



MINESAFE

THE YEAR IN REVIEW

underground metalliferous and coal sectors. However, this result has again been marred by a spate of fatal accidents in the latter half of 1990-91. In most cases, those who lost their lives were very experienced, and the type of accident was avoidable or preventable. The Minister for Mines endorsed a retrospective study into fatal accidents over a five to ten year period to determine if more light may be shed on the underlying causative factors of these accidents.

Positive initiatives have continued to flow from the Inquiry into Safety in Underground Gold Mines.

The Mines Regulation Amendment Act was enacted and assented to in December 1990. Following consequential amendments to the Regulations, it is expected that it will be proclaimed in the near future.

Many operations in the mining industry have already moved to implement the consultative provisions of the Amendment Act.

Joint training courses for health and safety representatives commenced in November 1990 and were scheduled throughout the 1991 calendar year. These have been well attended and received. The courses were developed by the Chamber of Mines & Energy and

The 1990-91 year saw substantial improvement in safety performance in the industry, with profound improvement in the



the Australian Worker's Union and are being conducted by TAFE.

The Mines Regulation Act and Coal Mines Regulation Act have now been included in the ambit of the Commission for Occupational Health Safety & Welfare and the Mining Industry Advisory Committee has been reformed as a sub-committee of the Commission, after a lapse of three and a half years.

In the year ahead the Mining Inspectorate will focus attention on developments in a number of important areas, which includes:

- emergency preparedness and procedures.
- auditing of mine fire risk and investigation of mine fires.
- policy and advice on underground mine ventilation and diesel emission standards in particular.
- development of a more systematic approach to training in and application of ground support.

The Department will produce a booklet on the occurrence of asbestos fibres in greenstone and mafic and ultramafic mineral zones in mining regions. The purpose of the booklet will be to inform the mining workforce accurately of the nature of its occurrence, identification and associated hazards, and the correct method of managing the risks involved and dealing with it, when it is identified. It remains to wish you all well for the coming year, and to ask you to commit yourselves to the precept that all ACCIDENTS ARE PREVENTABLE.

J.M. TORLACH

State Mining Engineer

MACHINERY IN MINES

Investigations of some recent accidents involving mobile machinery have revealed that managers have not complied with Regulation 6.9 (MRA), and have allowed persons neither tested nor authorised to operate mobile machinery.

The regulation requires that authorisation for any mobile machinery is only to be given after the operator has been given a practical trial and found competent by either the Manager or a

suitable person appointed by the Manager.

Additional to the Manager's authorisation, Certificates of Competency are required for some machinery. Examples are winding engines, cranes, boilers, power shovels and locomotives.

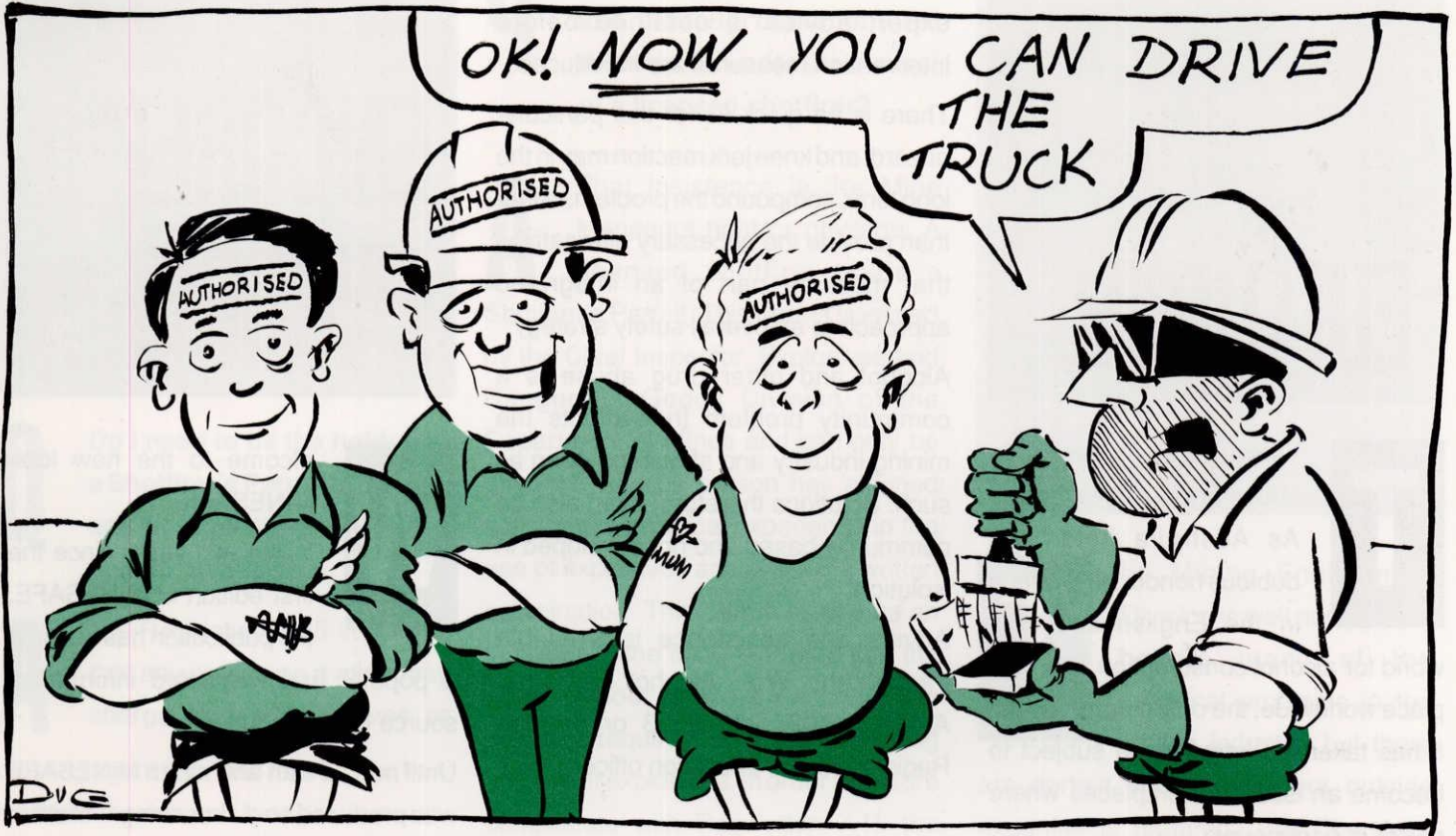
Certificates of Competency are not required by persons carrying out repairs or making adjustments to equipment normally operated by a certificated operator. They still require the authority of the manager or his representative however, and must be trained and found competent in a practical trial.

