

The Bulli Mining Disaster 1887

Lessons from the Past



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Don Dingsdag

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THE BULLI MINING DISASTER 1887
lessons from the past

DONALD P. DINGSdag



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The Bulli Mining Disaster 1887: lessons from the past

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To the memory of Jill Dingsdag without whom
this book would not have been possible

CONVERSION TABLE AND ABBREVIATIONS

Conversion Table

1 inch	=	2.54 centimetres
1 foot	=	30.48 centimetres
1 yard	=	0.91 metres
1 mile	=	1.62 kilometres

1 penny	=	0.83 cents
1 shilling	=	10 cents
1 pound	=	2 dollars

(at the time of conversion to decimal currency in 1966)

Abbreviations

AACo	Australian Agricultural Company
CMRA	Coal Mines Regulation Act
ICEA	Illawarra Colliery Employees' Association
MLC	Member of the Legislative Council
IMMPA	Illawarra Miners' Mutual Protective Association

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FOREWORD

We coalminers earn our living in one of the most dangerous industries in the world. Our history is characterised by tragedy. The number of dead and crippled mineworkers is a reflection of the hostile environment in which we work.

History has shown us that unless we are prepared to learn from the lessons of the past we are condemned to repeat our mistakes. Experience has taught us that there is nothing more important in our industry than safety. For us, it is a constant matter of life and death. There is no single issue more important to our union than the responsibility of ensuring that when mineworkers begin their shifts, they are provided with the safest possible working environment so that at the end of the day they can return safely to their families and friends.

Disasters such as the one which occurred at Bulli have mobilised enormous community support for mineworkers' campaigns for improved safety regulations. Our history shows that employers and management cannot ensure safety in the mining industry. Workers must also contribute to this process. However, it will indeed be a tragic day when safety is sacrificed for profit.

The Bulli disaster is a classic lesson in history. Aggravated by severe economic circumstances in 1887 and returning to work after a protracted strike, the mineworkers had been forced to sign agreements which precluded them from questioning any management decisions let alone taking strike action. Miners who had raised safety issues under those circumstances were victimised. The neglect of safety issues led to the explosion at Bulli on March 23, 1887, which claimed the lives of 81 men and boys. Fifteen years later, another explosion at the nearby Mt. Kembla mine took the lives of another 96 mineworkers.

There are many other disasters in our history that could have been avoided if safety regulations had been strictly enforced. Our union has

fought for, and won the right to elect its own full-time safety officers and check inspectors, whose responsibility includes the inspection of mines without notice and ensuring that all safety standards are observed. There have been improvements in safety regulations in our industry but we know these standards will not be maintained and improved upon without the constant vigilance of our union.

With our industry today dominated by giant multinational corporations, there is the increasing pressure for even greater degrees of deregulation within the mining industry, including the area of safety.

Once again, in a climate of economic recession and conservative politics, the time is ripe for an erosion of the role of trade unions at the workplace. For our part, the United Mine Workers remains absolutely resolute in overcoming this threat.

The tragic lessons of the past have shown us that there is no room for compromise where issues of safety are concerned.

Don Dingsdag's book vividly illustrates the validity of our position.

Tony Wilks

General Secretary

United Mine Workers

Sydney, New South Wales

July, 1993

INTRODUCTION

The importance of learning from the past is demonstrated in this book by Don Dingsdag about the Bulli mining disaster of 1887.

The theme of the book will be of interest to miners in particular and workers in general. While the story of the Bulli disaster will be highly relevant to students of Australian labour history, it also has implications for students studying education, industrial relations, occupational health and safety, politics and sociology.

The Bulli disaster clearly illustrates that people frequently disregard the lessons of history. In his analysis of the inquiry which followed the tragedy at Bulli, Don Dingsdag details the role of the state in that inquiry process. The specific role of the government of the day in the enactment of coalmining legislation provides a fascinating glimpse into N.S.W. politics in the late 1880s. The tasks of the colliery and government officials are also described in this treatment of the Bulli disaster.

Don Dingsdag's examination of issues relating to safety within the coalmining industry is pertinent given the increased focus on safety in industry in today's world. In the 1880s, however, coal mining legislation was vague and imprecise with too many 'let out' clauses. Phrases such as 'whenever deemed necessary', 'within a reasonable time' and 'as far as practicable' appear often in the legislation and these phrases provide a clue to the causes of the 1887 disaster.

History has shown us that the rigid adherence to the principle of payment strictly by result can have dire consequences, especially in high risk industries. Don Dingsdag sees this principle as a factor in the many unsafe practices which flourished in nineteenth century coalmining where injuries and death were common occurrences.

The investigation of the enforcement of coalmining legislation and the role of the N.S.W. Department of Mines in the process provides examples

of industry practices in the 1880s. The influence of Government in the coalmining industry at that time was mainly confined to the regulatory function of the Department of Mines and its inspectorate. Thus, the work of inspectors and the impact of their performance had profound effects in N.S.W. coalmines. There were never enough inspectors and coalmining legislation was imprecise in its content and inconsistent in its application. When combined, these factors created a recipe for disaster.

The relationship between government and private enterprise is also an issue covered in Don Dingsdag's book. The Bulli mining disaster shows that a fundamental element in developing an understanding of the nature of official inquiries into coalmining accidents in the coalmining industry of N.S.W. during the nineteenth century is the phenomenon of the interlocking of economic and political interests. The investigation surrounding the Bulli disaster reveals that parliamentarians and business people held common interests, a situation which may well have influenced safety issues. The events at Bulli also highlight the potential problems that can arise with close relationship between government and private enterprise.

In the instance of the Bulli disaster, the Government's response to the inquest verdict was to appoint a Royal Commission composed of Commissioners who appeared to have been biased in favour of the Government and the Bulli Coal Mining Company. The Government was able to arrange these favourable conditions by virtue of the powers vested in Cabinet to call for a Royal Commission, to choose its terms of reference and to select its Commissioners.

In his description of the social relations of production in nineteenth century coalmining in N.S.W., Don Dingsdag reveals both an unconscious and sometimes intentional disregard for safety by nearly all those involved with the industry. He suggests that an economic rationale frequently eroded any serious consideration of the issue of safety. The manner in which the coalmining legislation had been framed and the ineffectual way it was enforced also contributed to the disregard of safety.

The inadequacy of the investigative processes into mining disasters can also be seen as a contributing factor to the lack of success by governments in preventing major mine accidents in the twentieth century despite improvements in technology and safety legislation since the early 1900s.

The concentration by Don Dingsdag on selected responses to a single event in an historical perspective succinctly highlights the influence of the political and economic ideologies which pervaded the N.S.W. coal mining industry in the latter parts of the last century.

As a lesson from the past, the terrible calamity at Bulli begs the question 'how could the Mt. Kembla disaster happen just a few short years after Bulli?'. This book provides a lesson from the past as Australia approaches the close of another century. Whether this lesson is heeded will depend on the responses of all people who are prepared to become active participants in shaping the future.

Once one has read Don Dingsdag's account of the Bulli disaster, the role that education can play in the process of making mining a safer working environment and making people more aware of the importance of safety issues in industry is evident.

This book can play an important role in an educative process aimed at enhancing working conditions in the mining industry. Teachers, miners, company directors, trade unionists, Members of Parliament and members of the wider society all have a role to play in this educative process.

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Faculty of Education

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July, 1993

CHAPTER ONE

1 The Bulli Mining Disaster: an Introduction

On Wednesday, 23 March 1887, at 2.30 p.m. an explosion occurred at the Bulli Colliery in New South Wales (N.S.W.), Australia which resulted in the deaths of 81 men and boys. At the time this was Australia's largest coalmine disaster and today remains the second worst mine related disaster in Australian history. Together with the 1902 Mount Kembla mine tragedy in which 96 miners perished, these events remind us of the dangers faced by miners as a part of their working day.

The force of the explosion at Bulli, magnified by the presence of coaldust [1], was restricted to a small section of the mine and killed instantly those miners who worked in close proximity to the site of the blast. Those who survived the initial force of the explosion died from the effects of asphyxiant afterdamp, a poisonous mixture of gases nearly always encountered after a coalmine explosion. Immediately after the initial explosion several heroic rescue parties entered the mine. These men undertook this rescue task not knowing if there were any survivors or if successive explosions would cause the mine to collapse. The full horror of the tragedy began to unfold when the disfigured bodies of the miners were brought to the surface. This occurred amidst the panic and anxiety of the miners' next-of-kin who by that time had assembled at the mine. The immensity of the disaster presented several problems for the Bulli community. In terms of health problems, there were no adequate mortuary facilities available. In addition, the lack of government sponsored social services in the nineteenth century meant that either the private sector or the community would have to provide for the widows and dependents of the deceased miners. The importance of these social service and health issues are alluded to in the secondary title of the book, *lessons from the past*. They are treated in a general manner in the conclusion. In the light of these lessons from the past there is a pressing need today to examine these aspects of coalmining life.

Until recently the body of historical literature on Australian coalmine disasters was an under-represented field of study [2]. Issues

pertaining to rescue and charitable relief operations as well as the grief such coalmining communities experienced after disasters of the magnitude of Bulli have been discussed in orthodox studies of disasters. The focus of this book is a hitherto almost neglected area of Australian historiography, that of the official inquiry into coalmining accidents - more precisely, it is an investigation into the role of the state in this area. Another purpose is to examine the process of one other significant sphere of government activity, the enactment of coal mining legislation in Parliament. The book also investigates the role of the most significant government department in the N.S.W. coal mining industry during the nineteenth century, the Department of Mines.

This wider investigation of government activity is motivated by the response of the N.S.W. Government to the Bulli disaster as well as the reactions of the Bulli Coal Mining Company and the Department of Mines inspectorate. To a lesser extent, the book also investigates the actions of the miners and their union, the Illawarra Miners' Mutual Protective Association (IMMPA). The explosion at the Bulli mine was first investigated by a mandatory inquest which exonerated the miners and found against both the Government and the Bulli Coal Mining Company. If the inquest verdict would have been left unchallenged, the Government would have been embarrassed by evidence which clearly pointed to the incompetence of officials within the Department of Mines and the exposure of the ineffectiveness of the *1876 Coal Mines Regulation Act (CMRA)*. The parliamentary processes that produced such weak legislation would also have come under close scrutiny. An uncontested finding would also have resulted in a hefty financial liability and the probable financial ruin of the Bulli Coal Mining Company.

The Government's response to the inquest verdict was to appoint a Royal Commission which made a report (*Bulli Colliery Accident, Report of Royal Commission; together with the minutes of evidence and appendices*, hereafter referred to as 'the Royal Commission' or 'the Commission') composed of commissioners who were biased in favour of the Government and the Bulli Coal Mining Company. The Government was able to arrange these favourable conditions by virtue of the powers vested in cabinet to call for Royal Commissions and to choose the Commission's terms of reference and composition. The Cabinet of the

Parkes' administration in N.S.W. in 1887, replete with coalmine proprietors, was aided in this process by both houses of parliament, which were also over represented by men who held coalmining interests or who were sympathetic toward the industry. This set of interlocking relationships between coalmine owners and parliament is the mainspring of the wider investigation of this book, viz, the role of government in nineteenth century coalmining in N.S.W. There are clearly lessons to be learned from the past from this historical investigation.

Government functions are numerous and complex. However, the totality of government instrumentalities involved in the coalmining industry of N.S.W. for the larger part of the nineteenth century is beyond the scope of this book. The diversity of government participation and influence in the coalmining industry discussed here is not complete. Aside from passing only four coalmining acts during the nineteenth century, government involvement in the coalmining industry was mainly confined to the administration of legislation which was delegated to the Department of Mines and its inspectorate. The actions of this department and its inspectorate had a profound impact on the Bulli disaster.

It will be shown below that the other functions of the Department of Mines, which included survey work, also held implications for the Bulli disaster. In a broader context, unsafe mining practices elsewhere in the Colony were also affected by this moribund department. As well, the other branches of government including those responsible for public schooling and health, influenced the daily lives of both coalmining families and employers. The pervasiveness of government was felt by company officials and miners alike who were directly affected by government in many ways. Managers who in some instances were also magistrates adjudicated over breaches of the *Coal Mines Regulation Act* by either workers or in some cases fellow managers. The partisanship of the relationship between government and employers was such that miners could be charged by managers under the *Act* for swearing at work.

While the influence of government was pervasive, this book identifies a lack of government conviction in the pursuit of investigations into the ways in which coalmine owners operated their mines. The terrible calamity at Bulli is indicative of the biased relationship which existed between coalmine owners and government. The fact that

governments did not act decisively to make coalmines safer until 1912 when the *Coal Mines Regulation Act* was introduced raises the question of the extent of collusion between government and private enterprise, especially during the latter part of the nineteenth century. The inadequacy of the investigative process into the causes of mining disasters can also be seen as a contributing factor to the appalling record of governments in preventing major mine accidents in the twentieth century despite improvements in technology and the introduction of new legislation since the early 1900s. Accordingly, the major theme of this book is an analysis of the official responses to the Bulli disaster and the lessons that major mining accidents provide for contemporary society. The social, political and economic history of Bulli is mentioned in those instances where the information illuminates the process of official inquiry.

While research has been conducted into some aspects of the coalmining industry during the nineteenth century, for the purpose of the argument developed here, such research is either too general or too narrow in its application in the context of the approach taken in this book. For those who wish to pursue a more general treatment of coalmining, M. H. Ellis' *A Saga of Coal* [3] describes the development of the northern coalfields of N.S.W.. This work provides a non-scientific and sometimes biased view of the formative years of the Newcastle-Wallsend Coal Company and the company's reaction to the development of unionism in the Newcastle district. Ellis tends to ignore the role of government in matters of safety and the book can be interpreted as an apology for the company's role in the highly competitive embryonic stages of the N.S.W. coalmining industry. Ellis neither discusses the Bulli disaster in depth nor the general implications of government activity for either society at large or the coalmining industry. Some researchers, however, do refer to the Bulli disaster and indicate the need for greater government intervention in the regulation of coalmining safety. Robin Gollan's *The Coalminers of New South Wales* [4], for example, analysed the Bulli disaster, but did not come to grips fully with the problems associated with the official inquiries into the disaster. Gollan was predominantly concerned with the development of unionism in the coalmining industry. However, Gollan was very critical of the parliamentary machinations

which delayed the enactment of a new *CMRA* which was introduced in 1887 but not enacted until 1896. In *A History of the Miners' Federation of Australia* [5] E. Ross was mainly concerned with the struggle of unionism in the coalfields. Nevertheless, he referred to the Bulli disaster and deplored the neglect of safety requirements by governments. A more recent work by Stuart Piggin and Henry Lee, *The Mt Kembla Disaster* [6], fills the gap in the literature cited above. A significant portion of this book is devoted to the legal, industrial and political responses to the Mt. Kembla disaster. As with the Bulli disaster fifteen years earlier, the aftermath of the Mt. Kembla disaster produced similar outcomes. After several lengthy inquiries, including a Royal Commission which recommended extensive changes to coalmining legislation, the blame for the explosion at Mt. Kembla (as in the case of Bulli) was put down to the carelessness of workers rather than a lack of purpose by government, mine owners, managers and officials in enforcing the *CMRA* [7]. A focus on official responses to the Bulli disaster highlights the influence of political and economic thought of the time. By placing the responses to Bulli in an historical perspective, the verdict of the inquest held to investigate the Bulli Colliery explosion can be seen to have been subverted by the subsequent Bulli Royal Commission established by the Parkes Government.

A fundamental element in understanding the nature of the subversion of the original inquest is the interlocking of economic and political interests in the coalmining industry of N.S.W. during the nineteenth century. There were already many problems inherent in nineteenth century coalmining legislation due to the influence of parliamentary coalmine owners long before the Bulli explosion of 1887. By the late 1880s coalmine owners and other men of property were well entrenched in the N.S.W. Parliament. In fact, this association was well established before the Colony was made self-governing in 1856. It is not entirely surprising that only men of wealth were members of Parliament. There were restrictive property qualifications which prevented working men from being elected or appointed to the Legislative Council. When the entirely elected Legislative Assembly came into being in 1856 only two working men could afford to enter Parliament until 1891 after payment for parliamentarians was legislated. Consequently, before 1891

the framing of coalmining legislation occurred in parliaments which consisted of members who were involved financially in coalmining to various degrees. Some parliamentarians were coalmine owners while others had interests in allied industries such as gasmaking, foundries and shipping, all of which were dependent on coal as a source of fuel as well as income. This is not to suggest that Parliament or its members were corrupt. However, when decisions or laws were made which affected their business concerns such decisions would have been influenced by personal considerations even though members often claimed to the contrary. Notwithstanding, this is not to imply that there was something sinister or conspiratorial about the coalmine proprietors, landowners, or lawyers who dominated Parliament. Rather, their prominence in Parliament was the result of political and social structures which existed in the era before self-government and became a norm of society in N.S.W. after 1856.

Whether the vagueness and imprecise nature of coalmining legislation was intentional, the fact remains that there were many 'let out' Clauses in the legislation. Clauses such as 'whenever deemed necessary', 'within a reasonable time' and 'as far as practicable' seem to suggest that coalmine owners placed private gain before public good. Owing to the imprecise nature of legislation, Department of Mines inspectors were often incapable of enforcing the law. To complicate matters further there were not enough inspectors. Colliery and government officials were not alone in their dereliction of duty. A review of nineteenth century legislation presented in Chapter Seven reveals that the disregard for safety by managers and others at the workplace was both intentional and unintentional. This lack of concern for safety issues was accepted as normal.

The *1854 Coal Mines Act* was the first piece of legislation to address coalmining safety. This legislation dealt only with the registration and inspection of coalmines [8]. For example, no section was explicitly devoted to safety regulations, neither did the act forbid the employment of women or very young children. Sometimes children were employed in N.S.W. coalmines [9]. The *1854 Act* caused coalmine proprietors little concern. The *Act's* only mandatory requirement was that owners supplied the examiner of coal mines with copies of their colliery's

plans. The examiner's duties included the role of chief inspector, assayer and surveyor. Under the *Act*, no other inspector was appointed and consequently part of the examiner's brief was to inspect regularly all of N.S.W.'s collieries which increased from 12 in 1854 to 18 in 1861. However, most of the examiner's time was taken advising the government on the valuation of all minerals [10]. Consequently, there was little chance that the examiner could inspect all of the Colony's collieries, even on an irregular basis. The *1862 Coal Fields Regulation Act* made several improvements but fell far short of making mines safer. It expressly prohibited the employment of persons under 13 years of age and women of any age. The *Act's* major stipulations included the reporting of accidents; the provision of two egresses or exits in every mine, a less than satisfactory definition of 'adequate' ventilation; the fencing off of dangerous sections; the locking of safety lamps; regulations for steam-engines and boilers; the establishment of Special Rules which governed safety at individual mines; a comprehensive schedule of penalties; and specific but limited powers for inspectors and the examiner of coalfields. The *Act* appeared to be an impressive piece of legislation but in reality it proved to be a paper tiger.

The momentum for a new act had come from the recently reformed Northern (Newcastle) district miners' union which soon after its establishment in May 1860 sent a petition to Parliament calling for an improvement in legislation. The failure to obtain a suitable response to its petition for improved ventilation and other demands prompted the union to nominate a miner, Thomas Lewis, for the Northumberland electorate in the 1860 general election [11]. Lewis, who had been very active in the establishment of the union, was initially responsible for the introduction of the *1862 Act* in Parliament. As the first and only working man in N.S.W. parliament, Lewis was probably not a frequent speaker but he nevertheless persuaded the Premier to introduce the Bill [12]. Subsequently, he resigned his seat in 1862 when he became one of the three Department of Mines Coal Fields Branch inspectors. From 1864 until 1881 he was the only inspector for the entire Colony.

The parliamentary coalmine owners who ensured a tortuous passage of subsequent legislation were already well established in Parliament which gave them the opportunity to moderate the more

demanding Clauses of the *1862 Bill*. Major opposition to the Bill came in particular from the Legislative Council which had a small but influential nucleus of coalmine owners as members. However, there is a problem if Parliament is seen as only the hand-maiden of private enterprise [13]. If it always performs functions biased in favour of private enterprise, how did this legislation get beyond its first reading? For that matter, how was the legislation introduced initially? A plausible explanation is that not all parliamentarians were ill-disposed towards legislation of this kind. The *1862 Bill* became a political football for reasons other than the machinations of parliamentary coalmine owners. The relationship between private enterprise and parliament is far more problematic and complex than simple explanations which suggest a permanent collusion between the two sectors. Despite a conservative element in the N.S.W. Parliament and members with direct involvement in the coalmining industry, the prevailing philosophy from the early 1860s to the late 1880s was liberal in character. Charles Cowper, the liberals' leader in his third term as Premier, introduced the *Coal Fields Regulation Bill* in 1861. However, because of the wrangle with the Legislative Council over the *Robertson Land Acts* the Council rejected several important pieces of legislation [14]. Cowper reintroduced the *Bill* in the next session, and after its failure to reach the Council, reintroduced it again in 1862. It was then referred to a Select Committee, drastically amended and finally passed in late 1862.

The composition of the Select Committee provides a prime example of political abuse and cynicism. Of its seven members, four had direct interests in coalmining. Bourn Russell and James Mitchell were both Newcastle mine owners and Francis Merewether was the superintendent of the Australian Agricultural Company's (AACo) coalmines as well as being Mitchell's son-in-law. Charles Kemp, the Committee Chairman, was also the Newcastle Wallsend Coal Mining Company chairman, a director of two steamship companies and the director of the Australian Gas Light Company [15]. A major objection to the Bill was that the original provision compelled owners to deposit mine plans with government authorities. Parliamentarians in both houses argued vehemently against this 'invasion of privacy' which according to their reasoning, would enable competitors to view plans and gain an

economic advantage. Of course, the depositing of plans was a sensible safety precaution and in the event of a serious accident this requirement would assist in any rescue operations.

With legislation in place, the next step for government was to undertake the administration of the law. Under Cowper's premiership the Coal Fields Branch briefly flourished, becoming a semi-autonomous branch within the Department of Lands with William Keene the examiner as its head. Cowper expanded the Coal Fields Branch by appointing three additional inspectors and an examiner for the Illawarra district. The latter position was taken up by John Mackenzie, a colliery viewer (overseer) and mining engineer, who was heavily implicated in the Bulli disaster. Curiously, as a witness at the 1862 Select Committee, Mackenzie denied the need for examiners or inspectors and vigorously attacked most of the Bill's provisions [16]. Nevertheless, Mackenzie was appointed in early 1863 and it appears that he had overcome his objections in the light of his salary which was £400 per annum. Thomas Lewis was one of the inspectors [17] appointed after he was forced to vacate his seat in Parliament. Because there was no payment for Members of Parliament, Lewis was supported by a levy of the northern union membership. However, in 1861 at the instigation of the AACo, the northern coalmine owners formed a loose association, the actions of which caused the disintegration of the district union in 1862. Accordingly Lewis' source of income disappeared. He resigned his seat and accepted the £300 p.a. inspector's appointment. The expansion of the Coal Fields Branch was cut short in 1863 when James Martin, Cowper's former ally but now his political enemy, became Premier of N.S.W.. Under the Martin administration two positions of inspector were abolished in June 1864. Besides Lewis, Mackenzie remained until August 1865 when he resigned his position. From that time until 1883 the Coal Fields Branch had only two field operatives even though the number of mines in N.S.W. more than doubled from 24 to 51 during that period.

Little is known of the early activities of the Coal Fields Branch, especially its most important function - the inspection of mines. Yet, from the earliest published *Department of Mines Annual Reports*, it is painfully obvious that Lewis could not inspect every mine. In addition to being an inspector of mines he was required to investigate serious

accidents and to be present at coroners' inquests when deaths occurred in coalmines. Lewis' workload was not lightened by Keene the examiner. Keene not only performed the field duties of assaying minerals but was also the principal administrator. Consequently, Lewis was left to inspect all the mines. The situation worsened when Keene resigned in 1873 and was replaced by Mackenzie, the former examiner of coal fields for the Illawarra. Mackenzie steadfastly refused to inspect mines because he felt it was beneath the dignity of his 'high' position [18].

The lack of mine inspections did not improve under the auspices of the *1876 Coal Mines Regulation Act* which had repealed the *1862 Act*. In fact, as the number of mines increased under Lewis' term of office to more than 40, the enforcement of the *1876 CMRA* became almost impossible. Lewis' successor, James Rowan, was supposed to inspect more than 50 mines until 1883 when another inspector, John Dixon, was appointed. In 1887 Rowan and Dixon were joined by Thomas Bates. From 1874 until 1895 the fractious Mackenzie remained the head of the Coal Fields Branch. From 1874, Mackenzie was responsible directly to the Under Secretary for Mines who was the permanent head responsible only to the Secretary for Mines who was also Minister for Lands.

The Coal Fields Branch under Mackenzie had a questionable attitude to the reporting of accidents, but its performance in accident prevention and safety was reprehensible. This was in part due to not only the ineffectiveness of the *1876 Act* but also to the lack of zeal on the part of Mackenzie and the inspectorate. The feeble nature of the Act originated with its tortuous passage through the Parliament. Originally introduced as an amendment to the *1862 Act*, it lapsed in the Legislative Council in 1865-66. In 1873 following the 1873 Select Committee [19] a new *Coal Mines Regulation Bill* was introduced and suspended while the two legislative chambers deliberated its enactment. It was finally passed in 1876 [20]. It is possible that these delays were a direct result of deliberate tactics by those Members of Parliament who may have stood to lose financially. Not only were those interested parties successful in delaying the implementation of legislation but they also succeeded in watering down the legislation during its passage through Parliament.

N.S.W. Parliament and the Coalmine Owners

A pivotal argument of this book is that the Bulli Royal Commission was intentionally filled with members who would counteract the verdict of the inquest. The bias of the jurors at the inquest held at Bulli, who were embittered by the tragedy, had incriminated the company and the Department of Mines. The Government was embarrassed by the press of the day and had created the Royal Commission in that context. The Government chose its members and determined its terms of reference. With its parliamentary connections, the Bulli Coal Mining Company aided the Government in this design in order to avoid monetary and judicial retribution. Ostensibly, the Royal Commission had been fashioned to inquire into the cause of the explosion at the Bulli mine and to make recommendations that would contribute to a general improvement of ventilation and safety precautions for the mining industry as a whole. However, in reality a *laissez-faire* attitude towards the improvement of safety regulations prevailed in parliamentary circles.

The interlocking of economic interests in the N.S.W. Parliament had a significant influence during the course of the Commission. This factor also had an impact on the outcome. In 1887, the N.S.W. Parliament was teeming with members who would have suffered a financial loss if prohibitive safety measures were introduced by legislation as a result of the recommendations made by the Commission. Regardless of the many escape Clauses in the report, costs would have escalated inordinately if additional supervisory staff, expensive drilling of extra ventilation shafts and anti-coaldust equipment had to be introduced to meet the requirements of CMRA.

An investigation [21] of the financial interests of N.S.W. parliamentarians in 1887 revealed that at least 22 Legislative Councillors were directors or owners of coalmines. A further three members had extensive interests in associated companies, mainly the steamship lines. At least 25 of the Legislative Assembly's 124 members were directors or owners of coalmines and two members were directors of steam navigation companies. In this light, the Ministry or Cabinet which housed the ultimate power of state, can be viewed as the epitome of interlocking economic and political interests.

