The 1933 Maps of 'Bechuanaland Protectorate' at 1:500,000: A Milestone in the Mapping of Botswana

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Abstract

An eight-sheet series of maps dated 1933 portrayed the whole of Botswana at a much larger scale than any previously published map. The history of map-making in Botswana prior to 1933 is summarised and related to British colonial map-making elsewhere in Africa, to provide the context of the 1933 series. The five-year compilation history of the 1933 series is then examined in more detail, to facilitate more informed consultation of the map as a historical document. The circumstances of its compilation help to explain both the content and the variable accuracy of the map.

In 1984, the Surveyor-General in Gaborone, published a single-sheet map entitled 'Bechuanaland Protectorate' at a scale of 1:1,250,000. The explanation for this surprising title almost two decades after Botswana gained its independence, is contained in an endorsement at the foot of the sheet reading: 'Reprinted from a negative/of an original printed copy/CTP 1984'. Beneath, smaller type reads 'Printed at Ordnance Survey Office, Southampton, 1935'. The latest map is a photographic reproduction of a map first published in 1935 by reducing the scale of a 1:500,000 eight-sheet series of maps of Bechuanaland Protectorate published by the War Office in 1933, reference 'Geographical Section, General Staff, No 3915'. None of the detail was lost in the reduction process in 1935 and all of it could therefore be carried forward in 1984.

The 1933 series was a significant milestone in the cartographic history of Botswana. However, it is also representative of a particular type of map which was characteristic of early colonial map-making, ie, compilation mapping, which draws on a wide range of earlier cartographic and sometimes non-cartographic sources (Stone, 1984). Coverage within the 1933 series is typically uneven, depending on availability and quality of source material. Furthermore, different parts of the country may be depicted at different dates. Hence, discretion is called for in consulting the map. The purpose of this article is, firstly, to provide a summary history of the cartography of Botswana, to set the 1933 compilation in its context. Secondly, and more specifically, the article will examine the origins and compilation history of the series itself, as an aid to informed consultation of what may be a potentially useful historical source for Botswana more than sixty years ago.

The Origins of Topographic Map-making in Botswana

For reasons which are not at all clear, there is very little evidence of map-making in Africa by indigenous peoples prior to European intervention (Blakemore, 1981; Hunt, 1994). Hence, depictions of any part of the surface area of Botswana on maps compiled prior to the nineteenth century do not derive from first hand observation. Their contents tell us mostly about European perceptions of the interior of Africa which largely derived from a very small number of written texts such as Descrittione dell’Africa (1526) by Al-Hasan (Phipps & Sdiri, 1993). By the nature of these somewhat speculative and geographically imprecise sources, maps prior to the nineteenth century are unlikely to be reliable sources of evidence about the...
past landscapes of Africa. If they are of interest as evidence of various perceptions of the area of the Kalahari, then carto-bibliographical information has been provided by Tooley (1969) and Norwich (1983 & 1993).

In the nineteenth century, cartographic portrayal of the Kalahari was transformed, as travellers with formal training in geodesy, navigation and mensuration penetrated and crossed the area. The character of the nineteenth century pre-colonial cartography of Africa was determined by the nature of the imperial relationship between Europe and Africa which had lasted for four centuries. Throughout this period, the states of Europe shared a common interest in commercial access to Africa within the traditional free trading system at the coasts of the continent, not control of its territory (Hargreaves, 1984). The European explorers who penetrated the interior of the continent in the nineteenth century still did so in that longstanding imperial context. Indeed, there is little evidence of a direct connection between the explorers and the initiation of colonial rule (Bridges, 1982). As has been shown not only by Professor Bridges but more exhaustively by Cain and Hopkins (1993), the impetus for exploration was located not in the minds of governments but in the 'gentlemanly capitalism' of nineteenth century Europe, in what Professor Bridges (1982) has described as the 'unofficial mind of imperialism', to be found amongst servicemen and officials, businessmen and missionary leaders who often constituted themselves into the influential geographical societies of Europe, beginning with the African Association in 1788. They saw themselves as deploying European organisational and technological skills in a laudable civilising process in Africa. It was in this context that the compilation of maps of the highest possible scientific calibre, using instrumentally determined data to locate places with optimum accuracy, contributed to legitimising European penetration or even interference in Africa. An archetypal example is the cartography of the Upper Zambezi Basin by Alfred Bertrand (1898), a Swiss army officer and philanthropist who devoted much of the latter part of his life to the support of the Paris Evangelical Missionary Society (Stone, 1988). Thus the maps of the nineteenth century explorers took a characteristic form, in contrast to the very different maps of the early colonial period when the purpose of map-making changed.

