

The Imperial Map Cape Colony and later military maps of the Cape Colony, South Africa.

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Abstract

Attempts to compile maps for military use in the Cape Colony during the Anglo-Boer War 1899-1902 left a legacy of incomplete and unstandardised mapping at the scale of 1:250,000 known as the Imperial Map Cape Colony. Aware of the need for good mapping to permit satisfactory administration and defence a congress of interested parties agreed in 1904 to a scheme for topographic mapping South Africa based on geodetic survey. Economic problems put an end to this project, but the War Office considered the NW Cape Colony worthy of a reconnaissance map at 1:250,000 which they would fund. Thus a special section of the War Office's map of Africa G.S.G.S.1764 was designed and produced in a military version and as sales editions. The paper documents the progress of the survey and compilation of this map using surviving maps and other archival material in the UK.

Introduction

British military mapping of a large part of the Cape Colony, South Africa was achieved in great haste to meet the requirements of a mobile army in unfamiliar and poorly mapped, mostly open country at the end of the 19th century. The Imperial Map Cape Colony was compiled to meet the need for a map for planning and executing military operations, to deal with guerrilla war in the Colony itself. It was compiled from mapping available in the Surveyor General's Department, supplemented by local observation and intelligence reports. About 30 sheets covering all but the extreme south-west of the Colony were produced in 1900-1901 the second and third editions under the supervision of military surveyors. Little or no use was made of geodetic survey, but the introduction of colour to what had been poor black and white map was an advance. An uncompleted third edition of some 13 sheets reveals much experiment in the employment of colour and lettering. (Board, 2004)ⁱ. However there appears to be little similarity between the Imperial Map of Cape Colony and the War Office maps of the Cape Colony which followed. The interesting cartographic experiments made under Casgrain's supervision were apparently just experiments. The main thrust of this paper is to re-examine what is known about the Cape Colony Reconnaissance series produced by the War Office between 1906 and 1914. This important contribution to mapping South Africa was addressed first by Liebenberg, who examined several collections in South Africa.ⁱⁱ This paper has benefitted from a study of British collections including a heterogeneous collection of unpublished material related to the published maps.ⁱⁱⁱ The paper attempts to place this series in a broader political context and to evaluate maps and map-related material as sources for historical geographers.

Plans to map South Africa after 1902.

After the Anglo-Boer War the defeated Boer republics became British colonies. The Royal Commission appointed in the aftermath of the war made much of the lack of mapping suitable for the campaign. Sir Alfred Milner, High Commissioner for South Africa backed a War Office plan for a topographic survey of the two inland colonies, Transvaal and Orange River Colony. But a case was also made for a properly grounded topographic survey for all the four colonies in South Africa.^{iv} Imperial policy favoured a strong South Africa guarding the route round the Cape of Good Hope secured by British influence over territory up to the Zambesi and secured at sea by the Royal Navy. Such a survey would be possible only by the joint effort of the War Office and the colonial

governments. General principles established included the benefit of central control, uniformity of system throughout South Africa, an assurance of Imperial aid and demonstrating the advantages of inter-colonial cooperation with the ultimate aim of federation. (Gill, 1908)^v Sir David Gill, meanwhile had extended geodetic survey between 1883 and 1892 to link the Western Cape and Eastern Cape with Natal, and, after the war to Transvaal and Orange River Colony. With the High Commissioner's full backing he proposed a conference of Surveyors-General over which he presided in March 1904. The War Office identified Colonel Sir William Morris as potential superintendent with Major Charles Close as assistant. Considerable progress was made, it being resolved that map series at four scales would be produced and specifications were laid down at the congress of Surveyors-General in Cape Town..^{vi} Engraving would be done in Britain with printing by the Ordnance Survey on a repayment basis. Financial contributions of over £40,000 were required from colonial governments. but in the ensuing economic crisis of 1904, first the Cape Colony and then the other colonies withdrew from the scheme. It was recognised that for sparsely populated areas such as the North West Cape, survey at Half-inch and publication at Quarter-inch to one mile scales was adequate.

