Mining warden inquiries

1972–2001

Contents

Introduction

Inquiries into fatal and serious accidents prior to March 2001 were carried out by the mining warden in the mining warden's court.

The last mining warden, Mr Frank Windridge, compiled the following information about mining warden inquiries held since 1990, together with findings of four coal mining disasters in Queensland at Box Flat, Kianga, Moura No 4 and Moura No 2. It is through the efforts of Mr Windridge that we are able to make the information available to the public in the interests of improving safety and health in the mining industry.

Index to inquiries

Name of deceased or injured party	Date of findings	Location of accident	Date of accident
Laurence THOMAS (Serious Injury)	22 March 2001	GOONYELLA RIVERSIDE MINE	8 March 2000
John Anthony MAHER	1 March 2001	COOK COLLIERY	30 August 2000
Michael John GALVIN and Edward Mervyn JONES (Serious Injury)	9 February 2001	LORENA MINE, CLONCURRY	26 August 2000
Peter James COMERFORD	7 December 2000	MOUNT ISA MINES LIMITED LEAD SMELTER UPGRADE	14 July 2000
Michael James MORRIS	9 November 2000	OAKY NO 1 MINE	26 May 2000
Christopher John LEE	24 August 2000	JELLINBAH OPEN CUT COAL MINE	15 March 2000
Michael GOLDSTAR	16 June 2000	MOUNT ISA MINES LIMITED LEAD MINE	20 December 1999
Geoffrey Michael BARLING	30 March 2000	CANNINGTON MINE	27 June 1999
Greg SOBCZAK (Serious Injury)	24 February 2000	LALEHAM MINE SOUTH BLACKWATER	22 May 1999
Brant NORTH (Serious Injury)	29 October 1999	OAKY CREEK NO 1	20 January 1999
Sang Chul KIM	23 September 1999	WMC FERTILIZER PROJECT PHOSPHATE HILL	27 April 1999
Scott Robert JOHNSTON	27 May 1999	ENTERPRISE MINE	23 November 1998
Phillip Anthony FOWLER	26 February 1999	CANNINGTON MINE	14 December 1997
John Charles BARBER	2 February 1998	DEEP COPPER MINE, MOUNT ISA	4 June 1997
Dale GADSBY	3 December 1997	BHP BLACKWATER OPEN CUT MINE	4 May 1997
David Ronald STRATTON	20 November 1997	ISA MINES SCRAP METAL YARD	19 June 1997
Trevor George DOMROW	29 October 1997	NEWHILL COLLIERY	25 March 1997
Gary John WILSON	3 September 1997	LALEHAM NO. 1 COLLIERY	5 November 1996
Brett Grant DUFFIE	14 August 1997	AT SELWYN MINE	23 November 1996
Rick John TURNBULL	14 August 1997	MOUNT ELLIOTT MINE	10 December 1996
Wayne Anthony Corry JACKSON	18 June 1997	MOUNT ISA MINES LIMITED LEAD MINE 17 LEVEL	6 October 1996
Barry Arnold ROOKS	29 April 1997	DEEP COPPER MINE, ISA LEASE	27 October 1996
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Kenneth Andrew SLATER	8 December 1995	LOW GRADE STOCK PILE, TICK HILL GOLD MINE	12 September 1994
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Gavin John MILNER	2 March 1995.	TICHUM CREEK QUARRY	17 October 1994
Ian William HAIGH	5 May 1993	GREGORY MINE	16 December 1992
Gay Thomas BOLTON	12 April 1994	MOURA OPEN CUT MINE	31 December 1993
Peter Lawrence KERR	12 April 1994	MOURA OPEN CUT MINE	31 December 1993
Maurice Gerald BISSELL (Serious Injury)	12 April 1994	MOURA OPEN CUT MINE	31 December 1993
Shane Thomas SWIFT (Serious Injury)	12 April 1994	MOURA OPEN CUT MINE	31 December 1993
Sean James KENNEDY	17 November 1992	TICK HILL MINE	2 October 1992
Gordon Dudley WOOD	30 April 1992	GOONYELLA/RIVERSIDE MINE	19 December 1991
David Anthony KELLY	9 March 1992	LEAD SMELTER GAS COOLING TOWER	7 February 1991
Peter Carl DANIEL	1 October 1991	SMACKER'S KNOB MINE	12 June 1991
Michael John GOREY	30 September 1991	MT ISA CONCENTRATOR	22 May 1991
Anthony MIHALJ	7 August 1991	N-S TWELVE-E-TWO STOPE, CRACOW MINE	14 May 1991
Jusuf VRBIC	6 August 1991	NUMBER SIX DRAW POINT N-S-TWELVE ORE BODY, CRACOW MINE	13 March 1991
John Phillip BAIRA	26 June 1991	LEAD SMELTER ISA MINES	22 April 1991
Gary Michael MARTIN	24 June 1991	MOUNT ISA MINES	26 January 1991
Malcolm Peter WOLFENDEN	22 April 1991	GREENVALE MINE SITE	5 October 1990
Martin Henry ROWLANDS	12 March 1991	HILTON MINE, MOUNT ISA	4 October 1990
Ricky Alan GUDGE (Serious Injury)	12 March 1991	HILTON MINE, MOUNT ISA	4 October 1990
Dean Michael WHITE	29 November 1990	GLENDEN	19 September 1990
Thomas Douglas Lawrence ANDERSON	4 June 1990	MOUNT ISA	2 October 1990

Gregory George NICHOLSON	19 May 1989	Mt Isa Mine (Area 2)	13 March 1989
Rodney Elwyn MADDOX	20 March 1990	OAKLEIGH NUMBER THREE COLLIERY, ROSEWOOD	19 November 1990
David Joseph FIRTH	15 November 1988	COLLINSVILLE COAL COMPANY NO 2 UNDERGROUND MINE	18 August 1988

Anderson, Thomas Douglas Lawrence

Findings and Recommendations

The *Mines Regulation Act 1964*

Findings and recommendations of reviewers and mining warden following an inquiry into fatal injuries received by Thomas Douglas Lawrence Anderson at Mount Isa on 4 june 1990 warden's court of Queensland Mount Isa 2 october 1990

Before: Mr F W Windridge esquire Warden

Reviewers:

- MR A W SCHRANK
- MR R JAMIESON
- MR R H MacKENZIE
- MR G H HUTCHINSON

To assist:

MR R A SEYMOUR, senior inspector of mines .

Appearances:

- MS L DAWSON, next of kin
- MR G MOUSLEY, district workers' representative
- MR C NOTHLING, solicitor for employer and mine manager

Witnesses examined: refer transcript and schedule "a"

Exhibits tendered: refer transcript and schedule "b"

Findings: refer transcript and schedule "c"

Recommendations: refer transcript and schedule "d"

Report of mining warden: refer transcript and schedule "e"

Schedule "A" Witnesses examined:

- William Charles EDBROOKE
- James BROWN
- Ashley Donald TURRELL
- David Anthony FACELLI
- Barry James HASTED
- Brendan HOLDEN
- Douglas Lawrence McLACHLAN
- William WARDROP
- Phillip George SOWDEN

Schedule "B" List of Exhibits

No of Exhibit	Nature of Exhibit
1	Statement EDBROOKE
2	Post Mortem Certificate
3	Post Mortem Examination Report
4	Certificate of Analysis
5	Entry Record Book BROWN
6	Entry Record Book WATERMEYER
7	Surveyors Plan of Site
8	Photographs "A - E"
9A	Entry Record Book BROWN
9B	Entry Record Book WATERMEYER
10	Extract 1987 Shunters Handbook
11	Extract 1990 Shunters Handbook
12	Employment History
13	Award Record Card
14	Workplace Induction Checklist
15A	Letter dated 25 July 1990
15B	Extract 1989 Shunters Handbook
16	Letter dated 26 September 1990
17	Statement Turrell
18	Certificate of Competency
19	Statement FACELLI
20	Statement HASTED
21	Statement HOLDEN
22	Statement McLACHLAN
23	Statement WARDROP
24	Statement SOWDEN

Schedule "C" Findings:

We find -

Name of deceased: Thomas Douglas Lawrence Anderson

Date of death: 4 june 1990

Nature and cause of accident:

The deceased received fatal injuries while performing duties as a shunter on the Isa lease near the Gardenia Gate crossing.

Findings:

The inquiry has heard evidence from a number of witnesses including some who were in the immediate vicinity. From the evidence we are satisfied the deceased landed between the tracks and the first wagon passed over him. There are at least two possibilities which caused the deceased to leave the wagon. One is that due to the manner in which the locomotive and wagons were operating a surge could have caused the deceased to lose his balance. The other possibility is that the deceased voluntarily, for some reason, attempted to leave the wagon. However, we do not see that the latter situation is a real possibility as we do not consider a shunter would intend to demount in the manner reflected in the evidence from the witnesses. It is clear that the deceased was riding on the front of the leading wagon and a complicating factor was the failure of a switch which operated the warning lights at the Gardenia street crossing. This brought a number of vehicles into close proximity with the wagons being shunted. This caused the loco driver to ease off the throttle after being warned by shunter Turrell. It is possible the resultant surge may have caused the deceased to lose his balance and fall. However, in later testing it was not possible to reproduce any surge of significant effect.

Schedule "D" Recommendations:

The recommendations of the reviewers are as follows:

All persons involved with shunting operations must become conversant with the new rules as stated in the 1990 shunters handbook.

The switch system for warning lights should be upgraded by installing a fall safe system similar to a track circuit system currently operated by the Queensland Railways; and

For emergency procedures in the event of power failure a shunter shall walk in front of the locomotive or leading vehicle to protect road traffic.

Schedule "E" Report of the Warden:

I concur with the findings of the reviewers as to the nature and cause of the accident.

Baira, John Phillip

Findings and Recommendations

The *Mines Regulation Act 1964*

Findings and recommendations of reviewers and mining warden following an inquiry into fatal injuries received by John Phillip Baira at Lead Smelter Isa mines on 22 april 1991 warden's court of Queensland Mount Isa 26 june 1991

Before: Mr F W Windridge esquire Warden

Reviewers:

- MR P BACON
- MR R H MacKENZIE
- MR B MIDDLIN
- MR D J SYMONS

To assist:

MR R A SEYMOUR, inspector of mines.

Appearances:

- MR D MOFFATT appearing for next of kin
- MR G MOUSLEY, district workers' representative
- MR G B FILL, solicitor for the crane driver
- MR C NOTHLING, representing the company the registered manager

Witnesses examined: refer transcript and schedule "a"

Exhibits tendered: refer transcript and schedule "b"

Findings: refer transcript and schedule "c"

Recommendations: refer transcript and schedule "d"

Report of mining warden: refer transcript and schedule "e"

Schedule "A" Witnesses examined:

- Gary Michael RANDALL
- Howard ROBIN
- Hugh DAWSON
- Stanley Ernest SMITH
- Michael Thomas BRODIE
- Stuart James MacKENZIE

- David John CINDRIC
- William Stanley PENGELLY
- James Boyd THOMSON
- Tom Francis RAINS
- David MENZIES
- Jayantha Lakshman MAHARAGE
- Terrance Ivan CAIN
- Keith Edward RAMUS

Schedule "B" List of Exhibits

No of Exhibit	Nature of Exhibit
1	Coroner's Report
2	Post Mortem Certificate
3	Statement - H Robin
4	Supplementary Statement - H Robin
5	Shift Card Check
6	Daily Check Card
7	Crane Driver's Instruction Manual
8	Statement - H Dawson
9	Statement - S E Smith
10	Statement - M T Brodie
11	Statement S J MacKenzie
12	Statement D J Cindric
13	Statement - W S Pengelly
14	Statement - D Menzies
15	Statement - T F Rains
16	Statement D Menzies
17	Type-Written Copy of Record Book Entry
18	Photographs Marked "A", "B", "C", "D"
19	Statement - J L Maharage
20	Check List
21	Statement - T I Cain
22	Drawing dated February 1991
23	Check Sheet
24	Statement - K E Ramus
25	Plans of Area
26	Photographs (Seventeen)

Schedule "C" Findings:

We find -

Name of deceased: John Phillip Baira

Date of death: 22 april 1991

Location of death: Royal Brisbane Hospital

Nature of accident:

John Phillip BAIRA received serious burn injuries when a pot of molten lead fell from a crane at the lead smelter, Isa mine, on 21 april 1991.

Cause of accident:

John Phillip Baira was performing duties as crane chaser in the lead smelter on 21 april 1991.

At approximately 1-30pm Baira was about to connect the auxiliary hook to a pot slung from the main hook of the 25 tonne Malcolm Moore bridge crane in the Isa Lead Smelter dressing aisle. The main hook disengaged from the bottom sheave block and the pot fell to the floor.

It appears that a locking bolt and nut may have failed or unscrewed between the time the overhaul was completed and the date of failure, allowing the main hook to unscrew and fall free.

Evidence from a number of persons involved in the overhaul of the hook assembly indicates the locking bolt was installed. The crane performed adequately under test before being put back into service.

Several searches of the area failed to locate the bolt or any part thereof. Therefore we are unable to determine the actual reason for failure of the locking bolt.

We are satisfied there is no evidence to show operator error by the crane driver.

Cause of death:

Multiple organ failure due to burns.

Schedule "D" Recommendations:

The recommendations of the reviewers are as follows:

We note the upgraded crane daily check card which now provides for inspection of hooks, top bearing and locking pin.

We concur with the recommendations put forward by registered manager Mr Keith Ramus and adopt them accordingly:

Institute immediately shift checks on all hook locking bolts on the three lead smelter aisle cranes. This has already been initiated. This to be done by the crane driver on the crane check card.

Institute immediately scheduled checks on all hook locking bolts on all other cranes across the Mount Isa mine lease.

Lead smelter maintenance to inspect for the presence of correctly fitted locking bolts on all overhauled hook assemblies on receipt from the main workshops and immediately on installation to a crane.

The main workshops prepare a written procedure detailing the steps involved in overhauling hook assemblies and a formalised system of inspection of the work done.

Schedule "E" Report of the Warden:

I concur with the findings of the reviewers as to the nature and cause of the accident.

The inquiry is closed.

Barber, John Charles

Findings and Recommendations

The *Mines Regulation Act 1964* -

Findings and recommendations of reviewers and mining warden following an inquiry into fatal injuries received by John Charles Barber at Deep Copper mine, Mt Isa on 4 june 1997

Warden's court 2-5 february 1998

Before: Mr F W Windridge esquire Warden

Reviewers:

- Mr John Patrick Brady
- Mr Simon Thompson
- Mr Ian Brown
- Mr Matthew Best

To assist:

Ms Margaret Maloney, barrister instructed by crown solicitors office for inspectorate

Appearances:

- Mr S Yates, district workers representative
- Mr N M O'Connor, Solicitor for Mount Isa Mines Limited and mine manager, Mr T Cooney
- Mr R Douglas, barrister instructed by V R Moffat and Associates solicitors for next of kin, Mrs L Barber
- Mr Gary Gear, Gary Gear & Associates solicitors, solicitor for Robert Allen Baird

Witnesses examined: refer transcript and schedule "a"

Exhibits tendered: refer transcript and schedule "b"

Findings: refer transcript and schedule "c"

Recommendations: refer transcript and schedule "d"

Report of mining warden: refer transcript and schedule "e"

Schedule "A" Witnesses examined:

- Senior Constable Dennis Martin Murphy
- Raymond Anthony Alex Seymour
- Trevor Farnell
- John William Howe
- Raymond John McGill
- Robert Allen Baird
- Ronald George MacKenzie
- Christopher Brendan Murphy

- Gerhard Magar
- Colin George Butterworth
- Allen Henry Williams
- Thomas Gregory Cooney

Schedule "B" List of Exhibits

No of Exhibit	Nature of Exhibit	Tendered by
1	Statement of Mr D Cameron	Ms Maloney
2	Statement of Mr R Pippenbacher	"
3	Statement of Senior Constable D M Murphy	"
4	Police Photographs (1 - 39)	"
5	Video of Police Accident Investigation	"
6	Form 10 - Post Mortem Examination Report	"
7	Form E - Post Mortem Examination Certificate	"
8	Form 4 - Report Concerning Death By Member of the Police Service	"
9	Form 9 - Order for Special Examination	"
10	Notes taken by Senior Constable D M Murphy	Mr N M O'Connor
11	Original Report by Inspector of Mines	Ms M Maloney
11A	Interim Report by Inspector of Mines	"
12	Photographs taken by Inspector of Mines (1-15)	"
13	Risk Analysis Report - Deep Copper Mine - 17 April 1997	Mr N M O'Connor
14	Plan of Design Approval - Level 24A	"
15	Report of Mr Trevor Farnell - Hastings Deering	Ms M Maloney
16	Result of Analysis - Oil Test	"
17	Report on mechanical aspects of Elphinstone Unit - Mechanical Inspector of Mines	"
18	Photographs taken by Mechanical Inspector of Mines - John Howe (1-37)	"
19	Elphinstone R2800 Specifications	"
20	Original Statement of Raymond John McGill	"
21	MIM Statements of Raymond John McGill dated 6 and 13 June 1997	"
22	Statement of Robert Allen Baird dated 6 June 1997	"
23	MIM Statement of Robert Allen Baird dated 5 June 1997	"
24	MIM Statement of Robert Allen Baird dated 13 June 1997	"
25	MIM Statement of Robert Allen Baird dated 18 June 1997	"
26	Statement of Leslie James Wylie	"
27	MIM Statement of Ronald George MacKenzie	"

No of Exhibit	Nature of Exhibit	Tendered by
	dated 6 June 1997	
28	Statement of Ronald George MacKenzie dated 30 June 1997	"
29	Statement of Christopher Brendan Murphy	"
30	Statement of Gerhard Magar	"
31	MIM Standard Work Instruction - 323701 - Cleaning a Stope/Vertical Edge	Mr R J Douglas
32	MIM Standard Work Instruction - 324111 - Construction of a Stop Log at Stope Edge	"
33	Statement of Colin George Butterworth	Ms M Maloney
34	MIM statements of Allen Henry Williams dated 6 and 23 June 1997	"
35	Mine Manager's Report	Mr N M O'Connor
36	Risk Assessment - Vertical Openings	"

Schedule "C" Findings:

We find -

Name of deceased: John Charles Barber

Date of death: 4 june 1997

Place of death: 26 level, Deep Copper mine, Mt Isa

Cause of death: From the medical certificate tendered:-

1. (a) Partial decapitation

Nature of accident:

John Charles Barber sustained fatal injuries at about 17:50 on 4 june 1997, when the Elphinstone R2800 load haul dump (LHD), unit No 1884, which he was operating, entered the open Q621 Stope in the Deep Copper mine section of the Isa Mine. At the time of the accident he was cleaning up in the Q621 access and drill drives on 24A sub-level and appears to have reversed the LHD into the stope. The unit fell about 125 metres to the bottom of the stope on 26 Level.

There were no witnesses to the accident.

Cause of accident:

At about 16:30 on 4 june 1997, Mr Barber was instructed to clean up the Q621 access and drill drives on the 24A sub-level in preparation for the installation of a bulkhead. These

instructions were issued by Mr Robert Allan Baird, shift supervisor and Mr Raymond John McGill, shift supervisor - production support.

We are satisfied that Mr Barber was given verbal instructions and shown an A4 design drawing of the existing and proposed bulkhead locations.

The quality of the task instruction and the design drawing could have created confusion as to the nature and location of the work required.

Mr Baird had not inspected the site at 24A sub-level Q621 access or drill drives. Mr McGill had visited the site earlier in the day but did not conduct a detailed inspection.

From the evidence we have concluded that Mr Barber had cleaned the floor in the Q621 access drive and had cleaned some rubble from the floor of the Q621 drill drive. It would appear that after tramming and dumping several loads into the Q616 truck tipple Mr Barber reversed the Elphinstone R2800 LHD into the drill drive and towards the open stope in order to clean up the remaining rubble in the drill drive.

There was no physical barrier that could have prevented the LHD from entering the open stope. It appears that on the final tram Mr Barber reversed into the open stope.

MAJOR CONTRIBUTING FACTORS:

From the evidence it would appear that Mr Barber did not adequately assess the risk of working so close to an open stope.

The visibility afforded to the operator of an Elphinstone R2800 LHD is limited in this application.

The stope edge was not illuminated by equipment or other lighting.

The supervision was less than adequate in that:-

- Detailed inspections of the work site had not been carried out prior to issuing the task instructions;
- There was no check of work in progress;
- Mr Barber was not given any written instructions or a copy of the design drawing;
- The location of the proposed new bulkhead was not marked on the back or the walls of the drive.

It is likely that Mr Barber was confused as to the exact location of the proposed bulkhead and therefore cleaned up the entire floor area.

We accept that the mechanical condition of the unit was satisfactory given the age of the machine. However, we are unable to say if the oil leaks and pools of oil near the stope edge are associated with any undetected mechanical failure.

Schedule "D" Recommendations:

The recommendations of the reviewers are as follows:

(1) Physical Barriers

Substantial physical structures or barriers should be installed, to prevent mobile equipment falling into open stopes or hazardous openings.

(2) Job Instruction

A formal task or job instruction process should be implemented for work in hazardous areas, for example within 20 metres of open stopes.

This instruction should include an easily understandable and up-to-date plan or job sketch which clearly shows the location and job specifications. The original job instruction should be maintained by the supervisor and a copy issued to the employee.

(3) Job Inspection

All jobs in hazardous areas should be inspected by the supervisor prior to the issuing of a job instruction. This inspection should include an assessment of the likely hazards and how these hazards are to be controlled.

(4) Hazard Assessment

Management should actively promote and enforce the need to formerly assess hazards at the commencement of every new job and provide employees with appropriate training to enable them to identify and assess such hazards.

Once trained, employees should undertake thorough and ongoing checks of their workplace and equipment to identify potential hazards and implement appropriate controls.

(5) Competency of Supervisors

Management should implement a formal process to ensure the ability of supervisors to competently undertake their duties.

(6) Visibility around Hazardous Openings

Wherever possible suitable lighting should be installed to effectively illuminate the edge of hazardous openings.

Where mobile equipment is to operate in the vicinity of hazardous openings the selection of equipment should include consideration of both operator visibility and equipment lighting.

Schedule "E" Report of the Warden:

I concur with the findings of the reviewers as to the nature and cause of the accident.

I thank Ms Maloney and all who appeared before the inquiry for their assistance. I thank the reviewers for their participation and assistance.

This inquiry is now closed.

05/02/1998

Barling, Geoffrey Michael

Findings and Recommendations

The *Mines Regulation Act 1964* -

Findings and recommendations of reviewers and mining warden following an inquiry into serious injuries received by Geoffrey Michael Barling at Cannington mine on 27 june 1999 Warden's court of Queensland Townsville 28-30 march 2000

Before: Mr F W Windridge, esquire Mining Warden

Reviewers:

- Mr J Brady
- Mr W Elrick
- Mr P Henley
- Mr P Ball

To assist:

Mr J Tate (instructed by crown law office) on behalf of the mines inspectorate and counsel assisting

Appearances:

- MR R Traves (instructed by Allen Allen & Hemsley) for BHP Minerals Pty Ltd, the registered mine manager, Ms Julie Devine and BHP Steel (AWI) Pty Ltd
- MR C Newton (instructed by Messrs Carter Capner) for the injured person, Mr Geoffrey Michael Barling
- MR S Yates, District Workers Representative

Witnesses examined: refer transcript and schedule "a"

Exhibits tendered: refer transcript and schedule "b"

Findings: refer transcript and schedule "c"

Recommendations: refer transcript and schedule "d"

Report of mining warden: refer transcript and schedule "e"

Schedule "A" Witnesses examined:

Tuesday, 28 March 2000

- Robert Bruce O'SULLIVAN

- Anthony FARCICH
- Patrick Lars LARSSON
- Glen Raymond CISLOWSKI
- Simon David INGHAM
- Geoffrey Michael BARLING
- John Ronald TOTMAN
- Graeme HAGGART
- Nigel WESTHORP
- Mark IRONSIDE
- Paul McGUCKIN
- Julie May DEVINE

Schedule "B" List of Exhibits

Exhibit No	Nature of Exhibit	Tendered By
1	Original Inspector's Report - Robert Bruce O'Sullivan	Mr J Tate
2	Sets 1, 2 & 3 of Colour Photographs	"
3	Accident Report Overview - R B O'Sullivan	"
4	Blue Back-Pack Equipment (Rescue Master System - by Moxham Industrial Pty Ltd)	"
5	Bosun's Chair	"
6	Fabric Sling	"
7	Rescue Master Pulley System	"
8	Karabiner (for demonstration purposes)	"
9	Mine Working Safety Belt	"
10	Waist Strap (with rope grab)	"
11	Stainless Steele Key Ring (for demonstration purposes)	"
12	Identification Disk and Broken Ring	"
13	Rescue Master Portable Rescue System Manual	"
14	Statement of Anthony Farcich dated 28 June 1999 Statement of Anthony Farcich dated 30 June 1999	"
15	Statement of Patrick Lars Larsson dated 29 June 1999	"
16	Statement of Glenn Raymond Cislowski dated 2 July 1999	"
17	Statement of Simon David Ingham dated 30 June 1999	"
18	Statement of Geoffrey Michael Barling dated 7 January 2000	"
19	Statement of John Ronald Totman dated 1 July 1999	"
20	Statement of Robert Michael Sturgeon dated 29 June 1999	"
21	Statement of Mark Derrick Prance dated 30 June 1999	"
22	Statement of Graeme Haggart dated 9 July 1999	"
23	Statement of Nigel Westhorp dated 19 July 1999	"

Exhibit No	Nature of Exhibit	Tendered By
24	Statement of Michael John Phillips dated 8 July 1999	"
25	Statement of Gary Thompson dated 9 July 1999	"
26	Statement of Cameron Lee Ruddell dated 8 July 1999	"
27	Statement of Wayne Michael Cordwell dated 8 July 1999	"
28	Statement of Mark Ironside dated 19 July 1999	"
29	Statement of Paul McGuckin dated 21 July 1999	"
30	Statement of Julie May Devine dated 1 July 1999	"
31	Corrective Action Report	Mr R Traves
32(a) 32(b)	Incident Report - Cannington Mine #04259 Continuation of Incident Report - Cannington Mine #04259	Mr J Tate

Schedule "C" Findings:

We find -

Name of injured: Geoffrey Michael Barling

Date of injury: 27 june 1999

Place of accident: Cannington mine

Nature of accident:

Mr Geoffrey Michael BARLING received serious injuries at the BHP Cannington mine when he fell approximately 13 metres to the bottom of the Fowler shaft. The accident occurred at about 13.38 hours on sunday, 27 june 1999.

Immediately prior to the accident, Mr Barling was suspended in a bosun's chair in the Fowler shaft at the tail rope change area at the 629 metre level where he was attempting to gain access to the top of the cheese weights.

The work to be performed included the removal of pipes from the guide ropes attached to the cheese weights. When this was completed, the guide ropes were to be cleaned and lubricated.

Mr Barling was being supervised and assisted on this task by Mr Anthony Farcich, a person appointed under the provisions of *Section 34A* of the *Mines Regulation Act 1964* .

Immediately prior to entering the shaft, Mr Barling and Mr Farcich had inspected the area and filled in a job safe analysis (JSA) Sheet.

A new moxham rescue master portable rescue system including a bosun's chair was suspended in the shaft. This was slung from a beam in the centre of the shaft using a two metre long polyester sling.

Mr Barling had strapped himself into the bosun's chair and associated harness and lowered himself into the shaft.

After descending a short distance, he stopped to make some adjustment to the ropes when the bosun's chair parted from the rope pulley system. Mr Barling fell to the bottom of the shaft some 10 to 13 metres below and received serious injuries.

Cause of accident:

From the evidence presented to the Inquiry, we have concluded that -

- Mr Barling inadvertently attached the lower karabiner of the Moxham Rescue Master to an identification tag split ring which was located immediately adjacent to the appropriate attachment point at the top of the Bosun's chair.
- We are satisfied that the Bosun's chair was attached to the identification tag split ring which failed because it wasn't capable of supporting his weight.

Major contributing factors may include -

- Mr Barling and Mr Farcich were not trained in the use of this particular equipment.
- Mr Barling and Mr Farcich failed to recognise or address the hazards associated with the use of this equipment.
- The Bosun's chair was delivered with an identification tag and split ring located immediately adjacent to the top "D" ring attachment point.

We are satisfied that the following procedures and standards were not adhered to -

- CAN-PS-5.42 Health and safety specifications covering the introduction and use of new equipment.
- CAN-PS-2.47 Safety harness and fall arrest devices.
- CAN-SM-004 Hazard identification and JSA process.
- CAN-SM-006 Working at heights.

The registered manager of Cannington issued what we believe were clear instructions regarding the assessment of Mr Barling's competence in the use of the bosun's chair and associated equipment. These instructions were not carried out.

Schedule "D" Recommendations:

The recommendations of the reviewers are as follows -

- We concur with the elements identified in the corrective action report No #04259 and would recommend that the Chief Inspector of Mines commission a comprehensive physical and systems audit to ensure that this corrective action has in fact been fully implemented.
- In situations where persons are exposed to significant hazards or unfamiliar tasks, an appropriately qualified supervisor should be provided to ensure that safety procedures and safe work methods are followed.
- That lifting gear registers contain all relevant information and are signed by the person who carried out the inspection.
- That the Chief Inspector publish and distribute a hazard alert regarding the inappropriate attachment of identification tags on lifting or like equipment. This hazard alert should be distributed to all manufacturers, suppliers and users of industrial safety belts and harnesses.
- That all employees be exposed to competency based training in hazard identification and appropriate control actions.

Schedule "E" Report of the Warden:

On Sunday, 27 June 1999, Geoffrey Michael BARLING received serious injuries whilst performing work in the Fowler Shaft at the CANNINGTON MINE.

The Cannington mine is owned and operated by BHP Minerals. The mine is located some 75 kilometres south south-west of McKinlay in north west Queensland. The mine operates on a "fly in fly out" basis.

A number of witnesses have been examined over the past two days, and 32 exhibits including statements and other documents have been admitted into evidence.

Findings as to nature and cause:

The Reviewers have delivered their findings as to nature and cause of the accident. I concur with the findings.

Having perused the documentary evidence and having heard the oral evidence, I am not of the opinion that there is any cause to recommend any action under Section 45 of the *Mines Regulation Act 1964* against the registered manager, Ms Julie May Devine.

I thank Mr Tate for his assistance as counsel assisting, and those legal representatives who appeared for various parties at the Inquiry.

Finally, I thank the reviewers for their assistance at this inquiry.

The inquiry is now closed. 30 Mach 2000

Bolton, Kerr, Bissell and Swift

Findings and Recommendations

The *Mines Regulation Act 1964* -

Findings and recommendations of reviewers and mining warden following an inquiry into fatal injuries received by Gay Thomas Bolton and Peter Lawrence Kerr and serious injuries to Shane Thomas Swift and Maurice Gerald John Bissell at Moura Open Cut mine on 31 december 1993 warden's court Rockhampton 11-12 april 1994

Before: Francis William WINDRIDGE esquire Warden

Reviewers:

- Mr Mark Andrew CHAMBERS
- Mr Glen WILLIAMS
- Mr Peter COMINO
- Mr Joseph Francis BOOTH

To assist:

Mr M P Walker, Senior inspector of mines, central division

Appearances:

- MR W ALLISON, district union inspector, United Mineworkers representative
- MR R BANNERMAN, legal officer, BHP Australia Coal
- MR R JOLLEY, solicitor of Quinlan Miller & Treston for Messrs Bissell and Swift
- MR DVC McMEEKIN, barrister, instructed by solicitors Swanwick Murray Roche for widow of deceased Mr Bolton

Witnesses examined: refer transcript and schedule "a"

Exhibits tendered: refer transcript and schedule "b"

Findings: refer transcript and schedule "c"

Recommendations: refer transcript and schedule "d"

Report of mining warden: refer transcript and schedule "e"

Schedule "A" Witnesses examined:

- Peter Robert McGREGORY
- Melvin BELL
- Maurice Gerald John BISSELL
- Bruce Henry LINDNER
- Maurice Gerald John BISSELL
- Ronald Roy DRAY

- Colin MALUGA
- Shane Thomas SWIFT
- Wane Evan Robert TURNER
- Martti Vilho Tapio KANKKUNEN

Schedule "B" List of Exhibits

No	Description
1	Accident Location Plan
2	Accident Plan 20212
3	Accident Plan 20213C
4	Report - Manager, Moura Mine
5	Photographs - Accident Site
6	Post Mortem Certificate - Gay Thomas BOLTON
7	Post Mortem Certificate - Peter Lawrence KERR
8	Certificate of Analysis - Gay Thomas BOLTON
9	Report - Melvin BELL
10	Sticker - (Cabin of WT)
11	Safety Alert
12	Statement - MGJ BISSELL
13	Stickers
14	Statement - B H LINDNER
15	Daily Log Book
16	Training Booklets (2)
17	Authorisation Tests Booklets (2)
18	Mine Traffic Rules
19	Document re: Safe Parking
20	Statement - MGJ BISSELL (3.1.94)
21	Statement - R R DRAY
22	Statement - C MALUGA
23	Statement - S T SWIFT
24(a)(b)(c)	Statement - WER TURNER
25	Report Mine Manager - MVT KANKKUNEN
26	Folio Photographs (Folio B)

Schedule "C" Findings:

Names of deceased:

Gay Thomas BOLTON
Peter Lawrence KERR

Name of injured:

Shane Thomas SWIFT
Maurice Gerald John BISSELL

Date of accident:

Friday, 31 december 1993

Date of deaths:

31 december 1993

Location of accident:

Pit 19B Mour Opencut mine

Nature of accident:

Tom Bolton and Peter Kerr received fatal injuries and Shane Swift and Morris Bissell received serious injuries when a water truck WT3 rolled forward in pit 19B at the Moura open cut mine and collided with the side of a service vehicle (ST4). The service truck (ST4) was parked parallel to front end loader 10 (FEL10) for the purpose of carrying out repairs or service to FEL10. The deceased and injured persons were standing between the service truck and the front end loader. The force of the collision pushed ST4 against FEL10 causing the injuries which were in the nature of crush injuries. We are satisfied that Tom Bolton died at the accident site on the 31st of December 1993. Peter Kerr was taken to the Moura hospital but died from his injuries a short time later. The date of death was the 31st December 1993. The injured persons received medical attention and have since recovered.

Cause of accident:

Site parking procedures were not followed.

The water truck was left unattended idling on site of a downhill grade with its wheels pointing towards the service truck. The evidence indicates that the park brake was not applied.

Schedule "D" Recommendations:

Consideration should be given to the installation of some form of engineering controls either physical visual or audible to indicate non-application of park brake by heavy mobile equipment operators.

The mine sites should conduct risk assessments and review their traffic rules to determine the adequacy of their site parking procedures. Ongoing auditing of these procedures should be built into the process.

Schedule "E" Report of the Warden:

Findings:

I find

Names of deceased persons:

Gay Thomas BOLTON
Peter Lawrence KERR

Name of injured persons:

Shane Thomas SWIFT
Maurice Gerald John BISSELL

Date of accident:

Friday, 31 December 1993

Location of accident:

Pit 19B Moura Opencut mine

Cause of death:

Gay Thomas Bolton:

1(a) compound fracture of skull

Crush injury

Peter Lawrence Kerr:

1(a) bilateral haemorthoraces

Crush injury

Serious injuries:

Shane Thomas Swift:

Severed arm and chest injuries

Maurice Gerald John Bissell:

Head injuries including fractured jaw

I concur with the findings of the reviewers as to the nature and cause of the accident.

The inquiry is now closed.

Burrows, Glenn

Findings and Recommendations

The *Mines Regulation Act 1964* -

Findings and recommendations of reviewers and mining warden following an inquiry into fatal injuries received by Glenn Burrows at Mount Isa Mines Copper Concentrator on 4 june 1996 warden's court 3-5 december 1996

Before: Mr A J Chilcott esquire acting Mining Warden

Reviewers:

- Mr John Patrick BRADY
- Mr Gregory Allan DALLISTON
- Mr William Barron ELRICK
- Mr Ben ELLIOTT

To assist:

Mr J Tate, barrister, instructed by crown solicitor on behalf of inspectorate.

Appearances:

- Mr G Gear, solicitor for next of kin, Mrs Samantha Burrows.
- Ms M Gibney, general manager MIM Legal.
- Mr R Needham, barrister instructed by LA Evans & Co for Schmider Barkly (sub-contractors).
- Mr G Mousley, district workers representative

Witnesses examined: refer transcript and schedule "a"

Exhibits tendered: refer transcript and schedule "b"

Findings: refer transcript and schedule "c"

Recommendations: refer transcript and schedule "d"

Report of mining warden: refer transcript and schedule "e"

Schedule "A" Witnesses examined:

- Christopher Paul SKELDING
- John William HOWE
- Ian Michael ROBERTSON
- John Francis McNAMARA
- Andrew James RICHARDSON
- Kevin James HEALEY
- David Ross McKEWEN
- Kenneth William TURNER
- William James AWING
- George Bernard CRABBE

- John Joseph STABLUM
- Kenneth John NASH
- John Edwin GEDDY
- Gary Thomas GARDNER
- David Read CARR
- Eric Stewart BURTON
- John OWENS
- Peter ROHNER

Schedule "B" List of Exhibits

No of Exhibit	Nature of Exhibit	Tendered by
1	Inspector's Report - C SKELDING	Mr J Tate
2	Eleven (11) Small Colour Photographs	"
3	Set of five (5) Colour Photographs	"
4	Eleven (11) Large Colour Photographs	"
5	Interim Standard Company Procedure	"
6	Medical Record	"
7	Copies of Minutes - MIM	"
8	Statement of John Geddy	"
9	Statement of David Carr	"
10	Statement of Stewie Burton	"
11	Twenty Six (26) Police Photographs	"
12	Police Report (Part) Life Extinct Form 4,Form F, Form D, Deputy Coroners Report Order for Special Examination (Form 9)	"
13	Balance of Police Report	"
14	Copy of Record Book Entry - 4 June 1996	"
15	Original Report - J W HOWE (Mechanical IOM) Statements - AJ Richardson, KJ Healey, DR McKewen KW Turner, WJ Awing, GB Crabbe, JJ Stablum, KJ Nash & GT Gardner	"
16	CUCONC List of Completed Safety Jobs	Ms Gibney
17	Report from MIM to Inspector of Mines	Mr Tate
18	Original of Twenty Six (26) Police Photographs	"
19	"D" Roster Sectional Safety Meetings 14/01/96 and 04/02/96 Services Order S044378 20/07/96 (S. Burton)	Ms Gibney
20	Job Number 7216 (Ken Nash) Job Number 8547 (Ken Nash)	Mr Needham
21	Work Order - Replacement Screens	Ms Gibney
22	Safety Procedures - Notice to Copper Concentrator	"

No of Exhibit	Nature of Exhibit	Tendered by
	Employees	
23	Memorandum from Mount Isa Mines Limited (3/1/95)	"
24	Training Courses - KW Turner	Ms Gibney
25	Training Courses - G Crabbe	Ms Gibney
	SAA Conveyor Safety Code AS 1755-1975	
	SAA Code for Fixed Platforms etc. AS 1657-1985	
26		
	AS Fixed Platforms etc. AS 1657-1992	
SENT TO IOM AT MOUNT ISA 28/4/97	SAA Loading Code AS 1170.1-1989	Mr Tate
	SAA Structural Steel Welding Code AS 1554.5-1989	
	SAA Structural Steel Welding Code AS 1554.4-1989	
	SAA Structural Steel Welding Code AS 1554.1-1991	
	Interim Standard Company Procedure SCP 1405	
27		Ms Gibney
	Securing of Grid Mesh/Grating etc.	
28	Training Courses - J Geddy	"
29	Wallchart - Safety Meeting Schedule	"
	Trainees Module - Mount Isa Mines Limited	
30		"
	Flotation Process and Control	
31	Copper Concentrator - Morning Meeting Format	"
	Plant Inspection Plan and	
32		"
	Plant Audit Inspection Report (Sheets 1-9)	
33	Training Record - Stewie Burton	"
34	Two (2) Organisation Charts	Mr Tate
	Key issues for 1995/96	
35		Ms Gibney
	Progress made for the first half 1995/96	
	Key Safety/Hygiene Issues	
36		"
	Safety/Hygiene Plan	
37	Safety Audit Reports	"
38	"D" Roster Sectional Safety Meeting & Area Audit	"
	Contributing Factors for High Potential Incidents	
39		"
	1991/96	
40	Chart - ISA Process Management Framework	"
41	CSN-1557 Securing Floor Plates & Floor Gratings	"
42	Training Guidelines - Dept of Mines & Energy	Mr Tate

Schedule "C" Findings:

We find -

Name of deceased: Glenn Burrows

Date of death: 4 june 1996

Place of death: Mount Isa base hospital

Nature of accident:

Glenn Burrows was walking or standing on the flotation level western walkway in the Mount Isa Mines copper concentrator building when an unsecured grating gave way beneath him. He fell 8.25 metres to the concrete floor below, possibly striking a floor joist and pipe in the process.

The injured person was found first by Schmider Barkly Engineering employee Jeffrey Andrew Lane who heard a loud bang and went to investigate. He found the injured person and having little or no first aid training himself summoned Mount Isa Mines Limited shift supervisor John Francis McNamara to assist.

The Mount Isa Mines Limited ambulance and the Queensland ambulance service arrived shortly afterwards and the injured person was transferred to Mount Isa base hospital where he died as a result of his injuries the same day, 4 june 1996.

Cause of death:

From the medical certificate tendered:-

1(a) severe multiple skull fractures & head injuries

Cause of accident:

We have concluded that Mr Burrows lost his life due to the substandard condition of the walkway, in that a mesh floor plate was not securely fixed in accordance with reasonable engineering standards and practice and the requirements of Australian Standard 1657 which states; amongst other things,

"Boards and plates shall be securely fixed to the supporting structure and shall not rely on adjacent sections of flooring for the prevention of lateral movement. They shall be fixed so that the removal of any section of flooring will not affect the security of the remaining sections.

All floors should be evenly laid, and variation in height between adjacent boards or plates which could form a tripping hazard shall be avoided".

Major contributing factors:

We were unable to determine when the western side stairway was removed and the stairwell covered by mesh grating. It is probable that this activity took place in about 1988.

At this time the stairwell grates were not securely fixed to the supporting beams.

It would appear that there were no safe work procedures in place to perform this task or to monitor the satisfactory completion of that work.

In addition to this, workplace inspections and safety audits conducted on an `adhoc' basis failed to detect this potential hazard.

The poor condition of the floor on the entire western side of the copper concentrator was raised at a safety meeting in april 1996 and we are of the opinion that had a detailed inspection been carried out at this time, the unsecured floor plates may have been discovered and correction action taken.

No evidence was presented to indicate that supervisors and employees have received training in hazard identification and formal auditing procedures.

Schedule "D" Recommendations:

The recommendations of the reviewers are as follows:

Safe work procedures should be developed and implemented with input from and in co-operation with a vertical cross section of the workforce affected by and competent in the work to be performed.

Safe work procedures should include audit mechanisms.

Company safety management systems be expanded to include training for a wide cross section of the workforce in relation to hazard identification and risk management.

That a specific training module on hazard identification be included in the induction and refresher training for all employees.

A means of tracking work carried out on items of equipment or delineated areas of structures be instituted.

We are concerned about the level of non-compliance with present regulations, mine site rules and standard work procedures. We strongly believe that management and all persons employed should comply with these rules and procedures and work in accordance with the methods in which they were trained.

Schedule "E" Report of the Warden:

Having delivered the findings as to the nature and cause of the accident and the recommendations I deliver the following report:-

It has become evident to the panel during this inquiry that to benefit and expedite inquiries in future, there would be much to be gained by having proposed documentary exhibits made available to the panel, a reasonable time prior to the commencement of an inquiry.

