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The style sheet for the War Office series GSGS 1764, Cape Colony Reconnaissance Series

Christopher Board

Formerly London School of Economics, UK.

c.board@macace.net

ABSTRACT

This assembly of cartographic conventions for use in the military version of a 1: 250 000 topographic map series of the north-west Cape Colony was produced in November 1907. It takes the form of one sheet but has no representation of any of the area's topography. Unrecorded as such until 2006 and in the British Library collection since 1909, this sheet was almost certainly produced at the behest of Charles Close. As the newly appointed Head of the Geographical Section, General Staff, he aimed at standardising subsequent maps in the series drawn after 1907. For him it may have been the ideal style for a South Africa-wide series that was still-born after the Topographical Conference in Cape Town in 1904. A coloured photo-copy of the style sheet will be compared with the military version of the published sheet dated May 1907. Examination of the entire series demonstrates the later use of the style set by the Britstown style sheet. Of the 32 published sheets only 21 were produced for sale to the public. Nevertheless the military versions in this series formed the best map of that part of South Africa until the 1940s or even later.

INTRODUCTION

This paper will concentrate on the cartographic aspects of GSGS 1764, the Cape Colony Reconnaissance series at 1 : 250 000. It will also emphasise the role of Charles Close in the birth and development of the series. Jewitt¹ indicates that this series is part of a wider map at that scale of British Africa. While Rhodes's dream of a Cape to Cairo railway through British territory proved too ambitious, mapping enterprises such as the measurement of the 30th Arc of the Meridian furnished a critical axis of geodetic observations. Relatively little has been written on the 1 : 250 000 map, but there are exceptions.²

THE AFTERMATH OF THE SOUTH AFRICAN WAR AND THE HOPE FOR BETTER MAPPING

Liebenberg³ notes that in style and layout these reconnaissance maps were identical to the military series GSGS 2230 and 2618 of the Orange River Colony and Transvaal respectively. Inspection of a range of styles adopted in mapping different regions of Africa shows a general similarity in which certain widespread conventions are followed.

There were compelling reasons for a special series to cover part of the Cape Colony. First, as was pointed out by Liebenberg⁴, it was a military map for official use and the smallest scale to be of use to armies. It replaced a hotchpotch of plans cobbled together from cadastral sources hastily prepared for use by the British Army in the second Anglo-Boer War.⁵ These had been found wanting as early as 1900. Attempts were made by Royal Engineers officers under Casgrain to improve on the appearance of some of these maps which appear as the Third Edition of the Imperial Map Cape Colony.⁶ The new War Office product was to be based on a geodetic survey linked to existing observations

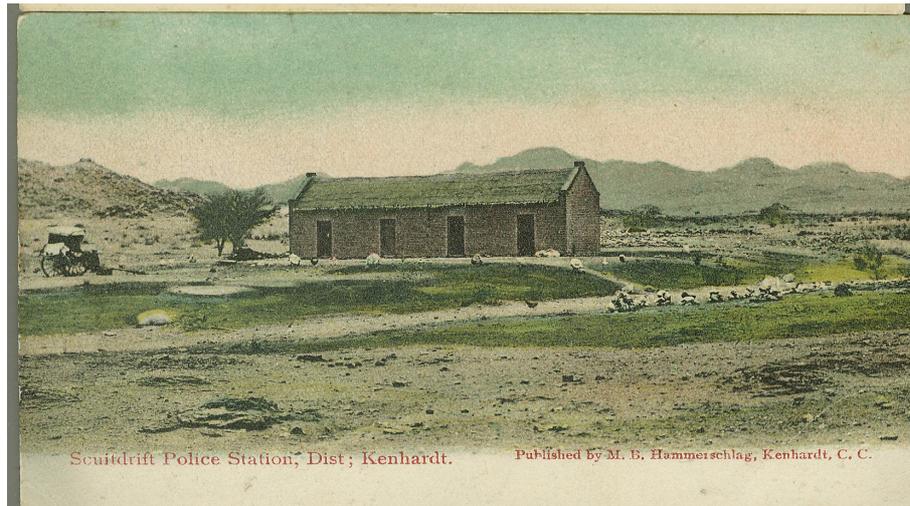


Figure 1 Mounted Police Station at Schuit Drift on the Orange River, North of Pofadder.

