

EAST AFR. PROT
28485

28485
21 JUN 1915

Governor
Belfield 417

1915
21st May

Last previous order
16007/14

REPORT OF SURVEY PART 1914-5

The Asks if it has been printed and published in previous years.

No: 457. 26 June 1915

The Report

... of the Gov. committee
... sufficient demand for
the report is justified. It is feared that
if printing it may have increased
... for sale in future years
without adequate provision in
each case. Point out that the
need for economy & the desirability
of preventing any further increase
in the vote for printing (at present
£200 this year) by cutting down
any work of this kind which
is not considered essential.

Reproduction

The Report is a good one & the work has
been well maintained both in quality &

at subsequent Paper
325W/16

quantity.

One of the disadvantages of a small
Court staff, & the consequent supply want
of licensed surveyors, is that checking
generally the latter get the work in the
highlands & the regular staff are
conferred too much to the coast. ~~then~~
When coming home complain a good
deal of this but if the licensed surveyors
will not take on coast work the regular
staff must do it.

Papers should return to me in connection
with the Committee's report.

GLS. 22/4/15

at once

H. J. R.

22/4/15

H. Protherton

Enclosure sent to Geographical Section W.O.
for consideration

? P. R. W. G.

Let us see what we can do.

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28485
JUN 15 1915

GOVERNMENT HOUSE
NAIROBI,
BRITISH EAST AFRICA.

EAST AFRICA PROTECTORATE

No. 417

May 21st 1915.

Sir,

I have the honour to transmit herewith the Annual Report of the Survey Department for the year ending March 31st, 1915, and to ask whether the report may be printed and published as in previous years.

I have the honour to be,

Sir,

Your humble, obedient servant,

Alonzo Begg

GOVERNOR.

RIGHT HONOURABLE

LEWIS HARCOURT, P.C., M.P.,

SECRETARY OF STATE FOR THE COLONIES,

DOWNING STREET,

LONDON, S.W.

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28485
JUN 15

EAST AFRICA PROTECTORATE

GOVERNMENT HOUSE,
NAIROBI,
BRITISH EAST AFRICA.

No. 417

May 21st 1915.

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Report

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Your humble, obedient servant,

H. Conway Boyd

GOVERNOR.

THE RIGHT HONOURABLE

LEWIS MURCOURT, P.C., M.P.,

SECRETARY OF STATE FOR THE COLONIES,

DOWNING STREET,

LONDON, S.W.

Govt 28285/1915
CWP

155

MIN.
24

28

Q

24 June 1915

DRAFT

CWP

No 145

for draft of file

MINUTE.

Mr. [unclear] 23/6/15

Mr. [unclear] 23/6/15

Mr.

Mr.

Sir [unclear]

Sir H. [unclear]

Sir J. [unclear]

Mr. [unclear]

Mr. [unclear]

Sir,

I have the honour to acknowledge the receipt of your despatch No 417 of the 21st of May & to inform you that forwarding the Annual Report of the Survey Dept for the year 1914-15 and to inform you that if you consider that there is a sufficient demand for the report to justify the expense of printing you may give authority for the

Return paper to [unclear]
[unclear]

printed. The same procedure
and may be adopted
proceed in future years
without separate permission
in each case.

I have however to
point out the need for
economy & the desirability
in present circumstances
of preventing any further
increase in the vote for
printing by cutting down
any work of this kind
which is not considered
essential.

(Signed) A. BONAR LAW.

I. ORGANISATION.

The organisation of the Survey Department is as under:-

(1). SUPERINTENDING STAFF.- Director, Office Superintendent and one Clerk.

(2). TRIGONOMETRICAL AND TOPOGRAPHICAL BRANCH.- Deputy Director with one Assistant Director and 6 Plane-tableers.

This Branch, with the exception of the Deputy Director, who is on the Permanent Staff, is composed of an officer and non-commissioned-officers of the Royal Engineers.

It is responsible for the main trigonometrical control in the Protectorate and for the production of topographical maps.

(3). CADASTRAL BRANCH.- Deputy Director, Assistant Director, 3 Clerks, 31 Surveyors, 12 Computers, 9 Draughtsmen, 3 Indian Surveyors, one native Surveyor, 5 Tracers and one European purser. There are also 28 Qualified Surveyors who hold licenses to survey in the East Africa Protectorate. The duties of the Cadastral Branch are the survey of all farms, townships, Government reserves, etc., the preparation and checking of computations, maps, plans and diagrams connected with the same and the checking of all private sub-divisions and surveys for registration purposes.