We acknowledge that the evidence at this inquiry has revealed that since the fatal accident to Mr Burrows, the company has taken some steps to prevent a re-occurrence of an accident of this nature.

In addition, an inquiry which I headed approximately twelve (12) months ago at this centre was critical amongst other matters of the inspectorate and the standard of the report submitted. I would add that Mr Skelding was not the inspector involved in that report.

This panel commends Mr Skelding for the professional and timely manner in which he has compiled his report in relation to this inquiry. Indeed we consider his report to be of a high standard.

I would like to express my sincere thanks to my reviewers and my clerk for their time and efforts during this inquiry.

In conclusion, I concur with the findings and recommendations of the reviewers as to the nature and cause of the accident. The inquiry is now closed.

5 december 1996

Comerford, Peter James

Findings and Recommendations

The *Mines Regulation Act 1964* -

Findings and recommendations of reviewers and mining warden following an inquiry into fatal injuries received by Peter James Comerford at Mount Isa Mines Limited lead smelter upgrade on 14 july 2000

Warden's court of Queensland Mount Isa 4-8 december 2000

Before: Mr F W Windridge, esquire Mining Warden

Reviewers:

- Mr John Brady
- Mr Paul Henley
- Mr Paul McGuckin
- Mr Anthony Marshall

To assist:

Mr J Tate (instructed by crown law office) on behalf of the mines inspectorate and counsel assisting

Appearances:

- MR G V Gear (of Gary Gear & Associates) for the next of kin, Ms Cilla Bird and Mr Dennis and Mrs Desleigh Comerford
- MR A S Kitchen (instructed by Messrs Clayton Utz) on behalf of AET Operations Pty Ltd and Baulderstone Hornibrook Pty Ltd
- MR G R Mullins (instructed by Freehills) on behalf of Bateman Brown and Root and the registered mine manager
- MR N M O'Connor (Principal legal adviser for MIM Holdings Limited) on behalf of Mount Isa Mines Limited

Witnesses examined: refer transcript and schedule "a"

Exhibits tendered: refer transcript and schedule "b"

Findings: refer transcript and schedule "c"

Recommendations: refer transcript and schedule "d"

Report of mining warden: refer transcript and schedule "e"

Schedule "A" Witnesses examined:

- Constable Murray GUSTAFSON

- Inspector Sergio Eduardo CESPEDES
- Inspector John Richard HORSBURGH
- Darryl John WILLIAMS
- Anthony Paul ROONEY
- Stuart James WILTON
- Michael John GATTY
- Glen Anthony CANNON
- Gary Michael WRIGHT
- Roger Adrian NICHOLLS
- Stephen Roy LAMONT
- Jason Thomas PINCOTT
- James Keith SANDERSON
- Torren Aziz BOCOS
- Kevin Rahin BOCOS
- Daniel Peter McMANUS

Schedule "B" List of Exhibits

EXHIBIT NO	NATURE OF EXHIBIT	TENDERED BY
Exhibit "A" For Ident	Police Report	Mr J Tate
1	Police Photographs	"
2	Post-Mortem Examination Report	"
3	Form E - Post Mortem Examination Certificate	"
4	Form 4 - Report concerning death by member of the Police Service	"
5	Analyst Certificate - J Wells - 29/11/00	"
6	Original Investigating Officer's Report - Sergio Cespedes	"
7	Folder of Colour Photographs (Inspector of Mines, Mount Isa)	"
8(A) 8(B)	Video Cassette - (17/7/00: Fatal Incident MIM Lead Smelter) Video Cassette - (20/7/00 MIM Incident Lead Smelter Facility	"
9	Accident Report Overview (Safety and Health Division)	"
10	George Fisher Project - Minutes of Meeting (215) 14/7/00 George Fisher Project - Minutes of Meeting (005) 14/7/00	Mr G Mullins
11	Adjusting Screw and Plate	Mr J Tate
12	Mines Inspectorate Significant Incident Report - Richard Horsburgh	"
13	ISAFETY ALERT - D McManus Registered Manager- 29/6/00 E-Mail message - R O'Sullivan to D McManus 7/7/00 ISAFETY ALERT - D McManus Registered Manager- 13/7/00	"
14	SITE PLAN - Survey of Fatal Accident Site at the Lead Smelter	"
15	Statement of Daryl John Williams	"
16	Statement of Anthony Paul Rooney	"
17	Statement of Stuart James Wilton	"
18	Statement of Michael John Gatty	"
19	Statement of Glen Anthony Cannon	"
20	Statement of Gary Michael Wright	"
21	Statement of Roger Adrian Nicholls	"

EXHIBIT NO	NATURE OF EXHIBIT	TENDERED BY
22	Statement of Stephen Roy Lamont	"
23	Statement of Michael Robert Bakhash	"
24	Statement of Peter John Gill	"
25	Statement of Jason Thomas Pincott	"
26	Statement of David John Ryan	"
27	Statement of James Keith Sanderson	"
28	Statement of Torren Aziz Bocos dated 16 July 2000	"
29	Statement of Torren Aziz Bocos dated 8 August 2000	"
30	Statement of Kevin Rahin Bocos	Mr A Kitchen
31	Lead Smelter - July 2000 Shutdown Organisation Chart REV 09 For Review 10/7/2000	Mr G Mullins

Schedule "C" Findings:

We find -

Name of deceased: Peter James Comerford

Date of fatal injury: 14 july 2000

Time of accident: 12:49 pm

Place of accident: 2.23 crusher level, Lead smelter sinter plant, Mount Isa Mine north-west Queensland

Nature of accident:

Peter James COMERFORD sustained fatal injuries at the Mount Isa Mines Limited Lead Smelter Sinter Plant when he was struck by the "north-west bearing housing assembly", a sub-assembly of the 2.23 spike rolls crusher frame.

Mr Comerford was struck while working within the fall zone of the 2.23 spike rolls crusher frame that was being lifted by the smelter plant's overhead travelling crane (Moore 9006 15 tonne/derated from 25 tonne) operated by Jason Thomas Pincott.

The lifting activity was a sub task of the smelter plant shutdown project which required the dismantling and removal of the 2.23 spike rolls crusher to facilitate its refurbishment and relocation.

Cause of accident:

From the evidence, we are satisfied that the "north-west bearing housing assembly" separated from the "adjusting screw" while the load was suspended and at rest in the near vertical position.

While there was no evidence to suggest the load was jolted or moved, it appears both bearing house assemblies fell almost simultaneously.

We are satisfied these assemblies were not securely attached to the "adjusting screws" prior to the lift. This is supported by evidence from Report No IXT 390-01 by Inspections X-Ray and Testing Pty Ltd where they state:

"There was corrosion on all surfaces except one area on one washer, no fresh matching fracture surfaces and a significant gap between the remaining weld metal on the bolts and washers when they were joined together. These observations support the conclusion that the washers were not welded to the bolts at the time of the incident and had broken away from each other possibly months or years earlier."

We are satisfied that this condition would not have presented itself as obvious to the work team involved in the dismantling and lifting tasks.

There was no evidence presented that suggested deficiencies in the communication process between the rigger and the crane operator, however, we are satisfied that had an effective radio system been used this would have removed the need for the rigger to be within the fall zone.

Health and Safety Management systems and procedures, while in place, were not adequate for this task.

Schedule "D" Recommendations:

AET Operations Pty Ltd commission a suitably certified independent Occupational Health and Safety audit of their safety management system and the findings of the audit be implemented within six months.

Risk assessments for future projects should be undertaken in accordance with the provisions of AS/NZS 4360, Risk Management (as amended).

During a Job Safety Analysis the activity must be broken down into specific logical steps. The team carrying out this analysis should consist of persons involved in the work and those with relevant expertise. Criteria should be established to determine when a JSA needs to be modified.

Operating manuals, installation manuals and other relevant documents for all machinery, to be kept, maintained and filed by the Principal and provided for inspection by persons or contractors required to work on the machinery or equipment. Work on or alterations to all machinery must be properly documented and recorded by the Principal.

Dated at Mount Isa this 7th day of December 2000.

Schedule "E" Report of the Warden:

On 14 July 2000, Mr Peter James COMERFORD received fatal injuries when he was struck by a bearing housing assembly which fell during the lift of a crusher frame by an overhead travelling crane in the SINTER PLANT of the MOUNT ISA MINES LEAD SMELTER.

The LEAD SMELTER forms part of a mining and processing operation conducted by Mount Isa Mines Limited on the Isa Lease. The lease is owned and operated by Mount Isa Mines Limited.

In addition to its own workforce, a number of contractors are engaged from time to time on construction and other projects. At the time of the accident, an upgrade of the Lead Smelter was being carried out. This upgrade was being co-ordinated and managed by the George Fisher Project team.

The contract for work in the Sinter Plant of the Lead Smelter was granted to BAULDERSTONE HORNIBROOK PTY LTD. Baulderstone Hornibrook then entered into an agreement with A.E.T OPERATIONS PTY LTD (AET). Mr Comerford was an employee of A.E.T.

The Inquiry has heard the evidence of 16 witnesses over the past three days and has admitted into evidence 31 statements, reports and other documents as exhibits including the reports of the investigating inspector and the report of the registered mine manager. An inspection of the accident site was conducted on Monday, 4 December 2000 although the accident scene has changed and the Sinter Plant is back in operation.

The General Manager of the George Fisher Project under the provisions of Section 34A of the Mines Regulation Act 1964 has appointed Daniel Peter McMANUS as a person to assist the manager. The appropriate documentation for the appointment was duly lodged on 12 November 1998.

Findings as to nature and cause:

The Reviewers have delivered their findings as to nature and cause. I concur with and adopt those findings.

In relation to Section 45 of the Mines Regulation Act 1964, having heard the oral evidence and having studied the documentary evidence, I am not satisfied that there is any cause to take any action in relation to any certificate, license or authorisation issued to the Registered Manager under this Act.

In relation to this Inquiry, we thank Mr Tate for his assistance as Counsel assisting the Inquiry. We thank Counsel and the various legal and other representatives who have appeared for various parties for their assistance during the Inquiry, particularly for the early starts and late finish times which allowed for a minimal disturbance for the witnesses.

I thank the Reviewers and my staff who have assisted the Court to carry out its legal functions at this Inquiry.

The Inquiry is now closed.

7 December 2000

Daniel, Peter Carl

Findings and Recommendations

The *Mines Regulation Act 1964* -

Findings and recommendations of reviewers and mining warden following an inquiry into fatal injuries received by Peter Carl Daniel at Smacker's Knob mine on or about 12 june 1991 warden's court of Queensland 1 october 1991

Before: Mr F W Windridge esquire Warden

Reviewers:

- MR A STANGER
- MR A W SCHRANK
- MR R FLATINSEK
- MR G HUTCHINSON

To assist:

MR R A A SEYMOUR, inspector of mines.

Appearances:

- MR G MOUSLEY, district workers' representative

Witnesses examined: refer transcript and schedule "a"

Exhibits tendered: refer transcript and schedule "b"

Findings: refer transcript and schedule "c"

Recommendations: refer transcript and schedule "d"

Report of mining warden: refer transcript and schedule "e"

Schedule "A" Witnesses examined:

- Eric John BIRCH
- Josephine GENTLE
- Geoffrey Ernest DANIEL
- Walter Phillip DANIEL

Schedule "B" List of Exhibits

No of Exhibit	Nature of Exhibit

No of Exhibit	Nature of Exhibit
1	Statement - Senior Constable E J Birch
2	Post Mortem Certificate
3	Post Mortem Examination Report
4	Photographs x 5
5	Statement - G Mousley
6	Photographs "A", "B", "C", "D"
7	Statement - Josephine Gentle
8	Statement - Geoffrey Ernst Daniel
9	Report - G Hutchinson
10	Statement - Walter Phillip Daniel

Schedule "C" Findings:

We find -

Name of deceased: Peter Carl Daniel

Date of death: According to post-mortem examination report either 10 or 11 June 1991.

Date of accident: Uncertain - sometime between 3 and 13 June 1991, probably close to the latter date.

Place of death: Smacker's Knob mine (mining claim 741, Winton)

Nature of accident:

At some time between 3rd and 13th june 1991, Peter Carl Daniel, who was working alone in a shallow opencut at the Smacker's Knob opal mine some 33 km south of Kynuna, sustained fatal injuries when buried under a fall of ground. Injuries included a depressed fracture of the skull, broken neck, broken left arm and broken ribs. Medical evidence indicates that death probably occurred on 10th or 11th june.

The section of the mine being worked consisted of a bench cut along the side of a sandstone hill following the outcrop of the opal horizon. At the time of the accident, deceased was either examining or digging out with hand tools a thin band of opal direct at the base of the face which was approximately three metres high.

Cause of accident:

The face of the side-hill cut consisted of weathered badly fractured sandstone which was too unstable to stand unsupported at such a steep angle, particularly when undercut by gouging out a band of opal dirt at its base.

Schedule "D" Recommendations:

The recommendations of the reviewers are as follows:

When surface benching into the opal horizon, the sandstone overburden should first be stripped back to a stable angle before extracting the opal dirt. Gouging out the opal band beneath unstable faces is extremely dangerous.

An adequate clear space should be maintained at all times between the toe of an advancing bench face and overburden waste dumps to ensure a clear unobstructed retreat in the event of a rockfall at the face.

Details of this significant incident should be disseminated to mine operators throughout the Winton-Kynuna opal fields.

Schedule "E" Report of the Warden:

Yes, thank you, Mr Hutchinson. I'd indicate that as warden, I agree with the findings of the reviewers, and will not be issuing my own findings. This unfortunate accident has reinforced the warnings issued to opal miners by departmental inspectors from time to time about the danger of falls of rock from the face of open cut miners. I propose to ensure that the recommendations of the reviewers are circulated widely amongst individual opal miners in the Quilpie, Jundah and Winton areas where the majority of opal mining is now carried out.

I thank the reviewers for their attendance as members of the inquiry, and for their assistance to me in fulfilling the purpose of the inquiry. I thank those witnesses who had to travel some distance to attend. The inquiry is closed.

1 October 1991

Domrow, Trevor George

Findings and Recommendations

The *Coal Mining Act 1925* (as amended) -

Findings and recommendations of reviewers and mining warden following an inquiry into fatal injuries received by Trevor George Domrow at Newhill Colliery on 25 march 1997 Warden's Court of Queensland Brisbane 28-29 october 1997.

Before: Mr A J Chilcott, esquire acting mining warden

Reviewers:

- Professor David Rowlands
- Mr Ray Parkin
- Mr John Patrick Brady
- Mr Denis Hansell

To assist:

Ms Margaret Maloney, barrister instructed by crown solicitors office for inspectorate

Appearances:

- Mr William Mead Allison for Construction Forestry, Mining & Energy Union (CFMEU) and next of kin, Mrs S Domrow.
- Mr R Dickson, barrister instructed by Messrs Standish Partners, solicitors for Newhill Coal Pty Ltd.

Witnesses examined: refer transcript and schedule "a"

Exhibits tendered: refer transcript and schedule "b"

Findings: refer transcript and schedule "c"

Recommendations: refer transcript and schedule "d"

Report of mining warden: refer transcript and schedule "e"

Schedule "A" Witnesses examined:

- Dr Russell Frith
- Inspector Walter Herbert English
- Gregory Joseph Rowan
- Glen Thomas Rew
- Mervyn Stanley Knack
- Trevor Lesley Hemley

- Robert Samuel Bitmead

Schedule "B" List of Exhibits

No of Exhibit	Nature of Exhibit	Tendered by
1	Letter of Dr D G McAdam dated 3 October 1997	Ms Maloney
Ex A for Ident	Report of Investigating Officer - Wal English	"
2	Report of Investigating Officer - Wal English (Formerly Exhibit A for Identification)	"
3	Approved Standard for Mine Safety Management Plan	"
4	Report of Mine Manager - Greg Rowan	"

Schedule "C" Findings:

We find -

Name of deceased: Trevor George Domrow

Date of fatal injury: 25 march 1997

Place of accident: Ipswich Hospital

Cause of death: From the medical certificate tendered:-

1(a) Chest injuries

Nature of accident:

At about 9.15 pm on tuesday 25th March 1997 Mr Trevor Domrow, section deputy, received serious injuries from the toppling of a large lump of coal (3.5 metres long, 0.5 metres thick and 1.0 metres high) from the south east unsupported rib adjacent to survey station 149 in the no.1 south west panel. (refer plan No. G13 - exhibit 2.)

At the time of the accident Mr Domrow was carrying out repairs to the left hand side roof bolter of the continuous miner.

He subsequently died as a result of these injuries at Ipswich hospital at 11-04 pm on that date.

Prior to the accident and in accordance with the normal mining sequence, a left hand break-off had been formed off the conveyor belt roadway. The face had been advanced about ten (10) metres from the intersection. Mining operations had continued without incident and no unusual conditions were evident.

The production crew had just completed scaling down the left hand rib adjacent to the accident site using the head of the continuous miner, a remote controlled, Joy 12 CM 12. Loose coal was loaded onto a shuttle car and the continuous miner was trammed back from the face and positioned for the installation of roof bolts.

Before these roof bolting operations were to commence, Mr Domrow noticed that a hydraulic fitting on the left-hand, machine mounted bolting rig had been damaged. This fitting was leaking hydraulic oil which effectively disabled the bolting rig.

Mr Domrow instructed the miner operator, Mr Rew, to withdraw the continuous miner outbye and away from the rib which was cracked and appeared unstable. The miner was moved about 2 to 3 metres and after an inspection of the rib, Mr Domrow instructed that the machine be withdrawn further. The continuous miner was moved another 2 to 3 metres. This area was examined by Mr Domrow and the shuttle car driver, Mr Knack, and these men concluded that the rib was stable and therefore safe to commence repairs to the bolting rig.

Shortly after, these two men were joined by the continuous miner operator, Mr Rew, and repairs to the machine were commenced.

Mr Domrow was bending around the unit when the under manager, Mr Bitmead, observed movement in the upper portion of the rib. He immediately shouted a warning, however, a large portion of the upper rib toppled over striking Mr Domrow and, to a lesser degree, Mr Rew and Mr Knack.

Mr Domrow, who was seriously injured, was removed very quickly by those present who should be commended for their valiant efforts in removing him from further danger and transporting him to the surface without undue delay.

We are of the opinion that the method of strata support offered little protection from rib spall. No effective rib support was required by the managers support rules, nor any installed as a matter of choice by the persons working at this particular place.

Cause of accident:

We are of the opinion that the workplace contained a number of hazards that were not realised by those present.

These include:-

- Mining induced fractures along a secondary cleat or joint plane;
- Orientation of the roadway in relation to the secondary cleat direction;
- Unsecured rib coal.

By not realising these hazards existed, Messrs Domrow, Rew and Knack placed themselves in a hazardous position between the continuous miner and the coal rib.

Schedule "D" Recommendations:

The recommendations of the reviewers are as follows:

- The Queensland Department of Mines and Energy require mine operators to prepare safety plans for "Strata Management". These plans must address the support systems required for both roof and sides of mining excavations. The support systems must take account of pre-mining stresses and mining induced stresses. In essence the support systems should be designed to maintain the physical integrity of both roof and rib elements so that they can safely withstand the sum total of the pre-mining and mining induced stresses. The following factors need to be considered in the development of "Strata Management Plans":-

    - The systematic support of the roof and ribs;
    - A sequence plan showing positions, intervals and types of support;
    - Wherever maintenance work is to be carried out underground on equipment, a procedure must be in place to ensure that the roof and sides are adequately supported;
    - The relationship between seam dip and excavated section on rib failure hazards.
- The development of strata management plans requires risk assessment using geotechnical information.
- Mine operators should establish and maintain a systematic audit process, to ensure that the plans and procedures have been properly implemented and reviewed.
- All personnel must receive competency based training to implement the requirements of the strata management plans.

Schedule "E" Report of the Warden:

Having delivered, the findings as to the nature and cause of the accident and the recommendations, I deliver the following report.

I express my sincere thanks to Ms Maloney for her assistance with regard to this inquiry. I would also like to thank the reviewers and my clerk for their time and assistance during this inquiry.

In conclusion, I concur with the findings of the reviewers as to the nature and cause of the accident.

The inquiry is now closed.

29 october 1997

Duffie, Brett Grant

Findings and Recommendations

The *Mines Regulation Act 1964* -

Findings and recommendations of reviewers and mining warden following an inquiry into fatal injuries received by Brett Grant Duffie at Selwyn mine on 23 november 1996 warden's court 14 august 1997

Before: Mr A J Chilcott esquire Acting Warden

Reviewers:

- Mr J P Brady
- Mr W M Allison
- Mr R R Ford
- Mr A E McMaster

To assist:

Ms D Silvester, barrister, instructed by crown solicitors office for inspectorate

Appearances:

- Mr M A Drew, barrister instructed by Messrs Connolly Suthers, solicitors for Jodi-Anne Thompson (widow of deceased) next of kin.

  Mr G Mousley, district workers representative.

  Mr J Bond, barrister instructed by Messrs Allen Allen & Hemsley, solicitors for Arimco Pty Ltd.

Witnesses examined: refer transcript and schedule "a"

Exhibits tendered: refer transcript and schedule "b"

Findings: refer transcript and schedule "c"

Recommendations: refer transcript and schedule "d"

Report of mining warden: refer transcript and schedule "e"

Schedule "A" Witnesses examined:

- Christine Janet McClure
- Christopher Paul Skelding
- John William Howe
- Peter Alphonso Sanford
- Russell Charles Lissa
- Simon Jenje

- Peter Anthony Webber
- Louis Douglas Geisel
- Jeremy Steven Hayllar (telephone link)

Schedule "B" List of Exhibits

No of Exhibit	Nature of Exhibit	Tendered by
1	Statement of Christine Janet McClure	Ms Silvester
2	Statement of Christine Janet McClure	"
3	Preliminary Report - Christopher Paul Skelding	"
4	Report - Christopher Paul Skelding	"
5	Police Photographs	"
6	Police Report	"
7	Post-Mortem Examination Report - Form 10	"
8	Post-Mortem Examination Certificate - Form E	"
9	Analyst Certificate	"
10	Statement of Jeremy Steven Hayllar	"
11	Managers Report	"
12	Statement of Richard Angus Wills Statement of Alistair J Skey Statement of Keith Noy Statement of Darren Grossi Statement of Geoff Barling Statement of Wallace Andrew Wheatley	"
13	Toyota FL'93 - Specification Manual	Mr Drew
14	Booklet - Industrial Truck Operators	Mr Bond
15	Statement of Peter Alphonso Sanford	Ms Silvester
16	Statement of Simon Jenje	"
17	Statement of Peter Anthony Webber	"
18	Statement of Louis Douglas Geisel	"
19	Factual Plan - Selwyn Project	Mr Brady

Schedule "C" Findings:

We find -

Name of deceased: Brett Grant Duffie

Date of death: 23 november 1996

Place of death: Selwyn mine

Nature of accident:

Brett Grant Duffie was fatally injured at about 6-00 pm on saturday 23 november 1996 when the toyota 025FD25, 2.5 tonne industrial truck (forklift), unit number S140FL02 which he was operating, overturned on the rear access roadway between the warehouse and the maintenance workshop.

From the evidence adduced it would appear that the forklift operator lost control of the unit shortly after crossing a slight depression or spoon drain which crossed its path.

Two witnesses reported unusual clanging sounds, most probably caused by the bouncing behaviour on the unit as it travelled along the roadway. This bouncing behaviour was reported by two witnesses and tyre scuff marks on the eastern side of the spoon drain indicate that the unit's tyres were not in continuous contact with the road surface.

Photographic evidence indicates that this motion became progressively worse until the unit rolled onto it's right side.

Duffie was thrown out of the unit and was crushed by the cabin roof structure.

Cause of death:

From the medical certificate tendered:-

1(a) Multiple injuries

Cause of accident:

We have concluded that Mr Duffie lost his life due to the following causal factors:-

- The unit was not fitted with a restraining device of any kind and as a result he was thrown out of the operator's cabin when he lost control of the vehicle.
- The evidence would strongly suggest that the forklift was travelling at an inappropriate speed for the prevailing road conditions.

Schedule "D" Recommendations:

The recommendations of the reviewers are as follows:

1. Forklift trucks must be equipped with a restraining device such as a seatbelt regardless of the date of manufacture which will restrain the operator within the safety cage of the forklift in the event of a rollover.
2. Forklift trucks used on mine sites must be suitable for the terrain the machine is to be operated on. Small narrow machines are undesirable for use on rough, unsealed surfaces.

Schedule "E" Report of the Warden:

I concur with the findings of the reviewers as to the nature and cause of the accident.

I thank Ms Silvester for her assistance through this inquiry. I would also like to express my sincere thanks to the reviewers and my clerk for their time and efforts during this inquiry.

This inquiry is now closed.

14 august 1997

Firth, David Joseph

Date of findings: 15 November 1988

Findings and Recommendations

The *Coal Mining Act 1925*

Findings and recommendations of reviewers and mining warden following an inquiry into fatal injuries received by David Joseph Firth at Collinsville coal company no 2 underground mine on 18 august 1988 warden's court Bowen Qld 15 november 1988

Before: Mr I T Killeen Warden

Mining inquiry under Section 74 of the Coal Mining Act into the nature and cause of an accident which occurred at the Collinsville Coal Company No 2 Underground Mine on 18 August 1988 which resulted in the death of DAVID JOSEPH FIRTH.

Panel:

- MR ALLAN JAMES WHITE
- MR JON SLEEMAN
- MR LEONARD FREDERICK CUMNER
- MR CHRISTOPHER DAVID RAWLINGS

Appearances:

- MR FREDERICK BARRY BIGGAM senior inspector of mines
- MR WILLIAM MEAD ALLISON, Qld Colliery Employees Union
- MR CARLTON NOTHING, Collinsville Coal Company
- MR JOHN C TAYLOR, For the next of kin, Mrs Melanie Firth and also for the Australian Collieries staff association

Witnesses examined:

- BARRY CLIVE ROBINSON
- NEIL JOHN TUDEHOPE
- THEO WILLIAM PETER JASSEN-ROESBEEK
- GLESTER MARK SELLINGS
- MICHAEL JEFFREY WALSH
- JOHN MARSHALL ROWE
- JOHN PAUL HARRISON
- WINTON GALE
- FREDERICK BARRY BIGGAM
- WILLIAM MEAD ALLISON

Exhibits tendered:

As per transcript

Findings & recommendations:

As per transcript

Findings:

Nature and cause of accident:

The deceased, David Joseph Firth, received fatal injuries when, as a mine deputy on the afternoon shift on the 18th day of august 1988, whilst engaged in a bottom coal removal process at the intersection of Level 47 and 17 heading in 32C Panel, a section of roof fell causing a fall of rib coal and subsequent injury. The mode of working adopted in 32C Panel at the time of the accident was such as to place great stress on the roof due to the massive sandstone cantilevering out of over the remnant pillars in the partial extraction area. These pillars were apparently failing because of their small size and the high stresses to which they were subjected.

Whilst the exact location of the roof failure and the fall could not be predicted in these circumstances, a review of the evidence suggests that such falls might have been expected in this area. When the roof feel through 47 level, it buried the continuous miner and those persons in its immediate vicinity. A significant factor in the consequent death of David Firth was his location adjacent to a high pillar corner of the down-dip rib side of 47 level during the extraction of coal.

In the evidence, a large number of possible contributory factors have been raised, some of which may have had an influence on the occurrence of the fall, but none of which individually could be determined to have been a factor which clearly and specifically caused the fall. The factors which contributed to the intersection failure were:

Uncontrolled transient stress re-distribution in the working area associated with partial and complete extraction in close proximity to each other.

Progressive development of cantilever failure of the massive roof sandstone.

Dilation of the remnant pillars after removal of bottom pole.

Over-widening of the intersection due to development mining and or rib spall.

There were many observations of progressive failure of roof sandstone and rib pole during extraction in 32C Panel. The relevance of these observations to the prediction of the behaviour of the rock mass in the working area was not fully understood by mine management, undermanagers, deputies and the workforce. The random robbing of barrier pillars, whilst not considered as having been a significant contribution to the intersection failure is regarded as poor mining practice. The panel finds no evidence of criminal negligence on the part of any persons or person. The recommendations of the panel are:

The geo-technical investigation currently underway in 32C panel, is required to determine the properties of the coal and the deformation of the rock mass, and distribution of stress in the working area.

The results of the geo-technical investigation be used to determine the suitability of current extraction method, and any future variance of it in 32C panel.

Prior to extraction of previously developed pillars in 32C panel, detailed mapping of roof and pillar strain indicators and geological features should be undertaken and recorded on the extraction plan.

Where a change to the extraction method is to be implemented that a stable barrier of pillar or pillars be left prior to the new extraction area being commenced.

All employees be provided with a clear understanding of the mining method and its requirements for implementation.

The manager's rules for the extraction method and roof support are to be strictly adhered to at all times.

The mode of reporting by deputies at C.C.P. number two mine be substantially upgraded to allow for detailed and specific information on mining conditions to be accurately recorded.

The results of this reporting should be compiled and analysed so that relevant information can be communicated to the statutory officials and the work force in general.

Warden's findings:

I am also obliged to make formal findings in this matter, and I make the following findings -

Name of deceased:

David Joseph Firth

Age of the deceased:

31 years

Sex of deceased:

Male

Occupation of deceased at time of death:

Mine Deputy

Usual place of residence:

Fifth Avenue, Scottville

Date and place of death:

18 august 1988, Number Two mine, Collinsville Coal Company

Cause of death:

As determined by post-mortem examination conducted by doctor B Hodges on 19 august 1988:

1(a) Asphyxia (accidental) due to

Buried under pile of coal due to

Roof collapse in mine shaft

Without reiterating the findings as to the nature and cause of the accident, I adopt the findings of the panel of inquiry as to the nature and cause of the accident as set out previously. I further suggest that the recommendations of this panel of inquiry be implemented by the appropriate authorities as soon as possible. The inquiry is now closed. Thanks gentlemen.

Mining warden's court is closed.

Fowler, Phillip Anthony

Findings and Recommendations

The *Mines Regulation Act 1964* -

Findings and recommendations of reviewers and mining warden following an inquiry into fatal injuries received by Phillip Anthony Fowler at Cannington mine on 14 december 1997

Warden's court of Queensland 22-26 february 1999

Before: Mr F W Windridge esquire Warden

Reviewers:

- Mr J P Brady
- Mr A E McMaster
- Mr S Sodervik
- Mr W B Elrick

To assist:

Mr J Tate, instructed by crown law office, with him MS D Silvester

Appearances:

- MR R Lynch, instructed by Sciacca's Lawyers, for next of kin, Ms Ruth Fowler
- MR R Traves, instructed by Allen Allen & Hemsley, for BHP Cannington mine and the mine manager, Mr Lennox
- MR G Mullins, instructed by Clayton Utz, for Peabody Resources
- MR S Yates, district workers' representative

Witnesses examined: refer transcript and schedule "a"

Exhibits tendered: refer transcript and schedule "b"

Findings: refer transcript and schedule "c"

Recommendations: refer transcript and schedule "d"

Report of mining warden: refer transcript and schedule "e"

Schedule "A" Witnesses examined:

Day One

- Scott Nicholas MEAD (telephone evidence)
- Mark Thomas HESTER (telephone evidence)
- Christopher Paul SKELDING

- Sergio Eduardo CESPEDES
- Alexander Scott PETRIE

Dat Two

- Ian Robert DICK
- Troy Ashley ROCK
- Brian Raymond CHRISTIE
- Darrell Ralph ANDERSON
- William David DAVIES
- Alan Laurence WELLS
- William Noel MILNE
- David Phillip REED
- Marnie Jayne PASCOE

Day Three

- David Phillip REED (recalled)
- Sara McCULLOCH
- Dr Richard Phillip STONE (telephone evidence)
- Dr Andrew Joseph O'NEILL (telephone evidence)
- Dr Jeremy Steven HAYLLAR
- Professor Anthony Joseph ANSFORD
- Beverley Anne WORDSWORTH
- Dr Robert Byron COLLINS

Day Four

- Michele James BAGROWSKI
- Gavin George BORRESEN
- Michael Earle AULD
- Brian Alexander KERR
- Michael Edward DAVIES
- Dr Robert Frances O'SHEA (telephone evidence)
- Anthony William LENNOX

Schedule "B" List of Exhibits

No of Exhibit	Date Day No	Nature of Exhibit	Tendered by
1(a)	22/2/99 D1	Statement of Scott Nicholas Mead dated 15/12/97	Ms D Silvester
1(b)	"	Statement of Scott Nicholas Mead dated 15/7/98	"
2	"	Statement of Scott Mead dated 14/12/97	Mr R Traves
3	"	Police Report to Coroner	Mr J Tate
4	"	44 Colour Photographs	"

No of Exhibit	Date Day No	Nature of Exhibit	Tendered by
5	"	Analyst Certificate dated 16/4/98	"
6	"	Pathology Report dated 21/1/98	"
7	"	Preliminary Report - C P Skelding - dated 14/12/97	"
8	"	Volume 1 - Report of C P Skelding	"
9	"	Volume 2 - Report of C P Skelding	"
10	"	Welding Equipment	"
11	"	Plan 1 : 574 Level - Crib Room - Incident Site Survey Plan 2 : 574 Level - Crib Room - Incident Site Survey - (showing approximate body position)	"
12	"	90 Colour Photographs (excluding photos 82,83,84 & 85) including a description list	"
13	"	WTIA - Health & Safety in Welding	"
14	"	Electrical Safety in the Workplace (SAA HB94 - 1997)	"
15	"	Effects of current passing through the human body AS 3859 - 1991	"
16	22/2/99 D1	Aide De Memoir - OHM'S LAW	Mr J Tate
17	"	(a) Manual Metal-Arc Welding Electrode Holders (AS 2826 - 1985) (b) Approval and test specification - Residual current devices (current-operated earth-leakage devices) (AS 3190 - 1994) (c) Electric arc welding power sources Part 1: Transformer type (AS 1966.1 - 1985) (d) Safety in welding and allied processes Part 2: Electrical (AS 1674.2 - 1990)	"

		(e) Approval and test specification - Portable machines for electric arc welding and allied processes (AS/NZS 3195 - 1995)	
18	22/2/99 D1	Two (2) Reports of Alexander Scott Petrie	"
19	23/2/99 D2	Statement of Darrell Ralph Anderson	Ms D Silvester
20	"	Statement of William David Davies	"
21	"	Statement of William Noel Milne	"
22	"	Statement of David Philip Reed	"
23	"	Document - Safe Working in Hot Conditions	Mr R Traves
24	"	Colour Photograph - BHP of Milne & Reed	"
25(a) (b) (c)	"	Three (3) Colour Photographs - BHP to demonstrate Position of items	"
26	"	Colour Photograph - View from inside	Mr R Lynch
27(d) (e) (f)	"	Three (3) Colour Photographs - Views inside of Crib Room	"
28	"	Polaroid Photograph - Crib Room	"
29	24/2/99 D3	Statement of Brian Raymond Christie	Ms D Silvester
30	"	Memorandum - D Reed dated 7/10/97	Mr R Traves
31	24/2/99 D3	Memorandum - D Reed dated 22/10/97	Mr R Traves
32(a)(b) (c)	"	(a) The blood alcohol curve and units of measurement (b) Severe hyperthermia: Heat stroke; neuroleptic malignant syndrome; and malignant hyperthermia (c) Environmental factors and disease - W R Keatinge	Mr J Tate
33	"	Statement of Sara McCullouch dated 15/12/97	"
34	"	Confidential Health Assessment - Dr R Stone	"
35	"	Observations by Nurse at Cannington and signed by Dr Stone	"
36	"	Form A - Pre-Employment Health Assessment	"
37	"	Health Summary - Dr Andrew O'Neill	"
38	"	Statutory Declaration of Dr A J Ansford	"
39	"	Pre-Placement Medical Examination Form	"
40	"	Kodacome Slides of Microscopic Slides of Mr Fowler's Coronary Arteries	"

41	"	Report of Dr Robert Byron Collins dated 12/10/98	Mr J Tate
42	25/2/99 D4	Accident/Incident/Hazard Report - Cannington Project (00087)	Mr Mullins
43	"	Statement of Adrian G L Pratt dated 17/12/97	Ms D Silvester
44	"	Report of Dr Robert F O'Shea	Mr R Lynch
45	"	Statement of Anthony William Lennox	Mr J Tate
46	"	Partnering Agreement between BHP Minerals Pty Ltd & Peabody Resources Ltd (Ref: No. CAN UG 009)	Mr R Traves
47	"	"Fit for Work, Fit for Life" - BHP Cannington Project	"
48	"	Electric Shock (Minimisation/Elimination)	"
49	"	Designation of Responsibility for Health and Safety	"
50	"	Control of Contractors (CAN-SM-012)	"
51	"	Contractors/Construction - BHP Cannington Project	"
52	"	Pocket Safety Book	"
53	25/2/99 D4	PRL Employee Site Induction Manual	Mr R Traves
54	"	(CAN-SM-017) Welding Procedure & Sheet Regarding Clamps	"
55	"	Overhead Projections - Ventilation and Safety Comparisons	"
56	"	Further Actions Report dated 11/1/98	"

RULING

The proceedings before us have been two-fold.

In my capacity as warden, assisted by four reviewers, I have conducted an inquiry under the provisions of the *Mines Regulations Act 1964.*

In my capacity as coroner, sitting alone, I have conducted an inquest under the *Coroners' Act 1958.*

The purpose of an inquiry under the *Mines Regulation Act 1964* is to establish the nature and cause of the accident (s.42(1)), and to make recommendations with a view to the prevention of a similar accident (s.42(3)(a)).

The purpose of an inquest conducted under Part 10 of the *Coroners' Act 1958* is to establish so far as practicable -

The fact that a person has died;

The identity of the deceased person;

When, where and how the death occurred;

The person's, (if any) to be charged with murder, manslaughter, the offence of dangerous driving of a motor vehicle causing death as set forth in the *Criminal Code, s.328A*, or any offence set forth in the *Criminal Code, s.311*.

At some stage during directions hearings in brisbane, the issue of jurisdiction was "flagged". This was due to the fact that the cause of death may be not determined or may be found to be "natural causes".

This would therefore affect the jurisdiction of the warden and reviewers to conduct an inquiry pursuant to the *Mines Regulation Act 1964*, and any such inquiry would therefore have to terminate.

The pertinent words in Section 42 of the *Mines Regulation Act 1964* are "In every case of accident causing death or serious bodily injury".

There is some dispute about the cause of death. This dispute revolves around the evidence of forensic pathologists and other medical experts, and the evidence of electrical engineers and other electrical experts.

However, it is not the function of the reviewers to find or make a finding about the cause of death. They need to be satisfied only that there has been a death or serious bodily injury from an accident.

What is an accident? The definition in the Australian Concise Oxford Dictionary is -

"1. An event that is without apparent cause, or is unexpected. 2. An unfortunate event especially one causing physical harm or damage, brought about unintentionally. 3. Occurrence of things by chance."

Other definitions of a similar vein are available (see Strouds Judicial Dictionary - 5th Edition, and Jowitts Dictionary of English Law).

We have the matter of Eaton v Caledonian United and New Zealand G.M. Coy Ltd (7.4.1897) when considering a death in a mine - "Any event out of the ordinary course happening in a mine which itself causes or is likely to cause injury is an "accident" within the meaning of s.18 of that Act".

Notwithstanding that there is some dispute as to the cause of death, we consider the finding of a mine worker in an unconscious or dead state with an electrode against his neck constitutes a "serious bodily injury" which would invoke the jurisdiction of the warden's court to hold an inquiry under the provisions of Section 42.

If that approach is rejected, we turn to Section 43(2) of the *Mines Regulation Act 1964*.

This section states interalia that the minister on his own initiative or when requested to do so, may order an inquiry to be held. I am aware that an internal memorandum referring to the deaths of Mr Fowler and a Mr Johnston has been "noted" by the minister, and endorsed under his signature in his own handwriting -

"I must stress that we do all we can to expedite these hearings".

While the purist may say those words are not a "direction", they are so close to a direction the difference is immaterial, and the intention and the desire of the minister is clear.

We therefore consider we are able to proceed under the authority of Section 43 of the Act, and Section 43 uses Section 42 of the Act for procedure.

In relation to the inquest, I desire to examine the evidence given over the past four days, and I adjourn the inquest to a date to be fixed.

Schedule "C" Findings:

We find -

Name of deceased: Phillip Anthony Fowler

Date of death: 14 december 1997

Place of death: Cannington mine

Nature of accident:

At about 10.45 am on Sunday, 14 december 1997, Mr Phillip Anthony Fowler was found in an unconscious state by Mr Scott Mead and Mr Brian Christie at the crib room of the 574 metre level (mLv) at the BHP Cannington mine.

An initial assessment of the situation by Christie and Mead indicated that Mr Fowler was lying on his back with a welding handpiece in his right hand that was resting on his chest.

The handpiece contained a welding electrode that was resting on the right side of his neck and the welding cables across and beneath his body.

The power was isolated at the main switch by Christie and the welding handpiece, electrode and cables removed from Mr Fowler. When the handpiece was removed an electrode burn was clearly visible on the right side of Mr Fowler's neck.

Attempts at resuscitation were commenced and continued until registered nurse Sara McCulloch and others arrived from the surface and Mr Fowler was transported to the medical centre. Resuscitation attempts continued during transport and on the surface.

After arrival of the Royal Flying Doctor, Dr Richard Stone, and after further resuscitation attempts, life was pronounced extinct at 12.32 pm.

Cause of accident:

From the evidence presented to the inquiry, we are satisfied that -

Mr Fowler, a boilermaker, was completing the fabrication and installation of the door and door frames of the crib room at the 574 mLv. This work entailed the use of a Transarc Junior Welder type TAD Z19, serial number AB5201 and Satincraft 13 electrodes.

The electrode holder was found to be defective.

He was not wearing protective gloves.

The atmosphere in the work area was hot and humid and most probably, above the standard that required special precautions to be taken as per Part 2.3.2 of the metalliferous mining regulations.

Parts of the crib room floor, in particular the section where Mr Fowler was alleged to be working and eventually found, have been described as wet.

There was no evidence that special precautions had been taken.

Mr Fowler was working alone.

Other observations

Due to the belief that Mr Fowler was a competent craftsman with many years experience, there was a lapse in active supervision on this occasion. This lapse in supervision was critical given the nature and the location of the work.

There was a failure to observe the requirement of Section 39.1 of the *Mines Regulation Act*. While we appreciated the efforts made to rescue Mr Fowler and remove him to the surface, subsequent activities may have resulted in the loss of vital evidence which would have assisted the Inquiry.

The delay in notification of next of kin is noted, and we trust that measures are put in place to prevent a recurrence.

Schedule "D" Recommendations:

The recommendations of the reviewers are as follows:

We acknowledge the development and implementation of the Cannington welding procedures, including the installation of voltage reducing devices (VRD's) on all alternating current welding equipment on site and would recommend the adoption of similar procedures and personal protection devices for welding equipment at all mines.

Effective standard work instructions for working in heat must be developed, implemented and enforced.

Contractors and sub-contractors employed on mine sites must have effective safety management systems in place that clearly define the role and responsibility of supervisors and their inter-relationship with the mine owners, agents or managers.

Schedule "E" Report of the Warden:

I concur with the findings of the reviewers as to the nature and cause of the accident and, before closing, I have a few comments: exhibit number 10, that is the box containing the equipment is to be returned to the custody of the senior inspector of mines at Mt Isa to be held for a period of 12 months. Any party desiring access or possession of the property can make application to either the court or the senior inspector. One proviso there is that the welding handpiece and the cable attached to it will be retained by the court and similar provisions exist to gain access.