The unofficial mind of imperialism penetrated the Kalahari in the nineteenth century, in the form of missionaries, explorers, hunters, traders and official emissaries. Clement (1967) has reviewed some of the nineteenth century maps of the Kalahari, in as far as they relate to the travels of Gilarmi A Farini. The large number of nineteenth century travellers moving through the Kalahari resulted in an unusually rich crop of maps which are mostly characteristic of the genre, beginning with the Reverend John Campbell (1835). Other missionary map-makers include Livingstone (1850), Livingstone and Oswell (1852), Moffat (1856), Mackenzie (1871) and Thomas (1872). Hunters were less cartographically productive. They rationalised their purpose within the imperial ethic by returning with specimens rather than depicting new and well-founded geographical facts. The maps which accompanied their accounts are likely to be sketch maps at small scales, eg, Cumming (1850), Bradshaw (1881) and Selous (1881).

Exploration had two purposes: to reveal the potential for commerce and to generate scientific data. Hence explorers’ maps often depict natural resources and they tend to be of a high standard in terms of planimetric accuracy. Livingstone acquired the characteristic instrumental and observational skills of the explorer, as did his contemporary explorer and trader, C J Andersson (1855). Other explorers who made significant cartographic contributions to the region include Mohr (1876), Holub (1880), Anderson (1884 & 1888) and Farini (1856), although the latter is an unreliable source (Goldie, 1963). Perhaps the archetypal explorer and map-maker was Thomas Baines. The two maps of his traverses published in the account of his travels (Baines, 1864) are models of their type, with frequent
latitudinal observations and dates inserted along the route, to enhance their status as scientific documents. Baines' manuscript compilations are extant in the collections of the Royal Geographical Society and they contain even more detail than the engraver was able to include in the printed maps. The map accompanying another of his traverses (Mann, 1871), much of it outside Botswana, is remarkable for the tables of co-ordinates appended.

A further category of map-making traveller, was the emissary of a European government, whose purpose to exert imperial influence or to inform imperial decision-making was facilitated by the recording of information about the location of places and their resources. Their contributions could be very modest, eg, Patterson (1879) or more substantial, eg, Bailie (1878). Lastly, there is the category of armchair geographer who sought to make contributions to the knowledge of Africa without travelling through the country which they deliberated upon. In the context of Botswana, the work of MacQueen (1850), Wilson (1865) and possibly Jeppe (1877) is relevant.

Hence, the pre-colonial cartography of Botswana is diverse, matching its origins. It derives from travellers and others with a range of skills and motivations, so that its content and technical quality is variable. It rarely sought to be comprehensive in depicting human settlement. Instead, it included the larger places where trade might be conducted or concessions sought. It depicted physical features of interest to other travellers, whether for way marking or provision of water and it took note of resources. European technology was deployed in order to obtain and disseminate knowledge of Africa, in support of the range of commercial and altruistic motives which characterised nineteenth century unofficial European imperialism.

The Cartography of Colonialism in Africa

Map-making in Africa under colonial rule evolved rapidly. The subject matter of maps, their scales and the technology of their compilation changed in keeping with the changing objectives of colonial authorities. Historians of Africa recognise at least three phases of evolution of colonial Government in Africa (Fage, 1978; Hargreaves, 1988). The first phase was devoted to securing a hold on the colonies. In the second phase, colonial governments did little more than sustain themselves in whatever ways they had chosen to adopt, although this is also the phase when colonial powers in Africa began to 'experiment with new techniques for state intervention and planning of economic development' (Hargreaves, 1988, 42). The third and last phase saw more active involvement by the colonial state in the economic and social well-being of the territory.