This Branch also prepares and prints special plans required for official use and maps for sale to the public.

(1). SUPERINTENDING STAFF.— Capt L.M.King, R.E., the present Director of Surveys, finally took over his duties from the late Director, Capt G.C.Williams, R.E., at the end of April 1914.

The Director, after spending two months at headquarters, started on a tour of inspection. He visited the officers of the Trigonometrical and Topographical Branch at work on the triangulation of the Magadi country, inspected the topographical plane-tables at work in the Lumbwa country and was on the point of inspecting the Cadastral Surveyors at work in Laikipia when war was declared and he was ordered to mobilize at once in Nairobi together with all the military members of the Trigonometrical and Topographical Branch.

The Office Superintendent received a commission in the local forces and his services were lent to the Department from early September until the end of March.

The Director was frequently away from Nairobi on military duty from September until the end of January, and was continuously in the field with the troops during the months of February and March.

At the end of January, the Deputy Director, Trigonometrical and Topographical Branch, returned to headquarters where he acted for the Director until the end of the year under review, as well as executing his military duties. The Director wishes to place on record the valuable work performed by this officer, in smoothing out the confusion which occurred in the headquarter office during the early months of the war.

(2). TRIGONOMETRICAL AND TOPOGRAPHICAL BRANCH.— Capt Coode, the Deputy Director, went home to England in May, and was succeeded by Capt K. Matherne on the 19th May 1914.

Capt Maxwell went home at the same time, and was succeeded

succeeded by Capt Cree, on first appointment.

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2/Corpl Loxton and L/Corpl Durkan both proceeded home on leave, the former was re-absorbed into the Royal Engineers on the outbreak of war, whilst L/Corpl Durkan had completed his full service in the Protectorate and was also re-absorbed.

The staff of the Trigonometrical and Topographical Branch was reduced in establishment by one Assistant Director, and the vacancy created by Capt Hemphorn's promotion to Deputy Director was not filled. The leaves of the present establishment of the Trigonometrical and Topographical Branch is as follows:

1. Deputy Director of Survey (Lt. Col. R. H. Hemphorn)
 1. Assistant Director (Lt. Col. R. H. Hemphorn)
 1. Chief Draftsman (Lt. Col. E. Wade)
 1. C. S. O. (Lt. Col. R. H. Hemphorn)

The programme of work during the season was the completion of the topographical sheets S.A. 36 K, S.A. 36 A, and S.A. 37 G. The work was carried out at levels along the Juba River, about 30 miles up stream from the Italian base in Italian Somaliland, and the extension of the Italian triangulation carried out in 1912, to the right bank of the Juba River, with the addition of a connecting triangulation on up stream towards the coast.

The topography of sheet S.A. 37 H was also commenced, and the sheet half completed at the end of July when war broke out. All field parties were recalled to headquarters and the work of the Branch stopped.

On the outbreak of war, the Trigonometrical and Topographical Branch was the only body of Royal Engineers in the Protectorate, and was immediately employed on military duty and has continued to be so employed until the end of the financial year.

The accounts of the year show a very large saving over the estimated expenditure. This is due to the fact that

improved.

Resurvey of old work has been vigorously carried out, and the contention of the Deputy Director that most of the old work was valueless and resurvey a necessity has been proved by the many serious errors which have been discovered.

The demands made by the Recorder of Titles for Coast Titles surveys were in excess of the capabilities of the staff which the Deputy Director was able to maintain on the Coast, but the work is progressing very favourably.

The Coast Titles Ordinance has been applied to Malindi, Mombasa Island, Mombasa District (North and South) and Kipani.

The work south of Mombasa has been suspended owing to the area being partially within the war zone.

Further work in this direction cannot proceed until the cessation of hostilities.

The Surveyor-in-charge Malindi, hopes to complete the whole of the surveys in Malindi District by the end of April 1915.

(4). CADASTRAL BRANCH (COMPUTING OFFICE).-- At the beginning of the year the staff of this Office actually consisted of the Chief Computer and 6 Computers, with provision in the estimates for 2 more Computers.

Later in the year permission was granted to engage two more Computers and also a Draftsman for this Office. Although the staff has thus nominally been increased by five, it is to be recorded that four of these posts were actually filled in June, July, September and November and that the fifth post was not filled by the end of the year. One Surveyor was, however, transferred to this Office temporarily from the 10th September.

The Chief Computer was on leave from the 13th July to the 4th January.