We thank the inspectors at Mt Isa for their reports and also Mr Lennox, the mine manager, for his report. We thank Mr Tate and Ms Silvester for their assistance and those at the bar table who have appeared and participated in the proceedings. A number of witnesses travelled considerable distances in order to give evidence and we thank them for their attendance.

This inquiry was able to proceed because additional resources have recently been made available to the court. I thank the deputy director-general for his assistance in that regard. And, last of all, but not the least, to my staff Mr Dahlke and Miss Susan Weller who, apart from their duties in Mt Isa this week, have put in a huge effort over the last month in the preparation for this inquiry.

The inquiry is closed.

26 february 1999

Gadsby, Dale

Findings and Recommendations

The *Coal Mining Act 1925* -

Findings and recommendations of reviewers and mining warden following an inquiry into fatal injuries received by Dale Gadsby at Blackwater Open Cut mine on 4 may 1997 Warden's Court of Queensland Emerald 2-3 december 1997.

Before: Mr A J Chilcott, esquire mining warden

Reviewers:

- Mr John Patrick Brady
- Mr Russell David Muller
- Mr Derek Leigh Hammet
- Mr Raymond Norman Bird

To assist:

Ms Margaret Maloney, barrister instructed by crown solicitors office for inspectorate

Appearances:

- Mr A S Mellick, barrister instructed by Messrs Rees R and Sydney Jones, solicitors for next of kin
- Ms M Gibney, solicitor of Allen Allen & Hemsley for BHP Coal and Graham Smith (mine manager)
- Mr M Best, Construction, Forestry, Mining and Energy Union (CFMEU)
- Mr P H Lees, Australian Manufacturing Workers Union (AMWU)

Witnesses examined: refer transcript and schedule "a"

Exhibits tendered: refer transcript and schedule "b"

Findings: refer transcript and schedule "c"

Recommendations: refer transcript and schedule "d"

Report of mining warden: refer transcript and schedule "e"

Schedule "A" Witnesses examined:

- Michael Paul Walker (inspector of mines)
- Thomas Graeme Sullivan
- Graham Hedley Smith (mine manager)
- Evan Graeme Biles
- Robert Peter Williams
- Paul Van der Klooster (witness in hospital - discharged)
- Francis Geoffrey Paull
- Lyle Booker
- Craig Ian Caton
- James Ronald Wirth

- Darryl Ross Wockner

Schedule "B" List of Exhibits

No of Exhibit	Nature of Exhibit	Tendered by
1	Post-Mortem Examination Report - Form 10	Ms M Maloney
2	Post-Mortem Examination Certificate - Form E	"
3	State Analyst Certificate - 24 June 1997	"
4	State Analyst Certificate - 21 October 1997	"
5	Life Extinct Certificate	"
6	Police Report	"
7	Original Report - Inspector of Mines	"
Exhibit A for Ident	Three (3) Colour Photographs - (Large)	Ms M Gibney
8	Folder of Documents - BHP Australia Coal Limited	"
9	BHP Blackwater Open Cut Mine - Record Book Entry	Mr M Best
10	Three (3) Colour Photographs - (Large) formerly Exhibit A for identification	Ms M Gibney
11	Overtaking Heavy Equipment - (Overhead)	"
12	Original Statement - Professor Christie	"
13	Medical Certificate - Paul Van der Klooster	Ms M Maloney
14	Letter of Appointment - Craig Caton (dated 9 May 1995)	Ms Gibney

Schedule "C" Findings:

We find -

Name of deceased: Dale Gadsby

Date of fatal injury: 4 may 1997

Place of accident: Blackwater

Nature of accident:

Shortly after 12-30 pm on sunday 4 may 1997 Mr Dale Gadsby received fatal injuries when the light vehicle, a toyota cruiser trayback utility, unit number TKP5746, which he was driving collided with and was subsequently crushed by an articulated Euclid 90,000 litre water truck, unit number TKD1300, and trailer 749-1300 being operated by Mr Thomas Graham Sullivan. The passenger in the toyota, Mr Evan Graeme Biles sustained minor injuries.

Immediately prior to the accident, Mr Gadsby accompanied by Mr Biles as the sole passenger in the light vehicle was travelling south along the haul road from the BHP Blackwater mine industrial complex.

At a point about one kilometre south and adjacent to a building known as the large parts warehouse, the light vehicle approached the Euclid water truck which was watering the haul road to the south.

The evidence of Mr Biles and Mr Sullivan indicates that the water truck moved to the left side of the haul road, before turning right into the stockpile entrance prior to the collision occurring.

Mr Gadsby attempted to pass the water truck by moving to the right hand side of the haul road.

When the toyota vehicle was adjacent to the water truck and past the water sprays, Mr Biles observed that the water truck was turning to the right.

From the evidence submitted, it would appear that Mr Gadsby attempted to take evasive action by moving further to the right and applying the brakes in a controlled manner. The toyota subsequently impacted with the right hand side of the water truck primemover and the truck's trailer went over the front section of the toyota.

Cause of death:

From the medical certificate tendered:-

1. (a) Crushed brain

Cause of accident:

From the evidence given to this Inquiry it would appear that the inter-departmental communication between the coal haulage and the maintenance departments on this particular day was inadequate.

As a result of this Mr Biles was unaware that the Ramp 2 west stockpile area was in use and therefore unaware of this mining activity.

Both the light and the heavy vehicles were fitted with two way radio communication albeit on different channels, however, Mr Sullivan stated that no attempt was made by the occupants of the toyota to advise him of the intention to overtake.

It would seem from the evidence that Mr Biles and possibly Mr Gadsby did not realise or know that the water truck was turning into the stockpile area, until just prior to the collision.

Contributing factors may include:-

- A failure to observe the turning indicator on the water truck.
- Visibility obscured by the spray from the water truck.

Mr Sullivan, the water truck operator, did not realise or know that the toyota land cruiser was attempting to pass on the right hand side.

Contributing factors may include:-

- Poor visibility from the operator cabin.
- Water spray.
- No communication with the toyota.

From the evidence presented, although cannabis was detected in Mr Gadsby's urine, we are unable to find whether or not this contributed to the accident.

Although signs were erected, we are not satisfied that the location of these signs clearly defined the entrance and exit of the Ramp 2 west stockpile area.

Schedule "D" Recommendations:

The recommendations of the reviewers are as follows:

1. An effective communication system that ensures that all persons performing duties within the active work areas of the mine are advised of the nature, extent and location of normal mining activities.
    1. (b) This communication system shall contain elements that ensure that all persons are advised of and have sufficient knowledge to identify any abnormal activity.
2. All persons must comply with the safe work procedures, special rules and the manager's schemes for the Blackwater mine.
3. Proactive action should be taken to develop and implement an effective drug and alcohol testing program.

Schedule "E" Report of the Warden:

The reviewers and myself wish to acknowledge the pro-active action which has been taken by BHP subsequent to the occurrence of this fatality.

We also acknowledge that it is the legal responsibility of managers, supervisors, foremen, open cut examiners and mine officials to ensure that all employees are provided with a safe place of work.

However, we also acknowledge that if Acts, schemes, policies and procedures are put into place to ensure the safe place of work then, all employees have a personal responsibility to be fully committed, understand and comply with such processes as a whole.

We commend the inspectorate for the standard of their report. Indeed, we consider the report to be of a high standard. Further, we found the re-enactment video tape to be of great benefit in understanding the incident.

I thank Ms Maloney for her assistance during this inquiry.

I also thank the reviewers and my clerk for their time and assistance during this inquiry.

In conclusion, I concur with the findings of the reviewers as to the nature and cause of the accident.

The inquiry is now closed.

03/12/1997

Galvin, Michael John and Jones, Edward Mervyn

Findings and Recommendations

The *Mines Regulation Act 1964* -

Findings and recommendations of reviewers and mining warden following an inquiry into serious injuries received by Michael John Galvin and Edward Mervyn Jones at Lorena mine, Cloncurry on 26 august 2000 Warden's court of Queensland

Before: Mr F W Windridge, esquire Mining Warden

Reviewers:

- Mr Paul Henley
- Mr Michael Harvey
- Mr Graham Caddies
- Mr Brian Davies

To assist:

Mr J Tate (instructed by crown law office) on behalf of the mines inspectorate and counsel assisting

Appearances:

- MR P Ambrose (instructed by Blake Dawson and Waldron) for Lorena Mines Pty Ltd and Mount Cobalt Mining Pty Ltd
- MR T Matthews (instructed by Bennett and Philp) for Mr Michael Galvin
- MR B Lauries (instructed by Simmonds Crowley and Galvin) for witness Patrick David Ross
- MR R Bannerman (solicitor) for Queensland Terminals Pty Ltd
- MR P McGarvey, District Workers' Representative

Witnesses examined: refer transcript and schedule "a"

Exhibits tendered: refer transcript and schedule "b"

Findings: refer transcript and schedule "c"

Recommendations: refer transcript and schedule "d"

Report of mining warden: refer transcript and schedule "e"

Schedule "A" Witnesses examined:

- Inspector Robert Bruce O'SULLIVAN
- Joe SODA
- Peter Stuart FERGUSON
- Joseph Charles QUAGLIATA
- Andrew Terrance FINNIGAN
- Patrick David ROSS
- Dudley Lin JESSER

- Harold John BURKE
- Michael John GALVIN
- Edward Mervyn JONES
- William Edgar MATTHEWS

Schedule "B" List of Exhibits

No of Exhibit	Nature of Exhibit	Tendered by
1	Report of Inspector R B O'Sullivan	Mr J Tate
2	Colour Photographs (Inspector O'Sullivan)	"
3	Accident Report Overview AS 3780-1994 The storage and handling of corrosive substances Australian Dangerous Goods Code Coogee Chemicals - Material Safety Data Sheet Sulphuric Acid 98% IMDG Code Portable Tanks and Road Tank Vehicles	"
4	Similar Butterfly valve Similar Camlock fitting	"
5	Similar Ball Valve - Minsup Econovalve	"
6	Pipes from Tank	"
7	Response letter from Mr R O'Sullivan dated 17 January 2001	"
8	Summary of Colour Photographs	Mr T Matthews
9	Statement of Joe Soda	Mr J Tate
10	HBL CHEMTRANS Customer Site Inspection Check List	"
11	Statement of Peter Stuart Ferguson	"
12	Two (2) Statements of Joseph Charles Quagliata	"
13	Statement of Andrew Terrance Finnigan	"
14	Statement of Patrick David Ross	"
15	File Note - David Ross Phone Interview - 20/10/2000	Mr T Matthews
16	HBL CHEMTRANS Work Instructions - Unloading Sulphuric Acid (1) Generic Instructions (2) BHP Cannington Mine	Mr J Tate
17	Two (2) Statements of Dudley Lin Jesser	"
18	Statement of Dudley Lin Jesser dated 31/8/2000	"
19	Statement of Harold John Burke	"
20	Statement of Michael John Galvin	"
21	HBL - Copy of Safety Management System	"
22	Statement of Edward Mervyn Jones dated 29/8/2000	"

No of Exhibit	Nature of Exhibit	Tendered by
23	Statement of Edward Mervyn Jones dated 7/9/2000	"
24	Statement of William Edgar Matthews	"

Schedule "C" Findings:

We find -

Name of injured: Michael John Galvin and Edward Mervyn Jones

Date of injury: 26 august 2000

Place of accident: Lorena Mine, Cloncurry

Nature of accident:

At about midday on Saturday 26 August 2000 Mr Michael John Galvin and Mr Edward Mervyn Jones received serious injuries at the Lorena Mine near Cloncurry when a loading/discharge butterfly valve on the top of a tank container was opened, allowing sulphuric acid to escape from the tank under pressure.

Immediately prior to the incident Mr Galvin and Mr Jones had been on the top of the tank container examining inlet and outlet valves.

The injuries received by Mr Galvin were acid burns to 65% of his body with a very severe affect on his vision. Injuries suffered by Mr Jones were acid burns to his face and body.

Cause of accident:

Tank container TCAU 010683/7 left Townsville on 2 August 2000 by rail to Cloncurry with a load of sulphuric acid for delivery to another mine. The acid was subsequently delivered to Mount Isa and unloaded at the AMPAC plant. The empty ISOTAINER was then transported back to Cloncurry. After remaining at Cloncurry for a number of days the Isotainer was taken from the Cloncurry railhead and delivered to the Lorena Mine by HBL Chemtrans Pty Ltd where it was intended to be used as a storage tank for sulphuric acid in a heap leaching operation.

From the evidence we are satisfied that a quantity of sulphuric acid remained in the tank and was under some pressure either from the unloading process at AMPAC or ambient temperature change as a result of storage in the open at Cloncurry. When examining the top of the tank on 26 August 2000 Mr Galvin and Mr Jones were exposed to harm when the butterfly valve of a loading/discharge spear was opened without prior venting of the Isotank allowing some of the remaining acid in the tank to exit the tank under pressure as a spray or plume via the loading/discharge spear. The spray was of sufficient volume and under enough pressure to cover both men and the immediate area with acid.

Schedule "D" Recommendations:

We recommend that -

1. If a supplier or operator is to use a tank for any purpose other than for what it had been designed then the supplier of the tank must undertake a formal risk assessment to establish if the tank container is fit for purpose.
2. The supplier should establish a system to ensure that the tanks under their control comply with all relevant legislation standards and codes with specific reference to - a) Function of each tank connection to be clearly marked; b) Each tank connection must have a suitable isolation valve fitted and clearly marked; c) Its serviceability.
3. If the supplier provides a tank container for use by persons other than their own trained operators, they must - a) Provide written operating instructions for safe use; b) Ensure customers/operators are competent in the use of the container and the handling of the material; c) Ensure that any modifications undertaken by anyone are formally documented, carried out by competent persons and approved by the tank owner before such modifications are carried out.
4. Install and use locking devices to prevent access to all valves by unauthorised personnel.
5. Prior to any work being undertaken on site the Registered Manager must ensure that facilities, written procedures and work methods are approved and in place, and that all personnel are competent to undertake the tasks assigned.
6. Install a system for identifying the state of the tank, eg - a) Purged b) Empty - In Product c) Full - In Product

Schedule "E" Report of the Warden:

On 20 August 2000 Mr Michael John Galvin and Mr Edward Mervyn Jones received serious injuries whilst performing work at the Lorena Mine Cloncurry.

The Mine was formally engaged in the mining and processing of ore by heap leaching for the production of gold.

This operation had ceased and it was proposed to commence the treatment of cobalt tailings by heap leaching with sulphuric acid on leaching pads that were available at the Lorena Mine.

As at the date of the accident no cobalt tailings had been delivered or spread on the pads, and no delivery of bulk sulphuric acid had taken place. Although there had been some testing on a very small scale, the proposed operation for the bulk treatment of tailings was still in the "setup" phase.

No Manager had been appointed under the Mines Regulation Act 1964 for the current testing operation or the proposed heap leaching operation.

A number of witnesses have been examined over the past three (3) days, and twenty-four documents and reports have been admitted into evidence as exhibits. It is hoped that the release of the findings and recommendations will alert all those associated with the transport, storage and use of dangerous goods particularly acid, to the inherent dangers that are always present.

Findings as to nature and cause:

The Reviewers have delivered their findings as to nature and cause of the accident. I concur with and adopt those findings.

Having heard the oral evidence given at the Inquiry, and having examined the documentary evidence tendered at the Inquiry, I am not of the opinion that there is any cause to take or recommend any action under Section 45 of the Act in relation to the holder of any certificate,

licence or authorisation under the Mines Regulation Act 1964. There appears to be no such person.

I thank Mr Tate for his assistance as Counsel assisting, and those legal representatives who appeared for the various parties at the Inquiry.

Finally, I thank the Reviewers for their assistance at this Inquiry.

The Inquiry is now closed.

9 February 2001

Goldstar, Michael

Findings and Recommendations

The *Mines Regulation Act 1964* -

Findings and recommendations of reviewers and mining warden following an inquiry into serious injuries received by Michael Goldstar at Mount Isa Mines limited lead mine on 20 december 1999 Warden's court of Queensland Mt Isa 13-16 june 2000

Before: Mr F W Windridge, esquire Mining Warden

Reviewers:

- Mr J Brady
- Mr T Hood
- Mr R Beattie
- Mr K Singer

To assist:

Mr J Tate (instructed by crown law office) on behalf of the mines inspectorate and counsel assisting

Appearances:

- MR G Mullins (instructed by Messrs Maurice Blackburn Cashman) for Mr Michael Goldstar
- MR G Fill (Solicitor of Messrs Conroy & Conroy) for Transfield Pty Ltd
- MR N O'Connor, principal legal adviser for Mount Isa Mines for the registered mine manager, Mr Tom de Vries
- MR P McGarvey, district worker's representative

Witnesses examined: refer transcript and schedule "a"

Exhibits tendered: refer transcript and schedule "b"

Findings: refer transcript and schedule "c"

Recommendations: refer transcript and schedule "d"

Report of mining warden: refer transcript and schedule "e"

Schedule "A" Witnesses examined:

Wednesday, 14 June 2000

- Hermann Hans FASCHING
- Reima Tapio RAIJAS
- Laurence Keith WATTS

Thursday, 15 June 2000

- Michael GOLDSTAR
- John Edward LENNON
- Arthur Edward EGAN
- Bradley Colin Kenith BELLERT
- Norman Grant ALLAN
- Johnathon Lyle WHITE
- David Mark PLANT
- Robert John HAMMOND
- Tom de VRIES

Schedule "B" List of Exhibits

Exhibit No	Nature of Exhibit	Tendered By
1	Letter from the Honourable Tony McGrady received 2 May 2000	Mr J Tate
2	Report of Investigating Officer Hermann Fasching	"
3	Mine Manager's Report	"
4 (a) 4 (b) 4 (c)	17 Colour Photographs (Set 1) 4 Colour Photographs (Set 2) 21 Colour Photographs (Set 3) *extra photographs enclosed*	"
Exhibit "A" for Ident	Additional Material from MIM	"
5	Accident Report Overview	"
6	Statement of Reima Tapio Raijas	"
7	Statement of Laurence Keith Watts dated 21/12/99	"
8	Statement of Laurence Keith Watts dated 23/12/99	"
9	Colour Photograph marked by witness Watts	Mr G Mullins
10	Statement of Michael Goldstar	"
11	Statement of John Edward Lennon	Mr J Tate
12	Statement of Arthur Edward Egan	"
13	Statement of Bradley Colin Bellert	"
14	Copy of diagram marked by witness Bellert	Mr G Fill
15	Statement of Norman Grant Allan dated 21/12/99	Mr J Tate
16	Statement of Norman Grant Allan dated 23/12/99	"
17	Piece of railway line from scene of accident	"
18	Statement of Johnathon Lyle White	"

Exhibit No	Nature of Exhibit	Tendered By
19	Statement of David Mark Plant	"
20	Statement of Robert John Hammond	"
21	Training System Manual - Lead Mine	Mr N O'Connor
22	Additional Material from MIM (formerly Exhibit "A" for identification)	"

Schedule "C" Findings:

We find -

Name of injured: Michael Goldstar

Date of injury: 20 december 1999

Place of accident: J59 south drive, 19 level haulage Mount Isa Mines Limited lead mine

Nature of accident:

At about 1520 hours on Monday, 20 december 1999, Mr Michael GOLDSTAR, a boilermaker in a track maintenance crew sustained serious injuries when he fell from a modified flat bed rail car.

The accident occurred in the J59 south drive, 19 level haulage in the Mount Isa lead mine.

Immediately prior to the accident, Mr Goldstar was seated on a toolbox which was mounted to the flat bed rail car. He was a member of a six man crew who had recently completed their assigned tasks and were in the process of travelling back to the plat.

The flat bed railcar was being pushed by a Gemco battery powered locomotive unit No 76.

Mr Goldstar was observed by some members of the crew to fall from the rail car as the unit passed over points No 22 of the J59 drive.

Mr Goldstar's lower left leg was crushed between the rail track and the leading wheel of the locomotive.

Members of the crew rendered immediate first-aid before Mr Goldstar was transported to the surface and subsequently to the Townsville base hospital. Three days after the accident a surgeon amputated his lower left leg.

Cause of accident:

From the evidence presented to the Inquiry, we are of the opinion that -

- The unit supplied and in use at the time for the transport of men and materials was inadequate for the tasks being performed.
- The system of work employed at the time enabled the transport of man and materials in a manner that exposed persons to unacceptable risk in that: The seating on the flat bed rail car was in fact the lid or top of the mounted tool box and therefore did not offer comfortable seating.

- Mr Goldstar slipped or tripped and fell to a lower level while adjusting his seating position.
- Scrap steel and other rubbish was present beneath the feet of the crew members.
- There was no effective barrier, guard or constraint that would prevent a person falling from the rail car.
- The persons employed in these activities and their supervisors failed to recognise the hazards and to take effective action to control the hazards associated with the transport of man and materials.
- The procedures covering the transport of man and materials were not widely known nor practised by the persons involved.

Schedule "D" Recommendations:

The recommendations of the reviewers are as follows -

1. In circumstances where personnel are to be transported by rail, a fit for purpose personnel or personnel and equipment carrier must be used.
2. A process is to be established that will address the hazards associated with the 19 level haulage system. This process should include:

- A review of the operating procedures;
- Appropriate training and assessment;
- Regular internal audits.

Schedule "E" Report of the Warden: (Section 42(3)(a))

On 20 December 1999, Mr Michael GOLSTAR received serious injuries whilst performing work at J59 south drive on 19 Level of the Mount Isa Mines Limited lead mine.

The Isa mine is owned and operated by Mount Isa Mines Limited (MIM). The mine is a base metal operation which mines copper, silver, lead and zinc ores. Some processing and smelting is conducted on lease. As part of the operation, some works and services at the mine have been contracted out. One of these contractors is Transfield Construction Pty Ltd (TRANSFIELD). Mr Goldstar, the injured person was an employee of this contractor or a business unit thereof.

The appointed Manager of the Mount Isa lead mine under Section 27 of the *Mines Regulation Act* at the time of the incident was Mr T De Vries. Notwithstanding any contractual arrangements between MIM and Transfield, the registered manager has the supervision and control of all work to be performed by such contractor (Section 37- *Mines Regulation Act 1964*).

The members of the inquiry panel have conducted a site inspection of the accident scene on 19 level. They have also viewed the electric battery locomotive unit number 76 and platelayers' mancar unit number K8. These were the units involved in the incident.

A number of witnesses have been examined over the past two days and 22 exhibits including statements and reports have been admitted into evidence.

Findings as to nature and cause: (Section 42(3)(b))

The reviewers have delivered their findings as to the nature and cause of the accident. I concur with and adopt those findings.

Having heard the oral evidence given at the inquiry, and having examined the documentary evidence tendered at the inquiry, I am not of the opinion that there is any cause to take or recommend any action under Section 45 of the Act in relation to the holder of any certificate, licence or authorisation under the *Mines Regulation Act 1964*.

I thank Mr Tate for his assistance as counsel assisting, and those legal representatives who appeared for various parties at the inquiry.

Finally, I thank the reviewers for their assistance at this inquiry.

The inquiry is now closed.

16 June 2000

Gorey, Michael John

Findings and Recommendations

The *Mines Regulation Act 1964 - 1989*

Findings and recommendations of reviewers and mining warden following an inquiry into fatal injuries received by Michael John Gorey at Mount Isa Concentrator on 22 may 1991 warden's court of Queensland Mount Isa 30 september 1991

Before: Mr F W Windridge esquire Warden

Reviewers:

- MR JOHN MOORE
- MR DAVID HARRIS
- MR IAN MacLEOD-CAREY
- MR GEORGE HUTCHINSON

To assist:

MR RAYMOND SEYMOUR, inspector of mines.

Appearances:

- MS SONIA HATCHARD - next of kin
- MR GRAEME MOUSLEY - district workers' representative
- MR ADRIAN VAN DER KAMP - contractor
- MR RICHARD WOOD - solicitor for mine and mine manager

Witnesses examined: refer transcript and schedule "a"

Exhibits tendered: refer transcript and schedule "b"

Findings: refer transcript and schedule "c"

Recommendations: refer transcript and schedule "d"

Report of mining warden: refer transcript and schedule "e"

Schedule "A" Witnesses examined:

- Peter Clive HORNSBY
- Malcolm LEWIS
- Darren John LUTZE
- Juoro Olati LEHTI
- Robert Phillip VAN RYT
- Donald Robert FERGUSON
- Arty John HANNILA
- Christopher Roger FITZGIBBON

Schedule "B" List of Exhibits

No of Exhibit	Nature of Exhibit
1	Police Report - Constable Hornsby
2	Post Mortem Certificate
3	Post Mortem Report
4	Government Analyst Report
5	Copy of Record Book Entry
6	Manager Report
7	Statement - Darren John LUTZE
8	Statement - Juoko Olati LEHTI
9	Statement - Robert Phillip VAN RYT
10	Statement - Donald Robert FERGUSON
11	Statement - Kevin Rahin BOCOS
12	Statement - Arty John HANNILA
13	Statement - Christopher Rodger FITZGIBBON
14	Photographs x 3

Schedule "C" Findings:

We find -

Name of deceased: Michael John Gorey

Date of death: 21 may 1991

Location of death: New mullock bin at Copper Concentrator, Isa mine

Nature of accident:

At approximately 10.00 am on wednesday, 22 may 1991, the deceased, Michael John Gorey, a boilermaker employed by the contracting firm of Barkly Welders, was gas-cutting an opening in the floor chequer plate beneath the head snubber drum of the new conveyor extension at the top of the mullock bin. This installation had been commissioned only three days previously and it was found that fines ahering to the belt were causing a build-up on the floor beneath the conveyor. The purpose of the opening was to allow the spillage to fall into the bin.

Assisting deceased was Darren John Lutze, another boilermaker also from Barkly Welders. Just before the accident, these two were joined by Juoko Oltai Lehti, an MIM beltman who came across from the crude ore bins to find out how long it would be before he could restart the belt.

Lutze took over from deceased to finish the cut while the deceased and Lehti held a wire rope sling attached to the section of floor plate being removed so that when detached it would not fall into the bin. Both men were standing on four unsecured steel acrow plants spanning the

discharge opening in the floor beside the conveyor. Neither man was secured by safety belt and lanyard.

As Lutze completed the cut and the section of plate fell free, Gorey and Lehti were pulled forward, dislodging one of the acrow planks. Gorey fell through the gap, temporarily grasped the conveyor stop line and then continued his fall 26 metres to the bottom of the empty bin where he came to rest in the west discharge chute. Lehti fell spreadeagled across the remaining Acrow planks but managed to get clear. The deceased died almost instantaneously due to cardio-respiratory arrest due to massive internal injuries and lung collapse.

Cause of accident:

The section of floor plate being removed which had a mass of 73kg was not properly secured to a suitable anchor point.

The acrow planks spanning the conveyor discharge opening and on which deceased and Lehti were standing were not secured in any way.

Neither deceased nor Lehti were attached by safety belt and lanyard.

Schedule "D" Recommendations:

The recommendations of the reviewers are as follows:

When removing structural sections in elevated position and it is not desirable for the member to fall free, the section to be removed must first be properly secured to a solid anchor point. Chain blocks, pull-lifts or slings and shackles, all of adequate strength, are considered suitable for this purpose.

In elevated positions, planks used as temporary cover for openings must be secured to prevent there being accidentally dislodged.

Also, personnel required to work where there is a risk of falling must use safety belt with lanyard or other approved means of restraint.

Steps should be taken by managers and supervisors to ensure a greater appreciation and awareness of general safety issues on all construction sites by those people employed thereon.

Schedule "E" Report of the Warden:

I'd indicate that as warden I agree with the findings as read out. I wish to thank the reviewers for their assistance in the conducting of this inquiry. And as there's no further matters to attend to, the inquiry is formally closed.

Haigh, Ian William

Findings and Recommendations

The *Mines Regulation Act 1964* -

Findings and recommendations of reviewers and mining warden following an inquiry into fatal injuries received by Ian William Haigh at Base Hospital, Rockhampton on 16 december 1992 warden's court, Emerald, 5 may 1993

Before: Francis William WINDRIDGE esquire Warden

Reviewers:

- MR R T Coyne
- MR S W Young
- MR P R Forbes
- MR D C Reeve

To assist:

MR D MACKIE, inspector of mines.

Appearances:

- MR M T BEST, district workers' representative
- MR T D NORTH, barrister, instructed by solicitors Messrs Quinlan Miller & Treston for widow and next-of-kin
- MR R BANNERMAN, legal officer with BHP Australia Coal for Gregory Joint Venture

Witnesses examined: refer transcript and schedule "a"

Exhibits tendered: refer transcript and schedule "b"

Findings: refer transcript and schedule "c"

Recommendations: refer transcript and schedule "d"

Report of mining warden: refer transcript and schedule "e"

Schedule "A" Witnesses examined:

- Ronald William STOKES
- Alan George THORNE
- Lance Stewart MATSCHOSS
- John Patrick DONNELLY
- Ian David FINNIS
- Rodney John FLAVEL
- Daniel Patrick DOYLE
- Martin Cuthbert DAVIS

- Phillip Arnold NIXON
- Steven Trevor MOORE
- Barry William RYAN
- Kenneth Ivor TAYLOR
- Andrew Cameron BLACK

Schedule "B" List of Exhibits

NO	DESCRIPTION
1	Report Inspector of Mines
2	Photographs 1 - 18
3	Sketch
4	Plan - Location (Deceased and Tools)
5	Plan - Location
6	Copy - Police Report
7	Post Mortem Report
8	Post Mortem Certificate
9	Statement - R W STOKES
10	Statement - A G THORNE
11	Statement - L S MATSCHOSS
12	Statement - J P DONNELLY
13	Statement - I D FINNIS
14	Statement - R J FLAVEL
15	Statement - D P DOYLE Statement - Martin Cuthbert DAVIS (Not formally admitted as an Exhibit)
16	Statement - P A NIXON
17	Statement - S T MOORE
18	Statement - B W RYAN
19	Statement - K I TAYLOR
20	Special Instructions
21	Statement - AC BLACK

Schedule "C" Findings:

We, the four reviewers selected by the warden under the provisions of Section 42 of the Mines *Regulation Act 1964-1989* to inquire into the nature and cause of this fatal accident, and whose names appear below, announce our findings as follows:

Name of deceased: Ian William Haigh

Date & time of accident: Thursday, 15 december 1992

Date & time of death: Friday, 16 december 1992 08.30 hours

Location of accident & death: Main workshop, Gregory mine base hospital, Rockhampton

Nature of accident:

In late 1992 two D-11N caterpillar dozers were delivered to the Gregory mine some sixty kilometres north-east of Emerald by Hastings Deering. One dozer was delivered in parts, assembled on site in the workshop, commissioned and handed over. The second dozer was delivered in parts and was in the process of being assembled on the fifteenth day of december 1992. Assembly was being carried out by Ian William Haigh, an employee of Hastings Deering, assisted by Ronald William Stokes, an employee of Gregory mine. The deceased was observed by a number of persons to be working on the dozer after nine a.m. on fifteen december 1992, and in particular he was seen working in the vicinity of the right hand blade left-cylinder trunnion.

Sometime later there was the sound of tools falling on the concrete floor, and a short time after that Mr Haigh was found on the floor. The alarm was raised and first aid was rendered very quickly. An ambulance then conveyed Mr Haigh to the Emerald hospital. He was later transferred to the Rockhampton base hospital where he passed away at zero eight-thirty hours on sixteen december 1992.

Cause of accident:

The deceased was observed to be standing at some stage on a small platform towards the front of the D-11N dozer on the right hand side, apparently engaged in loosening bolts in the blade left-cylinder trunnions. The last known position is uncertain as it is possible Mr Haigh attempted to loosen the bolt while on the platform or changed his position and moved into the bonnet of the machine. No person observed the fall and the exact cause is unknown. Later testing showed that one bolt required approximately four hundred foot pounds of pressure to loosen, and it is feasible that the deceased was attempting to loosen this bolt. At the time and for that purpose it appears the deceased had placed a pipe over the bar attached to the socket to achieve greater leverage. It is highly probably that the socket slipped from the bolt when pressure was applied causing the deceased to lose his balance and fall.

Contributing factors may have been -

- The conditions of the tools including the wear in the socket, the bend of the bar and the fitting of the bar to the ratchet head;
- The angle of the trunnion heads;
- The tightness of the back bolt;
- The socket not sitting properly on the bolt head;
- The position that the deceased may have adopted to work on the bolt;
- The height at which the deceased had been working; and
- The lack of identification of risks including heights while working on assembly or disassembly of machines.

Schedule "D" Recommendations:

Mine management must ensure that contractors coming on site must have appropriate safe working procedures and practices in place for the work to be performed.

In future tender documents should match specific provision for the safe method of work based on a detailed risk assessment of the proposed project.

Management should seriously consider that workplace inductions should take place in addition to general induction.

Hastings Deering through the caterpillar system should advise all D-11N operators of potential hazards due to sockets not able to be correctly fitted to bolts on blade lift cylinder trunnion caps.

Schedule "E" Report of the Warden:

I concur with the findings of the reviewers as to the nature and cause of the accident.

The inquiry is closed.

Jackson, Wayne Anthony Corry

Findings and Recommendations

The *Mines Regulation Act 1964* -

Findings and recommendations of reviewers and mining warden following an inquiry into fatal injuries received by Wayne Anthony Corry Jackson at Mount Isa Mines Limited Lead mine 17 level on 6 october 1996 warden's court 17-18 june 1997

Before: Mr F W Windridge esquire Warden

Reviewers:

- Mr John Patrick BRADY
- Mr Gregory Allan DALLISTON
- Mr William Barron ELRICK
- Mr Trevor John HOOD

To assist:

Mr John TATE, barrister, crown law office.

Appearances:

- Mr G B Fill, solicitor of Messrs Conroy & Conroy, solicitors for mother of deceased, Robin Patricia Charles.
- Mr G Mousley, district workers representative and for father of deceased, Corry Hartley Jackson.
- Mr N O'Connor, solicitor of MIM Holdings for Mount Isa Mines Limited and Mr A McIlwain.
- Mr G Gear, solicitor of Messrs Gary Gear & Associates for Brian Anthony Marshall.

Witnesses examined: refer transcript and schedule "a"

Exhibits tendered: refer transcript and schedule "b"

Findings: refer transcript and schedule "c"

Recommendations: refer transcript and schedule "d"

Report of mining warden: refer transcript and schedule "e"

Schedule "A" Witnesses examined:

- John William HOWE
- Gavin Lloyd EVANS
- Pekka TUPPURAINEN
- Brian Anthony MARSHALL
- Gregory Paul HOWARTH
- Alan James RUSSELL
- Douglas FLEMING
- Kerry George Christopher PEUT
- Andrew Ivor Bruce McILWAIN

Schedule "B" List of Exhibits

No ofExhibit	Nature of Exhibit	Tendered by
1	Preliminary Report - John William Howe	Mr J Tate
2	Report - John William Howe (dated 21/3/97)	"
3	Folio of Photographs	"
4(a)	Post-Mortem Examination Certificate (Form E)	
(b)	Post-Mortem Examination Report (Form 10)	"
(c)	Certified Copy of Death Certificate	
(d)	State Analyst Certificate	
5	Exhibit Summary - Pages 3,4 & 5	"
6	"DOCUMENTS TO BE REFERRED TO.." - Small Book	Mr N O'Connor
7	Plan - Cross Section of Bench	Mr J Tate
8(a)	Plan of Bench Brow	"
(b)	Reconstruction of EIMCO on Bench Brow	
9	Statement of Gavin Lloyd Evans	"
10	Statement of Pekka Tuppurainen	"
11	Statement of Brian Anthony Marshall	"
12	Statement of Gregory Paul Howarth	"
13	Statement of Alan James Russell	"
14	Diagram Marked "A"	"
15	Statement of Douglas Fleming	"
16	Isafety - Daily Safety Check form	"
17	Statement of Kerry George Christopher Peut	"
18	Report of Lead Mine Manager - Andrew Ivor Bruce McIlwain	"

Schedule "C" Findings:

We find -

Name of deceased: Wayne Anthony Corry Jackson

Date of death: 6 october 1996

Place of death: 17d sub-level of the 16d8 stope in the Mount Isa Lead mine

Nature of accident:

On sunday 6 october 1996 Mr Wayne Anthony Corry Jackson, backfill mucker, sustained fatal injuries after the EIMCO 913 LHD mucking unit number 2510 he was operating on the 16D8 bench on 17E sub-level fell fifteen (15) metres into the stope to 17D sub-level of the lead mine, area 2 Mount Isa Mines.

Cause of death:

Severe penetrating/crush injury to upper chest with transection of thoracic spine.

Cause of accident:

At about 9.15 pm on 6 october 1996 Mr. Jackson was given instructions by supervisor Marshall to push off the loose material on 16D8 - 17E sub-level in preparation for the erection of a stop log.

The assigned task was covered by a M.I.M. work instruction dated 31 october 1995. No evidence was presented to the inquiry to show that this work instruction was passed on to Mr. Jackson either orally or in written form at the time of being given this task.

Mr. Jackson was last sighted at about 10.30 pm by Mr. Tuppurainen who was delivering timberman equipment (bricks). Mr. Tuppurainen gave evidence to indicate that Mr. Jackson was standing on the bench of 16D8 - 17E sub-level in front of EIMCO 913.

It appears from the evidence produced that whilst pushing the loose material from along the footwall side of the floor toward the void that Jackson inadvertently assumed a ledge left on the footwall side of the void was a continuation of the floor. Visibility on the EIMCO unit is limited. The driver is seated on the left hand side facing inwards towards the unit. Line of sight is forward and backwards along the left hand side. Little, if any, visibility is available on the right side of the unit. Jackson continued pushing until the unit was exposed over the void causing the machine to rotate in both vertical and horizontal planes.

There was no evidence produced to show that the brow of the void was unstable nor was there any mechanical failure of the EIMCO 913 unit number 2510.

Major contributing factors:

A second competent person was not deployed to the task of either assisting Mr. Jackson to mark up, or set up a strobe light as required by the standard work procedure MIM 0211 or to act as a spotter in accordance with the provisions of *Metalliferous Mining Regulation 1985 Part 7.15*.

Mr. Jackson being aware of these procedures did not find cause to take the necessary precaution to ensure his own safety by observing the requirements of the standard work procedures MIM 0211.

The evidence before us would strongly suggest that there was lack of effective control which would have prevented or at least minimised substandard practice, conditions, and human error and the realisation of the hazard associated with the task of removing the muck from the floor of the 16D8 bench on 17E sub-level prior to the erection of a stoplog.

Schedule "D" Recommendations:

The recommendations of the reviewers are as follows:

Where a vertical edge will be used as a backfill/tipping location, a stop log should be constructed in accordance with a procedure developed using a recognised risk management process.

Backfilling and tipping into stopes is to be carried out by competent personnel only and in accordance with the procedure developed by the above process.

Supervisors allocating tasks should ensure that those carrying out the tasks are fully aware of the risks involved, have the correct equipment and are aware of the correct procedures to carry out the task.

Supervisors must frequently audit use of correct equipment and procedures and must take appropriate action when non-compliance is observed.

Communications between management and employees must be improved to ensure that the commitment to and understanding of safe operations is mutual. It is recommended that a working group consisting of a cross section of all levels of employees be established to identify barriers to effective communications and determine means of removing these barriers.

1. Current redrafting of standard work instructions should continue.
2. Formal auditing procedures should be implemented to ensure that the standard work instructions are soundly established, maintained and observed.

Schedule "E" Report of the Warden:

I concur with the findings of the reviewers as to the nature and cause of the accident.

I thank inspector Howe for his report, and Mr. Tate for his assistance during this inquiry. I thank the reviewers for their participation and assistance during this inquiry.

As I indicated to you at the commencement of these proceedings, until my staffing resources are increased, only an uncorrected and uncertified transcript will be available to the parties. It is also highly probable that for the same reason, no further inquiries will be conducted at Mount Isa during 1997.

The inquiry is now closed.

18 june 1997

Johnston, Scott Robert

Findings and Recommendations

The *Mines Regulation Act 1964* -

Findings and recommendations of reviewers and mining warden following an inquiry into fatal injuries received by Scott Robert Johnston at Enterprise mine on 23 november 1998

Warden's court of Queensland 24-27 may 1999

Before: Mr F W Windridge esquire Warden

Reviewers:

- Mr J P Brady
- Mr R Perry
- Mr P Henley
- Mr W B Elrick

To assist:

Mr J Tate, instructed by crown law office, with him MS D Silvester

Appearances:

- MR S Reidy, Solicitor of Messrs Reidy & Tonkin for next of kin
- MR P Hastie, instructed by Minter Ellison for Byrnecut - RUC & Contractors
- MR N O'Connor, legal officer, Mt Isa Mines Limited
- MR S Yates, district workers' representative

Witnesses examined: refer transcript and schedule "a"

Exhibits tendered: refer transcript and schedule "b"

Findings: refer transcript and schedule "c"

Recommendations: refer transcript and schedule "d"

Report of mining warden: refer transcript and schedule "e"

Schedule "A" Witnesses examined:

Day One

- Christopher Paul SKELDING
- Brian Douglas OATS

Day Two

- Sergeant Darren Martin MURPHY (T'phone Evidence)

- Simon Leigh DORWARD
- Martin George AGNEW
- Thomas Frederick NEUHOLD
- Terence Raymond HAMMOND
- David Bruce BROWN
- William Rogers BLAKE
- Alan Mark ROWELL

Day Three

- Doctor Jeremy Steven HAYLLAR
- Professor Olaf H DRUMMER (Telephone Evidence)
- Derrick John BRAKE
- Christopher Paul SKELDING, recalled
- Phillip Howard GOODE

Schedule "B" List of Exhibits

No of Exhibit	Nature of Exhibit	Tendered by
1	Preliminary Report To The Chief Inspector of Mines - Investigating Officer Chris Skelding	Mr J Tate
2	Report to The Chief Inspector of Mines - Investigating Officer Chris Skelding	"
3	Colour Photographs "A" "B" "C" and Overhead Projections	"
4	Sixteen (16) Colour Photographs	"
5(A) 5(B)	Statement of Joseph Patrick Latham Statement of Christopher John Corbett	" "
6	Book of Documents	Mr N O'Connor
7	Statement of Brian Douglas Oats dated 24/11/98	Ms D Silvester
8	Statement of Brian Douglas Oats dated 24 November 1998	"
9	Statement of Brian Douglas Oats dated 18 May 1999	"
10	Police File - S R Johnston	Mr T Tate
11	Coroner's File - S R Johnston	"
12	Video Cassette - Accident Scene	"
13	Police Photographs (20)	"
14	Statement of Simon Leigh Dorward dated 24/11/98	Ms Silvester
15	Statement of Simon Leigh Dorward dated 24 November 1998	"
16	Supplementary Statement of Simon Leigh Dorward dated 12/5/99	"

No of Exhibit	Nature of Exhibit	Tendered by
17	Statement of Martin George Agnew dated 24/11/98	"
18	Statement of Martin George Agnew dated 24/11/98	Ms D Silvester
19	Statement of Thomas Frederick Neuhold dated 24/11/98	"
20	Statement of Thomas Frederick Neuhold dated 24/11/98	"
21	Statement of Thomas Frederick Neuhold dated 17/5/99	"
22	Statement of Terence Raymond Hammond dated 24/11/98	"
23	Statement of Terence Raymond Hammond dated 2/2/99	"
24	Statement of Terence Raymond Hammond dated 24/11/98	"
25	Statement of David Bruce Brown dated 3/12/98	"
26	Statement of William Rogers Blake dated 24/11/98	"
27	Statement of Alan Mark Rowell dated 1/12/98	"
28	Revised State Analyst Certificate dated 25/5/99	Mr J Tate
29	Statutory Declaration of Margaret Clare Woolcock dated 26/5/99	"
30	Evaluation of Ethanol Concentrations in Decomposed Bodies (R W Zumwalt) Experimental Studies on the Mechanism of Ethanol Formation in Corpses (R Nanikawa, F Moriya and Y Hashimoto) A Review - Possible Sources of Ethanol Ante- and Post-mortem: its Relationship to the Biochemistry and Microbiology of Decomposition (Janet E L Corry)	"
31	The blood alcohol curve and units of measurement	"
32	Curriculum Vitae - Professor Olaf H Drummer	Mr P Hastie
33	Report of Professor Olaf H Drummer dated May 14, 1999	"
34	Statement of Derrick John Brake	Mr N O'Connor
35	Original Report of Registered Mine Manager - P H Goode	"
36	Enlarged Colour Photographs	Ms D Silvester

Schedule "C" Findings:

We find -

Name of deceased: Scott Robert Johnston

Date of fatal injury: 23 novemeber 1998

Place of accident: M62 shaft 30B sub level Enterprise mine, Mount Isa, Queensland

Cause of death:

As per medical evidence tendered -

1(a) Rupture of left ventricle

1(b) Blunt chest trauma

Nature of accident:

On the day shift of monday, 23 November 1998, Scott Robert Johnston and four other miners performed normal drill and blast cycles of the M62 shaft approximately 532 metres below 20 level. After crib, the crew went to the bottom deck of the stage and commenced to bar down.

