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J.P. Hoffman

President Elect

Dr H. Scott-Russell

Vice Presidents
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J.A. Cruise

Junior

D.A.J. Ross-Watt

Immediate Past President

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J.A. Cruise

Members of Council

Dr N.A. Barcza

B.R. Broekman

G.A. Brown

P.M. Craven

Prof. R.J. Dippenaar

J.R. Dixon*

A.A.B. Douglas

B.R. Fleetwood

Dr R.V.R. Handfield-Jones

P.R. Janisch

* co-opted

P.J. Knottenbelt

R.P. Mohring

J.L. Nel*

K.C. Owen

P.D.K. Robinson

K.A. van Gessel

D.J. van Niekerk

C.J.C.J. van Vuuren*

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Branch Chairmen

Johannesburg Branch

Orange Free State Branch

Pretoria Branch

Vaal Triangle Branch

Western Cape Branch

Eastern Transvaal Branch

Northwestern Transvaal Branch

G.S. Lee

B.J. Addison

Prof. R.F. Sandenbergh

A.M.L. de Sousa

J.J. Cilliers

M.H. Rogers

J.B.D. MacLennan

Past Presidents Serving on Council

B.C. Alberts

Prof. A.N. Brown

C.E. Fivaz

H.E. James

Dr P.R. Jochens

H.G. Mosenthal

G.Y. Nisbet

Prof. R.P. Plewman

Dr R.E. Robinson

Dr O.K.H. Steffen

P.W.J. van Rensburg

Dr H. Wagner

KEY OBJECTIVE OF THE INSTITUTE

To initiate and give effect to the means whereby the requirement for technology and scientific knowledge of the minerals and metals section of the South African economy is satisfied; and to represent and promote the interests of its members.

ARRANGEMENT OF THIS REPORT

In accordance with the current management policy, this report on the activities of the Institute is presented under seven main headings:

1. Interests of Individual Members
2. Technical Meetings
3. Publications
4. Regional Development
5. Engineering Science and Technology in South Africa
6. International Liaison
7. Management and Administration.

1. INTERESTS OF INDIVIDUAL MEMBERS
Portfolio Holder: Dr H. Scott-Russell
Key Performance Areas

In the interests of individual members, the SAIMM

- *undertakes to assess the qualifications, experience, and the level of responsibility of applicants for membership, and allocates a membership certificate in an appropriate grade as a means of granting appropriate professional and technical status to individuals who practise in the minerals and metals sector;*
- *undertakes to prepare and publish career-guidance brochures, bursary handbooks, audio-visual and video programmes, optional school-curricula material, etc., and participates in the activities of the Phoenix National Committee to stimulate scholars and students to select careers in the minerals and metals sector of the South African economy;*
- *guards the professional interests of engineers, scientists, technologists, and technicians by providing a corporate voice and by representing their interests on bodies such as the Engineering Council of South Africa (ECSA) and the Associated Scientific and Technical Societies of South Africa (AS&TS);*
- *through representation on bodies such as ECSA, assists with the evaluation of curricula at universities and technikons with a view to improving the level of education of graduates and diplomates and to ensuring that the courses are relevant to the needs of the minerals and metals sector;*
- *makes awards, in the form of medals, prizes, and certificates, in order to recognize technical excellence, to stimulate a sense of pride in high standards of performance, and to encourage individuals involved in the minerals and metals sector to share the results of their work through publication; the following are eligible for SAIMM awards: individuals for the very*

highest achievements in the South African mining and metallurgical industry, SAIMM members and non-members for papers of the highest standard published in the Journal or other SAIMM publications, and students from universities and technikons for exceptional academic performance;

- arranges technical excursions, banquets, and other social events to create opportunities for professional association and fellowship for its members.

1.1 Membership Committee

Dr H. Scott-Russell, Chairman

B.C. Alberts
R.D. Beck
Prof. A.N. Brown
J.A. Cruise
Prof. R.J. Dippenaar
C.E. Fivaz
J.P. Hoffman
H.E. James
Dr P.R. Jochens
R.P. Mohring
H.G. Mosenthal

G.Y. Nisbet
Prof. R.P. Plewman
P.D.K. Robinson
Dr R.E. Robinson
D.A.J. Ross-Watt
Dr O.K.H. Steffen
D.J. van Niekerk
P.W.J. van Rensburg
Dr H. Wagner
P.M.T. White

Membership

Members of the SAIMM comprise engineers, metallurgists, chemists, physicists, geologists, certificated managers, and technikon diplomates, all of whom have an interest in the fields of mining, extractive metallurgy, metals technology, and other related areas. Provision is made in the Institute's Constitution to include as CORPORATE members individuals who hold senior positions by virtue of their tertiary education or the experience and technical knowledge they have acquired over the years.

Members represent mining operations, beneficiation plants, research institutions, head offices, universities, technikons, consultants, and other sectors of the mining and metallurgical industry.

Members comprise CORPORATE and NON-CORPORATE Members, all of whom are entitled to attend and speak at meetings. Only Corporate Members, however, are allowed to vote.

Corporate Members are classified as follows.

HONORARY LIFE FELLOW: must have rendered services to the Institute, science, or industry.

FELLOW: must be 30 years or older; shall have appropriate qualifications and have worked for at least five years in a senior technical position or as a consultant in mining or metallurgy.

MEMBER: must be 25 years or older; shall have appropriate qualifications and have worked for at least two years in an acceptable senior position or as a consultant in mining or metallurgy.

Non-Corporate Members are classified as follows.

COMPANY AFFILIATE: companies associated with mining or metallurgical industries are eligible for membership.

HONORARY FELLOW: persons of distinction in public service, science, or the arts are elected or re-elected for a current year.

ASSOCIATE: must be at least 18 years of age, interested in the minerals and metals industry, and a fit and proper person to qualify for membership.

STUDENT: must be receiving appropriate training or education in a field related to the minerals and metals industry.

Membership Roll

To facilitate the processing of new applications and transfers, the applicant requires only **one** Proposer and **one** Secunder.

Corporate and Non-corporate members are encouraged to apply for transfer to a higher grade of membership.

RESIGNATION: A member may resign from the Institute by sending his written resignation to the Secretary together with payment of any monies due.

RETIRED MEMBERSHIP: A Fellow or Member who has *bona fide* retired from active business may retain membership at a reduced subscription providing he has been a member for 20 years. Members can contact the Secretary to establish the number of years of service prior to submitting a written request for Retired Membership to the Institute.

STUDENTS: A candidate may remain a Student member only while he is being educated or trained in a manner approved by the Council.

When he no longer qualifies as a Student member, he shall automatically be transferred to the category of Associate. Students are reminded to forward a copy of their degree certificates to the Institute on graduation.

A candidate may not remain a Student member after the end of the Institute's financial year in which he attains the age of twenty-eight years, unless the Institute receives a written confirmation from the university or technikon that the Student member is still a full-time student.

CHANGE OF ADDRESS DETAILS: It shall be incumbent upon members of all categories to notify the Secretary in writing of any change of address.

The Secretary must be informed promptly of any changes in designation, postal address, payment address, telephone number or company to ensure the accurate maintenance of Institute records.

Benefits of Membership

Individuals derive various benefits from membership of the Institute, e.g.

- contact with fellow members;
- special reduced fees when attending congresses, symposia, colloquia, conferences, schools, discussion groups, etc.;
- notices of events promoting technology transfer, which also satisfies the need for continuing education;
- a monthly *Journal* with a balanced content and of high technical standard, which serves as a communication medium to keep members informed on matters relating to their professional interests;
- participation in technical excursions, banquets, and other social events, which create further opportunities for professional association and fellowship;
- tax deduction of membership fees in most cases.

Companies that become Members of the Institute

- benefit from the opportunities to exchange knowledge, particularly regarding new developments and research;
- receive the Institute's publications of international conferences held in South Africa, as well as monographs on a variety of subjects and regular copies of the monthly *Journal*;

- are entitled to send two non-member employees to mining and metallurgical schools, colloquia, congresses, visits, and excursions at member rates;
- receive newsletters and notices regarding all Institute activities;
- benefit from the fact that Company Affiliateship is tax-deductible;
- have ample opportunity to send delegates to attend technical meetings to obtain information and to benefit from the experience of others.

1.2 Career Guidance and Education

C.J.C.J. van Vuuren, Chairman

Prof. A.N. Brown	K. McCarogher*
P.M. Craven	J.L. Nel
P.S. Grobler*	H.J. O'Keeffe*
Dr R.V.R. Handfield-Jones	Prof. R.F. Sandenbergh
P.J. Knottenbelt	P.M.T. White

*Co-opted

The brief of the Committee is to ensure an adequate flow of qualified, highly skilled manpower into the minerals industry.

During the year, all the regular programmes proceeded according to budget and plan. Noteworthy actions occurred in the following areas.

- The Phoenix Project was transferred to the Centre for Research and Development of Mathematics, Science and Technology Education (RADMASTE) at the University of the Witwatersrand from January 1993. All the present activities remain intact and can now be developed further.
- The principle of co-operative education was accepted. This covers the formal integration of academic and career interests with productive work. The South African Society for Co-operative Education (SASCE) was recognized as an organization that supports the objectives of the SAIMM and thus qualifies for SAIMM support.
- Most of the Committee's time and energy went into the need to avoid a curriculum for mining and metallurgical technicians that would be counter-productive. This resulted in numerous interactions with technikon bodies and curriculating authorities, and included submissions via SAARET, ASARET, and Council.
- A most worthwhile initiative, the Natlong project, was supported energetically. This resulted in the formation of a fully fledged community educational centre, and offers hope for the future of technological skills.
- The Education and Technology Workshop, led by Cliff McMillan, brought forward specific objectives aimed at satisfying the needs of the industry in the future. The two workshops were well attended by a wide range of representatives, the facilities and secretarial services being provided by ESKOM. The resulting document will be available in 1993 for use as a guiding policy as seen by the technological industry.

1.3 Awards and Adjudication Committees

Awards Committee—Mining

D.J. van Niekerk, Chairman

J.A. Cruise	P.D.K. Robinson
J.R. Dixon	D.A.J. Ross-Watt

B.R. Fleetwood
R.P. Mohring
K.C. Owen

K.A. van Gessel
Dr H. Wagner

Awards Committee—Extractive Metallurgy

Dr N.A. Barcza, Chairman

R.D. Beck	P.M. Craven
B.R. Broekman	R.M. Whyte*
G.A. Brown	

*Co-opted

Awards Committee—Metals Technology

Dr P.R. Jochens, Chairman

Dr N.A. Barcza	J.L. Nel*
T.R. Curr*	Dr H.V. Steyn*
J.P. Hoffman	C.J.C.J. van Vuuren*

*Co-opted

Adjudication Committee—Mining

R.P. Mohring, Chairman

A.A.B. Douglas	K.A. van Gessel
B.R. Fleetwood	D.J. van Niekerk
P.D.K. Robinson	

Adjudication Committee—Extractive Metallurgy

Dr N.A. Barcza, Chairman

R.D. Beck	P.M. Craven
B.R. Broekman	R.M. Whyte*

*Co-opted

Adjudication Committee—Metals Technology

Dr P.R. Jochens, Chairman

J.P. Hoffman	C.A. Scheepers*
J.L. Nel	H. Steyn*

*Co-opted

Brigadier Stokes Memorial Award

The Brigadier Stokes Memorial Award, which takes the form of a platinum medal, is awarded to an individual for the very highest achievement in the South African mining and metallurgical industry, and is not necessarily based on technical expertise.

The Award was established in 1980, and the previous recipients were as follows:

1980	Dr H.F. Oppenheimer
1981	Dr W. Bleloch
1982	Dr F.G. Hill
1983	Dr A.W. Whillier (posthumously)
1984	Prof. D.G. Krige
1985	Dr R.E. Robinson
1986	Prof. M.D.G. Salamon
1987	Dr T.F. Muller
1988	Dr W.J. (Wim) de Villiers
1989	Dr R.A. Plumbridge
1990	Dr W.G. Boustred
1991	Mr P. du P. Kruger
1992	Mr E. Pavitt

This year the award is being made to Professor Desmond Pretorius for the significant role he has played in a lifetime devoted to studying the Witwatersrand Basin and its origins, and for leadership of the Economic Geology Research Unit at the University of the Witwatersrand.