This three-phase model is applicable to the cartographic evolution of colonial territories. However, the peculiar problem in the case of Botswana is the atypical nature of colonial Government and its evolution, including the prolonged period during which the territory took shape and the unusually indirect form of colonialism in the early decades. Nevertheless, the framework is not only broadly applicable but is helpful in understanding the evolving cartography of Bechuanaland Protectorate. An amendment must nevertheless be made to the model at the outset, to take account of the peculiarly long period of time, from 1885 to 1899, during which the Protectorate was brought into being as a territorial entity and decisions taken about the form that colonial authority would take.

The Forerunner Phase: Incipient Colonialism

Maps made on the ground from 1885 to 1895 were few in number, but there is evidence that the men who moved into the new Protectorate with the authority of the High
Commissioner occasionally felt the need to compile maps, if only in support of their reports. In 1886, Colonel F Carrington commanding the Bechuanaland Border Police passed a map to the Governor, Cape Town, through the Administrator (BNA 1), with the request that it be copied by the Surveyor-General for onward transmission to London. This request was met (PRO). The map depicted the route followed by Carrington in May, June and July, 1886, from Kanye to the Nata River on the then northern boundary of the Protectorate. The map is a sketch of the route, including sources of water, hills and other route markers, plus occasional place names. It does not exhibit the instrumental accuracy of earlier travellers’ maps. Carrington travelled only as far as the 20th parallel, but two of his staff, Lieutenant A J Bethell and Trooper Ayton travelled north to the Zambezi River (BNA 2). A map accompanied their report and was reproduced in British Parliamentary Papers (1971). The report confirms that they did not carry instruments and indeed the map is no more than a small scale diagram.

Another map compiled by an officer travelling on duty was constructed with rather more skill and precision. Early in 1887, Captain H Goold-Adams travelled westwards from Moleplole to Lehututu, to investigate an alleged massacre. He compiled a map to accompany his report, using his observations of time-distance on horseback and a prismatic compass. The result was a detailed strip-map of the terrain, which the RC made a particular point of commending in forwarding the report and the accompanying map to the Governor in Cape Town (BNA 3). It is much more detailed than Carrington’s sketch of the previous year, so far exceeding the needs of a simple locational sketch to illustrate a written report that it is tempting to suggest that it was compiled with possible administrative needs in mind.

A map might occasionally be compiled in consequence of a potential international incident or a challenge to British influence. The fatal shooting of Piet Grobler by Chief Khama’s men in 1888 was one such circumstance. Sir Sydney Shippard’s report of his on-the-spot inquiry into the incident was accompanied by A Rough Sketch Map Showing Place of Boer Encounter With Bamangwatos (BNA 4). In 1890, the territorial dispute between Khama and Lobengula resulted in the compilation of a sketch map by H J Burrow of the Bechuanaland Exploration Company, a map which was copied for official reference by the Surveyor-General (BNA 5). Earlier, in 1887, an internal dispute over territorial rights resulted in the compilation by A S Woolley, Government Surveyor, of A Sketch of Boundary Line Between Secheli’s and Gassitse’s Countries (British Parliamentary Papers 1971). Another example is the route map constructed following a patrol by Bechuanaland Police officers in 1895 to investigate cases of murder and robbery in the extreme west of the Protectorate (BNA 6). The patrol passed through poorly recorded country and the report was accompanied by A Road Sketch from Palachwi to Lake Ngami and Naklechwi, by Lieutenant A B Walsh, showing settlements and cattle posts along the Boteti River and further east. This is an interesting example, in that it was thought to be worth while compiling a map which was not directly related to the purpose of the patrol.

Throughout the decade of sporadic map-making on the ground, the War Office maintained its interest in collating cartographic data. In 1888, when Shippard carried out his investigation of the Grobler incident, he continued his journey northwards accompanied by Goold-Adams who produced A Sketch Map of a Portion of the Bechuanaland Protectorate and Country to the Northwards as far as Bulawayo and Matabeteland (BNA 7). This neat and detailed map includes the territory disputed by Khama and Lobengula, between the Motloutse and Sashe Rivers, as well as some of the settlements in Khama’s country. A tracing was passed to Cape Town in 1889. Then in 1890, when the High Commissioner made a tour through the Protectorate, he was accompanied by the Surveyor-General of Bechuanaland, who took five sets of astronomical observations at sites in the Protectorate.
The observations were passed to HM Astronomer at the Cape who computed the latitudes and longitudes, which were passed through the Colonial Secretary to the War office (BNA 8). Other maps were compiled by the Intelligence Division of the War Office, not always delimited by the boundaries of the Protectorate but including parts of adjacent Matabeleland or South Africa. They have been systematically identified by Jewitt (1992).

