

GRAAFF-REINET'S WATER PROBLEMS

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The town of Graaff-Reinet was founded in 1786 on a site chosen by the first magistrate, M.H.O. Woeke, and lies in a bend of the Sundays River. The main factor influencing his decision was the abundance of water at this spot in contrast to the surrounding arid Karoo countryside. The village only began to grow after 1804 and at that stage the water supply was more than adequate. As the number of residents increased, so too did the problems concerning the supply of water. For two centuries the ever-present water supply problem engulfed the town's inhabitants in controversy. This article deals with some of the controversies right up to the present.

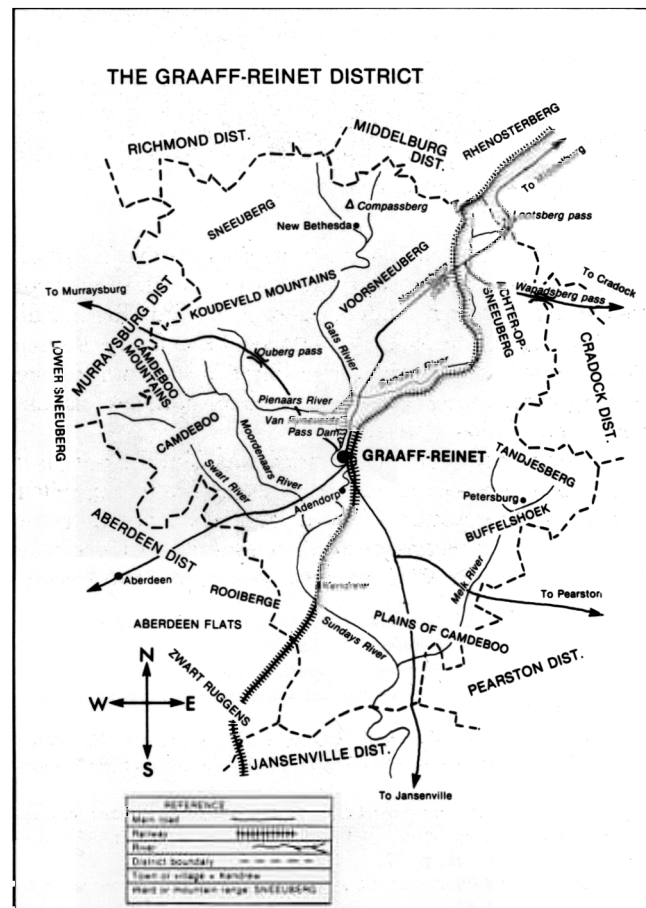
EARLY YEARS

When the original settlement was laid out there were no problems with water distribution. As long as there were few erven and plenty of water, each erfholder helped himself according to his requirements. As the town grew in size and the number of erven increased, the erfholders considered it a condition of sale that their properties should have vested water rights. In the late 1820s the landdrost, Andries Stockenström (jr), and the College of Landdrost and Heemraden drew up a system of water distribution. After months of trial, a general distribution giving every man his due was instituted on 19 November 1827. Every erf received a number and every holder was entitled to an amount of water in proportion to the size of his erf. Water turns were allocated twice a week.¹

The early settlers had built a crude dam across the Sundays River and had brought the water into the town for distribution by a system of water furrows or canals. Landdrost



A view of Graaff-Reinet (1950s), nestling in a bend of the Sundays River.
PHOTOGRAPH: E.S. WHITLOCK, GRAAFF-REINET



Stockenström had improved on this system by building a dam at Broederstroom, and a water canal below the cliffs above the town, using convict labour under his direct supervision. By means of an upper and lower furrow the town then received its water supply. (Today Graaff-Reinet is one of the few towns in South Africa still having open water furrows.) Once this distribution system was in operation the Graaff-Reinetters would not allow it to be changed, and this intransigence was often the cause of much argument over water in later years. Two defects existed in this system of water distribution, the first being that during heavy rains the Sundays River washed the dam away and silted up the two main furrows. The second was the filthy state of the water which was used for drinking purposes by the inhabitants at their own risk. On leaving the river, the water was crystal clear. It however became more and more muddy till it eventually flowed into the two *branddamme* (storage dams in case of fire) — one at the corner of Church and Somerset Streets at the spot next to the old library building (now the Reinet Museum), and one lower down in Church Street opposite the present Drostdy Hotel. The muddy state of these *branddamme* came in for much criticism especially as it was from these two dams that residents took water for domestic purposes.²

In October 1861 pumps were erected for the dams in Church Street. In order to avoid pumping the sediment at the bottom of the dam, the pump was set in a small masoned chamber on one side of the dam, with the end of the pipe away from the lowest level of the water. The *branddamme* were cleaned only once a year, sometimes every two

¹C.G. HENNING, *Graaff-Reinet: a cultural history, 1786-1886* (Cape Town, 1975), pp. 75-77; *Graaff-Reinet Advertiser*, 9.5.1968.

