

**A MEDICAL HISTORY OF AFRICAN MINeworkERS  
AT KABWE MINE, 1904-1964**

**BY**

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**A Dissertation Submitted to the University of Zambia in Partial Fulfillment of the  
Requirements for the Degree of Master of Arts in History**

**THE UNIVERSITY OF ZAMBIA**

**LUSAKA**

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## **DECLARATION**

I, Ng'ambi Chibesa, declare that this dissertation Represents my own work, has not previously been submitted for a degree at this or any other University and does not incorporate any published work or material from another dissertation.

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**APPROVAL**

This dissertation of Ng’ambi Chibesa is approved as fulfilling the partial requirements for the award of the degree of Master of Arts in History by the University of Zambia.

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## ABSTRACT

Few subjects have attracted as much scholarly attention during the colonial period in Zambia as African mineworkers. Most historical works that discuss the activities of this influential labour group have approached it from the prisms of their struggle or constant clashes with mining capital or their role in negotiating political change, particularly the transition from colonial rule to independence. The examination of the health of mineworkers however, has surprisingly been a neglected area of study, notwithstanding the fact that it was a vital component of productivity. Another major characteristic of studies on mineworkers in colonial Zambia is their exclusive focus on the Copperbelt, as if that was the only area in the territory where African miners were found. Set against this narrow background, this study examines the health of African mineworkers at Kabwe Mine, the first mine to be opened in colonial Zambia, and the changing attitude of mining companies towards their plight from 1904 to 1964.

The study shows a consistent interaction between the demand for lead and zinc on the international market and the health of African mineworkers in colonial Zambia. It argues that in times of economic decline or conflict, such as during the worldwide recession of the 1930s, mining authorities paid little attention to the health of their African employees. Thus, such periods witnessed high incidence of disease such as malaria, influenza, tuberculosis, lead poisoning and those induced by poor diet like malnutrition. The dissertation shows that when the demand and price of zinc and lead increased, such as during and after the Second World War, company authorities invested in the health of their African employees in order to maintain production and generate increased revenue. It also shows that, increased production during and after the Second World War raised the threat of industrial diseases such as lead poisoning and

tuberculosis. By focussing on African mineworkers outside the Copperbelt and a subject unrelated to economic concerns, the study contributes to the history of labour in colonial Zambia, further highlighting the role of public health in it.

## **DEDICATION**

I dedicate this study to my parents Patrick and Christine Ng'ambi who have both sacrificed greatly for my education and to my brothers and sisters Choongo, Mola, Vickness, Jaya and Grace for them to emulate. And to my lovely nephew Temwani who kept on putting a smile on my face when pressure of work was almost unbearable.

## **ACKNOWLEDGEMENTS**

I wish to particularly thank Dr Walima T. Kalusa who supervised me in writing this study. I am also grateful to Professors Mwelwa Musamachime and B.J. Phiri for offering many useful suggestions towards the study. My profound gratitude also goes to my family and friends for the encouragement and companionship during times when I faced difficulties. I am further highly indebted to the examiners in Kabwe who provided useful information. This work could not have been accomplished without the assistance I received from officials at various institutions that facilitated my research. In particular, I thank the staff of the Special Collections Section of the University of Zambia Main Library, the National Archives of Zambia in Lusaka and the Mining Industry Archives in Ndola all of whom lightened my research burden by locating for me useful sources of information for this study.

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## **ABBREVIATIONS**

TB.....Tuberculosis

ISF.....Imperial Smelting Furnace

RBHD.....Rhodesia Broken Hill Development Company

BSAC.....British South African Company

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## CHAPTER ONE

### INTRODUCTION AND HISTORICAL BACKGROUND

Archaeologists have established that the first Iron Age peoples expanded into Zambia in the early first millennium A.D. They brought with them the knowledge of working both iron and copper which they exploited to their own benefit. The utilisation of such minerals was on a small scale and large scale mining in Zambia only began in the twentieth century with the discovery of zinc and lead deposits at Kabwe Mine (formerly the Broken Hill Mine) in 1902 which was followed by commercial copper mining at the Kansanshi Mine, Bwana Mkubwa , Mufulira Mine to mention but a few.<sup>1</sup>

The mineral deposits in Kabwe were first located in January 1902 by T. G Davey, a consulting engineer for the Rhodesia Copper Company. He named the mine Rhodesia Broken Hill after a similar mine in Australia. The mine was the only discovery of a major mineral deposit in Northern Rhodesia made without any guidance from the local inhabitants.<sup>2</sup> This discovery brought about the development of Kabwe town due to modern mining of lead and zinc which was followed by the development of the railway industry in 1906. The making of the town as the headquarters of Rhodesia Railway in Northern Rhodesia accentuated the process even further. These developments had a profound effect on the economic and social life of the local Lenje, Swaka, Lala and other related people who inhabited the colony's province. Rural men left their villages for wage employment in the emerging mining and industrial town.<sup>3</sup> The mine and the

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<sup>1</sup> Austen Bancroft, **Mining in Northern Rhodesia: A chronicle of Mineral Exploration and Mining Development** (Bedford: The Sydney Press Ltd, 1961), p. 25.

<sup>2</sup> Bancroft, **Mining in Northern Rhodesia**, p. 70.

<sup>3</sup> Zikani Kaira, "A History of Poverty in Central Province Zambia, 1850-2000", MA Thesis, University of Zambia, 2005, p.1.

railway attracted labour, European and African, and the town expanded as it provided a market for local trade and for manufactured goods from the outside world.<sup>4</sup>

From 1904, mining was carried out on rather a small scale, at first mainly for lead but latterly more for zinc and vanadium. But large scale mining started in 1915 when the Rhodesia Lead and Zinc Syndicate under lease from the Rhodesia Broken Hill Development Company Limited equipped the mine with two blast furnaces and other plants. As a result of this, lead output reached 4,780 tons by the end of 1917, and in 1919, the company was able to pay its first dividend. By the early 1920s, initial problems with the recovery of zinc in the ores had also been solved and a pilot plant installed leading to great improvements in the mine.<sup>5</sup> After Zambia's independence, the mine which was the largest employer in Kabwe, was placed under the operation of the Zambia Consolidated Copper Mines (ZCCM). In 1994, the mine was declared worked out and with the smelter closed down.

Since the mine was the largest employer in Kabwe, it attracted a lot of labour, from within and outside Northern Rhodesia. Men migrated there in order to seek employment. The prevalence and spread of disease at the mine was inevitable due to the compound lifestyle led by the African workforce. Some of the diseases were 'social' resulting from the squalor of the mine compounds. But other diseases were 'industrial', miners' tuberculosis, and lead poisoning being the cases in point. Another category of diseases might be termed 'European' having been brought into the

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<sup>4</sup> Godfrey Wilson, "An Essay on the Economics of Detribalization in Northern Rhodesia", **The Rhodes-Livingstone Papers**, No 5 (1941), p 18.

<sup>5</sup> Bancroft, **Mining in Northern Rhodesia**, p. 122.

African communities by European carriers and spread subsequently through the mines and, from there, back to the rural areas, Smallpox and Spanish influenza are the cases in point.<sup>6</sup>

There were also health problems in the mining compounds which arose from the frequent use of polluted water and improper methods of cooking, both of which caused worm infestation that impaired the Africans' resistance to other diseases. The inevitable result of such dietary habits was malnutrition which led to serious lack of resistance to other diseases.<sup>7</sup> Malaria, blackwater fever and sleeping sickness were equally a common lot in the early times and although there was a medical officer in Kabwe, there was not much in the way of medical care for serious illness. In 1918, the world-wide post war influenza epidemic reached the town as well. So many African labourers died that they had to be buried in one long trench and there were not enough coffins for the European dead, many of whom were buried in blankets. Coffins were reserved for the Europeans.<sup>8</sup>

Mwelwa Musambachime also argued that between October 1918 and February 1919, the recruitment of African labour for the mine was suspended due to the epidemic. All borders were closed and closely monitored to restrict entry or exist.<sup>9</sup> Bodies of migrant labours in the towns and compounds who fell victim to flu, were buried near to where they had died often in unmarked graves, rather than being returned home as might have been the case in less fevered times.<sup>10</sup>

The measures against the disease were not effective due to lack of proper medical services. As

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<sup>6</sup> Thandekile R. M Mvusi, "The Creation of Unemployment in Northern Rhodesia, 1899-1936", PhD Thesis, Northwestern University, 1984. p.111.

<sup>7</sup> Glen D. Kittler, **Central Africa: The New World of Tomorrow**. (New York: Thomas Nelson Inc, 1959), p. 74.

<sup>8</sup> Arthur Allan Turner, "A Socio-Economic History of Kabwe, 1902-1966", PhD Thesis, University of California, 1979. pp. 24.

<sup>9</sup> Mwelwa Musambachime C, "The Influenza Epidemic of 1918-1919 in Northern Rhodesia", **Zambia Journal of History, No. 617** (1993/1994), p. 54.

<sup>10</sup> Musambachime, "Influenza Epidemic", p.54.

Musambachime asserts,

At the time of the outbreak of the influenza epidemic, the medical facilities in the country were totally inadequate. There were only 10 small government run hospitals located along the railway line and at Mongu, Fort Rosebery, Fort Jameson, Kasama and Abercorn. All had a resident European community. In the remaining country side, the people were served by mission hospitals such as Mwenzo, Lubwa, Mbereshi, Kaleni Hill, Nanzhila and others. The government medical service had only 13 doctors, including the principle medical officer and ten nurses in post. In addition, there were missionary doctors in various mission hospitals. Some missionaries became self taught medical practitioners.<sup>11</sup>

This lack of adequate medical services led to numerous deaths in the territory. Another epidemic that led to a number of deaths at Kabwe Mine and other parts of the territory at large was smallpox. It has been argued that, between 1910 and 1918, there occurred a series of smallpox outbreaks in the Central Province. The smallpox outbreak of 1912 which originated from the Luano Valley affected many Swaka people, with men, women and children dying in great numbers. Other affected areas were Lwimbo and Chikonkoto in the Kafulamase region south east of Kabwe.<sup>12</sup> Migrant mine workers were also exposed to occupational diseases. From the early days of the mine and later on, they were prone to diseases linked to poor conditions on the mine like tuberculosis, pneumonia and lead poisoning as observed by Fletcher.<sup>13</sup>

Working conditions at the mine in the early years were extremely unsafe. According to Turner, in an effort to produce zinc and lead quickly and cheaply, the mine owners pressed mining operations forward before they were safely organised. This led to many accidents. For example, on September 8, 1922 one wall of the newly-opened mine collapsed killing an African worker.

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<sup>11</sup> Musambachime, "Influenza Epidemic", p. 53.

<sup>12</sup> Kaira, "History of Poverty", p. 55.

<sup>13</sup> G. H Fletcher, "A Radiological Survey of Miners at Broken Hill", **The Central African Journal of Medicine**, Vol. 4, No. 11 (1958), pp. 473-475

This was the second fatal accident in six months of that year.<sup>14</sup> Turner asserts that African labourers working underground had minimum of clothing, often just a cloth wrapped around them, hence were prone to serious injuries as a result. Cut feet and hands, crushed fingers and toes, bruised shins and burned feet were frequently observed at the mine hospital because labourers handled rock and worked with acid without any protection.<sup>15</sup>

Despite the prevalence of such health challenges at Kabwe Mine, few studies have shed light on African mineworkers' health at the mine as most scholars tend to confine their studies to the Copperbelt.<sup>16</sup> Yet Kabwe Mine was the first large scale mining centre in colonial Zambia that had its own health problems that have not been studied. It is against this background that this study will explore the prevalent diseases of mine workers at Kabwe mine from 1904 to 1964. The study also establishes the role that the mine owners played in order to alleviate diseases among their African workers.

## **STUDY AREA**

The study focuses on Kabwe Mine. As maps 1.1 and 1.2 indicate the mine is located in the Central Province of Zambia. The town of Kabwe is situated between Lusaka (about 140km) and Ndola (about 170km) and is now a transit town. The mine occupied a 2.5km squared area, 1km south west of the town centre till 1994 when it was closed down.<sup>17</sup>

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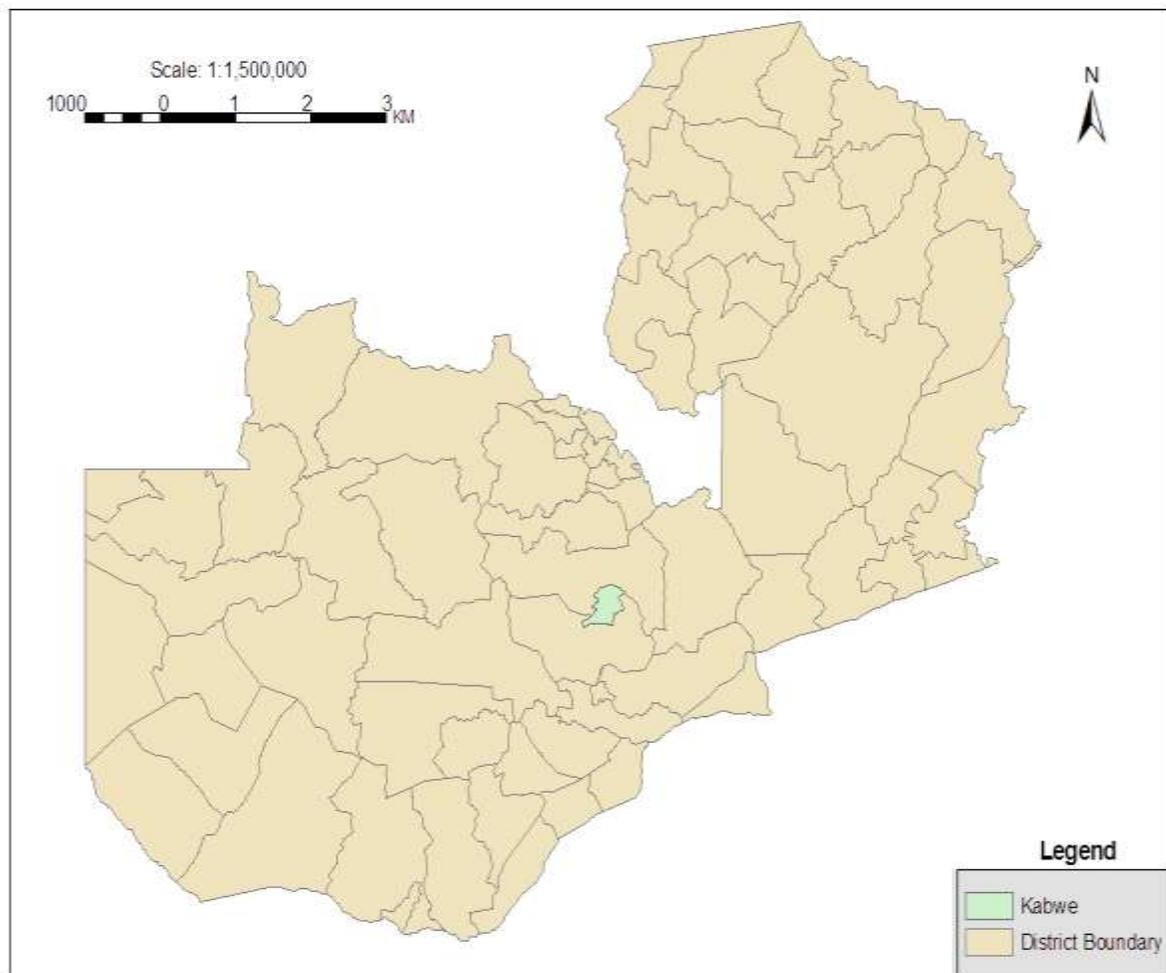
<sup>14</sup> Turner, "Socio-Economic History", p. 89.

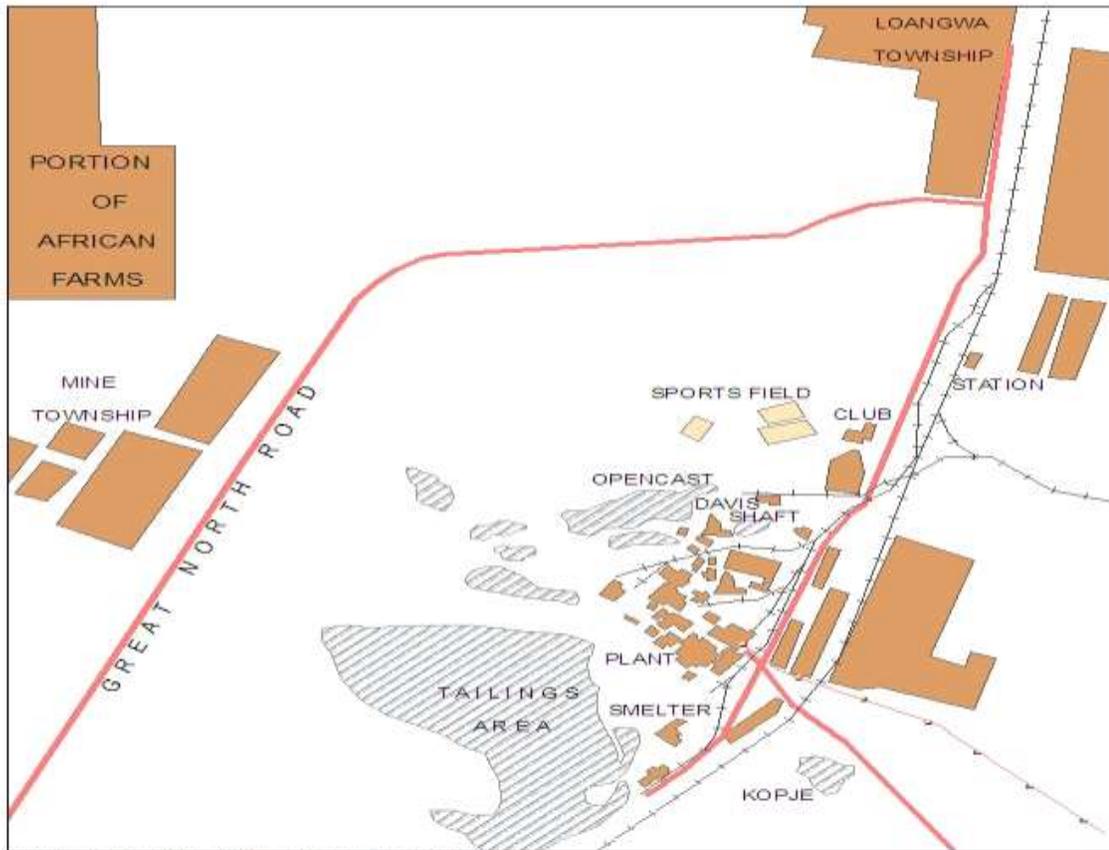
<sup>15</sup> Turner, "Socio-Economic History", p. 90.

<sup>16</sup> Chipasha Luchembe, "Finance Capital and Mine Labour: A Comparative Study of Copper Mines in Zambia and Peru, 1870-1980", Phd Thesis, University of California, 1982.

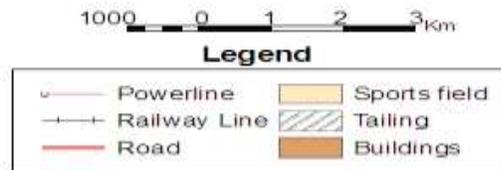
<sup>17</sup> [www.zambia-advisor/kabwe.html](http://www.zambia-advisor/kabwe.html)

*Map 1.1: Map showing location of Kabwe Town in Zambia*





Source: Cartographic Office, University of Zambia



## STATEMENT OF THE PROBLEM

There is a lot of literature on African labour in the mining industry. This literature explores, for example, how African labour was mobilised and accommodated on the Copperbelt and Kabwe and miners' wages and conditions of service. However, this literature ignores an important aspect of African life, namely their health. Yet African workers at Kabwe Mine and elsewhere were prone to diseases of various kinds such as smallpox, malaria, pneumonia, tuberculosis and

so on. Therefore, this study attempts to fill the gap by exploring the health of African workers at Kabwe Mine from 1904 to 1964, to understand the dynamics that underlined their diseases and how the mine authorities tackled them.

## **OBJECTIVES OF THE STUDY**

The main objective of the study is to reconstruct the medical history of African mineworkers' at Kabwe mine from 1904 to 1964. The specific objectives of the study are:

1. To investigate the conditions of labour at the mine that affected the health of African mine workers.
2. To discuss the diseases that were prevalent at the mine and their impact on African miners at Kabwe Mine.
3. To examine the measures that the mine owners employed in order to combat diseases and enhance good health among African mine workers.

## **RATIONALE**

The rationale for undertaking this study lies in the fact that although much scholarly attention has been given to the mining industry in Zambia, most of these studies seldom address the question of African mineworkers' health. The proposed study is intended to stimulate interest in exploring the health of mine workers in mines and thus contribute to the body of knowledge on the life and work of miners.

## **LITERATURE REVIEW**

There are numerous studies on the mining industry in Zambia. Among them are studies that tend to focus on the official history of the industry. Works by Bancroft and Pelletier illuminate the

official history and early operations of Kabwe Mine and of the copper mines in what was Northern Rhodesia.<sup>18</sup> Early studies on Kabwe Mine, celebrate the discovery made by Davey and how the mine was developed by the Rhodesian Broken Hill Development and Anglo American Corporation. On the other hand, Elena L. Berger's study explores the industrial politics that shaped the evolution of mining in colonial Zambia as a whole.<sup>19</sup> She also illustrates how the Rhodesian Selection Trust and Anglo American Corporation mobilized funds to open mines in colonial Zambia by citing key players like Beatty and Oppenheimer. Berger however, does not explore African health and lifestyle.

Similar to Berger's study, Gann's work illustrates how a group of financiers including Edmund Davies, Alfred Chester Beatty, Sir Ernest Oppenheimer and others managed to secure big American credits that led to the development of the mining industry in the colony. Gann further argues that such financiers managed to transform the mining industry leading to the development of a poverty stricken backveld protectorate which only a few people could have identified on the map.<sup>20</sup> However, Gann's work does not address the living conditions and health of African mine workers.

Another study which celebrates the role of prominent financiers of the development of colonial Zambia's mining industry with special reference to Ernest Oppenheimer is that of Theodore Gregory. This study tells the success story of Oppenheimer from the age of sixteen as a prospector in South Africa to the time where he becomes an important figure in the development

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<sup>18</sup> Bancroft, **Mining in Northern Rhodesia**, pp 112-123; and Pelletier, **Mineral Resources of South Central Africa** ( London: Oxford University Press,1964), pp 199-203.

<sup>19</sup> Elena L. Berger, **Labour, Race and Colonial Rule: The Copperbelt from 1924 to Independence** (London: Oxford University Press, 1974), p 8.

<sup>20</sup> L. H Gann, **A History of Northern Rhodesia: Early Days to 1953** (London: Chatto and Windus, 1964), pp. 204-205.

of financing companies that explored and developed mines in Southern Africa.<sup>21</sup> His success is also attributed to bringing about the economic development of Southern Africa. This study however pays no attention to African miners' health and lifestyles.

Francis Coleman looks at the development of different discoveries of copper mines in Zambia. These mines include Kansashi, Roan Antelope, Bwana Mkubwa, Mufulira, Bancroft, and Nkana to mention but a few. Coleman explains and describes the rise of the modern mining industry as the consequence of the work of the early lone prospectors, and as huge investment in copper mining by the Anglo-American Corporation and Rhodesian Selection Trust.<sup>22</sup> However, Coleman's work only accounts for the official history of the development of mining in Zambia without paying any attention to African workers' wellbeing in the mines. The conditions and living standards of African workers' are not addressed in this study.

Like other authors mentioned above, J. F Hollemen and S. Biesheuvel have discussed the development of the Copperbelt and Kabwe Mines.<sup>23</sup> They argue that the development of mining towns owe its origins to the discovery of minerals in the areas. These authors focus on the role of the European mine workers who developed the mines. Such studies are useful in trying to reconstruct the historical background of the operations of Kabwe Mine. However, such literature ignores what is known as the African dimension, that is to say African miners are completely silenced.

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<sup>21</sup>Theodore Gregory, **Ernest Oppenheimer and the Economic Development of Southern Africa**. (London: Oxford University Press, 1962), p. i.

<sup>22</sup> Francis L. Coleman, **The Northern Rhodesia Copperbelt 1899-1962: Technological development up to the end of the Central African Federation**. (Manchester, Manchester University Press, 1971), p. ix.

<sup>23</sup> J. F Holleman and S Biesheuvel, "White Mine Workers in Northern Rhodesia", **African Social Research Documents**, Vol. 6 (1973), p77.