SAIMM 50 Year Club

The Institute established the 50 year club in 1989 to recognize the faithful and loyal support of its senior members with 50 years' unbroken membership. They become members of the club on the 50th anniversary of joining the Institute. Their names are published each year in the annual report and they are presented with a gold lapel badge on a suitable occasion. There are no fees, and the only obligation of members is to wear their lapel badges with pride and affection at all meetings of the Institute. The present members of the club are as follows:

Year to

June	Member	
1924	E.C. Polkinghorne*	
1926	R.M. Martin	
1927	W. Allen*	
1930	E.T. Dunstan* (<i>posthumously</i>) P.L. Ward	
1931	F. Bowdler	
1932	J.E. Laschinger	
1933	F.D. Cartwright C.H. Coxon J. Levin D.D. McWilliam*	E.R.C. O'Connor B.M. Roberts A.A. von Maltitz T. Waterman
1934	A.C.M. Cornish-Bowden* H.E. Cross E.F. Laschinger E. Margo	J.W.V. Mortleman K. Rood* A. Siff* O. Weiss
1935	O.B. Swallow	
1936	O. Deane T.L. Gibbs R.C.J. Goode F.G. Hill D.M. Jamieson D.J. Rogers A.C. Pigott*	A.H. Mokken H.L. Monro R.M.F. Seawright J.S. van Zijl L. Walter
1937	W. Bleloch* L.A. Bushell* K.W. Findlay	J.J. Klein* C.D. Storrar
1938	V.C. Barnes E.T.S. Brown* R.S. Cooke J.K.E. Douglas A.L.A. Forder	C.A. McKechnie* J.A. Nixon E. Popplewell C.G. Sowry E.W. Thiel*
1939	G. Armstrong-Smith D.E.R. Ayres L.D.C. Bok A.W.L. Brereton E.H.D. Carman G.D. Gettliffe* W.G.H. Jackson*	T.A. Newman R.S. Pearson D.C.J. Squirrell* G.G. Stanley R.F.J. Teichmann I.S. van Eyssen S.J. Venning
1941	A.H.H. Davison D.J. Forder A.R.C. Fowler H.F.W. Ketelbey J.D. McNamara T.F. Muller	D de. V. Oxford E. Pavitt A.C. Petersen E.R. Rudolph P.W.J. van Rensburg

1942	R.E. Burnton R.C. Espley-Jones N.M. Hayne R.T. Naudé	O.L. Papendorf V.O. Steed J.E. van Leeuwen* W.C. Walmsley
1943	R.B. MacGillivray D.J. Molony	J.B. McMorran

* Deceased since becoming members of club

Gold and Silver Medals

Papers published in the *Journal* from March 1992 to February 1993 by members of the Institute were considered for medals.

Gold Medals

No gold medals were awarded.

Silver Medals

Dr D.G. Krige and W. Assibey-Bonsu for their paper entitled 'New developments in borehole valuations for gold mines and undeveloped sections of existing mines', published in the March 1992 issue of the *Journal*.

Dr H.A.D. Kirsten and P.J. Bartlett for their paper entitled 'Rigorously determined support characteristics and support-design method for tunnels subject to squeezing conditions', published in the July 1992 issue of the *Journal*.

M. Akyüzlü and Prof. R.H. Eric for their paper entitled 'Slag-metal equilibrium in the smelting of high-carbon ferrochromium', published in the April 1992 issue of the *Journal*.

Silver medals for papers published in *INFACON*, volume 2

R.D. Knutsen for the paper entitled 'Duplex ferrite-martensite steels containing 16 wt per cent chromium'. R. Hutchison, a co-author of the paper, being a non-member, will receive a certificate.

P.C. Pistorius and Prof. R.F. Sandenbergh for their paper entitled 'The influence of heat-tinted surface layers on the corrosion resistance of stainless steels'. T. von Moltke, a co-author of the paper, being a non-member, will receive a certificate.

Mineral and Metal Review Series

Dr M.A. Ford for his paper entitled 'Uranium in South Africa', published in the February 1993 issue of the *Journal* as part of the Mineral and Metal Review Series.

Honorary Life Fellows

Honorary Life Fellowship is awarded by Council to Corporate Members of the Institute who have rendered outstanding service to the Industry or to the Institute over a considerable period of time. Council has conferred Honorary Life Fellowship on the following persons:

Pre-		
1923	Dr A. Aiken A.F. Crosse J. Littleton	S.H. Pearce J.P. Williams
1923	Dr J. Moir	
1930	H.A. White	
1931	P. Cazalet A. Whitby	Prof. J.A. Wilkenson

1932	J.R. Thurlow	
1934	Dr Wm. Cullen W.R. Feldtmann E.H. Johnson	A. McArthur Johnston Prof. G.H. Stanley
1938	G. Melvill S. Newton	F.W. Watson
1941	J. Henderson	
1943	Sir R.N. Kotzé	
1946	Dr J. van N. Door C.J. Gray Jas Gray J.V. Muller Prof. John Orr	T.K. Prentice R.S.G. Stokes Prof. S.J. Truscott Prof. G.A. Watermeyer J.A. Woodburn
1951	W.W. Mein	
1953	Dr P.E. Hall	Prof. B. St. J. van der Riet
1954	Prof. C. Biccard Jeppe	
1955	Dr P.N. Lategan	
1958	R.A.H. Flugge-de-Smidt	
1960	G. Hildick-Smith Dr A.J. Orenstein Dr H.J. van Eck	A.J. Walton F. Wartenweiler
1961	Dr C.S. McLean	
1966	Dr F.G. Hill	Dr F. Meyer
1970	H.E. Cross R.C.J. Goode	D.M. Jamieson
1974	R.J. Adamson Dr W. Bleloch H. Britten	C.J. Irving J.F. Reid
1975	Dr M. Barcza Prof. J. de V. Lambrechts	Dr J.T. McIntyre
1976	D.G. Maxwell	Lt Col. A.R.O. Williams
1978	J.K.E. Douglas Prof. D.D. Howat	V.C. Robinson
1979	Dr J.P. Hugo	P.W.J. van Rensburg
1980	Hon. S.P. Botha Hon. P.G.J. Koornhof A. Louw	Prof. R.P. Plewman Dr R.E. Robinson
1982	Dr M.G. Atmore	
1983	C.S. MacPhail	
1985	Dr P.R. Jochens D.G. Malan	Dr M.D.G. Salamon
1986	Prof. D.J. Krige	G.Y. Nisbet
1987	Prof. A.N. Brown	
1988	J.D. Austin Prof. R.P. King	D.A. Viljoen
1989	P.A. von Wielligh	
1990	Prof. S. Budavari L.W.P. van den Bosch	Prof. G.T. van Rooyen
1991	Dr H. Wagner	
1992	Dr J. Lurie	

Student Prizes

Prizes were awarded to the following students for the best student dissertations in part fulfilment of the BSc. (Eng.) degree:

Mining

No awards were made in this category.

Extractive Metallurgy

P. Leger and A.C. Deneys, University of Cape Town
'An Investigation into the Rod Distribution and Breakage Mechanism in a Rod Mill'.

Metals Technology

H.J. Burger, University of Pretoria
'The Upper-nose Temper Embrittlement during Tempering of Mn-Mo Pressure Vessel Steel'.

Technikon Witwatersrand

Prestige Prizes

C.T. Smith
M. Rainier Pope
R. Greyvenstein

University of the Witwatersrand

Other prizes, made to students at the Universities of the Witwatersrand and Pretoria, were presented at faculty prize-giving ceremonies held at the respective Universities.

The prize winners were as follows.

University of the Witwatersrand

Prestige Prize

Mining	V. Fitzmaurice
Metallurgy	P. Holmes

Book Prize

Mining	V. Fitzmaurice
Metallurgy	P. Holmes

University of Pretoria

Prestige Prize

Mining	A.N. Lewis
Metallurgy	H.G. Oltmann

Book Prize

Mining	I.L. Thomson
Metallurgy	No award

University of Cape Town

Prestige Prize

Chemical Engineering	A. Burton
Materials Engineering	J. Hull

University of Stellenbosch

Prestige Prize

Chemical Engineering Ms V.M. Kemp

The Chemical Engineering prizes will be awarded at the 'Minerals Engineering '93' conference in August, and the Materials Engineering prize will be awarded at the 'Materials into the 21st Century' conference in October 1993.

Delfos & Atlas Copco Travel Grant

The winners of the 1993 Delfos & Atlas Copco Travel Grant for Mining Engineers were announced at a cocktail party at the Sandton Sun Hotel on Tuesday, 27th July, 1993. The winners this year are Mr J.F. Oelofse, Production Manager, Anglovaal Limited, and Mr R.C. Berry, Assistant Mine

Manager, Amcoal—Bank Colliery. They will travel to Australia and South Korea at the end of August.

1.4 Banquet

J.A. Cruise, Chairman

A.A.B. Douglas
B.R. Fleetwood
R.P. Mohring

H.G. Mosenthal
P.D.K. Robinson
Dr H. Scott-Russell

The annual banquet continues to be the social highlight of the year for members, and again it was oversubscribed. The Carlton Hotel provided a scrumptious spread, and dancing continued into the wee hours. The guest speaker was Mr David Phiri of Zambia, who regaled those present with his experiences as an Oxford Blue, director of companies, and Minister of Mines, and offered straight-from-the-shoulder advice on the pitfalls to be avoided by the mining industry in the 'New South Africa'.

1.5 Constitution, Rules, and Policy

R.D. Beck, Chairman

B.C. Alberts
Prof. A.N. Brown
J.A. Cruise
C.E. Fivaz
J.P. Hoffman
H.E. James
Dr P.R. Jochens
H.G. Mosenthal

G.Y. Nisbet
Prof. R.P. Plewman
Dr R.E. Robinson
D.A.J. Ross-Watt
Dr H. Scott-Russell
Dr O.K.H. Steffen
P.W.J. van Rensburg
Dr H. Wagner

Both language versions of the Constitution were checked and printed during the council year.

1.6 Special Projects

R.D. Beck, Portfolio Holder

The Institute has been considering a structure for the minerals industry that will better serve the interests of the diversified professional associations that form part of the industry in South Africa. A proposal was drawn up to create a body that would become the unifying body of existing mineral-industry associations. The body would be composed of individual members each of whom would have to meet the separate entry requirements of one or more of the associations that he/she wishes to join. Such associations would retain their professional autonomy, and use whatever services provided by the main body as they might desire. Constituent associations would rank equally, irrespective of membership. Each would have its own council and president as at present. The main body would be administered by an executive committee headed by a chairman. The number of executive committee members would be twice the number of constituent associations. Each association would nominate one member, and half of the members would be directly elected by individual members.

The advantages of the proposed structure are seen as follows:

- a pooling of resources and funds, with consequent efficiencies and an ability to attract competent professional staff;
- a vehicle for the use of smaller societies where their specific interests need to be defended in any circumstances;

- an effective public-relations medium for the constituent societies;
- centralization of functions, which would avoid both clashes and repetition;
- a unifying of minerals-industry disciplines at a time when the industry is under environmental and economic threat.

The structure has been devised in such a manner that no one existing society will dominate, and all the constituent societies will have equal status and professional autonomy.

These proposals have been put to a number of associations within the minerals industry and have received a positive response.

Communication of the proposals to a wide spectrum of the industry is under way. Implementation will follow once formal acceptance has been achieved.

1.6.1 Centenary Committee

R.D. Beck, Chairman

J.A. Cruise
J.P. Hoffman
P.R. Janisch
R.P. Mohring

H.G. Mosenthal
D.A.J. Ross-Watt
Dr H. Scott-Russell

Events to celebrate the Institute's centenary have progressed well. A banquet is planned for Friday, 25th March, 1994, one hundred years and a day after a group of men engaged in the fledgling South African mining industry met to start this association. The centenary banquet is planned for members, wives, and honoured guests. Suitable dignitaries are being invited, and the event will be planned along the lines of the early dinners of the Institute, which were major social occasions.

Memorabilia are being selected, along with a suitable centenary logo.

A commemorative issue of the *Journal* is being prepared that will reproduce papers that represent the technological and management highlights of the mining industry over the past one hundred years. Each paper will be prefaced by a comment from an expert in the field as to the importance of the paper.

The actual centenary celebrations will be given 'social page publicity'. The main thrust of the publicity will be focused on the CMMI Congress. It is hoped to achieve wide coverage by radio, TV, newspapers, weeklies, and magazines. With so much poor press for the minerals industry, this will be an opportunity to put the record straight.

2. TECHNICAL MEETINGS

Portfolio Holder: J.A. Cruise
Key Performance Areas

In pursuance of its objectives, regarding the dissemination of technical information, the SAIMM

- organizes congresses, symposia, colloquia, schools, discussion groups, etc., to promote the transfer of current and new technology, and to satisfy the needs of its members for continuing education by the exchange of technical information, the communication of ideas, and the identification of technological problem areas.

2.1 Technical Programme Committee—Mining

P.D.K. Robinson, Chairman

J.R. Dixon*	P.S. Piper*
A.A.B. Douglas	D.A.J. Ross-Watt
B.R. Fleetwood	Dr H. Scott-Russell
P.J. Knottenbelt	K.A. van Gessel
R.P. Mohring	D.J. van Niekerk
K.C. Owen	P.M.T. White

*Co-opted

The Committee organized 4 activities for the year, viz, an international conference on Underground Massive Mining Methods (MASSMIN 92), a school on Environmentally Related Legislation in the Minerals Industry, and two colloquia—Education and Training for the 'New South African' Minerals Industry, and Mine Closure—Legal and Logistics.

All the events were highly successful and were spread between September 1992 and May 1993.

The MASSMIN 92 Conference attracted 344 delegates, of whom approximately 60 were from places as far as Australia, USA, South America, United Kingdom, Portugal, Canada, Zambia, and Indonesia. The technical content of the conference was well received, and many useful contacts were made. The post-conference tours were also a great success for the overseas and local delegates who attended. The MASSMIN Organizing Committee are to be congratulated on all their efforts, in particular Messrs Ken Owen and Don Ross-Watt.

The colloquium on Environmentally Related Legislation was also well received, and the comments were that it should have been held sooner. With this in mind, the Committee will be assisting the Committee for the Environment of the Institute in planning further events in regard to the environment. Mr van Niekerk and his team are also congratulated on a successful two-day event.

The school on Education and Training for the 'New South African' Minerals Industry attracted a wide spectrum of delegates, including educationalists and the trade union's perspective on education. Appreciation for the organization of the colloquium goes to Mr Knottenbelt for his efforts.