² *Ibid.*

years. In addition there was no proper sanitation with much dirt going straight into the furrows in which residents also did their washing of dirty linen. The water the inhabitants drank was held to cause widespread illness, and infant mortality was high. Up to 1879 there was no hospital and only a few doctors to cover the vast surrounding district. Despite the growth of the town, nothing positive was done to improve the water situation. After heavy rains it was an accepted fact that streets were impassable, while stagnant water lay around spreading disease. The wealthy dug wells and in later years made use of rainwater tanks. The irregularities in the water supply especially in times of drought, and the method of distribution led to quarrelling amongst the inhabitants and there were many cases of neighbours stealing water from each other. In October 1867 the construction of a third *branddam* in Cradock Street was approved, while in 1873 Alfred Thornton sunk a well with a thirteen metre shaft and pump in Church Square from which water was supplied to inhabitants in emergencies such as in times of drought.³

The basic cause of the water problem was the extremely low rates charged by the municipality which rendered it impossible to bring about any improvement. The annual revenue of about £200 was squandered year after year on repairs to the embankment of sand (washed away when it rained) or keeping the furrows clean.⁴



Well and waterpump on Church Square put up by Alfred Thornton in 1873.
PHOTOGRAPH: WILLIAM ROE COLLECTION, GRAAFF-REINET

THE WATERWORKS PERIOD

The drought of 1865 resulted in the town engineer, W.L. Mackie, digging in the bed of the Sundays River near the mouth of the Pienaars River. There he found that it was possible to obtain 900 litres of pure, clean water per minute as the gravel, stones and sand of the river formed a natural filtering bed. This led the Graaff-Reinet Municipality to consider erecting a waterworks scheme. Various plans were submitted during 1875, that of Prof. F. Guthrie and Sidney Stent receiving widespread publicity. Their plan called for the piping of water from the so-called Mackie's Pit to the Mill Drift from where it would be pumped up to a reservoir on Magazine Hill. From there the town could be supplied with clean tap water. Nevertheless, at a public meeting the Guthrie/Stent plan, as well as a number of others, were rejected by a large majority. In 1880 the professional advice of the Colonial hydraulic engineer, John G. Gamble, was sought. His scheme, based on that of Guthrie and Stent, was then accepted by the municipality.⁵ This, however, was only the start of the municipality's problems.

On 1 May 1880 H. Henchman was appointed town engineer to put into operation Gamble's proposed waterworks



Construction of the Mackie's Pit culvert, 1883-1884.

PHOTOGRAPH: WILLIAM ROE COLLECTION, GRAAFF-REINET

scheme and immediately became the target of abuse, insult and humiliation by the obstructionists. Ignoring them, he continued with the implementation of the waterworks, part of which was to construct pipes and a concrete channel which would give the town a regular 3 150 000 to 3 600 000 litres per day. Furthermore, this water would have to be pumped into a reservoir by turbines. In April 1884 the appointed day arrived for trying out the turbines and pumps (erected by Messrs Howard, Farrar and Company). When Henchman, watched by a group of backstreeters, turned on the water, he was attacked by them and thrown into the water furrow. The municipality immediately instituted legal proceedings against the ringleaders. This case gained widespread publicity.⁶

A series of lawsuits followed. On 8 April 1884 the municipality laid charges against R. Jansen, C. Burger, C.H. Olivier, J. Waldek, C. Jacobs and J. Brummer who had fines imposed upon them by the acting magistrate, Ryk Meiring. On 15 April a second case followed in which J. Schimper instituted



The opening of the waterworks, 1884. L to r: Alston; Tom Auret; Berneuze; De Smit; D. de Graaff (town clerk); A. Essex; J.G. Gamble; C.E. Geard; J.E.S. Haarhoff; W. Gregorowski; G.E. Sherwood; H. Henchman; Carel Liebenberg; Olivier; W.H. Rabone; H. Sandford; F.S. Tübrook; Threepence (streetkeeper); D.J. van Ryneveld (mayor); F. Weitsz.

PHOTOGRAPH: WILLIAM ROE COLLECTION, GRAAFF-REINET

³ *Ibid.*

⁴ HENNING, *op. cit.*, p. 77.

⁵ *Ibid.*, pp. 78-79.

⁶ *Ibid.*, pp. 85-87.

legal proceedings against A. Hodge (for Farrar and Company) and Henchman on the grounds that it was unlawful to divert water from the main furrow to which he (Schimper) as a resident of Graaff-Reinet was entitled. Unfortunately for him he had consulted J.N. Rothman (his MLA) who was by no means a legal authority and his case went against him. Finally towards the end of April the Circuit Court visited Graaff-Reinet, where on 19 and 20 April 1884 it heard the case of Henchman vs Olivier. Henchman claimed £1 000 damages. The court awarded Henchman £400 damages. Soon after, he resigned as town engineer.⁷

Unfortunately this was not the end of the municipality's problems regarding the waterworks. From 1881 onwards it had become involved in ever increasing debt which by 1885 amounted to £26 000. The more the debt increased, the more Rothman urged the backstreeters not to pay rates. So in October 1885, when the municipality owed the State £15 000 and the Cape of Good Hope Bank £14 000, it was sued by the latter. But the municipality was insolvent, and the only way in which it could meet the demands of the bank was to hold a public sale of its effects. Most articles were sold cheaply, some of them (like the mayor's chair) were donated back to the municipality. In January 1886 the municipality was also forced to sell the farm Kruidfontein for a price well below its market value. (Situated south of Graaff-Reinet on the road to Port Elizabeth, this property had been given in perpetuity and trust to the inhabitants of Graaff-Reinet for their use and recreation by the governor, Sir George Grey, in 1857).⁸