Other studies celebrate the mining industry in Africa as a blessing to Africans. Michael Gelfand for example argues that migrant labourers returned to their villages with money, clothes and above all, new ideas of living.<sup>24</sup> The labourers were given opportunity of coming into close contact with European civilisation and of learning from it. The instruction they received in health matters from white doctors marked a break with the herbalists. Gelfand further contends that the improved health of towns became a positive inducement and reduced the incidence of malaria, sleeping sickness, malnutrition and other infections. Another study by Gelfand looks at issues that encouraged the migration of African labourers by attributing their movements to the industrial development of Rhodesia and Nyasaland during the colonial era. He further examines the conditions and health of these migrant workers as they arrived at the mines.<sup>25</sup> His study is vital as it documents the kind of diseases that afflicted African miners. However, he does not demonstrate how mining improved black workers' health.<sup>26</sup>

Godfrey Wilson's study on Kabwe Mine illuminates the economic aspects of the mining town from 1939 to 1940. Wilson, among other things, writes about the creation of the five-acre plot system as one of the measures that the management put in place to mitigate low wages and decongest African accommodation thereby attracting labour.<sup>27</sup> His work glorifies the new identity created by African workers at the mine. The study is important to this work as it discusses the housing systems of the African mine workers at the mine and the creation of Kabwe as an urban locality.

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<sup>24</sup> Michael Gelfand, **Northern Rhodesia in the Days of the Charter: A medical and Social Study 1878-1924** (Oxford: Basil Blackwell, 1961), pp. 49 and 94.

<sup>25</sup> Michael Gelfand, "Migration of African Labourers in Rhodesia and Nyasaland, 1890-1914", **Central African Journal of Medicine**, Vol. 7, No. 8 (1961), pp 293-300.

<sup>26</sup> Lewis Gann, **Central Africa: The Former British States** (Eaglewood Cliffs: Prentice Hall, 1971), p.112.

<sup>27</sup> Godfrey Wilson, "An Essay on the Economics of Detribalization in Northern Rhodesia", **Rhodes-Livingstone Papers**, No 5 (1941), pp 18-69.

Another study which focuses on the development of the African society under the pressures of the European power structures and the transformation of African lifestyle is that of Allan Turner.<sup>28</sup> His work asserts that Kabwe Mine developed as a town because its owners provided such resources as a water system, housing, health facilities and roads. However, in as much as the mine provided infrastructure and social services, its main desire was to make as much profit as possible. This had a negative impact on the miners and their families as the mine owners failed to adequately provide such services during the depression and Second World War. Turner illustrates that the company cut costs on the social welfare of Africans in order to gain as much profit as they could especially during the economic slump.<sup>29</sup> The study is important to this study as it informs the study about certain dynamics that underlined the mining industry in Kabwe.

Helmuth Heisler argues that large settlements in modern Zambia owe their origin to British imperialism which sanctioned the migration of Europeans into Central Africa.<sup>30</sup> His study depicts European capitalism as the force behind industrial development and the creation of towns in Africa. This capitalism was a powerful tool against primitivism in the African societies. Helmuth further argues that industrial development led to migration of African labourers especially into the mining industry. He asserts that personal welfare of these migrant workers was placed in the hands of the colonial government whose task was to look into the plight of migrant worker's health at the mines. However, this study does not show the effective ways and measures that the colonial government employed to safeguard the welfare of the African communities. Its main focus is on the creation of modern towns due to industrial development rather than the African workers' lifestyle and health.

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<sup>28</sup> Turner, "Socio-Economic", p. 124.

<sup>29</sup> Turner, "Socio-Economic", p. 130.

<sup>30</sup> Helmuth Heisler, **Urbanisation and the Government of Migration: The Inter relation of Urban and Rural life in Zambia** (London: C. Hurst and Company Ltd, 1974), p. 2.

Studies on the political economy of health in colonial Africa reject the view that mining improved miners' health. Randall Packard is one of the academics who challenge the notion that mining improved African miners' health. He attributes the prevalence of tuberculosis (TB) among African miners in South Africa to the failure of mine medicine and poor conditions of service.<sup>31</sup> Packard shows that TB, which killed so many Africans workers and afflicted those who survived, was a result of the poor conditions to which Africans were exposed to.

Van Onselen establishes a connection between adverse labour conditions that African workers were exposed to and the mine owners' unwillingness to invest in the housing and feeding of African workers.<sup>32</sup> He argues that this was because the mine owners were pursuing the policy of cost minimisation and profit maximisation at the expense of the Africans well being. But Van Onselen depicts African miners as simple victims of exploitation at the hands of mine owners and yet Africans found a way to protect their health. For example, by hunting and collecting additional foods in order to supplement the meager rations that they were given by mine owners, African employees insulated themselves from health problems.

Ian Phimister and Van Onselen's study on black and white labour in the Southern Rhodesian mines during the colonial era similarly shows how large and small mines made profits by reducing costs on African labour. Phimister and Van Onselen also critically examine worker consciousness and how it was linked to bad working conditions on the mines of Southern Africa.<sup>33</sup> Like Van Onselen and Phimister, Charles Perrings attributes ill-health among African miners to poor working and living conditions in Katanga and the Copperbelt mines. Perrings

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<sup>31</sup> Randall Packard, **White Plague, Black Labour: Tuberculosis and the Political Economy of Wealth and Disease in South Africa** (London: University of California Press, 1989)

<sup>32</sup> Charles Van Onselen, **Chibaro: African Mine Labour in Southern Rhodesia 1900-1933** (London: Pluto Press, 1976), p. 312.

<sup>33</sup> I. R. Phimister and C Van Onselen, **Studies in the History of African Mine Labour** (Gwelo: Mambo Press, 1978), p. 3.

observes that workers were deprived of the means of subsistence and forced into wage labour and were exposed to diseases such as scurvy, beri beri, dysentery, diarrhoea and the spanish influenza.<sup>34</sup> This work is important to this study as it convincingly shows the link between migrant workers living and working conditions and their health problems. However, Perrings work fails to acknowledge that Africans were not just simple victims of colonialism but people who tried to overcome the difficulties imposed on them by mining capital.

Chipasha Luchembe's study outlines some disease among African miners in pre-independence Zambia. Among other things, the study shows that mine owners failed to provide adequate food or shelter and there was a high death rate due to intolerable working and living conditions in the mines.<sup>35</sup> To Luchembe, this reluctance was deliberate because mining companies on the Copperbelt aimed at maximising the accumulation of surplus value.

In the same fashion, Kalusa's work highlights the connection between major African health problems and the conditions under which African miners and their families worked and lived at Roan Antelope Mine. He insists that African ill-health was inexorably tied to poor living and working conditions prevalent at Roan Antelope Mine.<sup>36</sup> Kulusa's work is influential to this study as it points to the significance of African living and working conditions in our effort to understand the root cause of diseases in mining communities.

Mushingeh sheds light on the disease patterns that affected African in the pre-colonial Botswana and after the introduction of mines in nearby South Africa. He observes that disease was very much rooted in ecology and culture and that disease patterns were changing as a result of contact

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<sup>34</sup> Charles Perrings, **Black Mine workers in Central Africa: Industrial Strategies and the Evolution of an African Proletariat in the Copperbelt, 1911-1941** (London: Heinemann, 1979), p. 165.

<sup>35</sup> Luchembe, *Finance Capital and Mine Labour*, p. 132.

<sup>36</sup> Kalusa, *Aspects of African Health*, pp vi.

with the outsiders. The penetration of the mine-based capitalism in Southern Africa was a major factor in that it broke down the comparative isolation of Tswana societies and exposed them to dangers of new diseases.<sup>37</sup>

Collectively, studies on the political economy of health locate poor health among African mineworkers in industrial capitalism. They argue that Africans suffered ill-health because of poor conditions of service that were offered by mine-owners as they aimed at profit maximisation and at the same time minimised costs on black labour. These studies are crucial to understanding how these problems affected the health of African miners at Kabwe Mine and beyond.

## **METHODOLOGY**

The data for the study was derived from both published and unpublished sources from different places as well as from oral sources. Firstly, the University of Zambia Special Collection was consulted for primary and secondary sources. These ranged from published and unpublished annual reports from various government departments such as mines, labour and health departments and also the annual reports of the Federation of Rhodesia and Nyasaland. The primary information together with the information from the secondary sources such as journal articles, books and dissertations provided data on health problems that afflicted the miners, the mining company's response towards health problems and information on the operations of Kabwe Mine.

Secondly, the National Archives of Zambia yielded extensive primary data from annual medical reports which document diseases that affected Africans. There were also traveler's accounts

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<sup>37</sup> Selemani A.C Mushingeh, "A History of Disease and Medicine in Botswana 1820-1945", PHD Thesis, University of Cambridge, 1984, p. 55.

which showed the different health conditions faced by the African communities that were recorded by European travelers. Government documents, the British South African Company (BSAco) Report of the Directors as well as books from the archives supplied critical information on the early health challenges in Kabwe and at the mine. These documents also provided data on the early operations of the mine and the impact of both the First and Second World Wars on the livelihood of the African miners and their families at Kabwe Mine.

Lastly, the mining industry archives in Ndola were also consulted. Among useful documents consulted there were annual reports from the Rhodesia Broken Hill Development Company, district tour reports, reports on mine labour with information on the establishment of mine compounds, the allocation of five acre plots, statistics on employees and exports of lead and zinc. The archives also provided information on industrial diseases within the mine such as lead poisoning, tuberculosis and silicosis.

The study also benefited from the information obtained from interviews with miners in Kabwe. The ex-miners were able to provide information ranging from the type of accommodation that mine owners provided, the food issued to them and their families and the diseases that used to affect them and their families due to the prevailing sanitation in these living quarters. The ex-miners also narrated the kind of experience they had at the workplace and the diseases and accidents they were exposed to as a result of poor working conditions. They also explained the kind of measures that the mine management put in place in order to minimise disease incidents and also safeguard the lives of the African community as a whole. This helped in filling the gaps in both published and unpublished sources.

## **ORGANISATION OF THE STUDY**

This study is divided into five chapters. Chapter One is the introduction and historical background. Chapter Two examines health aspects in the early times at Kabwe Mine by illustrating the prevalence of diseases and health problems at the mine. The chapter shows that in the early days, diseases on the mine resulted from such dynamics as the environment, labour migration itself, living and working conditions. Diseases such as malaria, blackwater fever, dysentery, bilharzia, smallpox, Spanish influenza and malnutrition were a common lot during this time.

Chapter Three analyses the transformations in African health during the Economic Depression and Second World War from 1930 to 1945. It postulates that the world wide economic slump and the Second World War had far reaching health ramifications on the health of the African miners and their families. This was because the mine adopted the policy of cost minimisation and profit maximisation which negatively affected the social welfare of the African community. This meant that the company aimed at making maximum profit at the expense of providing proper medical care and a good supply of foodstuffs for their African workers. Such negligence created a good environment for communicable diseases and malnutrition. The chapter also shows that the Second World War witnessed an increase in mineral production which brought about a rise in industrial diseases such as lead-poisoning and TB as well as an increase in mine accidents.

Chapter Four addresses African health challenges in the post war era from 1946 to 1964 by illustrating that the mine witnessed increased mineral production to meet the demands necessitated by the Korean War of the 1950s. This expansion in mineral production also led to an increase in the labour force thereby resulting in overcrowding in the mining compounds. Thus,

poor health conditions continued to be witnessed due to harsh living conditions and poor sanitation. The chapter also demonstrates that occupational diseases such as TB and lead poisoning continued to be on the rise in this era. However, the mining company gradually employed measures which improved the health of the miners and their families. Chapter Five is the conclusion of the study.

## CHAPTER TWO

### HEALTH ASPECTS IN THE EARLY TIMES AT KABWE, 1904-1929

#### **Introduction**

This chapter seeks to illuminate the prevalence of disease and other health issues at Kabwe Mine during the early days. The chapter firstly outlines the importance of the environment in promoting ecologically-related diseases at the mine. It argues that the physical environment in which the mine was situated encouraged such diseases as malaria, blackwater fever, bilharzia and dysentery which afflicted migrant workers at Kabwe Mine.

Secondly, this chapter shows that labour migration itself was a major source of afflictions as migrants quite often arrived at the mine ridden with diseases ranging from venereal diseases to smallpox. Others carried pathogen which precipitated the spread of disease thereby complicating the disease landscape of the mine. Lastly, the chapter demonstrates that living and working conditions also served as dynamics that contributed to the outbreaks of different afflictions. As later demonstrated, the mine compounds at Kabwe Mine were rife with diseases as a result of poor diet, sanitation, overcrowding as well as poverty especially in the early days of the mine. Diseases such as malnutrition, diarrhoea, hookworms and coughs ravaged these compounds. The physical environment and the operations at the mine which included digging of the ore further provided stagnant water, which in turn became mosquito breeding grounds. Poor underground conditions and lack of job training resulted in accidents which led to deaths and dismemberment of African mineworkers employees.

#### **Physical Environment of Kabwe**

The health problems faced by workers at Kabwe Mine cannot be understood in isolation from the physical environment of the mine. This is because some of the diseases that afflicted Africans

were ecologically determined. The geological formation of Kabwe consisted of limestone, with belts of sandstone and conglomerates with iron deposits in several places and larger deposits of lead, zinc and vanadium. Although the belts of sandstone and conglomerates enhanced opportunities for the mine to exploit a variety of minerals including zinc, lead and limestone, mining resulted in stagnation of water and foul air, posing a great challenge to underground mining operations. From the start Kabwe Mine suffered from water and foul air seeping through the limestone formation.<sup>1</sup> Such a challenge necessitated the utilization of advanced machinery. However, in the early days, the lead and zinc Kabwe Mine lacked advanced equipment. The mine therefore relied on African workers for hard physical work.<sup>2</sup>

This was compounded by the fact the area in which the mine lay was a water logged area. The area to the south and east was generally swampy with the Great Lukanga Swamps. The swampy areas were heavily laden with mosquitoes. These mosquitoes so much affected the lives of many people that at times some sought to sleep in the timbered areas at night to avoid being bitten.<sup>3</sup> As a result of this environment which provided breeding grounds for mosquitoes, malaria and blackwater fever were a common lot. Early government reports show that about 50% of the total deaths in Northern Rhodesia generally in the early years (1920s) were due to malaria and blackwater fever.<sup>4</sup> It was also estimated that in 1925, fifteen percent of the total hospital admissions recorded at Kabwe Hospital were European cases of malaria.<sup>5</sup>

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<sup>1</sup> Buzandi Mufinda, "A History of Mining in Broken Hill (Kabwe) 1902-1929", MA Thesis, University of The Free State, 2015. p. 23.

<sup>2</sup> NAZ, KDA/2/1 Broken Hill Rural District Annual on African Affairs by J. C Blunden, 1902-1962 p. 25.

<sup>3</sup> Mourbray, F. R. G. S, **In South Central Africa** ( London: constable & Company, 1912), p. 57

<sup>4</sup> NAZ, SEC1/1056 Malaria, The Public Health (Malaria and Mosquito) Control Measures, 1928, p 7. Bulawayo Chronicle 3/6/1923 Malaria Toll in the North, p 4.

<sup>5</sup> NAZ, MH1/3/47 Health Inspector Monthly- Annual Report, Broken Hill, 1925.

Malaria infections were particularly higher during the wet season. Most areas near the Boma especially in the early 1900s turned swampy as a result of exceptionally heavy rains resulting in breeding places for mosquitoes.<sup>6</sup> Therefore, most mineworkers, railway officials and local inhabitants were prone to malaria infections due to mosquitoes. While malaria could be treated with quinine, this drug was not readily available to the African workers. Consequently, blackwater fever, a particularly virulent form of malaria, affected those already debilitated by previous malaria attacks.<sup>7</sup>

The presence of the Lukanga swamp to the north of the mine and forests near it added to this problem. The swamp was an ideal place for the breeding of malaria-carrying mosquitoes. On the other hand, wild animals such as leopards lived in the forests. These wild animals at times terrorised Africans during the search for firewood and timber. Lions became particularly too numerous and killed so many people forcing some miners to desert the mine. It was not an uncommon sight to meet an African with part of his leg missing or deformed cheeks due to hyena attacks which occurred everywhere.<sup>8</sup> Apart from the danger of venturing into the forest to collect firewood and timber, the tasks proved to be strenuous during the rainy season as the road to the forest was impassable.<sup>9</sup> Such kind of environmental factors affected labour supply and efficiency in a negative way.

During the dry season surface water either was unobtainable or became contaminated. Lack of clean water and dependence on the swamp led to waterborne diseases such as bilharzia and dysentery. There were many sporadic occurrences of these diseases in most part of Kabwe due to

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<sup>6</sup> NAZ, A5/1/7 Medical Reports: medical report on sleeping sickness, 1908-1909, p.18.

<sup>7</sup> Mufinda, "History", p. 25.

<sup>8</sup> Moubray, **South Central**, p. 42.

<sup>9</sup> NAZ, ZA1/15/L/1/9 Human Geography: Mkushi, Serenje, Broken Hill and Ndola Districts, p. 3.

reliance on contaminated water. These diseases were communicated to human beings through drinking dirty water which contained physopsis snails infected with the bilharzias vectors.<sup>10</sup> As a matter of fact in 1929 Fourie, the Provincial Health Inspector of Central Province observed that all dams in the Kabwe area as well as some of the rivers and streams are heavily infested with both bilharzia vectors and catfluke vectors”.<sup>11</sup> Thus, bilharzia was a major problem in Kabwe that afflicted the local inhabitants. The east of the Kabwe Mine was well watered by the Mulungushi and Mwomboshi Rivers and their tributaries. These Rivers fall over the Lusemfwa valley. After the First World War, it was estimated that the falls had a total drop of about 1,100ft. These water sources were similarly a source of waterborne diseases as people depended on them for everyday use. The Mulungushi River would later facilitate the construction of a hydroelectric power station to supply electricity for domestic and industrial use at the mine.<sup>12</sup>

The altitude of the Central Province was above 3,700 feet above sea level and observers compared its climate to that of an English summer. But the province experienced a very hot season around the middle of September ending towards the end of March. The hot season compromised the health of Africans. Bleeding from the nose was a common ailment amongst Africans especially during the hot season of the year and many deaths were reported annually. Some years were worse than others and during the hot weather of 1913, many deaths were reported. Symptoms included headache and bleeding from the nose.<sup>13</sup>

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<sup>10</sup> NAZ, ZA7/1/4/7 Luangwa Province Annual Report, 1920.

<sup>11</sup> NAZ, MH1/3/117 Letter from the provincial health inspector to the provincial medical officer, monthly report September 1929.

<sup>12</sup> NAZ, A2/1/1/4 Broken Hill District, Annual Report for Native Affairs for 1923, p.2.

<sup>13</sup> NAZ, KDA 2/1 Vol 1 Kabwe District Note Book, p. 80.

The wet season coincided with the hot months of the year. Spring arrived around August and the cold season was from May to the end of July, or the middle of August.<sup>14</sup> The rainfall was fairly evenly distributed, although rain storms were usually localised. The average rainfall per annum was 33-38 inches. The heaviest rainy day would record rainfall of about 1-89 inches and the wet season extended from October to April, the wettest month being January. Meanwhile, wet weather attracted tsetse flies which not only affected cattle but people as well. A 1909 report by the Native Affairs Department stated that tsetse flies caused sleeping sickness among Africans and Europeans at Kabwe Mine.<sup>15</sup> While the physical environment of Kabwe Mine played a role in the outbreak of diseases, labour migration itself was another major factor in the diffusion of diseases.

### **The Migrant Labourer**

Kabwe rural was the main reservoir of African labour at the mine in the early days. This African labour initially was mobilised amongst the surrounding Lenje people who wished only to earn money to buy a few basic needs such as blankets, plates and soap and then return to their villages.<sup>16</sup> Many labourers had little incentive to stay in employment for long and often worked for only a few months. In addition, some local people were unwilling to work on the mine because they could easily pay their tax by selling farm produce thereby negatively affecting the supply of mine labour.<sup>17</sup> Therefore, this situation created deficits in labour supply creating the need for settled labour.

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<sup>14</sup> NAZ, A2/1/1/4 Native Affairs Annual Report 1923, p. 2.

<sup>15</sup> NAZ, A2/1/14 British South African Company, Review of North Western Rhodesia, p.24.

<sup>16</sup> Lewis Gann, **The Birth of a Plural Society** (Manchester: Manchester University Press, 1958), p.21.

<sup>17</sup> Gann, **Birth**, p. 21

In its early days, Kabwe Mine, like the Copperbelt, experienced critical shortages of labour due to movement of labour from Northern Rhodesia to the South. The mine could not attract sufficient labour from the surrounding Lenje villages even though the colonial administration had implemented a hut tax of 5s in North Western Rhodesia in 1904. The local people preferred to sell grain and fish to raise tax money. To help the mine acquire the much needed African labour, the colonial state raised taxation from 5s to 10s in 1909.<sup>18</sup>

However, taxation alone was not the only reason that eventually forced Africans from the rural areas to seek for employment at the mine. Ethnic obligations and, particularly the marriage payment formed another stimulus to migrant labour. In some areas, a young man had little hope of setting up a home without what was for him an appreciable sum of money paid to his bride's family. A rising standard of living also demanded money, the change from skins to cloth, or the replacement of indigenous tools with modern ones and a taste for tea and cigarettes all necessitated cash.<sup>19</sup>

Africans needed money to buy clothes and the various other luxuries to which they became accustomed, for oneself and family. Even in the case of the villager who lived by the sale of his agricultural products, visits to the industrial area were necessary in order to dispose off that produce. Furthermore, the African girls despised a youth who had no adventures to relate from industrial areas. Indeed, industrial activity appeared to some replace the former prowess in war.<sup>20</sup>

Finally, there was the desire to see the world. The African was also an enterprising traveller, and most young men were eager to experience the distant wonders and excitements described by the

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<sup>18</sup> R.Gray, **The two nations : Aspects of the Development of Race Relations in the Rhodesia and Nyasaland** (London: Oxford University Press, 1956) p. 104.

<sup>19</sup>NAZ, SEC1/1330, Labour Conditions in Northern Rhodesia, Major Orde Browns Report, p 10.

<sup>20</sup> NAZ, SEC1/1330, Labour Conditions , p 10.

returned worker. A person who had never been outside his village to work was regarded as abnormal and he was unable, unless there was a local market for agricultural produce, to meet the demands of relatives for some of the store goods, samples of which were displayed to them by others who had gone to work.<sup>21</sup>

Actuated by these various motives, the young man set out on what was for him a formidable undertaking. Usually he joined a party with several leaders who already had some acquaintance with the conditions of the journey to work and the search for employment. Possibly they took advantage of the offer of a recruiter to provide for them some place of employment, the conditions of which were clearly explained and detailed in a contract. Far more often, they would prefer to remain free of any commitment so that they could go to an employer recommended by their leaders.<sup>22</sup>

Most of those Africans who opted to use a recruiting agency succumbed to certain conditions provided by the recruiters' contract. In his report on labour conditions in colonial Zambia, Orde Browne argued that, "resort to the recruiter meant railway or lorry transport, with sleeping accommodation and food en route. Lack of a contract entailed a march of several hundred miles, with haphazard lodgings and inadequate food on the way, for the party would have little or no cash". Sometimes, African migrant labourers who had not attached themselves to any recruiters could be delayed on their way as they would run out of food or necessities needed to continue with their journey. Therefore, it was necessary to halt and work somewhere for a short spells of time in order to provide for the rest of the journey. For example, some African migrants from Nyasaland enroute to the Rand or Southern Rhodesia after running out of money for food opted

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<sup>21</sup> NAZ, SEC1/1312 Broken Hill District- Report on the causes and effects of native labour migrations, by E. H Cooke 1937.p. 14.

<sup>22</sup> NAZ, SEC1/1330, Labour Conditions, p.11

to work at Kabwe Mine in order to earn some cash which enabled them to continue with their journey.<sup>23</sup> It was also common that one or two members of the group would fall ill, and be reluctantly left behind after a rest of a day or so. Although group loyalty was a conspicuous feature of the travelling worker, a prolonged wait for a comrade was precluded by lack of supplies.<sup>24</sup> It was evident that labour migrants coming to the mine could not immediately work well because they were too weak and lacked stamina due to improper or insufficient diet along the way to the mine.<sup>25</sup> Therefore, due to the arduous journey and poor feeding migrants sometimes reached Kabwe Mine in very poor health making them vulnerable to diseases.

When at last the destination was reached, in this case Kabwe Mine, African migrants found themselves in compounds which were overcrowded and where sanitation was poor. These men were expected to do dangerous jobs which exposed them to lead poisoning, tuberculosis and other different diseases. Those migrants whose immune systems were lowered due to the journey and improper feeding on the way were more susceptible to diseases in the compounds. The filthiness of the compounds coupled with poor diet contributed to the rapid spread of various kinds of communicable diseases. A good example of the diseases that were brought in by African migrants which sometimes turned into epidemics in the compounds was smallpox.