The Parkes Ministry consisted of ten ministers, of whom seven were directors or proprietors of coalmines. These people included Sir Henry Parkes, the Premier and Colonial Secretary who owned 4,000 acres of coalmine leases at Jamberoo; Mr John Fitzgerald Burns, Colonial Treasurer and Director of unspecified coalmine companies; and Mr Thomas Garrett, Secretary for Lands and owner of 68,000 acres of mineral leases who was also Chairman and Director of several other coalmining companies. Others of influence included Mr John Sutherland, Secretary of Public Works and a partner of Sir Henry Parkes at Jamberoo; Mr James Inglis, Minister of Public Instruction who was also Chairman of the Sydney Harbour Collieries; and Mr Charles James Roberts, Postmaster General and Director of unspecified coalmining concerns. Mr James Nixon Brunker, who became Secretary of Lands after Thomas Garrett, was also a director of several coalmining companies.

The Ministry listed the Commissioners, chose the Commission's chairman, and gave these people the terms of reference which, arguably, guaranteed a favourable outcome. With these appointments, vested interests were able to locate the blame with the miners. The miner provided a convenient victim, as he had neither the political nor legal avenues at his disposal to counter the attack of the parliamentarian *cum* coalmine owner.

This reciprocal relationship between government and private interests holds true for all coalmining companies investigated in this paper. For example, in 1862, George Wigram Allen, who was elected to the Legislative Council in 1860, appeared as the solicitor before Parliament in the incorporation of the Bulli Coal Mining Company [22]. At the same time, the Osborne Wallsend Company, also represented by Allen, was incorporated. Before the same Parliamentary Select Committee, William Speer appeared as director for both companies and the only witness. Speer was later to become the member for West Sydney in 1869. Parliamentary connections would prove extremely useful for these companies in gaining concessions for private railways, harbours and jetties [23]. Although the now knighted Allen resigned from the N.S.W. Assembly in 1883 and had died a few years prior to the Bulli disaster, the business connections he had made during his 15 years of Parliamentary service would have been exceedingly useful to his beneficiaries who

retained a large share in the Bulli Company in 1887. Sir George Allen was Managing Director of the Bulli Coal Mining Company until 1885, his father George Allen, Chairman of Committees of the Legislative Council 1856-73, also served as a Director on the board. The family connection also enhanced Sir George Allen's eligibility as a director of companies in associated industries. He served as director of many steamship and mining companies as well as the Australian Gaslight Company [24], and benefited financially from these directorships. The family legal business of Allen, Allen and Bowden consisted of father and son and a cousin and acted for most of the above mentioned companies, including the Bulli Coal Mining Company. Sir George Allen's personal annual income was estimated to be some £15,000 in 1876 [25], and the extent of his parliamentary influence was such that Sir Henry Parkes was indebted to him on several occasions [26], borrowing £9,000 from him on one occasion [27].

At a local level the Allen family concern was able to exert a powerful economic influence on the north Illawarra District. Just to the north of the Bulli mine, Sir George owned a large acreage of mining freehold known as the North Illawarra Coal Mining Company [28]. The towns of Austinmer and Coledale, some 16 kilometres north of Bulli, owe the naming of several localities to the Allen family - Allen Park, Allen Street and Wigram Road in Austinmer are obvious reminders of the family's influence. Less obvious are Toxteth Avenue, Austinmer which was named after Sir George's residence in Glebe, an inner suburb of Sydney. Boyce Avenue in Austinmer was so named in honour of his wife's maiden name. The naming of Hemsley Place in Coledale was derived from the partner who joined the family firm in 1894. The name Allen, Allen and Bowden was changed to Allen, Allen and Hemsley, and this group subsequently became the legal counsel for E. Vickery [29].

Mr Ebenezer Vickery M.L.C., the owner of several coalmining companies in the Illawarra district, was also a director of the Bulli Coal Mining company by 1887. Mr E. Vickery, Mr George Alfred Lloyd, M.L.C., Director of the Bulli Company and Mr George Hamilton, the company's Secretary, in their capacity as administrators of the Bulli Relief Fund established to care for the families of the deceased miners, had dissuaded the widows and legatees from instigating proceedings

against the company for damages [30]. The miners' beneficiaries were entitled under the *Employers' Liability Act of 1886*, to three years of estimated earnings [31]. Vickery, Lloyd and Hamilton, undoubtedly worried about the company's financial losses during the preceding half yearly trading period, assured the widows that they would be maintained adequately by the Bulli Relief Fund [32]. Litigation by the miners' beneficiaries, based on a three yearly average per person employed in the same industry and district, would have threatened the company's economic viability. The earning capacity of miners in the district would have averaged between £1-15-0 and to £1-19-0 per week [33]. The majority of the 81 victims were miners while 20 or so were 'off-hand' or auxiliary workers earning an estimated £1 per week. The costs to the company would have been considerable if the earning capacity of the deceased men was taken into account. An estimate of the costs can be made by calculating the total of 20 wages at £1-0-0 per week and 60 wages at £1-15-0. The action against the company would have amounted to nearly £20,000, a sum greater than the company had earned in profits.

The subversion of the inquest verdict became important for these reasons, not only for the Government of the day, but also for the company. The judgement of the Royal Commission created at the behest of a Parliament which included the proprietors of several coalmines including the Bulli Coal Mining Company, exonerated the Government and the company and implicated the miners as causal agents in the disaster that struck Bulli on the afternoon of Wednesday, 23 March, 1887.

Notwithstanding misgivings about inappropriate parliamentary behaviour, the events after Bulli show the customary influence exerted by parliamentary coalmine owners extended beyond the legislative process. The influence of political and economic interests also had far reaching implications for the Bulli disaster. The 1887 Cabinet of the N.S.W. Government, for example, had arranged the composition of the membership of the Commission established to investigate the disaster. This may have been done to produce a favourable outcome. The Australian political economist and social historian Ted Wheelwright aptly summarised the implications of interlocking directorships thus:

(c)lose links between business and government can become scandalously close, and Australian political history is replete with incidents where business firms or wealthy individuals have used their political connections to direct personal advantage [34].

Eventually the intervention of the coalmining interests in Parliament in the passage of the 1876 CMRA may well have contributed to the events at Bulli on that fatal Wednesday in 1887. The ineffectiveness of the *Act* meant that an explosion of the magnitude of Bulli was perhaps inevitable. The weakness of the *Act* was aggravated by the understaffed Department of Mines Coalfields Branch inspectorate which was represented by some negligent officers. Yet, history records that the Commission's judgement effectively exonerated not only Department of Mines officials but also the Bulli Coal Mining Company.

J. D. Holmes, in the *Australian Law Journal*, suggested that Royal Commissions are the best method by which to obtain information [35]. However, the manner of appointment of the members to the Commission and the outcomes of their deliberations suggest that:

Royal Commissions may be granted for political ends to persons unworthy of compliments - they may be made the instruments of impertinent interference ... [36].

The Bulli Royal Commission was an instance of 'power abused, of essential and beneficial prerogatives perverted to serve a sinister object' [37].

Format of this Book

Chapter One serves as a general introduction of the main themes developed in this book. After briefly outlining the immediate events after the Bulli disaster the chapter addresses the implications of the failure of the official inquiries into the Bulli disaster to resolve the safety breaches that precipitated the disaster. More generally, this chapter examines the role of government in the enactment and the maintenance of coalmining legislation. Chapter Two deals with the background and development of Bulli in the context of the economic interaction between the township and the Bulli Coal Mining Company. The phenomenon of the interlocking of

economic and political interests is also scrutinised in this chapter. In Chapter Three, details of events preceding the inquest held to investigate the explosion, the selection of jurors, their prejudices and their verdict are discussed. The proceedings of the inquest are, however, not treated in depth. The implications of the biased verdict directed against the Department of Mines and the Bulli Coal Mining Company are seen as being worthy of more intensive comment. Chapter Four deals with the Parkes Government's need to create the Commission in order to counteract the inquest verdict. The Commissioners are seen as the agents of a Parliament intent on securing a favourable verdict for its coalmining members. Chapter Five scrutinises the sittings of the Commission and demonstrates that it was prejudiced in favour of the Department of Mines and the Bulli Coal Mining Company.

In Chapter Six, the weakness of the 1876 CMRA, the effectiveness of the judgements of its administrators and their possible collusion with the Bulli Coal Mining Company are discussed. Special attention is also given to the examiner, Mr John Mackenzie, who held the position of head of the Coal Fields Branch of the Department of Mines. He alone attributed the explosion at Bulli to sabotage by dynamite. This accusation, directed at miners, was clearly a ruse and not even the biased members of the Commission gave credence to his flight of fancy. Sections of this chapter are devoted to a disclosure of Mackenzie's financial and political connections because in many ways Mackenzie represented the Coalfields Branch and was one of its important policy-makers. An investigation of the role of the Department of Mines is also undertaken.

The final chapter examines the Bulli disaster in the context of the present. It is suggested that history could and should provide valuable lessons from the past, but in fact such lessons are largely ignored. It is also implied that more attention should be accorded by the historian to the area of policy-making and administration of government instrumentalities and departments for it is within this area that a safer coalmining industry can be developed. Also, Royal Commissions in general should not be seen as being alternatives to judicial inquiries in those cases where the latter are a duly warranted option for redress.

CHAPTER TWO

2 Background and Development of Bulli

Safety in Nineteenth Century Coalmines.

Across the bargaining tables of power, the bureaucracies of business and government face one another, and under the tables their myriad feet are interlocked in wonderfully complex ways (C. Wright Mills, 1951: 79)

Bulli lies 68 kilometres south of Sydney, N.S.W. and 13 kilometres north of the industrial city of Wollongong. It is located on the narrow coastal plain between the escarpment of the Illawarra Ranges and the Pacific Ocean. The ranges meet the sea at Coalcliff and recede about 1.75 kilometres inland at Bulli and approximately 3.5 kilometres at Mt. Keira. The average elevation is 300 metres. The ranges are heavily forested and contain eight coal seams separated by several beds of shale, sandstone and igneous rocks.

The coal seams of the Illawarra district are part of the Sydney Basin. While the seams are too deep in the Sydney area for mining to be a viable economic proposition, the seams are closer to the surface in the Illawarra area to the south of Sydney, at Newcastle to the north and Lithgow to the west. At Coalcliff, where mining has only recently ceased, coal strata are visible five metres above sea level, rising to 150 metres at Bulli. The coalbed today known as the Bulli Seam was known in 1887 as the '8 foot' seam [1] and by the late 1800s this was the easiest to work as it contained the thickest and the then most saleable coal deposits. Therefore, it was considered to be a most profitable exercise by the Bulli Coal Mining Company, despite the fact that the seam was most affected by the intrusion of 'rolls' and gas-inducing 'dykes' [2]. In the Balgownie or '4 foot' seam underlying the Bulli seam, no igneous irregularities were encountered and at Bulli this seam was mined without the problems that can occur with the presence of gas. The economically motivated decision by the Bulli Coal Mining Company to mine the Bulli seam in 1884, despite its gaseous nature, was a contributing factor to the

1887 disaster. The recurring natural cindering, or partial combustion of coal reduced the value of the Bulli pit, which was further devalued by the 1887 explosion. The Bulli Coal Mining Company never seemed to recover completely from the financial setback of this explosion. It was due to these financial reversals that the mine was sold in 1895 to George Adams of Tattersall's fame. It was later to be resold in 1936 to Australian Iron and Steel (AIS). It was not until well after World War II that AIS, which by then had become part of Broken Hill Pty Ltd (BHP), was eventually able to overcome the cindering and variable coal quality through the application of modern mining techniques.

Previous to the opening of the Bulli mine in 1863, the wealth of the 'North Illawarra' had been generated mainly through agricultural production, although the district had originally been a site for cattle raising and timber felling. Coal was discovered at Bulli as early as 1828 but mining was not permitted because of the Australian Agricultural Company's monopoly on coalmining [3] which made coalmining other than mining for the AACo an illegal activity. In 1848, the AACo's monopoly was revoked setting the scene for coalmining in the Illawarra district, initially at Mt. Keira in 1849. Due to its steam raising capacity, Illawarra coal was in high demand in the domestic market for local shipping and by 1863 after the opening of the Bulli mine coal began to be exported to Shanghai [4].

The high demand for the Bulli Coal Mining Company's coal dramatically changed the agricultural and economic character of the Bulli settlement. The area's present industrial character began to emerge at this time [5]. A village of 'substantial huts' appeared which were soon replaced by more substantial dwellings. A school and a few shops also sprang up near the company's property [6]. The continual growth of the company resulted in an increasing demand for miners. With its increasing importance as an employer the company was in a position to influence the economic character of the area. By 1879, Bulli and the adjacent village of Woonona had become largely dependent on the Bulli mine [7]. The population of the district increased in direct proportion to the production of coal, indicating the tremendous influence the mine exerted on the surrounding community. The company frequently used its economic strength to counteract potential industrial action by its workers

by threatening to reduce wages or to sack the striking workers. Eventually, the company's ability to dominate the labour market had direct implications in the causes of the Bulli explosion.

In 1869 the population of Bulli was about 100, yet 90 men from Bulli and the immediate district were employed at the Bulli pit producing some 64,000 tons per year. Within 12 years there were 645 males in the district, 317 of whom worked at the mine [8] until a major strike/lock-out which lasted from September 1886 to March 1887. In that year some 371 men of an estimated 845 males in the Bulli-Woonona locality were employed by the Bulli Coal Mining Company. The strike reduced the number to only 177 men [9]. The company had also become a major landlord for its employees by 1887, and with this development the mine management was able to exert an even greater influence over its employees. The company was closely identified with the daily life of the community.

The fluctuation of coal prices in the Sydney and overseas markets frequently led to a reduction in miners' wages and piece-rates which resulted in retaliatory strikes by the workers. The 1886-1887 strike not only affected the Bulli mine, but also the other Illawarra mines. The incident was marked with violence directed at outside miners, 'blacklegs' who were brought in by the coal mining companies to defeat the strike. Blacklegs were often assaulted and physically prevented from entering mines by the striking miners. During the strike, the military were brought in and shots were exchanged. As a result of this incident, several Bulli miners were prosecuted, fined in court and evicted from company owned dwellings. Many were forced to live in makeshift accommodation [10].

The cause of the strike had been the reduction of miners' hewing rates on a sliding scale proportionate to the reduction of coal prices. The settlement of the strike at Bulli in March 1887 was only achieved by forcing the miners to sign engagement rules stipulating reduced piece-rates, while at the same time ensuring rigid management control of employees. The terms of the settlement eventually became a telling factor in the 1887 disaster because miners claimed in evidence before the Commission that the strict enforcement of the engagement rules had prevented them from reporting the presence of gas [11].

The emission of gas in the mine was a controversial issue during the hearing into the Bulli disaster. The evidence tendered by miners who worked continually in gaseous sections of the mine was consistent with nineteenth century geological expectations of gas being encountered in the Bulli seam [12]. Yet, Department of Mines officials and management denied that unsafe quantities of gas were present at Bulli. The unexpected striking of several dykes was also a major contributing factor in the explosion because of the associated emission of explosive firedamp (methane). The discharge of firedamp necessitated additional safety procedures which were not observed at the Bulli mine by either management, miners, or members of the Department of Mines inspectorate.

The colliery had increased output annually until 1884 when a large dyke of basalt was struck 1200 metres along the main tunnel from the entrance. Because the basalt caused cindering and isolation from the coal seam in a northwesterly direction along the main tunnel, another tunnel was struck off to the west to avoid the unprofitable mining of stone. The new section became known as the 'Western district'. New leases were obtained under government land. However, in these new leases along the direction of the main tunnel the dyke was struck again. With the objective of avoiding the dyke, two parallel tunnels known as 'headings 1' and '2' were driven at right angles in a northeasterly direction to the main tunnel. This section was known as the 'Hill End' or the 'gassy' district. As this colloquial name suggests, these and the four subsequent headings gave off volatile firedamp, an occurrence which both Government and company witnesses attempted to deny during the course of the inquest and the Royal Commission.

A contributory factor to the explosion was the inability of the mine's inadequate ventilation system to disperse accumulations of gas. Alexander Ross, the manager of the Bulli mine, James Rowan, the Department of Mines inspector and John Mackenzie the head of the Coalfields Branch of the Department, had neglected to provide adequate ventilation according to law. Nevertheless, these men remained adamant throughout the Commission's sittings that they had indeed observed all the safety regulations. The judgement delivered by the Commission

exonerated these men and attributed the cause of the explosion to a reckless miner who had perished in the explosion.

The propensity for health and safety issues to be overlooked in N.S.W. coalmining had its roots in the economics of mining and was not necessarily the fault of individual company officials or government inspectors. Owing to the intermittent nature of the coal trade during the nineteenth century, mineworkers, especially those who were paid by piece-work - that is, those who were not paid wages but paid by the amount of coal they produced, had to take risks to maintain their livelihood. From the time of the first effective competition against the Australian Agricultural Company's coalmining monopoly in the early 1840s to the time of writing, the N.S.W. coal industry has possessed the potential to produce more coal than could be absorbed by its markets. This potential gave rise to an almost continuous problem of under-employment in the industry until the outbreak of World War II, as well as the inherent tendency in the industry to over produce [13]. From the end of the AACo's monopoly in 1847 N.S.W. coalmine proprietors operated their mines free of governmental regulation in the area of workers' compensation until 1900. There were no laws in wage determination until 1901 and pricing until 1916. Even by 1900 the only governmental constraints on coalmine proprietors consisted of four relatively unsubstantial coalmining acts. It can be seen in Chapter One above that these acts were carefully framed so as not to interfere with the profitability of coalmining. Employers' obligations to workers' compensation were limited to the flimsy *Employers' Liability Acts* enacted from 1882 and the *Miners' Accident Relief Act* of 1900, the first act specifically concerned with compensation. Consequently, wage justice, work conditions and health and safety issues received little or no consideration.

This *laissez-faire* attitude of the N.S.W. Governments during the nineteenth century allowed the unfettered development of an industry with too many mines and too many men which together constituted the roots of excess capacity. Because sailing ships were the mainstay of transport for most of the nineteenth century, over-production caused by climatic conditions exacerbated the problems of the industry. Stockpiles and underemployment were a normal condition of the N.S.W. coalmining

industry. These conditions placed inordinate pressures on all those directly concerned with the production of coal to neglect safety factors.

This background of irregular employment also gave rise to a pragmatic type of unionism which was almost entirely occupied with 'bread and butter' issues arising out of necessity. This focus generally precluded any organised action over the miners' health and safety. Indeed, the individualistic nature of the piece-work system nurtured by the unions of the day, fostered a disregard toward health and safety [14]. By the early 1860s when the Illawarra (Southern) district was established, these attitudes were well rooted in the Newcastle district. With the expansion of the coal mining industry these traditions were transported to the Southern district.

Apart from market fluctuations and price cutting, the inefficiency of the Colony's transport system was the over-riding contributor to the tendency for the industry to over produce. Newcastle harbour was a dangerous, inaccessible port, Wollongong's harbour was too small and the Bulli Coal Mining Company's jetty was frequently washed away by big swells. Because Wollongong and Bulli were mainly serviced by sail ships during the nineteenth century their harbours were often inaccessible especially during heavy winds and adverse tides [15].

The irregular arrivals of ships was as unwelcome to the miners as it was to coalmine proprietors. When there were no ships in the harbour the stockpiling of coal caused the deterioration of some qualities of coal mainly due to spontaneous combustion. Stockpiling also required double handling which increased the likelihood of breaking up the coal trade preferred 'round' coal which passed over screens with bars $3/4$ " to $7/8$ " (approximately 19 to 22 millimetres) apart. In addition the process incurred extra handling costs. To the miners the irregularity of shipping meant an indeterminate number of days of long hours followed by an equally uncertain period of idleness [16]. Hewers, the miners who actually mined the coal, and wheelers, who pushed the skips to and from the 'coalface' to the haulage system were generally paid by result. 'Off-hand' workers, labourers who were paid by the day, were stood down when coal was not required.

Consequently, the customs and practices developed in the coalmining industry were largely based on minimising the effects of

intermittency and optimising their income. These practices originally dated from the 1840s in the Northern district where individual 'lodges' were formed and a district union was created for a short period in 1854 and almost permanently from 1861. However, the development of unionism in the Southern district was slower. Coal was discovered in the Illawarra in 1797 at Coalcliff, but not mined commercially until 1849 owing to the AACo's monopoly. From 1849 there was little expansion in the Southern district until the 1880s. The number of mines grew from 5 in 1883 to 10 in 1885 in response to price increases during the prosperous 1880s. After the slump of the 1890s these prices were not surpassed until after World War I. By the turn of the century, of the 100 mines in N.S.W., 15 were located in the Illawarra, 64 in the Northern district and the remainder in the Western district [17].

While there is evidence of lodges at individual mines in the 1860s, attempts at district unionism in the Illawarra were unsuccessful and after a union was established it was severely decimated by the employers. In 1861 the recently reformed Northern union conducted a strike and sent delegates [18] to the Illawarra to form a district union; however these delegates were rebuffed by the Southern miners. It is not clear to what extent the advances of the Northern unionists were resisted by the Illawarra miners at the behest of coalmine owners [19]. However, there is a significant body of evidence which suggests that the miners from then until 1879 rejected incorporation into a district association with inter-district connections. This occurred because of the extra money they earned when the Northern district was on strike which forced ships to call at Illawarra ports. After the IMMPA was formed as a result of a successful delegation from the North in 1879, Illawarra miners continued to capitalise on the industrial misfortunes of other districts despite binding, or at times, less formal arrangements not to do so.

As mentioned above, Bulli harbour and the district's other harbours were unprotected from heavy north-easterly swells; their jetties were too insubstantial for big tides and were prone to wash away during storms. Southern miners' earnings, like their Northern counterparts' were heavily dependent on favourable shipping conditions. After the rail connection between Wollongong and Sydney was established in 1888 there was a slight improvement in transport efficiency but an endemic

shortage of rolling stock prevailed, especially during wheat harvests and other peak periods in the rural sector. Moreover, railway freight rates were considered prohibitive by the coalmine owners who also owned colliers (ships especially constructed to transport coal). Therefore, sea transport remained dominant well into the twentieth century. Any improvement in transport was also offset by the effects of the potential of the industry to over produce.

As well as irregular income, Southern district miners were also subjected to a reduction in wages from the late 1870s until the end of the century. In the Illawarra district hewing rates were almost never determined on a sliding scale. However, owing to the contraction of the price of coal from 12/- per ton in 1876 to 4/9d. in 1898, the coalmine owners forced down the district hewing rate from 2/9d. in 1878 to 2/- in 1894. This rate continued to 1899 when it rose to 2/2d. after the 1890s depression [20]. In addition, the workforce, despite severe periods of intermittent employment, increased prodigiously from 528 in 1876 to 2352 in 1900. The swelling of the workforce beyond the demand for labour was the owners' stock-in-trade response of assuring that a large army of reserve labour was available for long hours whenever ships called. These pressures on the earning capacity of miners resulted in an intensification of the labour process as well as an increase in the amount of labour performed [21]. Under these circumstances safety and health were of little consequence to the IMMPA and its successors. Furthermore, the union was often preoccupied with ensuring its viability. After being squeezed out of existence during the prolonged lock-out lasting from September 1886 to just prior to the Bulli disaster in March 1887, the IMMPA was reformed in 1888 [22]. In 1890, in an attempt to improve its increasingly weakening condition, IMMPA became a branch of the miners' organization, the A.M.A. [23] which operated in districts where minerals other than coal were mined.

The method under which coal was mined and wages were earned during the nineteenth century encouraged the non-observance of safety procedures. Arguably, piece-work, which was the customary method of payment in the United Kingdom where most N.S.W. coalminers came from, flourished because it suited employers owing to the irregularity of trade. Piece-work also encouraged unsafe working. Foremost, the

'contract' [24] system ensured that hewers worked almost unsupervised [25]. They alone were responsible for the upkeep of their 'place' in the mine, a location known as the 'bord'. Under the 'bord and pillar' method, single or parallel 'headings' normally four yards wide, were driven off the main tunnels. Headings, like tunnels, were simultaneously haulage roadways and the means of ventilating the bords. Typically, bords four to six yards wide were driven off headings, ideally at right angles to each side of the heading. Sometimes bords were worked to adjoining parallel headings leaving, when possible, symmetrical blocks of coal or 'pillars' standing to support the 'roof'. Until the 1950s it was more usual to let pillars stand but when they were worked miners systematically cut sections of pillars away until these were scarcely able to support the roof which would collapse when 'props' (supporting timber) were withdrawn.

Although there were many variations of bord and pillar, as well as the seldom used longwall system, all shared a basic similarity in the way the coal was separated from the 'solid' (or coalface). The face was initially undercut or holed generally at floor level, but if there was a band of stone or dirt in the face the face was cut near or in the band to separate it from the coal. The undercutting of the face was a skilful, arduous and dangerous task. Ideally, with a floorcut, the 'kerf' (or the undercut) was made higher at the face, perhaps 18" to 24", and was tapered to the floor perhaps 6 feet or more under the face as the kerf progressed. The wedged shape of the kerf facilitated the easier removal of the 'solid' (the undercut coal) after the solid was drilled, charged with explosives and detonated. As miners paid for their gunpowder and fuses they were fortunate if the solid fell away unassisted. Hewers were often forced into contorted positions to undercut the coal by squatting or bending down. In a low seam where they could not swing their picks vertically they lay on their sides sometimes for hours at a time and often in water with the back of their shovel the only support for their head. There was always a danger when a hewer was right under the solid that it might give way dumping several tons of coal on him, particularly if he had not 'spragged' the coal by supporting it with short props positioned in the kerf. This safety measure was frequently not observed. Because hewers were paid by result safety procedures were often disregarded; any hold-up in the work process interfered with their earning capacity. This may appear a gross

disregard of the safety of others by individuals, but owing to the intermittent nature of the N.S.W. coal trade these and other malpractices were tolerated, and in fact, became an indispensable part of the economic survival of both miners and coalmine owners.

Each pair of miners undercut and sometimes sheared [26] the coal, drilled and shot the coal down and also filled the coal into skips. In addition, they laid the skip rails as the face advanced, set the timber and performed many other tasks. Aside from a cursory inspection by a deputy (a company's safety and production officer) perhaps once or twice a day when two shifts were worked, the hewers worked entirely unsupervised. This was one feature which attracted the owners to use piece-work, particularly in larger mines where there were more than a hundred bords, the furthest literally miles from the adit (the mine's main entrance/exit). However, this customary lack of supervision allowed miners a great deal of latitude in their work practices. Consequently, whenever possible they cut corners, despite the fact that unsafe practices placed themselves and their workmates at risk. Unsafe practices ranged from not spragging the solid while lying under it, to not setting enough props so that the roof might collapse without warning. Such practices also consisted of the careless use of explosives and safety lights which ultimately led to the explosion at Bulli.

This attitude to health and safety by miners and their union is not surprising. To a degree their attitude reflected nineteenth century indifference to work conditions. Miners were used to working in dangerous conditions and taking risks. Among N.S.W. coalminers the tradition of playing down health and safety hazards came with the introduction of the first free miners in N.S.W. who were not convicts. British miners brought with them a long history of placing economic well-being before personal health and safety. A succession of immigrant coalminers from England, Scotland and Wales also brought with them in their 'invisible luggage', the results of being subjected to long hours underground, being surrounded by danger and atrocious working conditions. This invisible luggage turned out to be one of the main contributing factors in the Bulli disaster of 1887.

CHAPTER THREE

3 The Inquest

According to law the cause of the explosion at the Bulli Mine had to be investigated by a coroner's inquest [1]. However, the inquest seemed to be earmarked for special attention by the Government from its inception. Perhaps anticipating local antagonism in the Bulli district, a solicitor had been instructed by the Crown Solicitor to represent the interests of the Crown, the Government and the Department of Mines [2]. Adverse press reports criticising the Government and officers of the Department of Mines must have placed considerable pressure on the Government. The tone of the following newspaper article was typical of the criticism levelled at the Government:

(h)ow is it that a colliery explodes within a week of its being examined and pronounced safe by a Government officer?' [3].