All these problems led to a request for amendments to the Act of Incorporation, and on 6 July 1886 the Graaff-Reinet Amendment Act (No. 34) of 1886 was promulgated. On 8 December 1886 the first election under the new act took place. There was much uncertainty as to the effect of the new voting conditions, but it was clear that they would give the erfholders an advantage they had not enjoyed before. It was the most fiercely contested election in the municipal history of the town. There were a total of eighteen candidates, nine from each party. The 'anti-water party' recorded a total of 2 552 votes, their voters having fixed property valued at £99 883. The 'water party' recorded 2 433 votes, representing fixed property to the value of £131 690. After the votes had been counted, the erfholders obtained eight of the nine seats with only C.A. Nesor being elected from the 'water party'. But D.J. van Ryneveld, as mayor, was the returning officer, and with the aid of two of the 'water party' candidates, he scrutinised the votes and disqualified numerous voters who had not paid their rates; although most of the erfholders had made a point of paying their ordinary rates, they had not realised that they would be disqualified for failing to pay the night police rate. Other voters were disqualified on various technicalities, and the mayor's revised return gave a victory for all nine candidates of the 'water party'. A meeting of erfholders with Rothman in the chair decided to seek redress at law, and the case came before the Supreme Court on 18 February 1887. Chief Justice de Villiers agreed that since Van Ryneveld had been one of the candidates in the election he had no right to act as judge in the matter of the voting papers. He declared the election void because the polling officers had not been instructed properly. This was not Van Ryneveld's fault but rather the result of a defect in the 1886 Act. De Villiers then ordered a fresh election. But this was easier said than done, for the old council had retired and there was no mayor to initiate a new election. The municipal election at the end of 1886 and the outcome of the lawsuits at the same time marked the high point of the ill-feeling between the east ('water party') and west

('obstructionists') ends of town. The question of ownership of the water in the new aqueduct became immaterial as there was no likelihood of the waterworks being completed while the town was burdened with extra rates imposed by the government and the courts. The friction amongst the town councillors had caused much of the trouble. However, the fact that there was no council in 1887 allowed the tensions to subside. Most residents were tired of the strife, and there was a growing willingness to reach some sort of compromise in the interests of the town as a whole.⁹

The business community petitioned the governor to proclaim the General Municipal Act of 1882 over the town. The 'obstructionists' wanted nothing to do with this act which allowed Blacks to vote, and they still pinned their faith on the amended Act of 1886. The government eventually passed Act 37 of 1887 to set matters right in Graaff-Reinet. They also appointed H.L. Momberg as the returning officer but only the mayor could appoint polling officers. Since Van Ryneveld had resigned prior to the election, he refused to carry on acting as mayor or to appoint polling officers. But an added inducement for the Graaff-Reinetters to settle their differences speedily was the fact that the town council could possibly borrow money at much better rates than were being obtained. This would then reduce the heavy rates being paid by the townsmen.¹⁰

In December 1887 the local branch of the Afrikaner Bond tried to bring about a settlement. They arranged with the east end of town to give the erfholders six of the nine seats in the council; the east-enders at the same time agreed not to nominate Van Ryneveld, W. Gregorowski or T.N.G. Auret, provided that the erfholders agreed not to include Rothman among their six nominees. The east end nominated C. Wilke, F.K. te Water and C.A. Nesor as its representatives. The Bond accepted this generous offer as the basis for a settlement.¹¹

However, Rothman became an obstacle, insisting on first approving of the nominees put forward by the east end and then also questioning the names of those west-enders nominated by the ward committee of the local Bond. He also refused to stand down as a candidate and when the nominations closed towards the end of January 1888 both Rothman and R. Jansen, a close supporter of his, were candidates. The local ward committee of the Bond asked him to reconsider but he decided to stand as a candidate even though he was censured by the local Bond. The election proceeded, and for the first time in the municipal history of Graaff-Reinet, east and west end of town joined forces and voted for the same nine candidates, who each polled over 200 votes to the 61 and 81 votes obtained by Rothman and Jansen respectively.¹²

The agreement between the two groups in municipal affairs was adhered to in the elections between 1888 and 1892. But attempts by the east end to have the waterworks completed, which they believed would be the best way to reduce the municipal debt as there would then be increased revenue from water leadings, led to renewed tensions. To avoid clashing with the erfholders over the right to use water

⁷ *Ibid.*, p. 87.

⁸ *Ibid.*, pp. 72-73 and 88-89; *Graaff-Reinet Advertiser*, 20.10.1885 and 27.10.1885.

⁹ K.W. SMITH, *From frontier to midlands: a history of the Graaff-Reinet district, 1786-1910* (Grahamstown, 1976), pp. 170-172.

¹⁰ *Ibid.*, pp. 172-173.

¹¹ *Ibid.*, pp. 174.

¹² *Ibid.*, pp. 174-176.

from the aqueduct, the 'water party' in 1891 proposed a plan for the purchasing of property on the east side of Dry River. The water of this property could then be used to provide a household supply. Some 97 ratepayers objected, maintaining that the town debt was already heavy on account of the waterworks and that this should not be added to. Accordingly, the proposal to complete the waterworks was defeated in the council by five votes to four.¹³

Under the 1882 Act three councillors retired every year. In 1893 the east end of town ignored the arrangement between the two parties. One of the retiring members, Neser, was re-elected but the other two, both representatives of the erfholders, were rejected in favour of George Page and James Carter. This move was suspected by some of being a ploy to obtain a majority in favour of the completion of the waterworks.¹⁴ This victory did not see any progress being made towards completing the waterworks, and it was only with the building of the Van Ryneveld's Pass Dam in the early 1920s that the town's water problems were somewhat relieved.