During the dry season of 1912, an outbreak of smallpox occurred in Northern Rhodesia causing many deaths among Africans, unfortunately the numbers were not recorded. This epidemic led to mass vaccination against the disease in such villages as Luimbo, Chikonkoto, and Shamakulika (these were some of the villages where African labour migrated from). The vaccination campaign was led by Dr Burray and F. U. B Billar. This disease was spread by Africans

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<sup>23</sup> Mufinda, "History", p. 26.

<sup>24</sup> NAZ, SEC1/1330, Labour Conditions, p 11.

<sup>25</sup> NAZ, SEC 1/1041 Survey of Food Conditions 1919 to 1920, p. 15.

travelling from the Luano Valley to Kabwe Mine and other areas in the territory.<sup>26</sup> There was another outbreak of the disease in 1913 at Shiwuyinji, 17 miles south of Kabwe and it was spread by visiting the relatives of local inhabitants. In 1915, smallpox broke out again in Kabwe and affected many African mineworkers. Such cases were brought by war carriers coming from the Northern border.<sup>27</sup> Therefore, labour migration was also a source of epidemic diseases among Africans.

Another important pandemic that occurred as a result of traveling was that of the Spanish influenza. In March 1918 an influenza epidemic broke out among army recruits in the United States of America. Subsequently called Spanish flu, it spread within a year to all continents. Estimates of total deaths worldwide ranged from 25 to 39 million, more than twice the number killed during the First World War.<sup>28</sup> Spanish influenza spread rapidly not only from one nation to another but also within nations from one town to another as soldiers moved to and from one battle to another. By early October 1918 it had reached Northern Rhodesia, Kabwe did not escape.<sup>29</sup> The disease severely affected the African mineworkers at Kabwe Mine.

Turner observes that “so many labourers at Kabwe Mine died from the flu that they had to be buried in one long trench and there were not enough coffins for the Europeans, many of whom were buried in blankets.”<sup>30</sup> There was also an estimation of about 200 African deaths on the mine and a total of 447 deaths which were recorded for Kabwe as a whole.<sup>31</sup> The pandemic

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<sup>26</sup> NAZ, KDA 2/1 Vol 1 Kabwe Note Book, p. 81.

<sup>27</sup> NAZ, KDA 2/1 Vol 1 Kabwe Note Book, p. 80.

<sup>28</sup> R. F Hamilton and H.H Herwig, ‘World Wars: Definition and Causes’ in R.F Hamilton and H.H Herwig (eds), **The Origins of World War One** (Cambridge: University Press, 2003), pp. 3-4.

<sup>29</sup> Mufinda, “History”, p 56.

<sup>30</sup> Arthur Allan Turner, “A Socio-Economic History of Kabwe”, Phd Thesis, University of California, 1979. p 24; Memoirs of Edward Arden Copeman, 1867-1958, Native Commissioner Broken Hill 1911-1922. Unpublished Manuscript, p. 58.

<sup>31</sup> NAZ, KDA 2/1 Vol 1 Kabwe District Note Book.p. 79.

contributed to the drop in lead output by half. Many times the train would leave without any lead. The pandemic shut down the mine for three months.<sup>32</sup> The severity of the disease was due to the fact that at most times the mine would provide no sufficient medical inspection of African migrants as its main concern was to mobilise more labour for production.<sup>33</sup>

This lack of sufficient medical inspection on the part of the mine encouraged the spread of diseases amongst its workers to an extent where it became difficult to curb epidemics which led to a great number of deaths among African workers. Similarly, Pneumonia cases caused a lot of deaths among the African community due to improper medical inspection. Most of the African migrant workers readily contracted this disease due to the fact that they had less clothing on them which could not protect them from the cold at the mine.<sup>34</sup> The mining company during this time did not provide any protective clothing for African migrants. W. S Macdonald, the Medical Officer at Kabwe at that time cited the negligence of the mine management towards the sick Africans. He noted that, “I consider the death rate would be considerably reduced were the employers conduct medical examination of labourers and urged to send their African workers to hospital at once on the commencement of illness”.<sup>35</sup>

Such kind of epidemics prompted the colonial administrators at some point in 1919 to discourage the movement of Africans from one area to another in order avoid the spread of diseases.<sup>36</sup> The administrators also discouraged the sale of beer which encouraged groupings of people leading

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<sup>32</sup> H. Ross, “Broken Hill: Some Reminiscences”, **Northern Rhodesia Journal**, Vol 6 (1962-64) pp. 590-592.

<sup>33</sup> NAZ, ZA7/1/1/7 Annual Report Mwomboshi Sub-District of the Luangwa District 1913-1914.

<sup>34</sup> Turner, “Social-Economic”, p. 92.

<sup>35</sup> NAZ, ZA7/1/1/7 Annual Report Mwomboshi Sub-District of the Luangwa District 1913-1914

<sup>36</sup> NAZ, KDA 2/1 Vol 1 Kabwe Note Book, p. 80.

to exchange of diseases.<sup>37</sup> The sale of game meat in Kabwe and other townships was also prohibited. The headmen from different rural areas in Kabwe were also encouraged to see to it that their villages were kept clean and that open defecation stopped in order to avoid fly-borne diseases. Latrines were to be constructed. They were also urged to look after water supply.<sup>38</sup>

It is suffice to note that the migration of Africans in and out of Kabwe in the early times was a catalyst of the spread of diseases. This movement of a large number of men between the mine and their rural homes facilitated the spread of afflictions. This general pattern of movement of African migrants encouraged the spread of diseases such as smallpox and the Spanish influenza of 1918.

To some extent Kabwe Mine also relied on white foreign labour. The ratio of black to white employment in the early operations of the mine was 6 to 1.<sup>39</sup> In general, the whites were skilled workers and worked as foremen, telegraphists, postal sorters, typists and drivers. This labour hailed from a number of countries and included Britons, Indians, Chinese, Indonesians and Afrikaners. Most of its white workers had migrated from the diamond and gold mines of Southern Rhodesia.<sup>40</sup> All these labour migrants, African and Europeans found themselves in one environment that became their home. However, it is possible that some of the white community carried pathogens of TB which they possibly transferred to other workers as these whites tested positive to possible silicosis and TB which they acquired during the years they worked

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<sup>37</sup> NAZ, KDA 2/1 Vol 1 Kabwe Note Book, p. 80.

<sup>38</sup> NAZ, KDA 2/1 Vol 1 Kabwe Note Book, p. 81.

<sup>39</sup> Mufinda, "History", p. 75

<sup>40</sup> NAZ, ZA/7/1/14/7 Annual Report for the year ending 1931 Broken Hill By District Commissioner.

underground at the Southern Rhodesian mines unlike those who had just worked at Kabwe Mine alone.<sup>41</sup>

Early operations at the mine required a lot of settled labour due to the laborious nature of underground exploration of the ore body. It soon became apparent that as mining deepened, very large volumes of water had to be pumped out.<sup>42</sup> Such a task would require utilisation of machinery but Kabwe Mine lacked such machinery. This resulted in heavy reliance on African manual labour. This encouraged the mine to exploit cheap African labour in such operations as digging of shafts, locating ore and carting it.<sup>43</sup> However, due to the strenuous nature of work and low wages, the local people were unwilling to stay in wage employment for a longer period of time, hence the need for employment of migrant labour.<sup>44</sup> Migrant labour, however, served as a conduit through which diseases spread to the mine in question.

Many African workers from outside Northern Rhodesia who worked on Kabwe Mine came from Nyasaland. Although it was reported that venereal diseases in Kabwe were common as early as the time of the slave trade, most of the Nyasas who found work on the mine played a role in the spread of syphilis there as most of them had earlier worked on the mines on the Rand and Southern Rhodesia where such diseases were common.<sup>45</sup> These men carried pathogens of such diseases which they later transmitted sexually to women who engaged in prostitution at the

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<sup>41</sup> Northern Rhodesia, **Report of the Commission on Silicosis Legislation**. (Lusaka: Government Printers, 1949), p. 3.

<sup>42</sup> Austen Bancroft, **Mining in Northern Rhodesia: A chronicle of Mineral Exploration and Mining Development** (Bedford: The Sydney Press Ltd, 1961), p.71.

<sup>43</sup> Gann, **Birth of a Plural Society**, p. 21.

<sup>44</sup> NAZ, SEC1/1312 Broken Hill District, Report on the causes and effects of native Labour migrations, 1916, p.2.

<sup>45</sup> NAZ, KDA 2/1 Vol 1 Kabwe District Note Book, p 80.

mine.<sup>46</sup> Therefore, African labour migration to industrial areas also encouraged the spread of sexually transmitted afflictions.<sup>47</sup>

Headmen complained that the women from their villages in the neighbourhood of the mine left homes in large numbers without the permission of parents or headmen to become prostitutes or to cohabit with aliens employed in the mines or railways, where they got better clothed and fed than at home. There can be no doubt that women frequently contracted venereal diseases during their stay in the mine.<sup>48</sup> However, since the services of the women stabilised labour, the mine management encouraged women to move into mine compounds.<sup>49</sup> This contributed to the spread of venereal diseases among African miners.

### **Living Conditions**

Living conditions at Kabwe Mine compounds were far from desirable in the early days. Housing in the compounds was lacking in quality and quantity. Located on low flat land which was dusty in the dry season and muddy during the rains, the first mine compound was composed of round thatched huts, twelve feet in diameter with sun dried brick walls which tended to dissolve in wet weather. Van Onselen asserted that such kind of accommodation facilitated the spread of common diseases found in Rhodesian mine compounds, especially pneumonia and diarrhoea-related diseases.<sup>50</sup> The same was also true at Kabwe mine where pneumonia claimed a high percentage of African mineworkers.<sup>51</sup> Married workers had small outdoor kitchen shelter, but

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<sup>46</sup> NAZ, KDA 2/1 Vol 1 Kabwe District Note Book, P. 80.

<sup>47</sup> NAZ, KDA 2/1 Vol 1 Kabwe District Note Book, p. 81.

<sup>48</sup> NAZ, KDA 2/1 Vol 1 Kabwe District Note Book, p. 81.

<sup>49</sup> Jane L. Parpart, "The Household and the Mine Shaft: Gender and class struggles on the Zambian Copperbelt, 1926-1964", **Journal of Southern African Studies** Vol. 13, No. 1 (October 1986), p. 38.

<sup>50</sup> Charles Van Onselen, Chibaro, **African Mine Labour in Southern Rhodesia, 1900-1933.**( London: Pluto Press, 1976) P. 55.

<sup>51</sup> NAZ, ZA7/1/11/7 Luangwa District Broken Hill Sub District Annual Report, 1927-28.

single workers cooked over open fires. Latrine and washing facilities were grossly inadequate. The latrines were enclosed buckets which were emptied every night. But there were not enough buckets and as a result the last to use them had an unedifying experience unless they sought refuge in the surrounding bush.<sup>52</sup> This exposed miners to fly borne diseases. African mine workers and their families were often victims of diarrhoea, hookworms and dysentery.

In 1924 the mine also allocated a residential area for African miners and their families called the five-acre plots. Wilson argues that the mine which was the largest employer of labour in Kabwe found that its minerals sold less profitable on the world market than copper hence it was not in a position to pay the same wages as the Copperbelt mines. Therefore, in order to attract and keep a core of long term labourers, it started giving them five-acre plots. This minimised the competition for labour.<sup>53</sup> On these plots the Africans built two or more huts in place of single-roomed huts allotted to them in compounds, and they also grew corn and vegetables.<sup>54</sup> However, the dwellings on these plots were not satisfactory as the miners built them with little effort. They were erected outside the specifications of the Director of Medical Services and lacked clean water and proper sanitation. The plots were also overcrowded as most people sought to stay there as the kind of lifestyle was more continuous with traditional tribal life than on the mining compound.<sup>55</sup> Therefore, diseases like dysentery, measles, venereal diseases, malaria and diarrhoea thrived on the five-acre plots.<sup>56</sup>

The African mining community was also affected by dietary related diseases such as malnutrition in both residential areas. Initially, the role to grow crops to feed workers was

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<sup>52</sup> NAZ, SEC1/3115 Summary of proceedings of the first General meeting of the representatives of the United African Welfare Association of Northern Rhodesia, Kafue July 10-11, 1933.

<sup>53</sup> Wilson, "Economics of Detribalization", p. 22.

<sup>54</sup> Wilson, "Economics of Detribalization", p.22.

<sup>55</sup> NAZ, SEC 1/1324 Broken Hill Tour Report, 1926.

<sup>56</sup> NAZ, MH1/5/7 Broken Hill Medical Officers Annual Reports, 1926-1927.

assigned to settler farmers. But because of the small labour force in the colony in the first two and a half decades of the twentieth century, settlers found it more profitable to supply foodstuffs to the Katanga mines than local mines.<sup>57</sup> This decision by settler farmers minimised the supply of foodstuffs provided to the African mineworkers and their families who relied on mine rations at Kabwe. Such rations consisted only of corn meal and salt and occasionally, beans and nuts.<sup>58</sup> Gardening was also not allowed in the mining area making it difficult for the families to supplement the food provided by the mine management in the early days. As a result of the inadequate feeding, African mineworkers and their families became vulnerable to diseases of poverty notably malnutrition and kwashiorkor among miners' children.

To make matters worse, when the mine closed down during the period 1913 to 1914, the health of Africans and their families greatly deteriorated. Before the outbreak of the war, most of the company's resources were spent on obtaining machinery for the mine but, the ship carrying the equipments was interned and no date of delivery could be anticipated.<sup>59</sup> The delay of the shipment coupled with the financial difficulties the company faced forced it to arrange loans totaling to twenty six thousand pounds. Despite this, the mine closed down as it could not meet incoming bills.<sup>60</sup> This negatively affected the health of mineworkers and their families as medical facilities and African diet was the least priority of the mine. The main concern of the Rhodesia Broken Hill Development (RBHD) company during this time was to raise money for mineral production. But this was at the expense of the wellbeing of its employees.<sup>61</sup> In 1914, the district commissioner, Copeman, reported that, "200 Africans had been treated during the years

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<sup>57</sup> Maud Muntemba "Rural Underdevelopment in Zambia: Kabwe District, 1850-1970," PhD Thesis, University of California, 1977, p. 87.

<sup>58</sup> Muntemba, "Rural Underdevelopment", p. 87

<sup>59</sup> MIA, Loc 18.3.5A The Rhodesia Broken Hill Development Company Annual Report, 1950. P. 23.

<sup>60</sup> MIA, Loc 18.3.5A The Rhodesia Broken Hill Development Company Annual Report, 1950, p. 24

<sup>61</sup> Turner, "Socio-Economic", p.145.

at the mine. There were 22 deaths, of these one was from enteric fever and one cerebro-spinal meningities”.<sup>62</sup> Health problems in the homes also arose from the frequent use of polluted water and improper methods of cooking, especially in the bachelors’ quarters where men took little care of their cooking, both of which caused worm infestation and diarrhoea.<sup>63</sup>

The location of the mine compound was situated directly in the path of the smoke and fumes from the mine plant. As H. U Moffat, the Medical Officer at the mine reported to the visiting directors of the British South African Company in the early 1900s ‘‘refuse, fumes and smoke from the furnaces and mine plant as well as water contaminated by the mining and metallurgical operations were drawbacks to which those who were employed in mining area of necessity always exposed to....’’<sup>64</sup> This situation therefore promoted the spread of diseases among Africans.

The African mine workers at Kabwe Mine were vulnerable to the spread of infectious diseases due to overcrowding at the mine. Epidemics such as smallpox and influenza caused a high number of deaths among the African community due poor conditions of living. It was established that overcrowding in the mine compounds was a serious issue that needed to be addressed. The information on paper showed that the average number of Africans per hut was satisfactory but in reality they were very badly overcrowded. This condition constantly resulted in lung weakness among labourers as there was lack of ventilation in the huts which they occupied. Overcrowding also led to exchange of virulent diseases among the people in the same house and also the compounds at large. Another problem which affected the African families was the fumes from

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<sup>62</sup> NAZ, ZA7/1/1/7 Annual Report Mwomboshi Sub District of the Luangwa District, 1913-1914.

<sup>63</sup> NAZ, MH1/3/38 Broken Hill Medical Officers Annual Reports, Vol 1, 1923.

<sup>64</sup> NAZ, A3/8/1/3985 Rhodesian Broken Hill Development Company limited to the visiting directors of the British South African Company Salisbury, 1907.

the smelters which caused discontent and trouble and were indeed most noxious causing lead poisoning.<sup>65</sup>

The district officer in Kabwe in 1924 similarly complained that the health of Africans there was not entirely satisfactory as a result of overcrowding in the compounds. He asserted that “a larger proportion of Africans have been on the sick list than should I think have been the case”. During the early year, there were two thousand cases of influenza in Northern Rhodesia and ten cases of enteric fever of which five of these were Kabwe Mine African workers. Splenic abscess cases were also common at the mine due to influenza and a few cases of yaws were treated at the hospital.<sup>66</sup> All these ailments were the effects of poor living conditions on the mine.

Despite the prevalence and spread of diseases the attitude of the Africans towards treatment was not helpful at times as they concealed their afflictions from medical personnel. On other occasions, they refused vaccination or treatment and took to the bush on arrival of the vaccinators. Where cases of smallpox, for example were known to be concealed, the mine organised dawn raids on affected compounds and nearby villages.<sup>67</sup> This kind of attitude encouraged the spread of diseases in Kabwe. This reached an alarming rate thereby making it difficult to control diseases. As Turner noted,

It was known that men died in the hospital and the workers did not wish to live in such a building or to commit themselves to the care of those who were so obviously unsuccessful in their treatment. Africans did not understand the nature of the treatment and often hid rather than go to the hospital when ill. The mine was forced to make daily searches for sick Africans in their huts and then carry them to the hospital. This prospect was so terrifying to some that they hid in the bush until the search was over. Too many workers finally arrived at the hospital when their condition was desperate and little could be done for them. Their subsequent deaths

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<sup>65</sup> NAZ, ZA/7/1/17/7 Annual Report Broken Hill District, 1924.

<sup>66</sup> NAZ, ZA/7/1/17/7 Annual Report Broken Hill District, 1924.

<sup>67</sup> NAZ,CNP 4/2/10 Tour Report No 4 of 1926.

tended to confirm their colleagues' fears and effective medical treatment continued to be retarded.<sup>68</sup>

Another discouraging factor was that Broken Hill hospital provided very inadequate accommodation for patients admitted. For example, since it was opened in 1908, there were only ten (10) bed spaces for Europeans and twelve (12) beds for Africans.<sup>69</sup> This also discouraged African patients from seeking medical attention at the mine hospital.

### **Working Conditions in the Early Times at Kabwe Mine**

Living conditions at the mine were as poor as working conditions and both contributed to incidence of disease among African mineworkers. Working conditions on the mine in the early years were hazardous. In an effort to maximise mineral production, mining operations commenced before they were safely organised. The mine did not conduct any formal training for new workers on how to carry out their duties. As a result many injuries occurred. At most times an experienced African worker was directed to take new workers around the mine for an hour or so before they actually started working.<sup>70</sup> This was so because the mine did not want to incur the expense of training African labour.

The very structure of the mine in its early days, especially the underground structure, lent itself to accidents which culminated in death and or dismemberment of the African mine employees. Underground work was more arduous and posed a greater risk of serious accidents than surface labour. Many Africans were either killed or seriously injured in the early years.<sup>71</sup> Table 2.1

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<sup>68</sup>Turner, "Socio-Economic", p. 94; NAZ, KDA/4/1/1 Moffat Thompson, Luangwa District Annual Report, 1927

<sup>69</sup> NAZ, ZA7/1/4/7, Annual Report for year ending 31<sup>st</sup> March 1920, p. 6.

<sup>70</sup> Turner, "Socio-Economic", p. 92.

<sup>71</sup> NAZ, MH1/1/2/1 Letter from Senior Health Inspector to the Provincial Medical Officer, 26<sup>th</sup> January, 1927(Annual Statistics).

illustrates the figures of Africans killed and seriously injured per thousand at work on the surface and underground between 1919 and 1923.

*Table 2.1: Table showing Accidents of African miners at Kabwe Mine 1919-1923*

	SURFACE		UNDERGROUND	
Year	Killed	Seriously Injured	Killed	Seriously Injured
1919	2.38	2.49	8.62	8.62
1920	0.49	1.47	3.75	14.98
1922	0.40	2.01	2.31	4.64
1923	0.69	1.72	1.07	5.37

Source: NAZ, MH1/1/2/1 Medical Examination of Employees, 1927

A vivid example of an underground accident occurred in 1923 when the wall of the underground structure collapsed killing an African worker. This was the third fatal accident in the same year, which prompted the administration to look into the nature and causes of accidents at the mine. The mine was absolved of a negligence charge but some recommendations were made to increase mine safety. These recommendations were, however, soon forgotten because barely a year after, there were two more accidents due to the fall of ground causing the death of one European and resulting in the death of fourteen (14) Africans. There were also two isolated African cases of deaths by accident.<sup>72</sup> The unsafe working conditions caused the magistrate at Kabwe to charge that “lives were recklessly risked to increase production, before the accident and that people had not mentioned this at the inquest for fear of losing their jobs”.<sup>73</sup>

<sup>72</sup> NAZ, ZA7/1/6/7 Annual Reports Luangwa, Broken Hill Sub-District, 1922/23 p. 17.

<sup>73</sup> NAZ, ZA7/1/6/7 Broken Hill Sub-District, 1922/23.

Apart from an unstable underground structure, the mine built six furnaces. These were constructed from locally made bricks in which raw materials carried in cocopans that ran on wooden rails cut out of the surrounding bush were served.<sup>74</sup> These furnaces were poorly made leading to injuries such as acid burns, cut fingers, hot lead splashing up into one's eye and so on.<sup>75</sup> They also proved inefficient as the difficulties associated with the satisfactory extraction process for lead and zinc continued leading to the closure of the mine in 1913 to 1914 as earlier stated.<sup>76</sup>

The physical operations at the mine especially between October and April, involving mining excavations were frequently disrupted by rising water levels. The exposed water provided a good breeding ground for mosquitoes thereby increasing the incidences of diseases like malaria.<sup>77</sup> This also precipitated spread of hookworms as the mine especially in its early phase lacked advanced pumping equipment to pump out the water.<sup>78</sup> Aside from the actual physical structures and operations of the mines, the system of piece work also produced its share of deaths and accidents as workers were not properly oriented to work.<sup>79</sup>

To make matters worse, the mine management did not provide protective clothing for their employees but asked them to buy their own clothing. However, African workers did not have the financial muscle to supply themselves with protective clothing and the mine did so only when it was necessary to keep its labour supply. As Turner observes African labourers were thus too

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<sup>74</sup> MIA, Loc 15.1.40, Optima Magazine, Dec 1962, p.192.

<sup>75</sup> MIA, Loc T.19.6D Analysis of lost time Accidents and shafts lost, 1919.

<sup>76</sup> MIA, Loc 15.1.40 Optima Magazine Dec 1962, p. 192

<sup>77</sup> NAZ, SEC 1/1615 Mining Publications Rhodesian Mines and Industries, 1918-1925.

<sup>78</sup> Mufinda, "History," p 24.

<sup>79</sup> Thandekile R. M Mvusi, "The Creation of Unemployment in Northern Rhodesia, 1899-1936" PhD Thesis, Northwestern University, 1984. P. 111.

poorly clothed to undertake mining activities both on the surface and underground. These activities required protective clothing but most often Africans just wore a cloth wrapped around them.<sup>80</sup> This resulted in many injuries. According to Turner:

Painful and too often serious injuries were the common lot of the African worker. Cut feet and hands, crushed fingers and toes, bruised shins and burnt feet were frequently observed at the hospital because labourers handled rock and worked with acid without any protection. A man who was permanently crippled was dismissed with a month's pay and had to make his way back to the village. If he was lucky he would get a ride on a truck, but there were few roads in Northern Rhodesia and going home often meant weeks of walking as best as he could.<sup>81</sup>

Racial segregation was another factor in the working environment at Kabwe Mine. African mineworkers were regarded as the lowest class in the industry thereby making it easy for Europeans to ill treat them at the place of work. Therefore, physical roughness such as shoving, kicking, cuffing on the head and so on was a way of maintaining discipline and efficiency as deployed by most Europeans.<sup>82</sup> A vivid example is that of the conviction of five Europeans in 1927 who were charged with manslaughter and fined as a consequence of 'accidents' resulting in deaths of Africans. One European was sentenced to eighteen months imprisonment for a fatal assault on an African and there were other ten European convictions for assaults on Africans. It required considerable courage for an African to file a complaint against a European. Generally an African did not make any complaint against a European if he wanted to keep his job.<sup>83</sup> Assaults on the African miners compromised their health as some assaults led to dismemberment or even death.

If at all an African gathered courage and complained, he was far more likely to be dismissed than a European. European racial prejudice arose from the fear of a small minority in an alien land.