At about 1415 hours Scott Robert Johnston fell from the stage 6 metres onto the rill of the broken muck sitting on the bench and then fell a further 29 metres onto a muck pile at the bottom of the pilot raise at the 30B sub level. The injuries sustained were fatal.

Cause of accident:

From the evidence that we have heard, given that there was no actual eye witness, we are of the opinion:-

Mr Johnston was scaling the sides of the shaft on the north-eastern side of the lower deck of the shaft sinking stage just prior to the accident.

The stage was stationary at the time of the accident.

The nature of the work and the overbreak at this particular point meant that Mr Johnston could use a 1.8 metre scaling bar and effectively perform the task without the need to lean out or climb over the railing.

While it is possible that Mr Johnston fell outside the stage, which had a conforming safety rail, it is more likely that Mr Johnston fell inwards through the kibble hole where the top section of the safety rail was missing.

The fact that Mr Johnston was not using a harness and lanyard and the limited floor space in this area, greatly increased the risk associated with the task.

Schedule "D" Recommendations:

The recommendations of the reviewers are as follows:

Similar tasks or any other task where there is an unacceptable risk of serious bodily injury or death must be addressed by a hazard management plan, developed and implemented in accordance with AS/NZS 4360:1995; Risk Management.

The chief inspector of mines encourage the establishment of an industry work group to develop generic guidelines for safe shaft sinking operations.

The chief inspector of mines in association with the mining warden develop generic guidelines for the investigation of serious mine accidents.

Schedule "E" Report of the Warden:

I concur with the findings of the reviewers as to the nature and cause of the accident.

I do not intend to initiate any action under Section 45 of the *Mines Regulation Act 1964*.

There appears to have been some delay in notification of the accident to the next of kin. It is to be hoped that the mine owners, contractors and the police department will refine their procedures on this point and arrange for the appropriate person or authority to attend to the notification aspect as soon as possible after the accident.

I thank inspector Skelding for his report, and Mr Goode, the mine manager for his report.

I thank Mr Tate and Ms Silvester, and all those who have appeared at the bar table and participated in these proceedings for their assistance.

I thank the reviewers for their interest and assistance in the performance of their duties as required by Section 42 of the *Mines Regulation Act*.

The inquiry is closed.

27 may 1999

Kelly, David Anthony

Findings and Recommendations

The *Mines Regulation Act 1964* -

Findings and recommendations of reviewers and mining warden following an inquiry into fatal injuries received by David Anthony Kelly at Lead Smelter Gas Cooling Tower on 7 february 1991 warden's court of Queensland Mt Isa 9 march 1992

Before: Mr F W Windridge esquire Warden

Reviewers:

- MR C DESOE
- MR C WOLFF
- MR W BAGULEY
- MR G HUTCHINSON

To assist:

MR E WHEELWRIGHT, principal mechanical inspector.

Appearances:

- MR T P KELLY & S KELLY for next of kin
- MR G MOUSLEY, district workers' representative
- MR R B DICKSON, counsel for MIM
- MR G B FILL, solicitor for mine manager
- MR L A EVANS, solicitor, Gardner Perrot
- MR M FACEY, solicitor, Simon Carves

Witnesses examined: refer transcript and schedule "a"

Exhibits tendered: refer transcript and schedule "b"

Findings: refer transcript and schedule "c"

Recommendations: refer transcript and schedule "d"

Report of mining warden: refer transcript and schedule "e"

Schedule "A" Witnesses examined:

- Raymond Alexander SEYMOUR
- Paul Andrew BOUCKLEY-SIMONS
- John Peter CURRIE
- Desmond Gordon JENSEN
- Kevin Darcy McCARTHY
- Stephen Robert NEWMAN

- Kenneth John NASH
- Bevan John ROSSOW
- Conrad Wayne VAN EGMOND
- Max Frederick ROWLES
- John Marshall WELLINGTON
- Richard Phillip CROSS
- Graeme James KNUDSON
- Patrick ROCHFORD
- Malcolm Allan MACRAE
- Graeme Frederick McNAMEE
- Alan David DAVIES
- Frank William GRIGG
- David Leslie FINCH
- Gregory Robert YEOWART
- Darryl George STEPHENSON

Schedule "B" List of Exhibits

No of Exhibit	Nature of Exhibit
1	Mine Manager's Report
2	5 x B/W Photographs of Model
3	Area Survey Plan
4	Inspector's Report
5	Michael Gorey's Statement
6	Model (Held by Inspector at Mount Isa)
7	Record Book Entries
8	Statement - Bouckley-Simons
9	Statement - Currie
10	Statement - Jensen
11	Statement - McCarthy
12	Statement - Newman
13	Statement - Nash
14	Statement - Rossow
15	Police Report, Report to District Officer, Post Mortem Report, Post Mortem Examination Certificate
16	Inspector's Report Part 2
17	Statement - Fulwood
18	Simon Carves Report
19	Statement - Rowles
20	Statement - Cross
21	Statement - Knudson
22	Statement - Rochford

No of Exhibit	Nature of Exhibit
23	Statement - Taylor
24	Statement - McNamee
25	Statement - Davies
26	Memo Davies re Design check
27	Frank Grigg Report
28	Photographs 4 Albums A-U
29	Statement - Yeowart
30	Statement - Stephenson

Schedule "C" Findings:

We find -

Name of deceased: David Anthony Kelly

Date and time of accident: Between 10-10am and 10-15am on thursday, 7 february 1991

Date and time of death: Because of the severity of injuries sustained by deceased, death was virtually instantaneous.

Location of accident and death: Lead smelter gas cooler tower at the Isa Mine of Mount Mount Isa Mines Limited, Mount Isa.

Nature of accident:

On the morning of the accident, the sinter plant and blast furnace were shut down and a clean out of accumulated dust accretion in the gas cooler tower was commenced. Three men employed by the contracting firm of Gardner Perrott Pty Ltd and using specialised water jet tank cleaning equipment were engaged on this task. The crew consisted of the deceased, David Anthony Kelly acting as nozzle operator, John Peter Currie, radio communications officer, and Graeme James Knudson, water jet pump operator.

Kelly and Currie were on the platform at hopper level near the bottom of the tower. Kelly was directing the nozzle of a waterjet through an access hatch on the south-west side of the hopper washing accumulated dust from the crash bars above the buhler conveyor. Knudson was operating the water jet pump mounted on a truck parked at ground level in the north-east corner of the tower. Currie was acting as contact between Kelly and Knudson.

As Kelly continued to operate the water jet, the sub-structure supporting the tower began to collapse allowing the tower shell to drop vertically. The hopper at the base of the tower shell struck a concrete wall forming part of the old spray chambers above which the tower had been built. The shell then fell over to the north-east taking the downcomer duct with it and pushing over the steelwork on the north side. On striking the east wall of the old spray chambers and the ground, the shell of the tower split around its circumference into two parts.

When the tower began its initial vertical drop, Currie was moving away from Kelly towards the east side of the platform to communicate with Knudson below. He managed to scramble

through the handrails and down steps to the ground escaping with little more than shock. Knudson was struck by loose falling steel and knocked to the ground receiving cuts and bruises. Kelly did not get clear. His body was found among collapsed steelwork in the old spray chambers. A post-mortem examination revealed the cause of death to be transection of the cervical spinal cord due to (or as a consequence of) haemopneumothorax.

Cause of accident:

The gas cooler tower was constructed by Simon-Carves Australia, division of Simon Engineering (Australia) Pty Limited and put into operation in late 1978.

From the outset the tower was not self cleaning, and lead dust build-up on the walls became a problem. This problem was relieved from time to time by "clean-outs" by high pressure hoses, firstly by the lead smelter services, and lately by Gardner Perrott.

It appears that records about these clean-outs are incomplete, but we are reasonably satisfied such clean-outs seemed to decrease over the past few years. Between clean-outs there was a constant build up of accretion possibly from 2.5 to 10 tonnes per day, and from time to time, there were falls of accretion, ranging from minor to major.

From the evidence we are satisfied:

At the time of this accident, the sub-structure of the cooler tower and footings were overloaded, and failed.

The sub-structure supporting the shell of the gas cooler tower failed under the combined downward forces exerted by the dead load of the shell and its attachments, the live load of dust accretion adhering to the inside of the shell and in all probability the sudden impact force applied by a large mass of accretion falling from some height and striking the crash bars at the bottom of the shell.

It appears that the south-west plinth was the most overstressed structural member, and was probably the initial point of failure.

The gantry structure was also overloaded and had the footing been of sufficient capacity to withstand the load, the gantry structure would probably have failed in similar circumstances.

Contributing factors to the collapse were:

The original design parameters were inadequate.

The performance of the tower never met its expectations in terms of accretion build up which in actual practice became excessive.

Attempts to rectify the problems were ineffective.

Reinforcing in the south-west plinth and structural strengthening of the gantry was less than optimal.

In spite of a general awareness of the problems, there was a failure to instigate adequate preventive procedures.

Schedule "D" Recommendations:

The recommendations of the reviewers are as follows:

Where communications of a serious import are received, a mechanism should be put in place for ensuring that positive action is implemented without delay.

For vessels and ducts in which accretion or attrition occurs, records of the rate of accretion or attrition should be kept and used to determine adequate and regular cleaning or rebuilding intervals. Suitable monitoring instruments should be used.

Vessels of this type should be prominently marked with a safe working load capacity.

Consideration should be given by operating companies that the design, construction and modification of major structures be signed off by a qualified structural engineer.

Schedule "E" Report of the Warden:

I concur with the findings of the reviewers as to the nature and cause of the accident.

The inquiry is closed.

13 march 1992

Kennedy, Sean James

Findings and Recommendations

Inquiry pursuant to section forty two of the Mines Regulation Act -

Findings and recommendations -

Fatal inquiry - Sean James Kennedy at the Tick Hill mine 2nd october 1992

Before: Mr F W WindridgeWarden

Extract from the transcript of the inquiry into the fatal accident.

Warden:

Please be seated. The reviewers have considered the evidence presented to the inquiry today and I'd ask Mr.Hutchinson to read out the findings and recommendations.

Mr. Hutchinson:

Findings

We the four reviewers selected by the warden under the provisions of Section 42 of the *Mines Regulation Act* 1964 to 1989, to inquire into the nature and cause of this fatal accident, and who's names appear below announce our findings as follows. Name of deceased Sean James Kennedy. Date and time of accident approximately 9:55 a-m, on friday the 2 of october 1992. Date and time of death. Because of the severity of injuries sustained by the deceased death was virtually instantaneous. Location of accident and death. At the face of eight seventy five sill drive in the underground workings of the Tick Hill gold mine, located approximately eighteen kilometres north of the monument in north west Queensland. Nature of accident.. On the morning of the accident three employees of Farnsway Faminco Proprietary Limited a contracting firm engaged by Carpentaria Gold Proprietary Limited to carry out underground development work at the Latters Tick Hill gold mine were mucking out the face of eight seventy five sill drive. They were the deceased Sean James Kennedy who operated an elphinstone r-twenty wait.. Twenty eight hundred load-haul dump unit and dump truck drivers Karen Maree Stokes and Shane Michael Prowse. After the heading had been cleared they proceeded to mark up the outline of the four metre by four metre face prior to the drilling of the next ground. Prowse departed leaving Kennedy and Stokes to finish the job. Kennedy stood in the bucket of the unit while Stokes now at the controls responded to Kennedy's signal and raised the bucket about two metres so that Kennedy could mark the upper side walls of the drive. She then advanced the unit towards the face. In some manner which will never be known for certain the deceased was crushed between the lip of the bucket and the face. The post mortem examination revealed the cause of death to be massive haemo thorax due to or as a consequence of crush injuries to chest. Cause of accident. The fatality was caused by the forward movement of the load-haul-dump unit towards the face by an operator who was largely inexperienced and unauthorised for that machine. While the deceased was in the bucket, the continued forward movement of the unit was made after sight had been lost of the man riding in the bucket. Recommendations.. The provisions of the *Mines Regulation Act*

1964 to 1989 concerning the training and authorisation of persons carrying out prescribed work in, on or about a mine must be rigidly observed. These

Mr Hutchinson:

Provisions are set out in part 14 of the regulations under the above act. 2) Approved standard work procedures must be drawn up and enforced to cover the situation where persons are lifted in the bucket of load-haul-dump units. In this regard special attention must be given to those units equipped with z-bar linkage on the bucket. The geometry of which causes the bucket to tip automatically when the boom is raised above a certain height unless it is fully retracted. Three details of this accident should be promulgated to all mines where mechanised tractless mining methods are employed.

Warden:

Thank you Mr.Hutchinson. As warden I concur with those findings and I see no need to issue separate findings. I would indicate that after the evidence is transcribed documentation will be prepared and forwarded to the representatives at the bar table at no cost. Thank you gentlemen, madam for your attendance here today. If there are any further inquiries would you please see my clerk when the proceedings are closed. Thank you.

17th november, 1992

Kim, Sang Chul

Findings and Recommendations

The *Mines Regulation Act 1964* -

Findings and recommendations of reviewers and mining warden following an inquiry into fatal injuries received by Sang Chul Kim at WMC Fertilizer Project Phosphate Hill on 27 april 1999

Warden's court Mount Isa 20-23 september 1999

Before: Mr A J Chilcott esquire acting Mining Warden

Reviewers:

- Mr J P Brady
- Mr R Perry
- Mr P Henley
- Mr A McMaster

To assist:

Mr J Tate (instructed by crown law office) on behalf of the mines inspectorate and counsel assisting

Appearances:

- MR A Herbert (instructed by Hopgood Ganim) for Saunders International Pty Ltd
- MR M G Coonan (instructed by Messrs Freehill Hollingdale and Page) For Stork ICM Australia Pty Ltd
- MR G W Diehm (instructed by Blake Dawson & Waldron) for next of kin
- MR G Mullins (instructed by Clayton Utz) for Bechtel Australia and the registered mine manager, Mr Jim Gillin
- MR A MacSporran (instructed by Gadens lawyers) for WMC Fertilizers Limited

Witnesses examined: refer transcript and schedule "a"

Exhibits tendered: refer transcript and schedule "b"

Findings: refer transcript and schedule "c"

Recommendations: refer transcript and schedule "d"

Report of mining warden: refer transcript and schedule "e"

Schedule "A" Witnesses examined:

Day One

- Sergeant Jon LEWIS
- Herman FASCHING (Stood Down)

- Donald BAE
- Alan LIPAR

Dat Two

- Flamino CHAGAS
- Herman FASCHING (Continuing)
- William Roderick MASLIN
- Peter John MEYER.

Day Three

- Nazem ZAHABE
- John Allan SMART
- Timothy Steven ZEC
- Phil IRELAND
- Chris BULBROOK
- James GILLIN

Schedule "B" List of Exhibits

No of Exhibit	Nature of Exhibit	Tendered by
1	Police Report	Mr J Tate
2	50 Photographs	"
3	Original Report of Inspector Herman Fasching	"
4	Additional material attached to Inspector Fashing's Report	"
5	35 Photographs in Brown Envelope	"
6	Police Video	"
7	Mr Kim's Lanyard	"
8	Letter from Roger Billingham to Mr Maurice Schneider, WMC Fertilizers Ltd	"
9	Set of Standards	"
10	Mine Record Book	"
"A" for identification	Plan of Tank	"
"B" for identification	Box of Equipment (Ropes, Grinder, Extension Cord)	"
11	Statement of Donald BAE	"
12	Statement of Alan LIPAR	"
13	Statement of Flamino "Phil" CHAGAS	"
14	Site Induction Checklist - Saunders	Mr A Herbert

No of Exhibit	Nature of Exhibit	Tendered by
15	Government Analyst's Certificate	Mr J Tate
16	Statement of Kwang Suk OH	"
17	Statement of William Roderick MASLIN	"
18	Statement of Peter John MEYER	"
19	Employee Safety Handbook - WMC Fertilizers	Mr M Coonan
20	Statement of Nazem ZAHABE	Mr J Tate
21	Statement of John Allan SMART	"
22	Statement of Timothy ZEC	"
23	Overhead Safety Presentations - Chris BULBROOK	Mr G Mullins

Schedule "C" Findings:

We find -

Name of deceased: Sang Chul Kim

Date of fatal injury: 27 april 1999

Place of accident: Phosphate Mill mine site via Dajarra

Cause of death: As per medical evidence tendered -

1(a) Tear of descending aorta

Nature of accident:

Sang Chul KIM sustained fatal injuries at about 9.45 am on tuesday, 27 april 1999 as a result of his falling from the top of the No 1003 sulphuric acid storage tank at the WMC Fertilizer Project, Phosphate Hill.

Tank 1003 is a carbon steel storage tank for sulphuric acid, 28.8 metres in diameter and 12.3 metres high at the centre. The tank has a self-supporting roof, constructed of pre-fabricated panels that are lifted, fitted and welded into place on top of the completed tank shell and centre supporting ring.

On the day of the accident, all the panels had been installed except for one.

Mr Kim fell through the opening to the floor below.

Prior to the accident, Mr Kim was welding and grinding defects in the outer perimeter of the centre crown of the roof of the tank.

From the evidence, it appeared that Mr Kim was working in an anti-clockwise direction towards the unprotected opening.

At the time of the fall, Mr Kim was wearing a fall arrest harness with shock-absorbing lanyard. He was also wearing a particulate welding respirator which covered his mouth and nose and his welder's shield was found nearby.

It would appear that Mr Kim's lanyard had not been correctly attached to a suitable anchor point immediately prior to the fall.

Prior to the fall, Mr Kim was working alone and with no direct supervision. It would appear that Mr Kim's duties required him to move progressively towards the opening. This is supported by way of evidence of the chalk marks indicating areas where work was required.

There was no evidence to suggest what Mr Kim was doing immediately prior to his fall.

Cause of accident:

From the evidence, we have concluded that Mr Kim fell through an unprotected opening in the roof of the tank. The safety harness that he was wearing failed to arrest his fall because it was not effectively attached to a suitable anchor point.

Major contributing factors:

There was no static line or life line in the work area immediately prior to the accident.

On the north-eastern side of the platform there were limited accessible anchor points.

It had been reported that Mr Kim had not attached his lanyard to an anchor point on three previous occasions and there was no evidence to indicate that the formal Equitable Treatment System had been applied correctly.

There is no evidence to suggest that Mr Kim was counselled or that any attempt had been made to ascertain the reasons for his non-compliance with a safety directive.

The Saunders work method statement and associated HAZAN worksheets designed for erection of the roof panels had not been fully complied with or revised when it was found necessary to alter the work method.

This resulted in the non-recognition of additional hazards.

The job safety analysis was not revised to account for the extended period that the roof would be left open and that people would be required to work on the roof.

We are satisfied that no effective measure or hard barrier was in place to prevent the accident. We believe that verbally defining a work area and expecting a worker to stay within the defined area is not an effective control

Schedule "D" Recommendations:

The recommendations of the reviewers are as follows:

1. In similar situations, a comprehensive risk assessment in accordance with the provisions of AS/4360, Risk Management be conducted and that the risk treatment options adopted be in strict accordance with the hierarchy of control.
2. This would require appropriate action to be taken to reduce the level of risk associated with a particular task to the lowest acceptable level.
3. When work methods or conditions vary from the standard procedure or from the method or conditions anticipated on a JSA, a new site specific JSA must be developed. The development of this JSA must involved the participation of the work crew.
4. Periodic external audit of safety management systems should be undertaken to ensure compliance with documented procedures. This should also include the *Mines Regulation Act*, appropriate workplace health and safety standards, worksafe australian standards, and other codes as applicable.
5. Competency based training in risk management should be provided to all employees. This training should be tailored to meet the needs of the individual employee.

Schedule "E" Report of the Warden:

I concur with the findings of the reviewers as to the nature and cause of the accident.

I thank Mr Tate for all of his assistance during this inquiry.

I also thank the reviewers and my clerks for their time and assistance during this inquiry.

The inquiry is closed.

23 september 1999

Lee, Christopher John

Findings and Recommendations

The *Coal Mining Act 1925* -

Findings and recommendations of reviewers and mining warden following an inquiry into fatal injuries received by Christopher John Lee at Jellinabah Open Cut Coal mine on 15 march 2000 Warden's Court of Queensland Emerald 22 -24 august 2000.

Before: Mr F W Windridge, esquire mining warden

Reviewers:

- Mr Ian Mcdonell
- Mr Rod Woods
- Mr Chris Glazbrook
- Mr Lester Anderson

To assist:

Mr J Tate (instructed by crown law office) on behalf of the mines inspectorate and counsel assisting

Appearances:

- MR A S Mellick (instructed by Rees R & Sydney Jones) for the next of kin, Mrs Lee
- MR M Peacock (instructed by Messrs Hopgood Ganim) for Comserv (1218) Pty Ltd, the mining contractor
- MR R Morton (instructed by Corrs Chambers Westgarth) for Jellinbah Resources Pty Ltd and the then mine manager, Mr Scott Kidston
- MR S Vaccaneo on behalf of the Construction, Forestry, Mining and Engineering Union (CFMEU)

Witnesses examined: refer transcript and schedule "a"

Exhibits tendered: refer transcript and schedule "b"

Findings: refer transcript and schedule "c"

Recommendations: refer transcript and schedule "d"

Report of mining warden: refer transcript and schedule "e"

Schedule "A" Witnesses examined:

- Senior Constable Gregory Martin DWYER
- Inspector Gregory William LYNE
- Rodney John SHANNEN

- Jeffrey Roy HAMBLIN
- James Stewart McIVER
- Daniel Christopher CAWTE
- Ward Eric LEE
- Anthony David CHAMPION
- Scott William KIDSTON

Schedule "B" List of Exhibits

EXHIBIT NO	NATURE OF EXHIBIT	TENDERED BY
1	Letter from the Honourable Minister for Mines and Energy, Mr Tony McGrady, dated 20April 2000	Mr J Tate
2	Police Report to Coroner Form 4 Post-Mortem Examination Report Post Mortem Examination Certificate Coroner's Order for Cremation	"
3	Police Photographs (63)	"
4	Police Video Cassette - Re-enactment at Jellinbah Mine, Blackwater	"
5	Police Cassette Tape & Transcript of Interview (Hamblin)	"
6	Report of Investigating Officer, Mr G Lyne, Inspector of Mines, Central Region	"
7	Folio of Colour Photographs	"
8	Video Cassette by Inspector Lyne	"
9	Mine Manager's Accident Investigation Report	"
10	Additional Documentation lodged by Corrs Chambers Westgarth under letter dated 17 August 2000	"
11	Approved Schemes of Personnel Training - Open-Cut Coal Mines	Mr S Vacceneo
12	Copies of Mine Record Book Entries	Mr R Morton
13	Statement of Rodney John Shannen	Mr J Tate
14	Statement of Jeffrey Roy Hamblin	"
15	Statement of James Stuart McIver	"
16	Statement of Daniel Christopher Cawte	"
17	Statement of Ward Eric Lee	"
18	Statement of Anthony David Champion	"
19	Jellinbah Mining Pty ltd - Personnel Training Scheme	Mr R Morton

EXHIBIT NO	NATURE OF EXHIBIT	TENDERED BY
	Form 1 - Induction Checklist - Permanent Employee A.D. CHAMPION	
20	Statement of Scott William Kidston	Mr J Tate

Schedule "C" Findings:

We find -

Name of deceased: Christopher John Lee

Date of fatal injury: 15 march 2000

Time of accident: 1800 hours

Place of accident: Jellinabah Open Cut Coal mine

Nature of accident:

On 15 March 2000, Mr Christopher John Lee was fatally injured while working under a 785 rear dump truck tray when the tray fell causing severe crush injuries.

Cause of accident:

The tray was lifted by slings to a Caterpillar 992G (F.E.L.) loader bucket tooth and a dolly placed under the rear of the tray. The boom of the loader was lowered to approximately 200mm above the tray. With the slings still attached and the machine left running, the driver left the cab and descended to the ground.

Mr Lee was cleaning the overspray paint from a pin hole in the base of a 785 truck tray. Mr Lee was sitting on the ground under the tray with a clearance between the tray and the ground of about 900mm, approximately 1.5 metres in from the edge of the tray which was being supported by the transport dolly. The dolly wheels were not chocked or blocked in any way to prevent the dolly wheels from moving. No secondary supports were set under the tray.

The boom of the loader crept down and rested on the side of the tray, slightly twisting the tray and exerting extra weight sufficient to dislodge the dolly from under the tray. This allowed the tray to fall causing the fatal injury to Mr Lee.

Contributing factors:

- Mr Lee placed himself in a position of extreme danger which he had not recognised. Mr Lee remained in a position of great danger even after a fellow worker expressed extreme concern of the dangers associated with the task.
- The undocumented but widely understood standard procedure for the use of the dolly was deviated from by -

Withdrawal of fork lift from a bracing position;

Leaving the F.E.L. boom/bucket in a position still connected and positioned over the tray.

Schedule "D" Recommendations:

The Department of Mines and Energy is to establish and implement a system to allow the recording and reviewing of approved training schemes throughout the industry.

All mines to review current management systems to ensure compliance with the current legislation and the Chief Inspector's requirements for training. This must include all on site authorisations.

The Department of Mines and Energy is to establish a system to identify changes in trends of risk ranking for all mines with specific reference to the frequency of inspections/audits.

Mines are to ensure where loads are required to be lifted fit for purpose lifting equipment and machinery must be used. Risk management techniques and reference to all relevant standards are be followed.

Planning for major or infrequently performed maintenance tasks must include a risk assessment. Standard operating procedures (SOP) based on the risk assessment must be applied.

Personnel must apply hazard management skills while performing all tasks.

Supervisors should proactively enforce SOP/hazard management procedures. This should include the instigation of disciplinary procedures against personnel who do not comply with legislative and mine site requirements for hazard control and safe working procedures.

Management systems must include a system by which identified hazards can be accurately and easily reported, recorded and acted upon.

Dated at Emerald this 24th day of August 2000.

Schedule "E" Report of the Warden:

On 15 March 2000 at about 1800 hours, Mr Christopher John Lee received fatal injuries whilst performing work at the Jellinbah open cut mine, central Queensland.

Jellinbah open cut mine is operated by Jellinbah Resources Pty Ltd. Total annual production is approximately 2 million tonnes. A large proportion of the mining operation is performed by contractors, principally Comserv (1218) Pty Ltd. Mr Lee was employed by Comserv as a fitter.

The Inquiry has heard the evidence of 10 witnesses over the past two days and has admitted into evidence 20 statements and other documents as exhibits, including the inspector's report and a comprehensive mine manager's report.

Findings as to nature and cause:

The Reviewers have delivered their findings as to the nature and cause of the accident. I concur with and adopt those findings. I wish to re-enforce to all parties to this and future Inquiries of the desirability of lodging documentation at an early date and within the time frames set by the Court at any directions hearing. Although it is always possible that some documents will need to be produced during the course of the proceedings, bulky or lengthy documents should, except under exceptional circumstances, be produced at least one week before the hearing is due to commence in order that same may be perused by the panel members and other parties who have a vital interest in the proceedings. The alternative is to grant lengthy and expensive adjournments while the documents are read.

The mine manager's report is comprehensive and it is acknowledged that the mine management have actively and intensely pursued a vigorous programme of training, and the upgrading of all procedures at the mine site.

The circumstances of the accident were such that an accurate re-enactment was able to be conducted. We acknowledge that the mine owners and those persons who assisted at the re-enactment have re-produced an accurate duplication of the tragic events of 15 March 2000. We found that the video presentation of that re-enactment was very helpful.

In respect of this Inquiry, I thank Mr Tate for his assistance as Counsel Assisting the Inquiry. I thank counsel and the various legal and union representatives who appeared for various parties for their assistance during the Inquiry.

The Inquiry is now closed.

24 August 2000

Maddox, Rodney Elwyn

Findings and Recommendations

The *Coal Mining Act 1925 - 1981*

Findings and recommendations of reviewers and mining warden following an inquiry into fatal injuries received by Rodney Elwyn Maddox at Oakleigh number three colliery, Rosewood on 19 november 1990 warden's court of Queensland brisbane 20 march 1991

Before: F W WINDRIDGE esquire Warden

Reviewers:

- MR S J CURRIE
- MR T L HEMLEY
- MR M T POCOCK
- PROFESSOR D ROWLANDS

To assist:

MR R BANCROFT, inspector of mines

Appearances:

- MR W ALLISON, United Mine Workers' Federation
- MR W WILSON, registered mine manager

Witnesses examined: refer transcript and schedule "a"

Exhibits tendered: refer transcript and schedule "b"

Findings: refer transcript and schedule "c"

Recommendations: refer transcript and schedule "d"

Report of mining warden: refer transcript and schedule "e"

Schedule "A" Witnesses examined:

- Robert Allan BUSHMAN
- John William BALLIN
- Raymond William RULE
- Wayne Steven WILSON
- Roger BANCROFT

Schedule "B" List of Exhibits

No of Exhibit	Nature of Exhibit
1	Report by Senior Inspector of Mines - Mr R Bancroft
2	Report by Principal Mechanic Inspector of Coal Mines
3	Geological Investigations Report - Mr D Coffey
4	Geo-Technical Report - Dr I Gray
5	Large Scale Plan of Oakleigh Colliery
6	Large Scale Plan of Accident Site Area
7	The Site prior to Accident
8	Plan of Accident Site
9	Cross-section of Accident Site
10	Roof Support under Colliery
11	Sequence Plan of Pillar Section Area
12	Senior Inspector of Mines Record Book Entries
13	Statement - Bushman
14	Post Mortem Certificate
15	Police Report
16	Photographs
17	Statement - Ballin
18	Statement - Rule
19	Statement - Wilson

Schedule "C" Findings:

We find:

Name of deceased: Rodney Elwyn Maddox

Date of death: 19 november 1990

Place of death: Oakleigh number three colliery, Rosewood

Cause of death:

(a) Respiratory and cardiac arrest

Compression injury to chest

Cause of accident:

A large sandstone slab pinned Maddox against the continuous miner.

Nature of accident:

At about 10.00 am on 19 november 1990, miner Rodney Elwyn Maddox was operating a Lee Norse 38H continuous miner, extracting pillars in the Glenco section of the mine. A number of shuttle cars had been filled when Ray Rule, the section deputy, indicated to Maddox that he should switch off and listen. At this moment there was an immediate and substantial roof collapse and several large slabs of sandstone roof pinned Maddox against the machine which he had been attempting to leave at the time.

Schedule "D" Recommendations:

The recommendations of the reviewers are as follows:

It is strongly recommended that extraction should be designed to develop a straight and continuous goaf line.

Pillar extraction systems should be subject to continuous review.

The use of breaker line supports be encouraged.

Schedule "E" Report of the Warden:

I concur with the findings of the reviewers as to the nature and cause of the accident.

The inquiry is closed.

Maher, John Anthony

Findings and Recommendations

The *Coal Mining Act 1925* -

Findings and recommendations of reviewers and mining warden following an inquiry into fatal injuries received by John Anthony Maher at Cook colliery on 30 august 2000 Warden's Court of Queensland Emerald 26 february to 1 march 2001.

Before: Mr F W Windridge, esquire mining warden

Reviewers:

- Mr Phil Reed
- Mr Stephen Smyth
- Mr Tony Hazeldean
- Mr Alan McMaster

To assist:

Mr J Tate (instructed by crown law office) on behalf of the mines inspectorate and counsel assisting

Appearances:

- Mr P Roney (instructed by Messrs Sparke Helmore) for Cook Resource Mining and the registered mine manager, Mr Cunnion
- Mr G Dalliston, with him Mr S Vaccaneo, on behalf of the construction, forestry, mining and energy union (CFMEU) and the family of the deceased

Witnesses examined: refer transcript and schedule "a"

Exhibits tendered: refer transcript and schedule "b"

Findings: refer transcript and schedule "c"

Recommendations: refer transcript and schedule "d"

Report of mining warden: refer transcript and schedule "e"

Schedule "A" Witnesses examined:

- David Christopher ALCOCK
- Michael Edward CAFFERY
- Michael Paul WALKER
- Wayne William KOCH
- Gary DALBUSCO
- Darryl John WARWICK
- Rex SANDILANDS

- David Anthony GADSBY
- David John WATSON
- Gregory Raymond MEREDITH
- Ronald Glen PAGE
- Alan Glyndwr EVANS
- Ian MacPHEDRAN
- Doctor John SHEPHERD
- Labin Keith RIXON
- Michael John CUNNION

Schedule "B" List of Exhibits

No of Exhibit	Nature of Exhibit	Tendered by
1	Copy of Letter from the Honourable Mr T McGrady dated 23/01/2001	Mr J Tate
2	Letter from D/Coroner L N Lavaring dated 5/12/2000	"
3	Form 4 - Report Concerning Death by Member of the Police Service	"
4	Life Extinct Certificate	"
5	Inventory of Property Taken Possession of by Police Officer	"
6	Form 8 - Order for Post-Mortem Examination	"
7	Form E - Post Mortem Examination Certificate	"
8	Form F - Coroner's Certificate of Holding of Inquest	"
9	Letter from Daniel Hjalmar Pettersson (Medical Superintendent, Blackwater Hospital) dated 11/9/2000	"
10	Statement of Wayne Desmond Slee dated 24/9/2000	"
11	Statement of Paul Anthony Cracknell dated 15/11/2000	"
12	Statement of Mark Gerard McLachlan dated 14/11/2000	"
13	Fifty (50) Police Colour Photographs (Snr Const M G McLachlan)	"
14	Letter from Constable R J Butwell dated 1/9/2000	"

No of Exhibit	Nature of Exhibit	Tendered by
15	Letter from Chief Inspector of Coal Mines Mr Brian Lyne dated 30/8/2000	"
16	Letter from Mining Warden to Mr Michael Cunnion dated 16/2/2001 Letter from Mr M J Cunnion to Mining Warden dated 23/2/2001	"
17	Report to the Chief Inspector of Coal Mines	"
18	Mine Manager's Accident Investigation Report	"
19	Folio of Police Photographs	"
20	Folio of Department of Mines and Energy Photographs	"
21	Visual Overview of Inspector Alcock's Report	Mr J Tate
22	Cook Resources Mining - Safety Management Plan Training	Mr P Roney
23	Place Changer Operational and Safe Work Procedures	"
24	Cook Resources Mining Pty Ltd - Training and Other Records (Volume 1 and Volume 2)	"
25	Cook Colliery Attendance Record for Hazard Management Plan Training	Mr P Roney
26	Letter from Joncris Sentinel Services to Mike Cunnion dated 1/8/2000	"
27	Statement of Wayne Koch	Mr J Tate
28	Statement of Gary Dalbusco	"
29	Marked Plan by Witness Gary Dalbusco	Mr P Roney
30	Statement by Darryl John Warwick	Mr J Tate
31	Marked Plan by Witness Darryl Warwick	Mr P Roney
32	Statement of Rex Sandilands	Mr J Tate
33	Statement of David Anthony Gadsby	"
34	Statement of Gregory Raymond Meredith	"
35	Statement of Ronald Glen Page	"
36	Statement of Alan Glyndwr Evans	"

No of Exhibit	Nature of Exhibit	Tendered by
37	Statement of Iain MacPhedran	"
38	Copy of Letter from Cook Resource Mining Pty Ltd dated 24/8/2000	Mr P Roney
39	Copy of Geotechnical Report following accident dated 13/9/2000	Mr J Tate
40	Statement of Mike Cunnion	Mr P Roney
41	Time ordered events prior to the accident, Corrective action and training subsequent to the accident - CRM Pty Ltd 1/3/2001	"

Schedule "C" Findings:

We find -

Name of deceased: John Anthony Maher

Date of fatal injury: 30 august 2000

Time of accident: 9.30 am

Place of accident: Cook colliery central Queensland

Nature of accident:

On 30 August 2000, a mining crew consisting of five men was extracting coal from the 12 East panel at the Cook Colliery using a remote controlled continuous miner. Shortly after 9.00 am a fall of coal from the left-hand side lodged against the side of the continuous miner while sump mining in sub-panel 1, activating an emergency stop button. The continuous miner shut down and attempts to restart the miner by remote control were unsuccessful. Some breaker props were installed in the area and three members of the crew then took turns from behind the props to attempt to break up or remove coal from the side of the miner on the basis that this would allow the miner to be re-started and trammed out of the sump.

At about 9.30 am, JOHN ANTHONY MAHER entered the area between the left-hand rib and the continuous miner which was still in a sump in Sub-Panel 1. Suddenly and without any warning noise, a large block of coal dislodged from the rib and trapped Mr Maher against the side of the continuous miner. The rest of the crew then took action immediately and removed Mr Maher. Although it was first thought that the injuries to Mr Maher were not serious, it was ascertained after the rescue that the injuries were serious and CPR and EAR was commenced until the ambulance arrived. On the surface a doctor examined Mr Maher and pronounced life extinct.

Cause of accident:

Large blocks of coal dislodged from the left-hand rib of a sump in sub-panel 1 of D heading, 6 to 7 cut-through, 12 East panel trapping Mr Maher against the side of a continuous miner.

The design plan for the extraction of coal by sumping allowed for stooks at the corner of each panel and it was expected that these stooks would eventually crush out. Examination of the area after the accident revealed cracks in the rib that had not been previously visible.

Contributing factors:

1. The panel design lacked sufficient detail to enable mine officials and crews to fully understand the critical features of the design.
2. This caused a sump to be driven closer to an intersection than the intended design thus resulting in a smaller than intended stook.
3. Because of its small size this stook was subjected to high stress resulting in excessive rib spall.
4. The spalled coal stopped the machine by activating a poorly located and unprotected emergency stop button.
5. Lack of a planned recovery method led to members of the crew putting themselves in a hazardous situation.

Schedule "D" Recommendations:

We recommend that -

1. Risk Assessment and Application of Controls

Risk management is an important management tool to engineer a safe and more efficient working place.

a) Where the scope of intended activities is known to be outside the parameters of the previous risk assessment then the previous risk assessment must be reviewed to determine its suitability. This should be done -

Prior to commencing work by a new or modified method of work; - Prior to commencing work with a new or significantly modified piece of equipment; - Following a significant change in mining conditions.

b) All the controls from a risk assessment or review must be implemented in their entirety.

c) Ongoing audits and reviews must be carried out to ensure the continued safe performance of work.

2. Recovery of Machines from Unsupported Areas

Contingency plans are a key element of a safety management system in the event that normal strata controls fail and machines become trapped. In these circumstances mine workers need to be trained and competent in a procedure to work in hazardous strata conditions.

a) Procedures should be developed based on risk assessment. Consideration must be given to the hazards to personnel from unstable roof and rib strata conditions.

b) This procedure should be augmented by on the job review of the hazards and controls for the particular conditions.

c) The procedure should be presented in accordance with an acceptable standard that provides clear guidance to the user. d) A method on continuous miners of "shrouding" the emergency stop buttons to prevent inadvertent activation should be implemented at all mines as soon as practicable.

An industry task group should be formed to develop standards and guidelines for emergency stop buttons addressing -

Location on machines - Type and function - Accessibility - Shrouding and protection - Emergency over-ride device

3. Panel Design and Work Method Control

Prior to commencing a new or revised method of secondary extraction -

a) Critical dimensions must be considered in the initial panel design and included on all work and sequence plans.

b) Supervisors and mining crews must be trained and fully understand all relevant aspects of these plans including -

Method of Work - Sequencing - Hazards - Controls to reduce hazards - Critical dimensions

c) Assessments of this training are required to ensure a thorough understanding of the points in 3(b).

d) Documents used for the control of hazards must identify reference material including the revision date.

e) Supervisors must ensure that work is carried out in accordance with these design standards and report the "as mined workings" as accurately as possible.

Schedule "E" Report of the Warden:

Cook Colliery is located 29 kilometres south of the township of Blackwater in Central Queensland.

Cook Colliery is operated by COOK RESOURCE MINING PROPRIETARY LIMITED (CRM). The shareholders of CRM are GLENCORE INTERNATIONAL PROPRIETARY LIMITED, CENTENNIAL COAL COMPANY LIMITED and TOKYO BOKEI LIMITED. Centennial Coal is the manager of the consortium's operations.

The Colliery has a work force of 58 employees supplemented by contractors for peak periods of work and for specialised jobs. For the year ended 30 June 2000, approximately 600,000 tonnes of coal was produced for both the export and domestic market. The mine has an enviable LTIFR record and is assessed as being in the top 5% of the industry.

No inspection was conducted as the panel has been sealed off, the continuous miner is no longer available, and there is no similar operation in the area that would be available for comparison purposes.

The Court has heard the evidence over four days from 16 witnesses and 41 exhibits including reports, statements, documents, photographs and plans have been admitted into evidence.

The Reviewers have given their Report as to the nature and cause of the accident. I concur with those findings.

The Reviewers have requested that I note the prompt and valiant efforts of the crew to rescue Mr Maher and render aid. I do so willingly and commend them for their quick and unselfish actions at the time of the accident.

It is a matter of regret that the Inspector's Report puts forward an Executive Summary containing what I consider to be general and wide ranging comments which appear to be based on one investigation. The Investigation Report should contain factual matters only and I do not consider that one investigation into one accident is a firm basis on which to make such wide ranging critical comments. A deal of time was wasted in rebutting these comments and this tended to distract our attention from nature and cause. I would prefer if Executive Summaries were deleted from all future reports. Furthermore, the comments by Inspector Walker in the Mine Record Book appear to be also wide ranging and unsupported by any follow-up action. One would have thought that had the circumstances been as serious as indicated a more permanent presence of senior inspectors would have been desirable in lieu of inspection reports posted in the Record Book from time-to-time. Perhaps it is time for the Honourable the Minister for Natural Resources and Mines and those who have the duty to monitor and regulate the industry to re-consider their lack of presence on the mining field. Attendance at a fatal accident two and a half to three hours after the event is really not in the interests of the industry. It is essential that the Investigating Inspector arrive at the scene promptly to observe, collect, and preserve the hard evidence at the accident site. If Police turned up at a murder scene three hours after the event there would be public outcry. I don't consider the mining industry deserves to be treated in any less serious manner.

I thank Mr Tate as Counsel assisting the Inquiry and all those legal and union representatives who appeared for various parties at the Inquiry.

I thank the Reviewers for their assistance at this Inquiry. Without their assistance, I would find it difficult to fulfil my obligations under Section 74 of the Coal Mining Act 1925.