The amount

The amount of work done during the year is as follows:

Areas checked	1250 (approx)
Triangulations	9
Townships	-
Standard Traverses	2

Generally speaking, four plans out of every ten have either to be returned for correction or to be shelved pending replies from Surveyors on doubtful points due to insufficient data or non-compliance with the Departmental regulations. In both cases the work has often to be entirely re-checked after the delay.

The Office has only just been able to cope with the year's demands for work; 1246 new areas were passed for checking purposes and 1250 areas were actually checked. The number of arrears therefore remains substantially the same as at the outset of the year, viz. 4000 areas approximately.

The actual number of man-months available for computing, making no allowance for local or occasional sick leave, was 68, which gives an average of 18.4 areas per man-month as compared with 24 of last year. This reduction in output per man can be accounted for as follows:-

- (1). No large allotments were checked, but chiefly sub-divisional areas and re-surveys, both of which require considerably more time than new surveys.
- (2). Four Computers were new to the work.

During the year there were approximately 52 Surveyors engaged in field work so that the rate of Surveyors to Computers was nominally 5 to 1, which is a proper proportion, though actually the proportion was about 9 to 1 when the number of Computers employed is based on the actual number of man-months.

Triangulation charts on the Meridional District System are being prepared, and it is expected that these will save much time during the next year in issuing information and data to Surveyors.

It is satisfactory

It is satisfactory to report that, on the whole, the work done by Surveyors has improved. This has mainly been due to careful checking and to the more rigid enforcement of the regulations. Certain Surveyors, however, still fail to comply with the regulations in many ways, but it is expected that the prompt return of their work on such occasions, will have the desired effect.

A tabulated record is being prepared of all work done by the Surveyors, both Government and Licensed, and it is hoped that on the completion of this, it will be possible in the future to issue new work only to satisfactory Licensed Surveyors, and also to keep a better check on Government Surveyors.

(5). - CADASTRAL BRANCH (DRAWING OFFICE). - During the financial year under review, the personnel of the Drawing Office has been increased by four men, i.e. three Draughtsmen and a Record Clerk. As, however, three of these appointments were not made until the latter part of the year and transfers to the survey staff have been effected, the actual strength of the Drawing Office cannot be based upon the particulars given in the Staff List. Moreover, as during the preceding year, a Senior Staff Surveyor has acted as Assistant Chief Draughtsman,

In Table 1(a) will be found details of the actual effective strength.

Throughout August and September, practically all ordinary work was abandoned in favour of military mapping, and the Director wishes to draw special attention to the excellent work performed by the Chief Draughtsman and his entire staff. During this period and on later occasions, many of the Draughtsmen worked from 9 to 10 hours daily, and this without rest over the week-ends.

It is worthy of record that, in order to complete a map urgently required by the Military Authorities, several Draughtsmen worked for 12 consecutive hours.

This work

LIST OF OFFICERS OF THE DEPARTMENT 31st MARCH 1915.

Office.	Name.	Salary.	Allowances.	Date of first appointment.	Date of present rank.	Remarks.
SUPERINTENDING STAFF						
Director of Surveys	Capt L. N. F. I. King, R.E.	800	Nil	25.3.1914	25.3.1914	Free Quarters.
Office Supt.	A. Rehm. (1)	270	"	4.1.1908	4.1.1906	" "
4th Grade Clerk	M. F. D. Souza	92	"	1.9.1913	1.1.1915	" "
TRIG & TOPO. BRANCH.						
Deputy Director	Capt H. N. Kempthorne	600	Dy £50 H.A. £60 T.A. Rs 4	8.12.1911	19.5.1914	Free Quarters.
Asst Director	Capt D. Cree, R.E. (1)	525	"	29.4.1914	29.4.1914	"
Surveyors	2/Cpl F. G. Loxton, R.E.	250	H.A. £40	29.18.1911	29.12.1911	Free Quarters.
	2/Cpl A. R. Turner, R.E.	250	"	15.6.1912	15.6.1912	Temp with Army in Europe.
	L. Cpl H. C. Jones, R.E.	215	"	27.1.1912	27.1.1912	"
	L. Cpl P. W. Shields, R.E.	215	"	24.1.1913	24.1.1913	"
	L. Cpl C. W. Bird, R.E.	215	"	15.10.1913	15.10.1913	"

(1) Pensionable appointment.

Note:— H.A. House allowance
T.A. Travelling allowance
Dy Duty allowance.