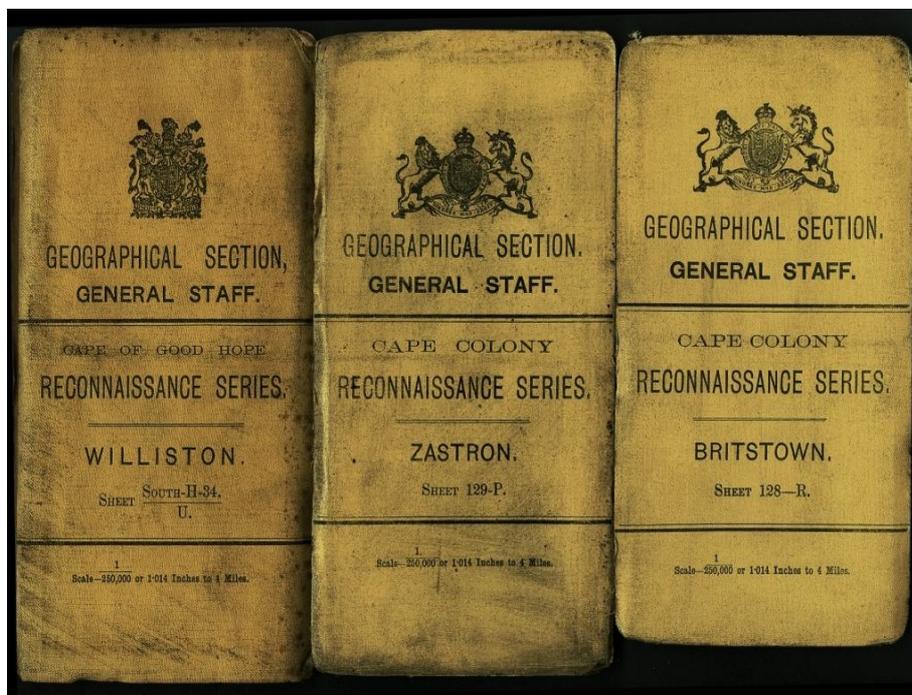


Figure 2 Covers of military versions of sheets of the series GSGS 1764

wherever possible.⁷ Even before the end of the war in July 1900, Charles Close, who had been invalided out of the field and was recuperating in the Cape, had expressed a view of how South Africa should be mapped to better effect.⁸ Charles Close believed that mapping at the scale of 1 : 250 000 provided a suitable base for much developmental work in sparsely populated, but potentially rich countries. While convalescing from enteric fever in 1900, he composed a paper which was based on his experience of fighting with inadequate maps. It assesses the requirements for mapping South Africa both for the military and for civil administration both contributing to the cost. If this great area (est. 432,000 sq.miles) is dealt with piece meal, by local organizations, with no general directing head, no common system, no general standards of accuracy or methods of reproduction, the result will be a waste of effort and money. He went on to advocate something similar to the Survey of India basing the speed of survey on practice in India and Burma. He calculated that with three such parties the whole country would be surveyed in seven years. He had already mapped at the half-inch scale some half-degree squares (10,000 sq miles apiece) along the Orange River, under wartime conditions, and thus had direct experience of mapping in South Africa. By September 1900 we see Sir John Ardagh, Director of Military Intelligence at the War Office, sending a memorandum on the organisation of a survey department for South Africa to the Colonial Office. It appears to be informed by Close's paper giving estimates of the size of the operation and some costings based on the employment of RE survey sections. Major Jackson was recommended for the post of Surveyor General of Transvaal with Captain Close as Assistant Surveyor General.⁹

This exchange of correspondence finishes with a dispatch from Joseph Chamberlain, Secretary of State for the Colonies, to Milner asking what progress had been made with plans but reminding him that home government departments (War Office and Colonial Office) had to consider finances before the colonies could be approached for their contributions. As Liebenberg¹⁰ points out Sir David Gill was the local driving force behind the establishment of a survey for South Africa. Once the Colonial Office had informed Milner in March 1903 that the imperial government would share the cost of a topographic survey of South Africa with the colonial governments, Gill marshalled opinion and reported back to Milner. General principles were established:- centralised control, uniformity of system throughout South Africa, assurance of considerable aid from the imperial government, and demonstration of advantages of inter-colonial cooperation and promotion of federation. Milner informed Gill in July that a War Office representative would meet a conference of Surveyors General to discuss the plan for South Africa.¹¹ Neither of the formerly independent colonies in the interior had had geodetic survey. In the coastal colonies geodetic survey was not linked with lower-order triangulation and detailed mapping. A geodetic survey was planned for the Transvaal and Orange River Colony, but the goal remained of a geodetically-based topographic survey for the whole of South Africa.¹²