It is required that every person who operates or drives any item of machinery for whatever purpose shall be the holder of either:

- a certificate of competency issued under the Mines Regulation Act or the Occupational Health, Safety and Welfare Act 1984.
- a written exemption granted by the Minister.

M.R.A REGULATION 6.9

- (1) Where machinery that would otherwise be required to be operated or driven by a person qualified under the provisions of these regulations is undergoing repair or adjustment that machinery may be operated or driven for that purpose by the person carrying out the repair or adjustment.
- (2) Subject to subregulation (1), a person shall not operate or drive -
 - (a) a winding engine, a stationary steam engine or an engine including a steam turbine, a traction engine, a crane, internal combustion engine or boiler unless -
 - (i) the person holds a certificate of competency under these regulations or under the Occupational Health, Safety and Welfare Act 1984 authorising or entitling the person to operate, take care of, or drive that machinery; or
 - (ii) in the case of a winding engine, he is the holder of a written exemption granted by the Minister where the circumstances are such that it is impracticable to employ a certificated person;
 - (b) a power shovel equipped with a jib or boom, a hoist for hoisting purposes, an underground locomotive, or a diesel engined vehicle underground, unless he is the holder of a Certificate under the Act issued by the Manager or Inspector in accordance with these regulations; or
 - (c) subject to regulation 20.7, any machinery, other than that specified in paragraph (a) or (b) until he has been trained and found to be competent by a practical trial in the operation of that machinery by the Manager or some suitable person appointed by the Manager for the purpose.



- an authorisation to operate, use or drive the machinery issued by the manager or manager's representative.
- a certificate of competency issued by a manager, district inspector or special inspector.

Naturally records should be kept by the manager as evidence that:

- he (the manager) has appointed a suitable person to train and test, by practical trial, the operator and/or driver.
- the suitable person has in fact carried out the training and practical trial of the operator and/or driver.
- authorisation by the manager or his representative for each person to use, drive or operate any machinery.

There are no short cuts. It would be unacceptable, say, for the manager or his representative/suitable person to

state the operator spent a couple of hours with another operator who found the first operator competent and leave it at that.

To summarise, it is necessary to:

- train all operators and drivers;
- test by practical trial all operators and drivers;
- authorise, in writing, all operators and drivers;
- appoint a suitable person to do this, unless the manager carries out those duties himself.

You should also ensure that you are thoroughly familiar with Reg. 20.7 which refers to Locomotive operators.

D. COLLIE
Senior Inspector of W.A.

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All copy should be addressed to The Editor, MINESAFE.

EDITORIAL

The issue of alcohol and drug abuse in industry is topical. As Australia holds the dubious honour of 1st place in the English speaking world for alcohol consumption and 15th place worldwide, the only surprise is that it has taken so long for the subject to become an issue in workplaces where safety is paramount.

Keeping the issue in perspective is vital if effective measures to combat abuse are to be implemented.

If a problem exists, or is perceived to exist on minesites, then it is crucial that expert advice is obtained before intervention measures are introduced.

There is no quick fix for this particular hazard, and knee jerk reaction may in the long term, compound the problem, rather than provide the necessary alternatives that must be part of an integrated approach to an overall safety strategy.

Alcohol and other drug abuse is a community problem that affects the mining industry and should be seen as such. Solutions therefore, must also be community based and not developed in isolation.

Advice and assistance is available through the W.A. Alcohol and Drug Authority (09) 370 0333 or through Regional Health Education offices.

CATHERINE STEDMAN
Editor

ENCORE! ENCORE!

Welcome to the new look MINESAFE.

In the two years since the first edition of MINESAFE, the publication has become a popular and respected information source for the industry.

Until now, a lean and mean MINESAFE was produced on a shoestring — it still is — but thanks to printers, Encore Productions, MINESAFE has been transformed.

Larry Cipriani, the Managing director of Encore, believes in MINESAFE'S message, and has agreed to sponsor the upgrade of the publication in exchange for the opportunity to familiarise you with Encore's range of services.

Encore also prints our Safety Pamphlets and we chose them because, as well as providing excellent service and quality, Encore staff have gone out of their way to assist this committee, and we are sure you will be pleased with the result.

I am sure you will find Encore's service as professional as we have, and hope you will support their commitment to MINESAFE.

The MINESAFE Committee

to produce them as well as a series dealing with operational safety practices.

The latest pamphlets are now available and cover Radiation safety, Respiratory protection, Diesel engines underground, Electricity in mines and Chemical handling.

This set and all future sets will be numbered. Ten pamphlets have already been issued and the numbering begins with No. 11.

Before Xmas we hope to have completed the first set in the series on operating practices. These pamphlets will cover crane safety, Conveyor belt safety, Barring down, Rockfalls and Dumping over edges.

Please contact Simon Wood on (09) 222 3532 to order your copies.

BEST SELLERS

Our new safety promoter, Nugget appears to have made quite an impact on minesites.