The engaging of solicitors by the Department of Mines, the Bulli Coal Mining Company and the Illawarra Miners' Mutual Protective Association was a tacit admission that litigation by the three represented parties could be expected. The *Daily Telegraph*, commenting on the inimical atmosphere during the inquest, noted:

(s)ides were taken at its inauguration, and the distinction between defence and prosecution was as clear as noonday. The Bulli Coal Company were on their [*sic*] trial and with them their manager and overman, the Examiner of Coalfields and the District Inspector. They must have all felt that; indeed, they often showed that they did, the asseverations of the counsel that it was not a trial notwithstanding. The Illawarra Miners' Association, but more particularly the more prominent remaining members of the Bulli Lodge of that association were the prosecutors [4].

The established procedure used by the Government was to send the Department of Mines inspector, Mr James Rowan, as its representative at coronial inquests in the Illawarra District. At the Bulli inquest however, in addition to a solicitor, the Government had taken the

unprecedented step of requisitioning a Sydney magistrate, Mr George O'Malley Clarke from the Department of Justice, to assist the Coroner [5]. The District Magistrate and Coroner, Mr J. F. Smith, was considered incapable of sitting on this case alone [6]. Owing to the serious nature of this inquest, the Government's action appeared to be justified. Considering that Smith, a local businessman, had been appointed to the Bench not as the result of any legal expertise, but simply as the result of custom because he was a middle-class community leader, this was a sound decision. Furthermore, besides his coronial income, Smith had depended on the community for the better part of his livelihood in his capacity as land agent and auctioneer. The fraternal interactions between Smith and the miners during the inquest indicate that the Government's cause would have been better served without his presence. Statute law, however, prevented his total removal from the case [7]. Clarke's participation ensured Smith's co-operation to the extent that he was overawed by Clarke's presence. The *Daily Telegraph* reported:

(t)hat gentleman, with a proper conception of his duties sat passively beside the Coroner, and throughout the whole investigation never infringed the dignity of the Court by any suggestion, advice to, or question through the Coroner; these were conveyed *sotto voce*. Hence there was the spectacle of an austere and dignified well known and able Sydney stipendiary magistrate sitting very close to an unobtrusive coroner, prompting more than two-thirds of the questions in a skilled and studied undertone [8].

Having served as Assisting Coroner, Clarke was also chosen as a Commissioner on the Royal Commission. The double appointment of Clarke must have been a unique judicial innovation. To serve twice as an adjudicator on the same matter appears contrary to any other N.S.W. legal precedent.

Newspaper articles suggested that the inquest jury was top-heavy with relatives who had lost their lives in the explosion. Furthermore, it was alleged that three jurors had worked in the Bulli mine until the strike and were not re-engaged when work resumed at the mine [9]. The verdict of the jury seems to reflect that the newspaper allegations were factual. One of the jurors, Joseph Walker, a farmer, had lost a brother and two

nephews in the explosion. Walker and the three miners who were not re-engaged by the company could hardly have been expected to return an unbiased verdict.

The principal object of Clarke's and the solicitor's appointment was a Government manoeuvre designed to minimise the prejudice of the inquest jury. However, this proved to be an impossible task. By law, jurors had to be chosen from eligible residents within the Bulli Jurors District [10]. Government interference could not alter that selection process. The Government solicitor was entitled to reject jurors who might be prejudiced and select those who might not be so prejudiced, or those who may have even been favourably inclined towards the Government. However, during the empanelling of the initial inquest jury on the day after the explosion, it became evident that most jurors had a relative or friend killed in the explosion. The jury rejection rate by the Crown solicitor climbed as more bodies were brought out of the mine with the result that three entire juries were determined to be unsuitable and thus were disengaged. The district soon ran out of eligible jurors [11].

An acceptable jury was finally constituted. This panel consisted of five farmers, four publicans, a landlord, a butcher and a storekeeper-miner [12]. The *Daily Telegraph* alleged after the verdict had been received that:

(t)he number of disinterested jurors is doubtful. With all respect, they must upon reflection see that they were biassed by their previously and pre-maturely-formed convictions [13].

The *Daily Telegraph's* allegation seems well founded; the publicans, butcher, storekeeper and landlord would have been dependent largely on miners' patronage. Joseph Walker, the farmer who had lost three relatives no doubt would have been biased against the Department of Mines and the Bulli Coal Mining Company. While the disposition of the remaining four farmers could not be reliably determined, it seems likely that they may well have shared some of the bitterness of the local community. According to the *Daily Telegraph*, only one juror had friendly inclinations toward the government and the company for reasons of personal gain - he had a timber contract with the company [14].

Notwithstanding governmental interference, the verdict implicated the Department of Mines and the Bulli Coal Mining Company. After being asked by the Coroner if the jury had reached their verdict the foreman replied:

(y)es, the Jury are of the opinion that William Wade and others came to their death in the Bulli Coalmine on the 23rd of March 1887 by a gas explosion (*and added as a rider*) which was brought about by the disregard of the Bulli Colliery Special Rules and the Coal Mines Regulation Act, in allowing men to work when gas existed [15].

This was an unknown verdict for coal mining communities accustomed to the fatal nature of working underground. In inquests where the empanelling of juries was a legal requirement, invariably such juries returned a verdict of accidental death. In the case of the Bulli jury owing to the immensity of the disaster and residual resentment over the company's role in the 1886-87 strike the trite verdict of accidental death was rejected. Instead, the jury openly blamed both the company and the Department of Mines for the disaster. Implicit in the verdict was that company management and Department of Mines officials had allowed miners to work in the presence of gas. The jury's reference to the disregard of the Bulli Colliery Special Rules could have implicated the miners, the Department of Mines, the company, or all three. The treatment of Government and company witnesses by the jury and the miners' solicitor left no doubt in the minds of people in the Department of Mines and the company as to whom the verdict was directed [16]. That the jury was earnest in its desire to incriminate the company and the Department of Mines is evident in the admissions of several jurors after the inquest. It was revealed that they had wanted to return a verdict of wilful neglect against the company and the Department. They had assumed however, that the appended rider in which they had conveyed that intention was as legally valid as the verdict itself [17].

The jury had been particularly critical of John Mackenzie, the Department of Mines' examiner of coalfields. The presence of Mr D. Rees, the Chairman, Mr W. Hunter, the Treasurer and Mr J. Curley, the General Secretary of the Coal Miners' Mutual Protective Association of the Hunter River District, seemed to encourage the already vindictive

mood of the jury to harass Mackenzie and to a lesser extent James Rowan, the Department of Mines inspector for the Illawarra and Western districts [18]. Utilising the right of cross-examination by the foreman, the jury continuously assailed the opinions of both Government and company witnesses, especially testing the evidence given by Mackenzie and Rowan. Examiner Mackenzie, in particular, was frequently subjected to humiliating cross-examination by the jury and as a result he was criticised in the national press. In contrast, however, witnesses who gave evidence on behalf of the miners were treated with respect and cordiality by the jury [19]. Notwithstanding the jury's partisanship, their criticism of the Department of Mines was warranted.

The Government had been frequently criticised in Parliament and in the press over the negligence exhibited by officers of the Department of Mines. In 1886, in response to the Lithgow Valley Colliery Royal Commission, Mr. DeCourcy Browne, Member for Mudgee, cited the proprietors of the Lithgow Colliery, Mackenzie and Rowan as negligent and directly responsible for an accident at the Lithgow mine [20]. An article appearing in the *Sydney Mail*, anticipating that a Royal Commission into the Bulli disaster would be held, reported that:

(t)he matters of the recent coronial inquest and promised Royal Commission are the all-absorbing topics of public interest hereabouts. The late jury individually contend that their verdict was most intelligible and proper - press comments notwithstanding. It is maintained that the act clearly provides for the men to be removed from workings where gas exists, until sufficient protection be supplied; and this was not observed at the Bulli pit, according to the evidence [21].

The Government had been incriminated and reacted accordingly at two levels. With parliamentary powers at the Government's disposal, a Royal Commission was proposed and assented to by the Parliament. Many of the Members of Parliament had a vested interest in maintaining the strength and economic viability of the coalmining industry. At a departmental level, a smear campaign was launched against the Bulli miners by examiner Mackenzie [22] during the inquest. This campaign

continued throughout the inquest and was maintained after the winding up of the Bulli Royal Commission.

The selection of jurors and other statutory prerequisites that applied to other types of inquests did not apply to the formation of Royal Commissions. The prejudice of the Bulli community could be overcome with the establishment of the Commission. The Cabinet, armed with the consent of a sympathetic Parliament, had the constitutional right to choose Commissioners and to select terms of reference, was able to reverse the verdict of the inquest by creating a puppet Royal Commission. Traditionally, Royal Commissions are constitutionally appointed by parliament which comprises the Crown, the Legislative Council and the Legislative Assembly. In practice members are chosen by the Minister responsible in conjunction with Cabinet [23].

From an official perspective, the Royal Commission was appointed to undertake a diligent and extensive inquiry into the cause of the explosion. It was further exhorted to ascertain the person or persons responsible and to make recommendations affecting the management and ventilation of the mine. Amendments to the 1876 CMRA which were concerned with the prevention of further gas explosions were due to be made [24]. A cursory review of the activities of the Commission seemed to suggest that it performed its appointed duties. In reality, manipulation by the Government subverted its objective mission. The Commission made recommendations regarding management and ventilation and suggested amendments to the 1876 CMRA. However, recommendations for improved mine management were ignored. Mr. Alexander Ross, the manager of the Bulli Mine continued as manager after the explosion and the old ventilation system in place at the time of the disaster remained. The suggestions made in order to improve the CMRA were ignored by Parliament for two years when the new CMRA was moved, only to be repressed until 1896 when it was enacted [25]. By 1890 [26], the use of naked safety lights was universally adopted at the Bulli mine despite the fact that it had been an open safety lamp that had caused the explosion. Considering the immensity of the loss of life at Bulli and the potential for further disaster these were scarcely reactions calculated to make N.S.W. coalmines safer workplaces.

CHAPTER FOUR

4 The Composition of the Royal Commission

The conduct of a Royal Commission depends upon the quality and character of the Commissioner (*Australian Law Journal*, (29): 268).

From the time it became apparent that the inquest was going to be followed by a Royal Commission, the composition of the Commission was debated in Parliament and in the press [1]. The Bulli correspondent for the *Sydney Mail* expressed the widespread fear of the community that a Royal Commission was to be established, the findings of which would be predetermined. The article stated that:

(t)he matters of the recent coronial inquest and promised Royal Commission are the all-absorbing topics of public interest hereabouts. The late jury individually contend that their verdict was most intelligible and proper - press comments notwithstanding. It is maintained that the Act clearly provides for the men to be removed from workings where gas exists, until sufficient protection be supplied and this was not observed at the Bulli Pit, according to the evidence. The mining community express little confidence in the action of a Royal Commission unless miners are represented thereon, as, it is urged, the sympathies of colonial experts are entirely with the proprietors; in fact, that such familiarity exists between the former and the latter that impartiality is next to impossible. Great stress is laid on the fact that officials, experts and managers, all fraternised during the recent inquest and the Bulli company's steamer conveyed those engaged on the inquest during its progress [2].

Initially all appointees to the Commission were selected from the non-mining community [3]. The Government, in part due to adverse press and pressure from Parliament, relented to this pressure and included three miners as members of the Commission to make it appear more representative of all interest groups. However, an analysis of these three miners' educational qualifications suggests that none possessed a level of theoretical mining knowledge equal to the demands of underground

safety requirements. Furthermore, two of them seemed to be more favourably inclined towards their employer than to their fellow workmen.

The Government's final choice of Commissioners were as follows: Chairman, Dr. James R. M. Robertson, mining engineer, and Director of several coal mining companies; Mr John Young Neilson, manager of the Wallsend Colliery; Mr Thomas Croudace, manager of the Lambton Colliery; Mr Joseph Hilton, checkweighman at the Mount Keira Colliery; Mr John Jones, checkweighman at the Lambton Colliery; Mr John Owens, Secretary of the Coal Miners' Mutual Protective Association of the Western district at Lithgow and Mr George O'Malley Clarke, Stipendiary Magistrate. While it is true that most of the Commission's members had either practical or theoretical mining expertise, of its seven members six had little empathy with miners, being more favourably disposed towards management. G. O. Clarke possessed no knowledge of the industry whatsoever and perhaps he was suitably chastened by the adverse press reaction regarding his participation in the inquest and the Commission: Whatever the reason, Clarke's contribution to the Commission was negligible and he asked less than ten per cent of the total questions put to witnesses [4], most of which were asked in the absence of Robertson when Clarke had taken the Chair.

Dissatisfaction with the composition of the Commission was soon expressed by the Members for Northumberland, a three member electorate composed predominantly of miners. In contrast, the ever silent M.L.A. for Illawarra, Mr Francis Woodward, did not oppose a Royal Commission, the membership of which reflected the interests of management. In fact, Mr Woodward did not speak on the Bulli disaster at all during the session of Parliament at the time of the disaster - neither did he ask any questions about the event [5]. It seemed that Woodward was not an active representative of his constituents; of all the 74 divisions of the House during the first session of the new Parliament, Woodward participated only in 25. His contribution to Committees can also be questioned as he attended only 24 out of a possible 76 sittings [6]. Notwithstanding his lack of vigour in parliamentary affairs, Woodward was re-elected in 1889 and served for a further two years.

It was Thomas Walker, one of the three members for Northumberland, who became one of the leaders of the miners' cause

against the bias inherent in the Commission. Mr Walker had a twofold motivation for acting in this way. He wanted to satisfy the miners' lobby in his electorate [7] and to air his Protectionist dislike of Parkes' 'free-trade' Ministry. Walker emerged in Parliament as a trouble maker over the issue of the bias of four Commissioners and the submissiveness of the other three to the former. Despite his ulterior motives, Walker's criticism of the Government was justified, particularly as he endorsed one of his constituents' letters in Parliament which objected to the final selection of the membership of the Bulli Royal Commission:

It is [*sic*] reasonable to expect anything but a farce when such men as Dr. Robertson and J. Y. Neilson are appointed on the commission? The latter does not conduct the ventilation of his own colliery according to the present act ... This appointment has caused intense dissatisfaction throughout this district [8].

This anonymous criticism was justified. Neilson, the manager of the Wallsend mine, had contravened the CMRA on several occasions. Even the Department of Mines itself had been engaged in a dispute with Neilson regarding his repeated failure to observe the CMRA [9]. It seems that Jones, Hilton and Owens were chosen as Commissioners to make the process appear to be representative of all interest groups, thereby counteracting criticism against the Commission such as those delivered by Walker. Another reason for the selection of Jones, Hilton and Owens was to exclude troublemakers such as the Newcastle Coal Miners' Mutual Protective Association's vociferous Secretary, Mr James Curley [10]. Curley, who had been instrumental in arousing high sentiment among miners over the Bulli disaster, was no doubt responsible for the majority of the Northumberland members' reaction to the disaster in Parliament [11]. Jones, Hilton and Owens served well the interests of managers and proprietors as predicted by Thomas Walker who saw that:

(t)he composition of this body clearly indicated that the interests of the miners would not be considered. The very fact that the commission was composed of Dr. Robertson, Mr. Neilson and Mr. Croudace on the one hand; and Messrs. Owen, Jones and Holden [*sic*] on the other, with Mr. O'Malley Clarke as chairman, showed that if any interests were to be considered at all they would be those of the managers and proprietors [12].

The *Illawarra Mercury* also held an opinion which reflected a concern over the choice of Commissioners, in particular, the choice of Dr. Robertson. Robertson was later reputed to be able to get managers to do whatever he wanted [13]. Jones had served with Robertson and Neilson on the Ferndale Colliery Royal Commission in 1886 and he knew how to maintain the role expected of working class people co-opted on official inquiries. If Jones forgot something, his manager at the Lambton Colliery as a fellow Commissioner could prompt him.

Croudace, like Neilson, had contravened the *CMRA* several times. One contravention had taken place as recently as 1886. The ventilation in the Lambton Colliery was so defective that powdersmoke from explosives was visible for the entire time of an unexpected visit by an inspector of the Department of Mines. Croudace's expertise must be considered as suspect. Under his management one of the pit tunnels at Lambton had been excavated so close to the surface that the main Northern Road, near Tighes Hill had subsided [14]. It was examiner Mackenzie who had performed the survey for the tunnel. Yet Croudace, like Mackenzie and Neilson, was touted by the Department of Mines as well as the Government as one of the most knowledgeable experts on mining in the Colony [15].

Objections concerning the appointment of Croudace to the Royal Commission came from the Northern district and were numerous and frequently placed before Parliament by Walker and Mr Ninian Melville, another of the Northumberland members. A special objection was made to Croudace's treatment of his miners and his patronising attitude towards them. Croudace had been engaged in a minor pay dispute which developed into a seven month lock-out. His amicable relationship with Jones, who had been a checkweighman for 25 years [16], casts suspicion on Jones' self-interest. The precarious tenure of a checkweighman's occupation requires explanation as it reflects directly on Jones' social and economic aspirations. Under the *CMRA*, miners were entitled to appoint a checkweighman [17] whose duty was to weigh at random a skip of coal as being average in content. The miners' piece-rates were calculated according to this process. However, mine managers employed company checkweighmen who were likely to choose a skip with less coal as the average weight. If the miners' representative chose a fuller skip as the

average, the checkweighmen was liable to be dismissed and fined under an abuse of Section 20 of the *CMRA* which stated that:

(t)he checkweigher shall not be authorised in any way to impede or interrupt the working of the mine or to interfere with the weighing If a checkweigher shall impede or interrupt the working of the mine or interfere with the weighing or otherwise mis-conduct himself such owner or agent may complain to the nearest Court of Petty Session [18]

Jones had fulfilled the duties of a checkweighman for 25 years without any problems [19] which suggests that he was a tool of management as there had been several prosecutions of other checkweighmen [20]. Hilton, like Jones, was also a checkweighman who had similar aspirations. Hilton was politically active in the Illawarra electorate and had nominated Francis Woodward's opponent, Mr Andrew Lysacht, prior to Woodward's election [21]. The *Bulli and Clifton Times and Illawarra Miners' Advocate*, pandering to its predominantly miner based readership, deplored Hilton's political attitude and ambition. An article in a February, 1887 issue stated that:

... Mr. H. whose interesting twaddle about those monthly old 'principles re protection and toryism had no effect upon the intelligence of the Illawarra miners, particularly those of Bulli and Coalcliff [22].

Hilton's proclivity towards achieving upward social mobility may well have affected his judgement during the investigation into the Bulli tragedy.

Neilson, like Croudace, had very poor working relations with his men. Since 1861, he had often battled the miners' union [23]. Unionism in the Northern district had been organised since 1860 [24], unlike the Southern coalfields where a permanent coalmining union was not organised until 1879 [25]. In 1861, Northern districts owners decided it was in their best interests to create a united front and tackle this unwelcome combination of miners head-on. Neilson was a more than willing participant in this confrontation. Moreover, an owners' mutual protective organisation was formed which standardised piece-work rates, wages and hours which existed under various shapes and forms throughout the nineteenth century [26]. The owners' association was

short-lived, but it was a forerunner of several organisations which combined to combat miners' demands, generally for wage justice. The owners' aversion to spending money on equipment has previously been discussed. However, when it came to wage increases their antipathy was especially strong as it inevitably drew class antagonism into the equation. Neilson typified this disposition and his attitude toward workers was captured in a letter he wrote in 1888 to Mr. F. W. Binney, the Secretary of the then Masters' Association. In the letter he wrote about the strike-breaking techniques he had employed and encouraged Binney to employ similar techniques. Clearly, Neilson was advocating an assault on workers; he referred to miners as the enemy and gave instructions on how to defeat them [27]. Neilson could not have been a man kindly disposed towards the Bulli miners - undoubtedly he favoured the interests of the Department of Mines and the Bulli Coal Mining Company. Another factor which must have affected Neilson's judgement was his employment by the company at the time of the explosion. He had been engaged by the company to measure the royalties owed to the Government from its Crown leases [28]. Neilson also had a close association with Alexander Ross, the manager of the Bulli mine. Yet, he was required to pass judgement on him. Indeed, on the day of the explosion the two men had attended the Wollongong flower show together. Neilson, nevertheless, denied his connection with the company when confronted with the accusations of his bias in the matter [29].

Ninian Melville, M.L.A. for Northumberland, like Walker, was against Neilson's inclusion on the Commission. He felt that Neilson's judgement could be impaired as a result of his employment by the company. Melville's principal objection to Neilson's appointment was that Neilson had already testified as a witness at the inquest [30], and protested:

... that it was contrary to all ideas of British justice to first of all take a man's evidence on a question and then appoint him a judge to give determination upon it [31].

Melville, a Protectionist and liberal, to whom Sir Henry Parkes referred to as the 'veriest charlatan that ever lived' [32], was sympathetic to the miners' cause. Making the most of the Government's bad publicity over

its handling of the Bulli affair, Melville continued to harass the Parkes Ministry over its choice of Commissioners. In support of Walker, Melville also questioned Croudace's appointment [33] and disapproved of Dr. Robertson's appointment because he felt that his extensive financial interests in the coalmining industry would impair his judgement [34].

The controversy over Robertson's appointment caused the Government to mislead Parliament deliberately. Mr. Francis Abigail, the Secretary for Mines, and therefore the responsible Minister, responded to Melville's attack by stating that '... Dr. Robertson had no direct interest in any mine ...' [35]. Yet, Department of Mines correspondence to the Under-Secretary of Mines cites Robertson as 'directing manager' of Mount Kembla Colliery [36]. The Under-Secretary was Abigail's immediate subordinate. In this case, either Abigail was unaware of Robertson's role, or he deliberately misrepresented his department's correspondence. It would appear the latter case was true. Abigail implicated himself after Melville insisted that Dr. Robertson's correspondence was always written on the note paper of a 'certain company'. To this, Abigail replied:

I submitted this very question to Dr. Robertson, and I have his clear statement that he is not interested to the extent of a farthing in any mine in the colony [37].

Some doubt may be cast on Abigail's integrity, for in 1892 he was convicted of fraud as a result of his chairmanship of the Australian Banking Company and sentenced to five years hard labour [38].

Contrary to Abigail's denial, Robertson's level of involvement was more than incidental. During the Mount Kembla Colliery Disaster Royal Commission in 1902, Robertson appeared as a witness, and revealed his close connection to the Mount Kembla Colliery which had lasted for 20 years [39]. This association also attests to his close affiliation with Ebenezer Vickery, the owner of the Mount Kembla Colliery and a director of the Bulli Coal Mining Company at the time of the explosion [40]. The legal firm established by the late Sir George Wigram Allen seems to be a common factor in several relationships on the southern district coalfields in the late 1880s [41].

The Government's denial over Robertson's involvement in the coalmining industry was a futile exercise. It was common knowledge in the Illawarra district that Robertson was an active participant in the Illawarra Collieries Proprietors' Defense Association. This association, which included the Bulli Coal Mining Company as a member, had utilised Robertson as a spokesman during the campaigns the company had mounted against the striking workers in the 1886-1887 strike/lock-out [42].

Reactions in Parliament to the appointment of miners on the Commission indicated the animosity some parliamentarians held towards workers in general. Mr. See, later Sir John and Premier of N.S.W. presumed:

(t)hat the object of the minister in appointing the commission was to get at the truth as to the cause of the disaster in the Bulli mine. If the minister had appointed men who had a prejudice against the proprietors of the mine and a feeling in favour of the unfortunate miners the ends of justice would not be met [43].

Mr. John McElhone, M.L.A., concurred with Mr. See questioning the right of miners to nominate members of the committee [44]. It is no surprise that both See and McElhone were actively involved in the coalmining industry.

The Government of the day could not claim that the Bulli Royal Commission fairly represented all interests. Thomas Walker's prophetic insights regarding the subservience of the miners' representatives on the Commission became fact. Jones, Hilton and Owens were overawed by the presence of the representatives of management, and consequently, their contributions to the Commission's judgement were insignificant compared to those made by Robertson. Out of 5963 questions asked, Jones put 434; Hilton 308; Owens, 354; Neilson, 317; Clarke, 538; Croudace, 1011; and Robertson, 2996 [45].

The motives driving Croudace are somewhat unclear. Possibly his actions can be explained by his desire to surpass Robertson's achievements because he had been engaged in a feud with Robertson [46]. Croudace was certainly regarded as an elder statesman in the mining community of the Northern district, an area where a locality was named in his honour. Although he was financially connected to several

Northern district mines, in 1887 Robertson did not have as high a public profile in the Northern district as Croudace did. There also existed inter-district rivalry between the Southern and Western districts which were both regarded as being substantially inferior to the north both in terms of output and quality of the coal. Neilson's lack of initiative might be explained in terms of a feud with Mackenzie, the examiner of coalfields [47]. Certainly Clarke's complete lack of knowledge of the mining industry explains his lacklustre performance.

The choice of Robertson had been a deft move. He skilfully manipulated most of the Commissioners and witnesses. In the light of Neilson's and Croudace's contraventions of the *CMRA* and their disposition against workers, the Government could not hold the position that the Commission would be an impartial inquiry. Furthermore, considering Robertson's financial interests together with Clarke's ignorance of mining procedures and Jones', Hilton's and Owen's subservient roles, the Commission had little chance of doing justice to the issues at hand. In a similar vein, the financial interests of parliamentarians does not provide any indication that the Commission was initiated out of an altruistic desire to improve safety in the mining industry through legislation. If there had been a genuine desire to eradicate reckless behaviour by miners and neglect by management and Department of Mines officers, successive parliaments would not have needed nine years to legislate the new *Coal Mines Regulation Act*.

CHAPTER FIVE

5 The Bulli Royal Commission

... of the seven gentlemen constituting the Commission, probably only two had a hand in its compilation ... (*Illawarra Mercury*, 19 July, 1887).

To avoid the emotive atmosphere witnessed at the Bulli inquest, Robertson decided to hold the Bulli Royal Commission at the Wollongong Town Hall. Because Wollongong was not yet connected by rail to Bulli and the journey by road was tortuous the difficulty of the 13 kilometre journey from Bulli to Wollongong precluded those miners who were not witnesses attending the hearing. Although the Commission was open, the strictly controlled mode of conduct was the opposite of the informal atmosphere which had prevailed during the inquest. Robertson, empowered by the *Taking of Evidence by Commissioners Act*, tightly controlled the entire procedure [1]. He determined the type of questions, instructed his subordinate Commissioners on how to conduct an examination of witnesses and chose the witnesses. The *Illawarra Mercury* commented that:

(t)he Bulli Commission began taking evidence at Wollongong yesterday. The inquiry was conducted with open doors, but the attendance was small owing, it is believed, to the strong feeling at Bulli that the inquiry ought to have been held there. The president, Dr. Robertson made a lengthy opening address to his fellow commissioners in which he gave them advice as to the manner in which they should act and conduct themselves. He also addressed the press [2].

Given the choice of Commissioners, the selection of questions and witnesses, the outcome of the Royal Commission was not entirely unexpected. The judgement exonerated Mr. Alexander Ross, the manager of the Bulli Colliery, Mr James Rowan, the Department of Mines inspector and Mr J. Mackenzie, the examiner of coalfields. While the Royal Commission reproached Mr. Richard White, the overman, and some of the deputies, it first and foremost blamed miners for the

explosion [3]. The stance adopted by the Commissioners ignored the fact that as with the vicarious responsibility associated with the position of captain of a vessel at sea, under the *CMRA*, the ultimate responsibility for all aspects of mining rested with mine management and the Department of Mines [4]. The Special Rules accorded to each mine under the *CMRA* gave the manager total control over all officers and made the manager responsible for the safety of miners [5]. Ross often had flouted the 'Special Rules for the Bulli Colliery', especially those sections relating to ventilation, safety lamps and gas. Furthermore, the *CMRA* provided for the examiner and the inspector to ensure that all regulations were adhered to by the mine managers. Rowan and Mackenzie had not checked to confirm if Ross had observed all provisions of the *CMRA*. Their absolution, therefore, depended on Ross's exoneration by the Commission. The Commissioner's rationale seemed to have been to establish Ross's innocence, thereby undermining the charges against him that were implied as a result of the verdict delivered at the inquest. Having exonerated Ross, the charge that Mackenzie and Rowan were derelict in their duties would become redundant.