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<sup>80</sup> Turner, "Socio-Economic", p.95.

<sup>81</sup> Turner, "Socio-Economic", p. 90.

<sup>82</sup> Turner, "Socio-Economic", p. 95.

<sup>83</sup> Turner, "Socio-Economic", p. 94.

There was an inherent understanding that Europeans must believe other Europeans first and always back each other as much as possible in order to maintain a myth of superiority and invincibility. Fault was often ascribed to the African who physically or verbally reacted to a constant barrage of verbal insults by European foremen. Kabwe Mine was no place for an African with tender ears. “Monkey”, “black son of a bitch” were common insults ‘unthinkingly’ used by Europeans. These insults were bitterly but quietly resented by African workers who thought about them a great deal. Africans were on the lowest rung of society in Kabwe and could do little about it.<sup>84</sup> This kind of verbal discrimination rendered the African to be subjected to emotional instability. If the health of a miner should include emotional well being, then such a situation compromised the emotional health of African miners.

Occupational diseases such as pneumonia, tuberculosis and lead-poisoning (to be discussed in detail in Chapter Three) associated with poor working conditions seriously affected African labour. For example, in 1927 and 1928 there was a sudden form of influenza in combination with pneumonia which caused several deaths. During a period of about five weeks, thirteen deaths ascribed to this cause occurred amongst the mineworkers in Kabwe. Pneumonia had quick and fatal results and was most evident in the period just prior to the commencement of the rains.<sup>85</sup> The tedious nature of the labour at the mine and the exposure of workers to rapid and sharp variations in the temperatures, without much protective clothing, also exposed workers to pneumonia. Such kind of working conditions correlated with a high number of desertions of the mine as men simply left or deserted the mine which appeared to be unworthy of the cash earned. Mambwe, workers for example, refused to go to Kabwe but walked five hundred miles to the sisal plantations on the Tanzanian coast instead. This was due to adverse experiences of most

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<sup>84</sup> Turner, “Socio- Economic”, p. 95-96.

<sup>85</sup> NAZ, ZA7/1/11/7 Luangwa District Broken Hill Sub District Annual Report for the year 1927/28.

African workers at the mine. Some unfortunate deserters from Kabwe were located due to circulars which were put up as far as Abercorn and were returned back to Kabwe for trial.<sup>86</sup>

Hazardous working conditions and diseases compelled Africans to look for help from other mediums. For example, diseases, strange and unclean food and corporal punishment on the worksites compelled the African labourers at the Union Miniere Du Haut Katanga Mine to seek protection and inspiration from bwanga, multi-ethnic and ethnic group based mutualities, secret societies and so on.<sup>87</sup> The same is also true of Kabwe Mine as Africans there attributed sickness to witchcraft and consulted witchdoctors. Witchcraft continued to rank before uncleanliness and disease as cause of death among Africans. The church was also another medium which was used by the Africans to alleviate their suffering arising from diseases, assaults and accidents.

The Watch Tower Church found ready acceptance in the anxious, unhappy environment of Kabwe Mine. Originally from the United States of America, the Watch Tower movement was a millennial fundamentalist sect which had spread through Southern Africa from South Africa preaching future elevation of oppressed black workers and their humbling of their white masters. Deliverance was offered to those who were baptised and ‘washed in Jordan’ a muddy mine drainage canal. There followed a greater rush than ever to be baptised in Jordan. With the hour of deliverance so near, delay was dangerous.<sup>88</sup>

Although such kind of information was well received by Africans who hoped to be delivered from the hands of the white mine owners, large meetings of the Watch Tower sect encouraged the spread of diseases. Reportedly, a lot of people who attended such gatherings had chesty

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<sup>86</sup> NAZ, SEC1/1323 Native Labour Desertion and Absenteeism by Gordon Smith (assistant legal advisor) Native Deserters 22<sup>nd</sup> February 1923.

<sup>87</sup> Higginson, John Edward, “The Making of an African working class: The Union Miniere Du Haut Katanga and the African Mine Workers, 1907-1947” PhD Thesis, University of Michigan 1979. p.117.

<sup>88</sup> Frank Melland, “Washing in Jordan”, **African Observer**, Vol III, No. 5 (September 1935) pp. 36-40.

coughs which were probably a mild attack of influenza caught at such gatherings.<sup>89</sup> Also the teaching of the sect that the elect should multiply to fill the earth had a negative impact on the health of Africans. Such teachings encouraged some promiscuity in the name of procreation resulting in many cases of syphilis among Africans. The cases were high and widespread due to the fact that these meetings were attended not only by people from Kabwe but also from Ndola and other districts.<sup>90</sup>

However, women played a vital role in trying to safeguard the lives of the African miners against poor health at the mine. Godfrey argues that initially the number of women coming to the mine was not much. Mostly these women opted to depend on the men for food and clothes as they did not want to carry out the duties of hoeing which they had engaged in from their villages.<sup>91</sup> However, as the years went by, the women decided to help the men to supplement on the merger rations that they received from the mine owners. As the employers did not allow gardening in the mine compounds, the women would venture into the bush to collect wild products such as caterpillars, ants and other insects with fungi, roots and nuts.<sup>92</sup> They used these foods from the wild to supplement upon the rations thereby increasing the nutritional levels of the diet which insulated against poor health. Therefore, the roles of women from the early times and later on were that of trying to mitigating against diseases by engaging in activities that would help improve the health of their families at the mine.

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<sup>89</sup> NAZ, SEC2/615 Tour Report No 11 of 1929 Broken Hill Rural District.

<sup>90</sup> NAZ, SEC2/615 Tour Report No 11 of 1929 Broken Hill Rural District.

<sup>91</sup> Wilson, "Economics of Detribalization", p. 17.

<sup>92</sup> NAZ, ZA7/1/17/2 Annual Reports Upon Native Affairs, 31<sup>st</sup> December, 1920.

## **Conclusion**

This chapter has endeavored to show the link between the physical environment and the health difficulties that African mineworkers faced at Kabwe Mine in the early days. It has shown that the environment in which the mine was located played a key role in the outbreak of diseases such as malaria, dysentery and bilharzias. The chapter further indicates that African migrant workers were also a source of health problems since they arrived in a vulnerable condition bringing with them disease pathogens which sometimes erupted in disease epidemics. The chapter has finally demonstrated that living and working conditions were crucial in the outbreak of diseases. The overcrowding, poverty and poor sanitation created a fertile ground for the outbreak of diseases at Kabwe Mine. Lastly, hazardous working conditions led to accidents which sometimes resulted in death or injury of African mineworkers.

## CHAPTER THREE

### DETERIORATION IN AFRICAN HEALTH DURING THE DEPRESSION AND SECOND WORLD WAR, 1930-1945

#### Introduction

The first section of this chapter examines the impact of the Economic Depression on African miners' health at Kabwe Mine between 1929 and 1939. It shows that the economic slump had far reaching health ramifications on the health of African mineworkers as it led to deterioration in living and working conditions on the mine due to the cost minimisation strategy employed by the mining company. This created an environment in which such diseases as pneumonia, dysentery, measles, malnutrition and so on thrived. The next section of the chapter argues that the Second World War between 1939 and 1945 also contributed to the deterioration of African health. As the war necessitated unprecedented increase in the production of lead and zinc, mining accidents and industrial diseases also increased at the mine. The final section of the chapter investigates how the women at the mine tried to mitigate the deterioration in the health of African miners at Kabwe during both periods.

#### The Economic Depression

According to Herbert Heaton,

The Great Depression or slump refers to the economic crisis that the capitalist world experienced between 1929 and 1935 which was more wide spread, deeper and longer than any other depression in the twentieth century. It was a period of unprecedented trade contraction, bank failures, investment cutbacks, acute unemployment, wage reductions and sharp decline in the standard of living in the capitalist world. The industrialised countries had experienced economic crises even before 1929 but none of them was as severe and extensive as the great depression.<sup>1</sup>

Santebe similarly argues:

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<sup>1</sup> Herbert Heaton, *The Economic History of Europe* ( New York: Harper and Row, 1948), p. 698.

The depression spread from Europe to Africa due to the economic ties between European colonial powers and their colonies around the world. In October 1931, Northern Rhodesia which was an appendage of the British Empire was hit by the depression due to the ties it had with Britain. The depression in Northern Rhodesia began in the mining industry thereafter spreading to the railways, commerce and agriculture and ruined the economic boom of the late 1920s. Mining was an important economic activity that attracted labour from within and outside Africa. Africans employed in the mining industry were able to obtain money for payment of tax and the purchase of desired goods such as clothes, blankets, plates, pots and many other items. Therefore, mining activities in Northern Rhodesia was a main source of income to the labourers.<sup>2</sup>

In the same way, Kaniki asserts that thousands of workers who depended on selling their labour to the mining and agricultural sectors were badly hit by the depression through wage cuts and mass retrenchments. Between the end of 1930 and the beginning of 1933, the mining companies alone in Northern Rhodesia laid off over 16, 000 workers. This was over 75 percent of the average labour force employed by the mines in 1930.<sup>3</sup> Berger further attributes that retrenchment of African workers especially from the mine had seriously deteriorated the African lifestyle as the depression had coincided with other difficulties in many of the villages such as drought, crop failure, a plague of locusts, shortage of food in some areas and the cattle trade came to a standstill. Some workers who had been away from the villages in wage employment for a long time felt so out of touch that they refused to return, while other men continued to flock from the villages to the towns in the vain hope of finding work.<sup>4</sup>

The depression also had a crushing effect on Kabwe Mine. Some sections at the mine such as the vanadium smelters were shut down completely in 1931 as the mine could not generate any income from there. Similarly in 1932 both lead and zinc production had to be suspended owing to the slump. About 868 miners were retrenched following this development at the

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<sup>2</sup>MboziSantebe, "The Colonial Government and the Great Depression in Northern Rhodesia: Administration and Legislative changes, 1929-1939" MA Thesis, University of Zambia, 2015, p. 2.

<sup>3</sup>M. H. Y. Kaniki, "The Impact of the Great Depression on Northern Rhodesia", **Transafrican Journal of History** No. 24 (1995), p.136.

<sup>4</sup> Berger, **Labour, Race and Colonial Rule**, p. 21.

mine.<sup>5</sup> The company also opted to lay off most African miners in other departments so that they could create jobs for Europeans who had no employment during the economic depression.<sup>6</sup> The mine was so severely hit by the depression that it could not raise enough income to pay dividends. Therefore, most African workers were laid off and the mine failed to sufficiently provide for those workers who remained in the compounds. Health and sanitation also suffered as the mine owners paid more attention on trying to up their profits whilst spent less on African welfare. Most of the miners who were laid off could not afford to go back to their villages and were left without any option but to squat with those still in employment. This situation led to overcrowding, especially at the five-acre plots.<sup>7</sup>

### **The Depression, Living Conditions and Miners' Health**

The cost minimisation measures introduced during the Great Depression were not confined to wages or retrenchment alone in the mining industry, expenditure on African housing, diet, sanitation and medical care was reduced to a minimum.<sup>8</sup> This led to a serious deterioration in African health at Kabwe Mine. Although the mine continued to function during the slump, it found it difficult to pay dividends between 1932 and 1940.<sup>9</sup>

There were two areas for African housing at Kabwe Mine as stated in the last chapter. There was the main mining compound near the mine and the five acre plots which the mining company offered to mitigate against overcrowding at the mine compound. During this period of the depression, the mine's construction of African employees housing was very minimal in the mine compound. The colonial government could not make any objection towards the

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<sup>5</sup>NAZ, ZA7/1/16/2 Broken Hill Annual Report, 1933.

<sup>6</sup>Turner, "Socio-Economic", p. 142.

<sup>7</sup>NAZ, CNP 1/5/14 African Affairs Committee, 1938.

<sup>8</sup>Walima T. Kalusa, "Aspects of African Health in the Mining Industry in Colonial Zambia: A Case Study of Roan Antelope Mine, 1920-1964", MA Thesis, University of Zambia, 1993, p. 44.

<sup>9</sup>Turner, "Socio-Economic", p. 201.

minimal construction of houses by the mine for fear of driving the company into closure thereby increasing unemployment. For fifteen years the Rhodesia Broken Hill Development (RBHD) Company which was the mining company avoided its responsibility of providing sufficient accommodation for its African employees by giving them five acre plots rent free as early as 1924.<sup>10</sup> This was within the letter but not the spirit of the law. Housing on the plots was decrepit because African labourers could not afford the prohibitive cost of building permanent housing and because they did not feel their tenure was secure enough to merit investment even though some of them lived on the plots for many years.<sup>11</sup>

The law required that an employer provides his employee with adequate housing thus it was the duty of the mine management to do so. At the Colonial Offices' insistence, a Labour Department was established in Northern Rhodesia in 1933. The new Labour Commissioner R.S Hudson and his Labour Officer for industrial areas, William F. Stubbs, began to pay more attention to African housing. It was discovered by the department that the grass-thatched huts for Africans in the mine compounds were truly lacking in quality and quantity. Although the Director of Medical services, J. C Haslam' found the compound quite adequate in 1935, the new Labour Commissioner had a very different point of view. The mine compound then consisted of 714 brick huts which the commissioner did not consider suitable for families, 800 single quarters and 880 huts on the five acre plots, which had no mine houses on them at all. With a total of 3,471 men including 1,594 married and 1,877 single men employed on the mine these dwellings proved insufficient.<sup>12</sup>

The mine insisted that 1,000 of these employees were 'temporary'. However, the mine consistently employed over 3,000 men and was simply trying to avoid its housing obligation

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<sup>10</sup>Turner, "Socio-Economic", p. 202.

<sup>11</sup>Turner, "Socio-Economic", p. 200.

<sup>12</sup>NAZ, SEC1/1475 Letter from the Labour Commissioner to the Chief Secretary Lusaka, dated 20<sup>th</sup> July, 1936; also Turner, "Socio-Economic", p. 201-202.

to black workers. Anxious to expand production and to pay shareholders dividends, the company tried by all means to keep African housing expenditure as low as possible. It attempted to persuade the government that housing expenditure should be tied to the company profits. The mining company set one government official against another in an effort to destroy the government's capacity to enforce housing regulations. It juggled figures of available housing for Africans employed at the mine in order to minimise housing problems. It delayed its building program as long as possible by bargaining over the size and quality of the proposed housing for black workers. Finally, the company declared that the depression and later the war shortages made it impossible to obtain building materials.<sup>13</sup>

However, towards the end of 1938 some government officials were becoming increasingly determined to prevent the establishment of poor or inadequate African housing which would fail to satisfy labourers' rising expectations. There was also a general tendency on the part of Africans to demand better standards of housing and they did not want the mines' housing to deteriorate. The government was becoming sensitive to African labourers' increasing restlessness and feared future labour disruptions. It therefore, upped the fight for better housing, urging the head office of Anglo America to intervene. But the company's response was uncooperative and vague. R. B. Hagart, the mining company's General Manager, maintained that the mine was unprofitable. He insisted that "the company was operating entirely for the benefit directly and indirectly of its employees, the government, the Rhodesia railways and the community as a whole".<sup>14</sup>

However, Hagart supplied no figures of the company's financial income to support his contentions. As Turner argues,

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<sup>13</sup> NAZ, SEC1/1475 Extract from Newsletter, Central Province March/April 1938.

<sup>14</sup> NAZ, SEC1/1475 Extract from Newsletter, Central Province March/April, 1938.

Even if Hagart had supplied the figures, they would have been open to question. The government did not have the research resources to determine whether such figures would have represented the mine's income fairly or whether its income was hidden in the parent company's financial manipulations. Lacking the ability to monitor the financial activities of the large corporations operating in Northern Rhodesia, the government was forced to make judgments. Hagart's contention was skeptically received and they continued to apply pressure with minimal success, for more improved housing.<sup>15</sup>

The labour department did all it could possibly do to rectify the housing problem at Kabwe Mine through various meetings and discussions with the general manager of the mine and other members of his staff, without yielding much result. A meeting which was held in 1938 between the District Medical officer, the Acting Labour Commissioner and the mine manager and his staff showed clearly that without pressure being put upon the director of the company whose residence was in Johannesburg, it would be impossible to get very much further. The general manager frankly admitted that he could not rectify the existing bad position with regard to the mine's housing without authority to spend the money on rectifying the problem. He noted that he had been told quite clearly by his managing director that he was to proceed slowly with the yearly building scheme and do everything as cheaply as possible but at the same time try to satisfy the governments' minimum requirements.<sup>16</sup>

Such kind of attitude from the mine management toward African housing negatively affected the lifestyle of miners and their families as they were forced to live in deplorable circumstances. Lack of proper housing at Kabwe Mine and poor sanitation especially during the economic depression exposed the African workforce and their families to different health problems arising from bad living conditions. Such conditions were instrumental in the spread of diseases such as influenza, whooping cough, smallpox, pneumonia, colds, malaria and other infectious diseases.<sup>17</sup> There were also complaints of many cases of chronic diarrhoea and dysentery which resulted in a death rate of 11.89% per thousand at the mine compound

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<sup>15</sup> Turner, "Socio-Economic", p. 203.

<sup>16</sup> NAZ, SEC1/1475 Extract from Newsletter, Central Province March/April 1938.

<sup>17</sup> NAZ, SEC2/604 Mundy, Broken Hill Tour Report No 2/1933.

during the year 1937.<sup>18</sup> Medical surveys of miners and their families also indicated that measles, mumps and chickenpox also broke out periodically amongst the miners' children in the compound and easily spread due to poor living conditions in the area.<sup>19</sup>

In 1938, the figures from the hospital admission of African mineworkers and their families especially from the mine compound showed that, two hundred and ten (210) cases of diseases were treated at the hospital and about eighteen (18) cases were admitted out of a total population of 1,312 Africans.<sup>20</sup> Thirteen (13) deaths occurred from those admitted. The diseases were of many kinds amongst others being thirteen (13) dysentery, ten (10) cases of pneumonia, twenty (20) of malaria and five (5) cases of hookworms.<sup>21</sup> Most of these health problems were as a result of the adverse living conditions such as lack of clean water and poor sanitation in the mine compound. The number of disease cases was so because of the overcrowding which encouraged the easy facilitation of such ailments. It was due to such kind of health problems and bad living conditions that forced the mining company to provide five acre plots for their employees. However, the conditions in these plots were also far from desirable.

### **Depression and the Five-Acre Plots**

The mining company at Kabwe Mine sought to minimise the shortage of housing by giving workers five-acre plots to miners to live on as early as 1924. Originally, the mine intended these plots to be a source of produce which it could buy from its workers to use as rations. The five-acre plot allowed a worker to have his whole family living with him and to be able to offer hospitality to his kinsmen from the village. The single worker in the compound

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<sup>18</sup>ZA7/1/11/7 District Commissioners' Report for the year ending 31<sup>st</sup> December 1937, Luangwa District.

<sup>19</sup>NAZ, MH1/3/38 Broken Hill Medical Officers Annual Reports Vol III, 1938.

<sup>20</sup>NAZ, MH1/3/38 Broken Hill Medical Officers Annual Reports Vol III, 1938.

<sup>21</sup>NAZ, A5/2/10 Broken Hill Medical Report showing number of cases treated at hospital, 1938.

would not be able to have relatives living with him as would a plot holder. Since most of the labour force was young, many men were content to live as bachelors, several to a round thatched brick hut in the compound. But those men, who were married and had children in their villages of origin, were anxious to have a plot so that they could bring and keep their family together while they worked in Kabwe. Indeed the plots became one of the main attractions of Kabwe Mine. They offered workers an escape from the crowded bachelor quarters so often the only available accommodation for target workers in other Southern African industrial centres.<sup>22</sup>

On the five-acre plots, a man could live a more independent life as compared to the quarters in the mining compound. Though his possession of a plot depended on his job, in his own home at least he could be master, the head of a family not simply a roommate. By 1927, the mine was very glad that the plots had become an attraction to labourers. As earlier stated, the Copperbelt had become a mighty competitor for Northern Rhodesia labour and the plots were the attraction which allowed Kabwe Mine to keep its share of that labour. For example, in the earlier days migrants from the local areas of Central Province did not spend much time in the industrial area. However, due to the system at Kabwe Mine of allowing the mine labourers to live on small plots outside the compounds close to the mine, many migrants were now able to live for long periods in such areas.<sup>23</sup> By 1935, there were 400 African employees living on the plots.<sup>24</sup>

During the Economic Depression, the value of the plots increased tremendously for they provided a place where a man who retained his employment could keep his family and thus stay in town longer than he could have initially contemplated. The depression halved both the

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<sup>22</sup> NAZ, ZA7/1/6/7 E. H Cooke, Broken Hill Annual Report, 1935.

<sup>23</sup> NAZ, SEC1/1312 Administration of Native labour. Investigation of labour conditions in Northern Rhodesia, Central Province; Provincial Commissioner Central Province to the Chief Secretary Lusaka, 18<sup>th</sup> October, 1937.

<sup>24</sup> Turner, "Socio-Economic", p. 71.

European and African work force along the lines of rail from 1,825 and 45 871 in 1930 to 958 and 17 571 by 1934 respectively.<sup>25</sup> At the same time, the men were staying longer. The African mineworker's average stay in Kabwe rose from five months in 1926 to twenty one months in 1935, the longest work period of any mine in Northern Rhodesia.<sup>26</sup> In the same period, turnover dropped from 300% to 100%. Although a lot of men could still be classified as target workers, a growing number were staying at the mine for extended periods of time.<sup>27</sup> During the slump, jobs had become very hard to come by. Men wandered from compound to compound, industry to industry, town to town in a long frustrating search for jobs.<sup>28</sup> But a man would particularly loath to leave his job if he possessed a mine plot which was only given to employees of long standing and was eagerly sought after. The plots were reasonably fertile and allowed the occupants to gain additional income by growing produce for the mine or local markets.<sup>29</sup>

The economic depression also made African workers anxious to keep their job for a longer period. The availability of the five acre plots made such a decision emotionally supportable because it allowed employers to bring families to town. The combination of employment scarcity and the availability of plots increased many African mineworkers' commitment to a wage earning urban life. Towards the end of the depression, a growing core of long term industrial workers in Kabwe was becoming increasingly concerned about the availability of retirement gratuities and pensions.<sup>30</sup>

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<sup>25</sup>NAZ, ZA7/1/6/7 Cooke, Broken Hill Annual Report, 1935.

<sup>26</sup>NAZ, ZA7/1/6/7 Cooke, Broken Hill Annual Report, 1935.

<sup>27</sup>NAZ, ZA7/1/6/7 Cooke, Broken Hill Annual Report, 1935. A target worker was one who came to work so that he would be able to fulfill a particular monetary need, and who would return home once that need had been met

<sup>28</sup>NAZ, ZA7/1/15/7 H.A Sylvester, Broken Hill Annual Report, 1932.

<sup>29</sup> NAZ, ZA7/1/15/7 Sylvester, Broken Hill Annual Report, 1932.

<sup>30</sup> NAZ, CNP 3/2/2/5/4861 Labour Reports and Tour Reports by Labour Officers, 1935 to 1945.

However, despite the benefits of the plots at Kabwe Mine, mine managers on the Copperbelt disagreed with Kabwe Mine's African five acre plot settlement scheme, which allowed African workers' families to live in greater privacy and independence outside the compound. They maintained that the workers' health would suffer owing to lack of anti malarial control and modern sanitation and that control and discipline would be much more difficult to maintain.<sup>31</sup> The concern of the Copperbelt mine managers actually proved correct when the labour commissioner visited the five acre plots in 1934. The commissioner observed that African housing on the mine was very poor and sanitation practically non-existent. This, he further observed, was because the buildings on the plots had not been erected by the employers but Africans themselves.<sup>32</sup> The Chief Secretary to the government, Beresford Stooke similarly noted that "...accommodation outside the compound on five acre plots encourages labourers to bring their wives with them and squat on these plots in conditions which are not properly supervised and should not be permitted".<sup>33</sup> Poor structures and lack of sanitation were visible on the plots.

Many Africans who lost their jobs during the depression consequently lost their accommodation as well. This was because the company avoided the costs of subsidised housing and food for the unemployed. African labourers who were laid off were encouraged to return to their villages. The employers felt that it was easy for Africans to go back home. However, what they did not realize was that it was not simply a case of packing up and going home. Their relations and friends in the villages had expectations of them and they also had obligations to meet such as providing money for tax, buying the relatives gifts and so on. Hence, a worker who was laid off continued to search for work in Kabwe and relied on the

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<sup>31</sup> Turner, "Socio-Economic", p. 82.

<sup>32</sup> NAZ, SEC1/1475 Letter from the labour commissioner to the chief secretary Lusaka. 20<sup>th</sup> July, 1934.