Unfortunately, as a sign of the times, the Committee was

requested to organize an event on Mine Closure. The papers presented were very interesting and included the preparation for the closure of Bracken Mines, a legal update on mine closure, disposal of assets, as well as a presentation on mining and nature conservation. Mr Robinson was the convenor of the event, and appreciation goes to him for all his hard work.

The 5th International Symposium on Mining with Backfill—MINEFILL 93 to be held from 13th to 17th September, 1993—is currently being organized under the chairmanship of Dr John Stewart. All arrangements are currently on target.

The Committee are to be commended on an excellent year, and it is hoped that the successes achieved this year will be continued in the future.

2.2 Technical Programme Committee — Extractive Metallurgy

B.R. Broekman, Chairman

Dr N.A. Barcza	Dr M.H. Moys*
G.A. Brown	W.W. Stange*
P.M. Craven	R.M. Whyte*
Dr R.V.R. Handfield-Jones	

*Co-opted

A three-day school on 'Pyrometallurgy in the 90's' was held from 7th to 9th October, 1992, at Mintek. Several technical and commercial developments had taken place since the last pyrometallurgy school, which was held in 1980. Topics such as prereduction, the pretreatment of hot metal in the iron and steel industry, the ferro-alloy industry, and the control and modelling of furnaces were covered. The primary aim of the School, which was to provide an overview of both theoretical and practical developments in the field of pyrometallurgy, was met. A total of 103 delegates attended the school. Particular thanks are due to Dr Nic Barcza for his sterling work.

A colloquium on 'Survival strategies for the Metallurgical Industry' was held on 12th November, 1992, at Mintek. The Hon. George Bartlett, Minister of Mineral and Energy Affairs, presented the keynote address. The ensuing papers were aimed primarily at non-sector-specific technical

Table I
Summary of new applications and membership movements for 1992/93 and comparison of membership grades and total membership 1992/93

Membership grade	Members July 92	New members	Transfers in	Transfers out	Reinstatements	Resignations	Deceased	Struck-off	Computer adjustment	Net gain/(loss)	Members June 93
Honorary Life Fellow	28									0	28
Honorary Fellow	7									0	7
Life Fellow	46						1			-1	45
Fellow	443	15	2	20		15	5	10	+2	-31	412
Retired Fellow	169		20			5	3	2	-2	8	177
Honorary Member	0		1							1	1
Life Member	1									0	1
Member	789	21	23	16	5	21	1	24	+4	-9	780
Retired Member	34		14					1	-1	12	46
Associate	726	28	44	25	6	19	3	60	+3	-26	700
Retired Associate	21		1			2		3		-4	17
Student	361	69		44	3	4		39	+1	-14	347
Company Affiliate	139	4			1	6		2	-2	-5	134
Total	2764	137	105	105	15	72	13	141	+5	-69	2695

and management strategies applicable to and being used by the industry. A total of 77 delegates attended the Colloquium. Particular thanks are due to Mr Peter Craven for his efforts in arranging this successful colloquium.

During November 1992, the affiliation to the SAIMM of The International Comminution Research Association—African Chapter was approved. This affiliation will lead to a joint one-day symposium on comminution research every two years.

The three-day school on 'Process Simulation, Control and Optimization', was postponed from May 1993 to August 1993 to allow certain lectures to be presented by a number of eminent international specialists.

2.3 Technical Programme Committee—Metals Technology

J.L. Nel, Chairman

Dr N.A. Barcza	C.A. Scheepers*
Prof. R.J. Dippenaar	Dr H. de V. Steyn*
A.M.P. Henderson*	Dr W.H. van Niekerk*
Dr. B. Metcalfe*	C.J.C.J. van Vuuren*

*Co-opted

The Committee met with varied success during the past year, an experience that seems to be symptomatic of the adverse economic situation in the country. A school on 'A Review of Modern Heat Treatment' and a colloquium on 'Mining and Metallurgy' organized by the Vaal Triangle Branch had to be cancelled owing to insufficient support.

A successful pyrometallurgy school was, however, held at Mintek under the expert guidance of Dr N.A. Barcza. It was well attended, and some constructive discussions took place on a number of papers presented.

A group of members visited Germany on the invitation of the VDEh, the German Institute of Metallurgy. This was in response to a visit paid by the VDEh during January 1991. The group consisted of the President of the SAIMM (Mr Hannes Hoffman), the Chairman of the Career Guidance, Education and Training Committee (Mr C.J.C.J. van Vuuren), Professors G.T. van Rooyen, and R.H. Eric, Dr A.J. van Wyk of Iscor, and Mr J.L. Nel. Various research institutions, universities, and a steel plant were visited. A one-day seminar was held at which five of the SAIMM delegates and five representatives of the VDEh presented papers. The proceedings of the seminar will be published shortly.

An initiative of this Committee on 'Design—An Interdisciplinary Approach/Materials to Market' was discussed with other institutes, and is now being handled by the South African Institute of Mechanical Engineers. A congress on 'The Africa Initiative' will be held during September 1993 under their guidance.

2.4 Minerals Legislation

R.P. Mohring, Chairman

B.C. Alberts	D.A.J. Ross-Watt
B.R. Fleetwood	D.J. van Niekerk
P.D.K. Robinson	

No issues were addressed during the year.

2.5 Committee for the Environment

D.J. van Niekerk, Chairman

Dr N.A. Barcza	J.C. Greeff*
G.A. Brown	R.P. Mohring

P.M. Craven
A.A.B. Douglas
A.E.W. Fletcher*
J.S. Freer*

Dr A.M. Patterson*
I.S.D. Tudhope*
Dr J.N. van der Merwe*

*Co-opted

This was a very eventful year. The Committee undertook the following activities during the year:

- commented on the report published by the CSIR Environmental Services during January 1993, entitled 'Environmental Impact Assessment—Eastern Shores of Lake St Lucia (Kingsa/Tojan Lease Area)'
- arranged a lunchtime lecture on 7th May, 1993, by Mr Brian van Wilgen, supported by Dr Alex Weaver, both of the CSIR, on the topic "EIA—Eastern Shores of Lake St Lucia: The facts"
- at the request of EPPIC, submitted comments on the six volumes of the IEM guidelines
- arranged a specialist lecture and opportunity to meet some of the major decision-makers in the different interested and affected State departments; Dr C.M. Cameron, Director General, Department of Environment Affairs addressed the Committee for the Environment on 16th April, 1993, discussing the White Paper on a National Environmental System for the RSA
- participated in the evaluation of the submissions made to EPPIC for each of the respective categories of the EPPIC 1993 Awards
- as requested by EPPIC, prepared and submitted the SAIMM's Position Statement and Environmental Goals, which is based on the Environmental Mission, Policy and Strategy document as approved by Council and taken up in the SAIMM's 'Family of Documents'
- arranged, at very short notice, a 'School on Environmentally Related Legislation in the Minerals Industry' on 24th and 25th November, 1992, which was supported by 154 delegates; this was arranged to challenge the transgression by certain professional bodies and sister institutes of the SAIMM's traditional presentation of technical schools, colloquia, and conferences for the minerals industry
- in response to a request from EPPIC, submitted an *aide-mémoire* to EPPIC setting out the impact that the new Minerals Act (Act no. 51 of 1991) is expected to have on environmentally related aspects in the minerals industry
- in response to a request from the Habitat Council, completed and submitted a questionnaire on 'Environmental Rights in the New SA'
- arranged a lunchtime lecture, in collaboration with the Johannesburg Branch of the Institute, by James Clark of *The Star* on 'Public Perceptions of the Mining Industry's Contribution to World Environmental Situations', which generated much interest and attracted an audience of at least 100.

This year was marked by the publication of the first environmentally specific paper in the *Journal* of the Institute. The paper, 'Integrated Environmental Management in the Mining Industry' by J.S. Freer appeared in the January 1993 issue.

The only major issue that the EMP process does not address is a 'Record of Decision'. It is not known at this time if the Department of Mineral and Energy Affairs are

considering this in the amendments to the Minerals Act.

Another major issue that is approached differently in the EMP is that the onus is placed on the proponent to prepare a proposal, rather than consultants as intimated throughout the updated IEM documents. This is done deliberately to ensure that the proponent has full ownership of the proposal, including its environmental management programme, since it is the proponent, not the consultant, who must face the consequences if something goes wrong. It is also only the proponent who understands the full impact that various environmental commitments will have on his business. However, the proponent is free to use consultants, and frequently does, to assist him in compiling the EMP.

The guideline for report requirements (Vol. 3 of the Series) is covered by the format presented in the *Aide-Mémoire* which, although different, addresses the major items.

In conclusion, the mining industry has grasped the significance of IEM principles in achieving very necessary developments in South Africa without unnecessary negative impacts on the environment. It has also willingly taken on the responsibility of self-regulation. The EMP process is the first in the country that gives expression to how IEM principles can be applied in practice. Every mine in South Africa is currently preparing, or has already prepared, an EMP. The result has been a quantum leap in focusing manpower, time, and money on environmental issues on the mines. It is imperative that the process be allowed to come to maturity before being tampered with in any significant manner.

2.6 Special Interest Group—Surface Mining

C. Swart*, Chairman

The Special Interest Group has been revitalized. A new committee comprising Mr C. Swart (Chairman), Prof. A.N. Brown, Messrs H.B. van der Walt, and Mr R.J. Thompson was formed during the latter half of the year.

The new Committee met to address the objectives of the Group, a programme for the year, and updating of the address list.

2.7 Special Interest Group—Computer Applications (SIGCA)

P. van Schaardenburgh, Chairman

The SIGCA Committee decided during the course of the year to adopt a more formal approach to the conduct of SIGCA business. It was therefore decided to draw up a set of rules, similar to a constitution, and to arrange for a membership list, as well as an Annual General Meeting.

The first Annual General Meeting is scheduled to take place at the beginning of August 1993, at which the proposed Set of Rules will be presented for acceptance and adoption.

Activities during the year included seminars on computerized mine planning, artificial intelligence, neural networks, and expert systems for the mining industry, as well as a full-day workshop on geological computer applications at the MASSMIN Conference.

The programme for 1993/94 is as follows:

5th August: Half-day seminar on 'Time and Attendance (Including Access Control)', followed by the SIGCA Annual General Meeting

14th October: Half-day seminar on 'Electronic Recording and Retrieval Processing (Including Scanning and/or Imaging)'
March 1994: Half-day seminar on 'Outsourcing/Downsizing'
June/July 1994: Half-day seminar on 'Process Control'.

2.8 Special Interest Group on Process Control

Dr M.H. Moys*, Chairman

The Group made two visits during the year. The attendance was generally good, indicating that the Group is fulfilling a need in the industry. It is worth emphasizing that visits are open to all SAIMM members and their guests, not just to the members of the Interest Group.

The visit to Azon Controls (formerly AECI Process Computing) focused on intelligent control—a concept illustrated with case studies of high-level sequencing and batch control in both the chemical and the mineral-processing areas, followed by formal demonstrations and hands-on operation of some of Azon's control tools.

Another AECI company hosted the next visit, which was to the AECI Midland factory. The minerals industry has much to learn from its colleagues in the chemical industry, once the former has overcome the measurement problems unique to its field of endeavour! The event ended with a memorable sheep-braai.

Mike Moys has handed the reins of this interest group into the capable hands of Wayne Stange, who will value suggestions of venues for further visits.

3. PUBLICATIONS

Portfolio Holder: D.A.J. Ross-Watt

Key Performance Areas

The SAIMM

- publishes a monthly journal with a balanced content and of high technical standard as a means of promoting technology transfer in all areas of interest to its members and as a communication medium to keep its members informed on matters relating to their professional interests;
- publishes monographs, the proceedings of international symposia and conferences, and other publications of a high technical standard on topics related to fields such as underground mining, surface mining, extractive metallurgy, metals technology, and materials science as a means of promoting technology transfer within South Africa and as a mechanism for the display of South African skills to an international audience;
- enters into reciprocal international agreements for the advertising and marketing of publications to the financial advantage of its members.

After some initial problems with the quality of the paper and the printing in the *Journal*, the Committee is glad to report that the *Journal* has once more become the flagship of the Institute.

Thanks are due to the *Journal* Committee, particularly to Mr Peter Janisch, who initiated something new with his 'Journal Notes'. More contributions were received this year than previously, which made the *Journal* more readable and also raised matters of interest.

The Committee is working on further ideas to make the *Journal* even more readable so that it will reach a wider readership.

3.1 Journal

P.R. Janisch, Chairman

J.D. Austin*	D.A.J. Ross-Watt
A.A.B. Douglas	Dr A.J.S. Spearing*
R.P. Mohring	P.M.T. White
P.D.K. Robinson	

The delays mentioned last year continued to affect production of the *Journal*, and only ten issues appeared this year. The quality of the printing was also regrettably below an acceptable standard. Matters improved when a new printer based in Johannesburg was contracted to produce the *Journal*, which has previously been printed in Kimberley.

Supply of refereed papers was adequate. The Committee is grateful to referees and members of the Programme Advisory Board for their dedication to the preservation of the high standard of papers published.