The Royal Commission's desire to exonerate Ross and officials of the Department of Mines was a goal which was supported by other managers in the Illawarra district. More than likely, they wanted to establish Ross' competency as a means of reflecting the competency of officials generally, thus protecting their own interests so that the Bulli explosion was seen as an isolated unfortunate accident [6]. It appeared that they did not wish to implicate the Department of Mines, an action which might attract heavy measures of retribution by inspections sometime in the future [7]. In contrast to the observations made by managers and the Commissioners, the testimony records that the real cause of the explosion was linked to negligence by both colliery management and the Department of Mines. Flagrant disregard of the *CMRA* by Ross, Mackenzie and Rowan had created the conditions which eventually led to the Bulli explosion.

The reasoned judgement of the Royal Commission was that the disaster occurred because a miner had used explosives carelessly. As far as the Commission was concerned, the person or persons to blame for the accident was either:

Westwood, or his mate (both deceased) who at the moment were working at the face of no. 2 heading and who prepared and fired the shot, which in the opinion of the Commission was the immediate or primary cause of the explosion [8].

The indictment of Westwood and his mate ignored the actual causes of the explosion which included faulty ventilation, frequent contraventions of the *CMRA*, and an almost complete absence of safety procedures in the mine. One contributory factor was an oversight by Ross who neglected to ensure that his instructions regarding the firing of shots were observed. The firing of shots created the most likely condition under which an explosion could take place [9], especially at Bulli where miners used highly volatile coaldust as tamping material and opened their safety lamps in a gas laden atmosphere to light the fuses. Ross had given the overman Richard White instructions to allow only deputies to fire shots due the dangerous nature of the procedure. Yet, implausible as it seems, Ross had not provided a deputy on the nightshift. This dereliction of duty did not, however, convince the Royal Commission of any incompetence on Ross' part in the disaster. There was no provision under the 1876 *CMRA* for shotfiring procedure and managers were left to use their own discretion. Ross' inattention to shot-firing was irresponsible, not illegal. On this matter the Royal Commission commented blandly that '(t)he arrangement for firing shots ... was unusual and unsatisfactory' [10].

Ross also had given instructions not to fire shots in the presence of gas, yet he had provided no means to remove such gas. He had not furnished equipment to conduct the air current to the working face as required by the *CMRA*. Nevertheless, he was only guilty of a small oversight, and according to the Royal Commission:

... the deputy Robert Millward [*sic*] deceased, Richard White, overman, and to a less extent (except in the matter of providing bratticing for which he was alone responsible) Alexander Ross, manager, were guilty of contributory negligence [11].

This was one of the few instances in which Ross was reprimanded in the Commission's lengthy summation.

There were several ventilation problems at the Bulli mine. One of the more serious was the use of a system which brought gas from one

heading to other headings. Another problem was the failure to brattice up to the face. The accumulation of gas as a result of the ventilation system introduced by Ross, and approved by Rowan and Mackenzie, did in all probability cause the explosion. The Royal Commission, however, merely believed that 'it betrayed an absence of forethought' by Ross [12]. The air current at Bulli was drawn in at the adit and after being prevented from entering several unused workings and tunnels by stoppings, or walls made from worthless pit-stone, the air was divided into two main portions. One portion supplied the Western district, the other the main tunnel to the Hill End district where the explosion took place.

The dividing of the air at the junction of these tunnels was brought about by a door with a regulating shutter which directed the amount of air that passed to each district. The air in the main tunnel was then conducted through the No. 1 heading into the No. 2 heading via a 'cut-through'. According to the *CMRA*, as headings advanced they had to be connected every 35 yards by cut-throughs or 'stentons' in order to allow the air to circulate near the advancing face which was the most likely location for gas [13]. To prevent air from escaping through old stentons, these routes were sealed with stoppings as the headings progressed.

After passing through No. 2 heading from No. 1, the air was then circulated to headings 3, 4, 5 and 6, which were also driven off the main tunnel. In order to prevent the air from going straight up the main tunnel, a door was placed between Nos. 1 and 2 and each subsequent pair of headings. Every heading had working places or 'bords' driven off them to each side. As each bord was 'worked out' of coal it was also sealed off by stoppings to prevent the air current circulating through. This cost-cutting device, although not illegal, was another doubtful mining practice as unused bords were precisely the locations where firedamp might accumulate. As the 'working' bords advanced, they too were supposed to be connected with cut-throughs if their length exceeded 35 yards [14].

The short-comings of the ventilation system used at Bulli were numerous. When gas was encountered in the No. 1 heading and some of its working bords, it was conducted into the No. 2 and successive heading to be emitted by the 'furnace', an underground fire which expelled the air by convection through a vertical shaft. The direction of the air current

swept explosive firedamp into sections where men were working with naked lights. The regulating door at the junction of the main tunnel and the Western tunnel as well as the doors between the headings were frequently opened, allowing for even a greater accumulation of gas.

The installation of a new furnace during the strike, which had trebled the volume of air, had lulled Ross and the overman, White, into a false sense of security [15]. It appears that Ross and White had neither the expertise nor cared to ensure whether or not the air supply reached the critical destinations, the working faces in the headings and bords. Although Ross's ventilation system was criticised by some of those witnesses kindly disposed towards him [16], the members of the Royal Commission did not feel disposed to attach any blame to Ross, and conceded that Ross had depended too much on the improved air current and admonished him for not using bratticing [17]. Neither Rowan nor Mackenzie ever complained to Ross about the impracticability of the ventilation system. Until the explosion the system was considered to be safe. Evidence tendered by Rowan and Mackenzie at the Royal Commission indicates that they were aware of alternative modes of ventilation but had not considered it necessary to bring them to the attention of Ross [18].

During the sitting of the Royal Commission, a frequent criticism of the Bulli ventilation system was that double doors were not generally in use. Yet, no mention of double doors was made at the inquest by the same witnesses, until a Bulli miner, Mr John Hobbs, reminded them that it was common to use double doors in Britain [19]. The single door system used at Bulli frequently caused the derangement of the air current and aggravated the build-up of gas. Because the doors had been placed thoughtlessly in the air tunnels which were also the main traffic thoroughfares, the doors had to be frequently opened to let up to twenty skips past. The ventilation of No. 1 and No. 2 headings was entirely dependent on two single doors. In fact, the entire district and the life of every workman in the district was also dependent on those two single doors [20].

Ross did not feel that double doors were a necessity; neither did the Commissioners, who believed that:

(i) in the case of Bulli, the lengths of trains would have necessitated their being placed 160 feet apart. This under the circumstances would have been impossible and the practice is not pursued in any Australian colliery [21].

The circumstances which prevented the use of double doors were financial considerations only. This was typical of the parsimony which prevailed in the industry during the nineteenth century; partially owing to the intermittency of trade, but also as a result of a traditional antipathy to investment on equipment that was not considered necessary. There were no practical obstacles for excluding the doors as Ross and the Commissioners suggested. During the course of the Royal Commission, there were numerous references made by Robertson, individual miners and managers in relation to the high safety standards in Britain, yet these standards were not implemented in N.S.W. It would appear that the unquestioning acceptance of inadequate safety measures in N.S.W. in general and by all concerned with the Bulli mine had led to the explosion.

The driving of headings and bords more than 35 yards ahead of the air was another gross transgression of the *CMRA* [22]. Generally, this widespread malpractice was also motivated by cutting costs and served to compound the problems associated with the ventilation system at Bulli. As headings and bords were advanced they often came upon the problem of the dykes and rolls, which meant that production was hampered by the mining of worthless stone. A financial hurdle arose when the next stenton to the adjoining heading or bord had to be cut through this waste material.

To avoid this costly exercise, managers often ignored the *CMRA* 35 yard regulation. They cut stentons only where coal was known to exist. On occasions at Bulli, cut-throughs in bords and headings were more than 42 yards ahead of the air. This illegal practice was condoned by both Rowan and Mackenzie [23]. On that breach of the *CMRA* alone, Ross should have been charged by Rowan who was supposed to check the distances between cut-throughs. Instead of inspecting the entire colliery once every eight weeks as stipulated by the *CMRA* [24], Rowan had aggravated the ventilation and gas problem by not inspecting the mine regularly [25]. The Commissioners recorded:

(e)xcepting Nos. 1 and 2 headings the Commission are inclined to accept the testimony of the only trustworthy authority that submitted themselves for examination - Mr. Inspector Rowan who, although his visits were frequent, yet found no amount of gas in this section, and the minute examination of the colliery by the Commission confirms this [26].

The exception to evidence given by Rowan pertaining to heading Nos. 1 and 2 was probably a measure to safeguard Rowan's integrity because he had claimed while giving evidence that he had never detected any gas [27]. Contradictory to Rowan's evidence, the source of the explosion had been heading No. 1 or No. 2, which confirmed the report by miners of gas in the area - this report incriminated Rowan.

Rowan's trustworthiness and reliability was central to the Royal Commission's refutation of evidence given by the miners, particularly in regard to the reporting of gas. During an inspection a few days after the explosion, some of the Commissioners unofficially observed some gas in headings No. 1 and 2 but they attributed that to the damage done to the ventilation [28]. On 18 May during a subsequent official inspection, no gas was detected in those headings. A slight amount of gas, however, was detected in No. 3 heading. The Royal Commission put this down to an improvement of the partially repaired ventilation which showed a reading of 2160 cubic feet of air per minute [29]. The first inspection should have indicated to the Commissioners that gas did issue in headings No. 1 and 2, a fact which Rowan had denied. He claimed that he had noticed a little gas in other headings only. The absence of gas during the Royal Commission's inspection of 18 May confirmed the probability that firedamp had appeared and reappeared due to its erratic nature, a fact consistent with common nineteenth century mining knowledge [30].

The Commissioners' explanation that the absence of gas on that occasion was due to the improved ventilation seems implausible; the 2160 cubic feet per minute was sufficient to disperse gas only when no men were working. The Commissioners had at their disposal Rowan's report of 9 August 1886, in which he recorded that the Hill End district was supplied with 3600 cubic feet per minute for 36 men and horses [31]. The minimum amount of air allowable under the *CMRA* was 100 cubic feet per man and horse per minute [32]. Clearly, the ventilation could not

have dispersed gas adequately during that inspection given the small quantity of air.

The presence of gas, as an additional problem to the ventilation deficiency, raised great dissent during the sittings of the Royal Commission. The pivotal argument was over the amount of gas reported. Generally, miners claimed that they had encountered large amounts of gas while management and government witnesses testified to small quantities being present. The Royal Commission believed the company and government witnesses and discredited the evidence of those men who had worked in the No. 1 and No. 2 headings and had who witnessed large quantities of gas. The Commissioners and qualified experts need not have played down evidence which supported large quantities of gas. They were aware of, and had acknowledged that only small quantities of gas were required to cause an explosion. In fact, with coaldust 1.9 to 9.8 per cent of gas volume in the air is the critical range. Amounts of more than 15 per cent renders the mixture almost harmless. This was consistent with the then scientific knowledge on the role of gas and coaldust in coal mine explosions [33]. Those Commissioners with coal mining expertise recognised coaldust as the real agent in an explosion [34]. Thus, the argument over the amount of gas was redundant.

However, the denial of the veracity of the reports by miners of large amounts of gas was necessary for Ross's, Rowan's and Mackenzie's exoneration. When gas was encountered, several safety procedures specified by the *CMRA* had to be observed. They were, however, ignored. These safety procedures consisted of recording in a book the detection of gas, the removal of the men if the amounts were considered to be dangerous, the issue of safety lamps to the miners and the erection of warning signals to alert miners of the dangers. At Bulli no report book was kept and the men were not removed. The warning signals or danger-boards were erected, but ignored by miners.

The overturning of the miners' evidence increased as the controversy over the quantities of gas escalated. While having been mildly censured for not making regular inspections of the pit, Ross, like Rowan, was elevated in status as an expert witness. In particular, his evidence regarding the quantity of gas was considered to be reliable. The Royal Commission recorded that:

(t)he evidence of the Manager, Mr. Ross, who did not often inspect the workings, and of his overman, Richard White, points to the presence of small quantities of gas only [35].

The reference to Ross's infrequent inspections is phrased in an euphemistic fashion. Ross seemed to possess only a poor knowledge of the underground workings. After the explosion, while leading a search party, he was forced to concede that he had lost his way [36]. Obviously, Ross lost his way because of the infrequent number of inspections he had made of the mine. Accordingly, his knowledge of gas problems in different parts of the mine must be suspect.

Several experienced miners who had worked in headings No. 1 and 2 had reported large quantities of gas before and after the strike, and gave evidence accordingly [37]. One drillhole in the face of the No. 1 heading emitted so much gas that it could be heard to 'hum' some 40 yards away [38]. While this volume of gas was not dangerous it suggested the presence of firedamp which the Royal Commission was so intent on denying. The Commission refuted the miners claims, recording that:

(t)his starting [*sic*] statement emanated from men who had no extensive knowledge of mining or any previous experience of firedamp [39];

and:

(i)n other respects the statements of these witnesses were not borne out by those of calmer more intelligent and truthful men [40].

Those calmer, more intelligent and truthful men were the miners whose evidence had supported the evidence of management and Department of Mines officers.

When the deputy James Crawford was shown the hummer - an audible issue of gas, he inserted a gas pipe with a tap into the drillhole to convince Ross and White of the large quantities of firedamp [41]. The purpose of the tap was to allow the gas to escape only when it was turned on. In the presence of Ross and White, the gas was lit by Crawford,

irresponsibly with a naked light. The force of the gas was so strong that it extinguished the flame if the tap was turned on more than half way [42].

The above act of bravado demonstrates the small regard miners had even toward their own safety. Under examination by Robertson, Ross played down the size of the blower. He claimed that Crawford had inserted the pipe in the hole to show his ingenuity [43]. The Commission readily accepted Ross's explanation, recording that there was:

... evidence of a small blower in No. 1 heading from whence gas issued for some weeks into which a pipe was fixed. It, however appears to have issued with no great force [44].

Ross, nevertheless, with justification protested to the Commission about Crawford's use of a naked light under such dangerous circumstances [45]. Ironically, Ross' protestation about Crawford's use of a naked light in a gas laden atmosphere corroborated the miners' evidence concerning gas. The company had implicitly acknowledged the existence of firedamp by distributing safety lamps. Safety lamps had to be issued once firedamp was encountered in accordance with the Special Rules.

The purpose of the Davy safety lamp was twofold. It was used by deputies to detect gas, as firedamp is undetectable by human senses, being tasteless, odourless and colourless. Even today, similar principles apply to the detection of gas. The size and colour of the flame determines the volume and constitution of the gas. If the volume of gas is greater than the volume of air, the flame will extinguish automatically. The second use of the safety lamp is as its name implies. The flame is enclosed by two separate gauzes and a glass case. Air can enter the lamp, but the flame cannot escape and ignite the gas outside the lamp.

The method of distribution and the abuse of safety lamps at Bulli was in direct contravention of the *CMRA* [46]. The dependence by miners on the safety lamp demanded that a strict maintenance policy be observed. Evidence had been given by miners that they had been issued with safety lamps with a faulty gauze and in one instance, without even a gauze [47]. A lamp without a gauze would be as unsafe as a naked light. The gauzes deteriorated very rapidly as it was a common mining practice to light fuses from an open lamp. This deterioration was brought on by tilting the lamp which caused oil to spill onto the gauze, which would

turn red hot, making the lighting of fuses easier. An alternative method was to hold a wire or a kerosene soaked 'touch paper' on the gauze and then to light the fuse.

Although these techniques were criticised by the Commissioners, no alternative methods of lighting explosives were proposed by members of the Commission, nor were other methods provided for by the company. The same witnesses who had reported the hummer also claimed they had been issued with faulty lamps. It was no surprise to find out that they were dismissed as being unreliable witnesses [48]. Ross's failure to ensure that safety lamps were locked, cleaned and fitted with gauzes was not deemed punishable by the Commission.

Once the existence of gas was established, safety lamps had to be circulated to miners in the affected section. The *CMRA* specified:

(w)henever any safety lamp is required to be used it shall be first examined and securely locked by some person duly authorized for that purpose who shall keep the key thereof [49].

Those regulations were not adhered to by either the overman, or the deputies after the strike. Ross did not ensure that his instructions concerning the locking of safety lamps were observed. From the Commissioners' point of view:

Mr. Ross issued instructions to his overman and deputies to lock all lamps; but that for some cause, and unknown to Mr. Ross, this order had not been strictly carried out for some weeks preceding the explosion. At the same time the Commission are fully aware how very difficulty it is to get subordinates to carry out orders in their integrity [50].

The issue of safety lamps was an unpopular one with miners because they gave off a very dim, flickering, orange coloured light. In general, miners preferred to work with the brighter naked light and were determined to make use of this method of lighting even if safety regulations were flouted in the process. While the safety lamps were easily extinguished by even a slight disturbance, they were very hard to light again if they were locked. The illumination of miners' immediate working quarters was entirely dependent on two dim safety lights. Miners at Bulli and elsewhere worked on piece-rates in teams of two and for the

reasons explained in Chapter Two were anxious about lost time if their light was accidentally extinguished. Before the strike, an extinguished light often resulted in a long walk by one of the team to the deputy's cabin in order to have the lamp lit as all lights were kept under lock and key by Crawford. This time consuming process was considered an annoyance by the men and whenever possible, the miners tried to avoid working with locked lights despite the obvious dangers associated with this procedure. After the strike, Crawford was not re-engaged and most of the time the new deputy, Millwood, did not bother to lock the lamps. Miners readily took advantage of Millwood's casual style of management by working with unlocked lights in gas laden sections of the mine despite the presence of firedamp [51].

The safety lamps at Bulli were only locked with a simple device which was easily unlatched with any sharp implement [52]. During one nightshift when no deputy had been provided, the men opened their lamp by using the key which had been left behind for that purpose by Millwood on the previous shift [53]. When questioned about this occurrence during the Commission, the miners recounted how they were confused as to what action to take if their light should go out without a deputy on duty. Mr Albert Smithers said in evidence that:

(o)n Monday night, when we first started after the strike, we went to the cabin for our lamps and Millwood handed us our lamps locked. Richards said to him, "What are we to do if we get in the dark?" and Millwood said, "I will leave the key", so he unlocked the lamps and never locked the lamps afterwards [54].

This appeared to corroborate that Millwood had been negligent in his duties. However, such evidence was discredited by the Commissioners because of the implicit faith Ross placed in Millwood's capacity as a deputy. Smithers' evidence was dealt with accordingly [55]. Smithers had given the same evidence at the inquest and the transcript was read to him verbatim at the Commission. During the inquest he had stated that Millwood had never locked his lamp, although he testified at the Commission that he had admitted that Millwood had briefly locked his lamp and then immediately unlocked it. The Commissioners branded him as a perjurer because of his use of the word 'never' in a vernacular sense [56].

The management at Bulli rarely enforced strict discipline and the men responded accordingly. Miners were used to smoking in the 'gassy district' and were permitted to carry tobacco and matches underground. While the Special Rules provided that a danger-board be erected across the entrance of any section where firedamp was found [57], this procedure was not always strictly followed. In the No. 1 heading where sizeable amounts of gas issued, a danger-board was hung at the last stenton. Nevertheless, the miners continued to smoke carelessly just outside the danger-board.

The night before the explosion Thomas Morgan, a wheeler, had hung his naked light on the danger-board after he was requested to do so by Mr William Hope, an experienced miner. Notwithstanding that his light was 28 yards from the face, the action ignited firedamp with a sheet of flame more than 4 yards long [58]. As no official was present during the incident, neither Hope, Morgan, nor any of the men working that shift bothered to report the incident to White the overman, or to any other official. The men had become so accustomed to the elements of danger and so familiar with working under life threatening conditions that after their shift they did not consider it necessary to call at White's house which was near the pit to report the sudden eruption of gas. Another motivation on the part of the men for not reporting the incident to White was fear. It was generally believed by Bulli miners that they would lose their job if they reported any danger.

The reason miners gave for not reporting particular hazards was the belief that the 'Engagement Rules of the Bulli Colliery' precluded them from reporting anything to the manager or Department of Mines inspector. The section which miners misinterpreted was rule No. 6 which decreed that:

(a)ny employee interfering in any way with the orders issued by the colliery manager or his overman for regulating the work of the mine shall be liable to dismissal without notice [59].

Rule No. 6 was preceded by Rule No. 5 which stated that:

(t)he colliery manager shall have full command over all employees in or about this colliery. They shall apply to, and

take their orders and instructions from him or such other person as may be appointed to act on his behalf [60].

Notwithstanding the miners' misinterpretations of Rules No. 5 and 6, one candid reason why they could not report the dangerous situation was the fact that according to Rule No. 3 of the Engagement Rules, miners could not leave their allotted working place. Rule No. 3 stated that:

(a)ny miner or other employee found in any part of the mine or colliery other than that in which he should be working without the consent of the colliery manager, shall be liable to dismissal without notice [61].

Each man at Bulli had signed the Engagement Rules as part of the agreement reached with the company to settle the strike. In essence, refusal meant unemployment. Intimidated and menaced after the prolonged strike, the majority of miners signed the 'Engagement Rules' without fully realising the restrictive nature of the Rules which were drafted in accordance with the *CMRA* Special Rules section which gave them a legal status. Although the Special Rules and Engagement Rules could be used to invoke prosecution under the archaic Masters and Servants Act for small offences such as absence from work, the Commissioners refused to understand the logic behind the miners' misconstruction of the rules. The Commissioners were unable:

... to comprehend how intelligent men could permit themselves to be persuaded to display such pusillanimity and to pervert or torture the words "That any interference with the orders of the Manager" into meaning that they must not report danger, especially as they admitted that no orders had been issued by the Manager to the effect that men were *not* to report danger and that they did not ask the manager whether Rule 6 would bear the interpretation given it by Nicholson and others [62].

Indeed, most miners admitted under cross-examination that no direct order had been given by Ross not to report danger. The Commission's interpretation was absurd; no manager would give direct orders to that effect. The failure to report danger was due to a misinterpretation of the rules by the miners because of the hierarchical relationship implicit in relationships between miners and managers. Miners felt restricted by social barriers and reinforced by a false sense of

security and bravado to dangerous situations they simply failed to take action and report the hazard.

The Commission, nevertheless, continued its harassment over the men's interpretation of the Engagement Rules by attacking the IMMPA and its nominal head, Mr John Barnes Nicholson, who as secretary of the Illawarra Miners' Mutual Protective Association had been the first person to misinterpret Rule No. 6. Once union members had accepted Nicholson's interpretation he had not bothered to relay to management the miners' misgivings about the rules. He also failed to make a formal criticism of the rules. Moreover, Nicholson could have made a severe and telling criticism of the company as he had not been re-employed by the company after the strike, and therefore was not bound by Rule No. 6. Wishing to avoid industrial and personal confrontation, Nicholson claimed he had known about the perilous condition of the mine, but had not reported it to management.

Less than two weeks before the explosion, Nicholson had ominously predicted the destruction of the mine, yet he allowed the men to continue working. Mr. Jerry Westwood, the miner to whom the cause of the explosion was attributed, told Nicholson less than a fortnight before the explosion about a hummer which could be heard 100 yards away. Nicholson's prophetic reply was 'God help you; one of these days you will get it' [63]. That response had been Nicholson's only known reaction, he did not feel he had the right to interfere as he claimed correctly that everyone including management, knew about the excessive quantities of gas [64]. Nicholson sought to shield his own ambivalence in the matter behind the union's past dealings with management. When Robertson asked Nicholson:

(h)olding the responsible position you do and being the leader of others, did you no think it was your own duty to take steps to avert such an evil as that?,

he replied as a matter of fact:

I did not think I had any right whatever [65].

The reasons why Nicholson did not report the danger to the company at first appear obscure. Even Edgar Ross, who was intent on the glorification of miners as the archetypal worker in *A History of the*

Miners' Federation of Australia is forced to frown upon Nicholson's behaviour [66]. Ross maintains that Nicholson, although being a conscientious union secretary, consistently opposed industrial action, and in this light he could be seen as a class collaborator [67]. Perhaps Nicholson's ambivalence could be explained by his political ambitions which were realised in 1891 when he was elected as the Labor member for Illawarra. By 1887 he may well have been sensitive to the distaste coalmine owners had to measures that would require the implementation of costly safety devices. In a sitting of Parliament in 1892 during one of many debates on the ill-fated Coal Mining Regulation Bill. Nicholson held that bratticing would not only save miners' lives, but that:

(i)t would also be a financial saving to mine owners ... and I feel certain that the money paid by the mine-owners in the shape of damages and for law costs would have provided brattice for the whole of that mine for the next ten years to come. Everyone knows what the price of lumber is and if they want to use anything cheaper they can use canvas; which will answer the purpose as well [68].

Nicholson once elected as an official Labor candidate refused to sign 'the pledge' along with several other Labor miner parliamentarians for reasons I have explained elsewhere [69]. Subsequently, Nicholson stood as an independent Labor candidate in the 1898 election [70]. Although he rejoined the Labor Party, he was eventually expelled in 1916 [71]. His obituary reflects his political pragmatism and reads in part:

Mr. Nicholson was one who had a difficulty which he sometimes failed to overcome in subordinating himself to party ... Mr. Nicholson more than once uttered to mass meetings words of comments and advice that displeased and thereby he undoubtedly lost supporters [72].

Nicholson was reprimanded by the Commission over his apathy in reporting danger prior to the explosion. As far as the Commission was concerned:

Mr. Nicholson's conduct ..., if he really did know of danger and took no steps to communicate with the inspector, the Minister for Mines, or his late fellow workmen, betrays an obliquity of character that they [the commissioners] sincerely trust is

uncommon in the Colony, and will meet with censure that it so deservedly merits [73].

Ironically, while the Commissioners were casting aspersions on Nicholson's character, they again contradicted their own observations regarding the quantities of gas present at Bulli. They had maintained during the course of the Commission and in their summation, that the quantities of gas were small. Yet, while Nicholson was being cross-examined, the Commissioners had inadvertently admitted to the existence of large quantities of gas in their eagerness to condemn him.

This is one example of several contradictions found when the summation is compared to the verbal evidence. The Commission distorted evidence from witness to witness to suit their convictions. In their summation the Commissioners accepted both Ross' and Rowan's alleged ignorance of the role of coaldust as a result of the dearth of scientific publications on the subject, even though both had admitted to a full knowledge of the dangers of coaldust during their examination [74]. In contrast, the miners were considered reckless if they were guilty of even the smallest oversight.

Despite overwhelming evidence against Ross, Rowan and Mackenzie their credibility was almost unassailable. Examiner Mackenzie's flight of fancy concerning his dynamite plot was the only rejection by the Commission of major evidence given by both Government and company witnesses. Clearly, the Commission ignored the fact that according to the *CMRA*, the ultimate responsibility lay with managers and Department of Mines officials. The condemnation of miners completed an exercise in bureaucratic evasion of responsibility, begun by the Government to subvert justice and to save money. The miners could not rely on the expertise of their peers, neither could they rely on their ineffectual union, decimated by the prolonged 1886-87 strike/lock-out, nor its discredited secretary: Nor could the miners redress the blame attributed to them, as Royal Commissioners are immune from civil or criminal proceedings under law [75]. Witnesses, however, did not receive the same protection under the law and could be required to appear by summons, and fined for refusing to answer questions.