The War Office Reconnaissance Series of the Cape Colony: preparation

Faced with the failure of the Cape Colony to live up to its promises, the War Office, advised no doubt by Close, decided to begin a reconnaissance series maps at 1:250,000 of the sparsely populated North-West of the Colony next to German South West Africa. This was to be wholly financed from the Imperial Treasury since mapping was required for the defence of the Colony, which was Imperial responsibility.^{vii} A secret War Office memorandum of August 1906 drew attention to the risk of raids from the railway in South West Africa into the "most disaffected portion of Cape Colony".^{viii} The absence of good maps in the guerrilla war phase of the Anglo-Boer War was to be remedied by the military versions of the the standard Africa maps at the Quarter-Million scale which informed the standardised design adopted by the Colonial Survey Congress in 1904 and which reached its apogee in the successful map of the Orange River Colony.^{ix} As conflict with Germany became more likely the desire by the German authorities to link up the

railways of South West Africa with those of the Cape gave increased urgency to the completion of useful maps south of the Orange River frontier.^x

It is not surprising that the Colonial Survey Committee on which Close sat as Director, Geographical Section General Staff, devoted considerable space to this reconnaissance survey and charted its progress from 1905 to 1912. It was pointed out that the geodetic surveys of the Cape, Natal and the new colonies shortly to be completed had been wholly funded by the colonies themselves.^{xi} Eleven officers were employed under Capt C.G.W. Hunter . Extending from the geodetic triangulation of the Cape Colony, graphical triangulation to points from which plane-table sketching of the surrounding terrain was plotted. It was hoped that this procedure would be strengthened by instrumental chains at intervals. Accordingly ‘the results will not be all that a geographer might desire, but they will be a great deal better than any maps which exist at present.’^{xii} Work in the field and the office was inspected in 1905 by Col. H.M. Jackson RE who reported favourably. Completed field sheets along the Orange River, but including two south of Kimberley, including the significant Strydenburg map^{xiii} amounted to eight in this series during the year. The second report announced the publication of five sheets, the staff counted thirteen officers and there were six on the staff in the Cape Town office, two of whom were draughtsmen. Methods employed were similar to those used in the American West by the USGS. Six sheets were published during the year and another six had complete field work. The third report for 1907-08 reveals that there were six parties at work and that seven sheets had been published. By 1908-09 progress was measured in square miles surveyed, which amounted to nearly 100,000 square miles by 1910-11. After the creation of the Union of South Africa , the operation was closed down in November 1911^{xiv} . Several sheets had still to be compiled, engraved or printed up to 1914, when the outbreak of the war with Germany demanded respect for other priorities. Also in 1911 the War Office adopted a new sheet numbering system in conformity with that adopted for the International Map of the World (IMW). At the closing down of the Cape survey eight further maps were recorded as published. ^{Writing} just before the war broke out, Close considered that the series embodied work “though not of the precision of the OFS survey, is good and reliable,....”.^{xv} A quarter of a century later Winterbotham^{xvi} probably referred to this series when he described Close’s “‘great work’ giving us.....that ‘quarter-inch knowledge’ which was almost sufficient for our purpose.” Clearly the value of such a series has to be assessed as a strategic rather than tactical map. Nevertheless in the process of surveying and mapping this part of the Cape Colony a significant amount of geographical detail was amassed which is now of historical value, much of it in the military versions of the maps.

The Maps of the Reconnaissance Series of the Cape Colony (GSGS 1764)

Compilation and printing of unfinished sheets was undertaken by the War Office until 1914, but some maps remained FOR OFFICIAL USE ONLY and were never issued as Sales editions. The progress of publication of the military and the doctored civil editions must now be charted from the

tables compiled from a study of surviving maps in major libraries.^{xvii} Liebenberg's thesis was the first to list dates of publication and has revealed either some discrepancies or new states. Jewett^{xviii} points out that this series was newly recast into sheets 1_ longitude by 1_ latitude and was a distinct section of the Africa 1:250,000 War Office series labelled TSGS or GSGS 1764. The use of the term Reconnaissance Series on military versions is not standardised although notes on the survey, when they appear usually include "under the direction of (rank and name) in charge Reconnaissance Surveys Cape of Good Hope". Although Jewett identified 13 sheets in the Reconnaissance series, there were in fact 30 military versions and only 20 sales editions, perhaps a more useful distinction. In general the latter appeared a year after the former.^{xix} If sheets were not published as military versions until 1912 or 1913, the more pressing work in Europe precluded further work to convert maps to Sales editions. Only Kimberley was favoured with a Sales edition as late as 1914.^{xx} Only three sheets were revised and reissued in second editions