THE VAN RYNEVELD'S PASS DAM ERA

It was during Herbert Urquhart's tenure as mayor (1915-1936) that the water situation took a dramatic turn. It had become evident that dependence on the diversion of flood water for irrigation purposes was much too uncertain a supply. In September 1901 a record flood had destroyed 30 metres of culvert and 130 metres of the upper furrow near Holl's Sloop. J.P. McMillan, the town engineer, had proposed a plan to ensure the town of a constant source of water with no danger from floods by moving the furrows further away from the edge of the river. The town council, ever fearful of the expenditure involved — a sum of £2 000 —, nevertheless postponed its implementation and there the matter rested. The closing of the poort at the Van Ryneveld's Pass on the Sundays River just north of the town was also for many years a subject of constant discussion. A plan for a dam at the Van

Ryneveld's Pass was first submitted to the town council for their consideration in October 1908 by Max Wertheim and G.E. Sherwood. In 1912 the town council had appointed Thomas W. Cairncross to investigate the possibilities of improving the town's water supply. He recommended the adoption of the plan to build a dam on the Broederstroom, north of the town, for £30 000. If that was too expensive, Cairncross suggested that Broederstroom could be diverted with a weir costing only £3 000, from which channels would lead off onto the commonage supplying smaller dams to irrigate trees and as drinking spots for cattle.¹⁵

Nothing came of either of these two plans and in 1916 the town council, in need of water, bought R. ('*Witbuis*') Jansen's and the Glebe lands' water rights. Only then was it realised that they could not separate these water leadings from other leadings without disrupting the flow to the water users in town. The water from these two properties was therefore leased to other irrigators. Attention then returned to the Van Ryneveld's Pass site for a storage dam. But it was only in 1918, after various representations, that any attempt was made to investigate the possibilities of a storage scheme there. In that year, under the supervision of C.H. Warren, circle engineer at Cradock, a survey was conducted of the storage basin and the area to be irrigated. A public meeting was held on 27 December 1918 to secure the signing of a petition to the government asking for the formation of an irrigation district in connection with the Van Ryneveld's Pass scheme. As a result the Van Ryneveld's Pass Dam Irrigation District was proclaimed in 1919. The irrigation board then approached the government with a view to obtaining engineering assistance for the construction of the dam. K.R. Shand was accordingly seconded and appointed as resident engineer.¹⁶

The site for the new storage dam was eventually fixed at the poort of the Van Ryneveld's Pass where the Gats, Pienaars

The laying of the foundations of the Van Ryneveld's Pass Dam, 1922-1923.

PHOTOGRAPH: E.S. WHITLOCK, GRAAFF-REINET



¹³ *Ibid.*, pp. 176-177.

¹⁴ *Ibid.*, pp. 177-178.

¹⁵ *Graaff-Reinet Advertiser*, 23.4.1902, 19.10.1908, 4.10.1912 and 15.7.1925.

¹⁶ *Ibid.*, 15.7.1925.

and Sundays Rivers meet. The drawback of this site was that it would cover the fountain, known as Mackie's Pit, from which the town's water supply was piped. The other problem was the water rights of the area served by privately owned weirs situated in the Sundays River and its tributaries, comprising an area of approximately 1 500 hectares of alluvial land along the banks of the Sundays River and extending some 50 kilometres south of Graaff-Reinet. The first problem was overcome when, on 27 May 1920, Urquhart (also a member of the irrigation board) induced a meeting of 85 ratepayers to approve the site for the building of a dam. Four months later an agreement between the Van Ryneveld's Pass Irrigation Board and the town council was signed. Under this Mackie's Pit would be slabbed over, and the town council would grant the irrigation board certain commonage land for the site of the dam. In compensation, the board contracted to supply nine million litres of water per day. This amount represented the irrigation supply for the erfholders, while the supply of 3 375 000 litres per day from the slabbed-over MacKie's Pit would be used for domestic purposes. The second problem, of the alluvial land, was solved in 1922 when the irrigation board instituted proceedings to protect owners' riparian rights.¹⁷

A preliminary start on the construction of the dam was made in 1920 but owing to the lack of funds, the actual work was not commenced in earnest until June 1921. Concrete work started in November 1922 and the workforce at one stage reached 800. Nearly a quarter of a million pockets of cement were used in the construction of the wall which when completed in August 1924, was 380 metres long. The dam, creating a lake approximately six square kilometres when full and costing just on £410 000, was officially opened by the chairman of the Van Ryneveld's Pass Irrigation Board H. Urquhart, on 14 July 1925.¹⁸

The building of the dam seemed to assure the water supply of Graaff-Reinet for years to come. Calculations made at the time of construction resulted in the assumption that the reservoir could serve a scheduled area of 8 072 hectares. But only four years after its completion, it became abundantly evident that run-off probabilities had been grossly overestimated and that the scheduled area could never be adequately served.¹⁹

At its meeting on 18 May 1928 the Van Ryneveld's Pass Irrigation Board instructed its engineer, P.R.R. Bisschop, to carry out an investigation and prepare a report for submission to the Permanent Irrigation Commission. He estimated that the reservoir would, in an average season, only be able to serve an area not exceeding 5 570 hectares. At the same time Bisschop inadvertently injected an element of controversy into the situation. In his report he had highlighted the problem of the wastage of water by the townspeople, especially in the winter months, when a large amount of irrigation water out of their daily supply of nine million litres, was returned to the river. This report caused much debate as well as concern amongst all those involved. The irrigation board approached the town council concerning the alleged wastage of water and a conference of all interested parties was held. It was decided to wait for the resident engineer's figures on the daily wastage which Bisschop during May 1929 confirmed as being 4,5 million litres. Armed with this information, the irrigation board attended a conference of all owners of scheduled land within the irrigation area in the Graaff-Reinet town hall on 17 May 1929. This meeting turned particularly acrimonious. Objecting to the irrigation board's interference, the town council alleged that it had sole control over the use of the nine million litres per day. It argued further that the irrigation board merely discharged

the water which was "a duty under the agreement and not a right of control. Nor has the Board any right or interest in what the municipality may do with the water". The town council also felt that it was not wasteful to return to the Sundays River the surplus run-off from the town's furrow system, as lower riparian owners (at the villages of Rouvierville and Adendorp some six kilometres below Graaff-Reinet) reaped the benefit of this practice.²⁰

