

# COMPETENCY AND THE FUTURE

**Greg Rowan**  
F.Aus.I.M.M.  
QLD Dept of Mines and Energy

## SUMMARY

- Brief review of the lessons of the past
- Overview of the industry response to the Moura No 2 disaster
- The jointly held view of the Qld Board of Examiners and the NSW Coal Mine Qualifications Board on statutory certification
- Brief discussion on the findings of Industry Commission Report into the Australian Black Coal Industry, as it relates to training and statutory competencies
- Detail the current status of the Black Coal Training Package
- Directions for the future

## INTRODUCTION

On the 19th September 1921, a disaster occurred in the Australian coal mining industry that had profound effects on the control and administration of the industry. Seventy five (75) people were killed in an underground coal dust explosion at the Mt Mulligan coal mine, probably initiated by explosives and propagated through accumulations of coal dust.

As a direct result of this disaster, in November of 1921, Robert Alexander Dunlop esq. Police Magistrate and Warden, made recommendation that led directly to the development and proclamation in Queensland of the *Coal Mining Act 1925*. (A timeline of only 4 years from initiation to proclamation of this new Act will, I'm sure, not be lost on those submerged in the current process of achieving its rewrite).

New South Wales introduced the coal mining specific *Coal Mines Regulation Act*, proclaimed in 1912, as a result of similar tragedies in that state.

Nevertheless, in the nearly 75 years since Mt. Mulligan, the Australian coal mining industry has continued to be plagued by higher levels of industrial deaths and accidents than any other of our country's industries.

**Over the nine years to 1995-96:**

- the rate of fatal injury in the coal industry was about **THREE TIMES** the average rate applying across all Australian industries
- the rate of compensated injury per hour worked was **FOUR TIMES** the all industry average
- coal mining has a **HIGHER** lost time injury frequency rate than metalliferous mines
- coal mining has a **LOWER** fatality rate than metalliferous mines. In fact the underground metalliferous fatality rate is **TWICE** that of the underground coal mining industry<sup>1</sup>

Numerous inquiries into mining disasters over the years have made numerous recommendations and observations, many with a familiar and recurring theme.

Specifically :

*It appears that the failure of all these people to advert to the distinct possibility of danger from explosion stems from widespread lack of knowledge of the danger associated with conditions which prevailed that night".*

Qld Dep't of Mines  
- Box Flat - 31 July 1972-17 fatalities.

"There is a basic need for all members of the coal mining industry in Queensland to improve their knowledge with regard to the fundamentals of spontaneous combustion..."

E. N. Loane: Mining Warden  
- Kianga No 1- 20<sup>th</sup> Sept 1975 - 13 fatalities

"Methane accumulated in B heading of K panel due to inadequate ventilation... There was apparent local confusion as to the procedure for carrying out a ventilation changeover..."

NSW Dep't Mineral Resources  
- Appin - 24 July 1979 - 14 fatalities

<sup>1</sup> Source : The Australian Black Coal Industry - Draft Report, vol. 1. Report, Industry Commission, Melbourne, Vic., April 1998, pp.215-217. Refer Appendix - TABLE I and CHARTS 1, 2, 3, 4.

“Evidence taken during the hearing...highlighted the fact that the formal statutory training requirements in the Queensland Coal Mining Industry were inadequate and that the training and supervision of new entrants into the industry are below a satisfactory level”.

K. P. Lynn: Mining Warden  
- Moura No 4 - 16 July 1986 - 12 fatalities

“The previous three inquiries...have consistently made recommendation aimed at addressing perceived deficiencies in the coal industry’s arrangement for training, or the state of knowledge of industry personnel. There has also consistently been the conduct of seminars and symposia as a response to those disasters accompanied by the production of publications.....These measures have, however, clearly not been effective in the longer term with the industry displaying, as it does, a capacity to lose sight of the lessons of the past and to not maintain an adequate knowledge base among key personnel”.

F. W. Windridge: Mining Warden  
- Moura No 2 -7 Aug 1994 - 11 fatalities

Typically in response to disasters, a review of current legislation is held, frequently resulting in the addition of further prescription and tighter controls. It is not the purpose of this paper to examine the relevant merits of prescriptive or enabling regulation or de-regulation.

What will be addressed is a way to progress the clear message emanating from these numerous reviews and reports - there needs to be change.

*“...fundamental and permanent change in the current approaches and attitudes in the coal industry”<sup>2</sup>*

What must be changed? What is the name?

Unfortunately, its name is everywhere.

It appeared most recently as a newspaper<sup>3</sup> quote in response to the latest tragedy at Wallarah. It appears no less than three (3) times in The Australian Black Coal Industry Commission Report. It is in common use and echoed by many stakeholders across all aspects of our industry.

Its name: “Mining is a Dangerous Activity !!”

It would be comforting to think that this phrase is merely an innocent reflection of historical statistics. Comforting yes, accurate no.

What this single statement provides is a crutch against which this industry leans in the self justification of its own performance, a security blanket to protect against the cold winds of reality.

Fortunately however, it is also an absolute nonsense.

The physical act of mining is no more inherently dangerous than any other activity. It is the environment in which mining operations are performed that is dangerous.