Programme Advisory Board Members

P.R. Janisch, Chairman

Dr H. Wagner, Vice-chairman

Mining	Dr C.J. Fauconnier*	Dr H. Scott-Russell
	Dr G.A. Fourie*	K.A. van Gessel
	G.S. Lee*	D.J. van Niekerk
	P.D.K. Robinson	
Extractive	Dr N.A. Barcza	B.R. Broekman
Metallurgy	G.A. Brown	Dr P.R. Jochens
Metals	J.L. Nel*	Prof. G.T. van Rooyen
Technology	Prof. R.F. Sandenbergh	

*Co-opted

3.2 Book Publications

R.P. Mohring, Chairman

J.D. Austin*	Dr M. Moys*
P.M. Craven	Dr A.J.S. Spearing*
J.R. Dixon*	Dr H. Wagner
A.A.B. Douglas	P.M.T. White
P.R. Janisch	L.C. Woollacott*
J.W. Klokow*	

*Co-opted

The desk-top publishing (DTP) department was extremely busy during the year, and the system is being extremely well utilized, producing volumes for the Book Publications Committee and the *Journal*.

During the year, the proceedings of the MASSMIN Conference were published in book form, and the production of the volume for the MINEFILL Conference, which is to be held in September 1993, is absorbing much of the DTP time.

Three other volumes are at an advanced stage of drafting and editing. These are *An Overview of Minerals Processing*, *Minerals Engineering Management*, and *Measurement, Control and Optimization*. Work on a volume entitled *Strata Control in Coal Mines* progressed satisfactorily during the year.

Sales of the Institute's publications were satisfactory for the year, and the Committee's marketing drive continues.

The Committee records its appreciation of the valuable contribution made by the DTP department, and thanks Susan Luddick and Karen Norman for their efficient administration of the Committee's affairs.

4. REGIONAL DEVELOPMENT

Portfolio Holder: D.A.J. Ross-Watt Key Performance Areas

To promote the interests of members based in different regions, the SAIMM

- supports the establishment and maintenance of branches and chapters to satisfy the local needs of its members for professional association and the exchange of technical information;
- co-operates with other member societies of AS&TS and with associations and interest groups that have close ties with operating mines and metallurgical plants by holding joint technical meetings and collaborating in the field of publication.

4.1 Regional Development Committee

D.A.J. Ross-Watt, Chairman

B.J. Addison	R.P. Mohring
R.D. Beck	H.G. Mosenthal
J.J. Cilliers	P.D.K. Robinson
A.M.L. de Sousa	M. Rogers
A.E.W. Fletcher*	Prof. R.F. Sandenbergh
G.S. Lee	K.A. van Gessel
J.B.D. MacLennan*	P.W.J. van Rensburg

*Co-opted

The Branches of the Institute continue to play an active and enthusiastic role. The branch chairmen and their committees must be congratulated on their efforts to arrange stimulating technical and commercial meetings and excursions for the members of their branches.

The programmes arranged by branches play an important part in supplementing the events planned by the technical committees of the Institute. Planning of these events will require progressively improved co-ordination to ensure that the best possible overall schedule is offered to the industry.

The social aspects of these events was not overlooked and the year was most successful in this regard.

Initiatives to create new branches at Richards Bay or in Zululand or Natal are looking positive. An exercise continues to review boundaries of branches and to identify mining areas not suitably covered by existing branches.

SAIMM Branches

4.2.1 Johannesburg Branch

G.S. Lee, Chairman

J.G. Allan	P.D.K. Robinson
P.L. Brogan	K.A. van Gessel
R.J. Dixon	R.P.H. Willis
J. Humphriss	C.L. Workman-Davies
D.J. Millela	

The Johannesburg Branch enjoyed another interesting year of technical presentations and one-day visits to mines, plants, and factories. In addition, lunch-time lectures on topical, industry-related subjects were re-instated. For the

latter, the Standard Bank auditorium in Simmonds Street became a popular and excellent venue, whilst the Johannesburg Country Club remained the popular venue for the general meetings. The Branch owes much to both institutions for the excellent service provided.

The composition of the Committee has retained the same balance and spread of members from the mining houses, Mintek, CSIR, and stockbroking and academic fraternities.

A variety of technical presentations were made at the general meetings as follows:

21st July, 1992	AGM presentation by ESKOM
25th August, 1992	Students' technical evening—Mining and Metallurgical Departments of the Witwatersrand University and Technikon
8th September, 1992	Exploration in sub-Saharan Africa
18th February, 1993	SAREF presentation
13th May, 1993	Lesotho Highlands Water Project
20th July, 1992	Social responsibility and change in the mining industry.

The attendance fluctuated from 80 to 120 people, often with many guests showing interest in the presentations. The Committee's appreciation goes out to the speakers who so willingly gave of their time and effort, and to the sponsoring companies who enabled the meetings to be rounded off with snacks and drinks, providing an extended forum for members to exchange ideas and renew acquaintances.

Fifty-year membership presentations were made by the President, Mr Hannes Hoffman, to members R.B. MacGillivray (joined 1st January, 1943) and D.J. Molony (joined 9th April, 1943).

The Branch records its thanks to the following companies, which hosted very interesting one-day technical visits:

29th October, 1992	Metalloys Plant, Vereeniging
13th February, 1993	Consol Glass, Clayville
27th April, 1993	Premier Diamond Mine
24th July, 1993	Haggie Rand Jupiter Plant.

The students' evening has become a standard event, and has evolved from its quieter early days to a forum of vigorous exchanges of ideas and debate. The mining houses have kindly agreed to host this function by rote, Genmin being this year's host followed by Anglo American Corporation Gold Division.

Three well-attended lunchtime lectures were held:

20th August, 1992	'Where to South Africa?', by Dr Zach de Beer
4th March, 1993	'Public Perceptions of the Mining Industry and the Environment', by Mr James Clarke
7th May, 1993	'St Lucia EIA', by Mr Brian van Wilgen.

The arranging of the Branch events has been an enriching and enjoyable experience for the Committee, and its greatest reward is the interest shown by the members and their guests. It has been a delight to meet some of the senior members; perhaps more lift clubs should be the order of the day.

None of the foregoing would have been possible without the support, advice, and assistance of that well-founded permanent anchor of the Institute, the Secretariat. The ladies are thanked for their enthusiasm and encouragement. Finally, the support of the President and Council has been most reassuring to the Committee throughout the year.

4.2.2 Orange Free State Branch

B.J. Addison, Chairman

D.R. Fleming	H. Laycock
S. Goodwin	N. Liebenberg
P.G.J. Hol	D.J.R. Ras
R.I. Klintworth	E.N.D. Westgate

The AGM was held at Freegold Regional Canteen on 28th July, 1992. Mr Richard Beck, outgoing President of the SAIMM, was the guest speaker. From his broad knowledge of the world's minerals industry, he gave a most interesting talk on 'The Image of the Minerals Industry'. Although the minerals industry had had a dubious public image for centuries, active steps were now being taken to improve the image in the important areas of safety, environmental control, and technological education and advancement. Altogether, 40 members and guests attended the meeting.

The first technical visit for the period was undertaken to the Lesotho Highlands Water Scheme during the weekend of 14th September, 1992. Members joined the pre-conference tour of the following week's international conference on tunnelling, hosted in Maseru by SANCOT. This imaginative and spectacular project was viewed in its infancy: 20 members enjoyed a well-organized tour of the civil works, especially the tunnel-boring process that will create the water-delivery conduits.

A general meeting was held on 19th November, 1992, at Western Holdings. After a thorough Free State flood in the evening, 20 members heard the fascinating views of Mr Nick Goodwin, a partner of E.W. Balderson, stockbroker on the Johannesburg Stock Exchange. His bullish technical views on the investor's prospects for gold shares were given at the very bottom of the cycle of confidence in gold. The last six months have justified most of his predictions!

The next technical visit was undertaken on 24th February, 1993 to Western Holdings No. 6 Shaft, where the shaft pillar is being mined out. Altogether, 20 members were treated to excellent technical presentations on the process being employed and the problems encountered. A fine lunch was supplied by the hosts.

The annual, longer technical visit took place on 14th and 15th May, 1992, to the Katse Dam site in Lesotho. The northern tunnels at Clarens, which will deliver the final water to South Africa, were very well presented by the contractors on that site. This second visit to the Highlands Water Scheme proved well worth the effort because of the rapid progress being made, and the uniqueness of this project.

Late in 1992, Messrs A.C. Naude and W.J.N. Gelderblom were transferred and resigned from the Committee. Their periods of service to the Institute were very valuable and most appreciated.

The membership of the Branch remains constant at 140 members. The tracking of frequent transfers of members in and out of the Branch area is a problem that is being addressed.

4.2.3 Pretoria Branch

Prof. R.F. Sandenbergh, Chairman

P.H. Botha
Prof. A.N. Brown
G.S. Esterhuizen

P.C. Pretorius
C. Swart

The Pretoria Branch again had a most successful year during which a number of meetings and other functions were held. The committee functioned well owing to the enthusiastic support and co-operation of all its members. Four committee meetings were held during the year.

The Annual General Meeting of the Branch was held on 27th July, 1992, in the Mineral Building at the University of Pretoria, and was attended by some 40 people. It was indeed a pleasure to have Mr Hannes Hoffman back on the campus, and he addressed the meeting on 'The Influence of Environmental Issues on the Metallurgical Industry'. This was followed by a cocktail party sponsored by Delkor and Screenex.

The Branch, together with the Departments of Materials Science and Metallurgical Engineering and of Mining Engineering, again presented a series of Metallurgical Forums. This is felt to be a very important part of Branch activities at which an endeavour is made to introduce students to the Institute and to illustrate the advantages of membership to them. About 40 to 50 people were attracted to each of these meetings, and the informal cocktail parties that were held after these events served as social get-togethers for Branch members. The good attendance of these events by the student members is encouraging, and such events are to be continued in future. The concept of a mini-symposium with a few lectures followed by a cocktail party is popular, especially with members residing outside Pretoria.

Prof. C.J.C.J. van Vuuren of Iscor Head Office gave a lecture on 'Nuwe Ontwikkelings in die Staalbedryf', and Dr E.B. Pretorius of Iscor Research presented a lecture on 'Refractories—Science or Art?' at a meeting preceding the AGM on 27th July. Mr Fred Boshoff of Columbus Joint Venture gave a talk on 'Uitbouing van die roesvrystaalbedryf in Suid-Afrika' on 26th August. Mr Ken Garner and Mr Bruce Botes of Kenwalt gave lectures on 'Modelling of Metallurgical Processes' on 23rd September. The visit to the Corex plant at Iscor planned for 11th November had to be cancelled because of a lack of interest.

A mini-symposium on corrosion was held on 11th February, 1993, and was attended by some 100 people. Lectures were given by Dr Hugh Isaacs of Brookhaven National Laboratory, Prof. Chris Pistorius of Pretoria University, Dr Tom van Moltke of Iscor Research, and Mr Josias van der Merwe of Pretoria University. Mr Hennie Marais of Gencor gave a lecture on 24th March on 'Bakteriologiese Logging van Goud'. On 26th May, Mr Paul Dempsey of Anglo American Research Laboratories gave a talk on 'Research in Extractive Metallurgy at AARL'. The Committee is grateful to both Gencor and AARL for sponsoring cocktail parties at the above events.

The Committee is satisfied with the format and attendance of the events that were hosted during the year. In the present economic climate, the members seem to find it difficult to attend visits, and the Committee has decided not to schedule any for the immediate future. This is unfortunate, especially in regard to senior members who attended these visits in the past. An attempt will be made to compensate for this by involving them in the Branch's other meetings.

4.2.4 Vaal Triangle Branch

A.M.L. de Sousa, Acting Chairman

F. du Toit
H. Mocke

G. Panapoulos
H. Parsons

During the past year, the Vaal Triangle Branch hosted many events consisting of breakfast meetings, technical evenings, and plant visits.

The average attendance was 25 delegates per function. The breakfast meetings were held at the Riviera International Hotel in Vereeniging, whilst the technical evenings were held at the Iscor Club, Vanderbijlpark.

Professionals from industry and the academic world delivered presentations at the abovementioned meetings. The meetings were preceded by breakfast (in the case of breakfast meetings) or followed by a small cocktail party (in the case of technical evenings and plant visits).

The plant visits were all very well organized and instructive. Samancor (Meyerton), New Vaal Colliery, Libanon, Venterspost, and Leeudoom were all very supportive, and delegates stated that the visits had been fruitful.

It was with regret that the Colloquium on Mining and Metallurgy had to be cancelled. The low registration may have been due to the unrest in the Vaal Triangle area (at the time), the broad range of papers, and the absence of mining-related subjects.

The Annual General Meeting was held on 24th June, 1993. Mr J.P. Hoffman, President of the Institute, delivered an outstanding presentation on 'Environmental Management in Integrated Steelworks'.

For the coming year various breakfast meetings, technical evenings, and plant visits have been planned. However, events in the next year will focus on technical evenings.

Iscor, Vanderbijlpark and Gold Fields have kindly allowed the Branch to use their conference facilities at the Iscor Club, Vanderbijlpark, and the Gold Fields Training Centre at Kloof, respectively. The technical evenings will alternate between these two venues.

The Chairman and Committee of the Vaal Triangle Branch would like to express their gratitude to Mr J.P. Hoffman, members of Council, Secretariat of both the Institute and the Branch; the Vaal Triangle Technikon—Department of Metallurgy; RSA Mining and Chemicals; Iscor, Vanderbijlpark; and all the companies that sponsored the past year's events.