TABLE I (n) (continued)

Office.	Name.	Salary.	Allowances.	Date of first appointment.	Date of present rank.	Remarks.
CADASTRAL BRANCH.						
Deputy Director	A. E. Townsend (1)	500-25-500	DY \$50 T.A. Rs 4	12. 7. 1906	28. 12. 1908	Free Qrs.
Asst Director	C. H. Galbraith (1)	400-20-500	H.A. \$60 T.A. Rs 4	18. 7. 1906	28. 12. 1908	
Ch. Clerk & Acct	C. H. Chalk (1)	150-10-250	DY \$24 H.A. \$40	11. 10. 1906	7. 7. 1911	
Clerk & Acct	H. I. West (1)	"	H.A. \$40	4. 7. 1908	4. 7. 1908	
	H. Vickerstaff	"	"	26. 8. 1918	1. 5. 1918	
3rd Grade Clerk	A. J. de Mello (1)	Rs. 125-150 p.m.	"	1. 12. 1906	4. 4. 1912	
SURVEYORS.						
District	G. Goodruff	400-20-450	H.A. \$60 T.A. Rs 4	12. 9. 1906	1. 7. 1910	
"	A. G. Baker	"	"	28. 8. 1907	14. 4. 1912	
"	C. O. Gilbert	"	T.A. Rs 4	16. 9. 1912	1. 9. 1913	Free Qrs.
Senior Staff	R. K. Bollan	350-15-400	H.A. \$60 T.A. Rs 4	1. 2. 1907	1. 4. 1913	
"	F. S. O. Molony	"	T.A. Rs 4	22. 1. 1912	1. 2. 1913	
"	T. Macdonald	"	"	14. 1. 1911	1. 4. 1914	Free Qrs.
"	A. Bessler	"	H.A. \$60 T.A. Rs 4	17. 12. 1906	1. 4. 1914	
"	G. I. Coole	"	"	17. 7. 1912	1. 4. 1914	
"	P. W. E. Flint	"	"	16. 1. 1915	16. 1. 1915	
Junior Staff	J. Merseno	300-10-350	H.A. \$60 T.A. Rs 4	1. 4. 1907	1. 4. 1907	
"	W. V. Conles	"	"	12. 10. 1911	12. 10. 1911	
"	C. O. Oakes	"	"	17. 12. 1911	1. 8. 1912	
"	S. H. Ramsey	"	"	12. 9. 1912	16. 1. 1912	
"	C. E. Taylor	"	"	1. 9. 1910	9. 4. 1912	
"	R. W. Nelson	"	"	9. 4. 1913	1. 4. 1914	
"	A. W. Morris	"	"	14. 9. 1911	1. 4. 1914	
"	G. Taylor	"	"	9. 9. 1912	1. 4. 1914	
"	W. Wilson	"	"	5. 9. 1914	15. 9. 1914	
"	W. Gemmill	"	"	12. 10. 1914	12. 10. 1914	
Asst Junr Staff	W. N. Low	150	H.A. \$40 T.A. Rs 50	1. 2. 1907	7. 11. 1912	

Office.	Name.	Salary.	Allowances.	Date of first appointment.	Date of present rank.	Remarks.
Draughtsman	F. W. E. Kitching	160-15 tri-annually-205	H. A. £40	25. 2. 1914	25. 2. 1914	
"	H. L. A. Tennet	"	"	14. 5. 1914	14. 5. 1914	
"	J. Downey	"	"	20. 5. 1914	20. 5. 1914	
"	W. Woods	"	"	5. 8. 1914	5. 8. 1914	
"	C. C. Simpson	"	"	5. 8. 1914	5. 8. 1914	
"	F. F. P. Huntington	"	"	5. 9. 1914	5. 9. 1914	
"	R. H. S. Parry	"	"	10. 10. 1914	10. 10. 1914	
Record Clerk	A. E. Balmer	150-10-250	H. A. £40	21. 7. 1913	1. 5. 1914	
Pupil	T. Davidson	40	"	19. 2. 1913	19. 2. 1913	
Tracers	Behari Lal	Rs 45-120 p.m.	H. A. Rs 20	1. 8. 1908	1. 8. 1908	
"	Aziz Iuz	"	"	16. 8. 1908	16. 8. 1908	
"	Imamuddin	"	"	24. 1. 1912	22. 1. 1912	
"	Fattah Jghomed	"	"	24. 6. 1912	24. 6. 1912	
"	Ami Chand	"	"	1. 6. 1913	1. 5. 1913	
COAST LAND SETTLEMENT						
Senior Staff	Surveysors.	350-15-400	H. A. £60 T. A. Rs 4p.d.	12. 8. 1912	1. 4. 1914	
Junior Staff	F. B. Ballenden	300-10-350	H. A. £60 T. A. Rs 4p.d.	27. 7. 1912	27. 7. 1912	
"	W. P. Piers	"	"	1. 2. 1911	1. 4. 1914	
"	J. Levison	"	"	21. 4. 1913	1. 4. 1914	
"	D. C. Fright	"	"	12. 10. 1911	2. 1. 1915	
"	H. V. Hayes	"	"	"	"	
Asst Junr Staff	W. C. Tappin	150	H. A. £40 T. A. Rs 2.50	14. 9. 1911	2. 1. 1915	
"	A. C. Stevens	"	"	P.d.	14. 9. 1911	
"	Computers.	"	"	18. 6. 1913	1. 4. 1914	
Computer	J. H. L. Nestor	250-90-350	H. A. £60	20. 12. 1912	20. 12. 1911	
"	"	"	"	23. 10. 1912	7. 4. 1913	