Barring “Acts of God”, in order to achieve zero-loss we need only have:

- competent persons performing all of our production/operational activities; and
- competent persons ensuring a safe environment in which persons can perform such activities, through appropriate risk analysis techniques and implemented systems of control.

## **COMPETENCE**

Every task associated with the physical activities of mining operations can be identified.

The knowledge and skills required to safely perform these tasks can, therefore, be determined.

Many such tasks will be common across a range of industries, e.g. manual handling, equipment and machinery operation, maintenance, noise, hazardous substances etc., providing detailed data banks from which to proceed.

Once the knowledge and skills required have been identified, training packages can be developed to assist trainers and training organisations in the delivery of this knowledge.

<sup>2</sup> Source : F. W. Windridge, Wardens Inquiry Report on an Accident at Moura No2, Brisbane, Qld., January 1996 p.53

<sup>3</sup> Source : Courier Mail, Brisbane, Qld., Tuesday 7<sup>th</sup> July 1998

An essential element of any training package will be a valid and verifiable assessment method to ensure that persons have both acquired the theoretical knowledge underpinning a task AND to have demonstrated the practical "hands-on" application of skills to safely perform that task.

Once a person has successfully demonstrated this ability, they are deemed to be competent. Competency Based Training Packages must then, by definition, incorporate both aspects of these performance criteria.

Clearly, if all tasks are accurately identified, and all persons are competent to perform these tasks, there should never be a single accident, injury, fatality or resultant machinery damage associated with the performance of any task.

This may seem somewhat heroic. It is not.

Some operations, and certainly some other industries, are achieving exactly this - zero loss.

An industry wide zero loss regime will be more difficult to achieve, if not impossible given the nature of the "human factor" in its application. There must, however, be recognition that achieving at least parity with other industries is the only logical, acceptable target.

Again, these targets will never be reached until a profound and urgently needed change in mind-set is achieved, i.e. - mining activities are NOT, inherently, any more dangerous than other activities.

What IS more inherently dangerous than in most other industries (although by no means all) is the environment in which mining activities take place, particularly in the underground mining sector.

The gaining of competencies to allow all persons to perform their duties in a safe and effective manner is the first step towards achieving the goal of zero loss.

### **"IT'S THE ENVIRONMENT, STUPID"**

Task Group 3, established through the Queensland Government's Moura No 2 Wardens Inquiry implementation process, was charged, amongst other things, to look at the competencies of persons seeking statutory certificates for appointment as deputy, undermanager and manager at underground coal mines.

Task Group 3 comprised 11 persons with equal representation from Queensland and New South Wales with an independent Chairman. These persons were representatives from:

- Qld Board of Examiners
- Qld Dept of Mines and Energy
- Qld Mining Council (2)
- Qld United Mineworkers Union
- Qld -Aust Collieries Staff Association
- NSW Coal Mining Qualifications Board
- NSW Dept of Mineral Resources
- NSW Colliery Managers Association
- NSW Colliery Officials Association
- NSW - Aust Collieries Staff Association

When deliberating on these competencies the Task Group concerned itself ONLY with the technical and safety and health aspects of colliery management and developed what it described as CORE COMPETENCIES.

They DID NOT deal with the general competencies for management such as finance, budgetary, industrial relations, contract and project management, critical decision analysis and the like.

The environment in which underground mining operates is foreign to most other industries and may be subject to:

- spontaneous combustion
- explosive or asphyxiant gasses
- rock burst or coal/gas outbursts
- inherent ground stresses and strata collapse
- confined spaces for the introduction and utilisation of transport, fixed plant, services and infrastructure
- unique constraints in its methods of extraction
- flooding and ingress of water
- is totally reliant on artificially produced ventilation and has NO ease of access or escape.

It is this unique set of difficult environmental circumstances that requires competent management to firstly:

- identify the possibilities for these hazards;
- instigate an effective risk control strategy; and
- coordinate a hazard management systems approach in controlling these risks.

Task Group 3 has completed its deliberations on this matter and has determined the CORE COMPETENCIES required of persons to enable them to effectively identify and control the

environmental hazards associated with underground coal mining.

Further, the broad industry representation, the cross-state involvement and the stakeholder participation in the drafting of its Final Report, is reflected in the capture of all the essential issues involved in the technical safety and health management of underground coal mines.

By definition then, any person deemed competent (as previously defined) in these core areas, would be able to deliver an environment which would remove, or at least minimise, hazards to safety and health.

**In fact, it is the jointly held view of both the Queensland Board of Examiners and the New South Wales Coal Mining Qualifications Board that ONLY those persons who are competent in ALL of these fields may hold Statutory Certificates.**

As for the issue of statutory management certificates of competency in open cut and underground metalliferous mines, the relevant legislation review committees are yet to publish their final positions.

The debate continues on the comparison in legislative requirements relevant to open-cut coal mines with two levels of statutory management, underground coal mines with three, and metalliferous mines with no requirement for statutory certificates other than the Mine Manager.

One point that must, in my view, be deemed relevant to this debate is the fact that the fatality rate in underground metalliferous mines is TWICE that of the much maligned, and justifiably criticised, underground coal mining industry.