A further complication in this matter was that the town engineer, H. Purves, disagreed with the figure of 4,5 million litres of wasted water per day as given by Bisschop. This difference of opinion between the two men was exacerbated by a personality clash as well as by previous difficulties. Early in 1929, Bisschop had put a lock on the measuring chamber. Purves, finding access denied when wanting to check whether the municipality was getting its full nine million litres per day, complained to the town council. They were eventually able to prevail upon the irrigation board to allow Purves access. But the board, at the instigation of Bisschop, only allowed Purves inside the measuring chamber if accompanied by the resident engineer.²¹ This personal animosity was one of the reasons for Purves' refusal to accept Bisschop's figures for the wastage of water; thus the friction between the two engineers later caused a further series of complications in the controversy over water.

At a meeting of all irrigators on 8 August 1929 a willingness was expressed to reduce the scheduled area of 8 072 hectares to 4 285 hectares. But at the same time there was further disagreement between Bisschop and Purves regarding the method used to ascertain the amount of run-off from the town furrows. Purves refused to accept Bisschop's figures as the measurements were taken at *Tweede Drift* at Adendorp and therefore included the natural seepage of the river. Bisschop was also informed that the town council had instructed Purves to measure the run-off at the spot where the town furrows emptied their excess water into the river. The irrigation board, however, rejected all the figures obtained by the town engineer on the ground that the weirs were 'unreliable' and placed incorrectly. The board was therefore of the opinion that their own engineer's method was the only reliable one, and proposed to submit both sets of figures to the Permanent Irrigation Commission. This commission visited Graaff-Reinet in the last week of November 1929, and after hearing evidence from both sides it granted the town council's request for a year in which to check the amount of water alleged by the irrigation board to be running to waste.²²

In February 1932 the Select Committee on Irrigation Matters sitting in Cape Town, considered the report of the Permanent Irrigation Commission on the Van Ryneveld's Pass Irrigation District. The committee recommended to parliament the write-off of Sunnyside (an area which the Graaff-

¹⁷ *Ibid.*, 15.7.1925 and 16.1.1958; Van Ryneveld's Pass Dam Irrigation Board (VRPIB): Minutes, 27.9.1920, p. 41.

¹⁸ *Graaff-Reinet Advertiser*, 15.7.1925; VRPIB: Minutes, 21.8.1924, p. 220 and 16.7.1925, p. 279.

¹⁹ *Graaff-Reinet Advertiser*, 22.1.1945.

²⁰ *Ibid.*, 17.2.1928; Cape Archives Depot, Cape Town (CAD), 3GR/1/1/1/19 Graaff-Reinet, Town Clerk: Minutes, 17.5.1929, p. 458 and 1.7.1929, p. 478; A. DE V. MINNAAR, *Graaff-Reinet and the Great Depression (1929-1933)* (MA, Rhodes University, 1978), pp. 62-64; VRPIB: Minutes, 20.9.1928, p. 45 and 16.5.1929, p. 96; K.R. Shand's *Report on the availability of water in the Van Ryneveld's Pass Irrigation District*, 14.9.1928, pp. 3-4.

²¹ VRPIB: Minutes, 17.5.1929, p. 107.

²² CAD, 3GR/1/1/1/19, Town Clerk: Minutes, 8.8.1929, p. 492; 3GR/4/1/1/4, Correspondence: Irrigation Board — Town Council, 9.8.1929.

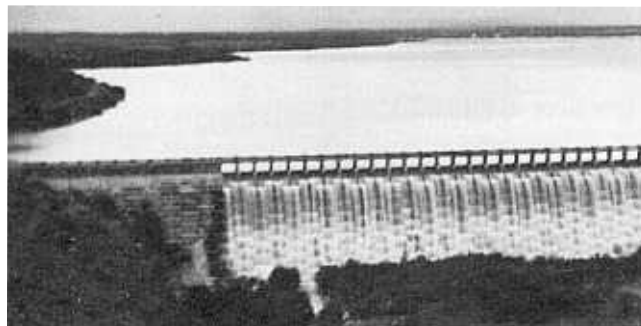
Reinet Town Council had planned to develop as irrigation plots) from the scheduled area of the Van Ryneveld's Pass Irrigation District. In addition, that the municipality institute a reduction of 4,5 million litres from their nine million litres daily supply. This was to be made by the town council surrendering all rights to the water from Mackie's Pit (3 375 000 litres per day) and by cutting down on the wastage of the run-off from the town's furrows.²³ These proposals, of course, touched a very sensitive issue amongst the erfholders who maintained that they could waste their own water if they so chose. When the select committee's report became known, the mayor, H. Urquhart, discussed the matter with Dr Karl Bremer, MP for Graaff-Reinet, who eventually met the Permanent Irrigation Commission on 6 July 1932; but no decision could be reached.²⁴

