proposed ..... " *proposed* .....

Headquarters of Administrative Districts underlined .....

Proposed Bauchi Light Rly. thus .....

1911.



Printed at the Ordnance Survey Office, Southampton, 1912

400 Miles

TABLE IV.

STATEMENT OF LAND REVENUE INCLUDING JANGALI (Cattle Tax) COLLECTED DURING THE YEARS SHOWN AS UNDER. (Compiled from Provincial Returns.)

Province.	1903–04.	1904–05.	1905–06.	1906–07.	1907–08.	1908–09.	1909–10.	1910–11.	Remarks.
	£	£	£	£	£	£	£	£	
Sokoto ...	—	1,538	5,673	11,611	19,144	24,074	25,238	28,545	
Kano ...	2,428	7,159	7,141	13,447	24,556	51,842	56,588	69,659	
Bauchi ...	476	1,091	3,991	9,999	8,787	10,112	11,479	10,943	
Bornu ...	1,476	4,181	6,562	8,642	11,947	11,606	13,857	15,054	
Zaria ...	506	725	1,513	2,165	7,262	2,073	8,168	5,691	
Kontagora ...	422	476	990	1,841	2,201	3,399	3,451	3,316	
Niger ...	480	2,078	1,951	2,005	3,751	6,807	6,162	16,006	
Ilorin ...	299	605	657	1,935	2,332	2,774	3,612	5,368	
Bassa ...	232	268	594	1,157	1,112	} 2,645	{ 2,623	6,047	
Kabba ...	244	674	886	1,856	1,828		{ 2,599	3,168	
Nassarawa ...	501	493	1,237	2,108	2,051	2,702	3,044	5,238	
Muri ...	1,082	1,182	1,582	2,452	4,143	3,743	4,728	5,711	
Yola ...	287	394	1,286	1,940	2,173	2,717	3,162	4,884	
Total ...	8,433	20,864	34,063	61,158	91,287	124,494	144,711	179,630	

During this year the Gwari District was taken out of the Zaria Province, and placed in the Niger Province.

COLONIAL REPORTS, &c.

The following recent reports, &c., relating to His Majesty's Colonial Possessions have been issued, and may be obtained from the sources indicated on the title page :—

ANNUAL.

No.	Colony, &c.	Year.
677	Basutoland	1909–1910
678	Weihaiwei	1910
679	Gambia	"
680	Ashanti	"
681	Turks and Caicos Islands	"
682	Falkland Islands	"
683	Northern Territories of the Gold Coast	"
684	Bahamas	1910–1911
685	Colonial Survey Committee	"
686	Malta	"
687	Imperial Institute	1910
688	Gold Coast	"
689	Fiji	"
690	Somaliland	"
691	Hong Kong	"
692	Nyasaland	1910–1911
693	Seychelles	1910
694	Sierra Leone	"
695	Southern Nigeria	"
696	Bechuanaland Protectorate	1910–11
697	Swaziland	"
698	Barbados	"
699	Trinidad and Tobago	"
700	Mauritius	1910
701	Grenada	"
702	British Guiana	1910–1911
703	Jamaica	"

MISCELLANEOUS.

No.	Colony, &c.	Subject.
71	Imperial Institute	Foodstuffs.
72	Fiji	Hurricane, 1910.
73	Jamaica	Cayman Islands.
74	Ceylon	Mineral Surveys, 1906–7 and 1907–8.
75	West Indies	Imperial Department of Agriculture.
76	Southern Nigeria	Mineral Survey, 1907–8.
77	St. Vincent	Roads and Land Settlement Fund.
78	Weihaiwei	Census, 1911.
79	Northern Nigeria	Mineral Survey, 1907–8 and 1908–9.
80	Nyasaland	Mineral Survey, 1908–9.
81	Southern Nigeria	Mineral Survey, 1908–9.
82	Imperial Institute	Rubber and Gutta-percha.