Apart from the fatalities resultant from catastrophic explosions, by far the greatest cause of death and injury in the underground mining sector is from roof and strata collapse. In the NSW coal industry during 1980-81, twelve separate accidents resulted in fourteen (14) fatalities from roof falls<sup>4</sup>. In the WA metalliferous sector eleven (11) fatalities have resulted from rock falls in the three years to December 1 1997<sup>5</sup>.

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<sup>4</sup> Source : Department of Mineral Resources, Annual Report, 1980-81, Sydney, NSW, 1982.

<sup>5</sup> Source : Report on the Inquiry into Fatalities in the Western Australian Mining Industry, Dept. of Minerals and Energy, Perth, WA, December 1997.

Although strata analysis interpretation, geomechanics and the geological sciences are not favoured with the same benefits of predictability and consistency of product as those of the metallurgist, the civil engineer or even the proverbial rocket scientist, it is only through TECHNICAL COMPETENCE and improved training in safe methods of work that these numbers can, and must, be reduced.

### **INDUSTRY COMMISSION REPORT INTO THE BLACK COAL INDUSTRY: APRIL 1998**

The terms of reference, laid down by the Federal Treasurer Peter Costello under Part 2 of the Industry Commission Act for the conduct of an inquiry into the black coal industry, requested the Commission report on several wide ranging aspects of the industry.

In its draft report there appeared to be significant issue with the prescriptive nature of various state legislation.

The Commission Report argued that:

- highly prescriptive legislation does not always lead to the best safety and health solution;
- high compliance costs are not reflected in commensurate safety improvements;
- prescription cannot cover all hazards, at all times, in all circumstances;
- prescription may contribute to apathy by miners and managers i.e. we need only comply.

The proposed alternatives suggested in the Commission Report included:

- all workplace parties to have legal obligation through their "Duty of Care";
- development of Safety Management Plans and Operating Procedures through consultation;
- less prescriptive legislation;
- removal of the requirements for statutory certificates;
- ongoing prescription of core hazards;
- governments providing "incentive"<sup>6</sup> through vigorous enforcement and large penalties.

Other than the proposal for the removal of statutory certificates, the broad thrusts of these arguments have been accepted by the stakeholders in the Queensland coal mining industry. This is reflected

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<sup>6</sup> Source : The Australian Black Coal Industry - Draft Report, vol. 1, Report, Industry Commission, Melbourne, Vic., April 1998, p. 235.

in the development of the new legislation currently in its final stages of drafting. It must, however, be pointed out that such is not the case across all states.

What seems much more tenuous however, is the proposition that the statutory requirement for persons in charge of mining operations to actually have experience and technical competence in mining operations somehow limits the ability of mining companies –

*“... to import successful safety practices from other parts of their operations...” or  
“...restricts companies’ ability to hire the most appropriate person for the job.”*

Organisations are NOT restricted from importing successful safety practises, indeed they are encouraged to do so through Best Practice concepts. Statutory management appointments neither prevent site level determination of supervisory roles, nor interfere with a manager’s access to advice from specialist assistants. They specifically do not prohibit certificate holders from gaining other general management skills nor prevent companies from employing general management experts who do not have statutory certificates.

A statutory certificate, like any other qualification, provides independent evidence that a person has demonstrated competency to a certain standard. Statutory certificates are transportable across both mine and state borders and as such, should only be issued if common competency standards have been met.

Statutory appointments are aimed at ensuring that persons in roles of authority affecting safety and health, have the competence to effectively discharge these responsibilities. In the case of the underground coal mining industry, these competencies reflect the ability to establish and maintain a safe working environment.

Airline operators can employ any number of experts within their organisation. It gives great comfort to this frequent flyer, however, to know that pilots must have the Civil Aviation Safety Authority’s equivalent of a statutory certificate, that they must meet certain specified standards before being granted that certificate and that no

airline can appoint a person as a pilot unless they hold such a certificate.

Ensuring the provision of a safe working environment is the second step in advancing towards the target of zero loss.

## **THE BLACK COAL TRAINING PACKAGE<sup>8</sup>**

In 1997 the Australian National Training Authority (ANTA) funded the development of the *Black Coal Training Package* to provide the framework for training, assessment and the issuing of qualifications in the black coal industry.

The Training Package consists of three endorsed components and two non-endorsed components.

### **ENDORSED COMPONENTS**

#### **Competency Standards**

These were developed in 1996 and revised in 1997 against best practice to meet the operational requirements for workers in the industry, as defined and developed by industry.

In 1998 the validation process was completed following development of the standards for statutory officials determined as Core Competencies by Task Group 3.

#### **Qualifications**

The competency standards have been packaged in a flexible way to achieve qualification under the Australian Qualification Framework.

The qualifications range from Certificate II and III levels for coal operations to Advanced Certificate, Diploma and Advanced Diploma levels for statutory officials.

#### **Assessment Guidelines**

These have been developed to provide procedures and guidance in using the competency standards as benchmarks for assessment.

It is most worthy of note that the Assessment Strategies developed for Statutory Management, incorporate assessment questions and techniques currently used by the NSW Coal Mines

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<sup>7</sup> Source : The Australian Black Coal Industry - Draft Report, vol. 1, Report, Industry Commission, Melbourne, Vic., April 1998, p. 227.