<sup>33</sup> NAZ, SEC1/1475 Letter from G. Beresford Stooke chief secretary to the government to general manager Anglo-American Corporation of South Africa Ltd, 29<sup>th</sup> May, 1941.

hospitality of employed relatives and friends. The unemployed flocked to the mine settling on the five acre plots for shelter and sustenance. The District Commissioner, Sylvester, argued that such a situation created crowding and was a great strain on the resources of the employed. He further argued that there was a distinct rise in theft, fighting, illegal beer brewing and poor health during the 'hard times'.<sup>34</sup>

The houses on the five acre plots were not as strong as the ones in the mine compound reason being they were constructed by the African miners themselves who used cheap material to build them. The mining company could not provide any building materials as they complained of the depression and later war shortages. Such houses were badly flooded and sometimes were in a state of bog when there was heavy rainfall. Hence, most virulent health problems such as pneumonia were prominent in this area due to such conditions.<sup>35</sup> Baldwin asserts that in 1930, the death rate at Kabwe Mine amongst African mine workers was 29.2% per thousand and pneumonia was listed as the most important cause of death.<sup>36</sup> In 1933, there were 26 deaths which occurred on the plots sixteen of which were from pneumonia alone. During September and October of the same year there occurred an epidemic of influenza which developed into pneumonia in the case of those who died.<sup>37</sup> From 1930 through to about 1935 onwards, pneumonia continued to be listed as one of the major killers of African mine workers. The death rate was 40.6% per thousand per annum throughout these years showing that pneumonia was the main cause of illness and death among Africans.<sup>38</sup>

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<sup>34</sup>NAZ, ZA7/1/15/7 Sylvester, Broken Hill Annual Report, 1932.

<sup>35</sup>NAZ, SEC2/604 Bowden, Tour Reports Broken Hill District, 1934.

<sup>36</sup> Robert E. Baldwin, **Economic Development and Export Growth: A Study of Northern Rhodesia, 1920-1960** (Los Angeles: University of California Press, 1966), p. 23.

<sup>37</sup> MIA, Loc T18.5E The Rhodesia Broken Hill Development Company Limited, Report and Accounts for the Year ended 31<sup>st</sup> December 1933, P. 7, by Per F. A Unger.

<sup>38</sup> MIA, Loc T18.5E See, The Rhodesia Broken Hill Development Company Limited, Report and Accounts for the Year ended 31<sup>st</sup> December 1930, p. 7; RBHD Ltd Report and Accounts for the Year ended 31<sup>st</sup> December 1934, p. 7; RBHD Ltd Report of the Directors 31<sup>st</sup> December 1935; RBHD Ltd Report of the Directors 31<sup>st</sup> December 1938; and RBHD Ltd Report of the Directors, 31<sup>st</sup> December, 1945, p. 14.

Towards 1939, coughs and colds became common on the five acre-plots as well as eye problems particularly among the children. About 380 patients from the plots were treated for ailments such as abrasions, cuts, malaria, syphilis, gonorrhoea, bilharzia and diarrhoea.<sup>39</sup> It was observed that the cases of venereal diseases were very common at the five acre plots. The medical orderly at the five acre clinic reported that, “there was a large attendance of poor people and a lot of venereal diseases amongst them and it was difficult to keep in touch with them all as they would not finish their medication at the clinic”.<sup>40</sup>

Like housing, sanitation received less attention from the cash-strapped mine management during the economic slump. The absence of windows in the houses, the constant fumes of smoke from the cooking and the cramped size of the rooms made for poor ventilation. Ticks and bugs were prevalent in the mine workers’ quarters leading to relapsing fever. The squalor of the dwellings also resulted in diseases such as diarrhoea and hookworms. Latrines and washing facilities were grossly inadequate. Even after latrines were constructed, they were so badly built that they could easily be flooded resulting in overflowing of excreta. This was a serious health hazard in the mine area.<sup>41</sup> David Muchinda, an ex-miner explained that sanitation was very poor due to the use of communal toilets which led to miners and their families to suffer from enteric diseases.<sup>42</sup> During the depression, the government’s medical and sanitation inspection and prevention programs had virtually disappeared. Although the public health ordinance drawn up in 1930 set forth health standards and regulations governing sanitation, neither the government nor the mine had the resources to implement them.<sup>43</sup> Thus, sanitation at the mine was compromised.

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<sup>39</sup> NAZ, SEC2/606 Native Affairs District Travelling Broken Hill District, 1937

<sup>40</sup> MH1/1/2/28 Annual Report Health Department Central Province, 1939.

<sup>41</sup> NAZ, CNP1/3/5 African Affairs Committee, 12<sup>th</sup> July 1939. Mine African Housing Area, p. 19.

<sup>42</sup> Interview with David Muchinda, 11<sup>th</sup> March, 2016. ChowaKabwe.

<sup>43</sup> Turner, “Socio-Economic”, p. 140

As in the case of housing and sanitation, expenditure on feeding African labour during the depression was lessened as the company effected the cost-minimisation and profit-maximisation policy. It is difficult to discern how much money was spent on food but the rations deteriorated both in quality and quantity. Government regulation restricted the rations that large employers could give to their African employees. Both meat and maize meal were in short supply due the scarcity of food in the area that was caused by the drought and the movements of Africans into reserves where new gardens were not started yet.<sup>44</sup> The labour officials argued that the short supply of rations was due to the general food shortage being experienced in the territory. But the workers complained bitterly about the nature and quality of the food they were forced to live on. At times, meat was completely unobtainable and maize meal was often rotten, dirty or coarse. Beans, groundnuts and pumpkins were substituted for meat.<sup>45</sup> The beans and groundnuts were often rotten or insufficient and the pumpkins, workers protested, were an unsuitable food to accompany meal. It was impossible for Africans to buy their own meat from European butchers in Kabwe due to racial segregation. The only one which was able to sell them the meat did so through a hatch resulting into women waiting for hours in order to obtain the meat which at most times was just a ball of fat.<sup>46</sup>

The poor quality and quantity of food issued to the African employees at Kabwe led to dietary deficient diseases. For example, African children in the mine compounds were prone to malnutrition, fifty-nine cases being reported in 1932.<sup>47</sup> Poverty and poor nutrition were

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<sup>44</sup>NAZ, SEC2/604 Bowden, Tour Reports Broken Hill District, 1933.

<sup>45</sup> NAZ, SEC1/1437 Minutes of Meetings with Tribal Representatives at the Broken Hill Development Company Ltd, 24 -27<sup>th</sup> October, 1935.

<sup>46</sup> NAZ, SEC2/601 summary of Proceedings of the First General Meeting of the Representatives of the United African Welfare Association of Northern Rhodesia, Kafue, July 10-11, 1936.

<sup>47</sup> NAZ, MH1/3/38 Broken Hill Medical Annual Reports Vol III, 1932. p. 4.

undoubtedly the major causal factor in most cases of malnutrition.<sup>48</sup> Other cases of malnutrition among African mineworkers who were hospitalised emanated from the poor rations that were issued to them. Workers failed to adequately supplement the food provided by the employers due to their low wages. They bought inadequate corn, meal, eggs and other foodstuffs particularly chickens and fish from local vendors.<sup>49</sup> Trading in fish became common in the compound. The fishing industry was centered on the Lukanga Swamps and Kafue River.

### **Impact of the Second World War**

Like the Great Depression, the Second World War equally played a key role in the deterioration of the disease environment at Kabwe Mine between 1939 and 1945. The expansion in mineral production at the mine necessitated by the war was as a result of the Colonial policy which aimed at boosting the production of minerals such as copper, lead, zinc and so forth. These minerals were seen as a contribution to the British war effort. Chipungu asserts that, “the colonial policy in Northern Rhodesia was, therefore, geared towards increased production of necessary base metals as an economic contribution to the general war effort. This economic contribution was considered by the government in London and Northern Rhodesia as the most valuable aid they could give to the empire at war.”<sup>50</sup>

However, this increase in mineral production came with a cost to the health of African mineworkers. Increased production meant that there was need to employ more African workers, increase working hours and so on meaning that the level of harmful dust on the

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<sup>48</sup> Ministry of Labour and Mines, Annual Report of the Department of Labour (Lusaka: Government Printers, 1935), p. 27.

<sup>49</sup> Maud Muntamba, “Rural Underdevelopment in Zambia: Kabwe District, 1850-1970,” PhD Thesis, University of California, 1977, p. 116

<sup>50</sup> Samuel N. Chipungu, **The State, Technology and Peasant Differentiation in Zambia: A Case Study of the Southern Province, 1930-1986** (Lusaka: Historical Association of Zambia, 1988), p. 60.

mine increased making Africans more vulnerable to industrial diseases such as lead-poisoning and tuberculosis. The increase in production also brought about a rise in mine accidents in a bid to produce the minerals faster. The war also had an impact on housing, sanitation and diet of African mineworkers and their families as a result of the overcrowding that was caused by the increased employment to meet the high production of base minerals.

### **Industrial Diseases**

The year 1940 witnessed a big influx of rural Africans into Kabwe. The war expanded demand for labour in the mine and railway industries and rural famine caused by the drought simultaneously created the need to find work in the urban area. The war created opportunities for people to find industrial jobs especially in the mine due to the vacancies created by those who left to fight in the war.<sup>51</sup> It was during this period that the Northern Rhodesia Production Committee (munitions) was formed. Under this committee, munitions were produced at Kabwe Mine, Mufulira, Nchanga, Nkana and Roan Antelope Mines and in the Kabwe workshops of Rhodesia Railways by employees in their spare time and women working three shifts a day.<sup>52</sup> Articles made included tank parts, bomb parts, fuse bodies for land mines and so on. Urgent repair works such as rewinding of armatures and repairing of cylinder heads was carried out for the military authorities.<sup>53</sup> Because of the importance and demand for lead as war materials, there was increased production of this mineral.

The output of lead from Kabwe Mine thus rose from 1 720 tons in 1939 to 8 239 tons of pig lead in 1945 which was the highest figure since 1923.<sup>54</sup> Most of the lead was exported to the

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<sup>51</sup>Turner, "Socio-Economic", p.211.

<sup>52</sup>Mines Department Annual Report for the year ended 1946 with preface covering the years 1939 to 1945, p. 9.

<sup>53</sup> Mines Department Annual Report for the year ended 1946 with preface covering the years 1939 to 1945, p. 9.

<sup>54</sup> Mines Department Annual Report for the year ended 1946 with preface covering the years 1939 to 1945, p. 12.

United States of America, United Kingdom, India and the remainder was fabricated at the mine into pipes and sheets for use in the metallurgical plant. Zinc output similarly rose from 15 240 tons in 1940 to 17 190 in 1945 as shown in the tables below.<sup>55</sup>

*Table 3.1 Table showing Lead Productions in Northern Rhodesia, 1939 to 1945*

<b>YEAR</b>	<b>QUALITY (long tons)</b>	<b>VALUE (pound million)</b>
1939	1 720	0.9
1940	3 540	3.1
1943	6 895	5.9
1944	7 302	6.2
1945	8 239	7.0

*Table 3.2 Table showing Zinc Productions in Northern Rhodesia, 1939 to 1945*

<b>YEAR</b>	<b>QUALITY (long tons)</b>	<b>VALUE (pound million)</b>
1939	15 240	11.3
1940	15 745	11.5
1943	16 030	12.8
1944	16 987	13.1
1945	17 190	14.6

Source: Mines Department Annual Report for the year ended 1946 with preface covering the years 1939 to 1945, p. 13

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<sup>55</sup> Mines Department Annual Report for the year ended 1946 with preface covering the years 1939 to 1945, p. 13

The expansion in the production of lead and zinc played an instrumental role in the emergence of pneumoconiotic ailments at Kabwe Mine in particular because of increased harmful dust levels. Before the war, it was established that the risk of contracting silicosis was minimal and virtually absent at the mine although a survey of the disease was carried out from time to time. However, industrial diseases, such as lead poisoning and tuberculosis became rampant during the war.

In 1944, there was an investigation into the silicosis hazard at Kabwe Mine by M.T Hardy under the director of medical services in the colony. Hardy reported that some silicotic cases were found at Kabwe Mine due to the expansion in mining activities that aimed at increasing mineral production.<sup>56</sup> Even though the risk of contracting silicosis at Kabwe Mine was dismissed as minimal, African mineworkers underwent silicosis testing annually.<sup>57</sup>

Hardy's report also noted that there was a high risk of lead poisoning at Kabwe Mine and that the mine management was taking steps to prevent this serious disease. There was evidence that African mineworkers who worked in the lead plant were more liable to get lead poisoning as a result of lead absorption. In most cases, the effects of the lead absorption would not be felt or observed for many years until when its constitution in the blood began to weaken the immunity of the affected miner, making him more susceptible to other diseases.

The Arbitrator of the lead plant in 1945 argued that

I am satisfied from the evidence that conditions in the lead smelter are exceptionally dangerous as compared to other places on the mine on the ground that employees working in the lead smelter are subjected to the danger of lead poisoning. I consider that the medical evidence on this point is conclusive. I am also satisfied that the danger was not taken into account when the basic wage was fixed as the basic wage of operators working in the lead smelter is the same as that of operators in other sections of the same as that of operators in other sections of the metallurgical department working in places where there is no

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<sup>56</sup> NAZ, MH1/04/33/3320 Mr Hardy's Report on the Silicosis Hazard at Kabwe Mine, 20<sup>th</sup> April 1945.

<sup>57</sup>The Silicosis Medical Bureau Annual Report for the year 1945.

danger of lead poisoning. The risk of lead poisoning definitely has been in existence although medical reports from the mine have been negative up to date.<sup>58</sup>

Lack of statistical data makes it difficult to indicate how many miners were affected by lead poisoning and eventually died from it. Available medical reports conceal such information and the issue of lead poisoning in Kabwe is quite sensitive as up to this day, and in spite of ongoing investigations with regard to lead poisoning on the mine, accurate figures of cases of the disease do not still exist.<sup>59</sup>

However, former miners interviewed on this matter attested to the fact that lead-poisoning cases were very common and affected not only the African miners themselves but also their families due to the fumes from the lead plant. Muchinda, asserted that, “lead poisoning was very common at the lead smelters and the only treatment people were given was to be leaded out, meaning that if one was found with lead in the blood, he was removed from the smelter section and taken to work on the surface or another section so that the level of lead could go down.”<sup>60</sup> Muchinda further explained that after the level of lead in the blood lowered, African workers were taken back to the lead plant again leading to a situation which made them more at risk of dying of lead poisoning eventually.<sup>61</sup> Similar information was given by many other ex-miners with regard to such cases of lead poisoning on the mine.<sup>62</sup>

African mineworkers’ families also suffered from lead-poisoning due to the fumes. As noted in the last chapter, the mine compound was situated close to the smelter and smoke and fumes from it spewed over the compound. This was quite unpleasant and a serious health

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<sup>58</sup> MIA, Loc 19.4.2E Report from Pickard to the Secretary Anglo American Corporation of South Africa Limited-Northern Rhodesia Mine Workers Union lead plant arbitration, 17<sup>th</sup> September 1945.

<sup>59</sup> [https:// www.lusakatimes.com/2007/06/21/-mining-leaves-toxic-legacy-in-kabwe-town](https://www.lusakatimes.com/2007/06/21/-mining-leaves-toxic-legacy-in-kabwe-town).

<sup>60</sup> Interview with Muchinda, 11<sup>th</sup> March, 2016.

<sup>61</sup> Interview with Muchinda, 11<sup>th</sup> March, 2016.

<sup>62</sup> Interviews with ex-miners, Muchinda,,Nyirenda, Ngulube, Mulenga, Mubita, Ng’andu, and Chisenga in Kabwe, 11<sup>th</sup> to 12<sup>th</sup> March, 2016.

hazard.<sup>63</sup> A former miner, Patrick Mubita, complained that, “most of our family members and especially the young ones used to suffer from ‘ichitofu’ (lead-poisoning) which used to cause serious stomach problems as a result of the fumes from the mine.”<sup>64</sup> This was compromised by the lack of medical care for victims to lead-poisoning. Leading out those who were poisoned by lead proved ineffective. Such treatment failed to work especially with regard to family members or children who were poisoned. Once the content of lead was high in the blood, most people became more susceptible to other diseases as their immunity was compromised. Thus, most cases of lead-poisoning deaths were attributed to other ailments when in the actual sense were induced by poisoning.<sup>65</sup>

There were no effective measures put in place that would cure lead-poisoning. Therefore, the only way to avoiding cases of lead-poisoning at the mine was to find preventive ways against the condition. However, the only preventive measure instituted in the late 1940s was that of providing cocoa and buns to underground workers and those at the Imperial Smelting Furnance (ISF). Floyd Chisenga, an ex-miner, noted that cocoa and milk were issued to miners as a cushion against the toxic minerals.<sup>66</sup> It was not until 1960s that the mine started testing for incidence of lead in miners’ blood using the atomic absorption unit system. However, it was not possible to assess the results of the tests due to delays in obtaining chemical reagents and technical problems.<sup>67</sup> Therefore, ailments resulting from lead-pollution continued to afflict the African community at Kabwe Mine.

Most African mineworkers who suffered from lead-poisoning yielded more readily to tuberculosis at the mine. Tuberculosis (TB) is an infectious disease contracted primarily

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<sup>63</sup> NAZ, MH1/02/001/3151 Letter from J. R Macgregor Provincial Medical Officer to the Commissioner for Mines, 5<sup>th</sup> December, 1940.

<sup>64</sup> Interview with Patrick Mubita Kabwe ex-miner, 18<sup>th</sup> March, 2016, Makululu Kabwe.

<sup>65</sup> Interview with Ng’andu Veronica ex health assistant, 21<sup>st</sup> March 2016, Mine Area Kabwe.

<sup>66</sup> Interview with Floyd Chisenga ex-miner, 17<sup>th</sup> March 2016, Makululu Kabwe.

<sup>67</sup> MIA, Loc 19.4.3E The Zambia Broken Hill Development Company Limited, Summary of Operation, 1964.

through the inhalation of airborne droplets containing tubercle bacilli that are emitted by persons with active TB.<sup>68</sup> Increased mineral production during the war raised the incidence of TB at the mine prompting the colonial government to set up a tuberculosis unit in the town. This unit operated under the control of a chest physician.<sup>69</sup> Hundreds of African mineworkers suffered from TB during the war period due to increased pressure on production. In 1944 alone cases admitted by the Tuberculosis Unit in Kabwe totaled 194, of whom 159 were suffering from active pulmonary TB and seven from non-pulmonary TB. Investigations in the hospital showed that twenty eight of those admitted died whilst the rest were discharged. Of those discharged, fifty either left on their own accord or were discharged on non-medical grounds.<sup>70</sup>

Most African mineworkers who worked at the ISF and underground were more likely to get TB than those who worked on the surface in the open air (although some of the surface workers got infected through the fumes from the lead plant).<sup>71</sup> Poor ventilation systems underground encouraged the easy spread of the disease from one worker to another. Packard who did a study on TB in South African gold mines similarly argues that

Conditions in the mineshafts facilitated the spread of TB between infected and non infected workers. Labouring closely together in narrow, poorly ventilated stopes, for long hours, provided ample opportunity for tubercular miners who were coughing and expectorating bacilli laden sputum to infect their fellow workers.<sup>72</sup>

Poor housing in both the mine compound and five acre plots raised the chances of being infected by the disease. The overcrowding in the African mineworkers quarters facilitated the dissemination of TB from one person to another. Even the migrant workers succumbed to the

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<sup>68</sup> Randall Packard, **White Plague, Black Labour: Tuberculosis and the Political Economy of Wealth and Disease in South Africa** (London: University of California Press, 1989), p. 1.

<sup>69</sup> Annual Report on the Public Health of the Federation of Rhodesia and Nyasaland (Lusaka: Government Printers, 1945), p 7.

<sup>70</sup> NAZ, MH1/04/63/3226 Tuberculosis Section Broken Hill, 1944.

<sup>71</sup> Interview with MrCheshaLameck, 18<sup>th</sup> March 2016, MakululuKabwe.

<sup>72</sup> Packard, **White Plague**, p. 74.

infection due to the stress of the industrial life marked by overcrowding and poor diet thereby contributing to rising cases of TB. It can safely be argued that overcrowding and poor sanitation increased the incidence of tuberculosis spreading rapidly from the miners to their children and wives. At Kabwe Mine just like at most mines in the Copperbelt, control measures against TB were absent for many years, neither was there any organised treatment for African tuberculotics. Thompson Kadango, an ex-miner, narrated how he was laid off from work after being diagnosed with TB as there no proper medical care during the war period.<sup>73</sup>

In addition to lead-poisoning and tuberculosis, there were also other health disabilities which the expansion in mining activities during the war promoted at the mine. One of such cases was the wearing out of teeth especially amongst Africans in the cell room. The Africans complained that their teeth were eaten away and gradually shortened by the acid in the cell room.<sup>74</sup> Muchinda confirmed this situation by stating that, “in our department in the tank house, we had problems because our teeth were being eaten away due to fumes.”<sup>75</sup> When the problem was presented to the management, their response was that the Africans should breathe naturally through the nose and not their mouths as a way of preventing their teeth from wearing away.<sup>76</sup> This was a way of avoiding to procure masks or mouth wash for the workers in order to prevent such a condition. Cases of eye problems (conjunctivitis) were also common due to lack of safety devices for the eyes as well burns due to excessive heat especially at the ISF.

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<sup>73</sup>Interview with Thompson Kadango ex-miner, 17<sup>th</sup> March 2016, MukululuKabwe.

<sup>74</sup>MIA, Loc 19.4.1A Minutes of the the meeting held with the Branch Executive Committee of the Northern Rhodesia African Mineworkers Trade Union in the compound office, 14<sup>th</sup> September 1943.

<sup>75</sup> Interview with Muchinda, 11<sup>th</sup> March 2016.

<sup>76</sup>MIA, Loc 19.4.1A Minutes of the meeting held with the Branch Executive Committee of the Northern Rhodesia African Mineworkers Trade Union in the compound office, 14<sup>th</sup> September 1944.

The health hazards promoted by the Second World War were compounded by mining accidents. The period between 1930 and 1945 witnessed a number of accidents that could have been avoided if management had prioritised the safety concerns of their African miners. Lack of supervisory personnel and safety clothing exposed Africans to injuries and the mine only supplied such clothing when it fitted it to do so. When the zinc mine recommenced operations in as early as 1933, it was short of proper supervision. As a result accidents increased due to poor work discipline which had a lot to do with inadequate training as the mine did not want to incur any expense of conducting formal training for its workers.<sup>77</sup> For instance in 1943 an African died after falling some fifteen feet to the bottom of a shaft at Kabwe Mine.<sup>78</sup> Medically, the accident also revealed that the deceased had septic pneumonia as the lower lobe of the right lung was greatly enlarged, swollen and distended with pus. This shows that African mineworkers reported for work even when they were ill. Reportedly, more accidents occurred between during the Second World War which were caused by fall of rock underground, runaway ore car underground, and lorry accidents.<sup>79</sup> Increased production meant that the African mineworkers increased their output by working harder or for longer hours or a combination of the two and that additional raw labour was engaged thus tending to increase accident proneness.<sup>80</sup>

In 1940, the mine decided to provide some workers with makeshift clothing in the hope of trying to prevent mine accidents. Certain workers were provided with sandals made from rubber tyres and putters or canvas overall made initially from discarded canvas. These clothes

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<sup>77</sup> Turner, "Socio-Economic", p. 92

<sup>78</sup> NAZ, MH1/02/001/3151 Letter from J. A Fawdry Acting Commissioner for mines to Director Medical Services dated 3<sup>rd</sup> September, 1941.

<sup>79</sup> MIA, Loc T18.5E RBHD Company Ltd, Report and Accounts for the year ended 31<sup>st</sup> December 1940; RBHD Company Ltd Report of the Directors, 1941; RBHD Company Ltd Report of the Directors 31<sup>st</sup> December 1942; RBHD Company Ltd Report of Directors 1943; RBHD Company Ltd Report of Directors 1944; and RBHD Company Ltd Report of Directors, 1945.

<sup>80</sup> Mines Department Annual Report for the year ended 1946 with preface covering the years 1939 to 1945, p. 13

however did little in protection against accidents. In 1943 workers at the cell room were provided with boots and towards the end of 1945 the workers were charged for boots. Gradually, more protective clothing was made available to workers at a cost, but because of their low wages, African workers were unwilling or rather unable to buy such clothing. The protective clothing provided free remained minimal throughout the forties.<sup>81</sup> Hence, makeshift clothing as a way of a mitigation measure against accidents during the Second World War proved ineffective.