TABLE 1 (Continued)

Office.	Name.	Salary.	Allowances.	Date of first appointment.	Date of present rank.
Draughtsmen	Draughtsmen.	s.			
	H. V. Theakstone H. C. Walsh	160-15 tri- annually-205	H. A. #40	18. 8. 1913 10. 9. 1913	18. 8. 1913 10. 9. 1913

TABLE I(b).

List of Qualified Surveyors who have obtained License
to survey in the East Africa Protectorate.

Name.	Date of License.
R. A. Van Breda	March 28th, 1904
J. H. Gailley	
D. O. Roberts	
J. A. Coryell	May 16th, 1905
A. S. Frew	April 9th, 1905
A. A. Ortlepp	April 30th, 1906
B. E. A. O'Leary	July 24th, 1906
F. H. Jordan	August 31st, 1907
C. H. Webber	October 4th, 1907
F. W. Lind	June 3rd, 1910
W. M. Nightingale	May 1st, 1911
T. J. Murray	November 10th, 1911
J. C. Coverdale	December 13th, 1911
H. M. Shaw	March 27th, 1912
P. G. H. Kohler	April 23rd, 1912
W. E. Kolbe	August 17th, 1912
H. F. Duncan	September 19th, 1912
W. G. Stanley	December 13th, 1912
M. E. Smuts	December 31st, 1912
E. A. Leonard	March 27th, 1913
R. Pizzighelli	March 27th, 1913
W. St. C. Brockway	April 28th, 1913
W. Gemmill	April 28th, 1913
H. E. Beckman	April 29th, 1913
W. H. Sainsbury	August 1st, 1913
M. Spence	August 19th, 1913
P. F. E. Flint	September 5th, 1913
F. K. Webber	October 6th, 1913

COST OF SURVEY DEPARTMENT FOR YEAR ENDING MARCH 31ST 1915.

PERSONAL EMPLOYMENTS	ESTIMATES.	EXPENDITURE.
SUPERINTENDING STAFF	\$ 1,206	\$ 1,231
TRIGONOMETRICAL AND TOPOGRAPHICAL BRANCH		
CADASTRAL BRANCH		
Deputy Director's Office	2,177	2,357
Surveyors	10,926	9,361
Draughtsmen	2,530	2,859
Computers	3,087	3,110
Total Personal Emoluments	18,729 (1)	17,197 (3)
OTHER CHARGES		
Trig and Topo Branch	23,332	20,538
Cadastral Branch		
	4,290	1,366
	16,361 (2)	10,126 (4)
Grand Total	20,651	12,092
	44,032	32,630
Comparative annual accounts		
For year ending March 31st		
1914	35,296	25,133
1913	30,800	29,732
1912	24,806	21,825
1911	22,630	20,706
1910	21,751	21,752
1909	21,725	19,604
1908	17,853	19,972

(1). Includes \$3,920 Coast Land Settlement.
 (2). Includes \$4,512 Coast Land Settlement.
 (3).
 (4).

TABLE III.

EXPENDITURE AND REVENUE.

Year ending March 31st.	TRIG AND TOPE BRANCH.		CADASTRAL BRANCH.		Revenue.
	Estimated Expenditure. £	Actual Expenditure. £	Estimated Expenditure. £	Actual Expenditure. £	
1908	8,506	8,687	12,847	12,847	2,909
1909	8,416	6,437	13,049	13,049	860
1910	8,029	8,571	13,064	13,064	1,496
1911	8,797	7,246	12,731	12,731	4,787
1912	8,546	8,790	16,896	16,896	5,280
1913	8,735	8,085	22,042	22,042	1,667
1914	8,291	7,868	23,105	23,105	1,108
1915	8,943	5,807	17,800	17,800	4,922
					1,146

DETAILS OF REVENUE.