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<sup>8</sup> Source : National Mining Industry Training Advisory Body. The Black Coal Training Package - Draft, May 1998.

Qualification Board and the Queensland Board of Examiners in determining the granting of Statutory Certificates.

## **NON-ENDORSED COMPONENTS**

### **Competency Unit Learning Packages – CULPS**

CULPS are generic competency based learning and assessment packages which can be customised for use at any mine site.

CULPS contain:

- instructions for use
- the Unit of Competency and guidance for the customisation to mine site requirements
- a competency training
- assessment and learning materials

### **Professional Development Materials**

The kit titled *Using The Black Coal Training Package* provides assistance to those wishing to use any component of the Black Coal Training Package – trainers, assessors and registered training organisation.

It provides assistance to those who are undertaking new roles in facilitating, supporting and validating skills through flexible approaches to training delivery and assessment.

This relates particularly to the formation of partnerships with enterprises (by, for example, Registered Training Organisations) to meet the industry requirements for assessment in the workplace, or in a simulated situation, and a qualification system based on competence recognition.

## **DIRECTIONS FOR THE FUTURE**

The Black Coal Training Package addresses both the areas of :

- operator training
- statutory management training.

## **OPERATOR TRAINING**

In the operator training field, CULPs have been completed for:

- 7 Core Operator Competency Units
- 3 Coal Preparation and Treatment Units

- 5 General Units
- 19 Underground Production Units
- 3 Open Cut Production Units

## **STATUTORY MANAGEMENT TRAINING**

In the statutory management training field, an across the border cooperative is currently developing 33 CULPs<sup>9</sup> across the three levels of Manager, Undermanager and Deputy in the Core Competencies of :

- Spontaneous Combustion Management
- Ventilation Management
- Gas Management
- Gas Drainage
- Outburst Management
- Mining Methods and Strata Control
- Mine Transport Systems and Production Equipment
- Mine Services Systems
- Fixed Plant and Infrastructure
- Emergency Preparedness and Response Systems and
- Risk Control Systems

A further CULP is under development dealing with Occupational Health and Hygiene.

The combined equation then, derived from the Black Coal Training Package, is a nationally accredited, competency based training tool that addresses BOTH key areas essential to the improvement of safety and health performance in the underground black coal industry viz.,

- operator training to achieve a competent workforce, and
- technical management training to achieve a safe working environment.

Unfortunately, the genesis and difficulties associated with complete information sharing in the progress of such a project, has resulted in the Black Coal Training Package being widely viewed as a large, black, amorphous mass that will inevitably land on the industry from a great height.

Recognising the need to change this perception, the Coal Sector Project Steering Committee has

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<sup>9</sup> Another Competency Standard has been developed for Ventilation Officers titled MNC U109.A : Manage, Operate and Control the Mine Ventilation System. A CULP is yet to be developed for this standard.

developed a strategy to promote the training package and champion the cause of nationally accredited and industry validated competency standards.

The package is currently in final draft. Its earliest possible release will hopefully promote a broader discussion of its content, lift some of the veils surrounding it and reduce the level of anxiety over its application.

## **STATUTORY CANDIDATES**

Finally, no discussion on the future of statutory competencies would be complete without a review of the current standard of candidates.

A cursory examination of the failure rate for candidates seeking statutory qualification in Queensland<sup>10</sup> over the last five years leaves two clear impressions, either:

- the current technical and practical training provided to candidates is inadequate or
- the quality of the training courses, educators, trainers or candidates is less than satisfactory.

The challenge for the industry is to overcome the apparent lack of “quality” statutory certificate holders now available to the industry and its inability to attract “quality” candidates.

Importantly, it must be pointed out that not all these candidates were “first timers”. Several had years of experience in the industry and a number held bachelor degree qualifications. Yet an unacceptable percentage were deemed not to be competent to hold positions with responsibilities affecting the health and safety of persons employed in the mining industry.

Currently before the industry is a discussion paper, developed through the Minerals Council of Australia<sup>11</sup>, dealing with the issue of tertiary education across its broader aspects.

The work done by Task Group 3 in defining the core competencies necessary to safely operate our mines, and the considerable effort expended in turning these standards into competency based training and learning packages is our best chance to

advance the process of improving technical competence in the underground coal mining sector.

Let us hope that these two streams of formal tertiary education and competency based training qualifications can be linked and provide some cross fertilisation.

## **CONCLUSION**

We must change our attitudes towards the risks inherent in the mining industry. We must change this “mining is a dangerous game” nonsense that currently infests the industry. Until such time as it is widely accepted that mining can be done safely, the industry will continue to suffer appalling levels of death and injury.

Nationally accredited training packages are available that deal with both operator training and technical management training. These training packages are available to ANY training provider with the requisite resources and skilled training personnel. They are designed to be tailored to site specific needs, are flexible in their delivery options and contain both theoretical knowledge and skill based components. They were developed at the behest of the industry, from the input of the industry and validated by the industry.

The necessity for technically competent management will not disappear with or without the abolition of Statutory Certificates. Such proposals, along with the proliferation of “fast-track” courses, are “lowest common denominator” solutions and shine little credit on the industry. The answer lies in attracting quality candidates to professionally administered training programs, in turn leading to long term career prospects.

We will never attract a student body to a management profession that constantly debates its own existence.