In all probability, this is the last sittings of the Wardens Court of Queensland at Emerald. I thank, very sincerely, all those persons who have assisted the Court over a number of years, particularly Reviewers who have always been willing to give back to the mining industry the benefit of their knowledge and experience in order to make mining a safer industry.

The Inquiry is now closed.

1 March 2001

Martin, Gary Michael

Findings and Recommendations

The *Mines Regulation Act 1964*

Findings and recommendations of reviewers and mining warden following an inquiry into fatal injuries received by Gary Michael Martin at Mount Isa mine on 26 january 1991 warden's court of Queensland Mount Isa 26 june 1991

Before: Mr F W Windridge esquire Warden

Reviewers:

- MR R A GLANVILLE
- MR D M HARRIS
- MR R H MACKENZIE
- MR D J SYMONS

To assist:

MR G SLEZIAK, inspector of mines.

Appearances:

- MR W M BOULTON for next of kin
- MR G MOUSLEY, district workers' representative
- MR C NOTHLING representing the company and the registered manager

Witnesses examined: refer transcript and schedule "a"

Exhibits tendered: refer transcript and schedule "b"

Findings: refer transcript and schedule "c"

Recommendations: refer transcript and schedule "d"

Report of mining warden: refer transcript and schedule "e"

Schedule "A" Witnesses examined:

- Christopher Judge CASTLEY
- Peter Clive HORNSBY
- Trevor Bruce HANNIGAN
- Wayne John GREENSILL
- John Francis BAWDEN
- Rodney Glen BUTTLE
- Darryl John MCLELLAN
- Peter James BERRY
- Robert PURDIE

- Sid DE SATGE
- John Murray THOMPSON
- Timothy Mark GILBERT
- Gary Alan VARLEY
- Trevor Patrick TIERNEY
- Thor HALVORSEN
- Gary William BUTLER

Schedule "B" List of Exhibits

No of Exhibit	Nature of Exhibit
1	Report - C J Castley
2	Post Mortem Certificate
3	Post Mortem Report
4	Report - P C Hornsby
5	Photographs Marked "A" and "B"
6	Record Book Entry
7	Record Book Entry
8	Record Book Entry
9	Plan of the Site
10	Report - T B Hannigan
11	Photographs Marked "A" to "H"
12	Record Book Entry
13	Photostat Sheet of Training Log Book
14	Statement - W J Greensill
15	Statement - J F Bawden
16	Statement - R G Buttle
17	Statement - D J McLellan
18	Statement - P J Berry
19	Statement - R Purdie
20	Statement - S De Satge
21	Statement - J M Thompson
22	Statement - T M Gilbert
23	Statement - G A Varley
24	Statement - T P Tierney
25	Statement - T Halvorsen
26	Statement - G W Butler
27	Record Book Entry

Schedule "C" Findings:

We find -

Name of deceased: Gary Michael Martin

Date of death: 26 january 1991

Location of death: R405 stope below 18b sub level, Isa mine

Nature of accident:

Gary Michael Martin received fatal injuries when a UGL loader which he was driving entered the void of R405 stope.

Cause of accident:

At about 12.20 am on 26 january 1991, Martin was instructed to muck V405 stope on 18E Level and to tip back to Q41 ore pass. Greensill was instructed to go to S404 cut off and muck to Q41 ore pass.

It appears that Greensill and Martin decided that Martin would muck from S404 stope to V405 stope and Greensill would muck from V405 stope to Q41 ore pass.

Although Martin had assured supervisor Butler that he was aware of the location of V405 stope, from the conversation with Greensill it appears Martin was less sure of the location of S404 stope.

This leads us to believe that Martin entered R405 stope in error.

Across the entrance of R405 stope there was a warning sign, "Danger OPEN STOPE - LANYARD REQUIRED". It is highly probable that this warning sign was not observed by Martin in that it may have been obscured by the position of the bucket of the loader.

It is highly probable that having turned right and sighting "R405" marked on the rubber flaps, Martin continued on looking for S404.

We consider Martin was in R405 stope because of a number of factors, namely -

- Some unfamiliarity with the location of S404 stope;
- Lack of clear marking of S404 stope;
- Confusion over or a misinterpretation of Greensill's directions.

Schedule "D" Recommendations:

The recommendations of the reviewers are as follows:

Mine Management in consultation with the chief inspector of mines investigate the size and positioning of additional signs, particularly in relation to ore passes and open stopes.

We consider there are adequate rules and procedures in relation to signs and barricades, but it is imperative that personnel be instructed to observe those rules and procedures at all times.

Schedule "E" Report of the Warden:

I concur with the findings of the reviewers as to the nature and cause of the accident.

The inquiry is closed.

Mihalj, Anthony

Findings and Recommendations

The *Mines Regulation Act 1964*

Findings and recommendations of reviewers and mining warden following an inquiry into fatal injuries received by Anthony Mihalj at at N-S Twelve-e-two stope, Cracow mine on 14 may 1991 warden's court of Queensland Mount Isa 7 august 1991

Before: Mr F W Windridge esquire Warden

Reviewers:

- MR K G BUCKLAND
- MR G B CHALMERS
- MR P DOLAN
- MR W J GORMLY

To assist:

MR R WHITE, inspector of mines.

Appearances:

- MR A MIHALJ for next of kin
- MR D PAPPIN, district workers' representative
- MR A HERBERT appearing for Cracow Mining Venture and registered mine manager
- MR D K BODDICE appearing for Costain Australia Limited and its employees

Witnesses examined: refer transcript and schedule "a"

Exhibits tendered: refer transcript and schedule "b"

Findings: refer transcript and schedule "c"

Recommendations: refer transcript and schedule "d"

Report of mining warden: refer transcript and schedule "e"

Schedule "A" Witnesses examined:

- Darryl Glen FOYSTER
- Brian Frank LEWANDOWSKY
- Darryl Arthur LAUCHLAN
- Duncan Peter PAPPIN
- Gary Arthur GRAY
- Michael David JOHNSTON
- Rodney John GRAY
- Alan MITCHELL

Schedule "B" List of Exhibits

No of Exhibit	Nature of Exhibit
1	Statement - D G Foyster
2	Statement of Work History
3	Photographs marked 1 to 10 taken by W Elrick
4	Photographs (2) of accident scene taken by Inspector White
5	Photographs - accident scene taken by Inspector White
6	Police Report - Post Mortem Report
7	Statement - D A Lauchlan
8	Plan
9	Plan - E-two sill drive and production drive
10	Statement - G A Gray
11	Statement - M Johnston
12	Statement - R J Gray
13	Statement - A Mitchell

Schedule "C" Findings:

We find -

Name of deceased: Anthony Mihalj

Date of death: 14 may 1991

Location of death: NS 12 - e2 stope, Cracow mine

Nature and cause of accident:

The deceased was engaged in shrink stope mining on the morning of 14 may 1991. Two holes had been drilled in the back of the ore body with a sig machine and air leg. The deceased had commenced to drill the third hole when a large slab fell down, causing fatal injuries.

From the evidence we are satisfied that the deceased was using the wrong mining method in that flatbacking was the only way to advance the stope to the north.

We consider this accident was caused by a failure to work the job by an appropriate mining method resulting from inadequate direction by supervision.

Schedule "D" Recommendations:

The recommendations of the reviewers are as follows:

Because of the inherent dangers of shrink stope mining in the upper levels of the Cracow mine, only experienced managers and miners should be employed in this type of operation.

Suitable staging should be readily available for shrink stoping where required.

The lines of authority at Cracow is to be made clear to all employees and responsibility for directing and supervising the progress of each job is to be defined.

Schedule "E" Report of the Warden:

I would indicate that as warden, I concur with the findings and recommendations.

It has come to my attention that a number of witnesses travelled a considerable distance to attend and give evidence. I thank those concerned for their attendance.

I am also informed that a number of witnesses who are still employed by Costain have been informed they will not suffer any loss of wages due to their attendances at this inquiry. That gesture is appreciated.

I am also informed that Costain assisted in relation to this attendance of an interstate witness. I thank them for that assistance.

Copies of transcript will be made available.

The inquiry is closed.

Milner, Gavin John

Findings and Recommendations

The *Mines Regulation Act 1964* -

Findings and recommendations of reviewers and mining warden following an inquiry into fatal injuries received by Gavin John Milner at Tichum Creek Quarry on 17 october 1994

Before: Mr W S Christensen Warden

Findings:

Nature of accident:

As to the nature of the accident we find:

The single vehicle accident which caused the death of Gavin John Milner at the Tichum Creek Quarry on 17 october 1994 occurred at about 2 pm on that day when the deceased was driving a loaded Wabco 35C dump truck on a haul road to the primary crusher rock bin.

At the place where the accident occurred the haul road passed between an upper bench highwall on the driver's right hand side and a lower bench footwall on the left hand side. There was a gravel safety berm on the left hand edge of the haul road of approximate dimensions varying from 1.5 to 3 metres (wide) x .4 metre (high). The approximate available width for the passage of vehicles between the highwall and the safety berm was 5.8 metres at the point of impact narrowing to 4.9 metres approximately 2.5 metres further on. The width of the Wabco 35C dump truck was 3.6 metres plus the right hand wing mirror width of .3 metres (being an overall width of 3.9 metres).

The right hand side of the truck struck the highwall with a reasonable amount of force. This initial impact caused severe damage to the steering mechanism of the truck. The truck then veered at an approximate 45 degree angle across the haul road through the safety berm and fell about 11 metres before striking the floor level of the lower bench in an inverted position, severely crushing the driver's cabin.

Prior to impact with the highwall the course of travel of the truck was in a straight line straddling a rill left by a grader over a distance of over 30 metres to the point of impact and the evidence suggests that the vehicle was travelling at a speed in excess of 34 kilometres per hour.

Cause of accident:

We have given consideration to all possible causes of the accident and we are satisfied that there is no evidence of any defect in the Wabco 35C dump truck involved in the accident which caused or could have contributed to the accident.

We are also satisfied that the accident was caused by any one or more of the following reasons:

- Inattention of the driver

- Misjudgment by the driver
- Physical or mental incapacity of the driver

We find there is no evidence to show which of these factors was the primary cause.

We find that the deceased was not restrained by a seat belt at the time of initial impact. We are unable to find whether the correct wearing of the seat belt would have assisted the deceased in regaining control of the vehicle.

Although there is no evidence to show that the following factors were a cause of the accident, or contributed to the accident, we find:

- There is evidence that the speed of the dump truck leading to its impact with the highwall was excessive, having regard to the available width of the haul road; and
- That the width of the haul road was not adequate for the size of the vehicle or any other vehicles of similar size likely to be using the haul road at the speed indicated in this instance by the evidence.

Recommendations with a view to prevention of a similar accident

We recommend with a view to prevention of similar accidents that all regulations governing mine operational safety be amended to:

- Prescribe a minimum haul road width of (in the case of a single carriageway) 1.5 times and (in the case of a double carriageway) 2.5 times the maximum width of any vehicle permitted to use the haul road;
- Prescribe a minimum safety berm height of one metre or one-half the wheel diameter of the largest truck permitted to use the haul road;
- Prescribe minimum specifications for the design of, and the kind of material used in the construction of, safety berms;
- Provide for a breach of the regulations where a vehicle exceeding the dimension limits governed by the width of the haul road and dimensions of safety berms is permitted to travel on that haul road.

We also recommend that greater importance be placed on ensuring compliance with existing regulatory requirements with regard to operator training and induction.

Warden's report:

I report that I agree with the reviewers' findings of the nature and cause of the accident.

The inquiry is closed.

2 march 1995.

Morgan, Alan

Findings and Recommendations

The *Mines Regulation Act 1964* -

Findings and recommendations of reviewers and mining warden following an inquiry into fatal injuries received by Alan Morgan at Oaky Creek No1 mine, Isa Lease on 19 september 1996 warden's court 25-27 march 1997

Before: Mr Alec Jolliffe CHILCOTT esquire acting Warden

Reviewers:

- Mr Robert Francis PEARSON
  Mr Christopher John GLAZBROOK
  Mr John Patrick BRADY
  Mr Rodney Errol WOODS

To assist:

Mr John William SMITH, mechanical inspector of coal mines assisted by Mr Frederick Barrie BIGGAM for Department of Mines & Energy.

Appearances:

- Mr Larry Reginald PROFFITT appears for Mrs Caran Morgan, next of kin. (Mrs Caran Morgan in person).
- Mr Gregory Allan DALLISTON, CFMEU mining division.
- Mr Paul Martin Scarr, solicitor of MIM Holdings Pty Ltd, Fincoal Pty Ltd and Mr Alan L PAYNE.

Witnesses examined: refer transcript and schedule "a"

Exhibits tendered: refer transcript and schedule "b"

Findings: refer transcript and schedule "c"

Recommendations: refer transcript and schedule "d"

Report of mining warden: refer transcript and schedule "e"

Schedule "A" Witnesses examined:

- John William SMITH
- Trevor GAFFEL
- Alan Leslie PAYNE
- Stephen James CLARK
- Stephen Dale RENWICK
- Glenn Angelo COPPO
- Leslie John BUNT
- Christopher Bernard BLACK
- Allen James KIRBY

- Kerry Arthur STOCKS
- Phillip Wayne SHORTEN
- Robin Graham WHITAKER
- Phillip Richard JACKSON
- Karl Jason BALLINGER
- Francis James CASEY
- John Allan SUTTON

Schedule "B" List of Exhibits

No of Exhibit	Nature of Exhibit	Tendered by
1	Form E - Post Mortem Examination	Warden
2	Letter from Robert John Shakespeare	Warden
3	Report - John William Smith	Mr.F.B.Biggam
4	Neutral Start Valve Hose	``
5	Engine Air Filter	``
6	Five (5) Brake Discs	``
7	Springs	``
8	Brake Test Certificate Tag (Green)	``
9	Orbital Valve & Steering Column Bearing	``
10	Set of Colour Photographs	Mr F.B. Biggam Mr G.A.Dalliston
11	Interview of Trevor Gaffel	Mr J.W.Smith
12	Statement of Trevor Gaffel (dated 21 March 1997)	Mr P.M. Scarr
13	Brief of Documents for Reviewers	``
14	Diagram - MPV Vehicle Dash Board	Mr J.W.Smith
15	Fitters Daily Report - Oaky Creek - 18 June 1996 (Day Shift Crew A)	Mr G.A. Dalliston
16	Fitters Daily Report - Oaky Creek - 19 June 1996 (Day Shift Crew A)	Mr P.M. Scarr
17	Fitters Daily Reports - Oaky Creek (A) 28 June 1996 - Afternoon Shift - Crew A (B) 29 June 1996 - Day Shift - Crew C (C) 1 July 1996 - Night Shift - Crew A	``
18	Report of Alan Leslie PAYNE	Mr J.W.Smith
19	Report for Lighting Survey Oaky Creek Coal Pty Ltd	``
20	Report of Stephen James Clark	``
21	Statement of Stephen Dale Renwick	``
22	Statement of Glenn Angelo Coppo	``

No of Exhibit	Nature of Exhibit	Tendered by
23	Statement of Leslie John Bunt	``
24	Statement of Christopher Bernard Black	Mr.J.W.Smith
25	Statement of Robert John Shakespeare	``
26	Statement of Allen James Kirby	``
27	Statement of Kerry Arthur Stocks	``
28	Statement of Phillip Wayne Shorten	``
29	Statement of Robin Graham Whitaker	``
30	Minuts of Toolbox Meetings 29/6/95,6/11/95,18/12/95,11/3/96,3/5/96	Mr G.A.Dalliston
31	Statement of Phillip Richard Jackson	Mr J.W.Smith
32	Statement of Karl Jason Ballinger	``
33	Statement of Francis James Casey	Mr P.M. Scarr
34	Lighting Survey 24 March 1997	``
35	Statement of John Allan Sutton	``

Schedule "C" Findings:

Warden:

The reviewers have considered the evidence tendered to the court over the last two days and i am authorised by them to read out their findings as to the nature and cause of the accident and their recommendation:

We the reviewers selected by the warden for the purpose of this inquiry find as follows:

We find -

Name of deceased: Aan Morgan

Date of death: 19 september 1996

Place of death: Tieri

Nature of accident:

On the afternoon shift of 19 september 1996, Mr Alan Morgan lost his life on the surface of the Oaky Creek No 1 underground mine.

Mr. Morgan's body was discovered in about 1.6 metres of water and at the bottom of the mine waste water lagoon, in close proximity to or partly under the partly submerged Noyes (boart longyear) multi purpose vehicle, serial number 186, mine unit number MV03.

During the shift of 19 september 1996, Mr. Morgan was assigned various tasks which entailed the operation of diesel vehicles both underground as well as surface.

At about 7-00pm. Mr C. Black, controller, asked him to replace the soluble oil tank (tellina) with a full pod located near the main drift conveyor.

Mr. Morgan was transported up the ramp to the running shed to collect MVO3 by Mr. S. Clark, a mechanical fitter. Clark left Mr. Morgan at about 7-30pm and Mr. Morgan was apparently not seen alive again by any person.

We are of the opinion that Mr. Morgan drove back down the ramp and proceeded along the access road adjacent to the toe of the low wall and towards the underground stone and rubbish dump with, what we believe, the intention of dropping the materials pod attached to MVO3, adjacent to the detachable implements for eimcos, myne dozer and multi purpose vehicles.

We believe that Mr. Morgan had travelled about one kilometre, down the ramp and an access road located within 25 metres of the portal complex in which a number of people were known to be present.

There was no evidence to suggest that any person heard or saw Mr. Morgan pass this area as he proceeded towards the lay down area.

At some stage after 7-30pm, crew members started to query the whereabouts of Alan Morgan. After checking the running shed area, the main workshop and the emulsion tank on the offside of the surface transfer belt, a search of the underground portal area was initiated. Fitter Steve Clark and miner Neil Smith were involved in the initial search of the running shed area, workshop and emulsion tank. Deputy Glenn Coppo and control officer Chris Black became involved in the search of the underground portal area with Steve Clark and Neil Smith.

At approximately 9-20pm fitter Steve Clark noticed an MPV in the lagoon, at a point between the pontoon and the longwall emulsion shed. Immediate rescue was started, the protection services officer (PSO) and open cut mines rescue summoned and recovery initiated. At approximately 9-45pm Alan Morgan's body was recovered via the lagoon pontoon. The PSO

Allen Kirby then transported the body under doctor Edward Foley's instructions to Tieri then Emerald hospital.

Cause of death:

From the medical certificate tendered

1.(a) Asphyxiation (under water)

Cause of accident:

We have concluded that Mr. Morgan lost his life due to the substandard condition of the workplace in that:

1. The existing rill adjacent to the edge of the excavation at the site of the accident, was of insufficient height to prevent the multi purpose vehicle, MVO3, from being driven or proceeding over the edge of the excavation.
2. There was inadequate lighting to provide a clear definition of the edge of the excavation.

Other observations:

1. We believe that the substandard condition of the lay down and vehicle parking area with respect to:
    - The absence of an adequate berm or barrier designed to prevent vehicle runaways into the mine waste water lagoon.
    - The poorly defined edge of the excavation which forms the lagoon.
    - Inadequate lighting on the portal side of the tellina tanks.
    - Absence of lighting in the equipment lay down area on the dump side of the longwall emulsion shed;

has until some months prior to the accident, existed for many years without the serious potential hazards associated with this area being recognised by:

- Senior Company Officials;
- Statutory Officials;
- Occupational Health and Safety Officers;
- Other employees at the mine;
- Union Safety Inspectors;
- Department of Mines Inspectors;

with the result that no corrective action was taken to remove these hazards prior to the death of Mr. Alan Morgan.

Evidence was presented to the Inquiry which strongly suggests that some employees raised the issue of poor lighting, however, we were not convinced that timely corrective action was taken.

The issue of a safety berm which was to prevent vehicle runaways into the lagoon was raised by the Underground Safety Advisor during May 1996, however, any action taken was inadequate.

1. Considerable evidence was presented to this Inquiry which would indicate that the maintenance of MVO3 was below standard.
2. Some attempt had been made to define the edge using white PVC pipes as guideposts, however, the plans provided to this inquiry indicate that these markers were spaced nine (9) to fifteen (15) metres apart.

Schedule "D" Recommendations:

The recommendations of the reviewers are as follows:

1. Every excavation in a mine whether at the surface or underground shall be securely protected by an adequate barrier and made safe for persons and equipment working in the area.
2. The chief inspector of coal mines vary, under the provisions of part 16.1 of the general rules for underground coal mines, part 16.3 of the said rules to include areas where bulky materials,

equipment or implements are stored, with a view to providing good visibility in areas of vehicle activity.

3. A precise, practical and appropriate bake testing procedure shall be developed and implemented within a reasonable time period. This procedure shall include clear, pass/fail criteria and the provision for the training and accreditation of testing personnel.
4. That the chief inspector of coal mines establish an industry task group to investigate and develop guidelines for free steered vehicles, to include worlds best practice in:
    - Ergonomic design principles;
    - Maintenance, examination and testing;
    - Operating controls;
    - Operator security.
5. That a system be implemented as soon as practicable, whereby it is ensured, that all relevant notices, directions, or memoranda, be brought to the attention of all employees, within a reasonable timeframe.
   Any such system, once devised, should ensure that all personnel acknowledge having perused such relevant documentation by the dating and signing of same, respectively.

Schedule "E" Report of the Warden:

Having delivered the findings as to the nature and cause of the accident and the recommendations, I deliver the following report:-

At a previous inquiry, I recommended that to benefit and expedite inquiries in the future, much would be gained by having proposed documentary exhibits made available to the panel, a reasonable time prior to the commencement of an inquiry.

In this instance, some documentation was supplied to the panel prior to the commencement of such inquiry. It is evident that a panel has to consume a large volume of evidence during the course of most inquiries. To this end, it would be desirable that, in future, all documentation proposed to be tendered, be supplied to the panel at least seven (7) days prior to the commencement of an inquiry, to expedite same.

The manner in which statements were taken in this inquiry was of concern to the reviewers and myself. In many instances, there were a number of persons in the same room when a witness was being interviewed.

This process is clearly unacceptable. The number of persons in such a room should be streamlined, as a matter of commonsense.

It would also be of benefit, if the inspectorate received additional training in the manner in which statements are taken.

Statements that are tendered to a court, by any party should be sworn, for obvious reasons.

Some inquiries, in the past, have been known to take in excess of twelve (12) months to be convened after a fatality has occurred. Because of the delay involved, it is often the case that crucial witnesses are not able to be located. If a sworn statement has been taken from a prospective witness, such a statement is more beneficial and of greater weight than an unsworn statement.

In relation to exhibits 4,5,6,7 and 9 which were tendered to the inquiry, I do order that they be held in safe custody by the inspector of coal mines (mechanical) Mackay for a period of

twelve (12) months and then returned to the rightful owner unless he has notice of any claim and a request to hold the exhibits for any further period.

Further, I would like to express my sincere thanks to my reviewers and my clerk for their time and efforts during this inquiry. They were required to work very lengthy hours during the course of the inquiry.

In conclusion I concur with the findings of the reviewers as to the nature and cause of the accident.

The inquiry is now closed.

27/03/1997

Morris, Michael James

Findings and Recommendations

The *Mines Regulation Act 1964* -

Findings and recommendations of reviewers and mining warden following an inquiry into fatal injuries received by Michael James Morris Oaky No 1 mine on 26 may 2000 Warden's court of Queensland Emerald 7-9 november 2000

Before: Mr F W Windridge, esquire Mining Warden

Reviewers:

- Mr Rod Woods
- Mr Chris Glazbrook
- Mr Stephen Smyth
- Mr Ken Singer

To assist:

Mr J Tate (instructed by crown law office) on behalf of the mines inspectorate and counsel assisting

Appearances:

- MR G Dalliston on behalf of the Construction, Forestry, Mining and Energy Union (CFMEU) and the Combined Mining Unions
- MR A S Mellick (instructed by Messrs Rees R & Sydney Jones) on behalf of the next of kin
- MR R N Traves (instructed by Mount Isa Mines Pty Ltd) on behalf of Mount Isa Mines Limited, Sumisho Coal Australia Pty Ltd, Itoshu Coal Resources Australia Pty Ltd, Oaky Creek Coal Pty Ltd and for Mr Murray Wood, the registered mine manager

Witnesses examined: refer transcript and schedule "a"

Exhibits tendered: refer transcript and schedule "b"

Findings: refer transcript and schedule "c"

Recommendations: refer transcript and schedule "d"

Report of mining warden: refer transcript and schedule "e"

Schedule "A" Witnesses examined:

- Senior Constable William John NAPTHALI
- Inspector Michael Edward CAFFERY
- Peter Gilmour FULLER
- Brendan Scott DALGLISH
- Brandon Lee GRUENING

- Ross Graham WYATTE
- John Barry SANDERSON
- Stewart Owen EUSTON
- Phillip Edward WAGSTAFF
- Wayne Douglas DEAKIN
- Brett Anthony MURPHY
- Gregory Edward MERRICK
- Paul O'GRADY
- Scott Hugh DOBBIE
- Darren John NICHOLLS
- Murray Alan WOOD

Schedule "B" List of Exhibits

EXHIBIT NO	NATURE OF EXHIBIT	TENDERED BY
1	Police Report - Senior Constable W J Napthali (including statements)	Mr J Tate
2	Form 4 - Report Concerning Death by Member of the Police Service	"
3	Form F - Coroner's Certificate of Holding of Inquest	"
4	Life Extinct Certificate - Dr M E Foley 30 May 2000	"
5	Form 10 - Post-Mortem Examination Report	"
6	Form E - Post-Mortem Examination Certificate	"
7	Police Photographs - (72 colour)	"
8	Report of Inspector M E Caffery	"
9	Red Folder: Photographs of accident site	"
10	Original Photographs of accident site	"
11	Volume 1 - Photographs taken 26 May 2000	"
12	Volume 2 - Subsequent photographs	"
13	Slides from Inspector Caffery's Report	"
14	Two (2) rock samples	"
15	Plastic recovered from roof bolt	"
16	Sliver of chemical recovered from scene	"
17	Deputies Statutory Inspections & Development Panel Production Control - Oaky No 1 Mine	"
18	Information for Mike Caffery - Two (2) Folders 1) Shift Handover 2) Mine Record Book	"
19	Training Records - Oaky Creek Coal	"
20	Mine Managers Preliminary Report dated 13 June 2000	"
21	Mine Managers Report dated 12 September 2000	"

EXHIBIT NO	NATURE OF EXHIBIT	TENDERED BY
22	Geotechnical Report on the Roof Fall on 26 May 2000 BFP Consultants Pty Ltd - Prepared by Dr P G Fuller	"
23	Strata Engineering (Australia) Pty Ltd Report No: 00-212-OCC/2 dated August 2000	"
24	IC 9387 - Coal Mine Roof Rating (CMRR): A Practical Rock Mass Classification for Coal Mines (United States Department of the Interior - Bureau of Mines)	"
25	Statement of Brendan Scott Dalglish	"
26	Statement of Brandon Lee Gruening	"
27	Statement of Ross Wyatte	"
28	Statement of John Barry Sanderson	"
29	Statement of Stewart Owen Euston	"
30	Statement of Peter Derrick Dunham	"
31	Statement of Phillip Edward Wagstaff	"
32	Statement of Wayne Douglas Deakin	"
33	Statement of Brett Anthony Murphy	"
34	Statement of Gregory Edward Merrick	"
35	Statement of Paul O'Grady	"
36	Plan No A1 - Oaky Creek Coal Pty Ltd No 1 Underground Colliery (marked for falls or difficult areas)	Mr G Dalliston
37	Statement of Scott Hugh Dobbie	Mr J Tate
38	Statement of Darren John Nicholls	"
39	Minutes of weekly communications Meetings with afternoon shift (discussion of SCARF Plan)	Mr R Traves
40	Original Mine Manager's Report dated 12 September 2000	"

Schedule "C" Findings:

We find -

Name of deceased: Michael James Morris

Date of fatal injury: 26 may 2000

Time of accident: 03:40 hours

Place of accident: Oaky No 1 mine

Nature of accident:

On 26 May 2000, Mr Michael Morris received fatal injuries while working on night shift at Oaky No 1 Mine. The incident occurred at 28 cut-through Main Gate 19 when Mr Morris was trapped by a roof fall at 3.40 am.

Cause of accident:

On 25 May 2000, Mr Morris commenced work with red crew at 11.00 pm and proceeded underground to the crib room at 26 cut-through B heading MG 19. At that point a crew briefing was conducted on the work to be performed, part of this being to continue to break off 28 cut-through, 28 metres inbye 27 cut-through B heading. Roof conditions were considered by the crew as good and the Strata Control Action Response Plan (SCARP) on code Green.

Mr Morris was the designated operator of a Jeffery 2048 single pass remote controlled miner with four roof bolters fitted.

At 3.40 am, Mr Euston and Mr Morris were standing on the roof bolting platform when Mr Euston looked across the top of the miner and noticed the straps "were a bit bagged, no longer flat, not normal". At this point he saw a small flake fall out of the roof 1 metre away and saw two drops of water fall from where the flake had come from. Mr Euston tapped Mr Morris who turned, looked and shouted "get out". Both men jumped off the platform and ran outbye when the roof collapsed trapping both men near the back right-hand side of the shuttle car.

The remainder of the crew started the emergency triggers and recovery operation. Mr Euston was recovered from the fall at approximately 6.00 am with minor injuries after being trapped in a cavity between the shuttle car and fallen "W" straps.

Rescue efforts continued to recover Mr Morris and their efforts were hampered by further unstable roof conditions. Life was pronounced extinct at 9.15 am. Mr Morris' body was recovered at 11.52 am and transported to the surface of the mine.

Contributing factors:

- Primary roof support installed in the intersection and through the faulted roof horizon was insufficient to prevent catastrophic failure of ground.
- The absence of quantitative monitoring that would have enabled the crew to measure ground movement and to remove themselves from a position of danger in a timely manner.
- The failure of all persons involved to recognise the risk of the potential of faulted ground in the cut-through at the angle driven.

Schedule "D" Recommendations:

1. The reviewers endorse the recommendations of inspector Caffery's report, and of the manager's recommendations implemented since the event.
2. Mines should review Strata Control Action Response Plans to ensure they provide a reliable method of determining if trigger levels have been exceeded.
3. Mines should ensure that personnel who are exposed to strata hazards are competent to identify and respond to changing conditions in accordance with pre-defined trigger levels.
4. Mines should ensure that trigger levels in the Strata Control Action Response Plan are adequately resourced in the event of an uncontrolled roof fall. The response time should consider the need to recover people entrapped in roof falls.

5. Risk management techniques should be used to determine the level of strata support required and appropriate monitoring in relation to mine design - which includes when mining adjacent to and/or parallel to major geological structures.
6. The findings of this investigation and inquiry should be placed on the DME incident data base.
7. All risks assessment data and core data used to develop the safety management plans and associated procedures should be retained at the mine and used in reviews of the plans until it is no longer current, including a system to report and record relevant information pertaining to the strata each shift as mining progresses for the use in future mine plan decision making.

Dated at Emerald this 9th day of november 2000.

Schedule "E" Report of the Warden:

On 26 May 2000, Mr Michael James MORRIS received fatal injuries from a catastrophic roof fall whilst performing work at 28 cut-through in Maingate 19 panel of Oaky No 1 Mine.

Oaky No 1 Mine is owned by a joint venture which is constituted by -

Mount Isa Mines Limited Sumisho Coal Australia Pty Ltd Itochu Coal Resources Australia Pty Ltd

The Manager of the joint venture is Mount Isa Mines Limited and the mine is operated by Oaky Creek Coal Pty Ltd.

Coal is extracted by a longwall operation at Oaky No 1 Mine and Oaky North Mine. Annual production for Oaky No 1 Mine in 1999 was in excess of four million tonnes of coal. Product is exported through Dalrymple Bay Coal Terminal. Approximately 165 persons are employed at Oaky No 1 Mine, with an additional 35 persons engaged on a contract basis for peak work and specialist tasks.

The Inquiry has heard the evidence of 15 witnesses over the past three days and has admitted into evidence 40 statements, reports and other documents as exhibits, including the report of the investigating inspector and the report of the Registered Mine Manager. An inspection of the accident site was conducted on Monday, 6 November 2000.

Findings as to nature and cause:

The Reviewers have delivered their findings as to the nature and cause of the accident. I concur with and adopt those findings.

In respect of this Inquiry, I thank Mr Tate for his assistance as Counsel Assisting the Inquiry. I thank Counsel and the various legal and union representatives who appeared for various parties for their assistance during the Inquiry, particularly for the early start and late finish times which allowed the witnesses to return to their family and work commitments.

I thank the Reviewers who have assisted the Court to carry out its legal functions in this Inquiry.

The Inquiry is now closed.

9 November 2000

Nicholson, Gregory George

Findings and Recommendations

The Mines Regulation Act 1964 –

Findings and recommendations of inspectors following the fatality of Gregory George Nicholson at Mount Isa mine, Mount Isa on 13 March 1989. Note this is not a mining warden enquiry, the investigation was conducted by Senior Inspector of Mines – Mr. George Hutchinson

Assisted by registered Mine Manager – Mr. Phil Goode

Witnesses examined – refer to Schedule "A"

Report Attachments – refer to Schedule "B"

Findings – refer to Schedule "C"

Investigation Conclusions - – refer to Schedule "D"

Introduced procedures as a result of the incident – refer to Schedule "E"

Schedule A

Witnesses Examined:

- Clinton Maxwell Rickard – Miner
- Bohakan Holmkvist – Miner
- Paul Gregory Howarth – Load Haul Dump Unit (LHDU) Operator
- Ralph Leonard Bowden – Grader Operator
- Norman Howard Fuller – Timberman
- Owen Raymond Casey – Locomotive Driver
- Leo John Kose – Mine Rescue Squad Captain
- Alan John Latter – Shiftboss (Area 2 Lower Levels)

Schedule B

Report Attachments:

Number of	Attachment	Content Tendered By
1	Letter to Senior Inspector of Mines (17-03-1989)	Mr. Phil Goode
2	Letter From Senior Inspector of Mines (29-03-1989)	Mr. George Hutchinson
3	Witness Statements	See Schedule "A"
4	Photographs	-
5	Equipment Inspectors Report on LHDU	Mr. P. Werner
6	Fill Bulkhead Layout	-
7	Stope File Note – "*Bulkhead*	Mr A.G. Price

Number of	Attachment	Content Tendered By
	Failure in K711 stope, 19C Sublevel"	
8	Mine Planning Directive on Grouting of Diamond Drill Exploration Holes and Service Holes	-
9	Wet Fill Run Times Memorandum (19-07-1988)	Underground Manager (Area 5
10	New Stope Filling Specification Sheet	-
11	Chronological Sequence of Major Events Related to the Fatality Investigation	-
12	Drawing No. C5-1-222 Sheet 1	-
13	Drawing No. C5-1-222 Sheet 2	-
14	Drawing No. C5-1-222 Sheet 3	-

Schedule C

Findings

Name of Deceased - Gregory George Nicholson

Date of Death – 13 March 1989

Place of Death – Mount Isa Mine (Area 2)

At approximately 2.35 pm on Monday 13 March 1989 Underground Mine Manager (UMM) Mr Phil Goode received notification from mine control that an influx of water was coming fro K70 stope on 19C Sublevel. About 15 minutes later UMM received a further call from mine control stating that there had been a fill rush on 19C sublevel and that a LHDU had been partially buried with the operator not being able to be located.

UMM, Mining Operations Manager – Mr Bywater, Mine Services Manager - Mr Adams, Acting Foreman (Area 2 Lower Levels) - Mr Horsefield, Shift boss (Area 2 Lower Levels) – Mr Latter and Mines Rescue Squad assembled and travelled underground directly to 17 Level North crib room where the rescue squad proceeded down to K66 North Drive on 19C sublevel. Due to end of shift other parties waited in the crib room for the "IN" disc board to be cleared so that missing personnel could be easily identified. By the end of day shift all but 3 persons (Mr Fuller, Mr Broers and Mr Nicholson) had been located.

Party proceeded down K66 North Drive on 19C sub level where Mines rescue vehicle was found "bogged" in wet fill material. As the party proceeded down the drive, wet fill was noticed to be flowing down K67 RAR to 19 level haulage. The party crawled over fill in K70 North Drive and reached the southern bulkhead access of K711 stope where it was decided to hazardous to advance further due to poor ventilation and insufficient room for safe entry. Initial suspicions indicated to a breach in the northern fill bulkhead of K711.

After returning to the vehicle the party travelled to 19 Level crib room to find out more information on missing personnel. At the crib room UMM was informed that the body of Mr

Nicholson had been located in the N73 by-pass on 19 Level. About this time Mr Fuller and Mr Broers arrived at the crib room.

UMM and party proceeded to the fatality site where it was under control of the Mine Rescue Squad. Mr Latter indentified the body as being that of Mr Nicholson. Access to the site was barricaded.

While waiting for Mines Department and police investigators, UMM and Mr Horsefield travelled to K72 decline where Mr Nicholson's LHDU was located. Where it was observed that a channel of water and fill was continuing to run down K72 Decline. The LHDU had been inundated with hydraulic fill, the operators cabin subsequently was full of fill.

When UMM and Mr Horsefield returned to 19 level the Mines Department and police investigating party had arrived. This consisted of Senior Inspector of Mines – Mr G Hutchinson, Inspector of Mines – Mr R Seymour, Sergeant - B Brampton and Police Photographer – Mr C O'Brien. They were accompanied by Safety Officer – Mr K Slater, Photographer – Mr E Klemola and a Survey Team. Photographs were taken of Mr Nicholson and the body was removed, photographs and a survey were conducted of the site and LHDU position.

Schedule D

Investigation Conclusions

1. Mr Nicholson sustained fatal injuries when struck by a wave of fill and water which flowed from stope K711 on sub level 19C at approximately 2.20pm

2. Mr Nicholson had parked LHDU with bucket in tramming position at the top of K72 Decline

3. Mr Nicholson was not in the drivers cabin at time of fill rush

4. Mr Nicholson was washed into N73 by-pass by fill

5. LHDU was in good mechanical condition

6. The Fill rush occurred as a result of the collapse of K711 northern fill bulkhead

7. There were no indications that bulk head was likely to fail

8. Approximately 17,500 tonnes of fill exited K711 stope during the fill rush

9. The northern fill bulkhead of K711 stope was well constructed and exceeded standard requirements detailed in MSD – 584

10. Placement rates and quality of the fill were within current guidelines

11. The Water table in stope K711 did not rise above 18B sublevel at any time during filling

12. Drainage from K711 stope was normal

13. There was no evidence that K695 stope firing contributed to the K711 stope bulkhead failure

14. Drainage water from K701 Stope filling and extra flushing runs over the last 2 days of filling in K711 stope contributed in additional water in K711 stope However this alone would not be sufficient to cause the bulkhead failure

15. The cause of the bulkhead failure was a hydraulic connection via H712 ED2 Diamond drill hole between the water on 17 level and the bottom of K711 stope. This resulted in a generation of hydraulic head that exceeded the design capacity of the fill bulkhead

Schedule E

Procedures in place as result of incident

1. Any hole that intersects a stope will be detailed in the final design stope file note

2. All declined holes which intersect a particular stope will be grouted before filling of the stope commences. All other holes will be plugged or grouted

3. Before initial fill run to a stope, a review meeting will be held to establish the filling requirements for that particular stope. This will include specifying pour and rest times, number of restarts, flushing water quantities, location and status of any intersecting holes. An individual stope filling sheet will be issued signed by the UMM responsible for fill placement and the relevant area underground manager

North, Brant

Findings and Recommendations

The *Coal Mining Act 1925* -

Findings and recommendations of reviewers and mining warden following an inquiry into serious injuries received by Brant North at Oaky Creek No1 mine, on 20 january 1999 Warden's Court of Queensland.

Before: Mr F W Windridge, esquire mining warden

Reviewers:

- Mr J P Brady
- Mr C Glazbrook
- Mr R Woods
- Mr L Anderson

To assist:

Mr W Isdale (instructed by crown law office) on behalf of the mines inspectorate and counsel assisting

Appearances:

- MR G Dalliston on behalf of the Construction Forestry Mining and Energy Union
- MR A S Mellick (instructed by Rees R & Sydney Jones) for
- Mr Brant North
- MR J E Murdoch (instructed by MIM Legal Department) for Oaky Creek Coal Pty Limited and Mt Isa Mines Limited and for the registered mine manager, Murray Wood, and for the undermanager, Mr Don Foster
- MR G C Paterson (of Messrs Macrossan & Amiet) on behalf of REB Engineering and Adam Clarke

Witnesses examined: refer transcript and schedule "a"

Exhibits tendered: refer transcript and schedule "b"

Findings: refer transcript and schedule "c"

Recommendations: refer transcript and schedule "d"

Report of mining warden: refer transcript and schedule "e"

Schedule "A" Witnesses examined:

Day One - Tuesday, 26 october 1999

- Michael CAFFERY

Day Two - Wednesday, 27 october 1999

- Michael CAFFERY (Continuing)
- Thomas McDONALD
- Adam Michael CLARKE
- Leslie John BUNT
- Peter James McPHAIL
- Lesley STELLING
- Tony Melville GOODWIN
- Michael George DARMODY

Day Three - Thursday, 28 october 1999

- Les PARKER
- Greg BURGESS
- Don FOSTER
- Brant NORTH
- Murray WOOD

Schedule "B" List of Exhibits

No of Exhibit	Nature of Exhibit	Tendered by
1	Letter from Tony McGrady Requesting Inquiry	Warden
2	Interview of 14 July 1999 between Warden and Tony McGrady	Warden
3	HANSARD p.369, 370 of 12 October 1999	Warden
4	Copy of Investigation Report - Michael Caffery	Mr Isdale
5	Video Prepared by Michael Caffery	Mr Isdale
6	Lost Time & Fatal Injuries - Qld Government Statistical Report	Mr Isdale
7	Audit Report and Response from Mine Manager	Mr Isdale
8	Overview Investigation Report from Michael Caffery	Mr Isdale
9	Statement of Thomas McDonald	Mr Isdale
10	Statement of Adam Michael Clarke	Mr Isdale
11	Plan of Tailgate Drive - Oaky Creek No 1	Mr Isdale
12	Statement of Leslie John Bunt	Mr Isdale
13	Statement of Peter James McPhail	Mr Isdale
14	Statement of Lesley Stelling	Mr Isdale
15	Plan 354	Mr Isdale
16	Statement of Tony Melville Goodwin	Mr Isdale
17	Statement of Michael George Darmody	Mr Isdale
18	Supplementary Statement of Mr Les Bunt	Mr Isdale

No of Exhibit	Nature of Exhibit	Tendered by
19	Statement of Les Parker	Mr Isdale
20	Statement of Gregory Burgess	Mr Isdale
21	Diagram from Gregory Burgess	Mr Isdale
22	Statement of Donald Frederick Foster	Mr Isdale
23	Document "Underground General Familiarisation"	Mr Murdoch
24	Contractor ID Card	Mr Murdoch

Schedule "C" Findings:

We find -

Name of injured: Brant North

Date of injury: 20 january 1999

Place of accident: Oaky Creek No1 mine

Nature of accident:

On night shift of Wednesday, 20 january 1999 at approximately 0500 hours, trainee miner Brant North had both legs caught by the armoured face conveyor chain at the tailgate drive sprocket of longwall 14 at Oaky Creek No 1 mine.

Mr North and Mr Adam Clarke, a contract miner, were deployed to the task of unloading a mesh basket of winches, placing some on the armoured face conveyor drive and the rest on the ground by the tailgate drive. After placing some winches on the armoured face conveyor tailgate drive, Mr North climbed up onto the armoured face conveyor drive to clear room for more winches.

In descending the armoured face conveyor tailgate drive, Mr North's legs were caught in the armoured face conveyor chain and a flight bar, dragging him for approximately seven metres.