### **The Second World War, Living Conditions and African Health**

The minimal construction of mine housing in the early 1940s aggravated the migration of families into Kabwe. Housing was becoming better and workers increasingly brought their wives and families to town, while they still expected to return to the village, they now planned to live in town for extended periods. The growth of family life created new problems for the mine, railways and municipality. More married housing was needed than ever before and the mine and railways attempted to keep down the construction of married housing by limiting the number of workers they would recognise as properly married.<sup>82</sup>

It was for this reason that the employers asked workers' representatives if occupants of the mine farms would share their farms with friends or relatives who were mine employees. The representatives replied that there were many such employees already living on the mine farms and they asked the mine to build housing for them. The mine also asked if families would be willing to live in single quarters that were converted to married quarters. All forms of housing were occupied by as many people as possible.<sup>83</sup> Despite these housing challenges, the company still encouraged the workers to settle their families in Kabwe (even if they did not

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<sup>81</sup> NAZ, ZA/7/1/5/7 Annual Report Luangwa District year ending March 21<sup>st</sup>, 1943, p. 9 - 10.

<sup>82</sup> Turner, "Socio-Economic", p. 212

<sup>83</sup> NAZ, SEC2/3126 Minutes of Meetings with compound representatives, 20<sup>th</sup> July 1942.

always officially recognise their married status) in order to assure their labour supply at a time when the Copperbelt competition for African labour was severe.

This insistence by the company of encouraging workers to bring their families despite the minimal construction of houses at the mine heightened the situation of overcrowding as there were still quite a number of employees who were not housed and squatting with other employees. This situation aggravated the serious cases of communicable diseases amongst workers and their families. Reportedly, high cases of chicken pox, measles and whooping cough seemed to be continuous in the compound and a lot of bilharzia amongst women and children.<sup>84</sup>

The mine records of 1945 also reveal that a host of problems were brought to the attention of the company manager during the course of the war. Among such problems discussed were mine beer hall hours, security from house theft, hospital conditions, lack of firewood, cocoa and beer rations among other things. Larger issues were similarly discussed year after year, generally without any satisfactory resolution. Wages, quality and quantity of rations, beer raids, married housing and race relations were major issues.<sup>85</sup> Such grievances by the African mineworkers of the poor conditions of service that were provided by the company, indicates that the mine was only interested in increased production at the expense of the labourers' welfare.

Low wages were a constant complaint in the early 1940s by the workers who felt that while costs of manufactured goods soared 100% to 200% and food 50% to 100% during the war, African wages remained at Depression levels.<sup>86</sup> This situation caused poverty in both the five acre plots and mine compounds as African workers relied on the meager salaries to

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<sup>84</sup>NAZ, MH1/3/38 Broken Hill Mine Township, 1942.

<sup>85</sup> NAZ, SEC1/1041 Letter from Pickard General Manager for RBHD Company Ltd to the Assistant Chief Secretary Native Affairs, 21<sup>st</sup> December, 1945.

<sup>86</sup>NAZ, SEC1/1353 Survey of food Conditions, 1943.

supplement on the poor rations that were offered. The inability to do so led to poor feeding consequently, malnutrition occurred. Improper food continued to be offered to the families even after the depression. The mine management referred to the shortages of the war and the famine as a reason why it continued to offer such kind of foodstuffs to its workers. Rotten maize meal, beans, groundnuts and pumpkins continued to be the issued even when the workers protested. Meat still remained a rare delicacy.<sup>87</sup>

During the period 1943 to 1945 hospital conditions were far from desirable and were instrumental in the spread of diseases. This led to miners shunning the hospital and continued staying in compounds where they communicated diseases to other people. While the compound manager complained that workers could not be persuaded to be treated in the hospital, the workers complained that conditions in the hospital were not conducive to a quick recovery. Orderlies were rough and rude, the food was unpalatable and meager, worse yet, it was all served on one plate, contrary to the Africans' habit. Patients objected to sharing showers and latrines with patients who had venereal disease and there were no separate shower facilities for men and women.<sup>88</sup> All in all poor living and working conditions and medical facilities played a major role in the disease environment at Kabwe Mine. These conditions were worsened by the effects of the Great Depression and Second World War on the mining industry. Although the management could not do much in improving the health of African miners and their families, women in both the mine compound and five acre plots greatly helped in safeguarding their families' health.

### **The Role of Women**

The role of women at the mine was clearly defined along the lines of mitigating the health problems which were found at Kabwe Mine. Their presence in both the five acre plots and

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<sup>87</sup>NAZ, SEC1/1353 Survey of food conditions, 1943.

<sup>88</sup> Turner, "Socio-Economic", p.249.

the mine compounds contributed to dealing with the problems encouraged by the depression and Second World War as they tended to engage in activities like gardening, beer brewing and so on which improved the health of their families.

Initially, most miners who came to work at Kabwe mine left their wives back in the rural areas. But after a certain period of time when the mine management needed stabilised labour, it started encouraging African mineworkers to bring their wives to the mine compounds. As earlier stated, most of the workers who had families opted to stay on the five acre plots. Here, the role of women was clearly defined. Gardening, beer-brewing and the provision of domestic favours were all features of the work performed by women in their villages and it was primarily these tasks which women transformed into means of earning cash in the market economy of urban areas.<sup>89</sup>

Women's agricultural labour was particularly important. Land was tilled by the wives of the male workers, the women themselves, by servants, and by relatives. Unemployed visitors often helped in fieldwork as well. The fertility of the land available varied considerably. Some of the plots, for instance worked on continuously for many years lost their fertility yielding very poor crops, others, which were recently allocated, produced excellent crops.<sup>90</sup> Garden cultivation played a major role in women's' lives both socially and economically.<sup>91</sup> The women made extra money by selling some of the crops they grew and kept some extra delicacies for themselves. By 1939, there were 396 of these plots and were controlled by the compound manager assisted by tribal elders.<sup>92</sup>

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<sup>89</sup> George Chauncy Jr, "The Locus of Reproduction: Womens' Labour in the Zambezi Copperbelt, 1927-1953" **Journal of Southern African Studies**, Vol 7, No 2 (April 1981), p 144.

<sup>90</sup> Godfrey Wilson, **The Economics of Detribalization in Northern Rhodesia** (Rhodes-Livingstone Institute, Northern Rhodesia, 1941 ), p. 21

<sup>91</sup> Chauncy, "Locus", p. 147

<sup>92</sup> NAZ, ZA7/1/17/2 Central Province Annual Report 1940, p. 5

Agriculture also played a major role in the alleviation of dietary related diseases at the mine especially at the plots as women were able to supplement the poor rations given by the employers with the produce from the gardens. This explains why most of the single labourers who did not have wives to supplement their food were more prone to contracting health problems due to improper cooking and diet whilst most of those who were married maintained good health as their wives took care of them. Godfrey noted that the industrial companies all in varying degrees encourage labourers to bring their wives because it is worthwhile to do so.<sup>93</sup> In the case of Roan Antelope Mine, Kalusa similarly argued that, “by supplementing company rations married miners and their families managed to maintain themselves in relatively good health. Many visitors to the mine observed that married families were healthier and more contented than single labourers.”<sup>94</sup>

Beer brewing was an essential and important activity of women in the rural areas. The women who moved to the towns continued to brew beer which was an activity supported even by the compound managers as an income generating scheme.<sup>95</sup> They procured the necessary ingredients such as maize and millet, from their own gardens or nearby villages and prepared the beer inside their homes. After it was ready, the women spread the word through the network of friends and relatives and men quickly learned of its availability.<sup>96</sup> Beer brewing allowed the women to earn extra cash which was used in purchasing food items such as fish, grain, caterpillars, meat, hens and so on.<sup>97</sup> In fact, this activity saw women earning cash which helped in alleviating the poverty levels as they were able to buy food which they supplemented upon the poor rations that were given by mine during the depression and the Second World War. The mine also had some interest in their employees

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<sup>93</sup> Wilson, **Economics of Detribalization**, p. 40.

<sup>94</sup> Kalusa, “Aspects”, p. 49.

<sup>95</sup> Jane L. Parpart, “The Household and the Mine Shaft: Gender and class struggles on the Zambian Copperbelt, 1926-1964”, **Journal of Southern African Studies** Vol. 13, No. 1 (October 1986), p 41.

<sup>96</sup> Chauncy, “Locus”, p. 145.

<sup>97</sup> Wilson, **Economics of Detribalization**, p. 23.

drinking beer, as it served to dissipate the tensions of the workplace thereby encouraging efficiency at the workplace.<sup>98</sup>

In addition to gardening and beer brewing, women cooked and helped provide men's food, maintained sanitary living quarters, washed clothes, managed household budgets and provided other social and sexual services. It was observed that homes of married workers were comparatively cleaner than those of single men as women swept the grounds of the huts and kept flies away. The difference in the cleanliness was reflected in the number of diseases resulting from poor sanitation such as diarrhoea in single quarters than married homes.<sup>99</sup> Such roles of women continued to play a part in the decrease of certain diseases that afflicted the miners and their families even through the war period.

## **Conclusion**

In summary, it can be asserted that the world-wide economic slump and the Second World War played a key role in the changes in the disease environment at Kabwe Mine. During the Great depression health conditions worsened in the African community as the company minimised expenditure on African housing, sanitation and diet which led to further deterioration in African health. The Second World War also promoted the outbreak of industrial diseases and also expanded poor health conditions which were already present in the mine compounds as expenditure on African health remained minimal. However, the women in both the mine compounds and the five acre plots played a critical role in improving the lifestyles and health of the miners and their families. They grew food which they supplemented upon the rations and also obtained money through the sale of beer which they used to purchase other foodstuffs.

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<sup>98</sup>Wilson, "Economics of Detribalization", p. 31.

<sup>99</sup> NAZ, MH1/02/001/3151 Letter from J. R Macgregor Provincial Medical Officer to the Commissioner of Mines, 5<sup>th</sup> December, 1942.

## **CHAPTER FOUR**

### **AFRICAN HEALTH CHALLENGES IN THE POST-WAR ERA, 1946-1964**

#### **Introduction**

The purpose of this chapter is to demonstrate the health challenges of African miners after the Second World War associated with increased production of minerals at Kabwe Mine. Increased production was as a result of the Korean War of the 1950s which began when North Korea invaded South Korea. The United Nations with the United States as the principal force came to the aid of South Korea. China with assistance from the Soviet Union supported North Korea. Due to the war, demand for lead and zinc at Kabwe Mine increased production to meet war demands with the United States of America and the United Kingdom being the main importers of lead and zinc. This meant that the Rhodesia Broken Hill Development Company Limited had to increase its labour force. This led to continued overcrowding. Poor health conditions continued to be witnessed due to harsh living conditions and poor sanitation. Occupational diseases such as TB, lead-poisoning and accidents continued to be on the rise in the post war era. The chapter also highlights that the ecologically related diseases such as malaria and dysentery continued well after the war. However, the company continued to implement measures to mitigate such health problems to lower levels while women continued to play a vital role in promoting miners' health.

#### **Living Conditions in the Post War Period**

Mineral production in Northern Rhodesia underwent a tremendous increase after 1946. This increase was facilitated by the demand of minerals caused by the Korean War of the 1950s and the demand created by European countries for reconstruction of industries. Lead and zinc production at Kabwe Mine in particular increased. Lead output rose from 8, 239 tons in 1946 to 15, 640 tons in 1955, the highest since 1922. Zinc output also rose from 17, 190 tons in 1946 to

25, 330 in 1953. These minerals were exported to the United Kingdom, United States of America, Holland India and Italy.<sup>1</sup>

In order to facilitate this increase in production, the mine needed to increase employment which caused a strain on available housing as there was already inadequate housing at Kabwe Mine.<sup>2</sup> Poor housing led to overcrowding which was one of the main causes of health problems at the mine. By 1945, the shortage of housing had become so acute in Kabwe that the mine risked losing African labour because of lack of accommodation.<sup>3</sup> Thus overcrowding and poor sanitation were catalysts of diseases in the post war era. Malnutrition, venereal diseases, dysentery, malaria, lead poisoning and tuberculosis continued to cause general ill health among Africans and reportedly reduced the work efficiency of the African labour force.<sup>4</sup>

Inadequate nutrition weakened resistance to certain diseases. The rations given to workers were notoriously insufficient for the needs of the mineworkers and their families. For example, in 1949, there was a serious shortage of beans and nuts and despite representations made to the butchers, meat supplied to Africans was of poor quality and quantity. Also, there was no marked improvement in ration scales due to shortage of so many commodities because of increased employment at the mine.<sup>5</sup> Inadequate food supply contributed greatly to the persistence of diseases to a greater extent. Malnutrition in particular continued to be noticeable and disturbing feature of a large number of patients admitted to the African hospital at Kabwe Mine.<sup>6</sup>

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<sup>1</sup>Northern Rhodesia, **Mines Department Annual Report** (Lusaka: Government Printers, 1946), p.6.

<sup>2</sup>H. W Woodruff, **The Federation of Rhodesia and Nyasaland** (London: Her Majesty's Stationary Office, 1955), p. 1.

<sup>3</sup>Arthur Allan Turner, "A Socio-Economic history of Kabwe, 1902-1966", PhD Thesis University of California, 1976, p. 343.

<sup>4</sup>Woodruff, **Federation**, 1955, p. 146.

<sup>5</sup>NAZ, CNP 2/2/16 Department of Labour and Mines, Annual Report Broken Hill, 1949.

<sup>6</sup>NAZ, CNP 2/2/5 African Affairs Annual Report for the year 1959 Central Province.

In the late 1950s, however, the mine began to provide cash in lieu of rations. Reason being that African miners began complaining about the kind of foodstuffs that was issued by the mine which they felt was not enough to cater for them and their families. Another reason was that the number of employees increased from about 3,500 in the 1940s to 4,320 in the 1950s thereby putting a strain on the ration system. However, the situation of providing cash in lieu of rations led to an increase in the number of malnutrition cases because most families were used to obtaining food rations without necessarily using their monthly wages to budget or buy foodstuffs. For example, incidences of the inability to budget effectively became visible when 15 children died of malnutrition. This was due to the negligence of buying food for the household as most of the money was spent on material things and on beer rather than on food. During this same period there was an increase in the sale of European beer and a considerably drop in the sale of African beer, which had some nutritional value. This led to more drunkenness on the mine than ever before and reduction in food supply in homes.<sup>7</sup>

Many workers spent wages on beer, material goods, additional food or other things.<sup>8</sup> The miner's union noted that workers' children were not being fed properly and they concluded that the food allocation was not sufficient.<sup>9</sup> The African personnel manager explained that since the introduction of money in lieu of rations, the incidence of malnutrition had increased greatly, not only in Kabwe but on the Copperbelt as well. The attendance at the clinics and the cost of food supplied by them had increased. It was obvious that many mine workers were not using their wages to buy food for their families.<sup>10</sup> Hence, the mining company decided to put in place

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<sup>7</sup>Turner, "Socio-Economic", p. 396.

<sup>8</sup>Turner, "Socio-Economic", p. 397.

<sup>9</sup>Turner, "Socio-Economic", p. 399.

<sup>10</sup>Turner, "Socio-Economic", p. 400.

measures that would safeguard their African employees' health resulting from increased employment which led to poor and uneven distribution of foodstuffs.

Therefore, from 1950 onwards, malnutrition cases began to be attended to at both the hospital and welfare centres where great improvement was witnessed. The mine and government medical officers assisted in caring for underweight and sickly babies who were given milk, and of course, other treatment.<sup>11</sup> Bernard Mukaya, an ex Kabwe miner noted that, "malnutrition cases at the mine were lessening because, our wives used to go to community services where they would be taught on how to take care of children and prepare special foods."<sup>12</sup> Soup issuing was also another measure that was provided to mitigate against malnutrition. In 1954 the company installed a 250 gallon cooker which catered for all African children whose parents were employed by the mine. "Malnutrition became less common because children would go to the welfare centre where they were given soup"<sup>13</sup> explained Mubita an ex-miner. The idea of giving children soup was not only for curbing sickness and providing nutrition, but was also meant to attract them to come to the welfare centre for educational purposes.<sup>14</sup>

Other diseases such as venereal diseases continued afflicting the Africans in the mine compounds during the Korean War period. This was partly as a result of overcrowding in the mine compounds and also poverty in the nearby villages which led to increased prostitution at the mine.<sup>15</sup> It was for this reason that in 1952, venereal diseases began to be treated by antibiotics at the hospital which proved to be effective. For example, cases of syphilis and gonorrhoea

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<sup>11</sup>NAZ, SEC1/1090 Broken Hill Hospital, 1952.

<sup>12</sup>Interview with Bernard Mukaya ex miner, 11<sup>th</sup> March, 2016. ChowaKabwe.

<sup>13</sup> Interview with Patrick Mubita ex Miner, 18<sup>th</sup> March, 2016. MakululuKabwe.

<sup>14</sup> MIA, Loc 11.8.6F Community Services Department Monthly Report November, 1964, p. 4.

<sup>15</sup>NAZ, MH1/3/28/3189 Annual Report Health Department Central Province 1950.

reduced from 68% in the 1940s to 39% of the total population in 1954.<sup>16</sup> Penicillin treatment was also extended to the surrounding areas in Kabwe where most of the labour came from and also Mumbwa district dispensaries which were under the supervision of M. Nixon, the medical inspector in charge.<sup>17</sup>

It is important to note that even after the Korean War ended in 1953, production at Kabwe Mine continued to increase as the mine began expanding its market to meet other demands from both Europe and America. Therefore, the mine's efforts which were mostly focused on increased production continued to negatively affect living conditions of Africans. Poor sanitation continued to pose serious health problems to the Africans especially in the wet season. For example, heavy rains in 1958 flooded all the latrines in the compound creating a severe and immediate health hazard. Many latrines collapsed completely and sewerage flooded the area. Some thirty thousand pounds was required to provide a new sewerage system and even then the situation was not satisfactory. In the early 1960s, the abandonment of the compound was considered but the idea was rejected because of the continued shortage of houses.<sup>18</sup>

General cleanliness in the compounds was also a major concern as the disposal of litter was not properly dealt with. This garbage in the compounds attracted flies which caused diarrhoea cases.<sup>19</sup> In an effort to do away with such health challenges which would create problems for them from the provincial health department, the mining company in 1960 decided to issue tenders for collection of refuse in the township as a way of promoting cleanliness in the

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<sup>16</sup>NAZ, MH1/09/13/3278 Broken Hill Combined Hospital Advisory Committee 1952 to 1961.

<sup>17</sup>NAZ, MH1/3/28/3189 Federal Ministry of Health Annual Report Central Province, 1954.

<sup>18</sup>Turner, "A Socio-Economic", p. 344

<sup>19</sup>NAZ, SEC2/606 Broken Hill Tour Report No. 5 of 1958.

compounds. Garbage bins were also provided in the compounds and collectors were employed to remove garbage weekly.<sup>20</sup>

During the post war era, inadequate housing continued to give way to overcrowding as earlier stated. This situation easily facilitated the spread of communicable diseases which erupted into epidemics from time to time at the mine. For instance, in the late 1950s, there occurred an epidemic of whooping cough in the mining compounds and the health inspector was approached on numerous occasions because children had been coughing and spitting throughout the compounds thereby leading to the spreading of the disease.<sup>21</sup> It was then resolved that the solution lay in isolation and disinfection in homes and that, patients who were still in the infectious stages not permitted to mingle with other children. The medical officer was of the opinion that parents were concealing cases. The provincial medical officer also pointed out that there was no unit of infectious diseases at Kabwe Hospital and the other thing was that doctors did not notify the health department whenever a case of infectious diseases occurred.<sup>22</sup>

There were also widespread epidemics of measles and chicken-pox in the mining compounds. Two epidemics of cerebro spinal meningitis also occurred together with Alastrim in 1960.<sup>23</sup> From time to time, a limited outbreak of smallpox occurred in the Northern Rhodesia in the second half of 1963 and a number of cases were also reported in certain towns notably Ndola and Kabwe. The mine was not spared by this outbreak and the incidence was somewhat greater than in previous years. Therefore, in order to maintain a steady inflow of labour, the mining company with the help of the ministry of health carried out large scale vaccinations in the town and mine

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<sup>20</sup> MIA, Loc 11.8.6F Community Services Department Monthly Report, November 1964, p. 5.

<sup>21</sup>NAZ, MH1/3/38/3621 Broken Hill Medical Officers Annual Reports, 1952 to 1958.

<sup>22</sup>NAZ, MH1/3/47 Annual Report for the year ending 31<sup>st</sup> December 1959.

<sup>23</sup>NAZ, MH1/3/28/3189 Annual Report Health Department Central Province, 1960.

compounds respectively.<sup>24</sup> There were also some cases of poliomyelitis which occurred in African children residing in the mine compound.<sup>25</sup> In order to eradicate polio and help the government acquire the funds to obtain the vaccines, the Health Consultative Committee of Northern Rhodesia held a special meeting dated 28<sup>th</sup> August 1962, where a request was made that a contribution in the region of four to five pounds towards advertising the campaign for oral polio vaccine should be made by municipality and Mine Township.<sup>26</sup> All in all, these outbreaks of diseases which occurred periodically in the townships were brought under control with mass vaccinations carried out under the effort of the government and the mining company. Hence the cases were not as severe as the ones witnessed in the 1920s.<sup>27</sup>

In order to minimise incidences of diseases arising from poor sanitation and overcrowding, the mining company in the late 1950s sought to embark on constructing new houses and also improving upon some old African dwellings. Although this was a good move, some African workers through their tribal representatives complained that Africans were given houses in a section which was condemned by the town medical officer. The representatives also complained that funds from the beer halls were being used to improve European residential areas where the roads were tarred unlike in the African township.<sup>28</sup>

However, the company occasionally constructed more houses in both the mine compound and five acre plots. In the African township, a number of barrack type single quarters were converted to provide 236 married quarters and 6 two-roomed houses were built on five acre plots in 1958.

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<sup>24</sup>Ministry of Labour and Mines Annual Report of the Department of Labour (Lusaka : Government Printers, 1964), p. 23.

<sup>25</sup>NAZ, MH1/3/28/3189 Federal Ministry of Health Annual Report Central Province, 1954.

<sup>26</sup>MIA, Loc 2.8.2A Broken Hill Township management Board, 1957 to 1964.

<sup>27</sup>MIA, Loc T18.5E RBHD Annual Report 31<sup>st</sup> December 1955.

<sup>28</sup> MIA, Loc 11.8.6F Minutes of the Kabwe Mine Township Council meeting held in the council meeting room on the 19<sup>th</sup> November, 1960.

In 1960 additional housing was provided for 400 families and there was also the conversion of 59 blocks of single quarters into married quarters. Twenty special type three roomed houses were also been built. It was the mine managements' intention to evacuate the thatched roofed compound as soon as additional permanent housing permitted.<sup>29</sup>

A further 100 two roomed houses in the main compound were completed and 409 round huts with thatched roofs were erected on the five acre plots in 1961.<sup>30</sup> Eight (8) special type houses and 48 improved type houses were under construction in 1963. In the same year the system of tribal elders was abolished and the African mineworkers union was granted representation on the African welfare committee.<sup>31</sup> It was felt that the tribal leaders were selfish in the handling of housing issues as they favoured themselves in representations to the company.

The mine had also earlier on in 1957 began providing housing allowances to all married employees who were not housed by the company but qualified for the allowance. This meant that an employee who shared a mine house with another employee would receive the allowance as though they were not housed.<sup>32</sup> Major works such as the extension of the water borne sewerage system to all sections of the plant and township was completed by 1963 and there was an installation of water system to the African married quarters for the sum of three hundred and fifty seven pounds by the company.<sup>33</sup> The entire European system was now converted to water borne sewerage. Only one area of the African township remained to be converted to this system at the end of the year. A number of barrack type single quarters were also converted to provide

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<sup>29</sup> NAZ, CNP 2/2/16 Department of Labour and Mines Annual Report, 1960.

<sup>30</sup> MIA, Loc T18.5E RBHD Report of Directors, 1951.

<sup>31</sup> MIA, Loc T18.5E RBHD Annual Reports and Accounts 31<sup>st</sup> December 1953 to 1964, p. 13.

<sup>32</sup> MIA, Loc 19.4.2E Letter from Pickard general manager at Broken Hill Mine to Broken Hill Branch, Northern Rhodesia Mineworkers Union, 27<sup>th</sup> February, 1958.

<sup>33</sup> MIA, Loc 19.4.2D Letter from Roberts Construction Company (Central Africa) Ltd to the Resident Engineer RBHD Company Ltd, 22<sup>nd</sup> June, 1962.

236 married quarters.<sup>34</sup> Despite all these developments on housing, there was a further shortage of 157 houses for African mine workers at Kabwe Mine who were married.<sup>35</sup> The African township committee was later formed to discuss and make recommendation in respect of non-industrial aspects of African township life with housing as the major issue.<sup>36</sup> Nevertheless, diseases during the post war era also continued to spread ecologically.