The first phase of consolidation of colonial rule in British Africa was usually accompanied by rapid and unsophisticated mapping of the population to be administered. Clearly, this did not happen in Bechuanaland Protectorate over the period 1885 to 1895. During that time, individual incidents resulted in sporadic local sketch mapping on the ground, whilst the Intelligence Branch of the War Office assiduously gathered geographical information relevant to external or international issues. The misfit with the more widely applicable colonial model is not surprising in view of the indecision over the future of the Protectorate.

The Cartography of Minimal Interference

The decision of the Colonial Secretary in 1895 to maintain an administrative presence but with minimal interference of chiefly authority is reflected in the cartography of at least the two subsequent decades. The Protectorate continued to avoid the full impact of that first phase of colonial imposition and consolidation on the ground which was cartographically very significant in other territories such as Northern Rhodesia (Stone, 1990). Occasionally, maps were the products of officials travelling on duty. For example, in 1904, A W Hodson of the Bechuanaland Protectorate Police mapped his route west from Gaborone to Lehututu and the western border (Hodson, 1912). Otherwise, new cartographic work was mainly confined to border problems, such as Goold-Adams’s work on the boundaries of the Native Reserves published by the War Office in 1898 and 1899 (Penfold 1982), or the efforts of Captain H V Eason in 1912, to locate the main channel of the Chobe River (Stone 1986). 'A Sketch Map of the Bechuanaland Protectorate' in two sheets at 1;1,000,000 was compiled in Mafikeng for publication in 1905 by the War Office, a map which is sometimes referred to as 'Panzera's map' because it is signed by F W Panzera, Acting Resident Commissioner. However, as late as 1919, the submission by Lieutenant G E Nettleton of a sketch map to accompany a report entitled 'Hut tax collecting routes - Lehututu District' (BNA 9) was an isolated example of the compilation of a map as an administrative aid, despite the official commendation which he received.

The First Impulses Towards Cartographic Reform

After the first world war, the cartographic history of the Protectorate increasingly resembles that of other colonial territories, as the Protectorate began to experience what has been described as 'the various impulses towards reform' (Hargreaves, 1988, 45). In particular, several surveys were conducted, sometimes externally motivated, which gave rise to new cartographic data. Some of this source material was to be drawn upon directly in the compilation of the 1933 series.

The first such survey arose from the controversial views of E H L Schwarz, Professor of Geology at Rhodes University College, on the alleged dessication of southern Africa. Schwarz (1920) proposed massive hydrological engineering to increase precipitation and such was the publicity given to his theories that an investigation was carried out on the ground with the support of the Union Government. The report (Du Toit, 1926) included a Map of the Zambezi-Ngami Region at 1:500,000 which became a source for subsequent compilation
mapping, as did Schwarz’s own maps of the region.

Early in 1928, Lieutenant H Beeching of the Protectorate Police made a 23-day journey southeast from Ghanzi to Metsematuk and Molepolole, a route which had already been partly explored by C W Mally of the University of Stellenbosch. The purpose of Beeching’s journey, which was to establish an alternative route for trekking cattle to the railway, lead him to compile extensive notes describing his route, as well as a crude sketch map which is very similar to an earlier sketch map compiled by Mally (BNA 10).

The continuing search for a tsetse free route eastwards from Ghanzi involved the Imperial Secretary, Captain B E H Clifford, who led an expedition westwards from Mahalapye into what the South African press described as the desert which has defied the cartographers (Makin, 1929). A compass traverse together with distances measured on the vehicle speedometer (Clifford, 1928) provided data which was incorporated into the 1933 series, where Clifford’s route is evident.