4.2.5 Western Cape Branch

J.J. Cilliers, Chairman

Prof. F.L.D. Cloete
Prof. J-P. Franzidis
Dr R.D. Knutsen

L. Lorenzen
Prof. C.T. O'Connor
F. Petersen

The Committee met regularly during the year to deal mainly with the activities of the Branch, which are focused on the Universities of Stellenbosch (US) and Cape Town (UCT) and the associated Western Cape Minerals Processing Faculty of the Chamber of Mines.

The main event of the year was the 11th Annual Minerals Processing Symposium, organized jointly with the two universities, which was held on 6th and 7th August, 1992. Following the success of 1991, the 1992 Symposium was again held over two days. Two keynote speakers, Professor Ross Smith of the University of Nevada and Dr Tim Napier-Munn of the J.K. Minerals Research Centre,

elevated the profile of this event. Altogether, 26 papers were delivered by speakers from most research groups in the country, and 120 delegates attended. The Branch thanks S.A. Cyanamid, Poretch, and Senmin for their most welcome sponsorship of this event.

Participants in the annual dinner were addressed by the Immediate Past President, Mr Richard Beck. Prizes were presented to the top students at each of the Universities: Darryl Henwood of UCT, and Wynand van Dyk of US.

The Branch helped to sponsor a visit to operating mines in the Transvaal by 30 students from UCT and US during the short vacation at the beginning of April 1993. The Committee is very grateful to the managements of ISCOR Vanderbijlpark, New Vaal Colliery, Randfontein Estates Gold Mine, and Rustenburg Platinum Mines, who arranged visits to their mines and accommodated the visitors.

Professor Peter Spargo and Mr Jan Cilliers led a group of students on an expedition to start restorations on the 1875 Du Toits Kloof Manganese Mine. It is hoped that this work will be the start of a greater effort at preserving the historic mines of the Western Cape.

Schools Days were organized at UCT and US on 4th May. All the schools in the Western Cape were invited and more than a hundred scholars attended. The Committee was pleased by the response, and believes that this event plays an important role in broadening the appeal to scholars of a career in the minerals industry.

A most successful function for students of the two universities and the local technikons was held at the Cape Technikon on 30th March. Mr Jerry Clos, Quality Assurance Manager at the Atlantis Diesel Company, delivered a most interesting address on the radius hardening of iron and steel; 55 students attended, and a number of them joined the Institute.

The Branch is most grateful for the support that it received from Council during the year. As it has no full-time staff, it depends entirely on the enthusiastic assistance of Mrs Meg Winter, the Conference Secretary, and the secretarial staff of the Departments of Chemical and Metallurgical Engineering at US and UCT. The continued interest shown by industry in the Branch's main event, the Annual Minerals Processing Symposium, is most gratifying.

The Branch believes that exposing students to the challenges and problems of the minerals industry through active research projects, symposia, and visits to mines is an important and useful function.

4.2.6 Eastern Transvaal Branch

M.H. Rogers, Chairman

W.J. Abel	R.B. Hendry
B.G. Bell	P.H. Henry
K. Bladwell	R. Jennings
P. Gericke	A. Johnston
C.P. Goodale	A. Pix
A.M.P. Henderson	C. Sonnekus

The Branch enjoyed another successful year. The support given to the Branch and the interest shown in its activities by members have been good. The blend of technical and social events of past years proved successful once again this year.

The year started with a technical meeting hosted by Bank Colliery at which papers on quality control and participative management were presented.

This was followed in November by a gala dinner held in honour of the Institute's President, Mr J.P. Hoffman. The well-attended dinner was addressed by Mr F. Boshoff of the Columbus Steel Joint Venture.

A second technical meeting was held at Tavistock Collieries, at which papers on coal mine geology and rock mechanics were read.

Douglas Colliery hosted a dinner in March, when Professor David Horsfall gave an amusing address to members and their wives.

This was followed by a very interesting afternoon visit to the new Landau Replacement Project. The visit included a trip to the new open pit and the coal-preparation plant.

The Branch AGM will be held on 14th July at Kriel Club, and will be followed by a dinner by courtesy of Kriel Colliery.

The Branch has also made contact with the Witbank and Middelburg Branches of PROTEC. Both branches requested financial assistance for various projects. This, the Eastern Transvaal Branch was not able to provide, but offered as an alternative, to provide students with exposure to the coal mining and ferro-alloy industries.

To this end, sixty matriculation students (male and female) of the Witbank Branch were taken on visits to Van Dyksdrift, Middelbult, and Tavistock Collieries on 6th July, 1993. These visits were then followed up with career guidance lectures at the Mpondozankomo Technical College on 7th July, 1993. Mines supplied mining, engineering, mining services, geological and metallurgical personnel for this purpose.

The response to the exercise was very positive from all parties concerned i.e. PROTEC, the students, and the participating mines.

It is intended to organize similar visits to the ferro-alloy plants in the area for the Middelburg Branch in October.

4.2.7 North Western Transvaal Branch

J.B.D. MacLennan, Chairman

R.G. Calcott	W. Muir
K.E. Field	S.A.R. Purkiss
K.J. Hay	G.B. Watson

Three events were organized in the past year.

In October 1992, Professor Ruben Sher lectured to a group of approximately 35 members and guests of the Branch on 'Aids in South Africa'.

A platinum jewellery show was held in January 1992 in co-operation with a local jeweller and Rustenburg Platinum Mines, at which a publicity film was shown. About 40 members and guests of the Branch attended this function.

Another 25 members and guests attended a lecture on industrial relations at Lebowa and Impala Platinum Mines.

5. ENGINEERING SCIENCE AND TECHNOLOGY IN SOUTH AFRICA

Portfolio Holder: R.D. Beck
Key Performance Areas

The SAIMM

- *participates in the work of AS&TS (The Associated Scientific and Technical Societies of South Africa),*

ECSA (Engineering Council of South Africa), SAVI (The South African Engineering Association) in order to play its part in making a meaningful contribution to the general advancement of science and technology in South Africa.

5.1 The Associated Scientific & Technical Societies of South Africa (AS&TS)

<i>Representatives</i>	<i>Alternates</i>
J.P. Hoffman	R.D. Beck
Dr H. Scott-Russell	J.A. Cruise

5.1.1 Controlling Executive

R.D. Beck, Chairman

Dr R.P. Viljoen succeeded Mr C.M. McMillan as President in January 1993.

The two distinct functions of AS&TS were managed separately during the year. The Observatory site was managed by a committee representing bodies who have accommodation on the site. Space was fully let during the year, and good use was made of the telescope room for functions.

The reconstituted Science, Engineering and Technology (SET) Committee with equal representation from AS&TS, the South Africa Engineering Association (SAVI), and the Joint Council for Scientific Societies (JCSS) met regularly throughout the year and carried out the 'Learned Society function'.

A sub-committee was formed under Dr P.J.D. Lloyd to examine the Articles of the Association in the light of the changes to the SET committee. After meeting on a number of occasions, it recommended that the Articles remain unchanged until there is greater clarity as to how the new Learned Society initiative is to be developed.

A major achievement of AS&TS was the production of a report entitled 'A Contribution towards Developing an Education Policy for Technology'. This well-presented document was the result of workshops and working parties representing all aspects of science, engineering, and technology. It is an authoritative document that provides a single opinion across the SET communities and must significantly contribute to future education policy. Ways of taking the views expressed into the education debate are being examined.

The year 1995 is the 75th anniversary of AS&TS. A committee under Mr R.D. Beck has been set up to mark the occasion. Various initiatives have already been taken to mark the event. These include a geological model on the Observatory site and the aim to culminate the science museum/exploratorium project in that year. This project intends to create a science museum equipped with attractive modern hands-on interactive displays that will provoke a lively interest in science and technology among the general public, and particularly school children before they select their matric subjects.

The AS&TS national award was presented to JCI for the geological aspects of their South Deep project.

The problem of how to communicate the many developments taking place in the SET community to members of the Learned Societies was debated at length during the year. A suggested approach is being followed up.

5.1.2 Science and Technology

C.J.C.J. van Vuuren, Chairman

This project, led by Cliff McMillan, has brought forward specific objectives aimed at satisfying the needs of industry in the future.

The workshops were well attended by a wide range of representatives, with facilities and secretarial services offered by ESKOM.

The resulting document will be available in 1993 for use as a guiding policy as seen by the technological industry.

5.2 Engineering Council of South Africa (ECSA)

	<i>Mining</i>	<i>Metallurgy</i>
<i>Representative</i>	R.P. Mohring	H.E. James
<i>Alternate</i>	H.G. Mosenthal	Prof. R.J. Dippenaar

Professional Advisory Committees

PAC Mining

R.P. Mohring	H.G. Mosenthal
J.B. Raath	D.A.J. Ross-Watt
Prof. R.P. Plewman	D.J. van Niekerk
J.A. Cruise	Prof. A.N. Brown
Dr O.K.H. Steffen	Prof. D.G. Krige

PAC Metallurgy

H.E. James	R.D. Beck
Prof. G.T. van Rooyen	Prof. R.F. Sandenbergh
Dr A.K. Haines	Dr N.A. Barcza
Dr P.R. Jochens	C.E. Fivaz
B.R. Broekman	Prof. R.J. Dippenaar

During the year, ECSA continued with the following functions with respect to the whole engineering profession:

- setting the standards for registration
- registering applicants who comply with the standards
- accrediting qualifications
- prescribing and enforcing a code of conduct
- publishing a tariff of recommended fees for consulting work
- proposing reserved work
- recognizing engineering institutes
- liaising with other engineering bodies.

The SAIMM is represented on the Council of ECSA, and also nominates members to the registration and professional advisory committees for mining and metallurgy.

During the past year, these committees continued their important work of screening the qualifications and practical experience of applicants for registration as Professional Engineers. Several training programmes for engineers-in-training, which had been submitted by local mining and metallurgical organizations, were screened by the committees. Assistance continues to be provided by nominees of the SAIMM in the accreditation of courses offered by universities and technikons in the disciplines of mining and metallurgy.

Dr Loubser, the first President of ECSA, retired during the year, and Mr R.A. Pullen has taken over as President.

5.3 The S A Engineering Association (SAVI)

<i>Representative</i>	R.D. Beck
<i>Alternate</i>	J.A. Cruise

Although it appeared at the end of the last Council year that the revised structures in which SAVI operates in relation to the Learned Societies and vocational groups have been agreed to, no finalization was in fact reached. The Institute has been trying to get SAVI to quantify the resource requirements needed to achieve its objectives. This issue came to a head in January, when a budget was produced showing the need to increase fees from R6 to R12 per head, based on a lesser membership base. Although such an increase is unacceptable in percentage terms, it may well be far below the required level to meet the needs of the Engineering Profession. The Institute agreed to payment for half the year and subsequently for the full year. Remaining a member of SAVI beyond December 1993 will depend on SAVI achieving its objectives in defined areas and producing a realistic budget for the subsequent year to meet its aims.

Although the Institute believes that it needs to be a demonstrable part of the engineering profession and hence SAVI, many of the issues being addressed are already being handled within the mining industry and the Chamber of Mines. Therefore, the SAIMM is in a strong position to be guiding members of SAVI.

The South African Institution of Civil Engineers has proposed a new SAVI structure. Although with some exciting prospects, this structure does not help to address the primary problems of the necessary resources to meet SAVI objectives. It is hoped that too much time is not wasted in further debate.

The following issues were dealt with by SAVI during the year.

SAVI/FRD/THRIP Programme

The Technological Human Resources for Industry Programme (THRIP), run in conjunction with the Foundation for Research Development (FRD), took a major step forward with the announcement by the Minister of Trade and Industry that an amount of R8,17 million (1993/94 financial year) was being made available to support the THRIP initiative. The grant was made on condition that the private sector will contribute R2 for every R1 provided by the government. Funds may be used only for programmes which promote technology and fall within the following framework:

- i) secondary school programmes and the development of a technological culture;
- ii) tertiary engineering training programmes that promote:
 - regional collaboration between universities and technicians;
 - centres for specialization;
 - academic training programmes (students and academic staff).

Technology Promotion

The Technology Top 100 Banquet took place on 31st March, 1993.

The companies who were judged to have qualified for recognition because of their contributions, were rewarded. It would appear that Technology Top 100 is gaining a greater degree of credibility within the business community. On the strength of the success, SAVI intends to enter into discussions with AS&TS and JCSS, with a view to expanding Technology Top 100 to cover the entire technology field.

The Africa Initiative

SAVI, in partnership with a commercial organization, has been involved in bringing top businessmen and technology leaders from the rest of Africa to South Africa.

Education

SAVI has fully participated in the development of the AS&TS Education for Technology policy.

Career Guidance

A start has been made to revitalize this important service to the engineering profession.

5.4 Engineering Career Guidance and Development Trust

This joint initiative of SAVI and SPE was formed to provide a source of technological information per discipline to be used in career guidance at school level.

Due to a lack of funds, it was discontinued in 1992.

5.5 Committee for Professional Engineers

C.E. Fivaz, Chairman

B.C. Alberts	Dr J. Lurie
Prof A.N. Brown	H.G. Mosenthal
Prof. R.J. Dippenaar	Prof. R.P. Plewman
H.E. James	D.J. van Niekerk
Dr B.K. Loveday	

There was no need for this Committee to meet during the past year.

5.6 Engineering Education and Training Committee

This Committee represents a joint initiative of SPE/SAVI and AS&TS. It consists of representatives of learned and vocational societies, and individuals who had been invited to sit on the Committee because of their specific experience or expertise in engineering education or related matters.