In as far as the adverse living conditions of African miners and their families gave way to diseases, the environment of the mine itself continued to cause incidences of ecologically related diseases such as malaria and bilharzia in Kabwe and Mumbwa districts. For example, in 1961, there was an increase in the number of cases of malaria in Kabwe and the remainder of the province, 130 Europeans and 383 African cases were being recorded.<sup>37</sup> Bilharzia was also extremely prevalent and remained a major problem from the 1950s to early 1960s. However, the mining company began to employ measures that were aimed at reducing such diseases to their lowest levels. For example in 1950, preventive work in the form of spraying with BHC or DDT and similar compounds for the treatment of malaria and with copper sulphate solution for the prevention of Bilharzia was carried out by government units, mine authorities and voluntary effort.<sup>38</sup>

In 1956, the mine also planted about 300 blue gum trees in order to keep most areas clear of the drainage. The provincial health inspector together with the mining company continued their campaign in Kabwe, spraying, searching and oiling for mosquito control in the Kabwe town and also the mine area. The results of these efforts were becoming very apparent as evidenced from

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<sup>34</sup> MIA, Loc T18.5E RBHD Annual Report and Accounts 31<sup>st</sup> December 1951, p. 9-11.

<sup>35</sup> Ministry of Labour and Mines Annual Report of the Department of Labour for the year 1961 (Lusaka: Government Printers, 1962), p. 24

<sup>36</sup> MIA, Loc T18.5E RBHD Annual Report 31<sup>st</sup> December, 1957, p. 13.

<sup>37</sup> Woodruff, Federation, 1955.p. 145.

<sup>38</sup> Woodruff, **Federation**, 1955.P. 146.

the table below. The peak period of malarial cases was reached in 1945 with 43.11% of the admissions to the hospital being malarial cases while in 1952 the lowest figure yet recorded of 13.64% was achieved. In addition an analysis of these admissions showed that nearly all the malarial cases were people living outside the township especially in the farms where such control was out of reach.<sup>39</sup>

*Table 4.0: Table showing malaria cases from 1945 to 1952*

<b>YEAR</b>	<b>TOTAL HOSPITAL ADMISSIONS</b>	<b>TOTAL MALARIA ADMISSIONS</b>	<b>MALARIA (%) OF TOTAL ADMISSIONS</b>
1945	682	294	43.11
1946	579	189	32.82
1947	602	131	21.76
1948	624	124	15.02
1949	885	168	18.98
1950	1228	284	23.13
1951	1249	244	19.53
1952	1452	102	13.64

Source: NAZ, MH1/3/28/3189 Broken Hill Medical Officers Annual Reports 1953, Vol III, p. 5.

As a preventive measure against Bilharzia the dams providing water for human consumption needs were fenced off and the mine management installed wells or boreholes from which water

<sup>39</sup>NAZ, SEC1/1615 Central Province Annual Report on African Affairs, 1956. P. 23

was obtained without there being the necessity of persons coming into contact with the water in the dams themselves where there were snails with the bilharzias vectors.<sup>40</sup> Also treatment for bilharzia began to be administered at the hospital. Apart from ecologically related diseases, the working services at the mine continued to give way occupational diseases.

### **Mining Conditions and Occupational Health**

The continued rise in mineral production as shown in the table below led to the persistence of industrial diseases and accidents. Poor conditions underground continuously facilitated the spread of diseases such tuberculosis between the infected and non-infected workers. Increased production meant a high number of workers working closely together in poorly ventilated areas. Though there was an improvement in the ventilation system, TB persisted at the mine. Those who acquired the disease in this manner transmitted it into the mining compounds. Due to the overcrowding there, many people were exposed to the disease. The long hours the African miners worked underground similarly contributed to the high risk of contracting the disease. Working conditions at the mines undermined the ability of infected workers to control their infections, thus contributing to the production of TB cases and deaths.<sup>41</sup>

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<sup>40</sup> NAZ, CNP1/1/36 Medical and Sanitation Bilharzia- Record of a meeting held in the office of the member for health and local government 1<sup>st</sup> October, 1951.

<sup>41</sup> NAZ, MH1/02/108/3170 Industrial Diseases Committee, 1946 to 1965, p. 13.

*Table 4.1: Table showing the production of lead and zinc from 1946 to 1962.*

YEAR	LEAD PRODUCTION	ZINC PRODUCTION
1946	8, 798	17, 910
1947	15, 640	21, 140
1948	13, 020	22, 170
1949	13, 945	22, 850
1950	13, 685	22, 715
1951	13, 970	22, 590
1952	12, 600	22, 890
1953	11, 510	25, 330
1954	15, 000	26, 550
1955	16, 050	27,900
1956	15, 200	27,030
1957	15, 002	29, 500
1958	13, 043	30, 250
1962	14, 592	39,000

Source: Mines Department Annual Reports for the years 1946 to 1958 and 1962.

However, because of the opening of a well equipped modern hospital in Kabwe in the 1950s, TB cases from most of the surrounding areas and indeed from the mine itself began to be effectively treated. Dr Robinson the medical superintendent at the hospital attributed that, the headquarters for African tuberculosis cases had been moved from Lusaka to Kabwe under the government chest physician, Dr Briggs, early to facilitate the policy of using this very large hospital in the best possible way. The 78 African beds for TB patients from Kabwe Mine were working to

capacity and the other beds for general African patients were all filled.<sup>42</sup> By moving to Kabwe, the numbers of beds available for TB treatment were more than trebled. The survey to determine the incidence of TB at the mine and Northern Rhodesia as a whole continued to be carried out in Kabwe and Lusaka under the guidance of the government specialist. With the cooperation of the Rhokana Corporation a ward in Nkana Hospital had been made available to Dr R Paul the government medical specialist of the Silicosis Bureau and TB cases from Kabwe Mine were also being treated there. Protective vaccination against the disease was being carried out on an ever increasing scale.<sup>43</sup> The Rhodesia Association for the prevention of tuberculosis (RAPT) also raised funds to help in the fight against tuberculosis in the federation through the sale of adhesive seals at a cost of one penny for sale to school pupils in the territory. The funds accrued from the sale of the seals were used to help the association in the fight against tuberculosis.<sup>44</sup>

Most of the times however during the 1950s, situations at Kabwe Mine used to occur whereby after an African worker suffering from TB was given a certain amount of treatment at the hospital, but having a strong desire to return to his village, usually did not remain long in the hospitals. In some cases it was discovered that a miner would only stay for a few days and then left for his village where he arrived in an advanced stage of open TB, and spread it to others. In 1949 it was recommended by the commission of inquiry on the Silicosis Legislation that, it was extremely important and urgent that some general scheme should be initiated and developed by the state to deal with tuberculosis as a general public health problem, extending to treatment aftercare and financial assistance for sufferers as well as such general preventive measures as

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<sup>42</sup> **Northern News**, 13<sup>th</sup> March, 1953, p.7.

<sup>43</sup> **Northern News**, 13<sup>th</sup> March, 1953, p. 7.

<sup>44</sup> NAZ, CNP1/2/65 Letter from R.L Grieves Cook to all Head Teachers Central Province dated 27<sup>th</sup> November, 1957.

may be possible especially in the poor conditions prevailing in African areas.<sup>45</sup> Therefore, such a scheme was extended to Kabwe Mine in order to prevent the spread of the disease to local areas.

In 1960, a precaution was instituted against certain disease sources such as dust due to blasting and drilling which induced diseases like silicosis and tuberculosis, the mine provided a good ventilation system in dust ridden areas especially underground where most cases of tuberculosis were reported.<sup>46</sup> Lameck Chesha an ex miner pointed out that, “after blasting, the explosive dust which was dangerous was given time to settle and only the shift boss would be allowed to survey if it was clear enough for anybody else to go and work. This reduced the risk of getting ill from the dust.”<sup>47</sup> A dust counting laboratory for the testing of samples of mine air was constructed and systematic dust sampling was continued at the copper mines and at Kabwe Mine and monthly ventilation and dust reports prepared in an agreed standard form.<sup>48</sup>

Lead-poisoning continued to be a major health challenge at both the mine and the location where these miners stayed with their families during this period due to increased production. A report made to investigate the lead hazard at Kabwe Mine revealed that, “the management of the mine was very much alive to the lead poisoning hazard. During April 1948, a series of investigations were conducted to determine the lead concentration in the atmosphere of the lead plant building. The report disclosed that dust in a form which was considered injurious to health was present in the vicinity of Newman Hearth area”.<sup>49</sup> It was further discovered that there were enormous amounts of fumes given off from the blast furnace during the tipping of slag and lead which

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<sup>45</sup>Northern Rhodesia, Report of the Commission on Silicosis Legislation (Lusaka: Government Printers, 1949), p. 3.

<sup>46</sup>MIA, T19.6D Rhodesia Broken Hill Development Company Limited Accident Report, 1960 to 1973.

<sup>47</sup>Interview with Lameck Chesha ex miner, 18<sup>th</sup> March, 2016, Makululu, Kabwe.

<sup>48</sup> Mines Department Annual Report (Lusaka: Government Printers, 1950), p. 6.

<sup>49</sup>MIA, Loc 19.4.1F Silicosis and other Pulmonary Disabilities, 1953-1957, p. 5.

posed a serious threat to African worker's health as they were enveloped in this dense fume which they inhaled and which came into contact with exposed portions of their bodies and clothes.<sup>50</sup>

As previously stated, the mining compounds were located in the direction of the fumes from the mines leading to some cases of poisoning on the compounds. Lameck Chesha further attributed that lead poisoning cases were concealed and not addressed effectively but only after the closure of the mine in 1994. The company never usually used to tell people that they were affected by lead. Even children who exhibited certain behaviors were only told late that they were affected by lead.<sup>51</sup>

Leading out continued to be the one of the measures that the mine employed as a preventive and not curative method of safeguarding the health of the African workers. Further precautions which began to be taken later in 1953 by the management against lead poisoning in the lead smelting plant included the medical examination of all employees in the plant every three weeks. The company also provided midday meals and flasks of tea or coffee which were taken underground by the African miners just before the lunch hour.<sup>52</sup>

Also, when Kabwe Mine became scheduled in 1957 as an area where pneumoconiosis was present, it fell under the conditions of the Silicosis ordinance. The Silicosis Ordinance provided for the payment of compensation to men with Northern Rhodesia scheduled services that were found to be suffering from pneumoconiosis or TB or both. In case of a deceased miner, compensation was given to his dependants. A miner was compensated for having the disease

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<sup>50</sup>MIA, Loc 19.4.1F Silicosis and other Pulmonary Disabilities, 1953-1957, p.7.

<sup>51</sup> Interview with Lameck Chesha an ex miner, 18<sup>th</sup> March, 2016, Makululu Kabwe.

<sup>52</sup>MIA, Loc 19.4.1F Silicosis and other Pulmonary Disabilities, 1953-1957, p. 8.

itself whether he suffered from any disability or not. Compensation was financed by levies from the mining companies.<sup>53</sup> Hence most of the African miners at the mine who were affected by either lead poisoning or TB from the mine became liable to receive compensation.

Just like occupational diseases, mining accidents continued to be on the rise at Kabwe Mine. In 1947, out of a labour force of 3, 049, twenty eight were killed and a hundred and twenty eight (128) seriously injured.<sup>54</sup> Another accident occurred in 1950 where a hundred and fifty six (156) workers were seriously injured both on the surface and underground. The following year in 1951 another accident occurred due to the collapse of working face at tailings dam, fifteen African workers were killed and one worker was seriously injured, several sustained minor injuries.<sup>55</sup> In 1952 the casualty rate for persons injured was 30.37% with a total labour supply of 3,789. The seriously injured miners were one hundred and fifteen (115) and twelve (12) died.<sup>56</sup> In the 1953 accident out of 4,021 employees at Kabwe Mine, seventy (70) were seriously injured at casualty rate of 19.76%, with ten deaths occurring.<sup>57</sup>

Despite the accidents, in 1950, the mine sought to reduce these incidences in order to maintain production by employing a number of measures. For example, once a person was employed, the management would ensure that the person was given a blanket, raincoat, warm clothing and so on in order to encourage workers to report for work whether it was raining or cold. Warm clothing was given to insulate people from varying temperatures. Underground African miners were provided with boots, leg guards, waterproof coats, helmets and anti pneumonia jackets. Gloves, goggles, fire resisting putters and hard shields where also issued were considered

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<sup>53</sup>MIA, Loc T18.5E RBHD Annual Report 31<sup>st</sup> December, 1960, p. 25

<sup>54</sup>Northern Rhodesia, Mines Department Annual Report (Lusaka: Government Printers, 1947), p.14.

<sup>55</sup>Northern Rhodesia, Mines Department Annual Report (Lusaka: Government Printers, 1951), p. 6.

<sup>56</sup>Northern Rhodesia, Mines Department Annual Report (Lusaka: Government Printers, 1952), p.7.

<sup>57</sup>Northern Rhodesia, Mines Department Annual Report (Lusaka: Government Printers, 1953), p. 14.

necessary. New comers were instructed in the use and benefits of protective clothing. In 1951, a strict and regular check was maintained with regard to the wearing of protective clothing and offenders were penalised. Quarterly refresher courses for mine rescue teams continued to be held at the Roan Antelope mine where a gas chamber was available, and were attended by two men from Kabwe Mine in addition to the teams from the Copper Mines.<sup>58</sup> Muchinda an ex miner noted that, “we used to go for first aid training where we were taught on how to handle miners injured on duty or suffocated by gas before they were dispatched to the hospital”<sup>59</sup> Underground practices were also carried out at the individual mines.<sup>60</sup>

Working conditions at the mine began to be greatly improved during the late 1950s. The management put in place several strategic measures that improved conditions of service of the mine. Ngulube an ex miner evidently pointed out that,

In each department of the mining company, there was an accident prevention department. The officers in these departments used to carry out seminars for the workers educating us about the dangers of the work, what to do in case of an accident, what type of protective clothing to wear underground or at the smelters. Such preventive measures were very serious. There were also officers who made sure that workers did not work for longer periods of time without food, for example, 10 00hours tea break, 12 30hours lunch and 13 30 hours back to work. There were also washing provisions for our protective clothing, all we could do was leave the dirty clothing together with the gum boots in the washing area and workers would come and wash them so that the following day we would find them dry and clean. In dealing with overcrowding, the mine used to carry out surprise inspections at night such that if one had so many visitors, they would chase them. Only the miner and his wife and children were required to stay in the house. Sometimes the mining company did not want a lot of Africans staying in one place for fear that they would discuss politics.<sup>61</sup>

Other major interventions of safeguarding the health of the African community at Kabwe Mine during and after the Korean War, were that the company now began applying both curative and

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<sup>58</sup>Mines Department Annual Report for the year 1952, p. 12.

<sup>59</sup>Interview with Muchinda ex Kabwe miner.

<sup>60</sup> Mines Department Annual Report for the year 1952, p. 14

<sup>61</sup>Interview with Ngulube ex Kabwe miner.

preventive measures that witnessed some improvement in the working and living conditions of Africans at the mine. The greatest improvement that was effective in safeguarding Africans was that of the opening of Kabwe General Hospital in 1952.<sup>62</sup> It was reported that the hospital had the most modern equipment the territory had ever seen. Dr A. C Thomas a Belgian Congo Doctor at that time attributed that, “the new combined hospital in Kabwe and the Silicosis Medical Bureau in Kitwe were two fine pieces of medical armament in Zambia.”<sup>63</sup> He further argued that, the Congo had a number of excellent modern hospitals but none on the scale of Kabwe.<sup>64</sup>

The mining company entered into an agreement with the hospital administration which provided medical schemes for the African miners and their dependants. The company paid for its workers and their dependants who received medical attention from the hospital and it also assumed responsibility of about 60% of all the cost medical services while the government contributed 40% of these costs.<sup>65</sup> The mining company made sure that every form of medical treatment was available and particular attention was paid to pre and post natal cases and child nutrition. In addition the company also engaged into research on the incidence of malaria and bilharzias and contributed actively towards steps to control these diseases at the hospital.<sup>66</sup>

Apart from the hospital being a blessing to the people in Kabwe, the mining company specifically opened mine clinics in 1955 in the locations where the miners lived with their families. Examples of such clinics were Katondo, Makululu and Five Acre Plots clinics.<sup>67</sup> Nyirenda an ex miner commended the mine that, “medical measures employed by the

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<sup>62</sup> **Chronicle**, 5<sup>th</sup> May, 1952, P. 5

<sup>63</sup> **Northern News**, 21<sup>st</sup> May 1953, P. 3

<sup>64</sup> **Northern News**, 21<sup>st</sup> May, 1953, p. 3.

<sup>65</sup> NAZ, MH1/03/106/3203 Health Department Annual Reports, 1950 to 1955.

<sup>66</sup> Northern Rhodesia, Report of the commission appointed to inquire into the mining industry in Northern Rhodesia (Lusaka: Government Printer, 1962), p. 15

<sup>67</sup> Interview, Makaya ex health assistant, 15<sup>th</sup> March, 2016. Chowa Kabwe.

company were good, miners had their own doctors and so did their wives and children. Each morning there was a doctor at the work place and also at the clinics in our compounds to check on families at home.”<sup>68</sup> There was a general view that the ‘white man’s medicine’ was now being accepted to such an extent that there was a pressing need for medical facilities throughout the town. A number of attendances continued to be high in the health centres particularly maternity cases and also mobile clinics were introduced which provided a useful service by paying daily visits to far areas.<sup>69</sup>

In the period 1949 to 1962 the mining company also increased inspection visits to the housing areas and work place as often as possible. It was by these frequent visits that contact with African labour were established. Reports on visits to housing areas showed details of the number of married and single African employees, number of children, type of house, sanitation, water supply and rations.<sup>70</sup> Such visits were important as the mine tried by all means to improve the lifestyle of the African community as well as prevent epidemics from breaking out as some parents were in a habit of concealing disease cases. For example, Successful efforts were made to control fly breeding in the mining compound and farm areas with a resultant decrease in enteric diseases.<sup>71</sup>

From the 1950s onwards, the mining company at Kabwe Mine also fixed allowances for workers in exceptionally dangerous places or where working conditions were exceptionally bad or in cases where work was done underground. Examples of such places were acid plants, cell room and lead plant. Apart from fixing allowances, they also provided suitable gas masks and

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<sup>68</sup>Interview with Ngulube ex Kabwe miner.

<sup>69</sup> MIA, Loc T18.5E RBHD Annual Report 31<sup>st</sup> December, 1957, p. 13.

<sup>70</sup> NAZ, MH1/8/7/3261 Departmental Conference of Labour and Mines in Ndola, 24<sup>th</sup> March, 1950.

<sup>71</sup>NAZ, CNP 2/2/16 Department of Labour and Mines, Annual Report of 1949.

respirators for employees in places where excessive fumes or dust were present, drinking water was provided for employees in any place where the heat was excessive, oilskins were given to workers working in excessively wet places, overalls for apprentices were provided, necessary protective clothing for all underground welders and others using a torch were given, short gaiters, leather were also provided for welders.

In 1955, all disabled people as a result of mine accidents were not discharged but given other lighter jobs within the company and their children's rations were included in the inclusive wage scheme of their parents so long as they remained with them.<sup>72</sup> A year after, change houses at every working place in all mines including Kabwe Mine were provided with hot baths by various mine management. The miners underground also began to be issued with free boots throughout their service as such whenever the other pair was worn out instead of being charged one pound for a new one they were given for free.<sup>73</sup>

Although the mine management constantly reiterated that Kabwe Mine was not in the same prosperous category as the Copperbelt mines, the African mineworkers union at Kabwe Mine was able to improve the services of African mineworkers by constantly comparing their working conditions with those on the Copperbelt. In 1956, holiday and retirement bonuses and overtime pay were increased so that they were equivalent to those on the Copperbelt. Also increase in basic wages for all groups was fixed as follows:

Class I boss boys were promoted from grade E to grade F resulting in the following increases; surface, 20/-d and underground, 22/6d. Centered bed boys and stamper boys in the lead smelter plant were upgraded from A to B resulting in an increase of 5/-d per ticket. Cost of living allowance was consolidated as follows in basic pay;

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<sup>72</sup>MIA, Loc 19.4.1A Northern Rhodesia Mineworkers Union, 1952 to 1962.

<sup>73</sup>MIA, Loc 19.4.1A Northern Rhodesia Mineworkers Union, 1952 to 1962.

grade A and B, 2/6d per month, grade C and D, 5/-d per month and grade E and F, 7/6d per month.<sup>74</sup>

In the following year, a prosperity bonus part of which was paid monthly and part accumulated for payment each Christmas was also included, an increase in the rate of pay for Sunday work, gratuities for retirement after long service and introduction of the inclusive wage scheme for the top three grades of African labour, by which payment was made in lieu of rations were also included. The mine also undertook to train more African boss boys according to the higher standards of the Copperbelt. The union attempted to insure that Africans who took over jobs previously done by Europeans were promoted accordingly.<sup>75</sup>

Apart from financial measures being implemented, victimisation and discrimination on the mine became a very sensitive matter and the company tried to reprimand the Europeans who were involved in such habits. In 1958, the mining company strongly stressed how necessary it was for all Europeans to deal correctly with the Company's African employees and that petty assaults on and use of insulting language to Africans particularly at the period of apparently undue African sensitivity towards political ethics, would have led to something serious. Racial relations were more strained at Kabwe Mine than at any other mine in the territory.<sup>76</sup> The company stipulated that cases of victimisation and discrimination were liable to dismissal or imprisonment.<sup>77</sup>

In addition, in the early 1960s the mining company encouraged the formation of welfare committees by Africans and also some representatives from the company. These welfare committees directly dealt with problems that were experienced in the mine townships. Examples of such committees were; Women's committee whose main duties were to teach women how to

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<sup>74</sup> NAZ, CNP 2/2/16 Department of Labour and Mines Annual Report, Broken Hill, 1956, p. 8

<sup>75</sup> Tuner, "A Socio-Economic", p. 383.

<sup>76</sup> MIA, Loc 19.4.1A Letter from General Manager RBHD Company Ltd to Chief Secretary to the Government, 24<sup>th</sup> April, 1958.

<sup>77</sup> MIA, Loc 19.4.1A Northern Rhodesia Mineworkers Union, 1952 to 1962.

sew, clean, cook and take care of their children so as to avoid malnutrition cases, Adult education committee whose main aim was to carry out literacy classes of adult education for African mine employees. The company also encouraged the formation of youth clubs. For example; Chawama music club raised money for helping in the maintenance of sanitation in the compounds by supplying music to the beer hall during school holidays, Buyantashi Young Farmers Club prepared a number of acres for maize and potatoes. Other vegetables were also in good supply. The club also supplied casual labour and kept welfare surroundings clean and also arranged games, kindergarten classes and so on. There was also the Bwafwano Youth Club whose main activities were maintenance and township cleaning and also the Social cases committee which investigated cases ranging from matrimonial disputes, arson, assault, debts and witchcraft, running of beer halls, market and also looked into housing issues.<sup>78</sup>

However, the following activities were retained under the control of the medical department; malaria control, fly control, control of other pests (bugs, fleas etc), rodent control, supervision of collection and disposal of refuse, inspection of stores, markets, beerhalls, inspection of latrine blocks, underground latrines and change houses and inspection of compounds.<sup>79</sup> Although some of these activities were effectively controlled with the help of the welfare committees at the mine.

From 1946 to 1964, Women at both the mine compounds and the five-acre plots continued to play a vital role in safeguarding the health of their families. Most of the produce that was utilised by the mineworkers came from the five-acre plots and from the nearby villages. Some women from the compounds would venture out into these villages to obtain things such as hens,

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<sup>78</sup>MIA, Loc 11.8.6F Community Services Department Monthly Report November, 1964, p. 2.

<sup>79</sup>MIA, Loc 2.8.2A Broken Hill Township management Board, 1963.

caterpillars, fish and so on which they supplemented on their diet and also sold to earn extra income. With the provision of the African market by the mining company outside the mine compounds, women began to engage in trading different items. Agricultural items such as maize and vegetables from the five-acre plots as well other supplies became the main items of trade by the women. Therefore, the women greatly helped in reducing reliance on rations by selling nutritious food items to the miners who supplemented upon the rations they received and also they provided these same foodstuffs to their families. Proper feeding helped the African miners resist certain dietary related diseases thereby reducing disease incidences at the mine.

All in all, between the end of the Second World War and Zambian independence in 1964, the structure of the African community in Kabwe became relatively stable. Post war economic growth plus the unionisation of Northern Rhodesia mine and Railway workers caused a significant improvement in employed Africans' standards of living. This obvious growth in affluence attracted increasing numbers of people to Northern Rhodesian towns, including Kabwe. The increased population pressure made African workers more reluctant to leave their jobs even for temporary leave for fear they would lose their jobs to eager new comers. Each community became more highly organised in an effort to promote its own well being.<sup>80</sup>

### **Effectiveness of the Measures Employed by the Mining Company**

Despite the setbacks in African lifestyle and health during the post war era (1946 to 1964), the mining company effectively instituted certain measures that saw an improvement in the African community's health. The effectiveness of the measures instituted by the mining company in the

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<sup>80</sup> Turner, "Socio-Economic", p. 358.

post war era period can best understood by analysing the death rate of African miners from both diseases and accidents at the mine from the table below:

*Table 4.2 Table showing the death rate per thousand African employees per annum*

YEAR	DEATH RATE %
1946	4.26
1947	4.04
1948	5.81
1949	5.23
1950	4.79
1951	4.56
1952	6.75
1956	5.80
1957	7.20
1958	4.17
1959	3.98
1960	3.87
1961	4.05
1962	3.89
1963	3.21
1964	4.01

Source: MIA, Loc T18.5E Broken Hill Development Company Limited Annual Reports, 1946-1964.