Survey Fees	13
Sale of Maps	116
Sale of War Office Maps	16
Total	145

TABLE IV.
COMPARATIVE ANNUAL STATEMENT OF COSTS OF SURVEY.

Year ending March 31st.	Triangulation shillings per square mile.	Topography shillings per square mile.	Cadastral Surveys pence per acre.
1908	14.3	...	2.71
1909	11.6	...	3.73
1910	14.5	18.2	5.81
1911	8.6	6.5	5.21
1912	19.4	11.0	5.96
1913	6.8	8.0	4.51
1914	7.2	10.4	6.06
1915	5.9	...	5.15

DEPARTMENT OF MINES

Year ending March 31st.	Scale sq. miles	Scale sq. miles	Scale sq. miles	Remarks.
1907	447	2,533		Lumby's reconnaissance only.
1908	651	...		Good reconnaissance only.
1909	242	...		
1910	450	...		
1911	688	3,342		Malindang, Bana and Takaungu.
1911	...	...		Published on 1/125000 scale.
1911	...	8,575		N.W. of Ny. Published on 1/125000 scale.
1912	...	2,060		Nakuru, N. of Ny. and Fort Hall.
1912	...	5,390		Rumurili, N. of Ny. and 4,900 sq. miles
1912	...	1,188		reconnaissance N. of Kenya.
1913	...	10,500		Coast, Tana Mzoya and 500 sq. miles
1913	...	950		reconnaissance in Mgaraswet
1914	...	730		Coast S. of Mombasa, Elgon and Basin, Gishu.
1914	...	...		Cl Doonyo Sapuk.
1915	...	...		Mac. N. of Baringo (north sheet),
	...	...		Basin Gishu (sheet), Mup. (sheet) and
	...	...		1,000 sq. miles v. v. v. sheet N.E. of Kibwezi.
	...	800		Kenya. Surv. V. Tana River
	...	1500		Basin Gishu, Kisli and Kenya
	...	...		and Sotik.

TABLE VII.

LIST OF PUBLISHED TOPOGRAPHICAL MAPS.

Date.	Scale.	Description.
1907	1/100,000	Anglo German Boundary.
1909	1/250,000	Reconnaissance Lumwa Sotik.
1910	1/62,500	Five Maps Uasin Gishu.
	1/62,500	Nairobi Sheet.
	1/125,000	Sheet South A. 37/C.2 Nairobi.
1911	1/62,500	Malindi Sheet.
	1/125,000	South A. 37/V.2 Mangua.
	1/125,000	South A. 37/V.4 Takeungu.
1912	1/125,000	South A. 37/A.4 Mandarava.
	1/250,000	Provisional South A. 37/U Vol.
1913	1/125,000	South A. 37/A.1 Nakuru.
	1/125,000	South A. 37/B.3 Fort Hall.
	1/125,000	South A. 37/A.2 Nyeri.
	1/250,000	Provisional North A. 37/T Nairobi.
	1/250,000	Provisional South A. 37/D Kenya.
	1/250,000	Provisional South A. 37/C Mombasa.
	1/250,000	South A. 37/H Machakos s. Provisional.
	1/250,000	Provisional South A. 37/I Kitui.
	1/250,000	Provisional South A. 37/N Makindu.
1914	1/250,000	Provisional South A. 37/O Yala Plateau.
	1/250,000	South A. 37/A. 3, 4, and Naivasha.
	1/250,000	North A. 36/V. 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100.
	1/250,000	North A. 36/V. Elgon.
1915	1/250,000	North A. 36/V. Uasin Gishu.
		Nil.

Note.- The following sheets are also being printed:-

1/250,000	South E. 37/D Mombasa Provisional.
1/250,000	South A. 37/V & W Mackinnon Road-Malindi Provisional.
1/250,000	North A. 36/R Sakara Provisional.
1/250,000	South A. 37/H Machakos
1/250,000	North A. 36/W Mumbwa.
1/1,000,000	North A. 37
1/1,000,000	South A. 37

TABLE VIII(a).

STATE OF CADASTRAL SURVEYS FOR YEAR ENDING 31st MARCH 1915.