TOPOGRAPHICAL CONGRESS, CAPE TOWN 1904 - DASHED HOPES

Close was eminently suitable as the War Office's representative at the Topographical Congress held in Cape Town in March 1904. Gill had announced the willingness of the Imperial government to underwrite the pay of a officers and surveyors up to £5000 per annum on condition that the colonial governments also committed themselves to annual sums for the survey costs. Its proceedings were published in the same year and record a unanimous resolution on the desirability of a general topographic survey, but met some opposition from the Surveyor General, Cape to a central South African department for topographic survey unless it be a first step to unification. The other surveyors general accepted the idea. On the following day Close read a memorandum which elaborated the thoughts first expressed in 1900. One of his points was that colonial cadastral departments did not

produce useful topographic mapping and that none had so far been produced in South Africa. The Cape was persuaded to include in its estimates £10,000 for executing a secondary triangulation and £14,000 per annum towards the cost of topographic survey. The colonial governments were unwilling to contribute to the cost of mapping due to a down-turn in the economy. However, as Liebenberg¹³ points out, the Orange River Colony (ORC) was able to match funding for a topographic survey by a detachment of RE surveyors through the agency of the Colonial Survey Committee in 1905. Close had previously proposed suitable scales for topographic mapping in different parts of South Africa.¹⁴

HOPE REGENERATED

Ostensibly the defence of the Cape and southern Africa which faced a threat from German South West Africa must have justified its importance, it is also tempting to speculate about hidden motives. Frustrated by the lack of financial support from the Cape Colony, Close must have sensed an opportunity to undertake topographic survey for the north-west part of the colony which adjoined the frontier with German South West Africa. As defence of the colonies was still an imperial obligation, and the threat from German colonial and naval expansion was by 1904-5 greater than that from France, colonies adjacent to German protectorates were vulnerable. This gave added significance to efforts to organise the mapping of British Africa. By July 1905 the Colonial Office took up the question in a memorandum that was based on discussions with intelligence officers and surveyors in the War Office and Ordnance Survey proposing a comprehensive scheme for the survey of British Colonies and Protectorates in Tropical Africa. A central advisory committee in the UK bringing together the War Office and the Colonial Office would overcome the disadvantages evident from the lack of a central source for mapping South Africa experienced in the late war.¹⁵ Within a month the Colonial Survey Committee was set up and had held its first meeting. Although South Africa was originally excluded from its remit, its reports contain very detailed accounts of the Cape Colony Reconnaissance Survey. Minutes of its first meeting reveal that the title of the Committee was modified “as it would admit to the extension of the scope of the committee to British Possessions other than those in Tropical Africa, although the latter would be dealt with at first”.¹⁶ This was moved by Close, who neatly ensured that South Africa was included, permitting the current effort to map the northern Cape Colony and Orange River Colony to be overseen and doubtless to inform mapping elsewhere in Africa.

Within a year the committee’s first report¹⁷ states that the chief imperial requirement [was] the provision of maps for the defence of the colonies. In a reference to the Topographic Congress of 1904 they surprisingly comment that “the unanimous report was drawn up but in the light of subsequent events it appears that the conference opened its mouth too wide. Some of the colonial governments found that the financial situation did not enable them to contribute the money required.” These were probably Close’s words and expressed his disappointment over the still-birth of his southern Africa scheme in 1904. In the first year the committee dealt with British Africa within which there were reports on the progress of the ORC scheme and the Cape Colony Reconnaissance series. The latter showed impressive progress with eight completed field sheets and work in progress on three others. The index map included is titled Index to the sheets of South African Topographical Surveys on scales of 1/250,000 and 1/125,000. It is inscribed T.S.,G.S. 2214 1906. Thus we see that Close, now Director of the Geographical Section, General Staff, was able to begin a 1/250,000 map of South Africa to his liking. Moreover the surveyors were paid for by the War Office and the Colony contributed to the cost of transport. The official report by the War Office on the Reconnaissance Survey states that the survey was at two miles to the inch changed to four miles to produce a map