In Graaff-Reinet the matter dragged on with the town council having a number of meetings with the erfholders to endeavour to arrive at some means of saving water. The erfholders, however, insisted on their vested rights and would not countenance any interference with the water to which they were entitled whether they used it or not. Eventually at a meeting of ratepayers on 21 April 1933, a committee consisting of five erfholders²⁵ was appointed to collaborate with the town engineer in finding ways to save water. This committee recommended that the town's flow be reduced during the winter months, when the volume of the run-off from the furrows was the greatest. However, the committee pointed out the difficulty of ensuring that the wastage was controlled as each morgen erf received a four hour leading a week, divided into one day and a one night leading. The problem was that number one in a street might take his night leading, number two might leave it to run past and number three might take number two's turn and so on. While recognising the problem, the committee's recommendation was accepted by all the parties concerned on the understanding that every effort be made to see that no wastage actually occurred. The acceptance of the proposals effectively closed the matter.²⁶

This was by no means the end of the erfholders' water problems. As the drought of 1932/33 became ever more serious, the plight of the erfholders worsened. The level of the Van Ryneveld's Pass Dam fell to alarming levels, causing the water from Mackie's Pit to become increasingly brackish. This happened because the salts in the dam seeped down to its lowest corner where Mackie's Pit was situated, giving the water an extremely high salt content. The town council, finding that the Mackie's Pit supply was unsuitable for domestic use, mixed it with the regular irrigation supply. It then drew pure dam water from the main furrow for filtration purposes, and for subsequent use by domestic consumers. However, the town council was soon inundated by complaints from the erfholders who held that the mixed supply of irrigation water was damaging their gardens on which many depended for their livelihood.²⁷ The position was made even more precarious by the economic hardships they were still experiencing, as the prices for their produce remained low.

The town council approached the irrigation board with the suggestion that it take over the Mackie's Pit supply, and in return supply nine million litres of pure dam water per day during the winter months, and 12 375 000 litres daily during the summer months. The board refused the council's suggestion, maintaining that the high salt content of the Mackie's Pit would seriously affect the quality of the water in the dam if it was not drawn off through the Mackie's Pit pipeline. The board's decision was later supported by their engineer, Bisschop, who had Mackie's Pit water analysed and

found the salt content was 400 per 100 000 parts — the equivalent to a dessertspoonful of salt per gallon (4,5 litres).²⁸ The erfholders had to accept the situation until the drought was broken at the beginning of 1934. As the level of the dam rose, so the salt content of Mackie's Pit lessened. This problem of Mackie's Pit's brackish water continually recurred in times of drought. As it got drier, so erfholders' patience became shorter and the demands for a better supply of water (especially for domestic use) became greater.



The Van Ryneveld's Pass Dam overflowing.

PHOTOGRAPH: E.S. WHITLOCK, GRAAFF-REINET

From 1934 to 1945 concern over the water supply was at a low level. These were good years with plenty of water. The dam had actually overflowed for the first time on 1 January 1932 and despite the extreme drought of 1932/33 which almost emptied it, the good average rains for the ten year period 1934-1944 ensured a constant supply. Towards the end of 1944 the Graaff-Reinet district again experienced a severe drought and the town council became increasingly perturbed about its water supply, particularly for domestic purposes. In an attempt to increase the town's share from the Van Ryneveld's Pass Dam, negotiations were held with the board but these proved to be fruitless. Early in 1946 a deputation was sent to Cape Town in an attempt to enlist the aid of the Minister of Water Affairs, A.M. Conroy, in the negotiations with the owner of the African Irrigated Lands Company, I.W. Schlesinger, the biggest water user at Kendrew (30 kilometres south of Graaff-Reinet). In spite of the minister's personal intervention in the form of an exchange of correspondence with Schlesinger, the latter was unable to accede to the town council's request for a larger share of the Van Ryneveld's Pass Dam water.²⁹

ALTERNATIVE WATER SCHEMES

During 1946 the situation deteriorated rapidly. At one stage there was only a three weeks' supply of water available in the dam. Because of its salinity this meagre supply was of such poor quality that it was a danger to public health. In

²³ CAD, 3GR/1/1/1/22, Town Clerk: Minutes 23.2.1932, p. 16; 3GR/4/1/1/4, Correspondence: Memo, 11.8.1933.

²⁴ CAD, 3GR/1/1/1/22, Town Clerk: Minutes, 19.6.1932, p. 62; 3GR/4/1/1/4, Correspondence: Dr K. Bremer — Town Council, 7.7.1932.

²⁵ J.F. Muller (Plasket Street), R.A. Jansen (Donkin Street), J. Knoetze (Cradock Street), A.P. Somers (Church Street) and A.A. Kingwill (Cypress Grove)

²⁶ CAD, 3GR/1/1/1/23, Town Clerk: Minutes 21.4.1933, p. 166.

²⁷ *Ibid.*: 5.9.1933, p. 214; 3GR/4/1/1/4, Correspondence: Town Council — Irrigation Board, 5.9.1933.

²⁸ CAD, 3GR/4/1/1/4, Correspondence: Irrigation Board — Town Council, 14.9.1933; VRPIB: Minutes, 12.10.1933, pp. 32-33.