In 1929, Clifford lead another expedition westwards from Francistown, this time more concerned with the possibility of railway construction. The survey work was of a much higher order, with astronomical observations to fix the ground survey. The expedition circumnavigated Lake Makgadikgadi, generating data which were incorporated into a map at 1:1,000,000 (Clifford, 1930). A blue-print of Clifford’s manuscript is extant (BNA 11), as are copies of the map compiled by A M Macgregor, a representative of the Geological Survey of Southern Rhodesia who accompanied the expedition (BNA 12). In 1931, Clifford led a third expedition with less specific objectives. Nevertheless, it was cartographically significant, despite a delay in the publication of the findings (Clifford, 1938). His observations of the Makgadikgadi region were compiled into a manuscript at 1:500,000, from which dyeline copies were taken (BNA 13) and used in the compilation of the 1933 series.

One further expedition was of considerable significance to the compilation cartography of the Protectorate and that was the reconnaissance railway survey by J L S Jeffares of the Southern Rhodesian Ministry of Mines and Public Works. Jeffares’ traverses from Matetsi through Ghanzi towards Walvis Bay, were fixed astronomically with great accuracy and published (Jeffares, 1932), providing a ready source of compilation data.

Ngamiland Surveyed

There is one further cartographic landmark, prior to the compilation of the 1933 series, namely the remarkable survey of Ngamiland by Almar Gordon Stigand. Every colonial administration seemed to produce an idiosyncratic map-maker of great skill and single mindedness, eg, Archer in Kenya and Croad in Northern Rhodesia. During nine years of service as Resident Magistrate, Ngamiland, Stigand surveyed Ngamiland District with parts of Chobe and Ghanzi Districts by compass traverse. The culmination of his work was the publication by GSGS in 1925 of two sheets at 1:500,000 entitled Ngamiland and Ghanzi - Northern Portion [and] Southern Portion. Slightly more extensive coverage at a reduced scale had been published previously by the Royal Geographical Society (Stigand, 1923). Stigand’s original manuscripts are deposited with the Royal Geographical Society in London and merit a separate study. Suffice to say that the detail far exceeds any previous survey in any part of the territory and the maps were a source for all later cover until finally superseded by the post-war work of the Directorate of Overseas Surveys.
The 1:500,000 Series of 1933

This series was the first cartographic portrayal of the entire Protectorate since the publication of *A Sketch Map of Bechuanaland Protectorate* (GSGS No. 2681) at the very small scale of 1:2,000,000, as long ago as 1912. It was very much the product of a changing climate in colonial administration, the second phase when conditions of tranquillity were succumbing to forces of change in Africa (Hargreaves, 1988). Not even Bechuanaland Protectorate could be shielded from events elsewhere. Specifically, Sir Charles Rey had been appointed to invigorate a moribund administration, a man in the 'mercenary' rather than the 'missionary' tradition of colonial administration (Parsons, 1992). Although Rey's appointment post-dated the origins of the new map series, he was an influential part of the climate of change. Indeed, it has been suggested that 'a significant programme of imperially-sponsored development' was seen in consequence (Steenkamp, 1991: 293). Coincidentally, the then Imperial Secretary, B E H Clifford, was of course personally motivated towards map-making.

The idea of a new compilation for the Protectorate seems to have originated in the Office of the High Commissioner, perhaps in the mind of Clifford. The High Commissioner received a circular letter dated 22 November, 1928 from Downing Street, indicating that maps were to be re-introduced in Colonial Office annual reports. They had been abandoned in 1916 as a war time economy measure. The High Commissioner referred the circular to the Resident Commissioner in Mafikeng but at the same time, he enquired of the Dominions Office whether the War Office would reduce Stigand's map to the scale of Panzera's map of 1905, 'with a view to producing a new map of the Bechuanaland Protectorate' (DNA 14).

In the ensuing correspondence with the High Commissioner, the Resident Commissioner alluded on Stigand's authority to GSGS cover of South Africa at 1:1,000,000 including a part of the Protectorate. Consequently, the High Commissioner asked the Dominions Office to supply copies of the supposed 1:1,000,000 cover which could be updated with much new data to hand, including Clifford's work. The War Office responded that the cover which Stigand had in mind was in fact at the much smaller scale of 1:2,000,000. They proposed that the High Commission should collect and plot all locally available data which the War Office would compile and publish in a new map at 1:1,000,000.