THE CAPE RECONNAISSANCE SERIES

An earlier paper by the author¹⁹ has described the differences between military and sales editions, the limited amount of revision undertaken and some adjustments of the sheetlines. This paper will now turn specifically to the style sheet which was first mentioned in connection with the ORC series GSGS2230. Liebenberg²⁰ says that Close would elevate the Strydenburg map to the position of canon, in specifying that the style of the [G.S.G.S. 2230] map will be generally the same as that of the Strydenburg sheet. Since the ORC series was a half-inch map, Liebenberg looked for an equivalent sheet of that name and identified the half-inch map produced by Survey Section No.1 to which Close was posted early in 1900. For some years that particular map could not be found, but persistent enquiries finally succeeded in locating it at BL Maps WOMAT 91. Upon examination, although it was a simple map with relatively little detail, it was lithographed in colour in the field and a first of its kind.²¹ Questioning the choice of this sheet being a style sheet for anything, I noted that there was a Strydenburg sheet in the War Office's Cape Reconnaissance series. Indeed it was used as the background for the cover of Jewitt's book and receives a detailed notice there. This was a military map similar in many respects to the style of the ORC maps and was published in 1907, a proof of which had already been received by the Department of Geography, University of Cambridge on 3rd July 1907.

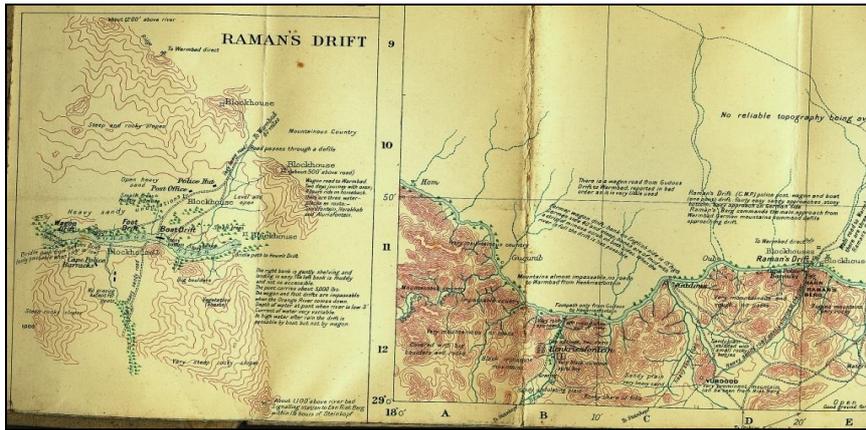


Figure 5 Detail of Raman's Drift in the border of sheet 128-A Warmbad with an excerpt of the map itself.

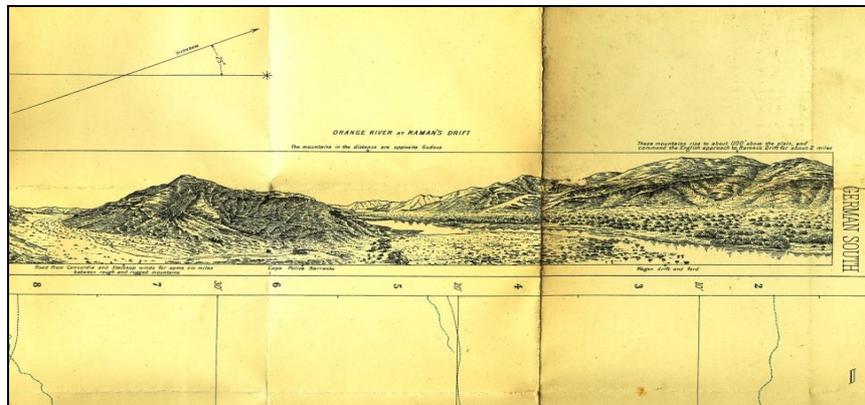


Figure 6 Topographic sketch taken from a photograph of the Orange River at Raman's Drift on sheet 128-A Warmbad.