Reliance on training courses that meet no accredited standard, coupled with the high turn over rates associated with “content free” management structures, will inevitably lead to an environment characterised by a culture with No Corporate Memory overseen by Unconsciously Incompetent personnel. A circumstance which, in this authors opinion, will inevitably repeat the sins of the past with the catastrophic consequence so familiar to us all.

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<sup>10</sup> Refer Appendix : TABLE II

<sup>11</sup> Source : National Tertiary Education Taskforce, Back from the Brink : Reshaping Minerals Tertiary Education : Discussion Paper, Minerals Council of Australia, Braddon, ACT., Feb 1998.

1970 - 1997

AUSTRALIAN COAL MINES

Fin Year	QLD	NSW	Total Without Fatalities	Total Employment	0000 tonnes Total Production	x 10,000		x 10,000		All Exports FOB A\$ Coal Price	Comments Mine	Cause	No. Killed
						Fatalities/ Employed	Fatalities/ Tonne	Fatalities/ Employed	Fatalities/ Tonne				
70-71	3	14	17	18454	5297	9.21	32.09	9.21	32.09	10.50			
71-72	5	9	14	18627	5886	7.52	23.79	7.52	23.79	10.89			
72-73	23	12	35	18528	6619	18.89	52.88	9.72	27.19	11.28	Box Flat	Explosion	17
73-74	4	8	12	19171	6658	6.26	18.02	6.26	18.02	12.50			
74-75	4	10	14	21505	7821	6.51	17.90	6.51	17.90	22.10	Klarga	Explosion	13
75-76	14	4	18	22411	7713	8.03	23.34	2.23	6.48	34.96			
76-77	3	7	10	23037	8596	4.34	11.63	4.34	11.63	37.23			
77-78	0	4	4	23521	8779	1.70	4.56	1.70	4.56	39.14			
78-79	2	11	13	24424	9190	5.32	14.15	4.50	11.97	38.99	Leichhardt	Outburst	2
79-80	1	22	23	26471	9020	8.69	25.50	3.40	9.98	39.35	Applin	Explosion	14
80-81	2	17	19	29428	10620	6.46	17.89	6.46	17.89	41.65	Various Singles		16
81-82	3	5	8	31294	11020	2.56	7.26	2.56	7.26	49.63	Laleham & Liddel	Roof Falls	5
82-83	0	6	6	30291	12033	1.98	4.99	1.98	4.99	56.21			
83-84	1	7	8	30413	12944	2.63	6.18	2.63	6.18	51.77			
84-85	1	8	9	31193	14514	2.89	6.20	2.89	6.20	54.09			
85-86	2	6	8	32413	16362	2.47	4.89	2.47	4.89	57.49			
86-87	13	7	20	31807	18243	6.29	10.96	2.52	4.39	55.46	Mourai#4	Explosion	12
87-88	1	1	2	28079	16685	0.71	1.20	0.71	1.20	46.61			
88-89	2	4	6	29079	18405	2.06	3.26	2.06	3.26	47.90			
89-90	2	1	3	29713	19685	1.01	1.52	1.01	1.52	55.69			
90-91	2	9	11	28893	20468	3.81	5.37	3.81	5.37	55.98	Various	Roof Falls	5
91-92	1	7	8	28297	21825	2.83	3.67	1.77	2.29	55.34	Sth Bulli	Outburst	3
92-93	1	4	5	26621	22250	1.88	2.25	1.88	2.25	58.20			
93-94	2	1	3	25526	22150	1.18	1.35	1.18	1.35	55.44	West Cliff	Gas Ignit'n	1
94-95	11	2	13	25362	23723	5.13	5.48	0.79	0.84	50.53	Mourai#2	Explosion	11
95-96	0	2	2	25859	24309	0.77	0.82	0.77	0.82	54.95			
96-97	4	6	10	26331	26134	3.80	3.83	2.28	2.30	55.64	Greiley	Inrush	4
Total	107	194	301	225	Average	4.63	11.52	3.45	8.76	42.95			