Mr North was trapped for approximately 4 hours. The extent of his injuries required a surgeon to amputate both legs to free him before being transported to the surface of Oaky Creek No 1 mine and to Rockhampton hospital.

Cause of accident:

From the evidence presented to the Inquiry, we are of the opinion that -

- The normal access way to and from the tailgate end of the longwall chocks and the tailgate roadway was blocked by the positioning of the goaf flushing chains located on the tailgate side of the chock 133.
- As a result, persons accessing the tailgate face or the tailgate roadway were forced to use an alternative route.

- Mr North was exposed to unacceptable risk by remaining on top of the tailgate drive during the pre-start warning sequence and subsequent startup of the armoured face conveyor (AFC).

Major contributing factors:

The decision to install the goaf flushing chains on the tailgate side of Chock 133 was made without the benefit of a formal, comprehensive risk assessment and consequently the additional hazards created by this action were not recognised and appropriately addressed.

The tailgate drive was not isolated and it was not possible to isolate the AFC without first crossing the tailgate drive or the AFC.

Mr North and Mr Clarke, given their limited exposure to the workplace and the work to be performed, were not adequately trained and supervised.

The extent of the injuries and the duration of recovery operations were compounded by the excessive wear of the AFC flight bars and the modified cover which exposed a portion of the AFC sprocket and the lead section of the flight bar re-router channel.

There was no positive communication between the work team on the Maingate end of the face line which started the AFC and Mr North and Mr Clarke on the tailgate end of the face.

We are satisfied that no effective measure or hard barrier was in place to prevent the accident. We believe that verbally defining a work area and expecting a worker to stay within the defined area is not an effective control.

Schedule "D" Recommendations:

We acknowledge that many of the recommendations put forward by inspector Caffery have been implemented at Oaky Creek No 1 mine and we endorse the action taken to date. We endorse these recommendations for the whole of the Queensland coal industry and offer the following additional recommendations -

When there is a perceived need to modify equipment, alter the workplace or amend standard operating procedures, and such a change may impact on the health and safety of persons, a comprehensive formal risk assessment must take place.

When such a risk assessment has been undertaken, the risk treatment options must be in accordance with the hierarchy of control.

The development and implementation of an industry standard for the effective management of contract labour with particular emphasis on experience, qualifications and training.

Positive isolation for the tailgate drive be installed at a convenient and accessible location as close as possible to the nominated access path to and from the tailgate roadway.

Schedule "E" Report of the Warden:

On 20 January 1999, Mr BRANT NORTH received serious injuries whilst performing work at the tailgate of longwall panel 14 of the Oaky Creek No 1 underground mine in Central Queensland.

NO 1 underground mine is one of three mines operated by Oaky Creek Coal PTY LTD and is under the management control of Mount Isa Mines Limited. The mine has a permanent workforce of 160 employees with an additional 55 persons employed by a contractor developing a new section of the mine. The mine is served by the township of Tieri located about 13 kilometres from the mine site.

The members of the inquiry panel have conducted a site inspection. A number of witnesses have been examined over the past three days, and 24 statements and other documents have been admitted as exhibits.

Findings as to nature and cause:

The reviewers have delivered their findings as to the nature and cause of the accident. I concur with the findings. I note that the accident occurred on 20 january 1999 and the inspector's report was completed on 25 march 1999. It is a matter of regret that the Minister's desires were not made known until 14 July 1999, some six months after the accident and four months after the report was completed.

To arrange for these inquiries to be completed in a timely manner, it is essential that the warden receive a copy of the inspector's report at the earliest practicable time for the following reasons -

- The court has to schedule the inquiry to fit in with other circuit duties.
- Timely notice should be given to witnesses who may have to re-schedule work and family commitments.
- Copies of documentation must be prepared and distributed to all legal representatives.
- Dates of hearing must be arranged to suit the availability of court facilities in country centres.
- Potential witnesses may change address or employment and often move interstate, creating problems with the service of subpoenas.
- The greater the delay, the higher the chance of memory fade or memory failure.

It is a matter of regret that the Mines Inspectorate have not seen the need to advise the warden of any serious accident for a number of years. The basis of this apparent reluctance is unknown, and is not supported by any reasonable interpretation of Section 74 of the *Coal Mining Act 1925*, in my opinion. I reject the approach of the Director of Safety and Health, Mr Dent, that the warden must play "hide and seek" with him over accident reports. Such action would appear to transgress the separation of power principles. In addition, it indicates a curious attitude of the department to death and injury to miners. If there is such confidence in the competency of the accident reports and the judgment of senior and chief inspectors, why is there some apparent reluctance to produce a copy of the report in order that the warden may exercise his discretion as provided in their own legislation. Perhaps the inquiry report into the death of Kenneth SLATER, known as the Tick Hill Inquiry, is the basis of some concern. Nevertheless, I would be re-assured if the Director of Health and Safety and the Chief Inspector of Mines was to advise my office that these adverse comments in the Tick Hill report had no bearing in the practice of non-supply of reports to the Warden over the past years.

I do point out that recently some reports have been received, as referred to by Mr Dent (p369 of Hansard 12 October 1999). I reject the implicit assertion that because I have determined that inquiries will not be held into these accidents for certain reasons the action of withholding the reports is justified. It is not, and if the protocol referred to by Mr Dent breaks

down (again), I will direct the Director of Health and Safety and the Chief Inspector of Mines to deliver to the office of the warden all reports in respect of serious injuries suffered by any person over the past five years, except for those recently provided.

Whilst it may be a short time before a full transcript is available, the report and recommendations will be available within a week or so on web page warden.qld.gov.au as are a number of previous inquiry results. It is planned that all reports will be available in due course for perusal and downloading. I recognise that there are some logistical problems with the distribution of results in hard copy to the industry as a whole. It is hoped that provision of the reports through the web page will assist to raise the level of awareness of inquiry reports and recommendations within all levels of the mining industry.

It has been brought to my attention that as recently as last week, Dysart Rescue Station represented by Southern Colliery Rescue team won the Australian Mines Rescue Competition at Musselbrook Dartbrook mine in New South Wales. Queensland teams came first, third, sixth and seventh out of nine teams competing. Southern Colliery team also won the trophy for the combined surface exercises. Members of this panel have some in depth experience with mines rescue and congratulate all those who participated.

In respect of this inquiry, I thank Mr Isdale for his assistance as counsel assisting. I understand that he took over the file at extremely short notice. I thank those legal representatives who appeared for various parties for their assistance during the Inquiry.

The preparation, recording, and finalisation of administration matters is a large and stressful part of the duties of Ms Susan Jayne Weller and Mr Max Parr, and I thank them for their assistance. We are also indebted to Mr Trickett, president of the land court for releasing Mr Parr, his deputy registrar, to assist at this inquiry. Ms Robyn Black at Oaky Creek No 1 assisted the inquiry by arranging the delivery of subpoenas to those witnesses employed at the mine. I thank her for that assistance.

Finally, I thank the Reviewers who assisted the inquiry, in particular, Mr John Brady who made himself available at short notice. Whilst the selection of reviewers by the warden has been the subject of some recent comment, I can assure the parties that reviewers are selected by the warden and the warden alone. I can indicate that I am entirely satisfied that all reviewers have approached their tasks and devoted themselves to their duties in an exemplary manner without fear, favor or affection. I have never doubted their commitment to the health and safety of all those employed in mines in Queensland.

The Inquiry is now closed.

29 October 1999

Rooks, Barry Arnold

Findings and Recommendations

The *Mines Regulation Act 1964* -

Findings and recommendations of reviewers and mining warden following an inquiry into fatal injuries received by Barry Arnold Rooks at Deep Copper mine, Isa Lease on 27 october 1996 warden's court, Mt Isa 28-29 april 1997

Before: Mr F W Windridge esquire Warden

Reviewers:

- Mr John Patrick BRADY
- Mr Gregory Allan DALLISTON
- Mr Roy FORD
- Mr Trevor John HOOD

To assist:

Mr John TATE, barrister, crown law office.

Appearances:

- Mr R Lynch, barrister instructed by Messrs C A Sciacca & Associates, solicitors for next of kin.
- Mr N O'Connor, solicitor for MIM Holdings Limited and appearing on behalf of Mr T G Cooney (mine manager).
- Mr G Mousley, district workers representative.

Witnesses examined: refer transcript and schedule "a"

Exhibits tendered: refer transcript and schedule "b"

Findings: refer transcript and schedule "c"

Recommendations: refer transcript and schedule "d"

Report of mining warden: refer transcript and schedule "e"

Schedule "A" Witnesses examined:

- Christopher Paul SKELDING
- William Stanley DONNELLY
- Michael Francis DURHAM
- Lee Michael DRYDEN
- Milan CINDRIC
- Ronald Joseph PIPPENBACHER
- Yves Henry POTVIN
- Thomas Gregory COONEY

Schedule "B" List of Exhibits

No of Exhibit	Nature of Exhibit	Tendered by
1	Post Mortem Examination Report	Mining Warden
2	Post-Mortem Examination Report	"
3	Preliminary Report - C Skelding	Mr J Tate
4	Final Report to Chief Inspector - C Skelding	"
5	Report of Registered Mine Manager	"
6	Set of Twelve (12) Colour Photographs	"
7	Letter dated 27/10/96 (C Day)	"
8	Plan No C5/1/234 - Scene of Fatal Accident (Sheet 2 of 2)	"
9	Plan No C5/1/234 - Scene of Fatal Accident (Sheet 1 of 2)	"
10	Folder of Documents - MIM Holdings Limited	Mr N O'Connor
11	Statement of William Stanley DONNELLY	Mr J Tate
12	Statement of Michael Francis DURHAM	"
13	Statement of Ronald Joseph PIPPENBACHER	"
14	Statement of Lee Michael DRYDEN	"
15	Statement of Milan CINDRIC	"
16	Statement of Matthew David WRIGHT	"
17	Statement of Colleen Joy CURRY	"
18	Curriculum Vitae - Yves Henry POTVIN	Mr N O'Connor
19	Curriculum Vitae - Thomas Gregory COONEY	"
20	Organisational Chart for Enterprise Development - 27/10/96	"
21	Action Taken Since Accident on 27 October 1996	"

Schedule "C" Findings:

We find -

Name of deceased: Barry Arnold Rooks

Date of death: 27 october 1996

Nature of accident:

On sunday 27 october 1996 Mr Barry Arnold Rooks was fatally injured when a rock fall of approximately 2 to 3 tonnes occurred pinning him to the platform of a Getman scissor lift tractor no. 2771.

Valiant attempts were made by Donnelly and Dryden to lift the rock off Mr. Rooks but their efforts were in vain.

After examination by a doctor on the scene, life was pronounced extinct at 11-00 am.

This accident occurred in the M62 conveyor access drive on 20 C sublevel at the Deep Copper mine, Mount Isa Mines.

Prior to the accident two employees were in the process of installing grouted rock bolts about seven (7) metres from the face.

The standard method of installing grouted rock bolts was carried out as follows:-

- Holes are drilled. This had already been carried out during the times that the face had been drilled over the previous few shifts. It was not part of their job on the morning of the accident;
- Grout, consisting of a mixture of 8 litres of water and 20 kg of powdered cement, was introduced into the holes with a grout pump;
- A 20 mm diameter re-bar rock bolt was then introduced into the hole;
- A plate and nut was then placed loosely over the end of the bolt;
- The nut is not tightened immediately, but is done at some time after the grout cures.

Barry Rooks and Lee Dryden had spent approximately two (2) hours on this task and at about 10-20 am William Donnelly (contract project planner) and Michael Durham (supervisor Deep Copper mine) arrived on the scene.

At this time Dryden was cleaning the grouting gear and Rooks was fitting the last few nuts on the bolts. Evidence was given by Dryden that he heard a pinging sound emanating from the backs. Dryden states that Rooks stopped and sounded the backs with a bar and indicated to him that the pinging sound was not an uncommon sound and there was no cause for alarm. Shortly after a fall of rock occurred.

Dryden felt the impact of the fall and looked back and saw that Rooks had been pinned to the floor of the scissor lift.

Dryden stepped back and used the hydraulic lever to lower the platform. Dryden alerted Durham to go for help and Donnelly and Dryden commenced the initial rescue attempt.

Despite their efforts they were unable to slide the rock slab off Rooks. The size of the slab was estimated to be approximately 2.25 metres in length, 1.5 to 2 metres in breadth and varying in thickness from a few millimetres to 250 millimetres.

Dryden and Donnelly continued to support this slab by using various means until help arrived.

Durham accompanied by Colleen Curry, a registered nurse employed by Mount Isa Mines, arrived at the accident site at 10-37 am. Curry commenced examination for vital signs and after a period of time advised those present that she was unable to detect any signs of life.

Doctor Matthew Wright arrived on the scene and pronounced life extinct at 11-00 am.

Cause of death:

From the medical certificate tendered:-

1(a) Chest injuries

Cause of accident:

We are of the opinion that the basic cause of this accident was the practices adopted with regard to the installation of rock bolts and the serious potential hazards which are present in a development drive of any type.

We believe that one, or a combination of these potential hazards was realised with the result that Mr. Rooks lost his life.

Factors which may have contributed to this fall of ground include, but are not limited to:-

- Localised stress anomaly;
- Vibration due to shot firing;
- Drilling of rock bolt holes and water ingress;
- Pumping of grout into the drill holes;
- Exothermic reaction of the grout;
- Natural weakness in the rock mass;
- Rattling or scaling.

We are satisfied that the rock support system in use at the time offered no immediate protection to persons engaged in the installation process or employed on other duties in the face area.

Other observations:

We are satisfied that this unsafe state, which finally resulted in the death of Mr. Rooks was most likely present for some time and therefore, a constant threat to all persons engaged in any activity forward of the last line of effective supports.

The failure of this section of the access drive which has been continuously referred to as competent ground, demonstrates the need for effective procedures, training and controls which will eliminate the need to advance too far forward of the last line of effective supports.

We are satisfied that a comprehensive risk assessment and hazard management process has not been completed for this accident and we are confident that had this process been carried out, then proper controls, procedures or standards would have been developed prior to this Inquiry.

We wish to draw attention to recommendation 3 of the Glenn Burrows fatal accident inquiry held in Mount Isa on 4 June 1996.

Schedule "D" Recommendations:

The recommendations of the reviewers are as follows:

Clearly defined minimum support rules should be developed and implemented for the Deep Copper mine.

1. These minimum support rules shall specify:-
    - Maximum drive widths;
    - Maximum distance from the face to the last line of effective support;
    - The number, type and pattern of the supports required;

- Safe work procedures for the installation of these supports.

2. Safe work procedures should be developed and implemented with input from, and in co-operation with, a vertical cross-section of the workforce affected by, and competent in the work to be performed. Safe work procedures should include audit mechanisms.
3. That an industry group consisting of representatives from the Deep Copper mine management team and employee representatives with input from the Department of Mine's Inspectorate, investigate, select and implement an effective rock bolting system. An effective rock bolting system should provide immediate protection for persons engaged in the installation process and effective support for persons employed on other duties in the face area.
4. That the Getman scissor-lift platform and other devices, used to elevate persons be fitted with falling object protection and guard rails as required by Part 7.32.1 of The *Metalliferous Mining Regulations of 1985* (as amended).

Schedule "E" Report of the Warden:

I concur with the findings of the reviewers as to the nature and cause of the accident.

I note that a legal representative of the employer was present during some of the interviews conducted by the inspectorate, albeit at the request of the interviewee. I do not accept this as good practice on the ground that the witness should be interviewed in a free and open environment more conductive to ascertaining nature and cause without any pressure, real or perceived, from the employer. I am not imputing an improper conduct, merely attempting to regulate the investigation process.

As a practice, the inspectorate should develop a procedure where each witness can be interviewed out of the presence of the employer. It is a matter for the witness if he or she desires his or her own solicitor or union representative to be present, as long as such persons do not interfere in the interview process.

I am advised that a representative of next-of-kin raised the question about the experience and appointment of reviewers in these matters.

Reviewers are selected by the warden, and the warden alone, as authorised by the Act. All reviewers are selected because of their experience in the industry, particularly where they have skills, qualifications and current occupations relevant to the accident under investigation. I also look for past regulatory, inspectorial or managerial experience, with an overlay of union representation, and lately, mines rescue representation. A further consideration is a high interest in health, safety and training issues. This must continue in the future, as to restrict my right of choice will severely inhibit the function of the whole inquiry process.

I thank inspector Skelding for his report, and Mr. Tate for his assistance during this inquiry.

I thank the reviewers for their participation and assistance during this inquiry.

This inquiry is now closed.

29 April 1997

Rowlands, Martin Henry and Gudge, Ricky Alan

Findings and Recommendations

The *Mines Regulation Act 1964*

Findings and recommendations of reviewers and mining warden following an inquiry into fatal injuries received by Martin Henry Rowlands at Hilton mine Mount Isa on 4 october 1990 warden's court of Queensland Mount Isa 12 march 1991

Before: Mr F W Windridge esquire Warden

Reviewers:

- MR R R GRACE
- MR G H HUTCHISON
- MR J W MOORE
- MR F SIBBEL

To assist:

MR G SLEZIAK, inspector of mines.

Appearances:

- MR W BOULTON, appearing for widow and children of deceased, also appearing for Mr Gudge
- MR G MOUSLEY, district workers' representative
- MR C NOTHLING, solicitor for company and registered management

Witnesses examined: refer transcript and schedule "a"

Exhibits tendered: refer transcript and schedule "b"

Findings: refer transcript and schedule "c"

Recommendations: refer transcript and schedule "d"

Report of mining warden: refer transcript and schedule "e"

Schedule "A" Witnesses examined:

- Marshall John BRIANT
- Ricky Alan GUDGE
- Felix James LEAHY
- Bruce John STEWART
- Albert William KERWIN
- Patrick David BARRS
- Donald Gordon PITT
- David John HARSTOFF
- John Charles WESTCOTT
- Michael David MacFARLANE
- David WALTERS

Schedule "B" List of Exhibits

No of Exhibit	Nature of Exhibit
1	Statement - J T Lewis
2	Statement - K J Allen
3	Post Mortem Certificate
4	Post Mortem Report
5	Statement - R A Gudge
6	Five Point Check List - Sample
7	Record Book Entry
8	Mine Manager's Report
9	Survey Plans
10	Photographs
11	Safety Instruction Book
12	Page from Mine Safety Instruction Booklet
13	Updated version of Mine Safety Instruction Booklet
14	Statement - B J Stewart
15	Statement - A W Kerwin
16	Five Point Safety Check List
17	Statement - P D Barrs
18	Statement - D G Pitt
19	Statement - D J Harstoff
20	Statement - J D Westcott
21	Statement - M D MacFarlane
22	Statement - D Walters
23	Instructions regarding Split Sets

Schedule "C" Findings:

We find -

Name of deceased: Martin Henry Rowlands

Seriously injured person: Ricky Alan Gudge

Date of accident and death of deceased: 4 october 1990

Location of accident and death of deceased: KD51 incline, 9a sublevel in the Hilton mine

Nature of accident:

At some time between 11-35am and midday on 4 october 1990, miner Martin Rowlands and nipper Ricky Gudge were replacing a faulty hydraulic hose on the right-hand boom of an Atlas Copco Boomer H128 two-boom jumbo (more specifically identified as MIM Unit No 3521) which was then drilling at the heading of KD51 incline on 9a sublevel in the Hilton mine. Both men were standing between the right-hand or western sidewall and the right-hand boom of the jumbo which was about one metre above floor level and the same distance from the sidewall. While they were so engaged a section of the western sidewall slipped off and fell upon them. Rowlands was crushed and held against the boom which Gudge fell to the floor with rocks covering his lower body. Rowlands died at the site from asphyxia and spinal cord avulsion. Gudge suffered a fractured skull and lumbar spinal injuries.

Cause of accident:

Both men had exposed themselves in a confined space beneath a sidewall that had not been properly secured.

Schedule "D" Recommendations:

The recommendations of the reviewers are as follows:

We cannot emphasise too strongly the need for all face persons to be constantly alert for deteriorating ground conditions and the continual need to bar down. This assumes greater importance with the increasing size of development openings. To ensure that a suitable scaling bar is always available, management should investigate the practicability of carrying such a bar attached to each mobile face unit.

Where it is deemed necessary to install temporary ground support right up to the face of an advancing development heading, procedures should be adopted to minimise personnel exposure to unsecured ground. These include:

Individual split-sets should be placed as soon as each hole is drilled and each ring of support should be completed before proceeding with the next ring closer to the face.

When doing maintenance work on mobile equipment, the unit in question should be positioned under secured ground and adequate space allowed for the work to be performed.

In unravelling ground, smooth wall blasting techniques should be adopted for the sidewalls and the backs to limit the damage to the ground.

Schedule "E" Report of the Warden:

I concur with the findings of the reviewers as to the nature and cause of the accident.

The inquiry is closed.

Slater, Kenneth Andrew

Findings and Recommendations

The *Mines Regulation Act 1964* -

Findings and recommendations of reviewers and mining warden following an inquiry into fatal injuries received by Kenneth Andrew Slater at low grade stockpile, Tick Hill Gold mine on 12 september 1994 warden's court 6-8 december 1995

Before: Mr A J Chilcott esquire acting Mining Warden

Reviewers:

- Mr John Patrick BRADY
- Mr John Arthur TORLACH
- Mr Gregory Allan DALLISTON
- Mr William Barron ELRICK

To assist:

Mr Christopher Paul Skelding, acting senior inspector of mines, Department of Minerals and Energy, appears to assist.

Appearances:

- Mr G R Moffatt, solicitor of Messrs V R Moffatt solicitors for next of kin (Mrs Slater in person)
- Mr R M Cooke, principal legal officer, MIM Holdings Limited for Carpentaria Gold Pty Ltd
- Mr D Pappin, district workers representative

Witnesses examined: refer transcript and schedule "a"

Exhibits tendered: refer transcript and schedule "b"

Findings: refer transcript and schedule "c"

Recommendations: refer transcript and schedule "d"

Report of mining warden: refer transcript and schedule "e"

Schedule "A" Witnesses examined:

- Constable Ian Michael ROBERTSON
- Alan Peter DOWNHAM
- Duncan Peter Hugh PAPPIN
- Jayantha Lakshman MAHARAGE
- Phillip HOLDEN
- Bradley John FORTESCUE
- Anthony Peter HYDE
- Shane Irvine PETERSEN

- Brett Leslie McGUINESS
- Richard Darcy ROBERTS
- Russell John TOMLINSON
- Odd NYBORG
- Peter John MINAHAN

Schedule "B" List of Exhibits

No of Exhibit	Nature of Exhibit	Tendered by
1	Medical Certificate - Raymond Seymour	C P Skelding
2	Report by R A A Seymour dated 8 September 1995	"
3	Small Colour Photograph	G R Moffatt
4	Police Photographs	C P Skelding
5	Post-Mortem Examination Report	"
6	Post-Mortem Examination Certificate	"
7	Statement of Ian Michael Robertson	"
8	Statement of Alan Peter Downham	"
9	Report of D P H Pappin dated 11 October 1994	"
Ex. A for Ident	Report of Carpentaria Gold Pty Ltd	G R Moffatt
10	22 Colour Photographs taken by D Pappin	C P Skelding
11	Plan - Marked with Blue Biro Cross by Witness Pappin	G R Moffatt
Ex. B for Ident	Statement by P J Minahan	C P Skelding
12	Statement of J L Maharage	"
13	Four (4) Colour Photographs taken by J L Maharage	"
14	Statement of Gregory Sleziak	"
15	Statement of Phillip Holden	"
16	Statement of Bradley John Fortescue	"
17	Statement of Anthony Peter Hyde	"
18	Statement of Shane Irvine Petersen	"
19	Statement of Brett Leslie McGuiness	"
20	Statement of Richard Darcy Roberts	"
21	Statement of Russell John Tomlinson	"
22	Statement of Odd Nyborg	"
23	White AS 1801 Safety Helmet	"
24	Orange Protector Safety Glasses SN 5000	"
25	Light Brown Protector Safety Glasses S29	"
26	Empty Orange Bell Wire Reel	C P Skelding
27	Quantity of Red and White Bell Wire with remnants of electric detonator leads attached	"
28	Stinger SB 10 Exploder used for initiating electric detonators	"
29	Samples from Chemical Laboratory	"
30 Formerly Ex. B for Ident	Statement of Peter John Minahan	"

Schedule "C" Findings:

We find -

Name of deceased: Kenneth Andrew Slater

Date of death: 12 september 1994

Place of death: Low grade stock pile, Tick Hill Gold mine

Nature of accident:

On tuesday 6 september 1994 Mr Greg Dellar, contractor, notified Mr Richard Darcy Roberts, acting mine manager, that he'd discovered a number of oversize rocks which still had explosives in them on top of the low grade stockpile.

After investigation Mr Roberts confirmed this and organised the area to be flagged off. During the course of a safety meeting held on 7 september 1994 at 2:00 p.m. the attendees were informed of the situation and asked to stay well away from the area.

It was decided at this meeting that Mr Alan Peter Downham would follow up with Mr Phillip Holden when he returned from leave. From the evidence before us, it would seem that some oversize rocks had been charged up and fired sometime between december 1993 and january 1994 and that the responsible person did not check the blast area for misfires before the all clear was given.

On his return to the Tick Hill mine on the morning of 12 september 1994, Mr Holden had a meeting with Mr Roberts, Mr Downham and Mr Tomlinson. During this meeting he was informed that during an inspection by Mr Dellar of the upper level of the low grade stockpile, a number of misfires had been found. Mr Holden then informed those present he would ask for assistance from Mount Isa Mines Limited.

Mr Holden then rang Mr Peter John Minahan of Mount Isa Mines and informed him that he had misfires on the low grade stockpile and had neither the equipment or the experience to deal with them. Mr Holden asked Mr Minahan if he had any people available who were capable of removing them. Mr Minahan rang back and said he had Mr Kenneth Andrew Slater with him and Mr Slater would be able to travel to Tick Hill and carry out the job. Mr Holden then spoke to Mr Slater and explained to him the approximate size of the rock and that it contained an unknown quantity of explosive.

At approximately 12:15 p.m. on 12 September 1994, Mr Slater (safety advisor) and Mr Brett Leslie McGuiness (workplace trainer) the persons nominated to assist the Tick Hill Mine left the Mount Isa mine complex by vehicle. This vehicle carried a quantity of explosives and accessories which may have been required to complete the assigned task.

At approximately 3:00 p.m. Mr Slater and Mr McGuiness arrived at the Tick Hill Mine office and after they completed the mine's condition of entry form and the visitor's book they followed Mr Russell John Tomlinson, mill foreman, to the low grade stockpile and parked the vehicle near the base of the stockpile.

Messrs Tomlinson, Slater and McGuiness then climbed up onto the stockpile and Mr Tomlinson pointed out the boulders which contained the misfired shots.

Evidence would suggest that discussions were held on the most suitable location to initiate the blast and it was assumed that the firing position would have been behind a Hymac 29 tonne hydraulic excavator which was parked about thirty (30) metres from the base of the stockpile.

A number of witnesses gave varying accounts of the quantity, type, location and state of deterioration of the explosives and detonating cord present in the immediate area.

We have concluded that the quantity of explosive present could have been in excess of 2.6 kilograms and that it had deteriorated markedly due to exposure for a period of about nine (9) months.

Mr Tomlinson left the stockpile area to arrange barricades and sentries on access roads adjacent to the area whilst Mr Slater and Mr McGuiness carried out work designed to initiate the explosives.

Their vehicle was parked behind the Hymac 29 tonne excavator and one roll of bell wire of about fifty (50)metres in length was run out from the rock to be blasted to the base of the stockpile and about thirty (30) metres short of the excavator.

From the evidence before us Mr Slater decided to initiate the charge from that point which was out of sight from the shot.

Mr Slater called for two (2) detonators which Mr McGuiness got from a carry bag in the vehicle.

Mr Slater attached one detonator to an existing length of red cord and the other to an existing plaster charge. The detonator lead wires were connected to the bell wire before Mr Slater and Mr McGuiness retreated to the base of the stockpile and connected the bell wire to a Stinger SB 10 exploder.

Mr McGuiness requested the warning siren and after a period of about five (5) minutes Mr McGuiness initiated the charge.

At this point Mr McGuiness was kneeling down over the exploder facing north-west towards the direction of the charge and Mr Slater was standing directly behind him and about one (1) metre back.

Immediately after the blast Mr McGuiness saw Mr Slater lying face down on the ground. He noticed that his helmet had been displaced and it was a short distance south-west of where Mr Slater was lying.

Mr McGuiness called for assistance over the radio and then checked Mr Slater's vital signs and administered first aid until help arrived about two (2) minutes later.

First aid was administered at the site until the Royal Flying Doctor arrived. Following an examination the doctor pronounced life extinct at 4:50 p.m.

Cause of death:

From the medical certificate tendered:-

1. (a) Perforated heart

due to (or as a consequence of)

(b) Fractured ribs

due to (or as a consequence of)

(c) Head trauma

Cause of accident:

We have concluded that Mr Slater lost his life and Mr McGuiness was exposed to serious risk due to the exposure to fly rock from unconfined blasting and the deliberate detonation of an unknown quantity of deteriorated explosive.

Fly rock distribution was in excess of an estimated 300 metres and the accident site was 42 metres from the point of detonation.

The blast crew failed to take adequate precautions to protect their own safety in that:-

Sufficient time was not allowed for a thorough inspection of the blast site.

No action was taken to reduce the size of the blast or to confine it in any way which would reduce the quantity of flyrock.

They did not take shelter behind or under the hydraulic excavator which was located about 25 metres away.

We have concluded that Mr Slater, Mr McGuiness and the manager of the Tick Hill mine, that being Mr Holden, and the competent persons appointed to assist him, failed to identify the potential hazards associated with this misfire.

Major omissions and contributing factors:

There is no evidence to support the belief or the assumption that Mr Slater was a competent shotfirer with demonstrated experience in the recovery or detonation of misfired shots of the type present on this occasion.

Mr Slater was not given any instructions by the manager of the Tick Hill mine, Mr Holden, or any competent person appointed to assist him.

Mr Slater nor Mr McGuiness were not appointed as shotfirers under the requirements of Regulation 5.32 (a) and (b) of the *Metalliferous Mining Regulations 1985* (as amended).

Secondary blasting by unknown persons was carried out on the Tick Hill mine low grade stockpile sometime in December 1993 or early January 1994 and there is clear evidence that a number of misfires occurred.

There is no evidence that post shotfiring examinations had been carried out and no action was taken to find or recover these misfires.

No evidence was produced which would support the requirements of Section 36 of the *Mines Regulation Act 1964* (as amended); weekly inspection of a mine.

When the deteriorated explosive was found on 6 september 1994, the area was protected by barricades, however, no action was taken to remove the potential danger until 12 september 1994.

The manager and the persons appointed to assist him having failed to recognise the potential hazards associated with the recovery of a misfired shot and deteriorating explosives, did not seek advice from experts or specialists in the explosives field.

The Tick Hill mine has no safe operating procedures in place nor were any developed for this particular event.

Transport of explosives on public roads:

At about 12:15 p.m. on 12 september 1994 a nissan pathfinder vehicle, registration number 552-AZT driven by Mr Slater with Mr McGuiness as passenger left the Mount Isa copper isa smelt plant for the Tick Hill mine.

This vehicle was carrying a quantity of explosives, which included:-

- 20 plugs (200 x 25mm) powergel pulsar 3131
- 10 detonators
- Red cord
- Bell wire
- Exploder
- Batteries of various voltages
- Other accessories

This vehicle stopped at a service station where it was refuelled and a 20 litre jerry can of unleaded petrol was placed in the back of the vehicle with the explosives. In addition to this there was a length of chain about ten (10) metres long.

This vehicle carried no fire extinguishers, warning signs or boxes designed for the cartage of explosives and no permits had been issued for the transport of explosives on public roads.

Schedule "D" Recommendations:

The recommendations of the reviewers are as follows:

1. This Inquiry has highlighted unacceptable non-compliance with statutory requirements and lack of implementation of health and safety measures to at least meet applicable standards. Consultation be initiated by company managements, employee representatives and statutory

authorities to determine action to bring the health and safety practice in the industry to a high standard. The means to deal with non-compliance with relevant acts, standards and codes should be determined.

The Department of Minerals and Energy should direct the inspectorate to take firm action where non-compliance with the mines regulation act and the metalliferous mining regulations occurs. The disciplinary process should be improved and an effective penalty structure developed and implemented. The means to support this implementation of such a penalty structure should be provided.

It is essential that the Department of Minerals and Energy ensure that the frequency of mines inspections and audits by all government and union appointed officers is sufficient to contribute to continuous improvement in health and safety issues effecting mining employees.

2. A person appointed to manage any part of a mining operation who does not hold a certificate of competency as a mine manager must demonstrate a working knowledge of the mines regulations act and the metalliferous mining regulations before taking up that appointment.

3. Before taking up an appointment as "a person appointed to assist the manager" that person must demonstrate a working knowledge of those parts of the mines regulations act and the metalliferous mining regulations which pertain to their duties and responsibilities.

4. A tri-partite industry group, including the relevant government Inspectors and persons with knowledge of relevant acts, regulations, standards and work practices should be set up to develop competency standards for the storage, transport and use of explosives in the mining industry.

These standards once developed and accredited will give recognition of both theory and practical applications and should be adopted by mining legislation thus promoting safety and delivering portability of competency through the mining industry.

Until this exercise can be completed we recommend that all people required to carry out shot firing operations in accordance with Part (5) of section 5.32 of the metalliferous mining regulations should hold the relevant shot firing competency in line with the requirements of the *Explosives Act 1952* (as amended).

The mines inspectorate should review all procedures associated with secondary blasting and the transport of explosives.

Schedule "E" Report of the Warden:

I concur with the findings of the reviewers as to the nature and cause of the accident and I do not propose to deliver separate findings.

Whilst the panel are mindful of all the provisions of Section 42 of the *Mines Regulation Act* and its requirements as to our powers we have made a number of observations during this inquiry which we believe warrant comment from us.

It is necessary that all relevant documentation and material in the possession of the senior inspector of mines should be forwarded to the mining warden in order that the warden is in a position to set up the holding of an inquiry as soon as possible. In this matter the warden did not have all the material available from the senior inspector of mines, Mount Isa. We believe that had the warden had the benefit of perusing all reports and material before the inquiry commenced then it would have been made considerably shorter. It may also alleviate any concerns that may arise from certain quarters that particular evidence has been withheld which may be construed as attempting to pervert the course of justice.

The delay in the senior inspector's report coming to the attention of the warden (being a period of approximately thirteen (13) months), we feel, it totally unacceptable. This is for a number of reasons i.e. the prolonged grief to the family of the deceased, the evidence of the witnesses not being fresh, the extra cost of calling witnesses and the time expended in trying to locate the whereabouts of certain witnesses.

It is also of concern that a crucial witness had to be called during the inquiry and could only be given 24 hours notice because one of the reports in the senior inspector's possession did not come to our attention until evidence was adduced from the third witness.

We feel that there should be strict guidelines, or instructions or an amendment to the Mines Regulation Act whereby a timeframe is set for the inspector of mines to forward all preliminary reports, documentation etc. in their possession of their investigations of an accident within a period of two (2) months from the date of such accident occurring.

We also have concerns with regard to the manner and taking of statements and their quality, in relation to this inquiry.

It is evident that the quality of the statements in general is lacking and the statements contained numerous areas of "heresay" evidence. If the senior inspector or inspectors of mines, Mount Isa are to continue to take statements from potential witnesses in relation to an accident then it is obvious that such officers require considerable training to bring the standard of statements up to an acceptable level.

They are the extent of the observations we consider need to be brought to the attention of the appropriate authority.

I do order that the physical exhibits tendered to the inquiry be held in safe custody by the mining registrar, Mount Isa for a period of twelve (12) months and then returned to the rightful owner unless he has notice of any claim and a request to hold the exhibits for any further period.

This inquiry is now closed.

8 december 1995

Sobczak, Greg

Findings and Recommendations

The *Coal Mining Act 1925* -

Findings and recommendations of reviewers and mining warden following an inquiry into serious injuries received by Gregory Richard Sobczak at Laleham mine, South Blackwater on 22 may 1999 Warden's Court of Queensland.

Before: Mr F W Windridge, esquire mining warden

Reviewers:

- Mr I Mcdonell
- Mr S Smyth
- Mr R Wallace
- Mr R Woods

To assist:

Mr J Tate (instructed by crown law office) on behalf of the mines inspectorate and counsel assisting

Appearances:

- MR G R Mullins (instructed by Morris Blackburn Cashman) for Mr Gregory Sobczak
- MR G Dalliston on behalf of Construction, Forestry, Mining and Energy Union and Communication and Electrical Plumbers Union
- MR D O Savage (instructed by Sparke Helmore) for Waratah Engineering
- MR P H Morrison QC, with him MR R Morton (instructed by Corrs Chambers Westgarth) for South Blackwater Coal Limited and the registered mine manager, Mr Keith Falconer

Witnesses examined: refer transcript and schedule "a"

Exhibits tendered: refer transcript and schedule "b"

Findings: refer transcript and schedule "c"

Recommendations: refer transcript and schedule "d"

Report of mining warden: refer transcript and schedule "e"

Schedule "A" Witnesses examined:

- Michael Edward CAFFERY
- Gregory William LYNE
- Steven Andrew GRANT

- Gregory Richard SOBCZAK
- Norman Clive MARSHALL
- Edward Clarence STRONG
- Robert Bruce CHARLES
- David John SLAPE
- Richard Vaughan CURTIS
- Gavin John DILLON
- Brian GOVER
- Gerard James WILD
- Keith William FALCONER

Schedule "B" List of Exhibits

Exhibit No	Nature of Exhibit	Tendered By
1	Letter from Tony McGrady Requesting Inquiry be Held dated 14/7/99	Mr J Tate
2	Accident Investigation Report prepared by Mr M Caffery	"
3	Overview Investigation Report (M Caffery IOM)	"
4	Causal Analysis Process (M Caffery IOM)	"
5	Mine Plan - Laleham No 1 Colliery	"
6	Waratah Engineering Pty Limited - Statement of Gerard James Wild	"
7	Documentation Submitted by Corrs Chambers Westgarth	"
8	Facsimile Transmission from South Blackwater Coal Limited to Waratah Engineering dated 21 May 1999	Mr P Morrison
9	E-Mail Response from Gerry to Keith (Undated)	"
10	Manual for 12CM12 Continuous Miner from Joy Technology	"
11	Statement of Steven Andrew Grant	Mr J Tate
12	Set of Coloured Photographs (in envelope)	"
13	Set of Original Coloured Photographs in Inspector's Report (in plastic sleeves)	"
14	Statement of Greg Sobczak	Mr G Mullins
15	Awareness Induction Questionnaire (SBCL) - Greg Sobczak	Mr P Morrison
16	Statement of Michael Roy Bailey	Mr J Tate
17	Statement of Norman Clive Marshall	"
18	Statement of Edward Clarence Strong	"
19	Statement of Robert Bruce Charles	"
20	Statement of David John Slape	"
21	Statement of Richard Vaughan Curtis dated 25 May 1999	Mr R Morton
22	Statement of Richard Vaughan Curtis dated 17 December	"

Exhibit No	Nature of Exhibit	Tendered By
	1999	
23	Procedures to Laleham Workforce from Keith Falconer Present Isolation (Tag Out) Locations - Continuous Miners (dated 2 June 1999 and 21 June 1999)	"
24	Statement of Gavin John Dillon	Mr P Morrison
25	Contractor's Induction Sheet	"
26	Contractors Induction Booklet July 1999	"
27	Toolbox Report	"
28	Generic Induction Program UNDERGROUND - Training Booklet	"
29	Statement of Brian Gover	"
30	Statement of Keith William Falconer	"

Schedule "C" Findings:

We find -

Name of injured: Gregory Richard Sobczak

Date of injury: 22 may 1999

Place of accident: Laleham mine, South Blackwater

Nature of accident:

On Saturday, the 22nd day of may 1999 at 0420 hours, Mr Gregory Richard SOBCZAK was caught in the conveyor chain of a continuous miner while performing maintenance at the Laleham underground mine in central Queensland.

Mr Sobczak was one of two fitters sent to the mine by Waratah Engineering Pty Ltd to assist with the repairs of the excessive free play in the conveyor pivot and left-hand boom pivot on a Joy 12CM12 continuous miner number 30846.

Mr Sobczak had positioned himself in the conveyor section of the continuous miner, straddling the bottom conveyor chain. While the continuous miner was in the manual operation mode, the conveyor was inadvertently started for a very brief period of time. The legs of Mr Sobczak were caught between a conveyor flight bar and the subframe of the miner. This resulted in the right leg being amputated above the knee and the left leg was amputated below the knee.

Quick action by those present controlled the loss of blood and Mr Sobczak was transported to the surface and on to medical treatment at Blackwater and Rockhampton.

Cause of accident:

The causes of the accident were -

The position adopted by Mr Sobczak immediately prior to the accident exposed him to an unacceptable risk from a high energy release hazard that was not controlled by hard barriers.

The inadvertent start-up of the conveyor chain of continuous miner 30846 manifested this risk to a foreseeable result.

Major contributing factors:

A lack of job planning and failure to recognise hazards and subsequent risks did not allow a suitable safe work system to be implemented.

By not understanding their responsibility to identify and control workplace hazards, persons who had supervisory tasks failed to identify and prevent an unsafe situation from developing.

The use of "soft barrier" (personal danger tags) enabled breaches of established isolation procedures to occur.

Schedule "D" Recommendations:

1) Competencies

The responsibilities of all persons with supervisory duties need to be defined. The current competencies of these persons need to be demonstrated as being consistent with the defined needs of the mine. Such identified competencies should include planning, risk management, communication, supervision, monitoring and assessment as well as the technical job skill requirements.

2) Machine isolation

Mines should examine the need for isolation of separate energy sources on machinery when undertaking maintenance tasks which require testing and adjustment. Machine isolation must be by means of physical barrier.

Furthermore, mines must regularly audit and review the isolation procedures to ensure the suitability of procedures for the maintenance tasks to be undertaken and compliance to these procedures in the workplace.

Job planning and risk assessment

Planning for major or infrequently performed maintenance tasks must include a risk assessment of the job steps, hazards and controls.

Standard operating procedures identifying machine isolation, hazards and controls as well as resources to safely and efficiently undertake the job must be applied.

Work instructions for maintenance tasks must specify isolation of hazardous energy sources. The supervisor should not only impart the instructions to all persons but also seek an understanding of these instructions.

Personnel on the job must apply hazard management skills throughout the performance of the job.

Supervisors should proactively reinforce hazard management.

Workplace inspection and supervision functions must include a system to verify and ensure compliance with isolation procedures and standard mine procedures.

Communication and work control at work sites

At start of each shift all personnel required to work at a site should be provided with an overview of the relevant risks or changed circumstances associated with the planned work activities and control methods to be applied. In determining what is a relevant risk or changed circumstance, regard should be had to:

Site specific risks and control procedures associated with:

- Ventilation
- Heat
- Gas
- Strata-roof, floor and ribs
- Machinery being used
- Reports on recent incidents in the mine
- Other identified hazards in the work area
- Additional controls to be available, including:
- Location of isolation points to control hazards associated with - electrical, mechanical, compressed air and hydraulic energy sources.
- Location of communication facilities.
- Location of fire fighting facilities.
- Emergency evacuation procedures including escape routes, transport arrangements and location of caches, and
- Relevant mine standards, procedures and rules applicable to activities on that shift.
- Advice of non routine issues; including:
- Attendance of visitors, contractors and/or new employees at the work site;
- Awareness of non-routine activities affecting the work site;
- Special Mine rules applicable to tasks planned for that shift, and
- Where a change from routine activities occurs, the hazards are to be identified and controls agreed in accordance with risk assessment protocol before the task is commenced.