The table indicates that the fluctuations in the figures of the death rate were due to how well the mining company managed to deal with specific health problems in different years respectively. Most of the figures showed a decline in the death rate of the mine workers due to the company's efforts of applying both the preventive and curative measures which witnessed some improvement in both the living and working conditions at the mine. The mining company managed to carry out construction of mine housing on both the five acre plots and the mine compound. This move created some room for Africans and their families and lessened the outbreak of certain epidemics which resulted from overcrowding and poor sanitation.

The company in conjunction with the local authorities also played a part in eradicating certain epidemics such as smallpox and Spanish influenza through carrying out normal quarantine measures and mass vaccinations. Also the measures against ecologically related diseases such as malaria through oiling, spraying and so on brought about a significant reduction in such cases as in indicated by figure 4.0. The mining company also played a major role in taking care of children who suffered from malnutrition, not only did they provide medical treatment, but food stuffs as well were provided to the children for as long as they stayed in hospital. This lowered the number of dietary related diseases in the compounds.

The fluctuations were also due the medical services that were provided to the dependants of the miners. The mining company provided medical schemes to both the African miners and their dependants. It even made sure that special medical attention was paid to pre and post natal cases. Some miners interviewed attested to the fact the mine used to provide baby hampers to pregnant

women which included napkins, blankets and clothes.<sup>81</sup> Such a gesture prevented deaths from winter induced diseases like pneumonia.

Moreover, the mine management employed measures that were aimed at reducing the number of TB cases by providing treatment and also financial assistance to the miners affected. The miners used to undergo medical screening every three weeks and if one was found to have lead in the blood, they were transferred to work elsewhere where no such hazard was present. Mining conditions also improved due to the provision of protective clothes. Hence, it is suffice to argue that the measures employed especially in the post war era fairly reduced the health problems experienced at Kabwe Mine which were a result of adverse living and working conditions.

## **CONCLUSION**

In conclusion it can be noted that the mine in the post war era experienced a range of problems such as continued health problems due to poor living and working conditions, accidents and so on. Poor housing was a major source of concern as it led to diseases of overcrowding and poor sanitation. Increased mineral production resulted in persistence of industrial diseases such as lead poisoning and tuberculosis. However, the mining company made some major strides in safeguarding the health of the African mine community by providing good medical facilities, protective clothing and improved type of housing.

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<sup>81</sup> Interviews with Kabwe ex-miners, Mukaya, Chisenga, Muchinda and Nasson Mulenga.

## **CHAPTER FIVE**

### **CONCLUSION**

The history of the health of African mineworkers at Kabwe Mine between 1904 and 1964 was decisively influenced by a number of factors. There was a connection between the major health problems that afflicted the African community with the living and working conditions that they were exposed to. The study argues that the major health challenges faced by the African community at Kabwe Mine were due to adverse living and working conditions. Inadequate poor housing promoted diseases which resulted from overcrowding and faulty sanitation. Working conditions at the mine were also undesirable and led to many accidents. The swampy environment of the mine similarly promoted different diseases such as malaria and dysentery while the physical activities of mineral production encouraged the evolution of industrial diseases such as lead poisoning and tuberculosis.

There are a number of conclusions that can be drawn from this study. The first of these is that the prevalence of disease and health challenges at Kabwe Mine was precipitated by different dynamics such as the environment, labour migration and poor living and working conditions. The study argues that the physical environment was instrumental in promoting ecologically related diseases such as malaria, black water fever, dysentery and bilharzia. The area in which the mine lay was water-logged and provided a favourable environment for the breeding of mosquitoes which transmitted malaria and black water fever. The inhabitants of Kabwe mine especially in the early times were dependent upon the swampy area for water supply used for drinking, cooking and washing. However, this water was not safe for consumption leading to many waterborne diseases such as bilharzia, diarrhoea, hookworms and dysentery. These

diseases were transmitted to human beings through drinking dirty water infested by disease causing vectors or parasites.

Labour migration was also a source of disease. Most of the African workers who were employed at Kabwe Mine were migrants from both within and outside Northern Rhodesia. These migrants were coerced into seeking wage labour for different reasons such as taxation, adventure and also to obtain money for buying clothes and various other luxuries. When the African migrants arrived at the mine, they found themselves in compounds which were overcrowded and sanitation was poor. Some migrants often reached at the mine ridden with all sorts of diseases which they later transferred to those found in the mining compound. Due to the nature of the mining compounds, communicable diseases spread easily. Those migrants whose immune systems were lowered due to improper feeding on the way to the area of employment (Kabwe Mine) were more susceptible to diseases in the mine such as smallpox, influenza, measles, coughs and so on. Labour migrants from Nyasaland who found work at the mine played a major role in the spread of venereal diseases as most of them had acquired the disease during the time they worked at the Rand and Southern Rhodesia which they later spread at Kabwe Mine. There were also those migrants that carried pathogens of diseases that precipitated the spread of diseases thereby complicating the disease landscape at the mine.

Living conditions were far from desirable in the early times. Housing in the compounds was lacking in quality and quantity. Located on a low flat land which was dusty in the dry season and muddy during the rains, the first mine compound was composed of round thatched huts, twelve feet in diameter with sun dried brick walls which tended to dissolve in wet weather presenting an enabling ground for the outbreak of pneumonia. Latrines and washing facilities were grossly inadequate leading the Africans to seek refuge in the surrounding bushes which exposed them to

fly borne diseases. The mine compounds were also rife with diseases as a result of poor diet and poverty such as malnutrition especially in the early days of the mine as the African community was supplied with inadequate rations. Gardening was not allowed in the compounds therefore, making it difficult for families to supplement the food provided by the mine management. The overcrowding in the compounds gave way to communicable diseases such as smallpox, influenza, coughs and measles and so on.

Working conditions on the mine during the early period were dangerous. In an effort to maximise mineral production, mining operations were pressed forward before they were safely organised leading to many injuries and fatal accidents. The physical environment and the operations of digging ore exposed the water underground leading to a breeding ground of malaria causing mosquitoes. The wet environment was also instrumental in causing pneumonia. Poor underground structures and lack of job training led to accidents which resulted in deaths and dismemberment of African mine employees at the mine.

This study further concludes that the Great Depression and the Second World War had far reaching health ramifications on the lives of the African community as they led to deterioration in living and working conditions at the mine. During the slump, the Rhodesia Broken Hill Development Company established cost minimisation measures which were not only confined to wages and retrenchment alone. Also the expenditure on African housing, diet, sanitation and medical care was reduced to a minimum. The mine management offered African mineworkers five acre plots to mitigate overcrowding in the mine compounds. However, housing on both locations, was decrepit and inadequate leading the mineworkers and their families to live in deplorable circumstances. These adverse living and working conditions were instrumental in the spread of diseases such as influenza, whooping cough, smallpox and the most virulent of them

all, pneumonia which was rife at the five acre plots. The squalor of the African dwellings themselves resulted in enteric diseases such as hookworms and diarrhoea.

Sanitation and feeding were also compromised during the depression due to lessened expenditure. This was as a result of the policy of cost minimisation and profit maximisation which the Rhodesia Broken Hill Development Company employed in the depression period. With regard to sanitation, the government and the mine management could not implement the health standards and regulations governing sanitation as neither had resources to implement them. The quality and quantity of the food was bad. Africans were fed on rotten beans and groundnuts and sometimes there was a short supply of rations to the workers and their families. This led to dietary deficient diseases such as malnutrition.

During the Second World War, the expansion in mineral production at the mine necessitated by the colonial policy, which aimed at boosting the production of base metals such as lead, zinc and copper led to industrial diseases such as tuberculosis and lead poisoning. Information reviewed showed that most African mineworkers who worked especially at the lead smelters were prone to lead absorption which caused lead poisoning. Unfortunately, it was not only the workers who were affected by the poisoning, but also their families as the mine compounds were located in the direction of the fumes from the lead plant at the mine. Poor ventilation systems underground were instrumental in the spread of tuberculosis. The miners who got infected underground later communicated the disease to the overcrowded compounds. The increase in production also brought about a rise in mine accidents as the employers pressed for more metals to be used in the war effort.

Housing and sanitation were also compromised during the war due to the high number of people employed to increase production. Although the management could not do much in improving the health of African miners and their families, women in both the five acre plots and the mine compounds greatly helped in safeguarding the miners' health and their families. The women involved themselves in activities such as beer brewing and gardening. Through beer brewing, the women were able to obtain money that they used to purchase extra food and also grew food that they supplemented on the rations given by the mine. In this way the women played a role in mitigating the health problems found at Kabwe Mine such as malnutrition.

The final conclusion of this study is that problems such as inadequate housing which led to overcrowding and poor sanitation continued in the post war era from 1946 to 1964. Exacerbated by the Korean war of the 1950s and the need to employ more workers in order to increase production, inadequate housing became a major cause of health problems at the mine. Diseases such as malnutrition, malaria, venereal diseases, diarrhoea, whooping cough and so on continued to afflict Africans. TB and lead poisoning continued to be part and parcel of the African mineworker due to continued increase in mineral production. Mining accidents as well were on the increase.

Due to these setbacks of diseases and accidents at the mine, the mining company began to effectively employ measures aimed at improving the health of African workers and their families at Kabwe Mine. The company sought to improve the living conditions of the African community by building more houses especially for married African employees and also upgrading the old ones. This lessened the risk of contacting communicable diseases in the compounds. The mine company also provided medical schemes for the African mineworkers and the dependants at Kabwe Hospital. Preventive works in form of spraying with DDT against malaria and with

copper solution for the prevention of bilharzia were carried out by the administration and mine authorities. Diseases such as venereal diseases were now treated with antibiotics such as penicillin which proved to be effective. Working conditions were also improved as the company began to issue protective clothing to workers, the wages were increased and pensions began to be offered to those workers who served in the mine for more than twenty years. Workers who worked in dangerous places like the lead smelter which could easily lead to serious health problems were given a higher salary than those in less dangerous places and also compensation began to be offered to the injured workers and those exposed to pneumonicotic ailments. The company also encouraged the formation of community services such as women and youth clubs which dealt with non industrial life styles of their workers and their families thereby improving the welfare of compound lifestyle.

## **BIBLIOGRAPHY**

### **PRIMARY SOURCES**

#### **Mining Industries Archives (MIA)**

MIA, Loc T18.5E The Rhodesia Broken Hill Development Company Limited Annual Reports, 1937 to 1964.

MIA, Loc 19.43E The Zambia Broken Hill Development Company Limited summary of operations, 1963.

MIA, Loc T18.6D Board of Directors Correspondence relating to...1<sup>st</sup> May 1957 to 31<sup>st</sup> October, 1957.

MIA, Loc HO 155/2 The Zambia Broken Hill Development Company Limited, 1964.

MIA, Loc HO 226/1 Report on Mine Accidents, February 1963 to May 1970.

MIA, Loc 19.4.1F Silicosis and other Pulmonary Disabilities 1953 to 1957.

MIA, Loc 11.8.6F Kabwe Mine Township Council Minutes Community Services Development Monthly Report, November 1964.

MIA, Loc 4.10.2E History of the Zambia Consolidated Copper Mines Limited.

MIA, Loc 19.5.1F Housing on the Mine, 1939 to 1953.

MIA, Loc 19.4.1A Northern Rhodesia Mine Workers' Union, 1948 to 1952.

MIA, Loc 19.4.2D African Labour Representation Broken Hill, 1951 to 1965.

MIA, Loc 2.8.2A Broken Hill Township Management Board, 1957 to 1964.

MIA, Loc T19.6D Rhodesia Broken Hill Development Company Limited Accident Report, 1960 to 1973.

MIA, Loc 15.1.4D Optima Magazine, December, 1962.

MIA, Loc 18.1.3B Pneumoconiosis Medical and Research Bureau, 1963.

#### **National Archives of Zambia (NAZ)**

#### **British South African Company Files**

NAZ, BS 2/141 Land Department Annual Report 1908-1910.

NAZ, BS 2/154 Medical Report showing number of cases treated at Broken Hill Hospital 1910-1911.

NAZ, BS 2/145 Annual Report 1908-1909.

NAZ, BS 3/316 Letter from the Rhodesia Broken Hill Development Company Limited, 1912.

### **Central Province Files**

NAZ, CNP 1/1/28/286 Medical and Sanitation General, 1951.

NAZ, CNP 1/1/44 Mine Workers Union, 1954.

NAZ, CNP 1/2/65 Tuberculosis Research 1957.

NAZ, CNP 1/2/115/352 Inspection Reports Broken Hill Urban, 1958-1964.

NAZ, CNP 2/2/21 Annual Reports Broken Hill Rural, 1952 to 1956

NAZ, CNP 2/2/9 Annual Reports on African Affairs, 1959-1960.

NAZ, CNP 2/2/34 Tour Reports Broken Hill Rural, 1956.

NAZ, CNP 2/4/14 Bwacha Area Board Health and Welfare Committee, 1961.

NAZ, CNP 3/2/2/5/4861 Labour Reports general and Tour Reports by Labour Officers, 1935-1945

NAZ, CNP 4/2/10 Health Annual Report, 1964.

### **Secretariat Files**

NAZ, SEC1/1312 Investigations of labour conditions in Northern Rhodesia, 1937.

NAZ, SEC1/1475 Housing for African employees letter, 1942.

NAZ, SEC1/1378 Labour European Committee on Industrial diseases, 1949.

NAZ, SEC1/1041 Survey of food conditions, 1936.

NAZ, SEC1/1323 Native labour dissertation and absenteeism, 1923.

NAZ, SEC1/1320 Stabilisation of Native Labour, 1944-1945.

NAZ, SEC1/1294 Labour supply on the Copper mines and Broken Hill, 1944.

NAZ, SEC1/1090 Broken Hill Hospital, 1952.

NAZ, SEC1/1056 Malaria Control, 1939.

NAZ, SEC1/1437 Strike Broken Hill Mine, 1947.

NAZ, SEC1/1438 Dispute on allowances to lead Smelter Operations at Broken Hill, 1947.

NAZ, SEC1/1330 Labour: Major Orde Brown's Report.

NAZ, SEC1/1615 Mining Publications Rhodesians mines and Industries, 1940.

NAZ, SEC1/1092 Opening of New Broken Hill Hospital, 1952.

NAZ, SEC1/1440 Strike at Broken Hill Mine, 1948.

NAZ, SEC1/1367 Food Shortages general measures.

NAZ, SEC2/604 Tour Reports Broken Hill 1932-1933.

NAZ, SEC2/606 Native Affairs District traveling, 1939.

NAZ, SEC2/607 Tour Reports Broken Hill 1940-1947.

NAZ, SEC2/608 Tour Reports Broken Hill 1948.

NAZ, SEC2/610 Tour Reports Broken Hill, 1950.

NAZ, SEC2/615 Tour Reports Broken Hill, 1956.

NAZ, SEC2/616 Tour Reports Broken Hill, 1957.

NAZ, SEC2/617 Tour Reports Broken Hill, 1958.

NAZ, SEC2/618 Tour Reports Broken Hill, 1959.

NAZ, SEC2/619 Tour Reports Broken Hill, 1960.

NAZ, SEC2/620 Tour Reports Broken Hill, 1961.

### **Ministry of Health Files**

NAZ, MH1/02/001/3151 Broken Hill Mine Township, 1940-1945.

NAZ, MH1/3/102/3206 Annual Reports of Municipal Health Department Broken Hill, 1957.

NAZ, MH1/3/38/3621 Broken Hill Medical Officers Annual Report, 1955.

NAZ, MH1/04/63/3226 T.B Section Broken Hill, 1957.

NAZ, MH1/04/33/3220 Investigation into Silicosis Hazard Northern Rhodesia Mines, 1953.

NAZ, MH1/03/61 Venereal Diseases Annual Report, 1953.

NAZ, MH1/05/09 Mine Township Ordinance, 1940.

NAZ, MH1/04/73 Sleeping Sickness 1961.

### **Miscellaneous Reports**

NAZ, ZA7/1/4/16 Luangwa Province Tour Report, 1930.

NAZ, ZA7/1/17/2 Central Province Annual Report, 1934.

NAZ, ZA7/1/13/7 Luangwa Province Annual Report, 1930.

NAZ, ZA7/1/12/7 Annual Reports Luangwa Province, 1929.

NAZ, ZA7/1/14/7 Luangwa Province Annual Report, 1931.

NAZ, ZA7/1/17/7 Luangwa Province Annual Report, 1923-1924.

NAZ, ZA7/1/6/7 Luangwa Province Annual Report, 1922-1923.

NAZ, ZA7/1/5/7 Luangwa Province Annual Report, 1920-1921.

NAZ, ZA7/1/1/7 Luangwa Province Annual Report, 1913.

NAZ, ZA7/1/2/7 Luangwa Province Annual Report, 1914-1915.

NAZ, ZA7/1/3/7 Luangwa Province Annual Report, 1915-1916.

NAZ, ZA7/1/4/7 Luangwa Province Annual Report, 1919.

NAZ, ZA7/1/11/7 Luangwa Province Annual Report, 1927.

NAZ, ZA7/1/4/8 Luangwa Province Annual Report, 1928-1929.

NAZ, MM2/1/19/4088 Rhodesia Broken Hill Development Company, 1913.

NAZ, ZA1/15/L/1/9 Human Geography 1931.

NAZ, KDA 2/1 Vol I Kabwe Note Book.

### **SECONDARY SOURCES**

#### **BOOKS**

Baldwin, R. **Economic Development and Export Growth: A Study of Northern Rhodesia, 1920-1960.** Los Angeles: University of California Press, 1966.

Bancroft, J. A. **Mining in Northern Rhodesia: A Chronicle of Mineral Exploration and Mining Development.** Bedford: The Sydney Press, 1961.

Berger, E. L. **Labour, Race and Colonial Rule: The Copperbelt from 1924 to Independence.** London: Oxford University Press, 1974.

Chipungu, S. N. **The State, Technology and Peasant Differentiation in Zambia: A Case Study of the Southern Province, 1930-1986.** Lusaka: Historical Association of Zambia, 1988.

Coleman, F. L. **The Northern Rhodesia Copperbelt, 1899-1962.** Manchester: Manchester University Press.

Forbes, Munro, **Africa and the International Economy.** London: J.M Dent and Sons Ltd, 1976.

Gann, L. H. **The Birth of a Plural Society: The Development of Northern Rhodesia under British South African Company 1894-1914.** Manchester: Manchester University Press, 1968.

Gann, L. H. **Central Africa: The Former British States.** Eaglewood Cliffs: Prentice Hall, 1971.

Gelfand, M. **Northern Rhodesia in the Days of the Charter: A Medical and Social Study 1878-1924.** Oxford: Basil Blackwell, 1961.

Gray, R. **The two Nations: Aspects of the Development of Race Relations in the Rhodesia and Nyasaland.** London: Oxford University Press, 1956.

Gregory, T. **Enerst Oppenheimer and the Economic Development of Southern Africa.** London: Oxford University Press, 1962.

Heisler, H. **Urbanisation and the Government of Migration: the Inter Relation of Urban and Rural Life in Zambia.** London: C. Hurst and Company Ltd, 1977.

Kindleberger, C. P, **The World in Depression.** London: The Penguin Books, 1973.

Kittler, G. D, **Central Africa : The New World of Tomorrow.** New York: Thomas Nelson Inc, 1959.

Meebelo, H. S. **African Proletarians and Colonial Capitalism.** Lusaka: Kenneth Kaunda Foundation, 1986.

Mourbray, F. R. G. S, **In South Central Africa.** London: Constable & Company, 1912.

Packard, R. **White Plague, Black Labour: Tuberculosis and the Political Economy of Wealth and Disease in South Africa.** London: University of California Press, 1989.

Parpart, J. L. **Labour and Capital on the African Copperbelt.** Philadelphia: Temple University Press, 1983.

Perrings, C. **Black Mine workers in Central Africa: Industrial Strategies and the Evolution of an African Proletariat in the Copperbelt, 1911-1941.** London: Heinemann, 1979.

Pelletier, R. A. **Mineral Resources of South Central Africa.** London: Oxford University Press, 1964.

Phimister, I. R and C Van Onselen, **Studies in the History of African Mine Labour.** Gwelo: Mambo Press, 1978

Van Onselen, C. **Chibaro: African Mine Labour in Southern Rhodesia, 1900-1933.** London: Pluto Press, 1976.

Woodruff, H. W. **The Federation of Rhodesia and Nyasaland**. London: Her Majesty's Stationary Office, 1955.

## **DISSERTATIONS**

Buzandi Mufinda, "A History of Mining in Broken Hill (Kabwe) 1902-1929", MA Thesis, University of The Free State, 2013.

Higginson, John E, "The Making of an African working class: The Union Miniere du Haut Katanga and the African mine workers, 1907-1947", PhD Thesis, University of Michigan, 1979.

Kaira, Zikani, "A History of Poverty in Central Province Zambia, 1850-200", MA Thesis, University of Zambia, 2005.

Kalusa, Walima T, "Aspects of African Health in the Mining Industry in Colonial Zambia: A Case Study of Roan Antelope Mine, 1920-1964", MA Thesis, University of Zambia, 1993.

Luchembe, Chipasha, "Finance Capital and Mine Labour: A Comparative Study of Copper Mines in Zambia and Peru, 1870-1980", PhD Thesis, University of California, 1982.

Mbozi Santebe, "The Colonial Government and the Great Depression in Northern Rhodesia: Administration and Legislative changes", 1929-1939. MA Thesis, University of Zambia, 2015.

Muntemba, Maud, "Rural Underdevelopment in Zambia: Kabwe District, 1850-1970," PhD Thesis, University of California, 1977.

Mushingeh, Selemani A. C, "A History of Disease and Medicine in Botswana, 1820-1945", PhD Thesis, University of Cambridge, 1984.

Mvusi, Thandekile R. M, "The creation of Unemployment in Northern Rhodesia, 1899-1936", PhD Thesis, Northwestern University, 1984.

Siamwiza, Bennett S, "A History of Famine in Zambia, c. 1825-1949", University of Cambridge, 1998.

Turner, Allan A,"A Socio-Economic History of Kabwe, 1902-1966", PhD Thesis, University of California, 1979.

## **JOURNALS**

H. Ross, "Broken Hill: Some Reminiscences", **Northern Rhodesia Journal**, Vol 6 (1962-64) pp. 590-592.

Burke Gillian and Richardson Peter," The Profits of Death: A Comparative Study of Miners' Phthisis in Cornwall and the Transvaal, 1976-1918", **Journal OF Southern African Studies**. Vol. 4 (1977/78), pp. 147-171.

Chauncy George Jr, "The Locus of Reproduction: Women's' Labour in the Zambezi Copperbelt, 1927-1953" **Journal of Southern African Studies**, Vol 7, No 2 (April 1981), pp.140-162.

Fletcher, G. H, "A Radiological Survey of Miners at Broken Hill", **Central African Journal of Medicine**, Vol. 4, No. 11 (1958), pp. 473-513.

Melland, Frank, "Washing in Jordan" in **The African Observer**, Vol III, No. 5 (September 1935) pp. 36-40

Gelfand Michael, "Migration of African Labourers in Rhodesia and Nyasaland 1890-1914", **Central African Journal of Medicine**, Vol. 7, No. 8 (1961), pp. 293-315.

Holleman, J. F and Biesheuvel S, “White mine workers in Northern Rhodesia”, **African Social Research Document**, Vol 6 (1973).

Parpart, Jane, L. “The Household and the Mine Shaft: Gender and class struggles on the Zambian Copperbelt, 1926-1964”, **Journal of Southern African Studies** Vol. 13, No. 1 (October 1986), pp. 37-53.

Kalusa Walima T, “Pneumonia and Labour Conditions at Roan Antelope Mine, Zambia, 1925-1945” **Zambia Journal of History**, Vol. 1, No. 9 (2004), pp. 1-17.

Kalusa Walima T, “Language, Medical Auxilliaris and Re-interpretation of Missionary Medicine in Colonial Mwinilunga, Zambia 1922-51”, **Journal of Eastern African Studies**, Vol. 1, No.1 (2007), pp. 57-78.

Wilson Godfrey, “An Essay on the Economics of Detribalization in Northern Rhodesia”, **The Rhodes-Livingstone Papers**, No. 5 (1941).

## **ORAL INTERVIEWS**

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