Table I



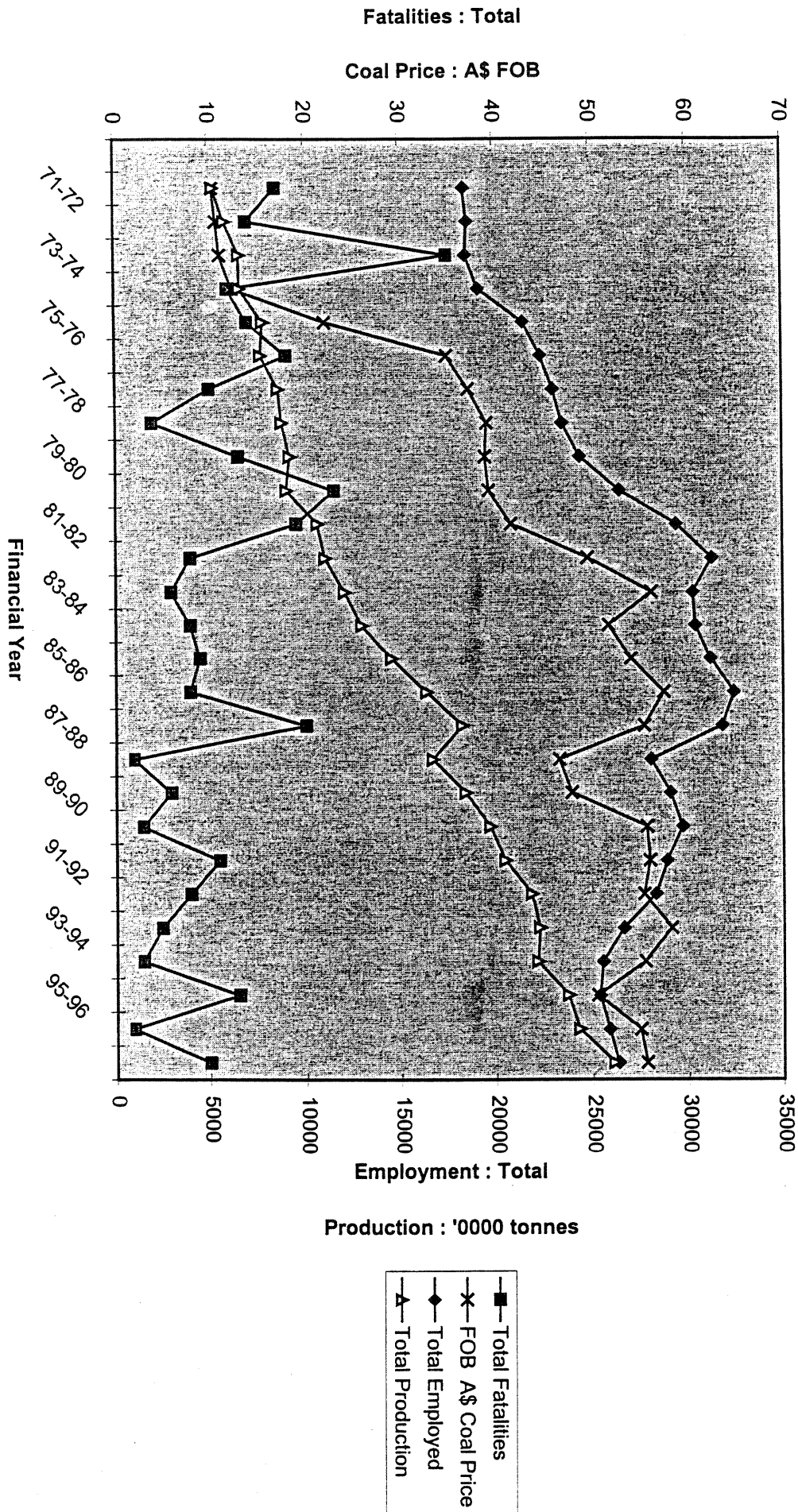
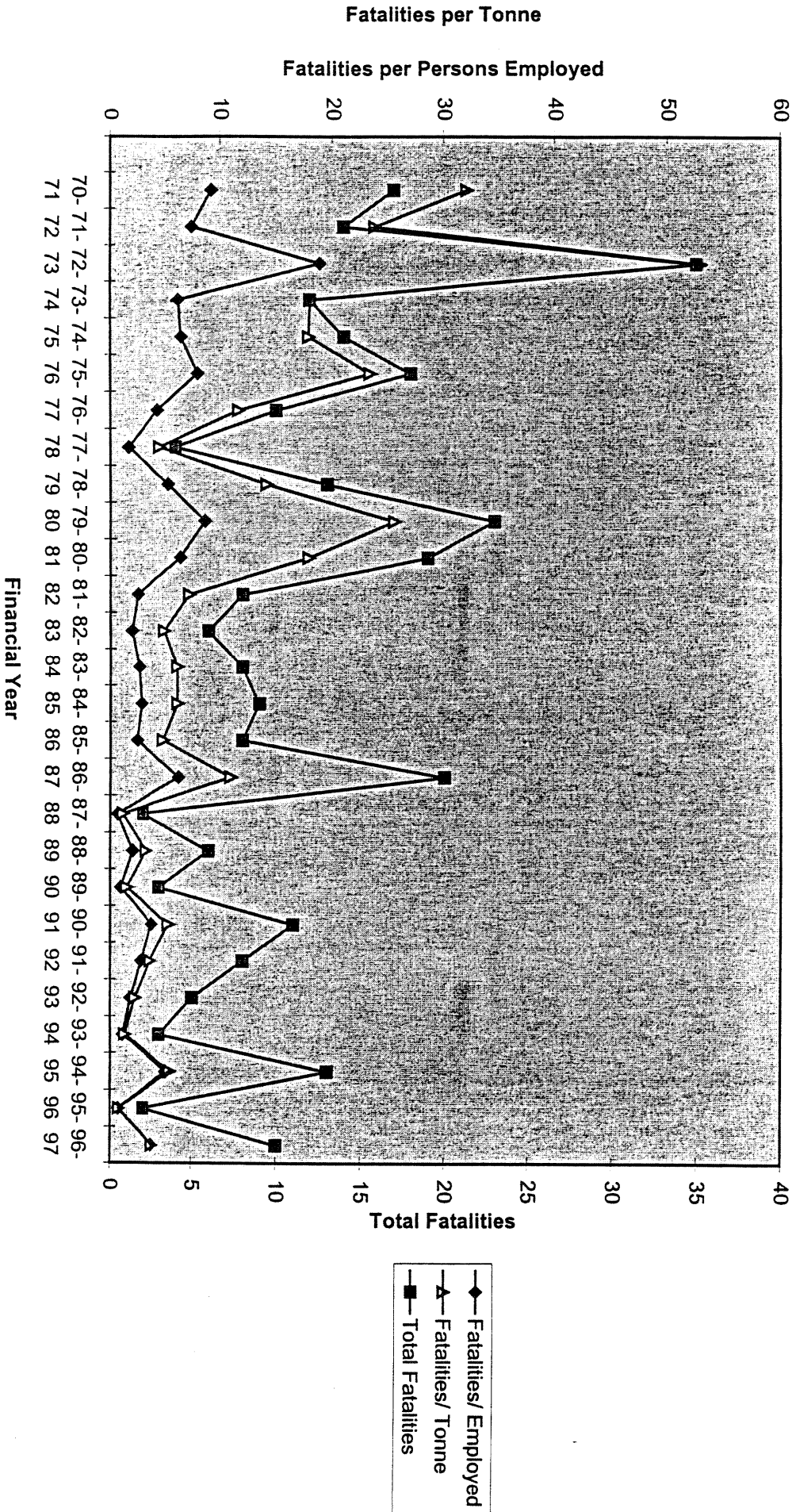