The Royal Commissioners used the powers given to them by law selectively to discriminate against the miners. The result was a

judgement in favour of the interlocking interests of state and capital. The judgement also allowed an ineffectual Department of Mines inspectorate to continue to administer an equally ineffective *Coal Mines Regulation Act*.

CHAPTER SIX

6 The Department of Mines and the Coal Mines Regulation Act, 1876

The Act is a perfect paradise for lawyers and a thorough failure (Mr. Thompson, acting for the Department of Mines against Brown's Minmi mine, 1882 (*Votes and Proceedings*, 1887-88, (8): 220).

The deliberations of the Royal Commission provoked an angry response among the mining communities. Newspapers took up the cause with articles recommending greater government supervision and stricter vigilance by Department of Mines officers. Also, the 1876 CMRA came under close scrutiny and was found wanting. These are not surprising reactions as the Act was originally framed by a legislative body comprising several mine owners. These parliamentary coal mine proprietors had restricted legislation which would have imposed heavy costs in the provision of safety measures.

An investigation [1] of the financial interests of parliamentarians in 1876 indicates that 5 of the 10 man Ministry which introduced the Bill were either owners or directors of coal mines. The Premier of the time, Mr. John Robertson, and Mr. Alexander Stuart, the Colonial Treasurer, were co-owners of the Coalcliff Colliery. Mr. Thomas Garrett, Secretary for Lands had extensive holdings in mines throughout the colony and Mr. John Lucas, the Minister for Mines, was a director of several coalmines while Mr. John Fitzgerald Burns, Postmaster-General, also held directorship of several coalmining companies and companies in associated industries. The Legislative Council, comprising 38 members, accounted for no less than 14 known owners or directors of coal mines. The 68 member Legislative Assembly accounted for another 20 known coalmine owners and directors, and a further three members were active in companies in industries associated with coal mining. Even the Governor, Sir Hercules Robinson, had direct interests in coal.

Not surprisingly, the 1876 CMRA was accepted only after being delayed in the Assembly by numerous readings, amendments and committee meetings; it was then returned from the Council with several

amendments [2]. The subsequent 1896 *CMRA*, which was first introduced in 1889, partly as a reaction to the Bulli disaster, shared a similar, albeit more tortuous passage in Parliament. This ill-fated Bill, despite the obvious deficiencies of the 1876 *CMRA*, was read and rejected several times, referred to numerous select committees, underwent a Royal Commission and finally given assent after seven years [3].

A great weakness of the 1876 *CMRA* was that it did not give Department of Mines officers the precise power of prosecution. Notwithstanding, officers made full use of loopholes in the Act to their advantage. Once the Act was established few authorities, apart from the Department of Mines, ensured that the Act was adequately observed. The inspectorate's pronouncements were almost unchallenged and its judgements invariably endorsed at ministerial level.

The only challenge to the inspectorate's mandate came from miners, who under the *CMRA* were entitled to appoint check-inspectors, who could check inspection results of both the Department of Mines and management each month and record their findings in a report book [4]. Superficially, the assignment of these powers to miners appears benevolent, but the process was difficult to implement in practice. Managers were empowered under the same regulation of the *CMRA* to accompany check-inspectors on their inspections although the presence of a mine manager was frequently an intimidating influence on the check-inspector. At the Bulli mine the possibility of being dismissed under No. 6 of the Special Rules and the added inconvenience of miners having to contribute to the wages of the check-inspectors from their own income forestalled the implementation of the check-inspector scheme [5].

The Department of Mines was autonomous, almost a law unto itself. The Department consisted of several independent sub-departments representing various metalliferous branches, a geological branch, as well as the Coalfields Branch, each led by a permanent executive officer. These officers were responsible to the Under Secretary, and through this line of command to the Secretary or Minister of Mines. The Minister responsible for mines in 1887 was Mr. Francis Abigail, who had taken on this hapless position only a few months prior to the Bulli disaster. Abigail's lack of mining expertise is understandable as he was a boot manufacturer by vocation [6]. However, despite being misled by

unreliable officers, even when proof existed of their dereliction of duty, this was overlooked [7].

At the inspectorate level, inspector Rowan and examiner Mackenzie either knowingly or unknowingly failed to perform their assigned tasks. These two officers gave tacit approval of practices which contravened the *CMRA*, and this alone is a damning indictment of the Coalfields Branch of the Department of Mines in the light of the fact that they represented one half of its entire inspectorate. The whole of the Colony of N.S.W. was represented by only three inspectors and one examiner. Ultimately, Mackenzie was responsible for the lives of more than 8,000 miners in N.S.W. in 1887.

Because of the tremendous responsibility associated with his duties, Mackenzie's annual income in 1876 was £600 which was increased by £50 by 1887 [8]. In addition, he received travelling expenses and was allowed to accept payment for surveys he undertook from private mining concerns. From the latter source, Mackenzie received an additional £1,800 in the period 1871 to 1876 [9]. This lucrative supplement to his official income placed him in the invidious position of having to enforce the *CMRA* against proprietors who had previously employed him as a surveyor. Mackenzie's only predicament was when he had to invoke the *CMRA* against the members of parliament who owned or had interests in coalmines.

The one way the examiner's position could be endangered was by incurring parliamentary censure. Under the *CMRA*, the examiner could only be sacked by the Governor in conjunction with the Executive Council [10]. Like parliamentarians, Mackenzie was supposed to uphold the law even if the law worked against personal and financial interests. However, it appears that Mackenzie made use of his position to evade as many legal obstacles as possible. There is also evidence of one instance of collusion between Mackenzie and parliamentarians [11]. Mackenzie's situation was especially compromised when he was required to pass judgement during the Bulli Inquest and Royal Commission on the Hon. G. A. Lloyd, M.L.C. and a director of the Bulli Coal Mining Company for whom Mackenzie had performed private surveys [12].

Abigail, perhaps lamenting the examiner's political connections, or perhaps because of their mutual collusion, refused to set into motion

the necessary parliamentary action to dismiss Mackenzie, even though Mackenzie's misconduct was known to him by 1887. Abigail was forced to defend Mackenzie during various parliamentary assaults made on the Department of Mines and its policies by those few parliamentarians who took up the miners' cause. Ironically, Abigail was engaged in 1887 in a Supreme Court litigation against Mackenzie, who contrary to the *CMRA*, was a proprietor of a coalmine [13]. Section 27 of the *CMRA* had been included as a measure to address the absurd situation of having an official enforce the law against his own coalmine [14]. Abigail did not force the examiner to resign or to sell his coalmine. Instead, when Mackenzie's crime had been discovered, he replied in Parliament as follows:

(a)s soon as the Supreme Court has given a decision, the Examiner of Coalfields will have to give up his interest in the mine [15].

Because of Mackenzie's coal mining interests, a prolonged campaign against Mackenzie and Abigail was conducted in Parliament by Mr. Ninian Melville [16]. That this action was justified is supported by Mackenzie's conduct during the Bulli inquest and Royal Commission. Melville initially began criticizing Mackenzie in 1885 because he had not rectified blatant ventilation deficiencies in the Northern district. Also, Melville claimed that Mackenzie had surveyed and then allowed mining to proceed so close to the surface that the main road from Lambton and Waratah to Wallsend had collapsed [17]. The mine was owned by Thomas Croudace. Melville renewed his intimidating stance toward Mackenzie when the examiner provided startling and controversial evidence during the Bulli inquest.

After several witnesses had testified at the inquest that the explosion had occurred in No. 2 heading, Mackenzie as the last witness claimed that the explosion had been caused by dynamite elsewhere in the mine. This sudden contradiction of evidence so startled the gathering that the coroner immediately adjourned the inquest to the Bulli pit for further investigation. When the court resumed sitting, Mackenzie held that an original explosion had taken place in the main tunnel, 374 yards from the mine adit and that the explosion in No. 2 heading had only been a secondary explosion as a consequence of the first [18]. He claimed that

dynamite had been set off deliberately, by a person or persons for revenge. Mackenzie was hinting at the viciousness of the warfare between miners and blacklegs, although he was not explicit in making this claim. Because of the radical nature of this evidence, Mackenzie was forced to explain himself in a report ordered by Parliament to investigate his evidence. Not even the Royal Commission, despite its prejudice against miners, believed Mackenzie's absurd dynamite hypothesis, and the Commissioners concurred that '(t)he suggestion of explosives infers malice of no ordinary kind' [19]. The examiner, trying to salvage his reputation after reading the report of the Royal Commission, replied in response to accusations made against him in Parliament claiming that:

(o)ur gaols are filled with criminals who have given play to "malice of no ordinary kind" - ships have been sunk, buildings have been burnt and blown up, railway trains have been upset, murders of all kinds have been committed, and collieries have been set on fire and subjected to other disasters, all from malice aforethought time out of mind, and the like will happen again until the Millenium [*sic*] arrives. And with regard to arson in connection with coal-mining, it was found necessary to pass an Act in England, in 1736, providing that any person who "wilfully and maliciously set on fire, or caused to be set on fire, any mine, pit, or delph of coal, or cannel coal, and being thereby lawfully convicted, shall be adjudged guilty of felony, and shall suffer death, as in cases of felony, without benefit of clergy" [20].

Mackenzie's need to cling to the dynamite theory was compounded by his social position and his concern for his damaged reputation. He supported the technical aspect of his dynamite theory with an interpretation of the manner of derangement of the props and the position of the door of the Western Main tunnel junction. Because props had been found lying in all directions, he held that the proximity of the tunnel mouth was the point of explosion [21]. During the inquest and the Royal Commission he had supported this evidence with the type of damage and position of the Western junction door, which had been blown 30 yards inbye [22]. After a period of initial surprise by experts at the inquest, the Royal Commission had gathered sufficient evidence to show that the recoil of the explosion in No. 2 heading had caused the disarranging of the props and the inward dislocation of the door [23].

Diagnoses of mine explosions before and after 1887 show that explosion recoil will cause the type of chaos like that found at Bulli. It appears that Mackenzie was either ignorant of, or chose to ignore nineteenth century scientific work on the effects of recoil in mine explosions. W. N. and J. B. Atkinson's *Explosions in Coal Mines*, is one textbook which was available in 1887 [24] and describes in detail the results of recoil in a mine explosion.

Mackenzie's dynamite plot was further tested by the Commissioners because they held that no one could place and fire explosives without being seen in the busiest part of the mine during the busiest part of the day [25]. Furthermore, testimony had recorded that no one came out of the mine in the one and a half hours before the explosion [26]. Mackenzie's luckless saboteur had suicidal tendencies as he must have perished by his own actions. Nevertheless, the Commission did not implicate Mackenzie in any manner, although his dynamite theory was a fabrication. Even when it was discovered during a cross examination that he could not define the precise nature of the examiner's duties as delineated under the CMRA, the Commissioners neglected to criticise his incompetence, in fact, they did not even mention it. It appears they castigated his hypothesis only to avert further parliamentary and press criticism. They dismissed Mackenzie's folly without any reference to his neglect of duty. The Commission failed to discover any:

cogent reasons to support this remarkable propositions of Mr. Mackenzie, or any circumstance that can justify the enunciation of such views [27].

Columnists, in their press reports after the revelation of the dynamite hypothesis, sniggered at the examiner. The *Illawarra Mercury* reported Mr. Ninian Melville's speech made at the Railway Hotel, Bulli, in which he gleefully intimated to an appreciative crowd that '(s)ome Guy Fawks [*sic*] had got into the district and blown the mine up' [28]. Jibes were frequently made about the examiner's conduct during the inquest and Royal Commission. Melville accused the examiner of being always 'three-parts drunk', a fool, a scoundrel and a murderer [29]. An editorial in the *Illawarra Mercury* proclaimed that:

Mr. Mackenzie on his part did not appear to have "favourably impressed" the Commission, as his pet theory is shattered to atoms - ... it now appears that this gentleman (who bye-the-bye holds no certificate of competency and who strange to say was elevated to the most responsible position in the Mines Department notwithstanding his circumstance) contemplates retiring from his position-probably on a pension [30].

The motivation for Mackenzie's bent for the dynamite theory seems quite malevolent when it is considered that the source of his information was Mr. G. Hamilton, the general manager of the Bulli Coal Mining Company. Hamilton had placed one of the company's steamships, the Woonona, at Mackenzie's disposal to bring him from Sydney to the inquest at Bulli. During the journey Hamilton had suggested to Mackenzie that he had heard from an unspecified source that dynamite had caused the explosion [31].

Both Mackenzie and Hamilton could only profit if the blame was attributed to miners instead of the company. The Department of Mines also would appear in a better light if miners were blamed. Mackenzie's gain would be the guarantee of a lucrative source of employment as a surveyor, a duty he had performed for the company in the past. Hamilton's benefit would be the possible waiver of the large compulsory payments made to the victims' relatives under the *Employers' Liability Act of 1886* [32].

The Bulli Coal Mining Company had been running at a loss during the fiscal year of 1886-1887, and required an additional subscription to a new share issue [33]. The bad publicity that would result from proven culpability would have frightened away the much needed new investors. In short, the company would face ruin. An article appearing in the *Daily Telegraph* the day after the Bulli disaster, alleged that the use of deceptive measures of this kind was common to the coalmining industry. The article stated:

(t)here has been, it is alleged, by those who are supposed to be competent authorities an unworthy attempt to throw dust in the eyes of the public and create an unsound sense of security on the part of innocent spectators (who have capital to lose but much experience to gain) by the endeavour to establish unwarranted confidence in the safety of working our coal seams [34].

Despite the tactics of both Hamilton and Mackenzie, the Bulli inquest jury found in favour of the miners. The wide publication of the jury's verdict cast suspicion over the activities and competencies of the Department of Mines and the Bulli Coal Mining Company. Although the verdict did not incriminate Mackenzie directly, he felt that its biased nature assailed his professional standing in the community [35]. Accordingly, he strongly attacked any opponent of his dynamite theory. As a result of Mackenzie's prolonged argument on this subject, Melville continued to question the examiner's mining expertise. The criticism of his mining proficiency seemed to be well founded. However, a parliamentary report of 1887-8 investigating Mackenzie's conduct came to the opposite conclusion. Copies of references supplied by the examiner to counteract the accusations made by Melville, reveal that Mackenzie had obtained the necessary qualifications to assume the responsibility of the position of examiner in England [36]. Even so, it would appear that Mackenzie had an obvious preference for a lucrative private practice, as opposed to his required official duties.

In defence of charges of neglecting his duties, Mackenzie remonstrated that he and his inspectors had to cope with too many duties. The examiner's protests were partially justified. There were only three inspectors and Mackenzie had to supervise 74 mines and 8,118 men in 1887 [37]. However, instead of easing the problem of staff shortage, Mackenzie compounded the matter by utilising a curious territorial division. Inspector Rowan had 32 out of the 74 mines in the Colony under his supervision, including the Western as well as the Southern coalfields. Inspector John Dixon and inspector Thomas Bates shared the remaining 42 mines which were in the Northern district, with Mackenzie inspecting none. Clearly, a better territorial distribution would have alleviated some of the examiner's problems in regard to staff shortage.

Mackenzie's repeated reference to the deficiencies of the 1876 *CMRA* cannot be attributed entirely to parliamentarians as he claimed. He and his inspectors were consulted during the passage of the Bill and were asked to contribute towards its formulation in parliament [38]. Mackenzie's acknowledgement of staff shortage and weakness in the Act should have made him more aware of the necessity for more thorough inspections. He could have relieved the staffing situation by inspecting

some mines himself. Indeed, he was required under the *CMRA* to make such inspections, a task which he felt was beneath the dignity of his high position [39]. Instead, the examiner chose to rely on second hand and sometimes incorrect information from his inspectors as he seldom visited the mines in his capacity as examiner [40]. In the instance of the Bulli colliery Mackenzie's vital knowledge of gas and ventilation had been based entirely on the inadequate inspections of inspector Rowan, who in turn had used the equally uninformed manager, Alexander Ross [41].

The element of truth in Mackenzie's denunciation of the *Act* was the role parliamentarians had played in its creation. In addition, successive governments since 1876 had neglected to provide adequate financial means to employ officers and purchase the equipment required for the *Act's* implementation. Quite clearly, four men could not have protected more than 8,000 lives in more than 70 locations. Mackenzie was severely criticised because of his ready admission of his unwillingness and inability to inspect mines. When he reiterated his unwillingness to make mine inspections at the Royal Commission [42], the *Illawarra Mercury* concluded that:

(i)t would be interesting to know what Mr. M'Kenzie [*sic*] actually does for the fat salary he draws, and from what sources other than the Inspectors he obtains his information on mining matters. Certainly not from personal observation. This highly paid but little worked official actually visited the mine a week before the explosion-nay more he was inside the mine-and though he was aware that gas was giving off and was well aware of the danger therefrom, he did not think it his duty as Examiner of Coalfields, to go into the gassy section to see for himself, if the ventilation was sufficient to cope with the gas giving off [43].

The Bulli disaster continued to be the lowest ebb of Mackenzie's career as he persisted in his vituperous defense campaign. In support of his dynamite hypothesis in a reply to the parliamentary report held to investigate his conduct, he cited miners and their unions as the real culprits of the Bulli mine explosion, stating:

... I wish to point out that there is a peculiarity in reference to the administration of the Coal Mines Regulation Act which does not

appear to be realised or understood by the general public. In no branch of the Civil Service are officials subjected to such direct and persistent criticism from outside sources as the Examiner and Inspectors of Collieries. By the very nature of their duties they are thrust between two contending elements that are ever wrangling and jarring with each other—capital and labour. Do what they may, it is impossible for them to escape animadversion, for in every dispute which they are called upon to investigate they are met with the consciousness that whatever decisions they may pronounce they must give dissatisfaction to one side or the other. The records of the office constantly show this. If they challenge malpractices on the part of the owners or managers, appeals are constantly made to the Minister, coupled with passionate remonstrances, sometimes suggesting improper motives, and nearly always charging officers with unnecessary interference and officiousness. If complaints come from the miners, and upon investigation some of them are found to be frivolous, and not deserving of any serious notice, the officers are denounced with either neglect of duty, incompetence or corruption, in language plentifully sprinkled with the vilest epithets which insolence, ingenuity, or malice can invent. There is no organisation of labour which is knitted together, and which has such special privileges, as that of the coalminers. No other class of artisans are able, as they are, through the inevitable concentration of their numbers, to return Members of Parliament specially to represent them, and no other mechanics are able to maintain such internal organisation as they possess. It seems to be an idea among them that the only way to keep Government officials at the highest pitch of tension in the performance of their duties is to be perpetually finding fault with them, and so officials are subjected, with or without reason, to a never ceasing carping criticism. Every mine has a recognised coterie of his own, whose business it is to settle petty details. These coterie join in forming district councils, and the whole merge in a combined association, with paid officials, whose business in life is to show the necessity of their employment by exhibiting real or pretended vigilance in the interest of those who employ them. Their paid mission is to find fault and stir up every conceivable form of agitation, and he is naturally accepted as the most worthy of confidence who can hunt up most subjects of dispute and scold in the strongest language and with the loudest lungs [44].

Mackenzie's social and political inclinations became apparent in this harangue, and they must have played an important part in his role during the inquest and the Royal Commission. Not only was the unfortunate examiner harassed by unrelenting union officials, but he also found that in nearly every Northern colliery miners had observed Section 30 of the *CMRA* and appointed check-inspectors, who were '... ever on the watch in the endeavour to find Government officials tripping ...' [45]. According to Mackenzie, miners need not have feared any retribution on his part. His defence to the accusations continued thus:

I am acquainted with the idiosyncrasies of miners, and it is perhaps because I know them so well, and they are aware that I know them, that I am so frequently subjected to evidences of the disfavour of their leaders [46].

Mackenzie tried to conceal his prejudice against the miners by demonstrating that he had often prosecuted managers for breaches of the *CMRA*. This was a feeble defensive ploy as evidence shows that most of the offending managers only paid a trifling fine and continued to flout the *Act* with the implicit blessing of the Department [47]. The real bane of coalmining companies was the closure of mines, an this action was only once resorted to by Mackenzie and his inspectors during the period described in this book. This situation occurred with the threatened closure of the Coalcliff Colliery as a direct result of the Department of Mines' bad publicity six weeks after the Bulli disaster. Inspector Rowan had recommended that Coalcliff Colliery be closed down because of a dangerous subsidence of the surface near the pit entrance [48]. So unusual was this reaction by the Department of Mines that former adversaries, the miners and owners of the Coalcliff pit, formed a deputation to convince Mr. Abigail, the Minister responsible, to countermand the closure order. Abigail commented that:

(t)he officers of the Department had been severely censured in certain quarters for neglect of their duty, and this had woke them up to a sense of greater anxiety to fulfill their duty [49].

In reply to a question in the Parliament by Ninian Melville, Abigail agreed to table a report of Mackenzie's prosecution of J. Y. Neilson, the former Royal Commissioner [50]. For the sake of

appearance, Mackenzie had prosecuted Neilson as if to prove his zeal and his impartiality in his dealings with both miners and managers. The real object of Mackenzie's prosecution of Neilson, it seems, was that it afforded him an opportunity to gain a measure of revenge against a person who had assailed his dynamite theory. Although Neilson had not explicitly ridiculed Mackenzie's dynamite plot, Mackenzie held that Neilson's criticism was implied because of Neilson's contribution to the summation delivered by the Commissioners [51].

Abigail's cooperation with a request made by Melville to table the report of *The Crown versus The Newcastle Coal Company* did not have the effect that either Abigail or Mackenzie wanted. Abigail's contrived cooperation was in part due to his objection to the magistrate's criticism of the Department of Mines and because he had demanded an apology from the Department of Justice. Once the transcript of the court case was tabled, rather than saving the reputations of the Department of Mines and Mackenzie, it further harmed them. The presiding magistrate, Mr. Robert J. Perrott not only criticised Mackenzie for his dereliction of duty at Neilson's Wallsend mine, but also virtually accused both Mackenzie and Rowan of being responsible for the explosion at Bulli.

Yet, apart from a fine of £1, Neilson was only mildly reprimanded by the magistrate. On the other hand, Mackenzie, who had to take Neilson to court because the CMRA had no provision for prosecution under its own auspices, was rebuked severely by the magistrate. To Perrott's amazement no arrangements had been made by Mackenzie to remove miners from a gaseous section of the Wallsend mine as required by Section 12 of the CMRA [52]. Neilson, who had been critical of the ventilation at the Bulli mine during the Commission, permitted a far more serious ventilation deficiency in his mine. Between Mackenzie's and inspector Dixon's original inspections on 5 January 1888 and Dixon's subsequent visit 20 days later, miners had continued to work even though Mackenzie had full knowledge of the emission of several blowers [53]. Evidence indicated that one day before the hearing on 7 March, 1888, the mine was still in the same gas laden condition [54]. Perrott's denunciation of Mackenzie was fully justified.

Inspector Dixon stated under examination in court that '(o)n the 5th. of January the mine was dangerous and defective and tending to the

bodily injuries of the persons working there' [55]. Yet Mackenzie, indifferent to the situation, did not perceive any immediate danger. To Perrott's consternation, Mackenzie had inspected the gaseous section with a naked light [56]. Magistrate Perrott found that neither the inspector nor the examiner, 'took the cause laid down by law where a mine is dangerous' [57]. During this case there was frequent mention of the *laissez-faire* attitude at Bulli by officials of the Department of Mines and by managers and officials of the Bulli Coal Mining Company. Speaking for the defence, Mr. Want became so enraged by the mention of Bulli that he exclaimed:

(i)t seems to me your worship that there is a great amount of feeling being imported in this case. Bulli, Bulli, Bulli!,

to which the magistrate retorted:

(i)f danger existed in the mine, it was quite right that the Inspectors warned by the accident at Bulli should have attention drawn to it.

Mr. Edmunds for the prosecution said:

(c)certainly your worship, the officers would not be doing their duty unless they were made more active and watchful by this Bulli accident.

To which Perrott replied:

I have read a great deal about this Bulli accident and I have come to the conclusion that great catastrophe would not have occurred if these men had done their duty [58].

It seems that the magistrate's impeachment of Mackenzie and his subordinates was a trenchant criticism which should have also been levelled at the administrators as well as the creators of the 1876 CMRA. Parliamentarians and agents of this legislation stood by in an unconcerned manner until the events of Bulli precipitated a situation which forced them to reflect on their past inactivity. The CMRA required only a small fine for a serious breach of the kind committed by Neilson. No charges had been laid against those responsible for the disaster at Bulli and not even the horror of that event prompted alterations to rectify the glaring deficiencies in the CMRA.

An editorial in the *Daily Telegraph* one week after the Bulli disaster ominously forecast this continued sham, stating that it was:

to be feared however, that too much confidence has been placed in the supposed absence of explosive gas in our coal mines. Nay more as we pointed out on a former occasion this over-confidence has purposely been fostered and encouraged by a certain class of interested persons, for reasons which will be obvious to those acquainted with the subject. Any attempt to create a "scare" has invariably been put down with the strong hand of authority [59].

It seems that the parliamentary system was infiltrated with coal interests to such an extent that little or any remedial action was forthcoming from Macquarie Street. In addition, a false sense of safety permeated the entire coalmining industry. Miners believed that they were working in a safe industry. Other than the protection of their investment it was not in the interest of coalmine owners to observe the CMRA to the letter. During the nineteenth century injury or death did not place the legal obligations on them which would eventuate with the evolution of workers' compensation legislation during the twentieth century. Disasters of the magnitude of Bulli were unknown. Consequently, with regard to their investment in technology and property coalmine owners played a Russian roulette. Despite their callous disregard for life, substantially these judgements were very shrewd. During the nineteenth century Bulli was the only large scale disaster. During the twentieth century, with the exception of the Mt. Kembla accident, mining disasters resulting in the deaths of large numbers of miners have also been rare. The Department of Mines inspectorate was unable or unwilling to enforce legislation which was inherently weak in any event. The depressing conclusion is that the false sense of security miners had about their work surroundings and work practices not only endangered their own lives, but also became an article of faith. The watered down coalmining legislation that passed through Parliament by the actions of parliamentary coalmine owners legitimated the unsafe practices that became part of coalmining.

CHAPTER SEVEN

7 Lessons from the Past

As the evidence of Mackenzie's prosecution of Neilson indicates, the immediate impact of the Bulli disaster within the coalmining fraternity was short-lived and minimal. In terms of making any significant impact on the coal mining industry, the lessons learnt from the Bulli disaster were few. Naked lights were re-introduced in the Bulli mine before 1890 and only 12 years later similar circumstances contributed to the Mt. Kembla disaster. Such events were the norm and a cursory review of selected events in the late nineteenth and early twentieth centuries reinforces the contention that actions intended to make coal mines safer were largely cosmetic in nature. Unsafe work practices continued to flourish and legislative changes made little impact on conditions - and unsafe workplace behaviour persisted. During this period official inquiries seemed to have little impact. Even in the latter half of the twentieth century few changes were made in coalmines in order to make them safer workplaces. In fact, unsafe work practices, either maintained or tolerated by many involved in the coalmining industry, had become so institutionalised that no amount of legislative change, official inquiry or dedication to duty by Department of Mines officials could make coalmines safe working places.