The series of pamphlets on mine safety law that feature Nugget are in demand, and the Division will continue

QUESTIONS & ANSWERS

Q Do I need to be the holder of a Shotfirer's Permit to charge and fire explosives or blasting agents on a mine?

A No. Regulation 7.15 stipulates that any person on a mine may charge or fire explosives or blasting agent provided that he/she has satisfied the owner, Manager, foreman or supervisor by a practical test that he/she is competent to do so. You must be aged 18 years or more in order to be permitted to handle, charge or fire explosive or blasting agents.

Regulation 7.35 requires that only a person who has been instructed on the work, and authorised by the Manager in writing, shall be allowed to charge of fire electrically on a mine.

Q Why then do some Mine Managers insist that charging and blasting operations on the mine be under the control of a licensed shotfirer?

A That insistence is the Mine Managers right or privilege. A licensed shotfirer holds a Shotfirer's Permit. This permit is issued by the Chief Inspector, Explosives and Dangerous Goods Division of the Department of Mines and can only be obtained when a person has attained satisfactory practical experience in the use of explosives and passed a written examination. This permit serves as an indicator to the Mine Manager that the permit holder is experienced in the practices required for the safe handling and use of explosives. In order to ensure compliance with Regulation 7.15 the permit holder must still satisfy the manager, foreman or supervisor of the mine that he/she is competent to charge or fire explosives or blasting agents.

W e have had several requests from the industry to produce a series of posters featuring mining specific hazards.

We would like to help out, but a project like this will need sponsors.

If you are interested in sponsoring a poster or a series of posters, we'd like to hear from you. Contact Catherine Stedman, MINESAFE Editor - (09) 222 3538.

POSTERS POSTERS

THE CHEMISTRY CENTRE OF WA

The Mining Engineering Division is well equipped to handle many of the technical problems in the mining industry, but there are certain situations where outside expertise is required. The Chemistry Centre of Western Australia is one organisation that the Division often calls on for specialist technical advice, particularly in relation to metallurgical, chemical and mineralogical matters.

The Chemistry Centre is an administrative part of the Department of Mines and has nine laboratories:

- Agricultural Chemistry
- Kalgoorlie Metallurgical Laboratory
- Environmental Chemistry
- Health Chemistry
- Forensic Science
- Materials Science
- Mineral Processing
- Racing Chemistry
- Mineral Science

Apart from the Mineral Processing Laboratory, which is located at Bentley, and the Kalgoorlie Metallurgical Laboratory, all laboratories are situated in the Mines Department Complex in East Perth.

The nature and scope of all activities undertaken by the Centre is too much to cover in one issue of MINESAFE so we will concentrate on the occupational health and safety services provided to the Mining Engineering Division by the Health Chemistry and Mineral Science Laboratories.

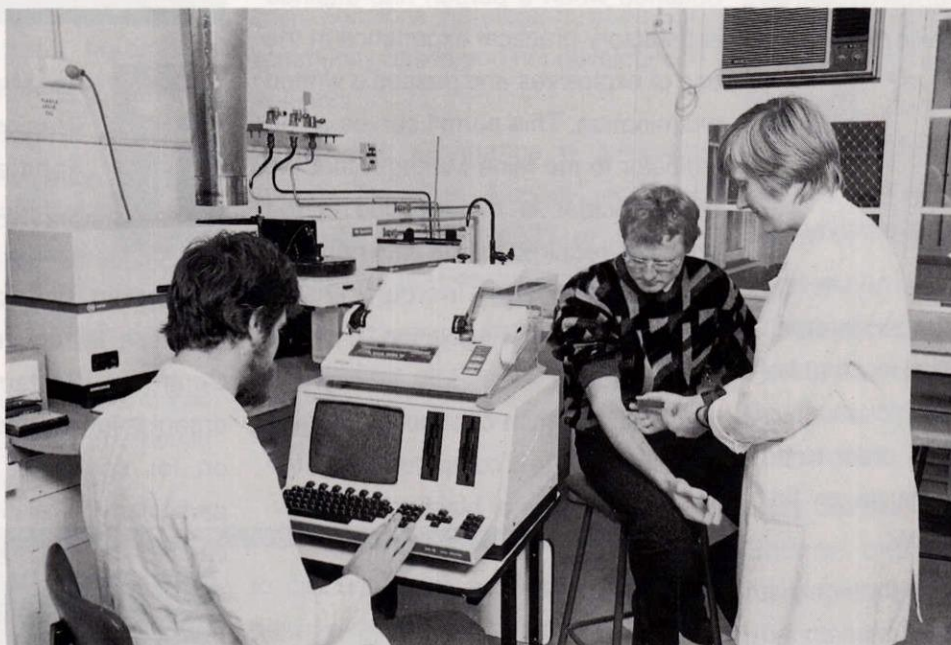
One of the functions of the Health Chemistry Laboratory is to do chemical inspections and advise both the Department of Mines and industry of the potential hazards of usage and storage of chemicals in and around mine sites. Inspections usually occur following a request from one of the Regional Mining Engineers to the Chemistry Centre. A qualified chemist is then appointed to do the inspection accompanied by a Mining

Engineering Division inspector. Any potential problems or defects are discussed with the mine manager, or other minesite personnel, and then are noted in the Mines Record Book by the inspector.

After the inspection the chemist writes a technical report which covers those defects noted in the Mines Record Book as well as any recommendations for problems not covered by the scope of the Mines Regulation Act; for example, the use of a particular chemical in favour of another. Chemical inspectors may

also recommend the correct type of "Personal Protective Equipment" to be used by workers, such as gloves, aprons and respiratory equipment.

Analysis of biological monitoring tests is another important service provided by the Health Chemistry Laboratory. Biological monitoring analysis is done on mines to determine the level of absorption of potentially harmful substances in use in the workplace. Fire assay laboratories are particularly



Blood sampling. Leisman Graphite Furnace AA for elements such as lead in blood

targeted for attention, as the analysis of gold in minerals often involves lead. Inadequate ventilation, or workplace controls, may lead to a dangerous accumulation of lead fumes in the air, with consequent inhalation leading to potentially toxic levels of lead entering the blood stream. Monitoring is also done where there is potential for exposure to mercury, arsenic and Thallium.