Chart1

Australian Coal Mines : 1970 to 1997

Chart 2

TOTAL Fatality Trends : 1970 - 1997



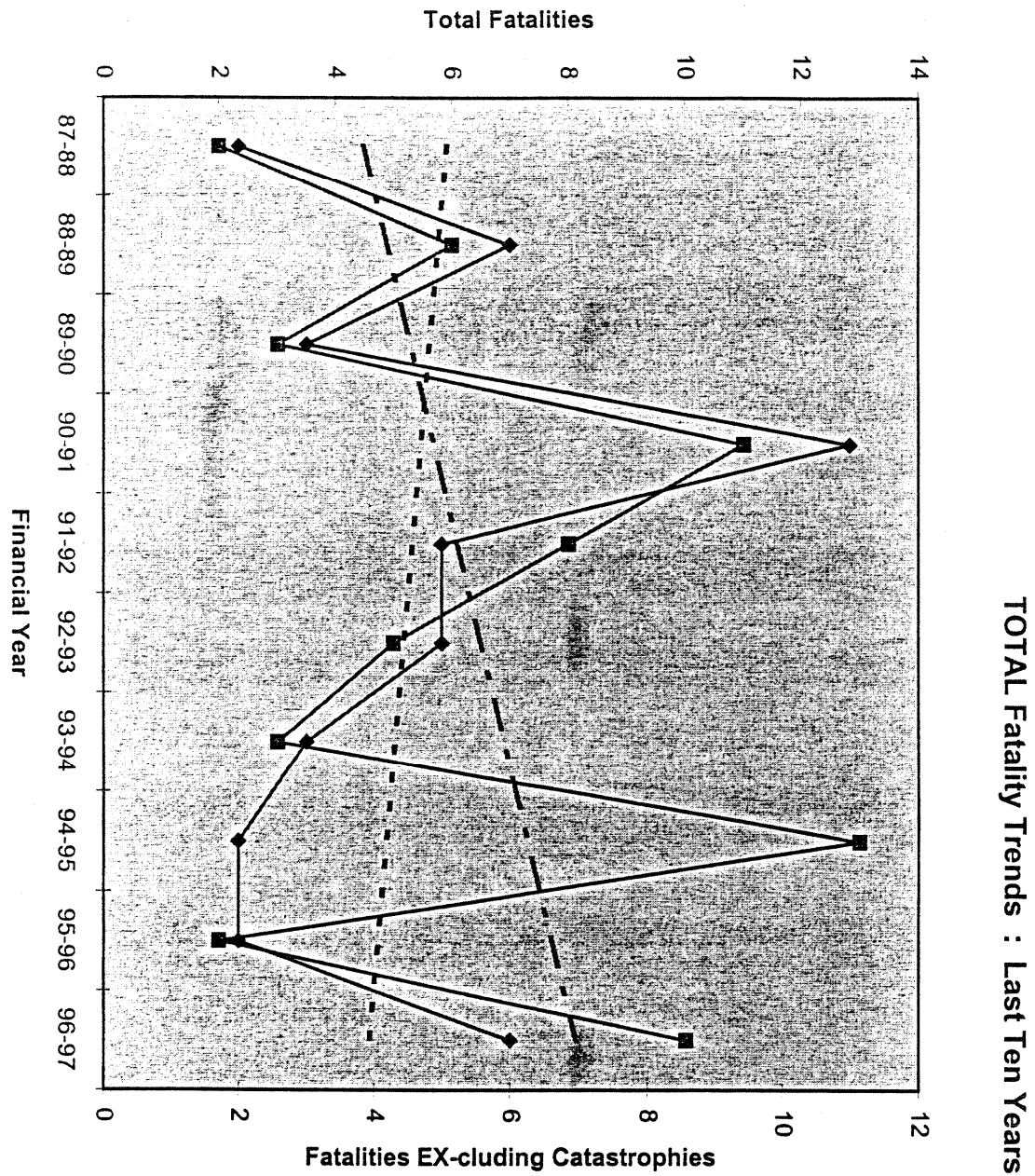


Chart3

- Fatalities INcluding Catastrophies
- ◆— Fatalities EXcluding Catastrophies
- - - Linear (Fatalities INcluding Catastrophies)
- - - Linear (Fatalities EXcluding Catastrophies)