The most important projects that were finalized during the year were as follows.

- The THRIP initiative aimed at the technological development of human resources to be managed by the FRD. The programme started slowly because of some initial information gaps, but seems to be coming on-stream now. Government support on the ex-industry basis of one rand for two rands was agreed to, and this has ensured that the necessary funding to run the programme will be available.
- Policy document for technological education and training. This document was completed after some sterling work in the form of workshop interactions. This approach is judged to have a better chance of success to influence governmental action in future than a confrontational approach towards the official educational structures.
- Certification and curriculae of engineering technologists and technicians. The aim was to ensure that the needs of the engineering industry would be satisfied without jeopardizing the possible academic or career paths of individuals.

5.7 The Association of South African Registered Engineering Technicians (ASARET)

Representative

P.J. Knottenbelt

As a patron member of ASARET, the SAIMM is represented on the Council of ASARET by only two of the many patron members. Unfortunately, the SAIMM nominee failed to be elected, and minimal feedback from ASARET was received during the year.

At a special meeting involving all the patrons and the ASARET Council, it was pointed out that, of all the technicians in the country, only about 6000 were registered with ECSA and, of these, no more than 3000 were registered members of ASARET. In particular, no mining technicians were registered or were members of ASARET; in addition, no more than 10 metallurgy technicians were registered with ECSA or were members of ASARET.

The SAIMM decided to support the registration system despite the argument that the mining industry appears to have its house in order regarding legislative assurance that only suitably qualified, experienced, and competent persons be appointed to positions of responsibility. It is believed that, until such time as the industry as a whole recognizes registration, few if any registrable technicians in mining or metallurgy will register. Further, it is believed that ASARET itself should create the high profile necessary to make an impact on the mining and metallurgical industries.

5.8 South African Association of Registrable Engineering Technologists (SAARET)

Representative

Dr R.V.R. Handfield-Jones

SAARET is the vocational society for registered engineering technologists. With the retirement of Dr Jos Lurie after ten years of representing the SAIMM on the Council of SAARET, Dr Rad Handfield-Jones was appointed to maintain the relationship and has been attending the monthly meetings.

Much of the discussion through the year, apart from the general running of the Association, centred on the implementation of the re-organized National Diploma structure of 4 academic and 2 experiential semesters of training in the engineering fields, and the proposal that the National Higher Diploma should involve a full year of academic study. These changes are being implemented or proposed to pave the way for the introduction of the B.Tech. qualification in 1995.

Mining, extraction metallurgy, and metallurgical engineering are currently excluded from this discussion owing to the strong industry representation that objected to the reduction in experiential training from 2 years to 1 year, and that does not see the need for the additional academic study that would qualify the student for more than the National Higher Diploma.

SAARET's own view was that the fourth year should remain as a semester of academic and a semester of experiential training, and that the T5 Master's Diploma be retained to fulfil the need that a T5 qualification continue to be the entry requirement for registration as a technologist in training.

In order to gauge the feeling of the industry, a 1-day conference was organized for early in May with the purpose of getting 'an objective recommendation or decision from industry as regards the formal training path of an

engineering technologist'. Although well attended by proponents of the various training routes and representatives of industry, no clear conclusion was arrived at. The matter continues to be debated in the SAARET Council.

5.9 Engineers' Liaison Committee

Representative

Prof. A.N. Brown

Ten of the learned and other engineering societies have northern branches, which come together in Pretoria as the Engineers' Liaison Committee. Mr W.F. Cronjé again served as Chairman.

The 31st Hendrik van der Bijl Memorial Lecture was held at the University of Pretoria on 12th May, 1993. It was organized by the South African Institution of Mechanical Engineers (Northern Branch). Prof. Spencer L. Sterling, Group Managing Director of SAMCOR, delivered a lecture entitled 'The Future of the Motor Industry in South Africa'.

5.10 Programme for Technological Careers (PROTEC)

The situation in black schools during the year was relatively unchanged and the slow movement towards normality has continued. The slowness of improvement is evidenced by the marginal improvement in matric pass rates for the year of just under 44 per cent, an increase of 5 per cent over the 1992 rate. PROTEC have seen a similar decrease in the number of bursaries and placements. While many students were able to identify alternative financial support there has been an alarming decrease in the number of work experience opportunities and the technikon students, in particular, face the prospect of uncompleted requirements for obtaining their diplomas.

5.10 Phoenix National Committee

Representative

C.J.C.J. van Vuuren

The Committee monitors and directs the activities of the Phoenix Programme (originally introduced into South Africa by Mintek in 1973) in conjunction with the Education Advisory Committee of the Chamber of Mines. The Chamber funds 90 per cent of the programme budget, the balance being funded by SAIMM, AECI, Envirotech, FAPA, Iscor, Mintek, Rio Tinto, and Sasol. These external contributions are administered by the SAIMM.

The mission of the Phoenix Programme is to contribute in a legitimate and effective manner to improve the quality and relevance of science and education in South Africa at the pre-tertiary level. Activities of the programme are conducted in conjunction with the RADMASTE (Centre of Research and Development of Mathematics, Science and Technology Education) at the University of the Witwatersrand.

During 1992, the Phoenix Programme operated in two main areas. The first area of operation was to facilitate the establishment of infrastructure in the science-teacher educator community in South Africa. The second area of operation was to develop science-teaching resource material that relates classroom science to the mining and mineral-processing industry. This material was also implemented in both schools and colleges of education in South Africa.

A resource package on the South African coal industry and a second package entitled 'Methods of Separation' were completed during 1992. The existing packages on copper

ACCOUNTS FOR THE YEAR ENDED 30TH JUNE, 1993

REPORT OF THE INDEPENDENT AUDITORS

To the members of The South African Institute of Mining and Metallurgy

We have audited the annual financial statements set out here. These financial statements are the responsibility of the Institute's Council. Our responsibility is to report on these financial statements.

We conducted our audit in accordance with generally accepted auditing standards. These standards require that we plan and perform the audit to obtain reasonable assurance that, in all material respects, fair presentation is achieved in the financial statements. The audit included an evaluation of the appropriateness of the accounting policies, an examination, on a test basis, of evidence that supports the amounts included in the financial statements, an assessment of the reasonableness of significant estimates and a consideration of the appropriateness of the overall financial statement presentation. We consider that our auditing procedures were appropriate to enable us to express our opinion presented here.

In our opinion these financial statements fairly present the financial position of the Institute at 30 June 1993, and the results of its operations for the year then ended in conformity with generally accepted accounting practice.

KPMG Rijken & Leat

Auditors
3 August 1993

ACCOUNTS

FOR THE YEAR ENDED 30TH JUNE, 1993

BALANCE SHEET AT 30TH JUNE, 1993

	Note	1993		1992	
		R	R	R	R
CAPITAL EMPLOYED					
Funds	2		1 332 028		537 944
Retained income			265 438		260 889
			<u>1 597 466</u>		<u>798 833</u>
EMPLOYMENT OF CAPITAL					
Fixed assets	3		752 475		155 603
Listed investments	4		849 535		860 754
Current assets					
Publications stock		4		4	
Debtors for sales of journals and publications, less provisions		45 386		85 145	
Advertisers in journal		21 889		23 784	
Sundry debtors		104 234		61 036	
Bank and cash		—		92 315	
Deposits		550		550	
			<u>172 063</u>	<u>262 834</u>	
CURRENT LIABILITIES					
Accounts payable		119 218		474 463	
Subscriptions received in advance		4 350		5 895	
Bank overdraft		53 039		—	
			<u>176 607</u>	<u>480 358</u>	
NET CURRENT LIABILITIES					
			(4 544)		(217 524)
			<u>1 597 466</u>		<u>798 833</u>

INCOME AND EXPENDITURE ACCOUNT FOR THE YEAR ENDED 30TH JUNE, 1993

	Note	1993	1992
		R	R
Income	5	1 047 193	552 225
Expenditure	6	<u>588 432</u>	<u>512 093</u>
Net income for the year		458 761	40 132
Transfer to funds	2	<u>454 212</u>	<u>35 000</u>
Retained income			
For the year		4 549	5 132
At beginning of year		260 889	255 757
At end of year		<u>265 438</u>	<u>260 889</u>

NOTES TO THE ANNUAL FINANCIAL STATEMENTS FOR THE YEAR ENDED 30TH JUNE, 1993

1. ACCOUNTING POLICY

The financial statements have been prepared in accordance with the historical cost convention and incorporate the following principal accounting bases and presentation which are the same as those adopted for the previous year and consistently applied.

1.1 Publications stock

The stock of publications is held and sold by the Institute for its own account and on behalf of its publishing partners who have underwritten some of the publications. The stock is reflected in the financial statements at nominal value.

1.2 Listed investments

Listed investments are held for the medium and long term and are stated at the lower of cost or market value on an aggregate portfolio basis.

1.3 Fixed assets

Investment properties are not depreciated. Furniture and equipment are depreciated over their estimated useful lives. Medals, plaques, dies and banners are recorded at a nominal value.

1.4 Accounts payable

Accounts payable include net income of R38 036 (1992—R246 587) which relates to technical events to be held in future financial years.

		1993 R	1992 R
2. FUNDS			
2.1 Book Publications Fund			
Balance at beginning of year		71 407	69 327
Donations received		1 578	2 080
		<u>72 985</u>	<u>71 407</u>
2.2 Brigadier Stokes Memorial Fund			
Balance at beginning of year		81 900	82 900
Transfer from retained income		12 617	-
Awards		(6 845)	(1 000)
		<u>87 672</u>	<u>81 900</u>
2.3 Centenary Fund			
Balance at beginning of year		35 000	-
Transfer from retained income		150 000	35 000
Donations received		20 050	-
		<u>205 050</u>	<u>35 000</u>
2.4 Education Fund			
Balance at beginning of year		239 953	259 154
Expenses		(10 651)	(13 201)
Donations to Phoenix Fund		-	(6 000)
		<u>229 302</u>	<u>239 953</u>
2.5 MacArthur Forrest Memorial Fund			
Balance at beginning of year		71 479	74 506
Transfer from retained income		16 903	-
Awards and expenses		(11 760)	(3 027)
		<u>76 622</u>	<u>71 479</u>
2.6 Safety in Coal Mining Award Fund			
Balance at beginning and end of year		<u>38 205</u>	<u>38 205</u>
2.7 Infacon Bursary Fund			
Donations received		360 000	-
Expenses		(12 500)	-
Transfer from retained income		24 692	-
		<u>372 192</u>	<u>-</u>
2.8 Observatory Refurbishment Fund			
Transfer from retained income		250 000	-
Total of funds at end of year		<u>1 332 028</u>	<u>537 944</u>
3. FIXED ASSETS			
	<i>Cost</i>	<i>Accumulated depreciation</i>	<i>Net book value</i>
	R	R	R
1993			
Land and buildings	618 620	-	618 620
Furniture and equipment	265 516	131 662	133 854
Medals, plaques, dies and banners	1	-	1
	<u>884 137</u>	<u>131 662</u>	<u>752 475</u>
1992			
Furniture and equipment	243 846	88 244	155 602
Medals, plaques, dies and banners	1	-	1
	<u>243 847</u>	<u>88 244</u>	<u>155 603</u>

Land and buildings comprises portion 1 of erf 304 Observatory Township, Transvaal and the house erected thereon. The property has been classified as an investment property by the council and will, therefore, not be depreciated.

	1993		1992	
	R	R	R	R
4. LISTED INVESTMENTS				
Investments at cost		849 535		860 754
Investments at market value		<u>1 981 200</u>		<u>2 045 175</u>
5. INCOME comprises				
Company affiliates subscriptions		83 400		68 886
Membership entrance fees and subscriptions		226 095		197 261
Colloquia		385 705		82 754
Schools		73 984		19 715
Surplus on sale of investments		108 191		107 569
Interest and dividends received		82 441		54 582
Sundry income		33 252		2 205
Special Publication series				
• Sales	102 622		72 059	
Less expenditure				
• Expenses net of postage recoveries	25 452		34 300	
• Cost of production	16 750		3 561	
• Refund of underwriting contributions to Chamber of Mines	6 295		14 945	
	<u>48 497</u>		<u>52 806</u>	
		54 125		19 253
		<u>1 047 193</u>		<u>552 225</u>

5.1 Underwriting contributions are taken to income in the year in which they are received.

5.2 Sales include a surplus on exchange of R17 241 (1992—R35 040).

5.3 Voluntary contributions by members amounting to R5 321 (1992—R1 773) were collected and paid over by the Institute to the AS&TS Trust and are not included in the income statement.

	1993		1992	
	R	R	R	R
6. EXPENDITURE comprises				
Secretarial fee		189 019		165 909
Institute journal				
• Expenses	175 769		184 576	
• Secretarial fee	20 005		30 887	
	<u>195 774</u>		<u>215 463</u>	
Deduct				
• Advertising	45 836		49 133	
• Sales	36 370		47 788	
• Subvention—Bureau for Scientific Publications	3 600		—	
	<u>85 806</u>		<u>96 921</u>	
		109 968		118 542
Administration expenditure		211 722		154 506
Apcom '92		—		15 775
Audit fee		5 500		4 700
Contributions				
• SAVI	15 041		—	
• EPPIC	3 033		2 809	
• SANCOT	770		700	
• ASARET	250		—	
• CMMI	711		797	
		<u>19 805</u>		4 306
Depreciation		43 418		39 355
Donations				
• SAFUES	4 000		4 000	
• PROTEC	5 000		5 000	
		<u>9 000</u>		<u>9 000</u>
		<u>588 432</u>		<u>512 093</u>

and manganese were implemented in schools in the western Cape region. This workshop was the first of its kind in the history of science education in South Africa.