The mine needs to have a system to confirm practical understanding by all persons of the risks and controls applying to the work site.

Review of industry practice

The Inspectorate should undertake a review of industry maintenance practice to examine the adequacy of methods applied to isolate hazardous energy sources. This review should also examine the control of unplanned movement of machinery.

Corrective actions to machines

Mines must develop and implement a system which ensures that:

They access information regarding faults identified and modifications suggested by OEM and suppliers for the safe operation of equipment installed at the mine site; and

All machines for which such information has been published should be assessed to ensure that potential hazards are controlled to achieve an acceptable level of risk.

Continuous miners

Mines using continuous miners should take immediate steps to ascertain whether their continuous miners require corrective action in the following categories:-

Modifying the conveyor control so that the conveyor can only be started in manual by a two switch operation.

Fitting an audible pre-start alarm and a traction reversing alarm.

Fitting a circuit breaker to provide power isolation to the cutter heads and conveyor in both manual and radio modes.

Fitting pressure switches to the power fill function to shut down the pump if an attempt is made to put oil into the machine before isolating the cutter and conveyors in either manual or radio modes; and implement corrective action if necessary.

Mines acquiring a continuous miner shall ensure that the miner has the above features.

Training

Where possible, trainers and assessors should be different persons to retain the integrity of the training system; and

Where training is recorded as taking place, copies of the theory assessment and proof of practical assessment carried out under the person's work or simulated work conditions should be recorded and retained on the person's training file

Schedule "E" Report of the Warden:

On 22 May 1999, Mr Gregory Richard SOBCZAK received serious injuries whilst performing work at A600 panel of the Laleham underground mine.

Laleham underground mine is one of three mines operated by South Blackwater Coal Limited (SBCL). The other mines include a long wall operation and an open cut operation. The mines are served by the township of Blackwater located about 43 kilometres north of the mine site. Laleham commenced operations in 1971 and has a workforce of 72 personnel.

The members of the inquiry panel have conducted an inspection of the miner which is still operational underground at Laleham.

A number of witnesses have been examined over the past four days, and 30 exhibits including statements and other documents have been admitted into evidence.

Findings as to nature and cause:

The reviewers have delivered their findings as to the nature and cause of the accident. I concur with the findings.

The reviewers have asked that I convey to inspector Caffery their appreciation of a comprehensive and detailed report. The reviewers also consider that the quick action of Mr Bailey in rendering effective first aid on the spot was a significant factor and possibly saved the life of Mr Sobczak. Both this incident and the incident involving Mr Brant North at Oaky Creek No 1 mine on 20 january 1999 emphasised that effective administration of first aid at the accident scene can be a significant factor in the saving of life.

It is acknowledged that SBCL have implemented engineering changes to the continuous miner to assist with isolation procedures on this particular machine. Other measures in respect of tagging out and isolation procedures have been upgraded, and new initiatives have been introduced.

I note the suggestion of Mr Dalliston on behalf of the CFMEU in relation to the facts surrounding this incident and the new legislation that has yet to be proclaimed. I consider that the suggestion would be a worthwhile exercise to be undertaken by the Inspectorate, the CFMEU, the Australian Colliery Staff Association and any Owners' Association.

I thank Mr Tate for his assistance as counsel assisting, and those legal representatives who appeared for various parties at the Inquiry. We thank the management at SBCL for facilitating the inspection at the mine on Sunday, 20 february 2000.

Finally, I thank the reviewers for their assistance at this inquiry.

The inquiry is now closed.

24 February 2000

Stratton, David Ronald

Findings and Recommendations

The *Mines Regulation Act 1964* -

Findings and recommendations of reviewers and mining warden following an inquiry into fatal injuries received by David Ronald Stratton at Isa Mines scrap metal yard on 19 june 1997 warden's court Mount Isa 8-20 november 1997

Before: Mr A J Chilcott esquire Acting Warden

Reviewers:

- Mr John Patrick Brady
- Mr William Mead Allison
- Mr Richard Roy Ford
- Mr Malcolm Stewart MacDonald

To assist:

Ms Margaret Maloney, barrister, crown solicitors office for inspectorate, appears to assist

Appearances:

- Mr P H Morrison, QC instructed by Messrs Minter Ellison solicitors for Simsmetal Limited
- Mr A J Glynn, barrister instructed by Messrs Gilshennan and Luton, solicitors for Mr Vincent Collins and Mr David Ruediger
- Mr S Yates, district workers representative
- Mr N M O'Connor, solicitor for Mount Isa Mines Limited
- Mr G C Young, solicitor of Messrs MacGillivrays solicitors for Mr G Stratton, next of kin

Witnesses examined: refer transcript and schedule "a"

Exhibits tendered: refer transcript and schedule "b"

Findings: refer transcript and schedule "c"

Recommendations: refer transcript and schedule "d"

Report of mining warden: refer transcript and schedule "e"

Schedule "A" Witnesses examined:

- Jayantha Lakshman Maharage
- Senior Constable Darren Martin Murphy
- Raymond Anthony Alex Seymour
- Neville Thomas Burton
- Vincent George Lewis Collins
- David John Ruediger

- James Boyd Pettit
- Murray Graham Pollock
- Terrence Peter Allen
- Lance Frederick Townsend

Schedule "B" List of Exhibits

No of Exhibit	Nature of Exhibit	Tendered by
1	Post-Mortem Report - David Stratton	Ms Maloney
2	Scientific Services - Pathology Report	"
3	State Analyst Certificate	"
4	Report of Inspector Jay Maharage	"
5	Police Photographs (parts A & B)	"
Exhibit A for Ident	Documents prepared by MIM Holdings Limited	"
6	Statement of David Bruce Cameron	"
7	Documents prepared by Simsmetal Limited	"
8	Documents prepared by MIM Holdings Limited(Formerly Exhibit A for identification)	"
9	Original Registered Mine Manager's Report	"
10	Photographs submitted by Minter Ellison	Mr Morrison QC
11	Excavator Specifications	"
12	Video Cassette Transfer from Beta Cam SP	"
13	Report of Senior Constable Darren Martin Murphy (including photographs 1 to 39)	Ms M Maloney
14	Report of Raymond Anthony Alex Seymour	"
15	MIM Security Gate Logs - 29/3/97 to 22/6/97	Mr Morrison QC
16	Weighbridge Records of Truck	"
17	Schedule of MIM R62 Gate - Simsmetal (Entering/Exiting)	"
18	Simsmetal Occupational Health and Safety Procedures	"

Schedule "C" Findings:

We find -

Name of deceased: David Ronald Stratton

Date of death: 19 june 1997

Place of death: Isa Mines scrap metal yard

Cause of death: From the medical certificate tendered:-

1. Cardiac tamponade

Having considered the evidence available, we express our disappointment with the manner in which the initial investigation was carried out by inspector Seymour.

In view of crucial witnesses claiming privilege, we are left with a lack of evidence which has been exacerbated by the fact that inspector Seymour failed to interview certain witnesses adequately on the date in question.

Had this been done, we feel that we may have been better assisted in arriving at our findings as to the nature and cause of the accident.

Nature of accident:

At approximately 12.25 am on thursday 19 june 1997 Mr David Ronald Stratton received fatal injuries when he was crushed between a Komatsu PC400LC-6 excavator/loader serial number 30074 and the offside of a tri-axle trailer unit, W.A. registration number N 2127.

Immediately prior to the accident Mr David Ronald Stratton, a self-employed contract truck driver, was attending to the tie down straps located towards the rear of a semi trailer unit located at the Scrap Metal Yard; number 3 tailings dam on the Mount Isa Mines lease.

Mr Vincent George Collins a simsmetal plant operator who was in control of a komatsu excavator/loader, was operating this unit in the near vicinity of the rear half of the semi trailer and adjacent to where David Ronald Stratton was working.

Photographic evidence indicates that the rear of the komatsu excavator/loader was reversed into the side of the trailer thereby crushing David Ronald Stratton between the underside of the trailer and the komatsu track.

Cause of accident:

Having regard to the lack of evidence available, we are uncertain as to the actual cause of the accident. However, we are of the opinion that major contributing factors were the absence of appropriate controls that would have prevented the existence of substandard practices, substandard conditions and human error.

Substandard practices include but are not limited to: -

- non-observance of safe work procedures;
- failure to enforce the simsmetal safety instructions for all drivers;
- failure to enforce the komatsu safety instructions for operators.

Substandard conditions include but are not limited to: -

- limited rear visibility for the operator of the komatsu excavator/loader;
- general area lighting;
- rear lights on the komatsu;
- communication systems.

Schedule "D" Recommendations:

The recommendations of the reviewers are as follows:

1. The operator of the komatsu excavator/loader or similar unit shall maintain a twenty-five (25) metre exclusion zone around the machine.

2. A person shall not enter the exclusion zone of an operating machine until they communicate with and receive the approval of the operator. A person shall not enter the zone within the swing radius of the machine unless the engine speed is reduced to idle and the implements lowered to the ground.
3. The mines inspectorate should in conjunction with industry continue investigations into the feasibility and development of improvements in operator visibility and movement warning devices for mobile plant.
4. Machines fitted with modifications that restrict the operators view should be subjected to a risk assessment to ensure that operating practices do not place people at unacceptable risk.

Schedule "E" Report of the Warden:

I concur with the findings of the reviewers as to the nature and cause of the accident.

The reviewers and myself commend inspector Maharage for the standard of his report.

We also acknowledge the quality and content of the systems and procedures that have been developed by MIM subsequent to the occurrence of this fatality.

I thank Ms Maloney for her assistance during this inquiry.

I also thank the reviewers and my clerk for their time and assistance during this inquiry.

This inquiry is now closed.

20 november 1997

Thomas, Laurence

Findings and Recommendations

The *Coal Mining Act 1925* -

Findings and recommendations of reviewers and mining warden following an inquiry into serious injuries received by Laurence Thomas at Goonyella Riverside mine on 8 march 2000 Warden's Court of Queensland Emerald 26 february to 1 march 2001.

Before: Mr F W Windridge, esquire mining warden

Reviewers:

- Mr Greg Dalliston
- Mr Mel Bell
- Mr Michael Brady
- Mr Alan McMaster

To assist:

Mr J Tate (instructed by crown law office) on behalf of the mines inspectorate and counsel assisting

Appearances:

- Mr G A Thompson SC (instructed by Mallesons Stephen Jaques) on behalf of the Central Queensland Coal Associates and the registered mine manager
- Mr Caton Mr P J Roney (instructed by Baker & McKenzie (melbourne)) on behalf of Krupp Engineering (Australia) Pty Ltd
- Mr B A Harrison (instructed by Taylor's solicitors) on behalf of Mr Laurence Thomas
- Mr C J White (solicitor of Biggs & Biggs) on behalf of CW Pope & Associates

Witnesses examined: refer transcript and schedule "a"

Exhibits tendered: refer transcript and schedule "b"

Findings: refer transcript and schedule "c"

Recommendations: refer transcript and schedule "d"

Report of mining warden: refer transcript and schedule "e"

Schedule "A" Witnesses examined:

- Inspector John William SMITH
- Leonard Edward BRADY
- Maxwell James CLEWS

- John William McCLYMONT
- Martin Robert GRANT
- Thomas Alan RALEIGH
- Justin Leonard RUSSELL
- Frank THIEL
- Martin Frederick KORTLUCKE
- Alan BONNEY
- Eduard Reiner HAEGEL
- Geoffrey Ross CATON

Schedule "B" List of Exhibits

No of Exhibit	Nature of Exhibit	Tendered by
1	Bucket wheel excavator Structural failure Report - Inspector John W Smith (Inspector of Mines, Mechanical)	Mr J Tate
2	Incident Investigation Report - Bucket Wheel Excavator Failure - "Interim Report" - BHP Goonyella Riverside Mine	"
3	Letter from Mallesons Stephen Jaques to Mr John Tate dated 23/2/01	"
4	Letter from the Honourable the Minister for Mines and Energy to Mr F W Windridge dated 4/12/00	"
5	Set of 27 Colour Photographs	"
6	Parts of BWE	"
7	Examination of Right Hand Mast Beam Failure - O & K Bucket Wheel Excavator - Date: 7 April 2000 - CW POPE	"
8	Investigation into the failure of the O & K bucket wheel excavator mast at BHP Goonyella Mine - Date: 17 May 2000 - C W POPE	"
9	Synopsis of Inspector Smith's PowerPoint Presentation	"
10	Copy of Facsimile Transmission from Krupp Engineering (Australia) to BHP Australia Coal - Inspection of Mobile Machines - 29/7/1996	Mr G Thompson
11	BHP Goonyella Riverside Review and Testing of Machine Safety Devices	Mr B Harrison
12	Independent Inspection of Large Open Cut Machines - Goonyella Riverside Mine - Bucket Wheel Excavator 1367 - October 1996	"
13	Statement of Len Brady	Mr Tate
14	Statement of David Bowater	"
15	Folio of 27 Colour Photographs	"
16	Statement of Max Clews	"

No of Exhibit	Nature of Exhibit	Tendered by
17	Extract from Operating Manual - Dismantling of Bucket Wheel with Hollow Shaft and Gearbox	Mr G Thompson
18	Extract from Operating Manual - Dismantling	"
19	Colour Photograph of Manometer Settings	Mr P Roney
20	Statement of John McClymont	Mr J Tate
21	Memorandum from REBTEC Calibration Services to BHPC Goonyella Riverside Mine Date: 6 August 1999	Mr G Thompson
22	Krupp Engineering (Australia) - Independent Inspection of Large Open Cut Machines - Bucketwheel Excavator 1367 - March 1999	Mr G Thompson
23	Copy of Facsimile Transmission from Krupp Engineering (Australia) - Purchase Order No L77359 - Inspection of Mobile Machines - 22/2/1999	Mr P Roney
24	O & K Operating Instructions (i) Copy of Plan 327290 (ii) Electrical Equipment - Schedule of switches	"
25	Wire Rope Visual Inspection Report dated 22 February 1999	Mr B Harrison
26	Goonyella/Riverside BWE - Condition Monitoring Workscope	Mr C White
27	Statement of Jay Allen	Mr J Tate
28	O & K Australia Pty Ltd - Final Repair Notes & Drawings	Mr G Thompson
29	Copy of Facsimile Transmission from BHP - High Dump Rainfall Data - 20 March 2001	"
30	(i) Photocopy of Handwritten Letter dated 26/11/84 - Tom Raleigh (ii) Version of Sketch Plan showing gusset detail	Mr P Roney
31	Pencilled workings - T Raleigh - November 1984	"
32	Extract from Expertise Bucket Wheel Excavator GY 67 - Dr Freidemann - 1985	"
33	Purchase Order No. G137085 BWE System - Annual Inspection Inspection - O & K Machines - Goonyella Mine - 3 April 1984	Mr G Thompson
34	Plan of Bucket Wheel Excavator - Justin Russell	"
35	Krupp Engineering (Australia) - Independent Inspection of Large Open Cut Machines - Bucketwheel Excavator 1367 - March 1999	Mr P Roney
36	Plan of Bucket Wheel Excavator - Frank Thiel	Mr G Thompson
37	Colour Photographs depicting cracks - Martin Kortlucke	"
38	Bucketwheel Information	Mr P Roney
39	Colour Photograph of Manometer	Mr P Roney
40	Letter from WBM Pty Ltd to BHP Goonyella Riverside Mine	Mr B Harrison

No of Exhibit	Nature of Exhibit	Tendered by
	dated 31/5/99	
41	BHP Incident Investigation Guide Issue 1, March 2000 (ICAM) BHP Minicam Investigation Guide Issue 1, March 2000 (ICAM)	Mr G Thompson
42	Record of Interview - David Raymond Bowater - dated 1/11/2000	Mr J Tate
43	Record of Interview - Maxwell James Clews - dated 1/11/2000	"
44	Statement of Laurence Thomas	Mr B Harrison
45	Correspondence re: Mr Laurence Thomas	"
46	Written Submissions BHP Australia Coal	Mr G Thompson
47	Written Submissions Krupp Engineering Pty Ltd	Mr P Roney

Schedule "C" Findings:

We find -

Name of injured: Laurence Thomas

Date of injury: 8 march 2000

Place of accident: Goonyella Riverside mine central Queensland

Nature of accident:

On 8 March 2000 at 3.15 am, Mr Laurence Thomas received serious spinal injuries while working on night shift at Goonyella Riverside Mine. The incident occurred at the Bucket Wheel Excavator (BWE) operating in Ramp 13, Strip 8, North Red Hill.

Cause of accident:

The BWE experienced a major structural failure resulting in the counterweight collapsing followed by the bucket wheel. The operator's cabin then fell to the ground. Mr Thomas, who was in the operator's cabin, was injured as a result of the cabin crashing to the ground due to the failure of the cabin support system.

Contributing factors:

The cabin support system was loaded beyond its design parameters due to a catastrophic failure of the main support frame.

The failure of the main support frame was brought about by a number of factors, namely -

- The design of the termination points of the stiffeners added after a previous buckling of the main support frame in 1984 induced increased localised stresses that ultimately led to cracking and fatigue failure of the main support frame.
- The inspection regime was less than adequate in that the critical nature of the stiffeners and termination points were not recognised.
- There was less than adequate, planning of the inspection process
- There was less than adequate access to critical areas.
- The inspections failed to observe the presence of cracks adjacent to the stiffeners in the upper section of the support frame.
- The lack of quality control of the inspection process.

OTHER ISSUES OF CONCERN:

In our opinion the evidence disclose a number of issues of concern which whilst not considered to be major contributing factors, nevertheless warrant some attention by the respective parties.

Less than adequate transfer of information between operators, supervisors, the mine site and contractors including -

- Critical information relating to change;
- Scoping of inspection requirements.
- Lack of information relevant to changes on the Manometer settings.
- The maintenance of travel routes for emergency access.
- Perceived lack of independence of the DME investigation. A statutory investigation should not be restricted by confidentiality agreements with the party under investigation.
- Lack of performance testing of brake systems upon which the safety of persons relies.
- The registered mine managers report was not finalised.

Schedule "D" Recommendations:

We recommend that -

1. Major structures inclusive of modifications and repairs shall be subject to stress analysis by Certified Structural Engineers to identify critical elements.
2. Critical elements to be monitored and the results audited to ensure continued effectiveness. Visual inspection alone will not meet this requirement. The monitoring shall take into account the age and duty cycle.
3. The results of critical element inspection need to be audited for compliance with the scope of work.
4. Where suspended operators cabins form part of plant, risk management processes need to be used to minimise the risk of injury to operators in the event of uncontrolled movement of the cabin.
5. Where practicable permanent access should be provided to allow inspection for all critical structural elements.
6. The newly introduced Coal Mining Safety and Health Regulation 2001 contains a number of requirements for the safety of persons working on or near plant that were not previously a requirement of the 1925 Act and regulations. Compliance with these Regulations should be assessed as soon as possible to ensure that mine management systems conform to them as a minimum.
7. Persons required to perform major roles in incident investigation need to have risk assessment and accident investigation training.
8. Incident reports need to include all relevant information including causal analysis.

Schedule "E" Report of the Warden:

On 8 March 2000, Mr Laurence Thomas received serious back injuries when the operator's cabin of a bucket wheel excavator (BWE) fell to the ground when the BWE suffered a catastrophic structural failure and collapsed, the counter weight and the bucket wheel hitting the ground with some considerable force. In effect, the BWE was rendered inoperable and is unlikely to be put back into service.

A number of witnesses have been examined over the past four days and some 47 exhibits consisting of reports, photographs and statements have been admitted into evidence.

Findings as to nature and cause:

The Reviewers have delivered their findings as to the nature and cause of the accident. I concur with those findings.

I thank Mr Tate for his assistance as Counsel assisting, and those legal representatives who have appeared for various parties at the Inquiry.

Finally, I thank the Reviewers for their assistance at this Inquiry.

Closing comments:

Due to changes in legislation, this is the final Inquiry to be conducted by the Warden's Court of Queensland. In fact, this Inquiry is concluded under the authority of the transitional provisions of the new legislation; the request of the Minister being received some nine months after the incident.

Over the past 10 years, I have conducted numerous Inquiries into fatal accidents and serious accidents throughout the State. At all of these Inquiries, I have been assisted by Reviewers from all disciplines in the mining industry.
I would not be so bold as to suggest that we heard the whole truth from all the witnesses all of the time. I am satisfied however that the calibre of the Reviewers allowed the Inquiry to get to the real issues at all times, and recommendations made were always meant to be applicable to the industry and readily understood by the miner at the face.

In many instances, Reviewers have been drawn from the ranks of the CFMEU, AMWU, Mines Rescue Service, former members of the Mines Inspectorate and mine management, particularly SHELL COAL and BHP MINERALS. I have been greatly assisted in the discharge of my duties by the knowledge and experience of Reviewers and I sincerely thank all those Reviewers for their assistance over many years.

These Inquiries do not happen by chance. There is a considerable amount of preparation for Inquiries of this type. The bulk of this preparation has, over the years, fallen on my former clerk, Mr Kevin Meiklejohn, and for the past eight years, on Mr Keith (Max) Dahlke, who has been assisted in the past 2 years by Ms Susan Weller. Both Mr Dahlke and Ms Weller have put in many extra hours in assisting witnesses, legal parties and next of kin in many aspects of the proceedings. Often the findings and recommendations were prepared late into the night or early morning so all parties could return to their families and work commitments. I thank

Kevin, Max and Sue for their efforts over many years and their commitment to the discharge of their duties in the Warden's Court.

Shortly I will close these proceedings, thus closing the book on a significant part of the mining history of Queensland. It is with a sense of achievement and humble pride that I do so as the last Mining Warden of Queensland.

On this historic occasion, it would be remiss of me not to give to those legal representatives at the Bar table who have appeared for the various parties the opportunity of making any comment they feel may be warranted by the occasion. Gentlemen, I now invite you to do so.

Mr Thompson: This is the last hearing that will be conducted by the Mining Warden in Queensland. It marks the passing of an era. On behalf of the Queensland Bar Association I have been requested to extend a tribute to the Court and to you personally, Mr Windridge.

You were appointed a Stipendiary Magistrate in March 1982, that was followed by appointment as Mining Warden for the State of Queensland on 3 September 1990. You leave with the reputation as a fearlessly independent member of the judiciary in the great tradition that such independence is valued particularly by the Bar and members of the legal profession. The Court goes with the reputation that you have given it over that period of time. Its jurisdiction has been wide long before the Judges of the District Court had their powers increased your Court enjoyed full equitable jurisdiction.

You have presided over many very complex matters assisted we trust sometimes by members of the Bar. Those matters were associated often with complex evidential issues and involved complex fields of expertise. In areas of assessment of compensation your jurisdiction was unlimited and very many cases involved assessments of many many millions of dollars. You have also dealt with cases where the nature of the mining activity was relatively minor and where parties appeared unrepresented. Every judicial officer appreciates the special consideration that is then required and your Court has been no exception in that respect.

In hearing all of these matters you have conducted the proceedings with the courtesy, patience, wisdom and expedition of your office, this despite the fact that you have not had all of the financial facilities and support necessary for the running of such a busy and important Court for the State of Queensland.

Your jurisdiction extended to Inquiries into matters of such gravity as fatal accidents and serious personal injury, and as I've said, commercial issues involving assessment of compensation involving very substantial amounts of money.

All of those matters have had very significant implications and beneficial implications for the mining industry in this State and your Court has been responsible for making many important recommendations.

The Bar Association also recognises the very significant contribution which has been made to this Court by those people who have assisted you as Panel Members over that period of time.

On behalf of the Queensland Bar Association, and may I say personally on behalf of Mr James Douglas who has asked me to make this tribute to the Court, the Association notes the

passing of an era in mining law in Queensland and acknowledges your very significant contribution to the jurisprudence of the State of Queensland.

Warden: Yes, thank you, Mr Thompson.

Mr Roney: Mr Windridge, I'd like to say something in addition to what Mr Thompson said. As you probably recall, I've appeared before the Mining Warden's Court on three occasions, not least of which was the very serious Moura mine disaster inquiry which lasted for some 13 weeks I think six years ago. There were a number of people who appeared before that Inquiry, only one of whom I think is here today, but it is clear from my recollection of that particular Inquiry and others that I've since been involved in, that those who've appeared at least at the Bar table and the witnesses for whom - at least that I have represented have always appreciated the integrity and the very real sense of common decency and common sensical approach that you and your fellow panel members have always brought to these inquiries. It's not always the case that in the Court system one appreciates or sees that and I know that those who appear in these inquiries always appreciated that and I otherwise concur with what Mr Thompson said on behalf of the Association of which I'm a member.

Warden: Yes, thank you, Mr Roney.

Mr Harrison: Your Worship, on behalf of the local profession I'd just like to say a few words. You'll certainly be missed by those of us that practise in this area and I can say that in so far as this town is concerned there's been a long standing association with you for John Taylor and myself going back to the Moura inquiry, one which we'll never forget. I think it's fair to say, and this applies not only to you, to the Reviewers, we spent our first few weeks in that inquiry totalling overawed by what was going on particularly what was going on behind the scenes. I know for me personally I saw X drinking with Y, and Y with Z, all of the rest of it, and at times I thought what is going on here, but I must confess, by the time we were able to settle into it and see what was going on, it was a credit to you as Warden and a credit to the Reviewers to see the professional way in fact things were operating. It was somewhat different to us and we as lawyers can sometimes think that we know the one and only way of conducting things, and very often of course that's far from the truth. I must say that in relation to you personally, Mr Windridge, there was a phrase used by Mr Thompson on behalf of the Association of which I'm a member which I'd have to fully endorse, and that was his reference to your fearless independence. If it's the one thing I will remember most from the whole Moura inquiry including its conduct and from other matters in which I've been involved since it was your fearless independence which, in my opinion, held the whole thing together, and I believe that is something which is going to be sorely missed under the new and untested system. There are a number of matters about this case that had some concerns, some of which have been touched on in your reports, and one wonders just what will be done in that regard in the future if that degree of fearless independence is not there, and to that end, you personally will be sorely missed and so too will this whole process, and I must take this opportunity of thanking you for the assistance that you and your staff have provided in any matter in which I've personally been involved. I'd also like to thank all of the Reviewers in the various matters that I've appeared before for the very professional way they went about things. Thank you.

Warden:: Thank you, Mr Harrison. Mr Tate.

Mr Tate: I too, Your Worship, would like to say some words. The Warden's Court has just handed down its last findings in relation to the nature and cause of a serious incident in, on or about a mine. The recommendations that have been made to promote safety are also the last. The passing of an era.

The Coal Mining Act was passed in the 1920's, the Mines Regulation Act sometime later. These expressions of public policy acknowledge the inherent dangers exposed by the mining environment in its many forms for those that operate within the system.

You, sir, as the current Warden have carried on a proud tradition. It's a very difficult one. The mining industry in my experience it not unitary in its outlook, it's divided in so many ways. The current industrial disputes we see in the media witnesses the pluralistic nature of the industry. There is however a common thread, a unifying golden thread, it's the recognition of every witness that I've seen in this Court, the comments and attitudes of every Reviewer, Your Worship's views, that the safety of all people in the industry is the paramount concern of all. Even here there is some debate as I recall about the role of the individual, the role and responsibility of the mine owners, the registered managers, now to be the site senior executives, and finally of course, the industry's need to maintain community acceptance of its endeavours. As is so often the case it's the process of an industry which becomes the focus of the media not the good an industry produces.

In all of this where does the Warden's Court fit in? Fortunately this is an easy question to answer; the riddle can be understood in terms of accountability; to whom, where does this accountability sit? The answer there is simple; to the mining community and through that community to broader society. They, the people, need to know their case will be heard and heard impartially, the truth will come out. The reputation of this Court is that is exactly what occurs.

Your Worship's reputation as being fearlessly independent is well known, well known. The curio that I have seen so often over the last six years, so far as fatal and serious injuries are concerned, is the effect that the Warden's Inquiry process has for the next of kin. So many times at the end of an Inquiry I've been met outside the Court by a grieving father, mother or wife, tears in their eyes saying, at last I understand what happened, the truth has come out. They also say, I hope the industry hears the recommendations that have been made. For them it is about making sense of the premature and unnecessary death of their loved one. Their singular hope is that their loved one has not died in vain, that some good will come out of the tragedy. There is no difference where the incident has resulted in a serious injury, and indeed, Your Worship, the last case before this Court this week has involved serious injuries. The pieces for the injured worker, or the deceased worker have to be picked up by the family. That's human nature.

It's important though to note that even though there is this process it is only when the open process is concluded that there is apparent understanding, even so they've been told previously by the company, by the Inspectorate, and many others in terms of what's happened to their loved one. It seems that the judicial process, it allows them to put the pieces together, is the difficult part for them. It's impartial.

Last year we commenced the new millennium, much water has passed since the Coal Act was passed in 1925 and the Mines Regulation Act in the 1960s. We now have new legislation, it's a brave new beginning. I suspect few fully understand the responsibilities they now have from

Friday, 16 March 2001. Where are we now, things change, that's the way of the world. In the east they often say that nothing is gained without something being lost. So too with the passing of the Warden's Court. The Inspectorate has lost its strongest advocate. Moura provided the catalyst for a new professional Inspectorate. Sometime I suspect that is forgotten. The mining community has lost its specialist Court, no longer will injuries and death in, on or about a mine be subject to peer review, and as a corollary to that the system of peer review itself comes to an end.

Let us look now at the composition and the personalities of the Warden's Court. There is the Warden. The closing of this Court is not an end, it is nothing more nothing less than a step along the way of Your Worship's very distinguished legal and judicial career that has lasted a lifetime. It's easy to wish you well. Over the six years or so that I've been associated with the Court you have taught me much, so have the Reviewers. When I began I thought strata failure was about planes falling out of the holding pattern above Brisbane airport; hanging walls were some sort of modern term for the old English gallows; and the goaf was some sort of higher office holder in a secret society probably wearing furs and a rather curious hat. I didn't know mining at all, I began to understand it when one Reviewer said to me, "Mining is about the subtle art of stealing the coal before the roof finds out". Also, over these years I've seen the Warden typify the best of the characteristics which the Bench has traditionally been famous for; patience, tolerance, impartiality, and more importantly, a genuine desire to do good according to law for all who appeared before the Court.

The Warden's Court like all great traditions is not just one person; on a personal note there's also Max and Sue who ensure all of the support the Court needs to discharge its important functions occur. More importantly, however, they taught me to play Keno. More of that later.

Equally, there are the Reviewers; there have been so many that I have been privileged to meet over the years that it is difficult to name them all, but that's the point. A Reviewer is a person who has given up their time to do a difficult job, their dedication and energy during Inquiries is legend. Also, they provide the human face. So often I've been able to say to miners in the witness box, speak freely, the people on the bench are miners, they'll understand what you saw, heard and did, they know how to spin a rock bolt. I think the mining community have been served very well by the Reviewers and the Reviewer system, their own people. I hope that the mining community pauses for a moment and thanks each one of those who has given up their time to discharge an important public duty.

If there be one thread that we can make the final tapestry with it's the women folk of the mining community. They send out their men to work and expect to have them returned safely at the end of the day. It seems to me, and it always appeared that the system employed by the Court and the Reviewers have done more than a little bit to try and make that dream come true. It seems that it would be difficult to find a higher ambition that any Court could have to have people return home safely and to improve the safety of an industry.

My best wishes go with all of you. To you, Warden, it has been an honour to be involved with the Court and the last six years assisting the bench as Counsel assisting has been a remarkable experience, I'll miss it greatly. There are also the many, many lawyers, my colleagues who have appeared over many occasions. They also have their place, they also have made the system work. I wish you well. Thank you, Your Worship.

Warden: Yes, thank you, Mr Tate. Mr Dalliston has requested to speak.

Reviewer Dalliston: Thank you, Your Worship, for the privilege to place some comments on record. On behalf of all mine workers and the CFMEU I'd like to express our concern at the loss of the Warden's Court which has been such an integral part of the mining industry as an independent process for determining nature and cause of serious and fatal accidents. We would like to take this occasion to sincerely thank Frank Windridge, the Mining Warden, his dedicated staff, Max and Sue, and all those who have generously given their time as Reviewers for their commitment to families of injured workers and the safety of other mine workers. As a person privileged to be selected as a Reviewer on numerous occasions, an experience that I believe has been or will be invaluable to me in my position as District Union Inspector. I would also like to place my personal gratitude on record to the Warden and his staff. In closing, we would recommend and commend to the mining industry the recommendations and findings of all Inquiries to mines in their development of standard operating procedures and safety management systems for the future. Thank you.

Warden: Yes, thank you. Mr Brady wants to say something.

Reviewer Brady: I'd just like to read a letter on behalf of my father, John, whose - I'll explain it all here.

"I am very sorry that I had to miss the final day's proceedings of the Queensland Mining Warden's Court but unfortunately my tired old body is trying very hard to reject the tired old face that has sat on the right-hand side of the Warden so many times over the last few years.

To be selected to serve as a Reviewer is an honour and the experience on so many Inquiries has given me an insight into Accident Investigation, Causal Analysis and Risk Management that could not be gleaned from textbooks and for this I thank you.

You told me once that you selected me for so many Inquiries because you wanted to inject some consistency into the process. It was not, as some have suggested, jobs for the boys, it has been in fact a very difficult and on many occasions emotional task but one that I will cherish for the rest of my days.

Today is a very black day for the Queensland Mining Industry and sometime in the near future people will realise what they have lost.

When I look back at where we were when you first appointed me to the Reviewer's Panel for the Tick Hill Fatal Accident Inquiry and where we ended I am more than satisfied that we have done an excellent job in upgrading Accident Investigation, Reporting, Findings and Recommendations and for this I am rightly proud.

It is sad to see the Warden's Inquiry process end but unfortunately someone decided that it could be done better another way. I can only hope that the industry and in particular the next of kin actually receive a better outcome. I have lost count of the number of times that a wife, mother, father, or relative of one of the victims of workplace accidents has, at the end of an Inquiry, hugged me in gratitude for having the guts to ask the difficult questions. It was the answers to these questions that helped them understand why their loved one lost their life or was seriously injured.

We can only hope that the new Board of Inquiry process does not end up bogged down in the legal system as it appears to have done in New South Wales. There they have a number of people being prosecuted but very few answers as to the nature and cause of accidents.

When or if this State goes the same way I hope that the politicians, bureaucrats and architects of the new process have the honesty and guts to stand up and claim responsibility. If they don't, I know who they are and I will ensure that the entire industry and the relevant next of kin know where to place the blame.

I can see a time when the fact that a person has been seriously injured or killed will be regarded as purely the trigger for an investigation designed to prove that the management systems failed and therefore the mine officials or some other poor soul must be prosecuted or clearly made to pay the price. It is interesting to note that the price has already been set at $75.00 per penalty point.

We seem to have forgotten about the victims and my experience with the most recent fatal accidents at Jellinbah and Cook has helped me realise that many people are severely and in some cases permanently injured everytime there is a serious or fatal accident. In our zeal to attach blame or to demonstrate that someone has been made to pay we tend to forget the families, the rescuers, first aiders, workmates, friends, supervisors and managers all of which are victims to varying degrees in an event that should not have occurred.

Please pass on my sincere thanks to Sue and a special mention to Max, I will miss them. Lastly, please pass on my best regards to John Tate. We worked hard to educate him in the workings of a mine and the practical application of actual Occupational Health and Safety.

Knowing and working with you all is something that I am truly thankful for."

Warden: Yes, thank you, Mr Brady. Well for myself and on behalf of Max and Sue I thank you all for your kind remarks and your best wishes. We will also miss the challenges but we will now move onto other things. We wish you all the best for the future gentlemen, and with that, this Inquiry is now closed.

The Inquiry is now closed.

22 March 2001

Trevor, Tony Daniel John

Findings and Recommendations

The *Mines Regulation Act 1964* -

Findings and recommendations of reviewers and mining warden following an inquiry into fatal injuries received by Tony Daniel John Trevor at Mount Isa Mines on 15 march 1995 warden's court Mt Isa 14-16 april 1996

Before: Mr F W Windridge esquire Warden

Reviewers:

- Mr John Patrick BRADY
- Mr Ben ELLIOTT
- Mr John Arthur TORLACH
- Mr William Barron ELRICK

To assist:

Mr W Isdale, barrister, crown law office, appears for inspectorate.

Appearances:

- Mr T D North, barrister, instructed by Messrs Conroy and Conroy, solicitors for Toni Danielle Gregory, infant child of the deceased
- Mr R M Cooke, solicitor for MIM Holdings Pty Ltd
- Mr Graeme George Mousley, district workers representative

Witnesses examined: refer transcript and schedule "a"

Exhibits tendered: refer transcript and schedule "b"

Findings: refer transcript and schedule "c"

Recommendations: refer transcript and schedule "d"

Report of mining warden: refer transcript and schedule "e"

Schedule "A" Witnesses examined:

- Constable Moreen Evelyn Peever
- Ray Anthony Alex Seymour
- Illona Maureen Casey
- Anthony James Wild
- Robin Arthur Herringe
- Graham Bernard Fuller
- James Coghlan
- Phillip Howard Goode

- Detective Inspector Brian Allan Richardson
- Peter Reginald Little

Schedule "B" List of Exhibits

No of Exhibit	Nature of Exhibit	Tendered by
1	Post-Mortem Examination Certificate - 16/3/95	Mr W Isdale
2	Post-Mortem Examination Report - 16/3/95	"
3	State Analyst Certificate - 9th May 1995	"
4	Statement of Constable Moreen Peever + Set of Ten (10) Black & White Photographs	"
Ex. "A" for Ident.	Photocopy of Map used in Interview with "CASEY"	"
5	REPORT - R A A SEYMOUR dated 20 October 1995	"
Ex. "B" for Ident.	Copy of CAUTION Sign	Mr R M Cooke
6	Statement of Medical Officer - Michael Robin DUGDALE	Mr W Isdale
7	Statutory Declaration of Mark STEPHENSON - 9/4/96	"
8	Record of Interview - Illona Maureen CASEY	Mr T D North
Ex. "C" for Ident.	Locality Plan - Scene of Accident 19 Level Plan - Scene of Fatal Accident - Hudson Bottom Discharge Rocflo Trucks (C5-1-231)	Mr W Isdale
9	Transcript of Interview - Anthony James WILD	"
10	Booklet - Underground Safety Instructions 1985	Mr R M Cooke
11	Photocopy of Receipt signed A J WILD	"
12	Booklet - Standard Work Procedure for Mules and Locomotives	"
13	Statement of Robin Arthur HERRINGE - 28/3/96	Mr W Isdale
14	Statement of Graham Bernard FULLER - 27/3/96	"
15	Statement of James COGHLAN - 28/3/96	"
16	Transcript of Interview - Anthony James WILD	"
17 Form. Ex "A" for Ident.	Photocopy of Map used in interview with "CASEY"	Mr W Isdale
18 Form. Ex "C" for Ident.	Locality Plan - Scene of Accident - 19th Level Plan - Scene of Fatal Accident - Hudson Bottom Discharge Rocflo Trucks (C5-1-231)	"
19	Photocopy of Employees's Training History - T D J TREVOR	Mr R M Cooke
20	Copy of Operation of the Gemco and Mancha Mules Descriptor - Trainer Module	"
21	Underground Safety Instructions 1989 - Booklet Receipt for Safety Instructions - TDJ TREVOR	"
22	Underground Induction - Program Guide 1. Introduction to Working Underground 2. Personal Safety Requirements - U/grd Induction	"

No of Exhibit	Nature of Exhibit	Tendered by
	3. Emergency Procedures - Underground Induction 4. Travelling and Communicating - U/grd Induction 5. Hazard Control - Underground Induction 6. Isolation, Lockout and Out of Service Procedures - U/grd Induction 7. Handling Materials - Underground Induction 8. Explosives Awareness - Underground Induction 9. Barring Down - Underground Induction	
23	Copy of MEMO signed P H GOODE - March 20, 1995	"
24	Three (3) Coloured Signs	"
25	Safety Reminder (Laminated)	"
26	Set of Ten (10) Colour Photographs	"
27	Copy of Entries made in the Record Book	"
28	Investigation Report - B A RICHARDSON	Mr W Isdale
29	Form 4 - Report Concerning Death by Member of the Police Service	Warden
30	Copy of Application 1050 of 1996 Application for Declaration of Paternity by Toni Danielle GREGORY in the Supreme Court	Mr T D North
31	Skills Audit Pre-Questionnaire Tony Daniel John TREVOR - 24/3/92	"
32	Locality Plan - Scene of Accident - 19th Level Plan - Survey Office (C5-1-231) Locality Plan & Plan combined Report of P H GOODE dated March 21, 1995 Four (4) B & W Photographs Original Locality Plan & Plan combined Copies of Statements from Anthony Wild, Illona Maureen Casey & Joanne Bartholomai	Mr W Isdale
33	Colour Map General Arrangement Showing Parking and Shunting Areas for Haulage Trucks	Warden
34	Copy of Correspondence from Wardens Court dated 30 November 1995	Mr P R Little
35	Copies of Correspondence from Registrar Mount Isa	"
36	Copy of Three (3) Letters from Wardens Court Copy of Correspondence from Conroy & Conroy	Warden

Schedule "C" Findings:

We find -

Name of deceased: Tony Daniel John Trevor

Date of death: 14 march 1995

Place of death: Mount Isa base hospital

Nature of accident:

On afternoon shift 14 march 1995 Anthony Wild (Team Leader) Tony Trevor and Illona Casey proceeded to 5928 crosscut in the 059 workshop area at approximately 9-15pm. Wild reversed loco number 1783 into 5928 crosscut from the 5902 crosscut and coupled up to a rake of five trucks which were parked in the 5928 crosscut. Trevor and Casey walked from the workshop to the 5928 crosscut and Trevor proceeded down the southside of the rake to a position between the second last and third last truck. Casey walked down the north side of the rake to a position on the other side of the rake from Trevor.

Trevor disconnected the brake air line and safety chain between these two trucks. Casey then took a crow bar and unclipped the coupling between these two trucks. Wild received a signal from Trevor and after checking to see that Casey was clear he drove the loco with the first three trucks attached slowly forward for about two metres and then stopped to ensure that the trucks had parted.

Trevor and Casey climbed onto the back of the third truck.

Wild got out on the side of the loco and looked back over the trucks waiting for their signal. When Wild received their signal he moved the loco slowly forward to take the three trucks around to the east side of the workshop. The slow speed was necessary because of the track condition and the curve.

During this time the two trucks left behind rolled down the grade of 1 in 220 and into the back of the rake. Casey felt something touch her lightly on the back and she took evasive action. Trevor was crushed between the truck bodies. The automatic coupling between the third and fourth truck did not engage and as the loco moved the rake forward the third truck pulled away from the fourth truck and the fourth and fifth trucks came to a halt.

Trevor fell off the third truck and collapsed beside the track.

Cause of death:

From the medical certificate tendered:-

1. (a) Rupture of right atrium of heart

   (b) Crush injury to thorax

Cause of accident:

We have concluded that Mr Trevor lost his life and Ms Casey was exposed to serious risk due to a failure to observe safe working practice by:

1. failing to effectively chock or prevent hudson rockflo trucks numbers 1 and 46 from rolling down a grade; and
2. positioning themselves on the outside rear of truck number 47.

We are satisfied that the three persons present, namely Messrs A. Wild, T. Trevor and I. Casey, failed to identify or recognise the hazards associated with this work. They did not use any initiative and therefore, failed to exert any corrective influence on the hazards which were present.

Major contributing factors:

We find that the instruction and training given in relation to this particular phase of their work, namely shunting operations, was inadequate and not conducive to the maintenance or provision of a safe work place and scheme of work.

We saw no evidence to support a belief that the senior members of this crew received any formal training in shunting operations. Management relied on on-the-job training whereby experienced persons passed on both good and bad habits with no follow up by supervisors, management or safety department.