In fact, work on a new draft with the next annual report in mind, was already being undertaken in the Resident Commissioner's office by S L Forster Towne, although the map which was half-completed by May 1929 was at the larger scale of 1:500,000 rather than the very small scale appropriate to a Colonial Office annual report. Nevertheless, to compile a small scale map from a large scale base was correct cartographic procedure. At that time, Stigand, who was now Resident Magistrate in Molepolole, volunteered his services to fix the position of Molepolole more accurately than on the GSGS 1:2,000,000 sheet of 1913, which he did by resection. Stigand then offered to fix other features by plain table, if a motor mileage allowance could be authorised. Here was the test of the Resident Commissioner's enthusiasm for the task. Was he willing to incur expenditure in pursuit of cartographic accuracy? Stigand sought authorisation of the costs of journeys totalling 276 miles. The RC authorised journeys totalling 207 miles but queried whether it might not be possible to fix points from the Molepolole/Gaborone road by resection as time permits, using the car speedometer for distances. He went on to say that 'I am only aiming at approximate accuracy' (BNA 14). Stigand was capable of higher quality work than the RC required but the RC was indeed willing to authorise expenditure on the new map.

Moreover, the RC was willing to allow many more of his field staff to devote time
and effort to the task. A request was sent to Resident Magistrates for 'any details which you may have, particularly names of large villages, mileages, direction of roads and rivers, situation of hills, wells, watering places, trading sites, etc' (BNA 14). The Inspector of Police and his field staff were similarly drawn in and indeed responded, although not always with very high quality data.

Late in 1929, the RC submitted a tracing of the northern portion of the new compilation for comment, before Forster Towne proceeded with the rest of the map. The RC also sought advice about the sheet lines and the scale of the printed map. The High Commissioner’s continued interest is evident from the response. He posed questions about the insertion of meridians and latitudes. He was also concerned to ensure the accuracy of the Protectorate boundaries and he stressed the need to include places whose location had been precisely fixed. Work was then expedited because of a forthcoming visit to London by the Imperial Secretary. The completed draft was sent to Cape Town by the end of March 1930, with the hope that the map could be reproduced quickly so that it could be put to use in the administration of the Protectorate. One such potential use was in connection with water-boring proposals which had been solicited by the Colonial Development Fund Committee. Despite a genuine feeling of need in the administration, the map was not available for another three years, however.

The first problem that arose was orthography. The War Office customarily deferred to the RGS Permanent Committee on Geographical Names whereas the compilation had utilised a recently agreed Setswana orthography unknown to the Committee. The decision to transpose all of the names in accordance with the RGS II system meant further work, which was carried out in the UK in 1931 by Sub-Inspector C K Moseley, a police officer who had already made data available from the Tshane area.

The second problem was the quality and legibility of the draft passed to the War Office. Forster Towne’s original plus at least one of six copies taken in the office of the Surveyor General, Cape Town, were passed to London where the original was lost, so that the War Office was obliged to work from a less legible print. The War Office was probably not happy with other aspects of content since they asked for Forster Towne’s sources. Maps alone amounted to a hundred or so, borrowed from a great many officials and they had been handed back to their authors all over the Protectorate. Also, the quality of Forster Towne’s draftsmanship seems not to have been acceptable to the War Office, perhaps not surprising in view of the admission that he had ‘worked under difficulties in that he had no proper instruments and had to do the work after office hours and under bad conditions’ (BNA 14). The response of the War Office was to put together a further compilation, using the Forster Towne compilation as just one source.

New sources were to hand, possibly including a sketch and determinations of altitudes by A L Du Toit who travelled across the Makgadikgadi from north to south in the latter part of 1930. Then the ‘Authorities’ listed on the published map of 1933 include ‘Reconnaissance of the Great Makarikari Lake by Captain B E H Clifford 1:500,000 1931’, although Clifford’s third expedition in 1931 followed a very similar route to that of Du Toit and correspondence between Clifford and Du Toit (BNA 14) suggests that Du Toit’s field observations resulted in significant corrections to the inferior outline of Makgadikgadi derived from Clifford’s 1930 expedition. In travelling south across the Makgadikgadi in 1931 between the Ntswetwe and Sowa Pans, Clifford was probably doing no more than verifying those corrections.