I favoured the choice of this map as the style sheet remembered by Close and I even persuaded Liebenberg that there was something in the idea. She noted that the Strydenburg sheet had been renamed Douglas at an early stage and had overlooked it. Both of us were soon to be disabused of this identification by the discovery of a style sheet named Britstown in another folder in the BL collection which I had not consulted.²² Hence we must conclude that Close forgot the name chosen to identify the style sheet. Note that Britstown adjoins Strydenburg to the south and was also published in 1907, but in May. There remains the problem of why the Report on the Topographical Survey of the Orange Free State (cited above by Liebenberg) should also have referred to the Strydenburg sheet when the Geographical Section, General Staff had produced a style sheet headed Britstown. It was probably written from memory after the style sheet had been passed to the British Museum in 1909.

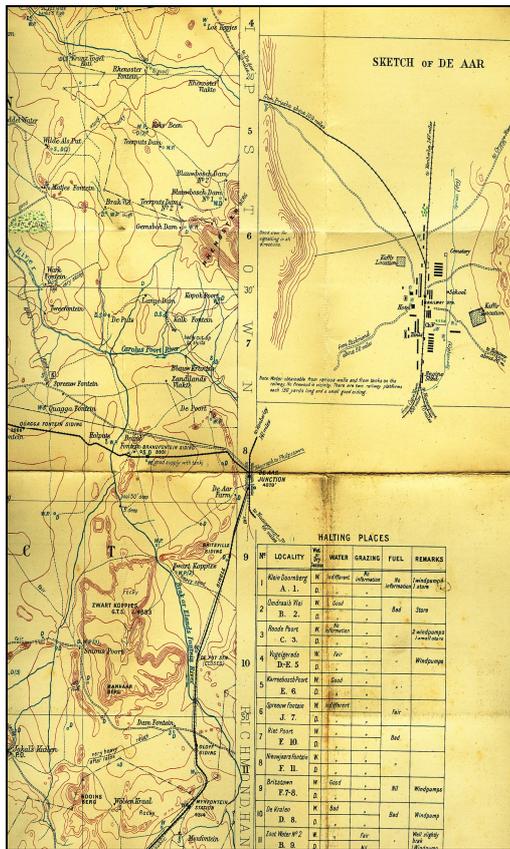


Figure 7a Excerpt from Military version of sheet 128-R Britstown showing DeAar junction in detail.

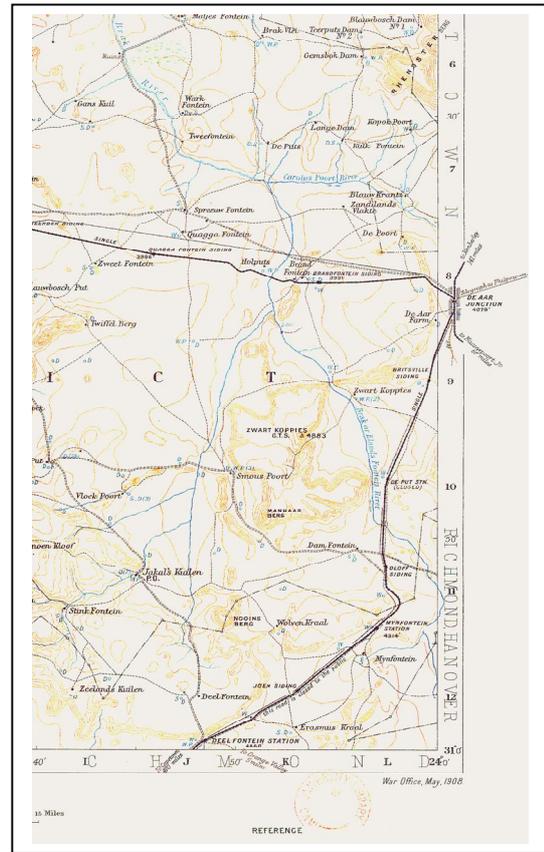


Figure 7b Excerpt from Sales version of sheet 128-R Britstown showing De Aar junction .

Why was a style sheet produced after the series had been started? I imagine Close looking at the first sheets to be published, including Britstown and wondering why they contained inconsistencies and anomalies and perhaps failed to match his idea of a well-designed topographic map. We know from his address on the ideal topographic map to the Royal Geographical Society in December 1904 that Close had a firm idea of what a quarter-inch map should look like. He was aware that given the amount of information required, the scale of a map will depend upon the closeness of the detail or the character of the country.²³ The survey methods used for the Orange River Colony map included the instruction to be careful to provide heights for the veld as well as on the hill tops. Close thought that his ideal map²⁴

should avoid the deficiency of numbered heights as found on some Indian topographic maps, on which an abundance of heights are shown on the tops of the hills and very few in the valleys. Does this not support the notion that Close also drew up the survey methods for both GSGS 2230 and 1764?