For fibre and dust analysis, the Mining Engineering Division often relies on the services of the Mineral Science

Laboratory. The MED staff do the sampling of asbestos and synthetic mineral fibres. Once the samples are taken, they are given to the Laboratory for analysis. Routine fibre counting is done using a microscope, whereas more sophisticated analyses, such as fibre identification, are undertaken using a "scanning electron microscope". The laboratory is also able to undertake silica/quartz analysis through the use of X-ray diffraction and Fourier Transform Infra-red Spectrophotometry - the latter being

a particularly complex procedure.

Not only does the Chemistry Centre collaborate with the Mining Engineering Division on a scientific and analytical level, it also assists in the education of mining industry professionals on occupational hygiene and safety matters

which includes the Surface and Underground Ventilation Officers Course, where Chemistry Centre Staff are involved, not only in lecturing, but also in the supervision of practical demonstrations.

In future issues of MINESAFE, we will look at other Centre Laboratories, and how they assist the mining industry.

MINE RESCUE TRAINING

Do you have the capacity to respond quickly and effectively to an emergency in your workplace?

The consequences of a fire, toxic chemical release or explosion have proved costly to many industries in Western Australia, so training your workforce to deal with such emergencies can mean the difference between relatively minor inconvenience and disaster.

Regulation 4.2 of the Mines Regulation Act Regulations requires rescue equipment, breathing apparatus and



Underground Exercise — W.A. Mine Safety Services

persons trained in the use of that equipment and apparatus to be provided on every mine unless an exemption has been granted. Mine Managers have a legal and moral responsibility to ensure the safety and protection of their employees, which in this context means emergency procedures must be of a

fundamental component of a basic safety program as emergencies can rise at any time.

Emergency planning involves organising and training small groups of people to perform specialised tasks such as fire fighting, first aid, search and rescue and restoring the operation to a safe condition.

Training is usually carried out on site and is developed to individual requirements, where a maximum benefit can be gained by the students.

Appropriate certificates are issued upon successful completion of the course, however, participants are advised to attend periodic refresher courses to ensure that the required level of competence is maintained and to introduce them to new techniques and equipment.

Volunteers should be drawn from all sections of the mine and should represent a cross section of all the skills and professions in the mining industry. Underground rescue and emergencies should be dealt with only by personnel



Vertical rescue — Rescue and Safety Training Pty Ltd



Rope rescue — Rescue Training Australia

familiar with U/G environment and trained in appropriate rescue and emergency techniques.

Mine rescue training is demanding, particularly in breathing apparatus training, rope rescue techniques, fire fighting and dealing with chemicals, so volunteers need to be fit, remain cool under pressure, have well developed reflexes and adequate training in first aid.

A major benefit of mine rescue training is that it encourages improved levels of interaction between management and employees. It also builds up individual confidence and self esteem and group identity which all develop effective communication and teamwork.

Rescue teams are needed in all mines and while there are subtle differences in training requirements, a rescue team should be able to respond to a call anywhere - it is the reason why a uniform standard in equipment and procedures is important, and why open cut rescue training is as important as the established underground requirement.

Mining skills and maintaining a high level of commitment is vital in producing high standards and why competitions play a role in providing incentives, such as the Chamber of Mines and Energy Annual Underground event held this year, in Kalgoorlie.

This competition covers underground rescue, special rescue exercises, fire fighting, first aid and a detailed test of breathing apparatus as well as a training exam. Prizes are awarded in each section with a trophy given to the overall competition winner.

Many mines have their own people with the skills needed to provide training. Others may require outside assistance, and Western Australia is fortunate to have the services of specialised training consultants that mines may call on.

G.N. "Mack" McCormack of Rescue and Safety Training Pty Ltd services the needs of mining and other high risk industries where workers are required to work at either heights, depths or close to vertical obstacles.

Mr V. Delgado of Rescue Training

Australia specialises in victim recovery and safety team training, including rope rescue and Mr R. McPhee of WA Mine Safety Services is an emergency response specialist for both underground and surface mining. IFAP now provide a service through Mr Fred Richardson, who specialises in U/G and Surface Firefighting, Surface Breathing Apparatus and Rescue and Hazardous Chemicals.

Mines rescue training is now well established in WA mines, and should be regarded as part of a long term commitment to a safe work environment.

In this special feature, MINESAFE and the Mining Engineering Division commend the volunteers who spend long hours in training, and the trainees - together their commitment has put Western Australian Mines Rescue on a parity with training worldwide.

Congratulations.

WAMEX '92
MAY 13-15

The Department of Mines supports the annual Western Australian Mining Exposition. In 1992 the Mining Engineering Division will provide the display and our theme will be "ACCIDENTS ARE PREVENTABLE".

The exhibition will be the venue for the official launch of the "Nugget" Safety Campaign.

DID YOU KNOW?

That as many as 1 in 7 Australians have difficulty with either literacy or numeracy skills?

In an industry where communication is important, a clear grasp of both written and oral instruction is needed to ensure accidents are prevented.