During the 1890s, despite an obvious need for improved safety precautions, legislative change was slow. Even so, as a result of changes in key personnel within the Department of Mines there was an attempt to improve safety measures. Although long overdue, the *1896 CMRA* was a vast improvement over the *1876 Act*. Furthermore, the departure of Mackenzie and others from the Coal Fields Branch had an effect on the Branch in the execution of its duties. Nevertheless, the new inspectorate was not sufficiently committed to making the necessary improvements in coalmining which may have prevented the Mt. Kembla disaster of 1902. The new chief inspector, Alfred Atkinson, was appointed in 1897. He was determined to enforce the new legislation. However, inspections of coalmines were few and far between. The *1896 Act*, which had

provisions to pursue the prosecution of managers, was easily evaded. Furthermore, owing to the long legacy of the neglect of safety issues, the coalmining industry had become very resistant to change. As a result, progress was minimal. Although Atkinson persisted he only managed to secure minor and, arguably, cosmetic changes, even though these modifications were significant given the mining industry's resistance to change. For example, most probably out of recognition that the primitive and isolated nature of most mines precluded speedy medical services, Atkinson instigated a scheme in 1897 under which miners were trained in first-aid. The New South Wales Government Ambulance Corps administered the course and drew on the experience of Atkinson as one of its advisers and utilised medical practitioners as instructors. In the Southern district the first classes were held at Bulli and attracted 38 students of whom 20 gained certificates [1].

Atkinson also vigorously prosecuted managers and owners for all offences including those not related to safety [2]. Atkinson was particularly zealous in the execution of his duties in cases such as the gas and coal-dust explosion at the Dudley colliery at Newcastle on 21 March 1898 which resulted in the loss of 15 lives. Subsequent to the mandatory Coroner's Inquest, the large loss of life as a result of the explosion was investigated further by a parliamentary inquiry under a special provision of the 1896 CMRA [3]. Headed by a well known barrister and later N.S.W. premier, G. C. Wade, the inquiry obscured the role of the management and the district inspector in relation to the unsafe ventilation of the mine. Rather than make public the weakness of the ventilation at Dudley which resulted in the accumulation of gas, the evidence showed that the ventilation was conducted in the same defective way as it had been at Bulli [4]. At Dudley, as at Bulli, the efficiency of the ventilation was also entirely dependent on sets of single regulating doors which were placed irresponsibly on main transport roads which also served as the main ventilation intakes. In such circumstances, these doors were frequently opened to let the sets of skips through, resulting in the dispersal of ventilated air. The ventilation was neither conducted properly to the face [5] nor were inspections conducted '... in accordance with General Rule 4' [6].

That such irresponsible behaviour continued at Dudley despite Atkinson's genuine desire to improve safety is not surprising. The industry's entire economic well-being depended on what can be termed as a 'conspiracy of complacency' which was ascribed to by owners, managers, subordinate officials and Department of Mines inspectors. It was also reflected in the conduct of contract and day-wage workers [7]. The principal ethos of the coalmining industry was to produce as much as possible with the regard for life and limb subject to this economic prerogative. Indeed, even off-hand labourers' wages depended on the number of days miners worked because they were paid by the day and were laid off on those days when no coal was required [8]. Even after the *1901 N.S.W. Industrial Arbitration Act* all mineworkers tried to produce more under the mistaken assumption that increasing amounts of coal maintained high prices. In reality, what they were doing had the opposite effect. Despite the industry's aversion to stockpiling, the greater the productivity the cheaper the price of coal became which in turn placed pressure on the rates for hewers and other contract workers to decrease. Until the N.S.W. coalmining industry's predisposition to over-produce ceased with the outbreak of World War II, for all mineworkers, over-production meant the industry was characterised by intermittent employment.

The disregard of safety by contract workers in general and hewers in particular remained a prominent feature of daily routine - as described above, time was money. Consequently, out of economic necessity the playing down of danger became commonplace and the acceptance of danger was regarded as a normal part of work. Transgressions against safety regulations were frequent and when these were reported they were punished with indifference, generally with the imposition of a small fine. In a similar vein, the disregard of gas and other dangerous occurrences was simply shrugged off by management and men as mundane features of working life. As a result, the lessons from the past in terms of safety issues were rarely heeded. Dangerous practices became such a normal part of the daily work routine that they were passed on from generation to generation. This tradition, maintained in the close-knit coalmining communities of N.S.W. until the 1950s, was reinforced through the custom of sons following their fathers into the

same mine. Even after the creation of the Joint Coal Board in 1947, when the coalmining workforce was increasingly drawn from non-traditional mining communities, work practices forged over more than a century persisted [9]. Of course, this normalisation of danger contained the potential for disaster. Even at the time of writing, a bravado persists among many in the coalmining industry which has the ingredients for calamity. The belief in the modernity and efficiency of ventilation, reinforced by a misplaced sense of security, led to the explosion of an accumulation of gas at the Mt Kembla mine in 1902 and the Appin mine in 1979. Similar attitudes can be attributed as causes of the Bulli explosion of 1887 and the Stockton disaster of 1896. At the Stockton colliery near Newcastle at the time the *1896 Bill* was completing its tortuous passage through Parliament, an emission of non-explosive gas asphyxiated and killed two men on 2 December. On the following day black-damp killed another nine miners [10]. Rather than following a course of inquiry based on the 'blaming the victim' syndrome, the Stockton inquests are notable because like the Bulli inquest they did not find fault with the actions of the miners. The Stockton inquests caused a furore because the result of the second inquest was not the usual trite 'accidental death' verdict, although the first inquest jury had decided on the stock-in-trade verdict of accidental death. As a result of the Bulli inquest, under the *1896 Act* both juries were precluded from being chosen from employees or management [11]. However, relatives of victims and local business people serving miners or management were not disqualified. This leaves some doubt concerning the loyalty of either party to management or miners - a complication which would have had a bearing on the inquest outcomes. What is deserving of attention is that not even a community in which violent deaths were commonplace and a community which wholeheartedly subscribed to the blame the victim syndrome could blame the miners in the course of the second inquest. The jury was unable to agree and was discharged without a verdict being delivered. Doubts over managerial or governmental wrongdoings were quashed by a parliamentary inquiry.

The normalisation of danger underground was widespread. To the hewer the cutting and positioning of a sprag or the erection of a prop was dead work which prevented output. Omission of these essential

safety precautions suited the hewers' and coalmine owners' mutual interest with owners considering timbering a necessary but onerous expense. The mutually beneficial 'cutting of corners' applied to a whole range of coalmining procedures. These were constantly modified, especially after the 1890s, in order to satisfy subsequent alterations in legislation and the changing demand in quality of coal. For example, after the turn of the century the previously forbidden practice of grunching or shooting coal out of the 'solid' without undercutting and nicking became permissible. Traditionally, grunching was a proscribed practice because it was considered dangerous by owners and the Department of Mines. It was also seen as 'uncraftsmanlike' by some miners. The supposed dangers attached to grunching were only a pretext in order to prevent the production of the then unsaleable slack, the fine dust deemed unsuitable for coalburning combustion chambers, which the method created in abundance. However, after the 1890s when a number of modifications were made to furnaces which enabled the burning of slack, for which miners were only paid a fraction of round coal, the dangers of grunching disappeared. In fact, later in the twentieth century grunching was encouraged and even legitimised by law in 'naked light mines'.

The conspiracy of complacency also brought about the circumstances that resulted in the Mt. Kembla disaster. Miners at Mt. Kembla were well aware of the laxity in safety procedures and that managers and other officials had not taken adequate precautions against the presence of explosive gas. One of the central issues discussed during the various inquiries into the Mt. Kembla disaster was whether or not the use of locked safety lamps should be enforced. However, there was opposition to this proposal from many quarters, including the miners themselves. In brief, aside from the explanations offered above, the universal introduction of safety lamps failed for a number of reasons. Although the interactions between miners and coalmine owners had altered little over the intervening fifteen years between the Bulli and Mt. Kembla disasters, the nature of parliamentary politics had changed and now appeared to be superficially in favour of miners. The Labor Party had been created and had entered the N.S.W. Parliament, with mixed success since 1891. However, many of its parliamentary members were

former miners. Even so, the expedient nature of party politics, parliamentary delaying tactics and the rejection by miners of the use of safety lights as well as the coalmine owners' traditional opposition to the introduction of safety lamps on economic grounds or any other safety devices that required substantial monetary outlays all combined to impede the progress of legislation of any kind as a result of the Mt Kembla disaster. In the words of Piggin and Lee, 'the killing would continue' [12].

In *The Mt Kembla Disaster*, Piggin and Lee (1992) contribute to the unmasking of the inadequacy of government inquiry and the shortcomings of coalmines legislation. They also highlight the need for further examination of government response in particular and the role of government in general in the creation and maintenance of safety regulation in coalmines. *The Mt Kembla Disaster* also demonstrates that until 1912 when an entirely new CMRA was enacted the lessons from the past were generally unheeded.

The benefits accruing from the 'conspiracy of complacency' were so pervasive that under 1876 and 1896 CMRA both management and miners schemed together to deceive Department of Mines inspectors when they were measuring ventilation [13] which was not supposed to fall below a minimum of one hundred cubic feet per minute for each man, boy and horse [14]. However, owing to the unpredictability of furnace ventilation which was easily affected by temperature or wind changes, the quantity and quality of air frequently fluctuated [15]. To prevent their mine from being closed down until the ventilation was rectified, miners, with the knowledge of colliery officials, temporarily sealed off entire sections with brattice to augment the ventilation while the inspector measured the air current. Most probably the 'brattice trick' was employed in the Southern district until the late 1920s when the last large mine using furnace ventilation switched to engine driven fan ventilation like the other mines in the Illawarra area. These breakthroughs improved ventilation to such a degree that the brattice trick became redundant.

Collusion between managers and inspectors was rife. Most of these men came from England, Wales and Scotland and had either worked together in various capacities in their homeland or in N.S.W.. If they were properly certificated there was a strong possibility that they

would have attended one of the few mining schools in Great Britain [16]. Although there was no provision in the 1896 CMRA or in subsequent legislation that required inspectors to make unannounced visits, frequently inspectors gave notice of an intended inspection a few days ahead of time in order to enable managers to get their mine in order. Today, inspectors are frequently appointed from the ranks of mine managers and it has been suggested that the practice of announcing intended inspections persists. Generally, it has been suggested that most mineworkers know when an inspector is due by the flurry of action to 'clean up' the mine [17].

Due the remoteness of Department of Mines inspectors to everyday mining activity, the task of frequently inspecting mines is an arduous one. It is certainly probable that inspectors are unable to take account of infractions of regulations that may occur in their absence. In recent times, the equivocation of some inspectors when confronted with transgressions of the CMRA has earned them stinging 'nick-names' [18].

Deputies and overmen were the intermediary officials who mediated between management and mineworkers in the 'conspiracy of complacency'. Under the 1896 Act overmen and deputies were not explicitly recognised other than as 'competent persons' [19]. However, through the devolution of vicarious responsibility from the manager they were legally responsible for the general safety underground [20] and ostensibly were employed as safety officers. Their obligations by law were manifold, but commonly these were so subordinated to the supervision of labour and mine organisation that their safety duties were scarcely more than a cursory inspection of work places. By attempting to serve two masters, minor officials were enmeshed in a perennial struggle between the two necessary, but often conflicting roles. Despite the importance to owners of observing statutory obligations to protect property and life, a deputy's prime function was to maintain production. To accomplish this demanding task, deputies had to coordinate a wide range of a mine's essential functions. Under the 1896 Act the deputy's statutory duties began before day-shift with an inspection for gas and a test of the ventilation, roof and ribs of each workplace. The condition of the ventilation or any damage was supposed to be entered into a report book.

Besides being answerable for the safety of the workplace before the commencement of the day shift, the deputy was also responsible for inspecting the ventilation, machinery below and above ground, the travelling shafts (if any) [21], the headgear and the chains and ropes [22]. The deputy was also accountable for fencing-off any disused sections and was enjoined to prohibit anyone from entering gassy sections [23]. If gas was detected regularly and the use of safetylamps enforced then the deputy was also responsible for their locking. The adherence to these and other safety precautions was accepted or rejected by management, generally as finances directed. The only pit in the Southern district where most of the *Act* was observed was the Metropolitan which in 1902 during the course of the Mt. Kembla inquiries was considered a marvel because D. A. W. Robertson, the manager, enforced the use of locked safetylamps. At all the other Illawarra mines the use of safetylamps was not strictly enforced because of the extra 3d. per ton [24] demanded by the miners for working under the dim, flickering, orange light given off by safetylamps. This arrangement was mutually acceptable, as owners were often unwilling to grant the additional payment and the miners claimed the light impeded their productivity.

Illawarra managers invariably appointed more than one deputy, an overman, a fireman to check the airways, a lampman to test the lamps, or simply a solitary deputy, or maybe a few in larger mines to meet the barest requirements of the law and to afford the minimum protection to their investment. After the deputy's morning statutory obligation, most of the day was absorbed by supervising duties which meant that the supplementary inspections required by the *Act* were often foregone [25].

The hub of mine production was the face. The economic viability of mines depended largely on the productivity of the hewers who not only had to be regularly serviced with skips but also supplied with 'bridging rails', temporary skiprails, timber and brattice. The deputy, who was responsible for the delivery of these necessities also directed the men who bratticed, timbered and generally performed maintenance work outside and near the vicinity of working places. From the 1896 *Act* onward, in all mines determined gassy by the Department of Mines, a deputy or shotfirer also had to fire all shots. However, shotfirers were generally not employed in the Southern district until that position was

made mandatory by the *1912 Act*. Of course, it was unrealistic to expect that the deputy, who was burdened by all the other duties described above, would also have time to go on foot several times a day to workplaces which might be hundreds of yards apart in order to fire shots [26].

Any deputy or mine official who did not partake of the conspiracy of complacency was victimised. There were two cases of victimisation which merited special attention. In 1899 a Parliamentary inquiry under G. C. Wade investigated the dismissal of deputy Bailey from the Newcastle Coal Co. three days after he had detected firedamp. Wade found that the deputy had been instructed on a previous occasion not to report firedamp but added, '... that Bailey was dismissed for making known the existence of gas I am unable to say' [27]. In 1903 a Royal Commission investigated deputy Joseph Lowe's allegations concerning his dismissal after reporting gas at the Seaham colliery [28].

The subordination of safety by officials to the needs of production was a well established British custom practised in N.S.W. since the beginning of coalmining and implicitly legitimised in the *1876 Act*. Under this *Act*, neither manager, overman nor deputy were recognised, nor were their many duties specifically designated. The entire responsibility devolved from the owner to a vaguely defined agent [29]. The paucity of legally enforceable safety regulations between 1876 and 1896 for underground officials encouraged the growth of a recklessness which became an accepted part of coalmining. It spread as coalmining became a large industry from the late 1870s and was not entirely checked by the innocuous *1896 Act* nor by any subsequent legislation in the twentieth century. In part this was due to the duality of the role of mine officials who were charged under law to protect the safety of life and limb, but who also had to ensure that the production process ran smoothly. Frequently, this would occur at the expense of safety. Under the *1912 CMRA* deputies, shotfirers, undermanagers and managers continued to serve two masters whose objectives were antagonistic. There is no evidence which suggests that this situation has been resolved under current legislation.

While there is no doubt that the *1912 CMRA* and its amendments were a vast improvement over any other Act that preceded it, the question

of the process of observance of the 1912 legislation, which was in force as recently as 1984, is one that remains. Arguably, it could also be said that the present legislation, the 1982 CMRA, (proclaimed 1984), makes mines safer, although some critics claim that it gives too much latitude to managers in decisions where safety is a factor. Aside from the equivocations of inspectors, the inclination to internalise or normalise danger was as prevalent under the 1912 Act as it was under previous legislation. The tradition remains under current legislation. In part, current malpractices have a tradition as long as coalmining itself and many traditions have more recently been reinforced by the introduction of the production bonus in the mid- to late 1950s despite a change in the composition of the mining workforce since the end of World War II at the behest of the Joint Coal Board. The contention here is that despite the strenuous opposition by the Miners' Federation to its introduction, since the 1960s introduction of the production bonus paid across the board to the majority of employees on mine sites, the tendency to overlook safety procedures has increased. An analysis of accident rates tends to support this view. While there is no doubt that since its introduction the bonus has increased productivity prodigiously, it has also fostered a propensity to cut corners with respect to safety. The inclination to normalise danger, a characteristic embedded in all ranks of the mining workforce since the industry's inception, was again reinforced by the bonus. The result has been a fall in safety consciousness, abetted consciously or unconsciously by all who partake in the bonus - from the 'Feds' (members of the former Miners' Federation) to tradesmen, deputies and higher company officials. In other words, the conspiracy of complacency accommodated the payment of the bonus.

Notwithstanding the laxity in the policing of safety breaches by inspectors and in spite of advances in technology such as roofbolting, the erection of rib-props or rib-doweling, high velocity ventilation and improved underground lighting, danger is always present underground. Regardless of safety precautions, roof sections can still collapse, often without warning. Large volumes of methane can appear suddenly or ribs may burst unexpectedly. There is no human agency that can prevent such occurrences. At best, safety measures furnish uncertain protection against

unforeseen circumstances only when safety regulations are meticulously observed.

One of the temptations of the bonus, however, is that it entices individuals to commit acts which go beyond limits for which safety measures were intended. The result may be a major disaster like the one which occurred at the Appin mine in 1979 when 14 men were killed by a methane explosion under circumstances which were not satisfactorily explained in official terms. Thankfully, disasters of the magnitude of Bulli and Appin have been rare. The more common result of the bonus' enticement is for individuals to commit acts which are not breaches of safety regulations but which cause injury to offenders ranging from minor to serious.

The range of transgressions against safety is varied and by no means are they universally practised. Indiscretions also vary from those which result in minor injury to the offender and which do not affect safety, to actions which may result in large loss of life. From the 1960s until the time of writing, while common minor indiscretions caused personal injury they do not necessarily endanger the lives of others. Such peccadillos include lifting of weights beyond an individuals' capacity, resulting in muscular and skeletal injury, and the misuse of tools which cause eye injuries or minor wounds to the limbs. Other forms of misconduct that may cause injury to others include careless driving of vehicles in roadways so as to crush individuals against props or rib-sides; leaving derelict equipment in the lesser, usually unlit roadways, creating hazardous obstacles and not 'sounding' the roof before commencing work, thereby inviting roof-falls with possible fatal consequences. However, it is not the intention to argue that the kind of behaviour outlined above is typical of the coalmining industry. Rather, the point is that the bonus has the potential to increase the incidence of such behaviour.

Generally, the most dangerous offences occur at the face. There are many serious types of misconduct at the face which may turn mines into disaster areas. For example, it was common practice since the introduction of continuous miners [30] during the 1960s to advance the face ahead of the last roof support as permitted under the Special Rules of the 1912 CMRA [31]. This procedure was resorted to in order to delay the interruption to production required to secure straps to the roof with

roofbolts. Instead, mineworkers permitted continuous miners to advance several times the distance prescribed by law and secure two, three or more sets of straps and roofbolts in one operation. By these omissions they increased production by avoiding the mandatory individual pauses which created discontinuity to production and affected the bonus adversely.

The failure to provide systematic roof support makes a collapse of a roof a distinct possibility and can result in hundreds of tons of superincumbent strata subsiding. It is no surprise that despite the universal application of roofbolting, roof-falls have been one of the most prevalent causes of death underground [32]. Another common safety infraction has been to cut headings wider than the statutorily permitted maximum to increase the shift's output. By 'robbing the pillars' the additional pressure created causes the 'crush' on the ribs to increase to such an extent that random rib-bursts capable of killing men could erupt suddenly without warning.

While roof and rib-falls have been the most common cause of death and injury they are not necessarily the most dangerous occurrences. The potential for death and injury arise from the frequent transgression of *CMRA* regulations governing the prevention of methane explosions. While fatal gas explosions have been rare this century, malpractices in gassy conditions are habitual and can turn mines into powder-kegs. Ironically, the vigorous enforcement of *CMRA* ventilation regulations by the Joint Coal Board which compelled management to install ventilation systems powerful enough to sweep away any quantity of gas also created a false sense of security. Because it was self-evident that ventilation was much stronger than ever before, mineworkers became increasingly inclined to take risks. Due to the changing composition of the workforce, by the time the bonus became almost universal during the 1960s, self-deception about the dangers of gas was the norm.

The inclination towards risk-taking was especially fuelled by the bonus. It became common practice to by-pass the methanometers, fail-safe devices on continuous miners which automatically stopped the machine if concentrations of gas reached dangerous proportions. Likewise, portable methanometers suspended in the optimum position from the roof near the face were deliberately damaged. Similarly,

continuous miner drivers, as well as deputies, did not always test for gas in gassy places at the statutorily prescribed half hour [33] so as not to hold up production. Indeed, one of the attractions of the introduction of continuous production with four overlapping shifts in 1971 was to avoid this procedure which was otherwise mandatory between shifts.

Under normal circumstances, these and other omissions are inconsequential even if they result in small fires which are quickly extinguished. However, a sequence of unusual occurrences can turn an apparently innocuous omission into a holocaust. Such was the case at the Bulli colliery on 9 November, 1965 when a fire caused by the ignition of a body of inflammable gas killed four men and seriously injured three. On this occasion the accident was confined to the ignition of gas in a small heading, but could easily have been an instantaneous explosion affecting the entire mine [34]. The mandatory investigation appointed by the Minister for Mines by virtue of Section 31 of the *CMRA* under Supreme Court Judge A. Goran originally apportioned no blame to anyone. This is a fairly predictable result of this type of inquiry and the mandatory inquests for lesser accidents owing to the conspiracy of complacency. The report was mainly confined to recommending amendments to the *CMRA* [35]. In a supplementary report requested by the Minister, Judge Goran found no evidence of culpable negligence under common law, but recommended the issue of summonses for minor offences under the *CMRA* [36] - another typical outcome and one not dissimilar to the inquiries held into Bulli in 1887 and Mt. Kembla in 1902.

At the Appin mine on 24 July 1979, gross neglect under gassy conditions and the illegal reversal of temporary ventilation in a longwall panel caused a gas explosion which killed 14 men. Like Bulli 14 years before, there was much breast-beating over the loss of life by the mining fraternity. Yet, despite private admissions by many in the Southern district that the 'accident' occurred due to the cutting of corners, no public acknowledgement was given to the connection between unsafe practices and the bonus. Instead, face-saving grief in public disguises the dangers induced by the bonus. There is a familiar echo about these reactions to large loss of life in coalmining disasters. At Bulli in 1887 and Mt. Kembla in 1902, economically driven industry practices convinced

miners and officials of the adequacy of the prevailing safety conditions. As at Appin, mineworkers were so inured to danger that they felt that disaster would never overtake them. Of course, disasters of the magnitude of Bulli, Mt. Kembla and Appin are rare and some cold comfort can be drawn from this.

However, in the context of Bulli, few lessons have been learnt from the past. Despite high velocity ventilation and mining technology and techniques superior to Appin, aside from being innately dangerous workplaces, unsafe practices make work in coalmines far more hazardous than it needs to be. The inquiries held into the Appin disaster revealed that faulty workmanship under gassy conditions by an electrician and an illegal reversal of a temporary ventilation system caused the explosion. The outcome of the Appin disaster inquiries have an all too familiar ring about them. The sad conclusion is that history may repeat itself and that calamity may strike again.

NOTES

CHAPTER ONE

1. If gas is the initiator in a mine explosion, coaldust, when it is ignited, increases the force of the explosion many times and precipitates the real damage.
2. Two of these works are Mitchell, G. & Piggin, S. (1977), pp. 52-69; Bell, P. (1978).
3. Ellis, M. H. (1969).
4. Gollan, R. (1963).
5. Ross, E. (1970).
6. Piggin, F. S. & Lee, H. (1992).
7. *ibid.*, p. 204.
8. *An Act for the Registration and Inspection of Coal Mines in the Colony of New South Wales.*
9. For reasons this author has not been able to uncover in some twelve years of research on N.S.W. coalmining, women were never employed in N.S.W. mines.
10. Report From the Select Committee on the Coal Fields Regulation Bill; together with the Proceedings of the Committee and Minutes of Evidence. *N.S.W. Legislative Council Journals*, 1862. (9) (hereafter 1862 Select Committee), evidence W. Keene, p. 36.
11. Turner, J. W. (1977), p. 172.
12. As a recent Welsh migrant, his reluctance to speak publicly might have also been due to his difficulty with spoken English.
13. For example, the original petition for improved legislation was accompanied by a deputation of 4 parliamentarians and one aspiring parliamentarian of whom not all would have gained politically. Of the former, Henry Parkes, James Hoskins and James Pemell had no obvious

ulterior motives, but Arthur Hodgson was the Member for Newcastle, the electors of which were nearly all miners. William Brooks was the original candidate for Northumberland, the adjoining mining electorate. Brooks had stood down in favour of Lewis.

14. Loveday, P. & Martin, A. W. (1966), p. 32.
15. Turner, J. W. (1977), p. 173.
16. 1862 Select Committee, pp. 9-15.
17. The other inspectors were Richard Harris and Thomas Topham.
18. *Illawarra Mercury* 21 May 1887: *Report of Evidence taken at the Coroner's inquest held at Bulli touching the Death of William Wade and Others, who were killed in the Bulli Colliery on Wednesday 23rd March, 1887*, (hereafter referred to as *Report of the Bulli Inquest*) pp. 97, 98; *Bulli Colliery Accident Report of Royal Commission; together with the minutes of evidence and appendices*, (hereafter referred to as *Report of the Bulli Royal Commission*), questions 5422-5425.
19. Report from the Select Committee on the Collieries Bill; together with the Proceedings of the Committee, Minutes of Evidence, and Appendix, *N.S.W. Legislative Council Journals*, 1872-73 Vol. 22, Pt. 1 (1873 Select Committee).
20. *Consolidated Index of N.S.W. Legislative Council*.
21. This evidence was collated from the following sources; Martin, A. W. & Wardle, P. (1959); *Australian Dictionary of Biography*. (2-7); Radi, H., Spearritt, P. & Hinton, E. (1979); *Australian Encyclopaedia*; *Sands Sydney Directory*, 1862-1887; *Sands Country Directory*, various reports of annual and bi-annual returns of coalmining companies; *N.S.W. Parliamentary Debates*, 1874-1887; *Votes and Proceedings of the NSW Legislative Assembly*, 1862-1887.
22. *Votes and Proceedings*. (1), 1862, p. 481.
23. For example, *Parliamentary Debates*, Loan estimates, Railway and Public Works, (1), Session, 1880-1881, pp. 1095, 1097-1122.
24. *Australian Dictionary of Biography*, (3), pp. 24-25.

25. *ibid.*
26. *ibid.*
27. *ibid.*, pp. 24, 25; Parkes Correspondence, Mitchell Library, A871-A934, (48), pp. 471-1.
28. *Annual Report of Department of Mines, New South Wales, 1885*, p. 119.
29. *Memorandum and Articles of Association of E. Vickery and Sons Limited, Sydney, 1902*, title page.
30. *Daily Telegraph*, Friday 6 May, 1887; *Illawarra Mercury*, Tuesday 24 May, 1887.
31. *Public Statutes of New South Wales, 1879-1887*. No. 8, 50 Victoriae, 1886, p. 854.
32. *Illawarra Mercury*, Tuesday 24 May, 1887. The 50th half-yearly report of the Bulli Coalmining Company showed a loss of £1,840-19-9 for the previous half-yearly period. *Sydney Mail*, Saturday 22 January, 1887; 51st half-yearly report, a loss of £6,281-7-8. *Sydney Mail*, Saturday 6 August, 1887.
33. Based on calculations from Dingsdag, D. (1988). The estimates of £2-0-0 to £2-10-0 per week in the thesis version of this work based on T. A. Coghlan's calculation of 1/- to 1/3 per hour and an eight hour day, six days per week are misleading (Coghlan, T. (1888), pp. 411, 413).
34. Wheelwright, E. L. (1972).
35. Holmes, J. D. (1956), p. 263.
36. *ibid.*, p. 263.
37. *ibid.*

CHAPTER TWO

1. The use of the term 8 foot is a misnomer. The Bulli seam has been known to vary from 50 cms. to 3.6 metres in thickness.