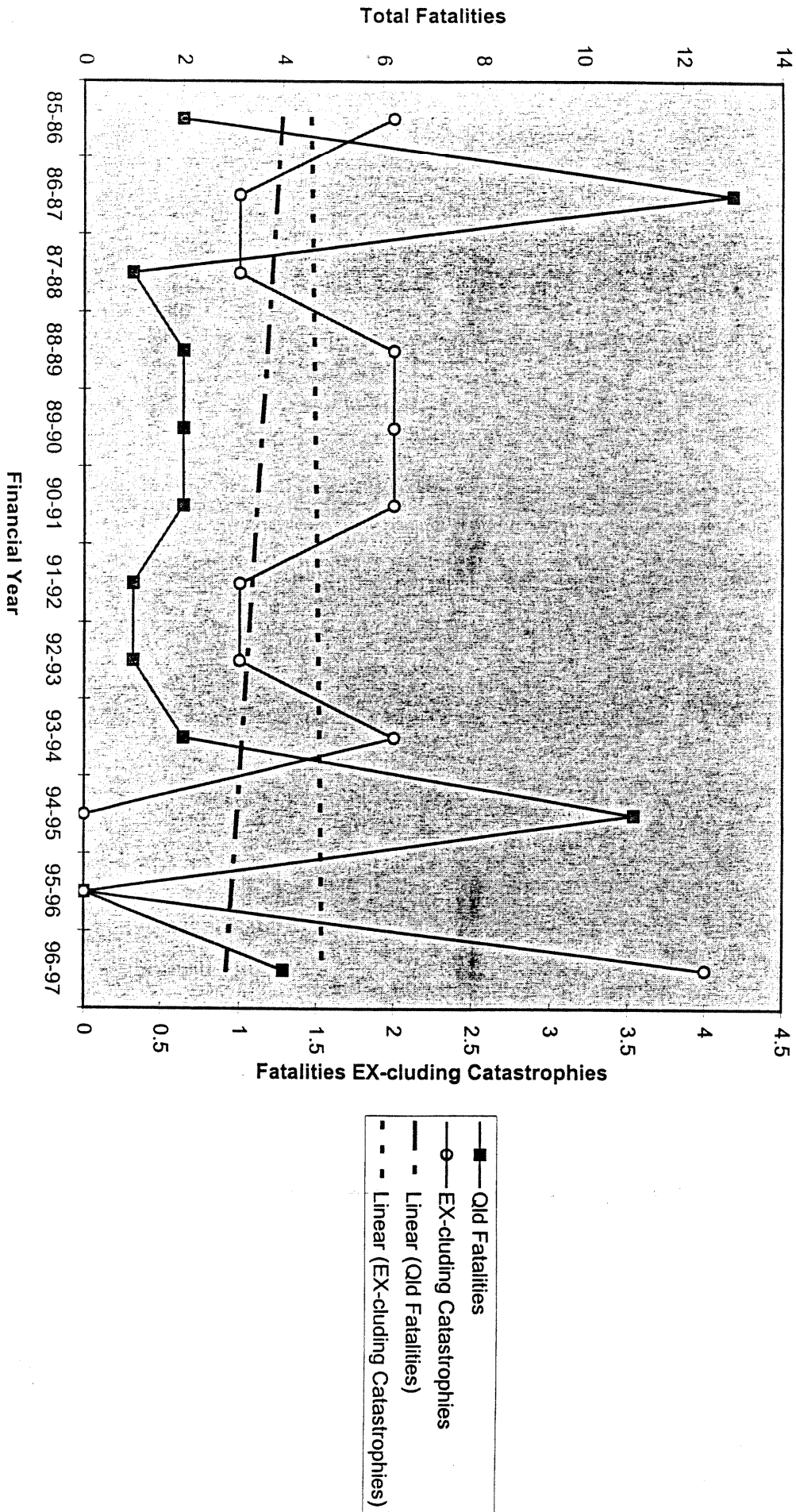


Chart4

## STATUTORY CERTIFICATES

5 YEARS : 1992 TO 1997

Certificate	Written Law Exam		Oral		Combined	
	Candidates	% Failed	Candidates	% Failed	Successful Candidates	Overall Failure Rate
First Class Coal	10	0	16	50	8	50
Second Class Coal	49	16	55	55	25	55
Limited Open Cut Coal	35	20	29	31	20	31
<b>SubTotal</b>	<b>94</b>		<b>100</b>		<b>53</b>	<b>47 %</b>
First Class Metaliferous	55	33	50	14	43	14 %
<b>TOTAL</b>	<b>149</b>		<b>150</b>		<b>96</b>	<b>36 %</b>

\* 10 % of candidates who applied were found ineligible to sit

TABLE II