The characteristics of Military versions and Sales Editions

The face of all maps follows the design envisaged in the 1904 Congress, doubtless influenced by contemporary practice. In general military versions are printed with very wide borders to accommodate additional information. Most frequently there are descriptions of the area under the heading General Note. Next come lists of Halting Places stating the availability of water, grazing and fuel for different numbers of men and animals in the wet and dry seasons. On the major rivers, such as the Orange there are surveyed sketches of drifts with notes about their ease of passage and approaches. Finally there are sketch maps of important settlements which mark, post and telegraph offices, churches, stores, schools, cemetery and "Kaffir location" where most Black people lived. Usually in colour these are embellished with brown form lines; and viewpoints, streams, irrigation furrows and wells all in blue. On the face of military maps are found numerous references to the nature of the terrain, vegetation and the state of roads most of which was edited out on Sales editions. For the student of historical geography the military maps provide by far the better picture of the country. Whereas the Imperial Map series bore details of farm boundaries, these were omitted from GSGS1764 allowing the visible topography to take centre-stage. In any case adding these would seriously conflict with the annotations and would have had to be provided by the Surveyor General's office.^{xxi} Much detail on the black plate relating to the state of roads, the quality of grazing and the nature of vegetation as a cover for movement was deleted from the sales edition. However both editions carried evidence of smithies, police posts, stores and post offices as well as standard names of farms. Detail on the blue (water) plate generally appears the same on both versions

Supplementary information.

From supporting compilation material in the WOMAT class in the British Library, it is sometimes possible to derive a vivid account of life as seen by the Army surveyors in remote parts of the Cape

Colony. A particularly fascinating record of the fabric, inhabitants and activities of Upington is given.^{xxii} A fairly full and frank typewritten report was provided for the compilers of the map, accompanied by a detailed town plan (now lost). Only the sketch survives in the margin of the military edition. Captain H.A.P. Littledale of the King's Own Yorkshire Light Infantry dated his report on the village of Upington in May 1911. Sited on the North bank of the Orange River, it had a mixed population split into Whites who lived in houses and Coloureds, whose 100 to 150 reed huts constituted the location. The report then describes the inhabitants of each house numbered on the lost two-inch to one mile map. At one house was a so-called doctor, self-styled Veterinary Surgeon, thought not to be certificated. He had been employed for malleining [inoculation] but not allowed to practice this. Inclined to drinking bouts, he could be employed as a farrier and nurser of sick animals. There are three churches with their ministers, a school for White children, several attorneys, a few shops, two doctors, a baker and a mill with an undershot wheel powered by water. This led from the Orange River twelve miles upstream and allowed garden lands to be irrigated along this stretch. Unfortunately the location, pound, slaughter place, cemetery and rubbish dump all lay in places draining into the furrow. As an administrative centre for the Division of Gordonia, there was a resident magistrate, Cape Mounted Police station, a public library and (from other information) a Post Office. The district's agriculture chiefly along the River included wheat, mealies and beans with fruit, vegetables. and lucerne. Littledale had to buy mealies from the Army Service Corps depot as none were available in 1910. Approaches by road to the crossing points are carefully described. The unreliable drift had a shifting gravelly bottom and was passable only in the three winter months. A full account of the steel pont [ponton] manually operated by hauling on two fixed hawsers could carry a loaded wagon carrying 40,000 lbs. Close attention was paid to the approaches to the river crossing including the need for improvements to roads which were often impassable after floods in spruits flowing into the Orange River. The report concludes with an analysis of the defensive situation of the village. By no means were all these details here summarised reproduced in the sketch maps and diagrams in the margins of the military versions. One must admit that the sketch map of Upington on the military version of the 1913 map gives a good indication of what to expect. It would be too much to expect such a map to provide more than a starting point for proper town planning. Chance preservation of this report indicates that the GSGS Map Room was a good source of information held in London (received there 12 November 1913).^{xxiii}

Conclusion

The military version of GSGS1764 for the Cape Colony and the associated data not only provide the "quarter-inch knowledge" valuable for defence, but a rare picture of the geography of a substantial part of the Colony a century ago. Evidence contained in this systematically produced map series is invaluable for the study of local history and the study of environmental change. As

such it offers a regional context for small-scale examples of changing in the landscape over a century of commercial farming in the North-West Cape.

Table 1. Cape Colony 1:250,000 GSGS 1764. Military versions and Sales Editions. Inventory of sheets examined in libraries in Great Britain