He also suggested that the wide margins for maps might be used for photographs or engraved views as were used on Admiralty charts. Sheets of GSGS 1764 included several field sketches along the frontier with German South West Africa, detailed sketch maps of important drifts across rivers, sketch maps of towns and military camps. Water and grazing were so important in South Africa that most military versions have tables of halting places with estimates of the amount and quality of the resources for supporting draught animals and rest for soldiers on the march.

Thus I envisage Close instructing those in charge of the topographic mapping to improve on the design used for the first few sheets and probably marked up a copy of Britstown to illustrate what he wanted. It is not too far-fetched to claim that Close embodied his ideas for a general map suitable for South Africa and treated GSGS1764 as a model for it

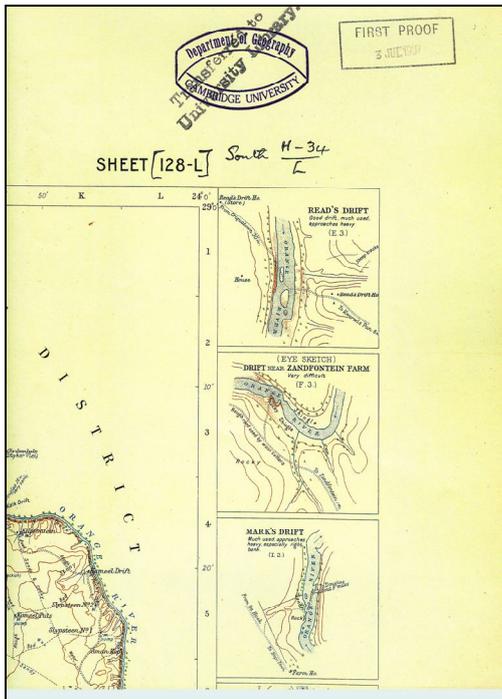


Figure 8 Excerpt from a proof copy of Military version of sheet 128-L Strydenburg. (Courtesy of Cambridge University Library).

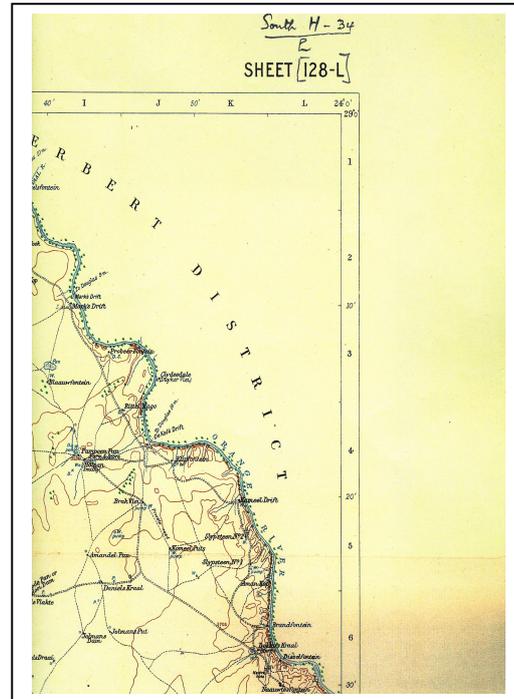


Figure 9 Excerpt from a proof copy of Sales version sheet 128-L Strydenburg. (Courtesy of Cambridge University Library).

THE CARTOGRAPHY EMBODIED IN THE STYLE SHEET BRITSTOWN

The margin includes at the top the series title(s) and sheet name; and on the sides in neat boxes, drifts, towns and villages, halting places and notes. The latter are on the style sheet as instructions to the draughtsmen, whereas on actual sheets they are General Notes on the area mapped. At the bottom there are publication notes, scale statements, both in words and graphical in both imperial and metric

Instead of a map, contrived or not, there are:

- a. Styles and sizes of lettering for all possible types of feature (names and descriptive terms), with examples, and in colour where appropriate
- b. two vertical panels containing alphabetically arranged kinds of feature to the left with their graphic representation to the left. Contours and Form-lines with heights are shown as a complex graphic. Railways and Roads are classified, but there is no specific reference to their quality, which is left to a description on the face of each map. River passages and Wells &c are also divided into many types. Care is taken to use ordinary language and local terms rather than scientific terms to help those who have to use the maps.