During the latter part of 1992, it was agreed by the Executive Committee of the Chamber of Mines that it would be appropriate and beneficial to incorporate the Phoenix Programme into the RADMASTE at the University of the Witwatersrand from 1st January, 1993. The main reason for this is to enable the programme to broaden its educational base. This has favourable implications politically, educationally, and financially.

Politically, a broadening of the educational base would probably dilute the existing suspicion (hidden agendas) about mining-based initiatives. In addition, a unified industrial voice on science education would be more efficient and politically acceptable as opposed to a fragmented scramble for syllabus representation.

Educationally, a broadening of the educational base would be sound since industries are interdependent and affect one another's performance both directly and indirectly. The present mining-specific approach limits the degree to which various technologies, industries, and societies can be linked together in the educational material being developed.

Within RADMASTE, the Phoenix Programme would be able to continue its development and implementation of mining and minerals-related resource material, subject to securing funding from the major funding agencies in South Africa. In addition, with the ability to broaden its education base to other technologies, the Phoenix Programme would create new funding opportunities from other industries.

5.11 South African National Council on Tunnelling (SANCOT)

Representative
Alternate

J.A. Cruise
D.A.J. Ross-Watt

SANCOT held an international conference in Maseru, Lesotho in September 1992. Visits were made to the tunnels being driven in the Lesotho Highlands Water Project and to the dam sites.

SANCOT was represented at the International Tunnelling Association's annual meeting in Amsterdam in April 1993.

Mr Cruise, the Institute's representative on SANCOT, is on the Legal Advisory Committee that is currently involved with the drafting of legislation for civil tunnelling.

5.12 The Environmental Planning Professions Interdisciplinary Committee (EPPIC)

Representative
Alternate

D.J. van Niekerk
K.A. van Gessel

Representatives of the SAIMM participated in the Committee's activities, which included *inter alia* the following items:

- finalization of a letter urging the adoption, as a policy of the implementation of IEM for all development projects
- formulation of guidelines for course content at universities and technikons
- distribution of comments on the impacts that the new Minerals Act (Act no. 50 of 1991) is expected to have on the minerals industry

- submission of nominations for the 1993 EPPIC awards, including the Alusaf Smelter Expansion, the 'Aide Memoire Projects,' the paper by J.S. Freer, and numerous dissertations and research reports by students
- four committee meetings that were scheduled for 1993
- EPPIC 1992 Conference on 'Poverty and the Environment', which, held on 28th and 29th September, 1992, was well attended and generated most interesting discussions
- support for the 'Business Charter for Sustainable Development' (16 principles) of the International Chamber of Commerce (ICC)
- active regional groups.

6. INTERNATIONAL LIAISON

Portfolio Holder: Dr H. Scott-Russell Key Performance Areas

To achieve its objectives, the SAIMM

- participates in and represents South Africa on bodies such as World Mining Congress and the Council of Mining and Metallurgical Institutions (CMMI), appoints Corresponding Members in areas such as the United Kingdom, Australasia, Canada, and the United States of America, Japan and South America, and interacts with sister institutes in other countries to promote international exchange of scientific and technical information.

The President met the President of The Metallurgical Society of CIM, Mr Engin Ozberk, and a Vice President of TMS, Dr Keith Brimacombe.

Both expressed interest in closer ties between the SAIMM and their societies. Details of one another's activities were exchanged, and areas of co-operation are to be explored.

6.1 Council of Mining and Metallurgical Institutions (CMMI)

National Representative
Alternates

Dr H. Scott-Russell
Dr M.G. Atmore
Prof. D. Buchanan

6.1.1 Centenary Dinner

A centenary dinner was organized by Members of IMM in South Africa on Friday, 4th September 1992 at the Inanda Club. Under the chairmanship of Mr Richard Beck, this event attracted 186 members and guests. Those present were addressed by Professor Noel Warner, President of IMM at the time. The President of the SAIMM presented a suitably inscribed plaque to IMM on the occasion of their Centenary. This event would have not been possible without the generous sponsorship of 12 companies.

6.1.2 15th CMMI Congress

There has been an extremely good response from throughout the world to the Preliminary Announcement brochure for the 15th CMMI Congress to be held in South Africa.

The date for this Congress has been postponed to 4th-8th September 1994, owing to the date for the first general election for all peoples of South Africa having been set for 27th April, 1994, which would have coincided with the Congress and its Southern African programme of technical

and sight-seeing visits long planned for 23rd April to 14th May, 1994.

Planning for the Congress is proceeding apace, and the second information brochure on the Congress, which was in preparation for issue in August, will accordingly be delayed and mailed to prospective delegates towards the end of 1993.

6.2 World Mining Congress

National Representatives

Dr H. Scott-Russell
Dr B.C. Alberts

Owing to urgent work commitments, neither Dr H. Scott-Russell nor Mr B.C. Alberts (Committee members) were able to attend the 71st Meeting of the International Organizing Committee (IOC) of the World Mining Congress, which was held in Delphi, Greece, in September 1992. South Africa was accordingly not represented at that meeting since the South African Embassy in Athens was also unable to send an observer. No response has been received to numerous requests for the minutes of that meeting.

The 72nd meeting of the IOC will be held in Acapulco, Mexico, in October 1993, and every endeavour will be made for a South African member of the Committee to attend this meeting.

Arrangements for the 16th World Mining Congress, which will be held in Bulgaria in September 1994, are progressing satisfactorily.

7. MANAGEMENT AND ADMINISTRATION

Portfolio Holder: J.P. Hoffman

The office accommodation in Cape Towers has proved to be most satisfactory, particularly because of its proximity to the mining houses.

The Institute acquired a house in Gill Street, adjacent to the Observatory site. This house, which was bought as an investment and possible future conversion into offices for the greater SAIMM, is being let at present. The Office Bearers decided that the Administration will stay in Cape Towers until September 1994 because of the pressure of CMMI and the Centenary Year on top of other activities scheduled for the first half of 1994. A decision will then be taken as to whether the Institute should move to the Observatory site or not. There would be certain benefits to the Institute, and to the scientific and engineering professions at large, if the Institute were to join the other learned societies on the Observatory site.

Council members and the Administration continued to liaise closely. The following staff are employed in servicing the needs of the Institute and its members:

Mrs Celeste Mackintosh (Manager)
Miss Caroline Jansen (Membership Secretary)
Mrs Sam Moodley (Conference Co-ordinator)
Mrs Karen Norman (Receptionist and Bookkeeper)
Mrs Susan Luddick (Journal Secretary)
Mrs Chiz Judge (DTP Operator—resigned 1st June, 1993)
Mrs Claire Kearney (Publications Co-ordinator)
Mrs Anna Panana (Clerk)
Mr Stan Hickin, (Accountant, part-time).

Mrs Glenda Myles joined the Administration during April 1993 on a part-time basis (mornings only) to assist with the desk-top publishing system in meeting the high work load.

Only one difficulty was experienced and that involved the changing of the address system from the members' home addresses to those of the members' companies for VAT purposes.

7.1 Forward Planning

7.1.1. Professional Structure for the Minerals Industry.

The SAIMM has for some months been considering a structure that would better serve the interests of the diversified professional associations associated with the minerals industry in South Africa.

The outcome is a structure, which had received the support of the SAIMM Council, that has been sent to various societies and associations serving the mining and minerals industries for comment and/or possible acceptance.

The proposed structure and the function of the body, tentatively called the South African Institution of Minerals, Metals, and Mining, or SAIM3, are outlined below.

7.1.1.1. Structure

- A two-tier oval structure is envisaged with SAIM3 at the centre and each constituent association at the periphery.
- Constituent associations would rank equally, irrespective of membership. Each would have its own council and president. Each would set its own membership qualifications, and may independently choose to associate with other bodies, such as AS&TS. Each would establish its own programme of activity, and maintain its own professional/scientific journal.
- SAIM3 would be administered by an executive committee headed by a chairman. The number of executive committee members would be twice the number of constituent associations. Each association would nominate one member, and half of the members would be directly elected by individual members present at an AGM or by proxy.
- The structure has been devised in such a manner that no one existing society will dominate, and all constituent societies will have equal status and professional autonomy.

7.1.1.2 Membership

Membership of one or more of the constituent associations would automatically confer membership of the SAIM3.

7.1.1.3 Functions

The SAIM3 would become the unifying body of existing mineral-industry associations. It would be composed of its individual members, each of whom would have to meet the separate entry requirements of one or more of the associations that he/she wished to join. Such associations would retain their professional autonomy, and use whatever services provided by the SAIM3 as they desired. These services would include

- representation on ECSA, SAVI, JCSS
- secretarial and financial services, including collection of subscriptions
- organization of conventions, meetings, and entertainment

- editorial and publications
- public relations.

7.1.1.4 Advantages

The advantages of the proposed structure are seen as

- a pooling of resources and funds with consequent efficiencies and an ability to attract competent professional staff
- a vehicle for the use of smaller societies, where their specific interest needs to be defended in any circumstances (although there is no intention that SAIMM should be used as a 'trade union' or lobbying vehicle, except where professional or technical interests are involved)
- an effective public relations medium for the constituent societies
- centralization of functions, which would avoid both clashes and repetition
- a unifying of minerals industry disciplines at a time when the industry is under environmental and economic threat.

7.1.1.5 Publications

The provision of a publication to communicate with a broader spectrum of members has still to be finalized. This may, however, have to take the possible emergence of other professional bodies and the SAIMM into account.

7.1.2 Activities

- Since 1994 is the Centenary year of the Institute, various functions are being planned to celebrate this event.
- Activities such as symposia, schools, colloquia, etc. are planned for four years ahead, and next year promises to be a very active year since the CMMI conference forms part of the activities of 1993/1994.

7.2 Finance

J.A. Cruise, Chairman

R.D. Beck

H.G. Mosenthal

J.P. Hoffman

Dr H. Scott-Russell

The Institute continues to rely on income from conferences, colloquia, schools, and symposia to be able to maintain its subscription fees at an acceptably low level. Financially, the Institute had an exceptional year and is able to declare a net income of R458 761 for the year.

This can be attributed to

- a highly successful international conference held at Electra Mining in September 1992, namely MASSMIN
- an energetic mining technical committee which, in addition to MASSMIN, held an environmental school in November, and colloquia on 'Education and Training in the New South Africa' in February, and 'Mine Closure' in April
- a cost-conscious Secretariat, who have worked long hours to ensure the smooth running of the Institute
- an increase of 17 per cent over the previous year in subscriptions paid in spite of difficulties encountered in billing subscribers under the new VAT legislation
- the containment of *Journal* expenses at the previous year's level
- a more than two-fold increase in the sales of book publications

- a desk-top publishing department that has not only contributed to a cost reduction in the publications and *Journal* but also has generated income from undertaking work for other societies
- rental income from the Institute's property in Observatory.

During the year, the Institute repaid funds that were held in trust for the Phoenix Programme (R196 031) and PRISEC (R11 877), and accepted the administration of the INFA-CON Bursary Fund (R360 000). In line with the policy adopted last year, investment income primarily went to the Centenary Fund, which now stands at R200 000.

In addition to the Observatory property, which has a cost value of R618 620, the Institute has listed investments of a market value of R1 981 200.

Thanks are due to Martin and Company, who continue to act as the Institute's investment advisors; to the Secretariat for their continued efforts in containing costs; and to the accountant and auditor for the excellent financial services rendered during the year.

ADDENDUM

New Members

Fellow

S.S. Anderson, L.F. Baars, E. Chivers, W.M. Eksteen, I.S. Henderson, A.P. Klintworth, M.H. Marsden, T.M. Roots, N.K. Savage, Dr P.D. Scott, H.D.V. Steyn, E.R. Sutton, E.H. Thomas, R.F. Tucker, Prof. M.J. Viljoen.

Member

J.J. Bornman, C.M. Feldman, R.P. Fouche, A.T. Haile, P.E. Hodgkinson, R.A. Johnson, K. Martinek, D. McGinness, P.P. Mwasinga, D.S. Ngandu Kangudi, D.A. Norval, T.T. Ozan, Dr K.P. Perry, A.R. Purcell, D.A.J. Starley, P.W. Steenkamp, C.A.F. Sweet, C.J. Viljoen, Dr F.B. Waanders, K. Whacha, M.G. Wynn.

Associate

R.J. Adams, Dr W. Assibey-Bonsu, R.S. Bessinger, J.R. Bunt, C.D.P. Campbell, N. Corlett, M.G. Da Costa, A.E. de Lange, E.A. Dhlamini, G. Evans, F.W. Fouché, F.E. Greyling, S.T. Harrison, S.J. Jones, A.M. Kucuk, N.B. Liebenberg, D.J. Markus, K.D. Meiring, C.W. Mienie, H. Mocke, P.M. North, R.W. Pesch, K. Sayginar, Ms H.S. Smith, M.J. Stoffberg, J. Strauss, C.J. Swanepoel, Dr P. Weber.