Another new source available to the War Office was the 1931 Walvis Bay Reconnaissance by J L S Jeffares. The War Office also sought new data on the Protectorate boundaries with Rhodesia and South Africa, and raised questions about the precise location
of places such as Palapye and the Ghanzi farms. They asked for the co-ordinates of a beacon near Tshabong, a request which was dealt with by C F Rey who took the opportunity to vent his spleen on Whitehall by sarcastically commenting 'I don't suppose the map will be finished in our lifetime' (BNA 14).

Further requests from the War Office were submitted to the RC through the High Commissioner, but proof copies of the eight sheets were dispatched to Mafikeng from the War Office in August 1932. The War Office was anxious that proofs should be examined in Africa before they went to print, in view of the difficulties which they had encountered in putting the compilation together. The sort of problem which they still sought to resolve and which is indicative of the variable quality of their data, is exemplified by the problem of locating Palapye.

Although not on the proposed new line, the Walvis Bay Reconnaissance party had located Palapye astronomically at a position significantly different from previous locations. As there were no other fixes nearby on the railway line, the War Office draughtsmen did not know where to relocate the railway line as well as other adjacent features to the north and south of Palapye. The problem was tackled on the proof copy by W J Brind, Bechuanaland Government Engineer, by 'retention of the relative position of Serowe and other important points and ... limited alterations to affect the rest of the map as little as possible', an alteration which he described as 'a most difficult one' (BNA 14). Brind was unable to provide an authoritative answer to the problem.

Corrected proofs were returned to London in November 1932. By May 1933, the RC was seeking copies of the finished maps urgently, in connection with the establishment of mining districts and the claims that were anticipated. However, a debate about production costs continued to delay completion. Because of the late amendments, estimates had been exceeded. Consequently, the War Office proposed to assume ownership and to recoup costs from sales. They also proposed to revise the map periodically, but although the costings arrangement was acceptable to the Protectorate administration, no revisions were ever compiled. The administration was anxious to obtain copies of the map, but either their needs were met by the first edition with its imperfections or else insufficient new data was forthcoming. In August 1933, five hundred sets were shipped to Cape Town and the maps were put on sale in the Protectorate at 15/- per set of eight.

It was Brind who first suggested a reduced-scale single-sheet edition in November 1932, when he corrected the proofs of the 1:500,000 sheets. The question was raised again after the printed sheets reached the Protectorate but the War Office were not willing to undertake the task. If this seems curious in view of their commitment to revise the larger scale maps, it may be explained by the fact that the War Office produced a 1:500,000 sketch map series in the 1930s (Bond, 1973) and a smaller scale map would not fit into that series. However, in December 1933, the Ordnance Survey, Southampton, agreed to prepare a single-sheet map of the Protectorate, although not at the 1:1,000,000 scale proposed by the Protectorate administration. Printing technology (the size of printing plates) necessitated a scale of 1:1,250,000, by means of photographic reduction of the existing sheets.

The demand in the Protectorate for a single-sheet map was again the Mining Proclamation, legalising public prospecting. The Mining Commissioners sought 'suitable compilation plans on which any claim peggings and areas affected by any Crown grants which may be issued can be plotted so as to minimise the possibilities of pegging disputes' (BNA 15). This need would, of course, be met by the 1:500,000 series in the first instance. However, the RC indicated that 'one-sheet maps of the whole territory are also required on which can be plainly marked here for ready reference the boundaries of the various areas declared under the mining law to be Mining Districts and other information for use in
connection with the administration of the mining law'.

The 1:1,250,000 sheet was printed by the Ordnance Survey in Southampton in 1935, showing the full list of authorities for the 1:500,000 sheets and including an index diagram for those eight sheets. The large lettering on the eight-sheet series and the clarity of the line work permitted the very substantial reduction in scale whilst retaining legibility. All of the detail was retained. In 1936, two copies were sent to all Heads of Departments and District Commissioners, with the suggestion that further copies were available on request for official use and sale (BNA 16). Maps had at last become an accepted tool of administration in Bechuanaland.

It has been suggested that maps may sometimes be influential documents in decision-making in Africa (Stone, 1994) but what influence, if any, this map exerted on the administration or on other aspects of the life of the Protectorate is an interesting question. In any event, in 1984 the Surveyor General recognised it as a significant episode in Botswana's cartographic history. By reprinting it, he made it readily accessible as a potential source of historical information.

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BNA 10: Botswana National Archives; S 15/1/2.

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