A series of colour swatches: red; green; brown; blue in three densities - solid and two screened versions. Little appears to have been left out of consideration. A small note by 3rd class roads says "not for S. Africa", indicating that the scheme was intended for other maps of this 1/250,000 scale. These are essentially a guide to the printer. The style sheet has a different GSGS number - 2317. It could well have been the number of a working document with a limited circulation. No other copy of this sheet has yet been found in other collections official or private, but a second later style sheet has been discovered (see below).

How many maps followed the design of the style sheet after 1907? The Upington sheet (1st edition) was one of the first to be published using the new style. It follows most of the instructions. Looking at other sheets, it seems that extrusions were countenanced only rarely, as at De Aar, a major railway junction just off the limit of the Britstown sheet. It merits a larger scale sketch map in the border of the Britstown sheet only. We can compare the sales edition of the Britstown sheet which was published in 1908 with its military predecessor. Gone are the references to road quality, all data on halting places, the sketch maps of De Aar and Britstown itself. This is a pity as most copies available in British collections are of sales editions. For gaining a better appreciation of the nature of the landscape in the Edwardian era one must consult the military versions. Fortunately all the sheets were published as military maps.

MODIFICATIONS TO THE 1907 STYLE

After the Union of South Africa had been created in 1910, the use of the title "Cape Colony" became redundant, requiring some change to the series designation and the guidance offered by the earlier style sheet. Two sheets published in 1911 had changed titles and with one exception, Prieska (2nd edition), all later sheets published from 1912 to 1914 appear with Cape of Good Hope on their covers and on the top of the map inside. During 1912, it was decided that an opportunity would be taken to make some further design changes. These affect only seven sheets published in 1913 and 1914. Unexpectedly a second style sheet was discovered in the Bodleian Library, dated November 1912.²⁵ It carries the same GSGS number as the original. In place of Britstown it is now titled Mount Fletcher. As in 1907 the published sheet bearing the title does not follow the prescription of the style sheet. This would support the idea that changes were made to a copy of the Mount Fletcher map before it was published in 1913. It may be a coincidence that an excerpt from the Mount Fletcher map is used to illustrate Close's Textbook on Topographical Surveying (Plate XXVIII, dated 1912).²⁶ Perhaps the choice of this sheet led Close to suggest that a new style sheet should be produced.

The squaring system labels in the border are in bold letters without the circles. There are indications that some of the marginal text is set in type doubtless to save time in compilation. There are now two

very arid. Some sheets are now found printed on pegamoid, or aeroplane cloth, an impregnated linen resistant to wear at the folds and much less bulky than paper mounted on linen. In fact all the sheets in the original style carry two prices on their sales editions: Paper 1/6d, Pegamoid 2/-.