²⁹ *Graaff-Reinet Advertiser*, 5.1.1932 and 8.7.1948.

desperation the town council explored every possible solution. Old boreholes were opened up and tested, and new ones were sunk, without any marked success. It was at this stage that the Toorberg waters (40 kilometres north-west of the town) were mentioned and on 4 November 1946 members of the council went to inspect these waters *in loco*. They unanimously resolved that, in principle, the acquiring of water flowing from Toorberg be adopted and that the town engineer and councillor, F. Setzkorn, be requested to submit a full report on the quantity of water available. In April 1947 the mayor, J. Kroon, and a councillor, G.B. Minnaar, went to Cape Town to find out how much assistance would be forthcoming from the provincial administration. The latter, while sympathetic, requested that a qualified consultant be brought in to conduct an investigation. Accordingly, N. Shand looked into not only the Toorberg water scheme but also B. Laubscher's borehole supplies, the raising of the Van Ryneveld's Pass Dam wall, the Coloniesplaats, New Bethesda (Gats River) and Roodebloem waters. Out of all these possibilities Shand recommended Toorberg and estimated the cost at £300 000, which excluded compensation to farmers using these waters.³⁰

A copy of Shand's report was forwarded to the Minister of Irrigation. He met a town council deputation on 27 November 1947 to discuss the scheme, and indicated that the government would be prepared to offer a maximum subsidy of £30 000. A round-table conference involving the minister, the provincial administration and the Graaff-Reinet Municipality was held in Cape Town in February 1948. The town council argued that prior to the building of the Van Ryneveld's Pass Dam, the town had had a good domestic supply of 3 375 000 litres per day from Mackie's Pit, but that after the building of the Van Ryneveld's Pass Dam this supply

The Van Ryneveld's Pass Dam full.

had become so impregnated with salts that it was unusable for domestic purposes and unsuitable for irrigation. In the 1930s the government had already tacitly accepted that the dam was a failure when they wrote off its total capital cost amounting to almost £500 000. Furthermore, the main beneficiary of 90% of this write-off was one owner, the African Irrigated Lands Company. The town council felt the government had ruined their domestic water supply and hence it should assist the town council in the Toorberg scheme. The minister thereupon undertook to appoint a fact-finding commission.³¹

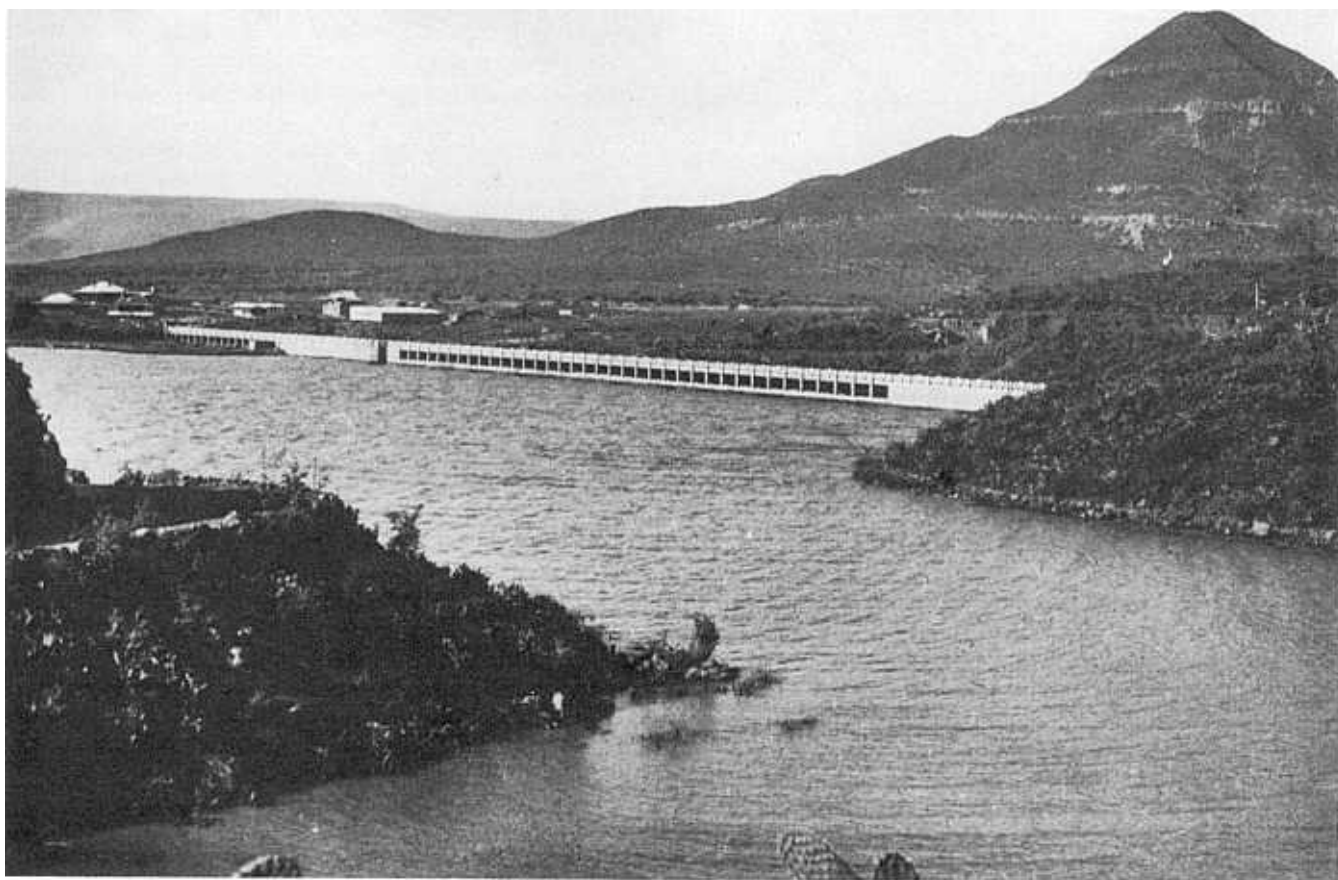
In August 1949 the town council had also resolved to ask the government to buy the water rights of Kendrew with a view to using it for establishing a small-holding settlement near Adendorp for incapacitated Whites. Unfortunately for Graaff-Reinet nothing came of this scheme nor was there any financial support forthcoming from the government for the Toorberg waters scheme. In the face of the opposition to this scheme by the Camdeboo farmers who already made use of the water from Toorberg, it was rejected by the government in January 1950.³²