Sheet No.	Sheet Name	Survey Date	Published	Notes
Military Versions				
33-E	Orange River Mouth		7.1907	Two profiles
33-F	Stinkfontein	1906	3.7.1907	First Proof CU Geog
33-K&L	Port Nolloth		6. 1907	First Proof CU Geog
33-K&L	Port Nolloth		7.1907	
33-R	Bowesdorp		1908	
34-A	Warmbad		4.1907	
34-B	Schuit Drift	1908	1911	
34-C	Kakamas	1910, 1911	1914	
34-D	Upington		9.1908	
34-D	Upington	1907, 1911	1913	
34-E	Langeberg	1910, 1911	1914	
34-E&K	Prieska		2.1909	Extended N to 28_50' only
34-F	Griquatown	1911	1914	
34-G	Little Bushmanland		7.1907	
34-H	Pella	1911	1913	
34-I	De Tuin	1911	1914	
34-J	Kenhardt	1907	8.1910	
34-K	Prieska		1912	Sheet shortened
34-L	Douglas		1913	Formerly called Strydenburg
34-L	Strydenburg		3.7.1907	First Proof CU Geog. Model
34-M	Kamiesberg	1908	1913	
34-M	Langeberg		1910	Renamed Kamiesberg
34-O	Brandvlei	1911	1914	Cultivation added in green
34-Q	Carnarvon	1909	1912	
34-R	Britstown		5.1907	
34-U	Williston	1907-1910	1914	Cultivation added in green
34-V	Fraserburg	1909	1911	
34-W	Loxton	1908	1913	Originally Elandsberg
34-X	Victoria West	1909	1912	Originally Biesiespoort
35-A	Kimberley	1910	1913	
35-G	Hopetown	1910, 1911	1913	
35-M	Philipstown	1910, 1911	1913	
35-N	[Colesberg]			Only compiled, not published
35-O	Aliwal North			Only compiled, not published
35-Q	Mt Fletcher	1906? 1908	?1913	
35-S	Naauwpoort	1907	?1910	Originaly Hanover
34-P	Van Wyks Vlei	1909	1910	
Sales Editions				
33-E	Orange River Mouth		7.1907	Profiles retained exceptionally
33-F	Stinkfontein		7.1907	
33-K&L	Port Nolloth		4.1908	
33-R	Bowesdorp		1908	
34-A	Warmbad		4.1908	
34-B	Schuit Drift	1908	1913	

34-D	Upington		1908	Little detail N of Orange River
34-D	Upington	1907, 1911	1913	
34-E&K	Prieska		2.1909	Extended N to 28_50' only
34-G	Little Bushmanland		7.1907	
34-J	Kenhardt	1907	8.1912	
34-K	Prieska	1907, 1910	1914	
34-L	Douglas		1914	Compiled 1905
34-L	Strydenburg	1908		Renamed Douglas
34-M	Kamiesberg	1908	1914	
34-P	Van Wyks Vlei	1908	1912	
34-Q	Carnarvon	1909	1913	
34-R	Britstown		5.1908	
34-V	Fraserburg	1909	1912	
34-X	Victoria West	1909	1913	
35-A	Kimberley	1910	1914	
35-P	Zastron		2.1909	Detail only in Cape Colony
35-Q	Mt Fletcher	1908	1913	
35-S	Naauwpoort	1907	7.1907	
35-S	Naauwpoort	1907	1913	

Possible Military Version

35-X Pondoland Only some field sheets compiled

Explanations:

Months are given where stated, but in numerals. N = North. Some sheet names appear in adjoining sheet indexes in the borders of maps, or on G.S.G.S. 2214, Index to the sheets of South African Topographical Surveys, War Office 1906. Although revised at intervals early errors in spelling were never corrected. So far, the only evidence for 35-X Pondoland comes from this Index. Several sheets were sent as proofs to the Geography Department, University of Cambridge (CU Geog) and are now in the University Library. "Model" against Strydenburg (military) refers to its significance for the design and layout of the Half-inch mapping of the Orange River Colony.

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ⁱ Board, C. 2004. The Imperial Map Cape Colony: towards a cartobibliography. In Kainz, W., Kriz, K. & Riedl, A. Aspekte der Kartographie im Wandel der Zeit. Festschrift für Ingrid Kretschmer zum 65. Geburtstag und anlässlich ihres übertritts in den Ruhestand. *Wiener Schriften zur Geographie und Kartographie*. Band 16. pp,17-24.

ⁱⁱ Liebenberg, E.C. 1973. Die Topografiese Kartering van Suid-Afrika, 1879-1972: 'n histories-geografies ontleding. MA thesis University of South Africa, Pretoria. pp.228-231.

ⁱⁱⁱ This material is in the class WOMAT in the British Library

^{iv} Liebenberg, E.C. 1997. documents the development of mapping policy for South Africa, in, Mapping British South Africa: the Case of G.S.G.S. 2230. *Imago Mundi*, 49, 129-142. See p.134.