ENDNOTES

- ¹ Jewitt, A.C. 1992. *Maps for Empire. The First 2,000 numbered War Office Maps*. London: British Library.
- ² McMaster, D.N. 1994. The Yellow Cultivation Plate of the Uganda 1 : 250 000 map 1911, in J.C. Stone (ed.), *Maps of Africa*, Proceedings of a Colloquium at the University of Aberdeen, April 1993; Board, C. 2004. The Imperial Map Cape Colony: towards a cartobibliography. In *Wiener Schriften zur Geographie und Kartographie*, Band 16, edited by W. Kainz, K. Kriz, A. Riedl., pp. 17-24; Board, C. 2006. The British War Office, 1 : 250 000 Mapping of Cape Colony, 1906-1914. *Proceedings of the International Symposium, Utrecht University, 21-23 August. "Old Worlds-New Worlds", History of Colonial Cartography from 1750 to 1950*. Organised by the ICA Working Group on the History of Colonial Cartography in the 19th and early 20th centuries, with the Faculty of Geosciences, Utrecht University.
- ³ Liebenberg, E.C. 1979 Topographical Maps of South Africa. Paper presented to the International Map Seminar, CSIR Conference, Pretoria, 12-15 June 1979. This draws on her MA dissertation completed in 1973 for UNISA.
- ⁴ Liebenberg, E.C. 1997. Mapping British South Africa: the Case of G.S.G.S. 2230. *Imago Mundi* 49, 129-142. See p. 135.
- ⁵ Liebenberg, E.C. 1997. *op. cit.* See p. 134.
- ⁶ Those were produced in three series: GSGS 1367 in black which was little more than a topographical sketch map; the Imperial Map Cape Colony (from the Surveyor General of the Cape Colony) and the Imperial Map of South Africa (compiled hastily by the commercial firm of Wood and Ortlepp).
- ⁷ Board, C. 2004. *op. cit.*
- ⁸ Close, C.F. 1900. Rough Notes on the Survey of S. Africa (typescript). 5 pp. dated 1 July 1900 at Claremont Sanatorium. Included with the draft section of Casgrain's Report in *Reports on Survey Mapping Sections in South Africa* by Brevet-Lieutenant-Colonel H.M. Jackson and Captain P. H. du P. Casgrain, R.E., War Office confidential print dated 1903. From the records of Chief Directorate of Survey and Mapping, Mowbray, H4/1/1.
- ⁹ Ardagh to Colonial Secretary No 18, 19 Sept 1900, in TNA, Kew. CO 72/7. Correspondence respecting the Mapping of Africa, July 25, 1896 – November 13, 1902.
- ¹⁰ Liebenberg, E.C. 1997. *op. cit.*, p. 134.
- ¹¹ Gill, D. Introduction to Report on the Geodetic Survey of South Africa, Vol. 5. *Report of the Geodetic Survey of the Transvaal and Orange River Colony executed by Col. Sir W Morris KCMG, CB, Late RE*. London 1908.
- ¹² A diagram published by the War Office in 1913 as GSGS 2380 showing the Triangulation on which the Cape of Good Hope Reconnaissance Survey was based, was located in the Bodleian Library, Oxford, in 2007.

¹³ Liebenberg, E.C. 1997. *op. cit.*

¹⁴ Topographic Survey of South Africa. 1904. *Proceedings of a Conference held at Cape Town, March 1904*. Annexures Votes & Proceedings of the Cape Colony Parliament, G-77-1904. Sunday March 6th.

¹⁵ Collier, P. 2006. "The Colonial Survey Committee and the Mapping of Africa", in *Proceedings of the International Symposium of the ICA Working Group on the History of Colonial Cartography in the 19th and 20th centuries*, 21-26 August 2006, Utrecht, The Netherlands.

¹⁶ Minutes of the Colonial Survey Committee, 14th August 1905, in CO 879/7, p. 13. TNA, Kew.

¹⁷ Colonial Office. 1906. Annual Colonial Reports. No. 500. *The Surveys and Explorations of British Africa*. First year of the Colonial Survey Committee. Cd2684-46. London: HMSO.

¹⁸ War Office, Geographical Section of the General Staff. 1914. *Report on the Reconnaissance Survey of the Cape of Good Hope, 1903-1911*.

¹⁹ Board, C. 2006. *op. cit.*

²⁰ Liebenberg, E.C. 1997. *op. cit.*, pp. 137-138.

²¹ Close, C.F. 1933. A fifty years retrospect. *Empire Survey Review* 2 (7), p.3.

²² British Library. MAPS 63510.(163) Contains several early military versions of sheets published in 1907 received and several sheets published for sale received by the British Museum in 1910. The style sheet was stamped by the BM 5 March 1909.

²³ Close, C.F. 1905. The Ideal Topographic Map. *Geographical Journal* 25(6), pp. 633-647.

²⁴ Close, C.F. 1905. *op. cit.*, p. 634.

²⁵ Bodleian Library, Oxford. Call mark E55(61).

²⁶ Close, C.F. 1913. *Textbook on Topographical Surveying*. Second edition, revised by E.W. Cox. London: HMSO.

BIOGRAPHY

Dr Christopher Board read Geography at the London School of Economics, 1952-55. His PhD research was done at Rhodes University, South Africa, after which he was a university teacher in the UK from 1958 to 1995. He represented the UK at several congresses of the International Cartographic Association. Currently he is chairman of the Charles Close Society for the study of Ordnance Survey Maps. In 2004 he was awarded the OBE for his Services to cartography in general and British cartography in particular.