In the mid-1950s drought conditions again put pressure on the town council to find solutions to the water supply problem. On 27 September 1955 it had decided against the course of expropriating existing rights and land scheduled under the Van Ryneveld's Pass Dam, but instead decided to negotiate with the Van Ryneveld's Pass Irrigation Board for storage rights. These were granted to the municipality on 20 October 1955 but were meaningless in the face of the increasing severity of the drought. As the water in the dam

³⁰ *Ibid.*, 8.7.1948 and 15.7.1948.

³¹ *Ibid.*, 25.8.1949.

³² *Ibid.*, 26.1.1950.





The Van Ryneveld's Pass Dam empty for the first time, 1957.

PHOTOGRAPH: E.S. WHITLOCK, GRAAFF-REINET

got lower and the domestic water supply became more brackish, tempers rose and the town council was blamed for neglecting to ensure an adequate water supply. A number of boreholes were sunk on the town commonage to augment domestic supplies. On 30 April 1956 the town council decided to appoint a select committee to investigate the water problem and to suggest possible solutions. On the committee's recommendations a £20 000 scheme to connect two boreholes (Nos. 5 and 7) in the dam camp to the north of the Van Ryneveld's Pass Dam to the town's reticulation scheme was unanimously adopted at a special meeting of the town council on 15 October 1956.³³

Early in 1956, as the water level became lower and lower, the MOH, Dr J.J. van Schalkwijk, expressed fears that if the fish still remaining in the dam died on a large scale, there might be a risk of disease in the town. On 21 January 1956 a large-scale netting operation, under the supervision of Dr N.J. (Jack) Laubscher, got under way to try to reduce the number of fish still in the dam. Crowds of location dwellers began arriving at 6.30 a.m. to receive fish as they were caught. It was estimated that about 35 000 fish were caught and distributed to the inhabitants. The fish were sorted out and those suitable for restocking in dams were then given to farmers.³⁴

When on 26 November 1957, for the first time in its history, the dam was officially declared empty, the weekly water leadings were cut to every second week. Inevitably, this soon had the erfholders up in arms. At a meeting called by R. Olivier on 18 January 1958, and attended by approximately 50 erfholders, they threatened to take the council to court, contending that they had sole ownership of all the water from Mackie's Pit plus the 7 875 000 litres of water a day from the Van Ryneveld's Pass Dam. They also asked the town council to reinstitute the weekly leadings without delay. Luckily it rained and there was a run-off into the dam. So nothing came of the proposed legal action.³⁵

The dam overflowed for the second time in 1948, the third time in 1961 and again on 29 March 1963 and 23 August 1971. Overflows became more frequent owing to the excessive silting of the dam which by the end of the 1970s was estimated to be in excess of 60%. After the severe drought of the 1950s Graaff-Reinetters had pinned their hopes of an assured water supply on the Orange River Project

and the Wapadsberg water tunnel which was to bring water from the Hendrik Verwoerd Dam. This tunnel was first postponed and then finally taken off the scheme completely in 1973. This was a big blow to Graaff-Reinet, and there were numerous efforts to have the tunnel reinstated. In the end the costs for it became exorbitant.³⁶

One of the inevitable consequences of silting in a dam is that when heavy rains do occur, the overflow is so much more than would otherwise be the case. This was particularly evident when the Van Ryneveld's Pass Dam overflowed on 4 March 1974. There were fears that the dam wall might collapse, and the low-lying areas of the town close to the river were evacuated. The fact that the wall withstood this flood rekindled plans for the raising of the wall. Ironically it was found that the original plans were missing and until they could be found nothing could be done. In mid-1980 the dam was again empty. A deputation from the town council and irrigators then met the Minister of Water Affairs, Sarel Hayward (also MP for Graaff-Reinet), in an effort to have the town once again linked up with the Orange River project. This was turned down.³⁷

During the drought of 1982/3 the town council again had to rely on its boreholes. However, the excessive rate of pumping caused the water table to drop five metres. At the same time there was a move afoot to get the town council to take over control of the dam to ensure a permanent supply of water for the town. The irrigators scheduled under the Van Ryneveld's Pass Dam offered their water rights to the Graaff-Reinet municipality for R10 million. Fortunately, though, the dam overflowed on 8 December 1985, signalling that one of the longest and most severe droughts ever experienced by the district was finally broken. This relieved the town council of the pressure to act, and on 9 December 1985 it formally rejected the scheduled irrigators' offer of their water rights.³⁸

Here the matter rested. Graaff-Reinet entered its third century, no nearer to solving its perennial and ever-vexing water supply problem than at any stage in the past. □

³³ *Ibid.*, 29.9.1955, 20.10.1955, 19.1.1956, 3.5.1956 and 18.10.1956.

³⁴ *Ibid.*, 23.1.1956.

³⁵ *Ibid.*, 16.1.1958.

³⁶ *Ibid.*, 23.8.1971 and 9.4.1973.

³⁷ *Ibid.*, 4.3.1974, 2.10.1980 and 6.10.1980.

³⁸ *Ibid.*, 17.2.1983, 9.6.1983 and 9.12.1985.