2. A dyke is a wall or sheet of igneous rock cutting through the coal. Dykes cause the natural cindering of the coal seam and are often associated with emissions of gas. In the nineteenth century, dyke intrusions necessitated the unprofitable mining of stone. Modern technology has overcome the obstructions caused by cindering; also the partially cindered coal is considered useful for specific industrial usages whereas in the 19th century it was considered waste material. Rolls are caused by strata stresses which cause the 'floor' of a coal seam to form irregular wavelike folds which thin the coal seam; sometimes to less than 30 cms. thick. Rolls, like dykes, also caused a loss of profit.

3. Jervis, J. (1942), pp. 282-283.

4. *ibid.*, pp. 286-291.

5. Bolton, K. B. (1977), pp. 72-76.

6. *ibid.*, p. 73; also Jervis (1942), pp. 95-96.

7. Bolton, K. B. (1977), pp. 73-74.

8. *Census of N.S.W., 1881*, p. 227; *Annual Report of the Department of Mines, New South Wales, 1881*, p. 111.

9. The census figures for 1881 and 1891 do not give the Bulli and Woonona population estimations separately, nor do these years coincide with the year 1887. An approximation of the Bulli-Woonona population was obtained by implementing a formula based on an annual 4.1% increase of population in that district since 1881. The male population was then calculated at the 56% average total of males for the district.

No other sources besides the 1887 electoral rolls adequately enumerated the population of Bulli alone.

Evidence gleaned from the 1887 electoral roll for Illawarra show that 235 enfranchised males were registered for the Bulli district. The calculation derived from the 4.1% annual increase from 1881 arrives at a male population of 845 in the Bulli-Woonona area.

10. *Illawarra Mercury*, Tuesday 26 October, 1886.

11. *Report of the Bulli Royal Commission*, for example, evidence William Scott, questions 422-444, p. 44; questions 482-487, p. 45; John

Richards, questions 1066-1075, pp. 57-58. Also see Chapter Four of this book.

12. *Report of Bulli Royal Commission*, pp. 2-12.

13. After a brief period of full employment lasting from 1939 to 1952 the coalmining industry entered a period when the workforce was drastically reduced to counteract another recurrence of excess capacity which was not overcome until 1964 (Dingsdag, 1988).

14. Dingsdag (1988), pp. 79-133.

15. All of the private jetties and harbours north of Wollongong suffered the same problems. The disadvantages of the Western (Lithgow) district were its isolation and after its connection to Sydney by rail freight charges were too high to make the district a major competitor. Viable land transport was not created at Newcastle and Wollongong until 1888 when the two cities were connected by rail to Sydney, which had a focal export harbour and a growing domestic market.

16. Report from the Select Committee on the Coal Inquiry N.S.W., *Legislative Council Votes and Proceedings*, 1845-47, (hereafter referred to as the *1847 Coal Inquiry*).

17. During the twentieth century the Southern district gained in importance, particularly after the Depression, never outproducing the Northern district, but becoming the major producer of metallurgical coking coal.

18. *Illawarra Mercury*, 8 October 1861.

19. *ibid.*, 8 October 1861; Letter from Thomas Hale, owner Bellambi colliery, to E. C. Merewether, general superintendent AACo., AACo Colliery Correspondence. Archives of Business and Labour A.N.U., (A.B.L.), Deposit 1/57/9-cc-1-50.

20. Transcript the Illawarra Collieries' Association Industrial Union of Employees, claimant and the Southern Colliery Proprietors' Association Industrial Union of Employers, respondent, Wollongong, 1902. (T. of E.), evidence James McGuire, President I.C.E.A., pp. 4-10.

21. The depression of the 1890s was far less severe in N.S.W. coalmining than it is portrayed in a vast array of literature. Despite the

reduction in prices during the 1890s, production of coal and the income of Illawarra miners rose. For example, when the Illawarra hewing rate was 2/9d. per ton in 1879 the hewers' estimated annual income was £58-16-0. However, for 1890, the most depressed year, when the hewing rate was 2/4d. per ton, estimated income was £47-6-7 and £60-0-0 from 1894 when the hewing rate was only 2/-. The hewers had to work much harder and longer hours, cut more corners and took greater risks (Dingsdag, 1988).

22. The Union was formed as a result of a strike. The Bulli miners struck in early 1879 to support the Seamen's Union strike begun in November 1878 against the Australian Steamship Navigation Co.'s policy of employing Chinese crews.

23. When this amalgamation failed to increase its bargaining powers the Illawarra Branch of the A.M.A. attempted to secure legislation on safety and conditions during the 1890s by an active involvement in the burgeoning Labor Party and kindred organisations. Until approximately 1904-10 the lodges also served as branches of the Labor Party. They selected candidates and successfully excluded outsiders. In 1895 the union was the A.M.A. Illawarra Branch Provincial Council A.L.F. (Australian Labor Federation). In 1898 it became the Illawarra District Council of the A.L.F.; in 1901 it disaffiliated and became the Illawarra Coalmining Employees' Association (Hagan & Turner, 1987).

24. 'Contract mining' is a misnomer. It is doubtful if written contracts between miners and owners were used after 1850, but the terminology remained. It appears the contracts disappeared after the AACo replaced its convict miners by free miners from Britain who worked off the fare the Co had paid to bring them to N.S.W. They were regarded as 'bound' or contracted.

25. That is with the exception of a cursory safety inspection by a deputy generally before the commencement of the shift. The diffuseness of working places and the complexity of layouts almost exclusively dictated that piece-workers should be unsupervised and that the mode of work was payment by result.

26. Shearing the coal vertically at each 'rib', side.

CHAPTER THREE

1. CMRA, 1876, 38 Victoriae No. 31, Section 28, *The Statutes of N.S.W.*, (1), A-J, p. 195.
2. *Report of Bulli Inquest.*
3. *Daily Telegraph*, Monday 18 April; *Daily Telegraph*, Saturday 26 March.
4. *Daily Telegraph*, Monday 18 April, 1887.
5. See Chapter Three of this book.
6. *Daily Telegraph*, Monday 18 April, 1887.
7. *N.S.W. Laws Statutes, Public and Private*, 1847-51, 14 Victoriae, 43, pp. 2288-2291.
8. *Daily Telegraph*, Monday 8 April, 1887.
9. *Daily Telegraph*, Monday 18 April, 1887.
10. *An Act further to amend the Jury Act*, 18 Victoriae, No. 18, *Statutes of N.S.W.*, 1852-1862, pp. 2844, 2845; *Jury Law Amendment Act of 1876*, 40 Victoriae, No. 6, *N.S.W. Public and Private Statutes*, (38-43), p. 57.
11. *Report of the Bulli Inquest*, p. 2.
12. *Daily Telegraph*, Thursday 31 March, 1887.
13. *Daily Telegraph*, Monday 18 April, 1887.
14. *ibid.*
15. *Report of Bulli Inquest*, p. 110. The words in the brackets appear in the original.
16. *ibid.*, e.g., evidence Alexander Ross, manager Bulli Mine, pp. 35-41; James Rowan, Department of Mines, inspector, Illawarra District, pp. 64-68; John Mackenzie, examiner of coalfields, pp. 95-102.

17. *Daily Telegraph*, Friday 2 May, 1887.
18. The Coal Miners' Mutual Protective Association of the Hunter River District (CMMPA) was at times strong numerically and financially. Out of the approximate 8,000 miners employed in N.S.W., 6,000 came from the Northern district, the majority of those miners were unionised. It would appear that the CMMPA supported financially the engagement of the solicitor by the Illawarra Miners' Mutual Protective Association, which after the 1886-87 strike/lock-out was ineffectual and unorganised (*Sydney Mail*, Saturday 2 March, 1887).
19. *Report of Bulli Inquest*, e.g., evidence William Scott, miner, pp. 27-32; James Salisbury, miner, pp. 41-44; John Mackenna, miner, pp. 60-64; William Beckton, miner, pp. 76-80; Noah Hobbs, miner, pp. 80-84; John Hobbs, miner, pp. 85-88; John Richards, miner, pp. 88-91; Thomas Bissell, engine driver and miner, p. 91.
20. *N.S.W. Parliamentary Debates*. (19), 1886, p. 1440.
21. *Sydney Mail*, Saturday 30 April, 1887.
22. See Chapter Five of this book.
23. Holmes, J. H. (1956) p. 263; Hanser, C. J. (1965), p. 38.
24. *Report of Bulli Royal Commission*, p. 1.
25. *Consolidated Index of the N.S.W.. Legislative Council*, (2), p. 258; (3), p. 189.
26. *Illawarra Mercury*, 3, 10, 17, 29, 31 July, 1890.

CHAPTER FOUR

1. *N.S.W. Parliamentary Debates*, 1887. (25), pp. 1045-1053; (26), pp. 1553-4, 1590, 1591.
2. *Sydney Mail*, 30 April, 1887. The use of the Bulli Coal Mining Company's steamer is treated fully in Chapter Five of this book.
3. *Illawarra Mercury*, 26 April, 1887. The original proposed members were G. O. Clarke, Chairman; T. Croudace; J. Y. Neilson; J. R.

M. Robertson; and W. Turnbull, manager, Australian Agricultural Company mine.

4. Minutes of Evidence. *Report of Bulli Royal Commission*, pp. 35-177.

5. Index to Parliamentary Debates, *N.S.W. Parliamentary Debates*, 1887 (26), pp. XXIII-LXXXIV; 1887-8 (30), pp. XIX-CXXVII.

6. Attendances of Members - Assembly, *N.S.W. Parliamentary Debates*, 1887 (26), pp. XIX-XX; 1887-8 (30), pp. XXV, XXVI.

7. There were 6,287 miners in the northern district, most of whom lived in Walker's electorate. *Annual Report of Department of Mines, N.S.W.*, 1887, p. 114.

8. *N.S.W. Parliamentary Debates*, 1887 (26), p. 1553.

9. *Votes and Proceedings of the N.S.W. Legislative Assembly*, 1887, (4), pp. 216, 258, 267, 268.

10. *N.S.W. Parliamentary Debates*, 1887 (26), pp. 1551, 1553, 1554, 1590, 1591.

11. *ibid.*, pp. 1533, 1590.

12. *ibid.*, p. 1553. Walker mistakenly referred to Hilton as Holden and to Owens as Owen. This suggests that these two commissioners were not well known in the mining fraternity. Another mistake made by Walker during this speech was his assumption that Clarke was still chairman of the commission, as originally proposed; see note 3 this chapter.

13. Depositions and Exhibits in connection with the Mount Kembla Colliery disaster inquest. *Mount Kembla Colliery Disaster, 31 July 1902, Report of the Royal Commission*, p. 50.

14. *Votes and Proceedings of the N.S.W. Legislative Assembly*, 1887 (4), p. 245.

15. *N.S.W. Parliamentary Debates*, 1887 (26), p. 1589; also Department of Mines Correspondence, State Archives, file No. 9-1930,

letter to Sir Henry Parkes from Croudace recommending Neilson's appointment.

16. *N.S.W. Parliamentary Debates*, 1887 (26), p. 1593.
17. *CMRA*, 1876, Section 20, p. 193
18. *ibid.*, Section 20, p. 193.
19. *N.S.W. Parliamentary Debates*, 1887 (26), p. 1593.
20. Annual Report of Examiner of Coalfields. *Votes and Proceedings of the N.S.W. Legislative Assembly*, 1887 (8), p. 246.
21. *Bulli and Clifton Times and Illawarra Miners' Advocate*, 16 February, 1887.
22. *ibid.*
23. Ellis (1969), p. 73.
24. *ibid.*, pp. 69-74.
25. Australian Agricultural Company Correspondence, Archives of Business and Labour, Australian national University, Deposit No. E165, 13, 131.
26. Ellis (1969) conflates this and the owners' other industrial associations with the vends, or selling cartels, which were formed to control prices and sales of coal, pp. 74, 75, 202.
27. Australian Agricultural Company Correspondence, Deposit No. E207. Neilson's letter is reproduced in Appendix A.
28. *N.S.W. Parliamentary Debates*, 1887 (26), pp. 1287, 1594.
29. *Illawarra Mercury*, 5 May, 1887.
30. *N.S.W. Parliamentary Debates*, 1887 (26), p. 1287.
31. *ibid.*, pp. 1287, 1590.
32. *Australian Dictionary of Biography*, (5), pp. 237-238.

33. *N.S.W. Parliamentary Debates*, 1887 (26), pp. 1551, 1590.
34. *ibid.*, p. 1590.
35. *ibid.*
36. *Votes and Proceedings of the N.S.W. Legislative Assembly*, 1887 (4), p. 236.
37. *N.S.W. Parliamentary Debates*, 1887 (26), p. 1287.
38. *Australian Dictionary of Biography*, (3), p. 1287.
38. *Mount Kembla Colliery Disaster, 31 July, 1902, Report of the Royal Commission, together with Minutes of Evidence and Exhibits*, questions 23668, 23669, p. 708.
40. *Daily Telegraph*, 6 May, 1887.
41. *Memorandum and Articles of Association of E. Vickery and Sons Limited*, Sydney, 1902, title page; see also Chapter One of this book for Vickery's association with the Bulli Coal Mining Company.
42. *Illawarra Mercury*, 3 May 1887, editorial.
43. *N.S.W. Parliamentary Debates*, 1887 (26), p. 1591.
44. *ibid.*
45. *Minutes of Evidence, Report of Bulli Royal Commission*, pp. 35-177.
46. *Votes and Proceedings of the N.S.W. Legislative Assembly*, 1887 (4), pp. 469-471.
47. see Chapter Six of this book for Mackenzie's influence over Neilson. It seems that Mackenzie was able to control managers by various means, e.g., threatened interruption of production by the temporary or permanent closure of mines. Mackenzie was enabled under the CMRA to invoke these measures, which however he never did.

CHAPTER FIVE

1. *An Act to regulate the taking of Evidence by Commissioners under the Great Seal.* 1880, 44 Victoriae, No. 1, *Public Statutes of N.S.W.*, 1879-87, p. 77.
2. *Illawarra Mercury*, Wednesday 11 May, 1887.
3. *Report of Bulli Royal Commission*, pp. 21-31. The overman was the official directly responsible to the manager, his position is equivalent to that of the modern under-manager.
4. *CMRA, 1876*, Section 13, pp. 191, 192; Section 24, p. 194.
5. Special Rules for the Bulli Colliery. *Report of Bulli Royal Commission*, Appendix 10, pp. 195, 196.
6. *Report of Bulli Royal Commission*, evidence H. O. McCabe, manager Mt. Keira Colliery, pp. 121-124; J. Evans, manager Mt. Kembla Colliery, pp. 126, 128; J. Williams, manager Coalcliff Colliery, p. 130; J. C. Jones, manager North Illawarra Company, pp. 131, 132. Some of these managers did not comment directly on Ross's competence; they affirmed it by agreeing to leading questions by Robertson.
7. See Chapter Five of this book for Neilson's victimisation by Mackenzie; see Appendix B for Deputy Crawford's ill-treatment.
8. *Report of the Bulli Royal Commission*, p. 23.
9. Miners were supposed to 'nick' the sides of the face, often they did not as it was quicker to blast coal straight out of the 'solid'. Generally a one inch hole, four feet deep was drilled horizontally and filled with either loose gunpowder or cartridges. The fuse and charge was then 'tamped', packed, with involatile stonedust on clay. Deputies generally observed these few cursory safety precautions; at Bulli miners often used coaldust as tamping. The 'shooting out of the solid' sometimes caused a 'blown out' shot because the coal would not dislodge resulting in a flame discharging out of the drill hole. The real danger lay in the use of coaldust as tamping. Coaldust once ignited and mixed with gas has been a major cause of coalmine explosions.
10. *Report of Bulli Royal Commission*, p. 15.

11. *ibid.*, p. 23. Millwood is mistakenly referred to as Millward. Bratticing is an artificial division of an airway used to conduct the air current to the working face. Generally bratticing was made from canvas or sometimes, timber; whichever was the cheapest material available. Today a fibreglass cloth is used.
12. *Report of Bulli Royal Commission*, p. 15.
13. *CMRA, 1876*, Section 12, subsection 4, p. 190.
14. *ibid.*
15. *Report of Bulli Royal Commission*, p. 26.
16. *ibid.*, evidence H. O. McCabe, question 3868, p. 121; questions 3917, 3918, p. 122; evidence J. Evans questions 4054, 4055, p. 126.
17. *ibid.*, p. 26.
18. *ibid.*, p. 26; Rowan's evidence, question 5120, p. 153, question 5202, p. 156; question 5242, p. 158; Mackenzie's evidence, questions 5414, 5415, 5416, p. 163.
19. *Report of Bulli Inquest*, p. 86.
20. May, J. (n.d). p. 4.
21. *Report of Bulli Royal Commission*, p. 17.
22. *CMRA, 1876*, Section 12, subsection 4, p. 190.
23. Appendix No. 8, The Examiner of Coalfields to the Under Secretary of Mines. *Report of Bulli Royal Commission*, p. 192. Mackenzie had not measured the distances between cut-throughs because he claimed it was Rowan's duty; questions 5103-5106, p. 153. Rowan claimed he didn't have time to measure the distances.
24. *CMRA, 1876*, Section 24, subsection 3, p. 194.
25. Appendix No. 6, Inspector Rowan's Reports in reference to the Bulli Colliery. *Report of Bulli Royal Commission*, p. 189.
26. *ibid.*, p. 13.

27. *ibid.*, evidence J. Rowan; questions 5122-5126, p. 154; question 5212, p. 157.
28. *ibid.*, p. 13.
29. *ibid.*
30. Final Report of Her Majesty's Commissioners appointed to inquire into Accidents in Mines, and the possible means of preventing their occurrence, or limiting their disastrous consequences; together with Evidence and Appendices. *British Parliamentary Papers*, 1886 (XVI), pp. 19-23; hereafter referred to as *Final Report of Royal Commission into Accidents in Mines*.
31. Appendix No.6. Inspector Rowan's Reports in reference to the Bulli Colliery. *Report of Bulli Royal Commission*, p. 189.
32. *CMRA*, 1876, Section 12, subsection 3, p. 190.
33. *Final Report of Royal Commission Into Accidents in Mines*. p. 5, pp. 30-32; Atkinson, W. N. & J. B. (1886).
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34. *Report of the Bulli Royal Commission*. p. 23.
35. *ibid*, p. 13.
36. *ibid.*, evidence J. B. Nicholson, question 3710, p. 117: *Report of Bulli Inquest*, p. 58.
37. *Report of Bulli Royal Commission*, evidence, W. Scott, questions 358-488, pp. 42-45; C. Hope, questions 600-648, pp. 48, 49, questions 755-766, p. 51; J. Richards, questions 890-974, pp. 54, 55; J. Hobbs, questions 1448-1481, p. 66, questions 1505-1537, p. 67, questions 1589-1636, pp. 69-70; J. McKenna, questions 1911-1942, p. 75.
38. *ibid.*, evidence J. Crawford, questions 3290, 3291, p. 107.
39. *ibid.*, p. 13.
40. *ibid.*, p. 14.
41. *ibid.*, evidence, J. Crawford, questions 3345-3361, p. 108.

42. *ibid.*, evidence, W. Beckton, question 1257, p. 62; N. Hobbs, question 1838, p. 73.
43. *ibid.*, evidence A. Ross, question 4750, p. 144.
44. *ibid.*, p. 14.
45. *ibid.*, evidence, A. Ross, questions 4754, 4755, p. 145.
46. *CMRA, 1876*, Section 12, subsequently 7, p. 190. Appendix 10. Special Rules for the Bulli Colliery. *Report of Bulli Royal Commission*, rule 16, p. 196.
47. *Report of Bulli Royal Commission*, evidence, J. Hobbs, questions 1457-1468, p. 66; J. McKenna, question 1996, p. 76.
48. *ibid.*, p. 13.
49. *CMRA, 1876*, Section 12, subsection 7, p. 190.
50. *Report of Bulli Royal Commission*, pp. 26, 27.
51. *ibid.*, evidence; W. Scott, questions 417-422, pp. 43, 44; C. Hope, questions 658, 672, p. 49; J. Richards, question 946, p. 55; W. Settle, question 1129, p. 59.
52. *ibid.*, p. 27.
53. *ibid.*, evidence J. Richards, question 946, p. 55; W. Settle, question 1129, p. 59.
54. *ibid.*, evidence A. Smithers, question 2893, p. 98.
55. *Report of Bulli Inquest*, pp. 37, 37. Ross had known Millwood from their previous association at the Wallsend Colliery more than 20 years before the explosion. He had employed Millwood during the strike after Crawford had left the company. The men considered Millwood a sort of blackleg and did not like him. Millwood had perished in the explosion; he could not reply to miners' accusations.
56. *Report of Bulli Royal Commission*, evidence A. Smithers, questions 2893, 2894, p. 98.

57. *ibid.*, Appendix 10. Special Rules for the Bulli Colliery. Rule 4, p. 196.
58. *ibid.*, evidence, T. Morgan, questions 2940-2945, p. 99; The commissioners in their summation erroneously referred to Hope as Scott, p. 24. Wheelers, boys who drive horsedrawn ships to and from headings to the main tunnels were allowed to use naked lights up to the danger-board, but not beyond.
59. *ibid.*, Appendix 11. Engagement Rules of the Bulli Colliery. rule No. 6, p. 197.
60. *ibid.*, rule No. 5, p. 197.
61. *ibid.*, rule No. 3, p. 197.
62. *ibid.*, p. 29.
63. *ibid.*, evidence, J. B. Nicholson, questions 3636-3638, p. 115.
64. *ibid.*, evidence, J. B. Nicholson, questions 3634-3775, pp. 115-119.
65. *ibid.*, evidence J. B. Nicholson, question 3650, p. 115.
66. Ross (1970), p. 53; *Report of Bulli Royal Commission*, evidence J. B. Nicholson, question 3650, p. 115.
67. *Report of Bulli Royal Commission*, p. 53.
68. *N.S.W. Parliamentary Debates*, session 1892-3, (64), pp. 5255, 5256.
69. Dingsdag (1988), pp. 79-134.
70. Radi, H., Spearritt, P. & Hinton, E. (1979) pp. 211-212.
71. *ibid.*, pp. 211, 212.
72. *South Coast Times*, 21 February, 1919. Obituary John Barnes Nicholson, died 19 February, 1919.

73. *Report of Bulli Royal Commission*, p. 29.
74. *ibid.*, pp. 26, 28; evidence, A. Ross, question 4841, p. 146. questions 4927-4930, p. 148; evidence, J. Rowan, questions 5140-5172, pp. 154-155. Contrary to the Commission's summation, the Minutes of Evidence show that Rowan had extensive knowledge of the role of coal dust.
75. *An Act to regulate the taking of Evidence by Commissioners under the Great Seal*, p. 77.

CHAPTER SIX

1. This evidence was derived from the following sources: Martin, A. & Wardle, P. (1959); *Australian Dictionary of Biography*, (2-7); Radi, H., Spearritt, P. & Hinton, E. (1979); *Sands Sydney Directory*, (1862-1876); *Sands Country Directory*; various reports of annual and bi-annual returns of coal mining companies; *N.S.W. Parliamentary Debates*, 1862-1876; *Votes and Proceedings of the N.S.W. Legislative Assembly*, 1862-1876; *The New South Wales Parliamentary Record*, (1), Sydney, 1957.
2. *Consolidated Index of N.S.W. Legislative Council*, (2), p. 257.
3. *ibid.*, p. 258; (3), p. 189.
4. *CMRA*, 1876, Section 30, p. 196.
5. See Chapter Four of this book for miners' victimisation under the Special Rules; for miners' objections to the payment of check inspectors; see *Report of Bulli Royal Commission*, evidence, J. B. Nicholson, questions 3677-3680, p. 116.
6. Martin & Wardle (1959), p. 2.
7. *Votes and Proceedings of the N.S.W. Legislative Assembly*, 1887-88 (8), p. 275; *N.S.W. Parliamentary Debates*, 1887 (29), pp. 1771-1786.
8. *Votes and Proceedings of the N.S.W. Legislative Assembly*, 1876-7 (3), pp. 576, 577; *Votes and Proceedings of the N.S.W. Legislative Assembly*, 1887 (5), p. 175.

9. *Votes and Proceedings of the N.S.W. Legislative Assembly, 1876-7* (3), pp. 576, 577.
10. *CMRA, 1876*, Section 3, p. 187.
11. Report of Examiner of Coalfields on land held by Messrs. Garrett and Greville, to inquire into and report upon the circumstances attending the obtaining, alteration and circulation of a certain report, under the hand of the Examiner of Coalfields. *Votes and Proceedings of the N.S.W. Legislative Assembly, 1875-6* (4), pp. 727-751.
12. *Votes and Proceedings of the N.S.W. Legislative Assembly, 1876-7* (3), pp. 576, 577.
13. *N.S.W. Parliamentary Debates, 1887* (29), pp. 1771-1781.
14. *CMRA, 1876*, Section 27, p. 195.
15. *N.S.W. Parliamentary Debates, 1887* (29), p. 1781.
16. Melville was the parliamentarian discussed in Chapter Three of this book, who was instrumental in questioning appointments to the Royal Commission.
17. *N.S.W. Parliamentary Debates, 1886* (18), pp. 620, 621. T. Croudace was the manager of the mine at Lambton. This incident is referred to in the context of Croudace's lack of mining expertise in Chapter Three of this book.
18. *Report of Bulli Inquest*, p. 95.
19. *Report of Bulli Royal Commission*, p. 31.
20. Report of Examiner of Coalfields in reply to certain charges made against him in the Assembly. *Votes and Proceedings of the N.S.W. Legislative Assembly, 1887-88* (8), p. 218.
21. *Report of Bulli Inquest*, p. 95.
22. *Report of Bulli Royal Commission*, p. 30; *Report of Bulli Inquest*, p. 95.
23. *Report of Bulli Royal Commission*, pp. 30-31.

24. Atkinson, W. N. & Atkinson, J. B. (1886).
25. *Report of the Bulli Royal Commission*, p. 31.
26. *ibid.*, p. 31.
27. *ibid.*
28. *Illawarra Mercury*, Saturday 30 April, 1887.
29. *N.S.W. Parliamentary Debates*, 1887-88 (30), pp. 2568-2571.
30. *Illawarra Mercury*, Tuesday 19 July, 1887.
31. *Illawarra Mercury*, Saturday 21 May, 1887; *N.S.W. Parliamentary Debates*, 1887-88 (29), p. 1772; *Report of Bulli Inquest*, p. 96.
32. *Public Statutes of New South Wales*, 1879-1887, 50 Victoriae, No. 8, 1886, Section 1, subsections I, II, III, IV, p. 20. The waiver of payment included proven negligence by employees such as sabotage.
33. See Chapter One of this book for a tabulation of the company's losses.
34. *Daily Telegraph*, Thursday 24 March, 1887.
35. Report of Examiner of Coalfields in reply to certain charges made against him in the Assembly. *Votes and Proceedings of the N.S.W. Legislative Assembly*, 1887-88 (8), pp. 217, 218. *Report of Bulli Royal Commission*, evidence, J. Mackenzie, questions 5415-5419, pp. 166, 167.
36. Report of Examiner of Coalfields in reply to certain charges made against him in the Assembly. *Votes and Proceedings of the N.S.W. Legislative Assembly*, 1887-88 (8), pp. 220, 221, 223.
37. *Annual Report of Department of Mines New South Wales*, 1887, pp. 114, 115.
38. *Votes and Proceedings of the N.S.W. Legislative Assembly*, 1876-7 (3), pp. 579, 580, 581.