The supervision of normal day to day work functions is provided by team leaders.

The role and function of this position is poorly defined with the result that the team leader is unclear of what responsibility, authority and accountability goes with this position.

We have determined that this position in it's present form contains a number of challenges namely:-

1. the employees nominate and appoint their own team leaders;
2. the position is rotated throughout the entire crew;
3. no formal supervisory or leadership training is provided;
4. team leaders have no authority in relation to work or safety matters.

Team leaders in the workshop area of 059 level have no responsibility under the *Mines Regulations Act 1985* and therefore are not accountable under the provisions of any statute governing the supervision of others.

We have concluded that the provisions of the *Mines Regulations Act 1985* in relation to section 35, Daily Supervision, have not been fully complied with in that personal supervision of all working parts of the mine is not carried out every day.

Management is therefore not aware of the methods of work or poor work practices which may be used by the employees.

We are of the opinion that management has failed to develop sound policies and management systems to effectively implement controls and follow up to ensure that people are adequately trained and that they work in accordance with the methods in which they are trained.

Schedule "D" Recommendations:

The recommendations of the reviewers are as follows:

1. The chief inspector of mines should under the provisions of Part 14.3.3 of the *Metalliferous Mining Regulations 1985* modify locomotive operator training to include the provision of an approved training scheme for shunting.
2. Management should devise and implement an effective scheme which will prevent the unplanned movement of rail mounted trucks. We are concerned that a period of thirteen months has expired since this fatality without the effective implementation of suitable chocking devises.
3. The protective cover for the dump rail wheel should be modified to prevent its use as a platform or step. The foothold that is available on the bottom frame of the truck above the dumping door should be modified to prevent its use as a foothold.
4. We are concerned about the effectiveness of responsible supervision for the working of various parts of the mine and would recommend that team leaders are appointed in accordance with the provisions of Section 34(A) and 35 of the *Mines Regulation Act 1985* and this would require instruction in their responsibility, authority and accountability.
5. We are concerned about the level of non-compliance with present regulations, mine site rules and standard work procedures. We strongly believe that management and all persons employed should comply with these rules and proceedings and work in accordance with the methods in which they were trained.
6. It is recommended that in the event of any incident resulting in injury or death to any person, members of the inspectorate exercise the provisions of section 25 of the *Mines Regulation Act 1964*..

Schedule "E" Report of the Warden:

I concur with the findings of the reviewers as to the nature and cause of the accident.

The inquiry is closed.

Turnbull, Rick John

Findings and Recommendations

The *Mines Regulation Act 1964* -

Findings and recommendations of reviewers and mining warden following an inquiry into fatal injuries received by Rick John Turnbull at Mount Elloit mine on 10 december 1996 warden's court Townsville 12-14 august 1997

Before: Mr A J Chilcott esquire Acting Mining Warden

Reviewers:

- Mr J P Brady
- Mr W M Allison
- Mr R R Ford
- Mr A E McMaster

To assist:

Mr J Tate, barrister, instructed by crown solicitors office, for inspectorate.

Appearances:

- Mr J A Griffin, QC instructed by Messrs Welsh and Welsh Solicitors for next of kin.
- Mr G Mousley, district workers representative.
- Mr N B Conroy, solicitor Conroy & Associates for Faminco.
- Mr J Bond, barrister instructed by Allen Allen & Hemsley for Arimco Mining Pty Ltd.

Witnesses examined: refer transcript and schedule "a"

Exhibits tendered: refer transcript and schedule "b"

Findings: refer transcript and schedule "c"

Recommendations: refer transcript and schedule "d"

Report of mining warden: refer transcript and schedule "e"

Schedule "A" Witnesses examined:

- John William HOWE
- Michael Leigh PROELSS
- Richard Charles MORTESS
- Ross James THOMAS
- Murray Roy HARRIS
- Patriag Simon DENNIS
- Graeme Charles SKAROTT
- Donald Keith CAMPBELL
- Steven Wardale WINGHAM
- Stewart James SMITH

- Gary Peter CRESWELL

Schedule "B" List of Exhibits

No of Exhibit	Nature of Exhibit	Tendered by
1	Report of John William HOWE	Mr J Tate
2	Set of Ten (10) Colour Photographs	"
3	Video Cassette	"
4	Set of Colour Police Photographs	"
5	Set of Training Records	"
6	Post-Mortem Examination Certificate (Form E)	"
7	Post-Mortem Examination Report (Form 10)	"
8	Appendix 6 - Registered Mine Managers Report	"
9	Original Statements:- Jim Parenti Christopher Gerard John Frommolt Alistair John Skey Keith Gavine Noy Marianne Lucy Rogers Joanne Stacey Moss Caroline Helen Trezise John Michael Trott	"
10	Video Cassette - Barring Down	Mr J Bond
11	Handwritten Statement - Michael Leigh PROELSS	Mr J Tate
12	Handwritten Statement - Michael Leigh PROELSS 11/12/96	"
13	Typed Statement - Michael Leigh PROELSS 10/12/96	"
14	Statement of Richard Charles MORTESS dated 11/12/96	"
15	Statement of Richard Charles MORTESS dated 13/12/96	"
16	Report of Ross James Thomas	"
17	Statement of Murray Roy HARRIS	Mr Bond
18	Sketch/Plan - M R HARRIS	"
19	Statement of Padriag Simon DENNIS 11/12/96	Mr Tate
20	Statement of Graeme Charles SKARROTT	"
21	Workplace Inspection and Scaling	Mr Conroy
22	Statement of Donald Keith CAMPBELL	Mr Tate
23	Statement of Steven Wardale WINGHAM	"
24	Plan - `Wedge Failure' from intersecting structures	Mr Griffin
25	Statement of Stewart James SMITH	Mr J Tate
26	Statement of Gary Peter CRESWELL	"

Schedule "C" Findings:

We find -

Name of deceased: Rick John Turnbull

Date of death: 10 december 1996

Place of death: Selwyn airstrip via Cloncurry

Nature of accident:

At about 10-00 am on tuesday 10 december 1996, Mr Rick John Turnbull received fatal injuries when he was crushed by a rock which fell or was dislodged from the back of the Corbould slot drive in the Arimco Mining Pty. Ltd., Mount Elliott mine.

Immediately prior to this event Mr Rick John Turnbull (miner/operator) and Richard Charles Mortess (surveyor/miner operator) were engaged in the task of secondary check scaling or barring down of loose material from the back of the Corbould slot drive, 1130 level and adjacent to the brow of the C1 stope.

To facilitate this task, they were working in the basket of a JCB loadall unit, plant number 587 which had been set up as an elevating work platform. This unit was operated by Mr Padriag Simon Dennis who was in the cabin of the unit and observing the activities of Turnbull and Mortess.

Dennis had positioned the JCB unit close to the brow of the stope before elevating the work platform containing Turnbull and Mortess to a height of about 2.0 metres above the floor.

Shortly after check scaling operations commenced a large rock with a mass estimated to be in excess of one tonne fell or was dislodged from the back striking Mortess and crushing Turnbull before finally trapping him by the lower left foot.

The elevated work platform was lowered and withdrawn before Dennis ran for help.

The evidence indicates that it took some time to remove the rock trapping Turnbull's foot and to recognise the true extent of the injuries he sustained, however, there was no evidence which indicated or suggested that this would have had any bearing on the final outcome.

Cause of death:

1. (a) Exsanguation

Cause of accident:

We are of the opinion that the basic cause of this accident was a combination of the suspect condition of the workplace and the practices performed by the persons employed in what proved to be a hazardous place.

Primary support in this workplace was provided by 2.4 metre split sets and butterfly plates set to a pattern with additional split sets installed as required at the time.

The work practices adopted in this particular instance were substandard in that the scaling operations commenced in what proved to be unstable ground. There is a clearly defined and well known standard operating procedure for scaling or barring down operations, however, in this instance a subjective analysis of what constituted good ground was flawed.

We believe that no clear directions or instructions were given to Mortess, Turnbull or Dennis at the commencement of the shift or at the time that this particular task was allocated to them.

Other observations:

We are satisfied that the use of an elevating work platform can under certain circumstances provide a number of advantages for the scaling or barring down process, however, we are concerned about the lack of protection from material which may fall from the backs.

A number of similar accidents have occurred in this State which have caused both fatal and serious injuries and we believe that there is a need to eliminate or at least minimise the risks by design changes to this equipment.

Present practice is to rely on the effectiveness of and adherence to safe operating procedures

Schedule "D" Recommendations:

The recommendations of the reviewers are as follows:

1. Arimco, industry and the mines inspectorate should investigate the possibility of providing overhead protection for people conducting scaling operations from baskets or elevated platforms.
2. When scaling, consideration should be given to having only one person in the elevating work platform to reduce the risk of exposure to hazards and to provide greater personal manoeuvrability. Should there be a need to have two persons in the elevating work platform only one person should carry out scaling.
3. Prior to the commencement of work the areas should be inspected by an experienced supervisor following production or major blasting in zones of geological structural weakness or identified hazardous conditions.
4. Following a fatal or serious accident the mines inspectorate investigation should, where possible, include a controlled reconstruction of the accident with a view to assisting the inquiry process.

Schedule "E" Report of the Warden:

I concur with the findings of the reviewers as to the nature and cause of the accident.

It has only become recent practice that directions hearings have been conducted by this court in relation to fatal inquiries.

A directions hearing was held in relation to this inquiry, however, I am of the opinion that such directions hearing was not completely successful.

For such directions hearings of this nature to be successful in the future, it is imperative that all respective parties provide productive input.

This includes, but is not restricted to, the number and identity of witnesses to be called and the production of any documentation proposed to be tendered by a party at a reasonable time prior to the commencement of an inquiry.

It is the intention of this court to hold directions hearings at an early stage in relation to future inquiries.

I am extremely confident that such directions hearings if they are held on this basis can only expedite and improve the effectiveness of the inquiry Process as a whole, in the future.

I thank Mr Tate for his assistance during this inquiry. I also thank the reviewers for their participation and assistance during this Inquiry.

The inquiry is now closed.

14/08/1997

Vrbic, Jusuf

Findings and Recommendations

The *Mines Regulation Act 1964*

Findings and recommendations of reviewers and mining warden following an inquiry into fatal injuries received by Jusuf Vrbic at at No 6 draw point N-S Twelve ore body, Cracow mine on 13 march 1991 warden's court of Queensland Rockhampton 6 august 1991

Before: Mr F W Windridge esquire Warden

Reviewers:

- MR K G BUCKLAND
- MR G B CHALMERS
- MR P DOLAN
- MR W J GORMLY

To assist:

MR R WHITE, inspector of mines.

Appearances:

- MR A MIHALJ for next of kin
- MR D PAPPIN, district workers' representative
- MR A HERBERT appearing for Cracow Mining Venture and registered mine manager
- MR D K BODDICE appearing for Costain Australia Limited and its employees

Witnesses examined: refer transcript and schedule "a"

Exhibits tendered: refer transcript and schedule "b"

Findings: refer transcript and schedule "c"

Recommendations: refer transcript and schedule "d"

Report of mining warden: refer transcript and schedule "e"

Schedule "A" Witnesses examined:

- MR D PAPPIN, district workers' representative
- MR HERBERT appearing for the owner of the mine and for the mine manager
- MR D K BODDICE appearing on behalf of the contractor, Costain Australia Limited and its employees

Schedule "B" List of Exhibits

No of Exhibit	Nature of Exhibit
1	Statement - R D Sheehan
2	Post Mortem Report
3	Statements taken by R D Sheehan
4	Statement - J J Lindley
5	Photographs
6	Tube (Returned to Senior Inspector, Rockhampton)
7	Statement - D B Legg
8	Photographs
9	Statement - A L Gillies
10	Statement - T Mihalj
10(a)	Curriculum Vitae - T Mihalj
11	Photographs
12	Statement - D G Foyster
12(a)	Resume - D G Foyster
13	Site Engagement Notification
14	Report and Drawing - A Mitchell
15	Document - Process for bring down hang ups

Schedule "C" Findings:

We find -

Name of deceased: Jusuf Vrbic

Date of death: 13 march 1991

Location of death: No 6 N-S Twelve ore body, Cracow mine

Nature of accident:

The deceased received fatal injuries when the muck in a draw point which had hung up collapsed and buried him while he was placing an explosive charge. In failing to observe industry standard practices, and ignoring his own extensive experience, the deceased exposed himself to grave danger when he entered the draw point beyond the protection of the brow, climbed a ladder, and attempted to place an explosive charge in the hang up. At this point, the hang up let go. It is unknown why the deceased, with his considerable experience, ignored basic safety rules and common sense, in attempting to set the charge in this manner.

Cause of accident:

1(a) Cerebral contusion

Skull fracture

2 Right Haema-thorax and lung contusion

Schedule "D" Recommendations:

The recommendations of the reviewers are as follows:

A general induction for all employees should include class-room instruction and assessment to ensure all inductees have an adequate grasp of safe working practices as outlined in the company handbook. This should precede the general underground induction carried out on the job.

In addition, each employee who has responsibility for carrying out the procedures covered by the approved schemes shall receive specific and detailed instructions on the procedures outlined in these schemes.

Supervisors should ensure that adequate equipment and materials to complete procedures as outlined in the company handbook and relevant approved schemes are available in close proximity to the work site and checked on a regular basis.

That refresher training be undertaken on selected topics from the company's handbook at regular intervals in work groups on the job.

We note that there is now an approved method of dealing with hang ups and ore passes in place at the mine.

Schedule "E" Report of the Warden:

I would indicate that as warden, I concur with the findings of the reviewers.

The inquiry is closed.

Westmoreland Project

Findings and Recommendations

Inquiry pursuant to section forty two of the Mines Regulation Act -

Findings and recommendations -

Fatal inquiry - Daile Alfred Coffison, Geoffrey Alan Schubert

Serious injury - Joseph Christopher Keegan, David Graham Hasthorpe

at the Westmoreland exploration project Lawn Hill station 10th november 1993

Before: Mr F W Windridge esquire Warden

Extract from the transcript of the inquiry into the fatal accident.

Warden:

Ladies and gentlemen I'll read the findings into the record as follows. Findings. We find name of deceased Daile Alfred Coffison and Geoffrey Alan Schubert. Name of injured Joseph Christopher Keegan and David Graham Hasthorpe. Location of death and injury Westmoreland exploration project Lawn Hill station. Nature of accident daile Daile Alfred Coffison and Geoffrey Alan Schubert received fatal injuries and Joseph Christopher Keegan received serious injuries when a Bell 206l helicopter registration vhect of which the aforesaid persons were occupants crashed at Westmoreland exploration project on 10 november 1993. David Graham Hasthorpe sustained injuries when he set out for help on the said date as a consequence of the crash. Nature of injuries Daile Alfred Coffison multiple injuries. Geoffrey Alan Schubert jaw and chest injuries. Joseph Christopher Keegan back and ankle injuries. David Graham Hasthorpe dehydration. It is also noted that on 9 march 1995 an original medical certificate was tendered by consent from Dr Vic Watts director mental health services Mt Isa indicating that Benjamin Keegan who was present at the time of the crash was diagnosed on 28 february 1995 as suffering from severe post traumatic stress disorder as a consequence thereof. Cause of accident CRA Exploration Pty Limited was carrying out a drilling program at westmoreland exploration project lawn hill station. Jack Schubert Drilling Services Pty Ltd was engaged by CRAE to conduct the drilling with a rig capable of being broken down into pieces for transportation. Timtala Pty Ltd trading as Chopperline was also engaged by CRAE to ferry personnel drill rig and equipment between sites with a bell model 206l helicopter registration vhect piloted at all material times by Daile Alfred Coffison pilot. On 10 november 1993 at approximately 9.45 am the pilot had just returned from drill site 3 to drill site 2. at drill site 2 a sling and cargo net were removed from the helicopter and certain items of equipment consisting of consisting of drill hammers and batteries were loaded. A sling was also attached to the underneath section of the helicopter. We are satisfied that it was not the pilot who attached the sling. We are unable to determine whether the pilot knew or did not know the sling was attached. Joseph Christopher Keegan and Geoffrey Alan Schubert then seated themselves into the passenger compartment of the helicopter. The helicopter then took off over the dismantled rig drill rig AH with the sling attached. We are satisfied that the

sling then snagged the motor section of the drill rig broke free and flew up into the main rotor of the helicopter causing it to crash. These are the recommendations.

1. Companies or individuals directing the operations of an exploration site must ensure that all key company and contract personnel working on that site know and apply the acts regulations and health and safety rules that apply to and regulate the work being carried out thereon.
2. Companies or individuals directing the operations of an exploration site must ensure that the person in daily charge of the site is appointed pursuant to the *Mines Regulation Act 1964* as amended and that person's responsibilities and accountabilities defined. Other personnel must be briefed on that persons responsibilities and accountabilities.
3. All company and contract personnel on an exploration site must be made aware of their responsibilities and accountabilities with regard to health and safety. There must be clear instructions on immediate reporting procedures in the event that procedures or equipment for operations communications or survival are deficient inadequate or do not meet statutory and company requirements. The preparation and distribution of comprehensive safety and operation manuals such as CRAE's fixed wing and helicopter safety and operations handbook revised october 1994 are essential parts of these requirements. There should be um ah..these should be supplemented by summary hand sheets or check lists for use in field operations.
4. Companies or individuals directing operations on an exploration site must ensure that there is a means of clear and effective communication between pilot and nominated ground-persons during any helicopter operations thereon.
5. Companies or individuals directing operations on an exploration sites site should appoint a suitably trained person as safety advisor and this role will be an additional duty to that person's site work role. That person should be instructed to monitor the equipment procedures and activities of site personnel with the intention of preventing incidents and accidents.
6. Unusual events which are considered to be a threat to safety or health must be reviewed on site and a record of the event and action taken is to be recorded in the record book.
7. The company or individuals directing the operations of an exploration site must ensure that a site induction and briefing is planned and delivered to all persons before they commence work on the site.
8. The inspectorate of mines to review it's current practices of monitoring exploration sites. The inspectorate of mines in consultation with companies or individuals involved in exploration to consider what role it can play in the training of personnel.
9. Exploration companies or individuals should give the mining inspector prior notification of the commencement of drilling or major earthworks on exploration sites.
10. The record book is an essential part of the communications between the mine manager and the inspector of mines. Entries in the record book should include both the date of occurrence and the date of entry. The inspectorate of mines to provide mine managers with suitable guide lines detailing the nature and scope of entries into the record book.
11. The recommendations of Bureau of Air Safety investigation report number 9303718 are noted.
12. The mining inspectorate should insure the results of this inquiry are distributed through out the industry. The mining inspectorate should further arrange meetings with the companies and individuals directing the operations of exploration sites to review the recommendations of this inquiry and to determine action to be taken aimed at improving health and safety management.

The report of myself the warden is that I concur with the findings of the reviewers as to the nature and cause of the accident. This inquiry is closed.

7 march 1995

White, Dean Michael

Findings and Recommendations

The *Coal Mining Act 1925 - 1981*

Findings and recommendations of reviewers and mining warden following an inquiry into fatal injuries received by Dean Michael White at Glenden on 19 september 1990 warden's court of Quensland Mackay 29 november 1990

Before: F W Windridge esquire Warden

Reviewers:

- MR D J CORNISH
- MR A BONNEY
- MR R PARKIN
- MR S FIN

To assist:

Mr F B Biggam, inspector of mines

Appearances:

- MR M D MARTIN (instructed by Messrs Feez Ruthning) appearing for Elgas.
- MR B A CAMPBELL (of Wallace and Wallace) appearing for Tulk-Gooninan Limited
- MR T I MORGAN (of Baron and Alan) appearing for CIG
- MR MFG DEAN appearing for Newlands Coal Pty Ltd
- MR W ALLISON for United Mines' Federation and also district union inspector.

Findings: refer transcript and schedule "c"

Recommendations: refer transcript and schedule "d"

Report of mining warden: refer transcript and schedule "e"

Schedule "C" Findings:

We find:

Name of deceased: Dean Michael White

Date of death: 1 october 1990

Place of death: Royal Brisbane Hospital

Cause of death:

1(a) Pulmonary embolism

1(b) Deep venos trombosis

1(c) Immobility from severe burns

How death occurred:

The deceased was working with a maintenance crew at the Newlands Mine at Glenden on 19 september 1990 when he received serious burns as a result of a gas explosion. Death occurred in Brisbane on 1 october 1990.

Cause of accident:

From the evidence we have heard we are satisfied that there was a build up of LP gas in the work area. There are a number of possible causes of the build up of gas. The panel has been unable to determine the exact cause but there are two possibilities -

- A leaking valve, and
- A damaged hose

The gas was ignited and it appears the probably ignition source was the flint gun activated by the deceased when he thought the area was clear of gas.

Schedule "D" Recommendations:

The recommendations of the reviewers are as follows:

The panel has considered the recommendations and these are those recommendations.

Mine induction shall cover the appropriate safety procedures on each mine site and the personnel in question shall be given tasks specific instructions to suit the nature of the work being carried out and the procedures to be followed.

Hotwork permit procedures shall be enforced at all mine sites to cover hazardous area.

When people are welding, gouging, flame cutting, grinding or heating, in areas like the tub or revolving frame of draglines the area in question must be adequately ventilated.

Before any equipment is used on a mine site it must be examined by a competent person to ensure that it meets the appropriate Australian Standards.

When using any gas in enclosed areas regular testing of the atmosphere must be employed to detect any build-up of explosive gases.

The manufacturers of liquid petroleum gas must ensure that the percentage of ethyl mercaptan is in compliance with the appropriate Australian Standards AS1596 1983, every batch shall be tested and the results supplied to the chief gas examiner of Queensland.

No oxy or actylene or fuel gas equipment shall be left unattended in any enclosed area.

Those are the recommendations of the reviewers.

Schedule "E" Report of the Warden:

I wish to place on the record appreciation for their assistance, your experience and expertise in the areas has been most valuable. Also, thank you inspector Biggam for your assistance in ensuring that all the relevant witnesses were available and the necessary reports were done. I think that concludes the proceedings. As far as we're aware there's no exhibits to go back, they've been returned to the appropriate parties.

The inquiry is closed.

Wilson, Gary John

Findings and Recommendations

The *Coal Mining Act 1925* (as amended) -

Findings and recommendations of reviewers and mining warden following an inquiry into fatal injuries received by Gary John Wilson at Laleham No1 Colliery on 5 november 1996 Warden's Court 2-3 september 1997.

Before: Mr A J Chilcott, esquire acting mining warden

Reviewers:

- Mr J P Brady
- Mr R McKenna
- Mr D Reece
- Mr L Anderson

To assist:

Mr M Walker, inspector of coal mines.

Appearances:

- Mr S Williams, QC instructed by Messrs Blake Dawson Waldron, solicitors for South Blackwater Coal (Mr J Murdoch, junior counsel).
- Mr W M Allison for Construction, Forestry, Mining & Energy Union.
- Mr R Nathans, solicitor of Middletons Moore & Bevins for Joy Manufacturing Company Pty Ltd.
- Mr S Byrne, solicitor of Rees R & Sydney Jones for next of kin.
- Mr B A Harrison, barrister instructed by Messrs John Taylor & Co, solicitors for Australian Colliery Staff Association.

Witnesses examined: refer transcript and schedule "a"

Exhibits tendered: refer transcript and schedule "b"

Findings: refer transcript and schedule "c"

Recommendations: refer transcript and schedule "d"

Report of mining warden: refer transcript and schedule "e"

Schedule "A" Witnesses examined:

- David Andrew Forbes MACKIE
- Kim ADDIS
- Graham Dennis GRIFFITHS

- David John Francis TORR
- Gregory Mark BIRD
- Craig James MAHONEY
- Stephen Gregory GILES
- Jeffrey Alan VOCK
- William Kevin KNIGHT
- David John SLAPE
- Anthony Charles HAZELDEAN
- Hugh Carlyle MORRISON

Schedule "B" List of Exhibits

No of Exhibit	Nature of Exhibit	Tendered by
1	Investigation Report by Inspector of Central Division	Mr Walker
2	Post-Mortem Examination Certificate (Form E)	"
3	State Analyst Certificate	"
4	Underground Employees Training Log Book	Mr Harrison
5	Certificate - TND008 Introduction to Training - S Giles Appointment as Trainer/Tester - S Giles	Mr Walker
6	Certificate - TND008 Introduction to Training - J Vock Appointment as Trainer/Tester - J Vock	"
7	Skills Audit - Operating Procedures for Continuous Miners - G Wilson	"
8	Australia/New Zealand Standard - Remote controls for mining equipment (AS/NZS 4240:1994)	"
9	Machine Operator Handouts Joy 12CM15-12D Continuous Miner	"
10	Statement of David John Slape	"
11	Statement of Anthony Charles Hazeldean	"
12	Statement of Hugh Carlyle Morrison	"

Schedule "C" Findings:

We find -

Name of deceased: Gary John Wilson

Date of fatal injury: 5 november 1996

Place of accident: Blackwater

Cause of death: From the medical certificate tendered:-

1. (a) Concussion & fractured skull

Nature of accident:

Shortly after 3-30 pm on the 5th november 1996 Mr Gary John Wilson was fatally injured when he was crushed between the right hand rib side of 0 heading, 9 to 10 cut-through, A500 panel, Laleham No. 1 Colliery and the Joy 12CM12 continuous miner, unit no. 47.

At the time of the accident Mr Wilson was working alone at the face, performing pre-start checks on the continuous miner.

The actual accident was not witnessed by any person.

At about 4-05 pm Mr Greg Bird checked the face area and discovered Mr Wilson pinned between the machine and the rib line. After a brief inspection Mr Bird alerted the remainder of the crew who were preparing to relocate a load centre.

Mr Wilson was found pinned by his head between the water filter housing, mounted on the right hand side of the continuous miner and the coal rib. He was located towards the rear of the machine in a position which strongly suggests on the balance of probabilities, that he was operating the manual controls to move the continuous miner.

The evidence would suggest that Mr Wilson positioned himself in the restricted space between the machine and the coal rib.

A reconstruction of the accident indicates that prior to the event Mr Wilson may have been in a crouched position with the right hand on the tramming levers and the left hand operating the brake override switch.

The manual tramming controls are mounted low on the right hand side of the machine and due to the confined space, estimated to be about 470 millimetres, it was likely that he was standing on approximately 300 millimetres of loose coal adjacent to the rib. As a result of this Mr Wilson would have needed to crouch lower than normal to reach the brake override device.

The machine was moved away from the rib side and valiant attempts were made by various members of the crew to revive Mr Wilson prior to and during transport to Blackwater hospital.

Evidence suggests that Mr Wilson may have decided that it was necessary to re-position the continuous miner to facilitate the task of completing the pre-start checks. A number of factors may have influenced such a decision:-

- having to work in the confined space between the machine and the rib;
- the closeness of the right hand cutter head to the rib line;
- fractured section of the rib adjacent to the right hand cutter head;
- a perceived inability to remove the scrubber filter screen due to the fact that the machine had been left parked close to the rib line.

Cause of accident:

Upon a consideration of the evidence presented to the Inquiry, we are of the opinion that Mr Wilson was fatally injured due to his perceived need to place himself in the confined space between the rib line and the machine.

By this action he put himself in a hazardous place.

This hazard was realised when he attempted to move the continuous miner using the manual tramming levers.

Major contributing factors:

The confined space hazard was created by the act of parking the continuous miner close to the rib line. Mr Wilson failed to recognise the risk associated with this hazard.

The company supplied machine operating manual does not adequately highlight the potential hazard associated with the manual operation of the continuous miner.

The design, installation and configuration of the manual controls on the various machines is substandard in that they lack consistency, create confusion and do not appear to conform to basic ergonomic principles.

The hazards created as a result of this had not been identified and assessed, therefore, no pro-active action was taken to eliminate or control the hazards by design changes or the installation of hard barriers which would have protected the operator from crush injury. (Refer to Australian/New Zealand Standard Remote controls for mining equipment 4240:1994 Section 3.5)

The training method and the learning outcome in this particular instance proved inadequate in that:

- record keeping was incomplete;
- the standard of the competency assessment provided was poor;
- some of the trainers had made a choice not to train in the manual mode when there was a requirement for manual controls to be fitted to this machine;
- Mr Wilson performed a task that he had not been trained or authorised to do.

Other observations

- We wish to acknowledge the work that has been done by the company and the employees of Laleham Colliery to address the hazards associated with the manual operation of the continuous miner.
- We are satisfied that a great deal of effort and money has been expended in the development and implementation of training schemes which are designed to make our industry safer, however, we are not convinced that these systems are fully effective.
- As an industry we need to question the reasons for this. Some concerns are:-
    - Are our expectations too high;
    - Fast tracking;
    - Skill versus next level of work model;
    - Apathy and complacency;
    - Assessment skills;
    - Lack of independent assessment;
    - Effective audits and internal review; and
    - Communication.

Schedule "D" Recommendations:

The recommendations of the reviewers are as follows:

Trainers and testers should not alter or omit training or testing material. This should be addressed through the established formal channels.

Training schemes should include a formal audit process for all facets of the scheme.

Operators have a responsibility to initiate action to rectify hazards in their workplace.

Competency based training should include some minimum time based component that is clearly indicated in training records.

Manufacturers should be pro-active in embracing the principles of the Workplace Health and Safety Act in the design and modification of machines and equipment.

Training programmes should be reviewed with increased emphasis on confined space awareness and the associated hazards.

Schedule "E" Report of the Warden:

Having delivered the findings as to the nature and cause of the accident and the recommendations, I deliver the following report:-

I commend the inspectorate for the professional manner in which their report has been compiled in relation to this inquiry. The reviewers and myself consider the report to be of a high standard.

I would like to express my sincere thanks to Mr Walker for his assistance during this inquiry.

I would also like to thank the reviewers and my clerk for their participation and assistance during this inquiry.

In conclusion, I concur with the findings of the reviewers as to the nature and cause of the accident.

The inquiry is now closed.

3 september 1997

Wolfenden, Malcolm Peter

Findings and Recommendations

The *Mines Regulation Act 1964*

Findings and recommendations of reviewers and mining warden following an inquiry into fatal injuries received by Malcolm Peter Wolfenden at Greenvale mine site on 5 october 1990 warden's court of Queensland mining warden's court Ingham 22 april 1991

Before: Mr W S Christensen, esquire Warden

Reviewers:

- MR J A BOWYER
- MR B J HEMBROW
- MR L J HICKS
- MR W INGLEDEW

Appearances:

- MR J GRIEVES, inspector of mines
- MR S G DURWARD (instructed by Messrs Crosby, Brosnan and Creen) on behalf of Queensland Nickel Pty Ltd
- MR W M BOULTON (instructed by Sciacca & Assoc) for the widow and the father of the deceased
- MR S YATES, district workers' representative

Findings:

We find -

Name of deceased: Malcolm Peter Wolfenden

Date of death: 5 october 1990

Location of death: Greenvale mine site Queensland Nickel Pty Ltd

Nature of accident:

As to the nature of the accident, the reviewers find that the accident which resulted in the death of Malcolm Peter Wolfenden occurred at the Greenvale mine site of Greenvale Nickel Proprietary Limited on the 5th day of october 1990 when an empty Wabco fifty haul pack dump truck driven by Mr Wolfenden came into collision with a loaded dump truck of the same kind, driven in the oppsosite direction by one, Elvin Wise. The accident occurred while the deceased was negotiating a bend in haul road number seventy-five, at which time he lost control of the vehicle and collided with the other truck.

The reviewers find that the accident was caused:

- By the road surface not being constructed of a suitable base material.
- By the road surface being slippery due to recent watering.

- By the dump truck driven by the deceased entering the bend at too greater speed for existing road conditions.

Recommendations:

The reviewers' recommendations are as follows:-

- All haul road pavements should be either firstly constructed of suitable base material to eliminate or reduce slippery driving conditions on wet pavement surfaces. Or secondly, where suitable base materials are not used, designed with consideration to available materials, as to eliminate or reduce slippery driving conditions on wet pavement surfaces, provided that appropriate maximum speed control signs shall be erected at strategic locations.
- That all drivers assigned to water cart duties receive special training in the use of watering facilities.
- That all drivers using the haul roads receive as part of their training, special instruction on anti-slip procedures, and that each driver receive training updates in respect of those procedures annual.

This is the findings of the reviewers.

Report of the Warden:

It is for me to make a report and my report will be that I agree with the findings of the reviewers as to the nature and cause of the accident.

The inquiry is closed.

22 april 1991.

Wood, Gordon Dudley

Findings and Recommendations

The *Coal Mining Act 1925 - 1981*

Findings and recommendations of reviewers and mining warden following an inquiry into fatal injuries received by Gordon Dudley Wood at Goonyella-Riverside mine on 19 december 1991 warden's court of Queensland Mackay 30 april 1992

Before: F W WINDRIDGE esquire Warden

Reviewers:

- Mr Joseph Barraclough
- Mr Geoffrey Robert Saunders
- Mr Gregory John Shannen
- Mr Russell George Zerner

To assist:

Mr B B Biggam, Inspector of mines

Appearances:

- MR W ALLISON, appearing for the widow and the United Mine Workers' federation
- MR D CARROL, representing BHP Utah Coal Ltd

Witnesses examined: refer transcript and schedule "a"

Exhibits tendered: refer transcript and schedule "b"

Findings: refer transcript and schedule "c"

Recommendations: refer transcript and schedule "d"

Report of mining warden: refer transcript and schedule "e"

Schedule "A" Witnesses examined:

- Alexander Hughen CAMPBELL
- Sean Desmond MARTIN
- Robert Bruce TREASURE
- John Anderson McLEOD
- Charles Frederick GOURLEY
- Athol James MacKENZIE
- Ian Raymond BRUCE
- Raymond Leslie John PATRONI
- Graham John HAYDEN
- Brian John BLACK

Schedule "B" List of Exhibits

No of Exhibit	Nature of Exhibit
1	Life Extinct Certificate
2	Report with Three-dimensional views of Accident Site
3	Mr G O Wood's Employment History
4	Revised Procedure
5	Detailed Procedure
6	Report on Accident of 10 March 1991
7	Post Mortem Examination
8	Post Mortem Certificate
9	State by Dr S D Martin
10	Blood Alcohol Certificate
11	Letter - Dr P E Wignall
12	Statement R B Treasure
13	Statement and Record of Interview by Mr V Tolo
14	Statement and Record of Interview by Mr J A McLeod
15	Statement and Record of Interview by Mr C F Gourley
16	Statement and Record of Interview by Mr A J MacKenzie
17	Reports on Progress Work on Number One Open Feeder and ROM One Open Feeder Lock-up and Accident
18	Statement and Record of Interview by Mr R L J Patroni
19	Statement by Mr G J Hayden

Schedule "C" Findings:

We find:

Name of deceased: Gordon Dudley Wood

Date of death: 19 december 1990

Place of death: Goonyella Riverside mine

Nature of accident:

At the commencement of the morning shift on 19 december 1990, Gordon Dudley Wood together with Vinko Tolo and John McLeod were attempting to clear a blockage in ROM 1 at Goonyella Riverside mine. To effect clearance Wood was utilising a high pressure water hose on the top of the R.O.M. 1 hopper whilst Tolo had entered the chute to remove pieces of coal and rock by hand. It appears Wood arranged for water to be applied to the hopper bin via the spray bars on the water truck in lieu of the water truck fire hose. Wood then proceeded down the stairs to the top of the apron feeder cover. A short time later there was an outrush of coal and water. Tolo was caught up in this outrush but managed to extricate himself with only minor injuries. Both Tolo and McLeod state they heard Wood call out. It was then realised

Wood had disappeared from the apron feeder where he was last positively sighted. After a search and removal of some coal, the body of Wood was recovered from the conveyor.

The panel considers it more probable than not that Wood left the top of the chute area and proceeded to the platform that allows access to the conveyor belt. At this time, the first outrush of coal occurred and the events that followed precipitated a heart attack, resulting in Wood being engulfed in the flowing material.

Cause of death

Cause of death was acute Myocardial Infarction due to severe coronary atherosclerosis. Post mortem examination excluded death by drowning, asphyxiation or bodily injuries.

Schedule "D" Recommendations:

The recommendations of the reviewers are as follows:

The panel recommends consideration be given to removal of blockages by mechanical means from the top of the R.O.M. bin to minimise the need for personnel engaged in cleaning out or blasting operations at the base of the R.O.M. hopper. We note the amended and upgraded procedures already in place, but recommend that a review be conducted in relation to work being carried out in tail pulley areas whilst bin cleaning operations are in progress.

It is recommended that if water is added to the bin from the R.O.M. truck grid, there should be strict control over the quantity of water used by a responsible person.

It is recommended that careful attention be paid to eliminating the possibility of metal to metal contact between the skirt plates and feeder flights whenever maintenance or repair work is carried out on this equipment.

Schedule "E" Report of the Warden:

I concur with the findings of the reviewers as to the nature and cause of the accident.

The inquiry is closed.

Moura inquiries

During the past forty years there have been three mining disasters in the Moura district at a cost of 36 lives.

The first occurred at Kianga Mine on 20 September 1975. Thirteen miners died from an explosion which was found to have been initiated by spontaneous combustion. The mine was sealed and the bodies of the men were never recovered.

The second occurred on 16 July 1986 at Moura No 4 Mine when twelve miners died from an explosion thought to have been initiated by one of two possible sources, namely frictional ignition or a flame safety lamp. The bodies of the miners, in this case, were recovered.

The third of the disasters occurred on 7 August 1994 at Moura No 2 Mine. On this occasion eleven miners died as a result of an explosion. The mine was sealed and, at this time, the bodies have not been recovered. Given this tragic history, it was inevitable that the inquiry into this third disaster would be the focus of considerable public attention and concern. Whereas it would be incorrect to say, as a consequence, that this Inquiry has been more thorough or exhaustive than the previous two, or for that matter any other mining inquiry, it is the case that it has been required to examine and consider a very large body of evidence and to hear and consider the testimony of a very large number of witnesses. The inquiry acknowledges that it has not been able to be totally thorough from an investigative point of view since it has not been possible to re-enter the mine. However, it would be correct to say that the inquiry has placed the operations, the management and the events leading to the explosion at Moura No 2 Mine under the closest possible scrutiny.

The inquiry wishes to express and place on record its sincere condolences to the families and friends of the men who died as a result of the Moura No. 2 explosion. It wishes further, to extend its sympathy to the Moura community for the many lives it has lost to coal mining over the years.

Summary of the accidents:

Date of accident	Location	Date of findings
20/09/1975	Kianga No 1 underground mine	15/12/1975
16/07/1986	Moura No 4 underground mine	12/06/1987
07/08/1994	Moura No 2 underground mine	18/12/1995

Kianga No 1

Summary

At about 5.10p.m. on September 20, 1975, an explosion occurred in the underground workings of the Kianga No. 1 mine in central queensland. Thirteen men who were underground at the time attempting to seal off a heating in the 4 North Section were killed.

As a result of the fatalities an inquiry was held in Rockhampton, conducted by the mining warden with assistance from four persons having practical mining knowledge. The inquiry commenced on November 10, 1975, and closed on November 24, 1975.

During the inquiry evidence showed the mine to be worked by a bord and pillar system. The seam being worked was not extracted to the full height and the coal was liable to spontaneous combustion. Methane had also been found in the workings.

The inquiry found that an explosion was initiated by a spontaneous combustion source which ignited inflammable gas and was propagated involving coal dust. The explosion flame front did not reach the surface.

It was recommended by the inquiry that:-

(a) the knowledge of all member of the coal mining industry in queensland be upgraded with regard to spontaneous combustion.

(b) changes be made in the Queensland Coal Mining Act to provide for:

- additional protection against the propagation of coal dust explosions,
- monitoring or sampling of ventilation,
- preparatory seals and the recognition and delineation of responsibilities of persons with technical authority superior to a manager.

(c) additional analytical facilities to be provided for the industry.

Other general recommendations relating to safety were also made.

The full report of the warden's inquiry is available at www.publications.qld.gov.au.

Moura No 4

Summary

At about 11:05 a.m. on 16th July, 1986 an explosion in Moura No. 4 underground mine in central queensland. The 12 miners who were extracting pillars in the main dips section were killed. Their bodies were recovered on 23rd July, 1986 after an extensive recovery operation.

The inquiry into the fatal accident was held in Rockhampton conducted before the mining warden and four persons having practical mining knowledge. The inquiry commenced on 9th february, 1987 and closed on 27th February 1987. Evidence presented to the inquiry showed that the upper part of the seven metre thick seam was being worked and that the strata between the seam worked and the seam approximately sixty metres above it consists mainly of massive bands of sandstone. The seam was described by witnesses as "fairly gassy".

The inquiry found that the mine was well ventilated and stone dusted and return airways were continuously monitored for carbon monoxide and methane. Methane detecting instruments were also available to the section's deputies.

The inquiry found that a roof fall had occurred in the goaf and that the wind blast from the fall blew a mixture of methane, air and coal dust into the working area. An explosive atmosphere developed in the working area and in particular around the deputy's flame safety lamp.

An ignition occurred creating a violent explosion which caused extensive damage throughout the section. The explosion was quenched by the presence of a water barrier in the belt roadway and substantial quantities of water in swilleys in other roadways. Some eight possible sources of ignition were considered. The inquiry considered that the flame safety lamp, although properly assembled, was the most likely source of ignition.

A number of recommendations were made by the members of the inquiry, the most important of these being that flame safety lamps be prohibited from use in underground coal mines in Queensland subject to limited exceptions.

The full report of the warden’s inquiry is available at www.publications.qld.gov.au.

Moura No 2

Summary

At about 2335 hours on Sunday 7 August 1994, an explosion occurred in the Moura No 2 underground coal mine.

There were twenty-one persons working underground at the time. Ten men from the northern area of the mine escaped within thirty minutes of the explosion but eleven from the southern area failed to return to the surface.

Those who failed to return comprised a crew of eight who were working in the 5 south section of the mine undertaking first workings for pillar development, and three others, a beltman and a sealing contractor with an assisting miner who were also deployed in the southern side of the mine.

A second and more violent explosion occurred at 1220 hours on Tuesday 9 August 1994. Rescue and recovery attempts were thereafter abandoned and the mine sealed at the surface.

Pursuant to Section 74 of the Coal Mining Act 1925 an inquiry was held before the mining warden and a panel of four other persons.

The inquiry found that the first explosion originated in the 512 panel of the mine and resulted from a failure to recognise, and effectively treat, a heating of coal in that panel. This, in turn, ignited methane gas which had accumulated within the panel after it was sealed. The inquiry did not reach a finding regarding the cause of the second explosion.

While the inquiry found that the eleven persons who failed to return to the surface died in the mine as a direct or indirect result of the first explosion no definite finding could be made regarding the precise cause of death of any of the victims.

The inquiry made a number of firm recommendations aimed at preventing the occurrence of a similar accident. The inquiry also identified a number of areas where there is a need for investigation and improvement to assist in securing the safety of those employed in the coal mining industry.

The inquiry made recommendations in relation to the following:

- Spontaneous combustion management;
- Mine safety management plans;
- Training and communications;
- Statutory certificates;
- Ventilation officer;
- Self-rescue breathing apparatus;
- Emergency scape facilities;
- Gas monitoring system protocols;
- Sealing - designs and procedures;
- Withdrawal of persons;
- Inertisation;
- Research into spontaneous combustion;
- Panel design;

- Mine surface facilities;
- Literature and other training support; and
- Future inquiries

In addition, the inquiry has made comment on a number of other issues.

The full report of the warden's inquiry is available at www.publications.qld.gov.au.

Box Flat Colliery inquiry

The accident at Box Flat Colliery on 31 July 1972 resulted in the loss of 17 lives.

The full report of the Box Flat Colliery inquiry is available at www.publications.qld.gov.au.

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Queensland Government