Did you also know that if you want help or advice, there is a Worksite Literacy

Co-ordinator in Perth who can arrange to do workplace literacy audits for you? If you are concerned about possible literacy levels at your mine site, call the Adult Literacy Service in Perth:

Hilary Gill

Worksite Co-ordinator

Adult Literacy Service

445 Murray Street

PERTH W A 6000

Telephone: (09) 420 4565

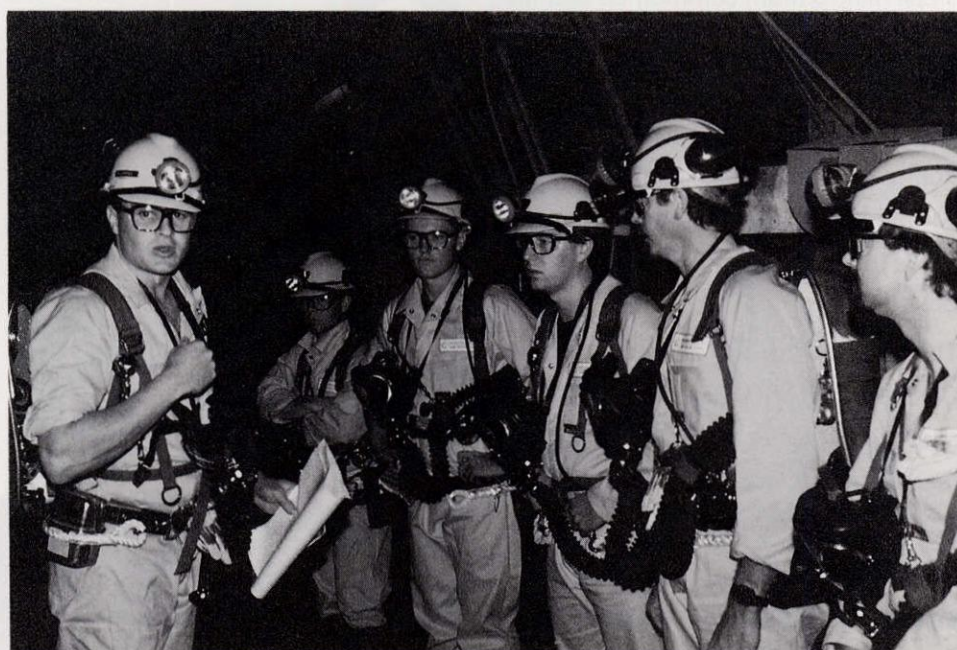
KALGOORLIE MINE RESCUE COMPETITION

KCGM number 2 team won the Chamber of Mines and Energy's annual Underground Mine Rescue Competition held on Sunday, November 3, 1991.

Captain, Paul McCreed, was judged Best Captain to win the trophy donated by Ian Taylor. He led the team to win in three of the seven sections and second in another three.

"The team's discipline and high standard of training resulted in perfect scores in several sections," said Chamber Regional Secretary, Mr Gary Arcus.

In addition to winning trophies for Search and Rescue from Drager Australia, for Fire Fighting from FFE and WAFE, for First Aid from Paramedical Supplies the team was awarded a special cash prize



KCGM No. 1. Briefing location, search and rescue — Kalgoorlie 1991.

donated by Western Mining Corporation's Western Operations. WMC Manager, Mr Rob Dennis, congratulated all teams on the significant increase in the standards achieved over the past few years.

Mr Dennis said, "Increasing skills for the competition is vital for the serious aspect of mine rescue. All underground workers depend on these teams, although we hope that they will never be needed. The skills and ideas gained here will improve emergency preparedness across the State".

In this year's competition teams had to deal with a real fire underground. This was extinguished while the teams were wearing self contained breathing apparatus. This apparatus was also used for an extended search and rescue in a supposed irrespirable atmosphere.

On the surface the teams were faced with a series of obstacles which they had to pass over under or through in order to rescue a teammate. They were then faced with the reverse journey while carrying their teammate in a stretcher. The teams were judged on speed, ingenuity and ability to work together.

Western Mining's Windarra team won the Special Rescue prize and Theory test to take second overall, while several high places enabled the visiting Western Collieries team from Collie to run third. New Celebration's team was awarded a special prize for the best first year team. This was awarded in recognition of the work put in by the six teams competing for the first time. Another encouragement award was given to the team from Burmine at Southern Cross. This very small mine's team commented that the event had provided tremendous example of what could be achieved. The Department of Mines provided a trophy for the best breathing apparatus knowledge which was won by the first time team from Murchison Zinc's Scuddles mine.

The two day event was held at the Cassidy Shaft of KCGM with fire fighting, search and rescue, first aid and a special rescue all conducted underground.

Place	Winning Team
1	KCGM 2 <i>Best Team: Search & Rescue; Fire Fighting; First Aid; Best Captain.</i>
2	WMC Windarra <i>Special Rescue; Theory.</i>
3	Western Collieries
4	WMC Leinster
5	WMC Kambalda
6	BHP Cadjebut <i>Skills</i>
7	KCGM 1
8	New Celebration
9	Stawell
10	Central Norseman
11	Murchison Zinc <i>Breathing Apparatus</i>
12	Edwards Find
13	Telfer
14	Coolgardie Gold
15	Burmine

THUMBS UP W.A.!

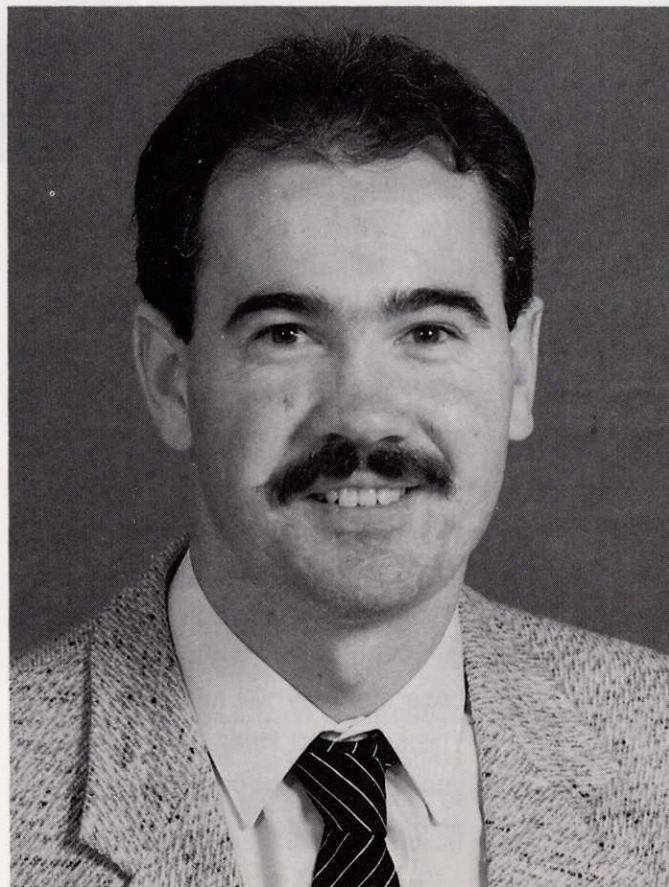
Over recent months the Mining Engineering Division has hosted several international delegations who came to the Department to examine occupational health and safety systems, the regulation framework, and environmental monitoring methods used by the Division. Expertise from the Division has also been requested by both Malaysia and Guyana.