DESCRIPTION.	NO.	ACRES.
Agricultural & Grazing Farms & Mining Concessions.	370	1,461,489
Reserves.	41	23,755
Wilderness.	169	961,248
Township Plots.	120	158
Road Surveys not incidental to Allotment or other surveys.	7	25
Forest Surveys.	3	3,339
Township & other Surveys.	2	376
Check Surveys.	3	---
Private Subdivisions of Farms into smaller plots.	---	167,743
Private subdivisions of Township areas.	24	78
Coast Land Surveys, including Shambas.	188	11,317
Reserves.	---	---
Subsidiary Islands.	12	365
Demarcations.	133	24,633
	1,358	1,929,433

These figures are exclusive of Miscellaneous Surveys shown in Table VIII(b).

TABLE VIII(b).

MISCELLANEOUS CADASTRAL SURVEYS 1914 - 1915.

CLASS OF SURVEY	AREA ACRES	REMARKS
Triangulation.	2,266,497	
Incidental Traverses		
Plane Table Surveys (10 sheets in preparation).	280	Nairobi Township.
Inspection & Sundry Surveys.		

TABLE IX.
COMPARATIVE ANNUAL STATEMENT OF CADASTRAL SURVEYS, PREPARED AND COMPLETED.

Year ending March 31st.	Surveys completed between April 1st and March 31st.		Total acreage.	Surveys ordered but not completed on March 31st.
	No. of areas.	Acres.		
1908	1,182	862,760	350,000	
1909	294	1,161,583	350,000	
1910	268	553,261	812,000	
1911	482	484,266	1,519,930	
1912	1,024	690,995	1,606,787	
1913	976	1,082,069	1,790,608	
1914	2,045	1,608,313	2,456,475	
1915	1,357	1,954,529	1,826,253	

TABLE X.

MISCELLANEOUS MAPS AND PLANS MADE AND ISSUED FOR YEAR
ENDING 31st MARCH 1915 WITH COMPARISON WITH PREVIOUS YEARS.

	Number	Approx. value. £
CONVEYANCE & OCCUPATION LICENSE PLANS		
1. To Conveyance Land Office Deed Plans	948	287
2. do do Occupation License Plans.	22	4
3. To Recorder of Titles Deed Plans.	506	169
MISCELLANEOUS MAPS & CADASTRAL SHEETS.		
1. To Government Departments.	2993	368
2. To Military.	2570	267
3. To special maps, plans, & diagrams prepared for military purposes.	57	275
4. To General Public.	797	88
WAR OFFICE MAPS (Printed at the War Office).		
1. To Government Departments.	648	65
2. To Military.	945	94
3. To General Public.	168	17
	<u>9,654</u>	<u>1,584</u>
	1914	1,822
	1913	1,028
	1912	1,068
	1911	816
	1910	659
	1909	526
	1908	598

TABLE I
LIST OF STAFF OF SURVEY DEPARTMENT 1914

Name.	Rank.	First.	To.
A. E. Townsend	Deputy Director	1st April 1914	1st October 1914
A. E. Fraser	Senior Staff Surveyor	1st April 1914	1st May 1914
F. Macdonald	" "	15th July 1914	1st October 1914
G. C. Oakes	Junior Staff Surveyor	13th July 1914	1st January 1915
S. H. Ramsey	" "	15th March 1915	1st March 1915
A. F. Morris	" "	13th July 1914	1st January 1915
G. Taylor	" "	10th August 1914	24th March 1915
F. V. Coates	" "	8th May 1914	14th August 1914
G. E. Weston	" "	20th April 1914	26th July 1914
V. O. Lappin	Asst Junr Staff Surveyor	18th May 1914	2nd January 1915
J. H. Williams	Chief Computer	13th July 1914	1st January 1915
F. J. Gosden	Computer	10th August 1914	20th March 1915
J. McKay	" "	1st April 1914	6th July 1914
J. H. McEwen	" "	14th November 1914	31st March 1915
F. West	Clerk & Accountant	1st April 1914	19th September 1914
A. J. de Mello	3rd Grade Clerk	3rd January 1915	31st March 1915

PROMOTIONS NEW APPOINTMENTS AND RESIGNATIONS 1914-15.

PROMOTIONS.

Capt H.N.Kempherne	to Deputy Director of Surveys, Trig. & Topo. Branch.
Mr A.Bessler	to Senior Staff Surveyor.
Mr C.T.Cogle	''''
Mr F.D.Ballenden	''''
Mr W.MacDonald	''''
Mr I.Lewis	to Junior Staff Surveyor.
Mr A.W.Morris	''''
Mr G.Taylor	''''
Mr L.C.Wright	''''
Mr H.W.Hayes	''''
Mr H.McC.Thornhill	to Computer
Mr A.G.Stevens	to Asst Junr Staff Surveyor.
Mr C.A.V.Hall	''''

NEW APPOINTMENTS.