^v Geodetic Survey of South Africa. Volume V. Report on the Geodetic Survey of the Transvaal and Orange River Colony. Introduction by Sir David Gill. 1908

vi Cape of Good Hope. Topographical Survey of South Africa. Proceedings of Congress held at Cape Town, March 1904. G77-1904. Annexures to the Votes and Proceedings of Parliament, vol VI, 1905. Of relevance here the proposed 1:250,000 map included generalised hill-shading by some photo-mechanical process resembling the 3rd edition of the Imperial Map Cape Colony.

vii Great Britain. Colonial Survey Committee Reports. First year to August 1906. Cd2684-46. p.37

viii Louis, W.R. 1967. Great Britain and German Expansion in Africa 1884-1919. in Gifford, P. & Louis, W.R. (eds) *Britain and Germany in Africa: imperial rivalry and colonial rule*. p.33. Minutes by officials in the British Foreign Office had urged drawn attention to the threat from German expansion especially after German interference in Transvaal before and during the Anglo-Boer War and after the signing of the Entente with France in 1904.

ix *ibid* Liebenberg, E.C. 1997. endnote 4

x War Office. 1913. Military Report on German South-West Africa. Part I, pp40-41. Such railway connections also made the Cape Premier nervous. See Lewsen, P. 1982. *John X. Merriman: paradoxical South African Statesman*. Johannesburg (Donker).

xi Great Britain. Colonial Survey Committee Reports First year to August 1906.p.38

xii *ibid* p.39

xiii It is now believed that Close regarded the Strydenburg sheet of this Cape Colony 1:250,000 series as the model for the Orange River Colony 1:125,000 series as it employs similar symbology and presents military information in the same way. (See Liebenberg, 1997, pp.137-8).

xiv Colonial Survey Committee Reports, 7th year, to 31 March 1912. p.25. Lists eight sheets published in the year. Liebenberg, 1973, quotes the sense of regret in the same report that systematic topographic mapping in South Africa ended, not to be resumed until 1936.

xv Close, C.F. The Mapping of British Territories, pp.306-341. in Herbertson, A.J. & Howarth O.J.R. 1914. *The Oxford Survey of the British Empire*. Volume VI General. Oxford, Clarendon Press. .

xvi Winterbotham, H.S.L. 1941. Under Five Sovereigns: or Military Surveys for the Last Fifty Years. *Empire Survey Review*, 6. (no. 40) 93-96

xvii At the time of writing I have examined collections in the British Library, National Library of Scotland, Royal Geographical Society, Cambridge University Library.

xviii Jewett, A. Crispin, 1992. *Maps for Empire. The first 2,000 numbered War Office Maps*. (British Library) See p.412 and illustration of Sheet 126-L (South. H-34-L) Strydenburg. This also figures in the cover of the book, either significant or a happy accident.

^{xix} The British Library's collection of materials used in compiling these maps in the class WOMAT contains several examples of military versions marked up for conversion to Sales editions. Much deletion from existing drawings and new plate-making would have been involved.

^{xx} A listing of the sheets in the series (omitting those for Basutoland) will be found in Table 1.

^{xxi} Liebenberg, 1997 describes how the cadastral information was added to the military maps at 1:125,000 of the Orange River Colony.

^{xxii} In 1911 the census records a total population of 2,225 there while the current almanack states that there is a Standard Bank and Hotel in the "village" on the (upper) right bank of the Orange River. The 1913 edition of sheet South H-34-D says that the 1911 White population was 400 but the census records 659 Whites in 1911..

^{xxiii} Although supplementary information was retained by the War Office, copies of the military versions of these maps are to be found in the Record Library of the Trigonometrical Survey, Lands and Surveys now in Cape Town. The author is grateful for their help and for librarians in the UK whose collections have been examined. He also wishes to acknowledge assistance by Dr Ian Mumford and Professor Elri Liebenberg in compiling this paper.

The author

Christopher Board born in 1932 and educated in Windsor and the London School of Economics, worked in South Africa after graduating with BA Honours in Geography. After teaching at University College Swansea and the University of Cambridge, he spent the rest of his career in the Geography Department, London School of Economics. A long serving member of the British Cartographic Society, he was President 1982-84, receiving the British Cartographic Society's Medal in 2004. In 2005 he was appointed as an Officer of the Order of the British Empire for services to cartography. For the last 20 years he has chaired the United Kingdom's national cartography committee, serving as the UK delegate to ICA conferences. Dr Board is also an Honorary Fellow of the Royal Geographical Society and is a founder member and current chairman of the Charles Close Society for the study of Ordnance Survey Maps. He has written on the geography of South Africa, especially the Eastern Cape, on aspects of the design, use of and communication with maps, and on the postal history of South Africa.