On November 28 our Principal Scientific Officer Greg Hewson, who heads the Occupational Health and Radiation Safety Branch left for Malaysia to begin a five week consultancy looking at radiological aspects on mining operations which produce minerals sands as a by-product. Greg's visit to Malaysia is at the request of the United Nations Development Program Committee and recognises the status of the radiation safety unit as a world leader in the mineral sands industry. The request from the U.N. followed publication of articles in mining and scientific journals on both development work by Greg's team, and the W.A. regulatory framework for the mineral sands industry.

While he is in Malaysia Greg will also run a five day information and technology transfer seminar for mining engineers and metallurgists.

During November, Jennifer Boshier, a scientist with the New Zealand Office of the Parliamentary Commissioner for the Environment also visited the Division to request assistance with formulating a regulatory framework for the emerging mineral sands industry in New Zealand in both the occupational health and environmental areas.

A delegation of senior occupational health and industrial hygiene representatives from the People's Republic



Greg Hewson, Senior Scientific Officer

of China also came to the Department on a study tour.

Principally concerned with Coal Mining, the visitors asked for and received advice on ventilation requirements of diesel engines used in an underground environment and the regulatory framework.

Of particular interest was the toxic substances and dangerous chemicals survey carried out every two years on the W.A. Coalfield.

Our South African visitors came to study AXTAT - the accident recording system developed by the Department.

The system received accolades from the delegation members, who were particularly impressed by the quality of reporting from the AXTAT system.

At the beginning of the year Environmental Engineer, Alan Bradley visited Guyana at the request of the World Bank to advise the Guyanese Government on Environmental aspects of dredging operations in tropical rain forests.

During the year, several members of the division were invited to share their expertise at various national and international forums from long distance commuting, the environment, ventilation, geotechnical problems, radiation safety and occupational health in general.

All Western Australians can be proud of the technological achievements of the mining industry, but as a regulatory authority, it is particularly gratifying to have our status as a leader in occupational health, and safety as well as environment confirmed by world bodies and international and national agencies of Government.

The MINESAFE Committee



The MINESAFE Committee wishes you a Happy and Safe Christmas and New Year. From left to right: Karen Buxton, Martin Ralph, Anna De Filippi, Catherine Stedman, Doug Blight, Yvonne Borowski, Simon Wood (Absent: Sherry Fyfe).

GOOD NEWS!!

Our congratulations go to the workers and management of our underground gold and nickel mines who posted a 26 per cent improvement in safety

performance during the last financial year. Overall, the number of lost time injuries per million hours worked in the gold/nickel sector of the industry has improved by 23 per cent since 1989-90.

Compared with 1987-88 the overall mining industry accident frequency rate has dropped from 37 injuries per million hours worked to 27 injuries per million - a decrease of 27 per cent.

During 1990-91 the mining industry workforce increased by 4 per cent to 34,371, so the figures clearly indicate the strong lead being taken by the industry in terms of occupational health and safety performance.

Lets make 1992 even BETTER!!

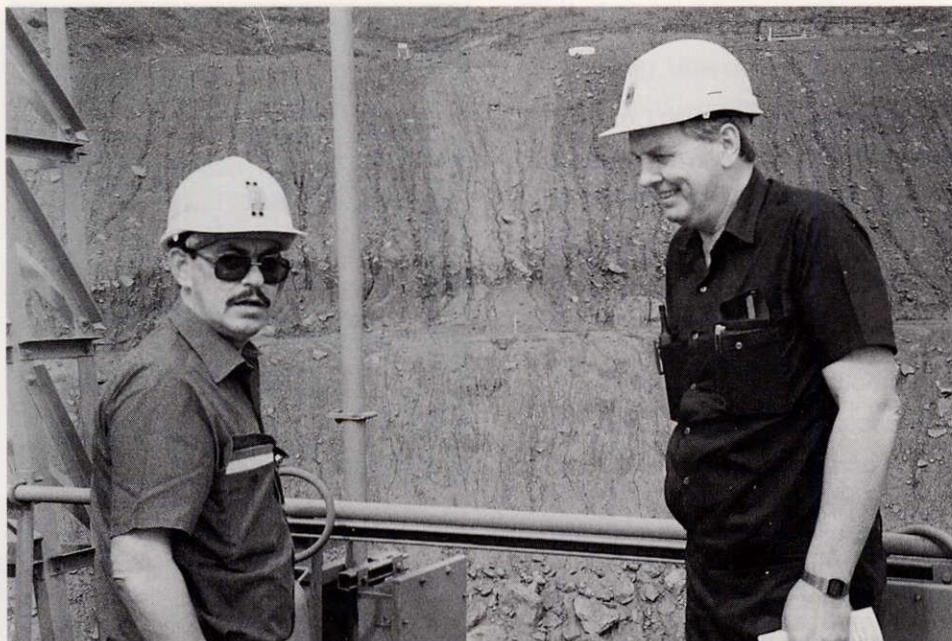
A WEEK IN THE LIFE OF...