Capt L.N.F.I.King	Director of Surveys.
Mr H.Vickerstaff	Clerk.
Mr P.W.E.Plint	Senior Staff Surveyor.
Mr W.Gemmill	Junior Staff Surveyor.
Mr W.Wilson	''''
Mr E.J.F.Francklin	Asst Junr Staff Surveyor.
Mr H.N.Surgey	''''
Mr S.S.Willis	''''
Mr V.McC.Thornhill	''''
Mr G.B.Campbell	''''
Mr H.Hops	Computer
Mr F.C.Kinsella	''
Mr J.F.Walker	''
Mr A.C.Barnes	''
Mr W.W.B.Kitching	Draughtsman.
Mr H.L.A.Tonnet	''
Mr J.Downey	''
Mr C.C.Simpson	''
Mr W.Woods	''
Mr R.F.R.Huntington	''
Mr R.H.S.Parry	''

LEFT DEPARTMENT.

Capt C.O.Williams, late Director of Surveys.
Capt A.M.Coode, late Deputy Director of Surveys, Trig and Topo Branch.
Lieut G.A.P.Maxwell, late Asst Director of Surveys, Trig and Topo Branch.
Lee Cpl J.P.Durkan, Surveyor Trig and Topo Branch.
Mr D.A.Maconachie, Clerk, resigned.
Mr A.E.Fraser, Senior Staff Surveyor, resigned.
Mr W.MacDonald, Senior Staff Surveyor, temporarily to join Army in Europe.
Mr G.E.Weston, Junior Staff Surveyor, resigned.
Mr W.V.Coates, Junior Staff Surveyor, temporarily to join Army in Europe.
Mr R.Aldous, Asst Junr Staff Surveyor, resigned.

COMPARATIVE TABLE SHEETING TIME SPENT IN DRAWING OFFICE (CIVIL ENGINEERS OF MILITARY WORKS.

Name.	Time spent on normal office work.	Time spent on military work.	Over-time normal work.	Over-time military work.	Sick leave.	Leaves on account of illness.	Total hours worked including overtime.	Total normal hours possible.	Remarks.
C. Panting, (Ch. Draftsman)	1,370	270	80	90	24	64	1,710	1,728	
A. Bassler, (Asst. Ch. Dr. man)	1,560	100	--	65	--	68	1,728	1,728	
A. C. Stevens	440	--	--	--	--	--	440	440	
E. V. Theakstone	1,064	552	--	72	34	58	1,715	1,728	Transferred to Survey Staff 1.4.14, but services retained in Drawing Office till 1.7.14.
F. G. Robinson	1,235	585	80	70	89	68	1,920	1,728	
H. C. Walsh	594	210	--	75	--	88	973	973	
F. Hall	1,042	60	--	30	--	--	1,122	1,102	Mobilized 1.9.14, but services retained until 31.10.14
T. Davidson	1,546	176	--	81	6	--	1,804	1,728	Transferred to Survey Staff 1.4.14, but services retained in Drawing Office until 16.9.14.
A. E. Bellar	920	--	161	--	--	--	1,081	1,081	transferred to Drawing Office, 1.4.15, but did not take up duties until 21.9.14.
J. Downey	1,482	--	101	--	12	--	1,583	1,432	Commenced work in Drawing Office 12.8.14.
H. Tommet	1,252	192	--	35	52	34	1,533	1,530	Commenced work in Drawing Office 14.6.14. Transferred to Coast Engineer to sickness 31.3.15.
W. Woods	906	--	--	--	--	--	906	906	Advanced work 23.9.14.
C. C. Simpson	462	154	--	3	--	--	619	616	Advanced work 28.9.14.
F. Huntington	611	24	--	139	--	--	774	776	Advanced work 28.9.14.
R. H. Ferry	618	26	--	--	76	18	728	728	Advanced work 19.10.14.
Aziz Bux	1,351	287	10	--	--	--	1,648	1,648	Advanced work 14.11.14.
B. Lal Sharma	1,371	357	--	37	16	60	1,831	1,728	
Manan Din	1,518	132	--	58	--	--	1,710	1,728	
Patten Mohamed	1,258	270	--	58	--	--	1,586	1,586	
Ami Chand	1,342	350	10	100	--	--	1,802	1,802	

942

4093

27 1/2

25 25