Student

G.J. Annandale, E.A. Asante, R.C. Austin, J.H. Barnard, W. Booysen, E. Botha, R.E. Bronkhorst, P.A. Brown, R. Bryans, R. Bryla, A.S. Buys, D.A. Christie, J.E. Collins, W.T. Cronk, J. Danckert, J.J. Eksteen, C.H. Els, S.Y. Eshun, M. Frimpong, S.E. Green, S.J.J. Grimbeek, G.S.B. Hattingh, D.V. Henwood, A.M. Heyes, P.R. Holmes, R.E. Howard, L.L. Joseph, C.J. Joubert, C. Jovner, J.P. Judkins, B.I. Kgopane, E.L. Kirschner, D.J. Kok, F.A. Landsberg, J.D. Lubbe, P.F. Lötter, I.T. Malata, L.C. Martin, I. McLelland, C.N. Moalahi, C.N. Mulligan, A.C.G. Naude, P.M. Nefadi, A.B. Nesbitt, O.Y. Ntrama, C.P. Ntsele, S.J. Nxele, G.L. Ponter, G. Pretorius, G.F. Rajool, G.S. Rautenbach, W. Scheepers, M.D. Shepstone, M. Sibanda, R.I. Smart, J.B. Speck, A.R. Teeke, S. Uludag, P.V.A. van der Westhuyzen,

J.A. van Huysteen, J.G.S. van Jaarsveld, V.V. van Rensburg, A.K. van Rooyen, A. van Zyl, A. van Zyl, J. van Zyl, W. Whitaker, R.C. Wienand, E. Wingate.

Company Affiliate

Concor Tecnicrete, Fondtogam (Pty) Limited, GFC Mining, Tavistock Collieries Limited.

Resignations

Retired Fellow

E.R. Baggott, D.I. Field, W. Holding, A.T. Hudson, E.I. Muller.

Retired Associate

A.D. Graham, C.J. Moore.

Fellow

J. Ainsworth, L.D. Airey, J.F. Aspelung, R.M. Cunningham, P.J. Day, P.J. de Koker, G.R. Jackson, H.J.C. Liebenberg, A. Mauchan, J.R. Rossouw, C.P. Smit, J.S.T. van Aswegen, E.H. van Rooy, E.W. Volk, J.E. Whillier.

Member

J.F. Botha, D.F. Bradshaw, Dr C.C. Chama, J.G. Coetzee, D.J. Crowe, A.D. Germond, S.M. Gray, G.M. Harris, G.G. Jacobs, J.E. Keller, A.H. le Roux, R.P. Loesch, D.R. Manvell, N. McDonald, M.K. Oertel, J. Prater, P.A. Reynolds, W.L. Stanton, J.M.O. van Sittert, T.D. van Wyk, B. Young.

Associate

K.E. Alvarez, C.P.J.M. Botha, R.G. Bushell, J.H. de Lange, R.G.G. Dolinschek, C.B. Druce, A.N.R. Eckersley, T.J. Holmes, A.R. Janse van Rensburg, J.J. Louw, J.G. McCallum, A.M. Muir, D. Norrington, G.J. Schnackenberg, R.J.C. Tincknell, M.H. Turner, P. van Biljon, M. van Staden, R.C.W. Webber.

Student

J.J.H. Bester, J.H. Hartzer, G.J. Newcomb, M. Ras.

Company Affiliate

Fosroc, Montan Chemicals (Pty) Limited, Penge Amosite Mine, Rossing Uranium Limited, Shell South Africa Pty Limited—Minerals Division, West Rand Consolidated Mines Limited.

Members Transferred to Higher Grades

Transfer to Honorary Life Member

Dr J. Lurie.

Transfer to Fellow

K.A. van Gessel (Member), F.C. Harvey (Associate).

Transfer to Member from Associate

Dr M.D. Adams, W. Baguley, K.J.R. Ford, C.D.R. Galpin, K.D. Hodge, G.V.R. Landman, I.D. Macrae, L.M. Matthews, D.M. Minnaar, T. Moolman, G.J. Mostert, J.M.S. Pinel, B.W. Pitchford, D.M. Powell, I.D. Ralston, P. Rankine, K.J. Smale, J.P. Stevens, N. Tamlyn, N.M. Vegter, Dr M.A. von Below, J.D. Whillier, E. Wolmarans.

Automatic Transfer to Associate

J.A. Barnard, A.J. Benson, S. Bhoowanpursadh, I.S. Bornman, D.M. Brazier, C.L. Brickhill, L.A. Cafferty, K.L. Cheong, J. Christowitz, W.A. Cilliers, J.E. Collins, P.M. Cook, D.R. Cutmore, D.S. Demmer, C.B. Draper, S.Y. Eshun, S.J. Ford, R.T.O. Gleimius, H.C. Hoffmann, J.J. Horn, W.C. Impey, M.A.R. Kruger, G.K. Loveday, S.G. Macdonald, A. Mahood, F.C. Malan, I.J. Marais, P.A. McAdam, V.K. McCulloch, N.J. McEwan, S. Moshokane, J.A. Munro, W.P. Nel, A.R. Nisbett, S.J.C.L. Peeters, F.W. Petersen, J.P. Potgieter, A. Richter, H.W. Scriba, D.K. Smith, S. Turner, H. van Niekerk, M. Visser, G.B. Wurr.

Deceased

Life Fellow

E.F. Laschinger.

Retired Fellow

R.K. Boright, J.S. Jacobi, R.D. Power.

Fellow

J.H. Cannon, C.J. du Plooy, L.B. Mcrae, C.P. Rossouw, A.L. Sillars.

Member

A.W. Heugh.

Associate

R.K. Briggs, P.J. Stark, C.S. Scott.

Retired Membership

F.D. Abbott, G.H.S. Bamford, G.J. Bernfeld, C.J. Boshoff, E.V. Bosman, D. Dawes, H.M.W. Eschenburg, G.W. Fitcher, T.E. Green, R.W. Impey, O.A. Jones, G.J. Keogh, P.A. Laxen, M.A. Madeyski, B.A. McKay, M.L. Melvill, D.J. Murphy, N.F. Peverett, J.G. Phimister, C.B. Roper, W.T. Ruhmer, E. Schmid, J.S. Smit, W.H. Stheeman, C.D. Thompson, R.C.M. van der Spuy, P.J. van der Walt, C.J. van Niekerk, C.F. Vermaak, U. Visser, H.V.R. Von Rahden, D.T. Watt, R.G. Williams, N. Zolezzi.

Members Who Were Reinstated

Reinstated as Member

A.H. le Roux, D.R. Manvell, P.G. Naude, M.J. Prinsloo, S.A. Shepherd.

Reinstated as Associate

G.A. Jones, G.D. Kotzee, M.A.R. Kruger, D.C.S. Maree, M. van Staden, C. Visagie.

Reinstated as Student

A.J. Benson, J. Hung, G.M.I. Lock.

Reinstated as Company Affiliate

Shell South Africa (Pty) Limited—Minerals Division.

Names of Members Removed from the Membership Register as at 30th June 1993, and Published in Terms of By-Law 7.3 of the Constitution

Member

D.J. Norton, D.A.A. Smith.

Associate

E.W. Albrecht, A.J. Brooker, S.P. Graham, V. Gökdere, W.J.L. Jacobs, H.T. Molale, E.A. Roberts, K.H. Schmommarz, J.N. Tarboton, N. Tsoumbris.

Names of Members Removed from the Membership Register as at 30th June 1993, and Published in Terms of By-Law 7.3.1 of the Constitution

Retired Fellow

H.E. Knight.

Fellow

K.L. Bright, D. van Heerden, K.P. Cornforth.

Member

A.W. Dougall, J.P.L. van Niekerk, C.G.B. Wilkinson, M.D. Bonneau.

Associate

C. Botha, A.G.S. Forbes, L.J. Janse van Rensburg, P.M. van den Heever, J. van Niekerk.

Student

W.C. Joughin, T.N. Kruger, D.M. Mashile, M.R. Ten Have, G.P. Muller, I. Smit.

Company Affiliate

Geoexpert S.P.A.

Names of Members Removed from the Membership Register as at 30th June 1993, and Published in Terms of By-Law 7.6.1 of the Constitution

Retired Fellow

M. Harris.

Retired Member

J.W. van den Munckhof.

Retired Associate

W.M. Mackay, F.G. Pascoe, R.F.J. Teichmann.

Fellow

J.A. Basson, G.J. Craig, R.L. Drollinger, J.D.R. Henriques, P. Hindmarch, T.L. Pretorius, V.C. Ward.

Member

R.W.J. Bentley, C.M. de Beer, J.P. Jordaan, J.G. Koekemoer, J.D. Krige, S.G. Low, S.K. Maw, D.J. Miles, P.K. Nel, M.J. Niayesh, P.W. Overbeek, C.J. Phillips, H.H. Schaum, E.R. Simpson, M.D. Smart, R. Smith, G.J. Steyn, A.R. van Zyl.

Associate

P.D. Bates, M.R. Beebe, M.J. Bleeker, H.B. Booyesen, R.G. Brink, C.P. Brits, S.T. Coetzer, A.P. Coombs, D.M. Cresswell, J.I.N. de Beer, J. de Hill, A.E. Edkins, T. Eksteen, G.D. Farr, H.H. Geach, A.S. Gibbons, P.J. Grobler, A.D.J. Grové, E.F. Heymann, M.N. Hyland, R.A.R. Kebble, D.S.R. Lawrence, N.J. Lourens, S.H. MacLennan, D.E.E. Maré, J.B. McGrath, R.J. Mostert, S.A. Nehring, W.A. Nel, G. Nicholson, P.J. Niemann, J.P. Oosthuizen, C.B. Pask, H.P. Potgieter, I.R. Poultney, D.J. Rooker, D.E. Scholtz, R.G. Stapleford, A.W. Stasikowski, A.J. Thatcher, W.Y. Timmerman, M.S. van Staden, I. von Bardeleben, I.R. Wermuth, S.C. Wood.

Student

P.C. Ackermann, J. Bashiello, N. Bezuidenhout, M.G. Botha, I.H. Breytenbach, S.J. Brown, C. de Klerk, J.H. de la Rey, H.J.T. Deale, J.P. du Plessis, L. Eksteen, M.A. Fusy, A. Hoek, T.C. Ives, J.C. Jordaan, C.M. M'Kombe, K.W. Makgeru, P.M.K. Mamabolo, I.O. Manini, M.J. Mashinini, O.H. Mathola, S.O. McIthwa, S.T. Mitchell, N.A. Mjacu, K.L. Moasi, S. Phetla, S.C. Qunta, C.J. Roux, A. Sebakela, C. Sim, G.H. Smith, P.C. van As, J.H. van Huyssteen.

Company Affiliate

S A College of Mining cc.

Environmental planning professions interdisciplinary committee (EPPIC)

CALL FOR NOMINATIONS FOR EPPIC AWARDS FOR 1994

The Environmental Planning Professions Interdisciplinary Committee (EPPIC) invites submissions for its prestigious 1994 EPPIC Awards in the following categories:

- National Premium Award
- National Student Award (Final Year Dissertation)
- Best South African Environmental Journal
- Best South African Environmental Technical Paper
- Best South African Environmental Video or Film.

All award submissions should demonstrate the effective use of Integrated Environmental Management (IEM) techniques with an holistic approach to development.

Closing date for entries:

- **30 November, 1993**— all entries except National Student Award
- **31 January, 1994**—National Student Award.

For further information and submission criteria contact:

The Secretary, EPPIC, P O Box 62041, Marshalltown, 2107.
Tel. (011) 836-8618 (Monday and Wednesday mornings), Fax (011) 836-8657.

INFACON BURSARY AWARD

Applications are invited for the award of a bursary to undertake post-graduate level research on ferro-alloys and alloy steels. The background to and the conditions of the award are as follows:

1. The bursary was established by FAPA, MINTEK and the SAIMM, who were the organizers of the 6th International Ferro-Alloys Congress (INFACON), which was held jointly with the International Chromium Steels and Alloys Congress (INCSAC).
2. The objective of the award is to promote post-graduate research on applied and fundamental aspects of ferro-alloy production, or the production of stainless and alloy steels in Southern Africa.
3. The research must be undertaken on a non-confidential basis, so that the results are publishable in the *Journal* of the SAIMM or any suitable internationally recognised journal, and specifically intended to form the basis of contributions to future INFACON Congresses. Topics for research may, in addition to production and uses of alloy steels, include related aspects such as environmental issues, raw materials and economics.
4. The research is to be conducted at or under the supervision of any university or technikon in South Africa, and may be at a post-doctoral level or lead to higher degrees or qualifications on a post-graduate level.
5. The award is primarily intended to provide financial support in the form of a bursary to the applicant, but, at the discretion of the Awards Committee, may include amounts for operating expenses (such as local travel, library and computer costs and consumables) and for special equipment.
6. The award may be used to supplement other grants, provided that the non-confidentiality of the work is not prejudiced.
7. The academic status and research capability of the candidates will be a primary consideration for the selection of bursars. However, the suitability of the topic of research and the status and capabilities of the department will also be important considerations.
8. Applications should be submitted to:

INFACON Bursary Committee
South African Institute of Mining and Metallurgy
P O Box 61127
Marshalltown
2107

and should include the applicant's CV, a detailed description of the research topic and a supporting motivation from the Head of Department concerned indicating the supervisor and facilities available for the research. Applications should preferably reach the Committee before the end of February, 1994.

9. The award of the bursary will be at the sole discretion of the INFACON Bursary Committee of the SAIMM, whose decision regarding the award will be final.