Charles Robertson, District Inspector

When Scottish born District Inspector Charles Robertson graduated from the Camborne School of Mines in 1966 he had no idea that his first job would lead to a lifetime working overseas, or that he and his family would make the quantum leap from the jungles of Honduras and Papua New Guinea to the arid empty spaces of the northwest and the Karratha Inspectorate.

Charles worked in Honduras and saw his share of history. The Robertsons lived through the 100 hours war with El Salvador, were thankful to be on leave when hurricane Fifi destroyed Honduras but were there for the devastating Guatemalan earthquake, and were on the doorstep during the civil war between the Contras and Sandinistas in neighbouring Nicaragua.

After that, a three year contract as an Inspector of Mines in Papua New Guinea seemed decidedly peaceful. When Charles went to Karratha in April, 1990 he was one of only two district inspectors, as was assigned to the Kimberley district which encompassed Koolan Island, Argyle, Cadjebut, Goldsworthy, Bow River, Leslie Salt and the Hamersley Group. Now that the inspectorate is divided into three, Charles is working



Carrying out a routine inspection, District Inspector Charles Robertson with Syd Elgar at Tom Price.

currently in the southern district: Hamersley and Robe River Operations and their railroads, the Dampier salt operations, Radio Hill and Lake MacLeod.

On this trip his first stop is Radio Hill, an underground base metal mine, and the only one on the route. He calls at the Registered Manager's office, a courtesy that is followed at every mine. A mine official accompanies Charles so that if there are any problems they can be

discussed, and the solutions worked out.

Following the inspection, the Record Book is filled out if there are defects to record, all of which are discussed with the manager before Charles is back on the road. In this instance, the Hamersley access road along the railway line and Millstream water pipe-line. It's a 228 km stretch to Tom Price through the Chichester Ranges.

Only three other people are on the road, one of whom is the Hamersley Security guard who stops to check identification. In this way, Charles learns that Environmental Officer Charles Newland is an hour or two ahead. It will be sometime late evening before they touch base.

In Karratha, the offices of these two men are about five metres apart, but seldom are they ever there at the same time, and meeting like this is not unusual.

The next day Charles is at the Tom Price operation by 8.00 a.m. and meets Registered Manager L.K. Tan. The pattern for this visit will follow that of



Charles Newland, Environmental Officer, Karratha

Radio Hill but will take all day. Tom Price is a big mine, and a routine inspection will require all of that - normally longer - but on this occasion it finishes by 4.30 p.m.

The next day it is on to Paraburdoo and Channar. Registered Manager Alan Jackson is away, so Occupational Health and Safety Manager, John Erkins and Safety Advisor John McNamara are the contacts at these operations, and will spend time with Charles over that day and the next.

There's a 528 km drive home to Karratha. Charles has been on the road for four days. The last day of the week is devoted to the paper work that has accumulated during his time away.

Charles gets a lot of job satisfaction. "Every day you learn something", he says, "and everyday you can teach something".

The inspectors are in a unique position because they have an overview of the whole industry, and what they learn at one mine can often help to solve a problem at another. Because they are also experienced engineers with mining industry backgrounds they are also able to appreciate problems from a production viewpoint, as well as their principal concern, the safety of the operation. As he says, "that's what you've dealt with - that's what you know. That makes a big difference when you are dealing with the industry; the respect for the inspectorate is there because your certificate of competency and your industry experience says that you know what you are talking about." That knowledge saves lives, and for all inspectors, that in itself makes the job worthwhile.

WORKSITE HEALTH PROMOTION

Suzanne Keenan, Worksite Health Co-ordinator, Health Department of W.A.

Safety standards on Western Australian mines have been of great concern over recent years, but an important underlying factor behind the

accident statistics could be basic health. All the most carefully worded and considered rules and regulations in the world may not succeed in saving someone from a bad accident if they are tired, stressed and depressed - or just plain ill.

Health promotion in the workplace is not new. Many large and small companies have been practising it for years. Sponsorship and assistance for the mine football team is a common example. Employees who are healthy and fit in their leisure time will be less likely to sicken on the job. Representing the company outside working hours may also reinforce the feeling that they are part of a team.

Many other companies are taking the idea further. The Paddington goldmine, established in 1985, has always had a policy of looking after the health of its employees. A broad range of health promotion activities is organised at the mine by occupational health and safety personnel.

Staff are encouraged to enter local sporting competitions and Paddington has had its own volleyball and indoor cricket teams whose members wear Paddington T-shirts provided by the management. Tennis competitions between staff have been organised and an outdoor recreation day is also a regular event.

At Woodside Offshore Petroleum the health promotion program has two aims - to ensure that healthy practices are followed and to provide activities such as hypertension (high blood pressure) education and screening.

The program emphasises disease prevention with particular targets being heart disease, stroke, cancer, women's health and AIDS.

A major component is the lifestyle assessment in which all employees have been able to participate. This involves completing a questionnaire about habits, supplying a urine and blood sample, measuring height, weight, pulse rate and blood pressure, followed by counselling on the results.

Large scale programs such as these can involve significant costs to the company (as well as benefits in improved health of staff), but it is also possible to introduce many ideas with almost no cost.

Agencies such as the Health Promotion Services Branch of the Health Department of WA have many resources available free relating to smoking, Drinksafe, healthier nutrition and sexual health.

Other government departments such as the Ministry of Sport and Recreation and the Department of Occupational Health, Safety and Welfare (DOHSWA) can also provide useful resources in connection with fitness, heat stress and other health issues.

Many publications are also available in languages other than English and further information on these can be obtained from the Co-ordinator Multicultural Access at the Health Department of WA on telephone (09) 222 2020.