39. *Report of Bulli Inquest*, pp. 97, 98; *Illawarra Mercury*, Saturday 21 May, 1887; *Report of Bulli Royal Commission*, evidence, J. Mackenzie, questions 5422-5425, p. 164.
40. *Report of Bulli Inquest*, pp. 97, 98.
41. *ibid.*, pp. 95-97.
42. *Report of Bulli Royal Commission*, evidence J. Mackenzie, questions 5422-5425, p. 114.
43. *Illawarra Mercury*, Saturday 21 May, 1887.
44. Report of Examiner of Coalfields in reply to certain charges made against him in the Assembly. *Votes and Proceedings of the N.S.W. Legislative Assembly, 1887-88* (8), pp. 218, 219.
45. *ibid.*, p. 219.
46. *ibid.*
47. *ibid.*, pp. 218, 219, 220.
48. *Sydney Mail*, Saturday 7 May, 1887.
49. *ibid.*
50. *N.S.W. Parliamentary Debates, 1887-88* (31), p. 3635.
51. Report of Examiner of Coalfields in reply to certain charges made against him in the Assembly. *Votes and Proceedings of the N.S.W. Legislative Assembly, 1887-88* (8), p. 218.
52. *CMRA, 1876*, Section 12, subsection 5, p. 190; Correspondence in connection with the Case of the Crown v The Newcastle Wallsend Coal Company. Laid upon the Table of the Honorable [sic] the Legislative Assembly of N.S.W. by the Secretary for Mines in reply to a question by Mr. Melville, M.P. dated 28th March, 1888. *Votes and Proceedings of the N.S.W. Legislative Assembly, 1887-88* (8), p. 302.
53. *ibid.*, p. 275.
54. *ibid.*

- 55. *ibid.*
- 56. *ibid.*, p. 276.
- 57. *ibid.*
- 58. *ibid.*, p. 290.
- 59. *Daily Telegraph*, Friday 1 April, 1887.

CHAPTER SEVEN

- 1. *Department of Mines Annual Report*, 1897, p. 8.
- 2. For example, according to the *1896 Act* miners were supposed to be paid for 'all minerals gotten', including slack for which they often were not paid. Many managers continued the custom of neither weighing nor paying for slack and Atkinson prosecuted them. (After Supreme Court litigation in March 1898, in which Justices Cohen and Stephen found against the Mt. Kembla company, owners overcame the legality by paying a nominal amount for slack, perhaps 1/2d. or 1d. per ton.)
- 3. *CMRA*, 1896, 60 Victoria, Section 23.
- 4. May (n.d.), p. 6; *Department of Mines Annual Report* 1898, p. 118.
- 5. *ibid.*, p. 118; May (n.d.), p. 6.
- 6. *Department of Mines Annual Report*, 1898, p. 118.
- 7. Dingsdag, D. (1986).
- 8. After the 1902 arbitration, the Southern hewing rate was temporarily fixed to a sliding scale but abandoned. The wages or day labour were fixed proportionate to the rising and falling of hewing rates but after the abandoning of the sliding scale wages continued to be determined by the rise and fall in the price of coal.
- 9. Dingsdag (1988).
- 10. *Department of Mines Annual Report* 1896, p. 89.

11. *CMRA, 1896*, 60 Victoria, No. 12, Section 26, VII.
12. Piggin, S. & Lee, H. (1992)
13. for example, see May (n.d.), pp. 7-8.
14. both the *1876* and *1896 Acts*.
15. for example, see May (n.d.), pp. 11-12.
16. One example came to light during one of the investigations into the Mt. Kembla disaster. During the inquiry into the conduct of the manager, William Rogers, it was revealed that Rogers had a long standing relationship with one of the Mt. Kembla Royal Commission members, D. A. W. Robertson, the general manager at the Metropolitan mine at Helensburgh. Robertson, who in 1903 had been 34 years in coalmining, had known Rogers since 1874 when he employed him as an under manager in North Wales and from 1881 at the Carron Coal Mine and Ironworks Co. in Scotland. Subsequently, in N.S.W., Rogers was Robertson's manager at Greta for about 18 months. Dr J. R. M. Robertson, D. A. W. Robertson's brother, was the viewer or general superintendent at the Mt. Kembla mine and had known Rogers since 1874 from North Wales and the Carron works. A principal of conservative Southern mine organisations J.R.M. Robertson as chairman of the Bulli Royal Commission was largely responsible for the white washing of the inspectorate's and management's misconduct. Using his influence as viewer of the Mt. Keira and South Bulli mines in the South and Waratah and West Wallsend in the Northern district he tried to manipulate the outcome of the Mt. Kembla disaster by procuring 'independent' expert witnesses. One of these was D. McGeachie of West Wallsend, who had known Rogers since 1890 from the Carron works where he had been the assistant manager. He also knew him at Greta. The preceding evidence from 'Conduct of Mr Rogers, as Manager, Mount Kembla Colliery', Government Printer, Sydney, 1903. Brought to the author's attention by H. P. Lee.
17. personal communications from miners and members of the Miners' Federation.
18. Dingsdag (1988).

19. Deputies were given legal recognition in 1917; overmen who were equivalent to an underground undermanager or foreman were never recognised by any subsequent legislation.
20. *CMRA, 1896*, 60 Victoria, No. 12, general rule 4.
21. There were only three mines in the Southern District with personnel shafts - Metropolitan, Coalcliff and South Clifton.
22. *CMRA, 1896*, 60 Victoria, No. 12, general rules, 5, 6.
23. *ibid.*, rule 7.
24. Sometimes less, down to 1d. per ton.
25. At several parliamentary inquiries, committees and commissions between 1887 and 1939, in their evidence miners reported they never saw the deputy except at the end of the fortnight to settle 'consideration' payments.
26. This procedure held up production and also prevented hewers from working at their own pace. Consequently, miners continued to fire their own shots. When shotfiring regulations were enforced from 1912 onwards, shotfirers were employed to ensure the continuity of the labour process.
27. May (n.d.), p. 8.
28. *ibid.*, p. 8. It seems that Bailey was too conscientious for management and men alike. In 1895 he reported a case where the brattice trick was used (pp. 7-9). The fact that Wade frequently took employers' briefs did not deter the Government from appointing him to the case, despite Wade's vigorous attacks on miners, and especially their unions.
29. *CMRA, 1876*, 39 Victoria, No. 31, interpretation 2.
30. A continuous miner is a machine which combines all of the labour processes at the face previously performed either mechanically or by hand. The continuous miner's cutting head shears the coal which is then fed to the rear of the machine where it is loaded onto various types of transport. The continuous mining crew performs all of the ancillary functions, such as roofbolting and ensuring that the coal is loaded properly.

31. Dingsdag (1986).
32. *ibid.*
33. CMRA, 1912, No 37, Seventh Schedule, Section III, regulations 27a, 27b, 28.
34. *Joint Coal Board Report 1965-66*, pp. 16, 17.
35. *ibid.*
36. *ibid.*

APPENDIX A

The letter from J. Y. Neilson to F. W. Binney, referred to in Chapter Three of this book, is set out below.

Wallsend

2nd September 1888

F.W. Binney Esq.

My Dear Sir

As you know that with the exception of Fletcher I have had more experience of strikes in this Colony than any other Colliery Manager in the district. This added to my intimate knowledge of the men you have to deal with ought to give some weight to my suggestions therefore, I will briefly give you of my ideas on Strikes.

I may preface my remarks by saying that all my opinions are formed on the premises that there are no conflicting interests or difference of opinion inside the Master's Association, or in other words that the Masters are determined to fight the Miners to the bitter end.

First we must find out the character of our enemy which may be summarised as follows:-

1st Curley and the delegates

The former (Curley) is fighting for a big stake inasmuch as having led the miners into the breach, and should he bring them out victorious he will be a hero for a generation and a made man for life and will fight on the motto that all is fair in love or war, of course if he loses, he will get all the blame, and suffer the fate of all men who fail to carry out their promises to Mobocracy, or he will adopt some plan to carry out the Georgianian theory of an equal distribution of wealth. The delegates are in a similar position to Curley but in a smaller degree and will obey Curley's orders to the letter until/s/ a pressure is put upon them by the quiet portion of the miners, and when they (the delegates) see that they must retreat each one will blame the other and all agree to blame Curley.

2nd

About 20% of the miners are thoughtless young men, the majority of whom do not care how long the strike may last and invariably

vote for mischief, regardless of consequences, as many of them are living on their parents. This is a serious contingent in the miners camp and are very difficult to deal with.

3rd

You have about 30% of heads of families who are agitators, and who will for a time follow their leaders, so long as there is a visible agitation and they can daily have their Courage kept up by some new rumour set afloat by the leaders viz. that "It will all be settled in a day or two as the masters are doing so" in fact they (the 30% of agitators) could not exist unless the struggle assumed some new feature every few days and their courage is in keeping with their instability, as the least depressing news would soon make them vent their spleen on the District officers and delegates.

4th

You have 50% of quiet house holders, and many of them with their little freeholds who seldom attend any ordinary meetings and even then have not the moral courage to vote or speak against any motion with which they disagree, and if they did they would be met with the usual larrikin calls of "Put him out, He is a masters man" etc, etc, and thus for the sake of peace they float with the tide; this they will do for a month in this case, as they will be bouyed up by continuous different reports got up by the delegates such as, We are sure to win in a few days as masters are going to do so and so, or are going to meet Mr. Brunker or some other notability etc., at the months end, they will begin to think that matters are becoming serious and will begin to agitate and express strong opinions in the little groups at the street corners and make dangerous bullets (which they dare not fire themselves) and hand them (the bullets) to some of the 30% of agitators who will without hesitation fire them at the delegates, then will commence the beginning of the end.

The above is a fair description of the men you have to deal with, and I think that you will agree with me that after a given time, the 50% of quiet miners are our best allies if they are not day by day supplied with the usual cry of "It will be settled in a day or two", and hoping against hope they keep quiet, and if it is as assumed at the beginning of this letter, viz, that the Associated Masters intend to fight it out, a most passive attitude ought to be observed, as few of masters or managers meetings held as possible and those which are held kept secret and quietly wait the issue and as miners come out themselves let them ask to go in, but to

keep finding the miners with rumours will indefinitely postpone a settlement.

If the above course had been pursued in 1873 strike masters would have won in six weeks instead of which all the wavering miners were clearly fed with rumours of a settlement and in eight weeks the masters were beaten.

The repeated attempts of outside parties to effect a settlement has done more injury that people in Sydney can understand it has if possible widened the breach and prolonged the agony and every apparent concession you have made is looked upon as a syn of weakness on your part, and I would respectfully recommend you as soon as you get rid of Messrs Bruncker and Creer affair for the Associated Masters to intimate through the press or through Curley that the Masters do not intend to do anything more until miners apply for a settlement.

At our managers meeting on 28th ult, I showed my form of averages of miners wages (a copy of which I sent you) and it was agreed that each manager draw up a similar form of averages and have it at our meeting tomorrow with a view of sending them to you and recommending them to be published in all the leading papers in the Colonies, and with the high wages and short hours, it will prevent many of the workmen in other Unions who are not half as well off as your mines from subscribing.

Referring again to the effect of rumours. Rumour of the 24th was, masters will not allow us to bring out tools. Rumour of the 27th having brought out our tools and most masters consented to allow us a week of syn of weakness, delegates report that it will be alright in a day or two. On 29th rumour. No. 1 that Mr. Gregson had run away could not stand the abuse same date. No. 2 that Mr. Gregson had left home and would not return for six weeks. This created quite a panic among the 50% men, as they were then sure the masters meant mischief, then followed Bruncker's arrangement and masters will settle it at their meeting on Tuesday next and everybody is happy for the time being. I detest strikes, and I can without egotism say that from 1873 to 1884 Mr. Fletcher and I settled more disputes and prevented more local strikes than we will ever get credit for, yet in this case the miners are earning higher wages than ever they have earned for 20 years, and Masters had having for the sake of peace conceded all that honourable men could do, yet still the miners come out on strike, and having done all the harm they can to

the trade, I trust the Associated Masters will unanimously agree to fight it out to the bitter end.

Your chances of success in present case are much more favourable than in any other previous strike inasmuch as now all the masters are making common cause, and have not the Lambton sending in 1000 tons per day and Greta and other smaller Collieries nearly another 1000 tons per day and miners giving 50% of wages as strike money.

If miners win there will be a universal agitation throughout the Colony for a "More Equal distribution of Wealth".

I am Dear Sir

Yours truly

J. Y. Neilson

(Australian Agricultural Company Correspondence. Australian National University Archives of Business and Labour. Deposit No. E207/19).

APPENDIX B

The following is one example of victimisation by the Department of Mines:

The Boycott

The Mines Act should be amended to penalise any boycotting or blacklisting of any officials or workmen who report or expose the existence of dangerous or defective mining conditions. The following examples have come under my own observation:-

1 James Crawford, a deputy at Bulli for some years, described before the Bulli Commission an occasion in the mine when he told a miner: "I will not fire this shot for you as the place is full of gas for twelve yards back" (see *Report of the Bulli Royal Commission*, question 3378, p. 109).

Mr. Crawford afterwards obtained work as a deputy at another mine. When the Manager and Government Inspector went through the mine, the Inspector suggestively asked the deputy "if he ever found any yards of gas now".

(May, J. (n.d.), p. 17)

BIBLIOGRAPHY

Primary Sources

Unpublished Primary Sources

Australian Agricultural Company Correspondence. Australian National University Archives of Business and Labour, Deposit 207.

Australian Coal and Shale Employee's Federal Central Council. Australian National University Archives of Business and Labour. Deposits T31, E165, t3, t31.

Department of Mines Correspondence. State Archives of NSW, Deposit No. 9-1930, (letters received in connection with the *Bulli Inquest* and the *Bulli Royal Commission*).

Parkes Correspondence. Mitchell Library, A871-A934 (48).

Published Primary Sources

Annual Report of Department of Mines. New South Wales, 1874-1888.

British Parliamentary Papers. (1886). Final Report of Her Majesty's Commissioners appointed to inquire into Accidents In Mines, and the possible means of preventing their occurrence or limiting their disastrous consequences; together with Evidence and Appendices. (XVI). London.

Bulli Colliery Accident. Report of Royal Commission; together with the minutes of evidence and appendices.

Census of N.S.W (1881). *Votes and Proceedings of the N.S.W. Legislative Assembly*, 1882 (2).

Census of N.S.W. (1881). *Votes and Proceedings of the N.S.W. Legislative Assembly*, 1882 (3).

Coghlan, T. A. (1888). *Wealth and Progress of New South Wales, 1887-88*. Sydney.

Coghlan, T. A. (1894). *General Report on the Eleventh Census of New South Wales*. Sydney.

Consolidated Index of the N.S.W. Legislative Council. (2, 3).

Depositions and Exhibits in Connection with the Mount Kembla Colliery Disaster Inquest. *Mount Kembla Colliery Disaster 31 July 1902, Report of the Royal Commission.*

Journal of the Legislative Council. 1862-1887.

Memorandum and Articles of Association of E. Vickery and Sons Limited. (1902). Sydney.

Mount Kembla Colliery Disaster 31 July 1902, Report of the Royal Commission; together with Minutes of Evidence and Exhibits.

N.S.W. Electoral Rolls for 1887-1888, Part 1 (microfilm, Mitchell Library).

N.S.W. Law Reports. 1887 (microfiche).

N.S.W. Parliamentary Debates. 1879-1887.

New South Wales Statistical Register. 1862-1888.

New South Wales Statutes, 1824-1957, Amendments and Annotations. (1973). Sydney.

Report of Evidence taken at the Coroner's inquest held at Bulli, touching the Death of William Wade and Others, who were killed in the Bulli Colliery on Wednesday 23rd March, 1887.

Sands Sydney Directory. Volumes for 1862-1887.

Sands Country Directory. Volumes for 1886-1888.

Statutes of N.S.W., Public and Private. 1856-1896.

The New South Wales Parliamentary Record. (1957). *Votes and Proceedings of the N.S.W. Legislative Assembly, 1862-1887.*

Newspapers

Bulli and Clifton Times and Illawarra Miners' Advocate. February-April, 1887.

Daily Telegraph. 1886-1888.

Illawarra Mercury. 1876-1888.

South Coast Times. 1919.

Sydney Mail. 1886-1888.

Sydney Morning Herald. 1862-1878.

Secondary Sources

Unpublished Secondary Sources

Dingsdag, D. (1980). *Response to the Bulli Colliery Disaster of 1887, with Special Reference to the New South Wales Government and the Bulli Coal Mining Company*. B.A. (Hons) thesis. Department of History. Wollongong University.

Dingsdag, D. (1986). *A Historical Survey of Occupational Health and Safety in Underground Coalmines in the Illawarra District of NSW, 1849-1982*, research report, Wollongong University.

Dingsdag, D. (1988). *The Restructuring of the NSW Coalmining Industry, 1903-1982*. Ph D. Thesis, Department of History and Politics, University of Wollongong.

Mitchell, W. *The Miners of Southern N.S.W., a history of the union to 1900*.

Turner, J. W. (1977). *Coalmining and Manufacturing in Newcastle, 1797-1900*. Ph D. Thesis, University of Newcastle.

Published Secondary Sources

Books and Monographs

Atkinson, W. N. & Atkinson, J. B. (1886). *Explosions in Coalmines*. Newcastle.

Australian Encyclopedia. (1-10).

Australian Dictionary of Biography. (2-7).

Bailey, W. A. (1978). *Black Diamonds, History of Bulli District, New South Wales*. Bulli.

Bell, P. (1978). The Mount Mulligan Disaster. *Studies in Queensland History*, (2).

Bolton, K. R. (1977). Urban Beginnings - Development of the Colliery Villages of Northern Illawarra, 1858-1905. In R. Robinson (Ed.). *Urban Illawarra*. Melbourne.

Cook, A. C. (Ed.). (1975). *Australian Black Coal*. Wollongong.

Danvers-Power, F. (1912). *Coalfields and Collieries of Australia*. Melbourne.

Ellis, M. H. (1969). *A Saga of Coal*. Sydney.

Gollan, R. (1963). *The Coalminers of New South Wales*. Melbourne.

Hagan, J. & Turner, K. (1987). The Origins of the Labor Party in the Illawarra. *Traditions for Reforms in New South Wales, Labor History Essays*. Sydney.

Hanser, C. J. (1965). *Guide to Decision, The Royal Commission*. New Jersey.

Loveday, P. & Martin, A. W. (1966). *Parliamentary Factions and Positions*. Melbourne.

Martin, A. W. & Wardle, P. (1959). *Members of the Legislative Assembly of New South Wales, 1856-1901*. Canberra.

Mason, E. (Ed.). (1951). *Practical Coal Mining for Miners*. (I, II), London.

May, J. (n.d.) *Colliery Explosions, their cause and their prevention*. Sydney (circa 1903).

Piggin, F.S. & Lee, H. (1992). *The Mt. Kembla Disaster*. Sydney.

Playford, J. & D. Kirsner (Eds.). (1972). *Australian Capitalism Towards a Socialist Critique*. Ringwood.

Radi, H., Spearritt, P. & Hinton, E. (1979). *Biographical Register of the NSW Parliament 1901-1970*. Canberra.

Ross, E. (1970). *A History of the Miners' Federation of Australia*. Sydney.

Wheelwright, E. L. (1972). Concentration of Private Economic Power. In J. Playford & D. Kirsner (Eds.). *Australian Capitalism Towards a Socialist Critique*. Ringwood.

Articles, Journals and Bulletins

Hagan, J. & Fisher, C. (1973). Piecework and some of its consequences in the printing and coalmining industries in Australia, 1850-1930. *Labour History*, (25), November.

Holmes, J. D. (1956). Royal Commissions. *The Australian Law Journal*, N. H. Bowen & R. Else-Mitchell (Eds.), (29), May 1955-April 1956, Sydney.

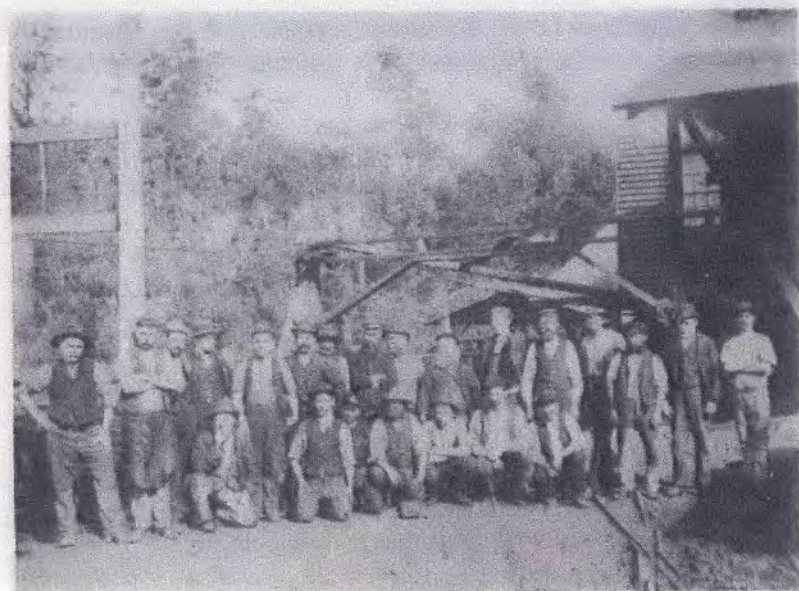
Jervis, J. (1942). Illawarra: a century of History. *Royal Australian Historical Society, Journal and Proceedings*, (XXVIII).

Mitchell, G. & Piggin, S. (1977). The Mount Kembla Mine Explosion of 1902. *Journal of Australian Studies*, (1).

Rice, G. S., Jones, L. M., Egy, W. L. & Greenwald, H. P. (1922). Coal-Dust, Explosion Tests in the Experimental Mine 1913 to 1918 Inclusive. *United States Bureau of Mines Bulletin*, (167). Washington.



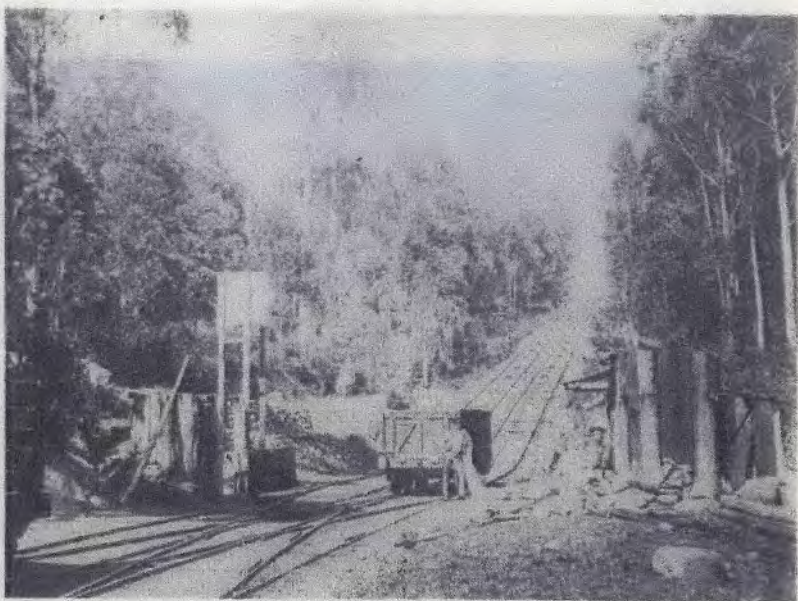
Bulli Mining Company jetty
Small Picture File - Mitchell Library



Group of Bulli miners 1886
Small Picture File - Mitchell Library



The main road Bulli
Small Picture File - Mitchell Library

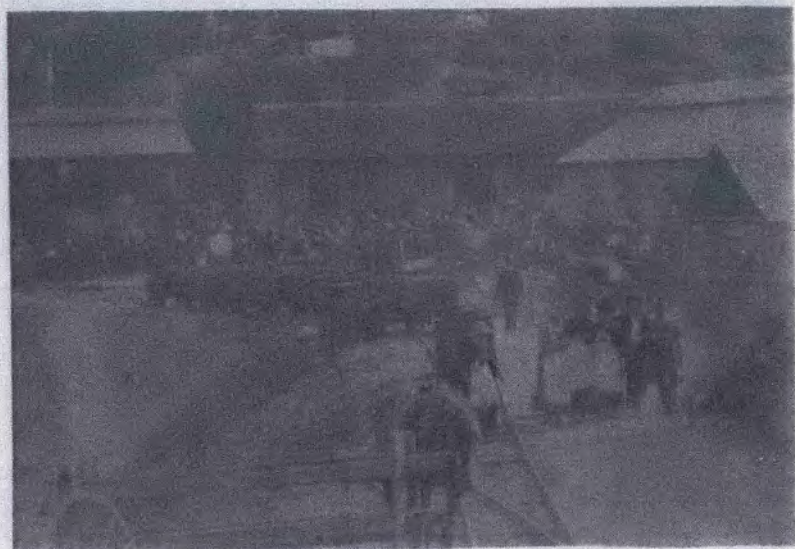


Bulli mine incline
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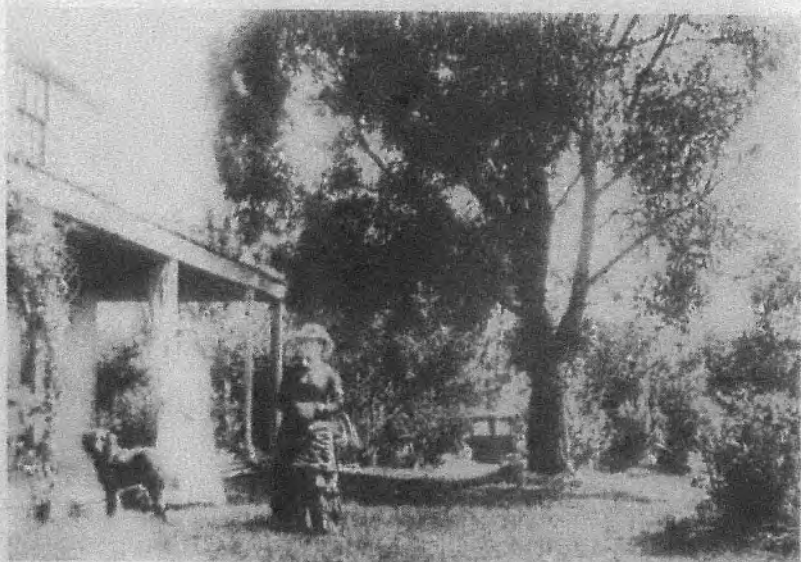
Officials and relatives waiting at the pit-top for survivors or dead to be brought out.

From Black Diamonds Museum, Bulli.



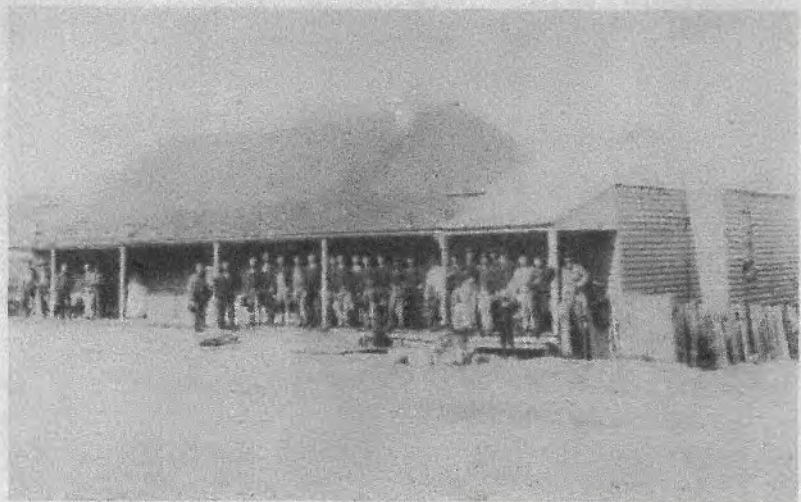
Widows at the pit-top 23 March 1887.

From Black Diamonds Museum, Bulli.



Bulli mine manager's residence

Small Picture File - Mitchell Library



The Star Of The Sea Hotel - Bulli

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