Expert guest speakers on specialist subjects may also be arranged as well as other activities which make health and fitness programs interesting and enjoyable.

The most important ingredient in a successful program is support from both management and employees. It is also particularly important that liaison with the various sectors of the company is maintained. This will ensure that everyone is familiar with activities, and support them as they develop.

Health promotion activities should be accessible to all employees. Shift workers need to be considered so that activities are not staged when one section of the work force is likely to miss out.

Initiatives are often more successful when incentives are offered as motivators. These can include T-shirts (possibly carrying the company logo), trophies and sporting equipment.

The Health Promotion Services Branch of the Health Department has produced a resource package for worksites called "Health Promotion at work" which is available free by telephoning (09) 222 2098.

It provides a guide on how to start, followed by specific ideas to try under a range of headings - smoking, alcohol, nutrition, exercise, back care, cancer, blood pressure, occupational skin care and many others.

Some ideas are simple and are probably already used in many mines. On heat stress for example the suggestions include:

- providing employees with information on heat stress;
- encouraging employees to drink more water while at work by providing accessible water station and water bottles for mobile staff;
- placing posters around the workplace which encourage staff to drink more water.

Other suggestions are more complicated and expensive such as holding a fitness awareness week or encouraging the social club to organise fitness activities.

To obtain further information please contact:

Worksite Co-ordinator
Health Promotion Services Branch
Health Department of WA
189 Royal Street
EAST PERTH WA 6004
Telephone: (09) 222 2098

CONGRATS NELSON POINT!

The 'A' Shift - Operations (Crushing) and Labour Group 327 at BHP's Iron Ore Nelson Point operations have something to be proud about - 15 years without a lost time injury -Congratulations.

The achievement earmarks a deep commitment to safe work practices and also says something about the part well designed buildings and systems play in safer operation and maintenance procedures.

WARNING!

A plant operator was injured recently while carrying out a pre-start check on his machine.

The operator had unscrewed the radiator cap, on a cool engine, and because he could not see the water level clearly, borrowed a cigarette lighter to illuminate the radiator outlet.

There was an explosion, and the operator's right eye and eyelid were scalded.

The exact cause of the explosion is not known, but two precautionary measures are obvious.

1. Do not use naked lights near engines.
2. Ensure you know the explosive properties, if any, of additives in use on machinery.

MINESAFE

is published by the:

Mining Engineering Division
Department of Mines

100 Plain Street

EAST PERTH W.A. 6004

Telephone: (09) 222 3310/222 3438

STAFF CHANGES

Rodger Hampson is our new District Mining Engineer. He will be responsible for mining operations in the central district of the Perth Inspectorate.

John McGee joined the Kalgoorlie Inspectorate as Mechanical Engineer.

Kym Williams has taken over from Jane Williamson as our Data Entry Operator for CONTAM and AXTAT. Jane transferred to another Branch of the Department of Mines.

Mark Cooper commenced employment in the Perth Inspectorate as Technical Officer (Occupational Health). He is joined by our **Anna DeFilippi** (ex Secretary to the Board of Exminers).

Kareen Johnson has joined the Kalgoorlie Inspectorate as Clerk/Typist



Yvonne Borowski has taken over from Anna to do duties of Secretary to the Board of Examiners.

WHAT'S ON

UPDATE OF PUBLISHED SIGNIFICANT INCIDENT REPORTS

26. Truck Backed Over Tip Head.

SURFACE VENTILATION OFFICERS COURSE

December 12 and 13, 1991 at the Department of Mines, 100 Plain Street, East Perth. Cost: \$150.00

Interested parties should contact Tania Narducci on (09) 222 3095.

WA CERTIFICATE OF COMPETENCY EXAMINATIONS

- First Class Mine Managers
- Quarry Managers
- Underground Supervisors
- Restricted Quarry Managers

Examination date for the above Certificates are April 13, 1992. **Closing date** of applications is March 6, 1992.

Enquiries to Yvonne Borowski on (09) 222 3269.

LOCOMOTIVE ENGINE DRIVER CERTIFICATE OF COMPETENCY

Applications to sit the next examination in Karratha should be sent to Denis Brown, Mineral House, 100 Plain Street, East Perth, 6004, by January 31, 1992. Examination date - February 28, 1992.

NEW READING

MINING ENGINEERING DIVISION PUBLICATIONS

- Environmental management of quarries: development operation and rehabilitation guidelines - 1991.
 - Fatal and lost time injuries in Western Australian mines - 1990.
 - Guidelines for preparation of a "Notice of Intent" - tailings dam, vat leach, heap leach or existing structures - rev. ed. 1991.
 - Guidelines for preparation of annual environmental reports on mining and general purpose leases - July 1991.
 - Mine safety law pamphlets (Nugget series: No. 3)
 1. Chemical safety
 2. Electricity in mines
 3. Radioactive minerals
 4. Respiratory protection
 5. Underground Diesels (Metalliferous).
 - Mines Radiation Safety Board - a tripartite advisory board - 1991.
 - Mines Radiation Safety Board - policy and procedures manual - 1991.
 - Radiation Safety Technican Training Seminar Course Notes - 1991.
 - Ventilation Officers' Course 1991 (Surface Mining).
 - Ventilation Officers' Course 1991 (Underground Mining).
- For information about these publications, contact the Research Assistant/Librarian, Simon Wood on (09) 222 3532.

ACCIDENT ALERT

INCIDENT

A scraper driver, travelling onto a slope from a narrow bench, overturned when he lowered the bowl too early.

The rear of the scraper was at an approximate 45° angle to the slope it was to cut, that is, travelling across the slope.


RESULT

The scraper bowl, and then the prime mover rolled over.



PREVENTATIVE ACTION

1. When you are cutting on a slope, ensure that scrapers are driven directly down and not across the slope of the ground being cut.
2. Ensure the scraper prime mover and bowl are in line before you lower the bowl.



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