

ANNUAL REPORT

FOR THE YEAR ENDED 30TH JUNE, 1994

Council for 1993/94

President

Dr H. Scott-Russell

President Elect

J.A. Cruise

Vice Presidents

Senior

D.A.J. Ross-Watt

Junior

P.D.K. Robinson

Immediate Past President

J.P. Hoffman

Honorary Treasurer

J.A. Cruise

Members of Council

Dr N.A. Barcza

B.R. Broekman

G.A. Brown

Dr L.A. Cramer

Prof. R.J. Dippenaar

J.R. Dixon*

A.A.B. Douglas

F.M.G. Egerton

B.R. Fleetwood

* Co-opted

Dr R.V.R. Handfield-Jones

P.R. Janisch

P.J. Knottenbelt

R.P. Mohring

K.C. Owen

K.A. van Gessel

D.J. van Niekerk

C.J.C.J. van Vuuren*

P.M.T. White

Branch Chairmen

Johannesburg Branch

Orange Free State Branch

Pretoria Branch

Vaal Triangle Branch

Western Cape Branch

Eastern Transvaal Branch

Northwestern Transvaal Branch

Zululand Branch

K.A. van Gessel

B.J. Addison

Prof. R.F. Sandenbergh

A.M.L. de Sousa

Dr L. Lorenzen

P. Gericke

K.G. Ludwick/C.A.F Sweet

J. Selby

Past Presidents Serving on Council

B.C. Alberts

R.D. Beck

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: D.A.J. Ross-Watt

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 RADMASTE Centre 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

D.A.J. Ross-Watt, Chairman

P.W.J. van Rensburg
 Prof. R.P. Plewman
 Dr R.E. Robinson
 Dr P.R. Jochens
 G.Y. Nisbet
 Prof. A.N. Brown
 H.E. James
 Dr H. Wagner
 B.C. Alberts
 C.E. Fivaz
 Dr O.K.H. Steffen
 H.G. Mosenthal

R.D. Beck
 J.P. Hoffman
 Dr N.A. Barcza
 J.A. Cruise
 Prof. R.J. Dippenaar
 P.R. Janisch
 R.P. Mohring
 P.D.K. Robinson
 Dr H. Scott-Russell
 K.A. van Gessel
 D.J. van Niekerk
 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;

Table I

Summary of new applications and membership movements for 1993/94 and comparison of membership grades and total membership 1993/94

Membership grade	Members July 93	New members	Transfers in	Transfers out	Reinstatements	Resignations	Deceased	Struck-off	Computer adjustment	Net gain / (loss)	Members June 94
Honorary Life Fellow	28										28
Honorary Fellow	7								-3	-3	4
Life Fellow	45						5			-5	40
Fellow	412	23	4	17	2	13		5		-6	406
Retired Fellow	177		17			6	4			+7	184
Honorary Member	1										1
Life Member	1										1
Member	780	32	12	16	3	19		13	-6	-7	773
Retired Member	46		13			3	1			+9	55
Associate	700	37	102	12	5	17	1	40	-7	+67	767
Retired Associate	17				1	1	1			-1	16
Student	347	110		103	3	8	1	57	+7	-49	298
Company Affiliate	134	10			2	3			-1	+8	142
Total	2695	212	148	148	16	70	13	115	-10	+20	2715

- 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

P.J. Knottenbelt, Chairman

Dr R.V.R. Handfield-Jones

J.P.W. Bennie*

Prof. A.N. Brown

F.M.G. Egerton

Prof. R.H. Eric*

*Co-opted

K. McCarogher*

J.L. Nel*

Prof. R.F. Sandenbergh

P.M.T. White

C.J.C.J. van Vuuren*

Following the recommendations of the 1993 Committee, the current Committee revised the objectives and identified projects for 1994. A position paper was generated, and the activities were generally to consolidate and confirm the priorities of the Committee. In particular, representations are in place in the following.

➤ The RADMASTE Centre

The Committee continued its financial and advice support through participation with the RADMASTE Centre. The activities of this project are most exciting, initiatives being taken to promote science and technology in a new school curriculum. The proposal to initiate a pilot project for the development of teacher orientation towards SET and career information was shelved owing to lack of financial resources.

➤ SAVI

(i) The Committee continued representation on the Education Committee, which, with assistance of AS&TS and JCSS, was instrumental in creating perhaps the only formalized document on the promotion of SET in the new political dispensation. The Committee also indicated that difficulties in obtaining practical training for technician and university students cannot be addressed through SAVI and should be handled by the relevant professional bodies (SAIMM).

(ii) Several meetings on a Unified Approach for Engineering Discipline Career Guidance were attended under the chairmanship of SAVI. It is believed that continued involvement in this initiative will lead to high-quality students being attracted to the disciplines of mining and metallurgy. It is recognized that mining and metallurgy have not been given sufficient exposure in the promotion of engineering careers, and that careers for technicians, technologists, and graduates as equal members of the engineering team should be promoted.

➤ ASARET

Representation of ASARET amounts only to indirect liaison through patron representatives. It is sad that no

mining technicians are registered through ECSA or ASARET. This position is likely to continue until such time as the industry recognizes registrations for people holding down specific jobs in industry. Much discussion has taken place in Committee and Council on the pros and cons of the current legislated qualifications for mining and related positions in industry.

The Committee has determined to promote specifically the following projects:

- a unified 'Career Guidance and Education' committee to represent mining and metallurgical professional bodies—in effect, to consolidate the representations of SAIMM, AMMSA, MMMSA, and SACMA; this thinking is in line with the SAIM3 concept proposed by the Institute's Council in 1992 and 1993
- creation of an 'industry information centre', where the youth could enquire about possible careers in the industry or could obtain any other industry-related information; this has been found necessary since the careers promotion department of the Chamber of Mines has been closed down
- mechanisms for obtaining practical training for mining and metallurgy students at universities and technikons.

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	K.A. van Gessel
R.P. Mohring	Dr H. Wagner
K.C. Owen	

*Co-opted

Awards Committee—Extractive Metallurgy

Dr N.A. Barcza, Chairman

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

*Co-opted

Awards Committee—Metals Technology

Dr P.R. Jochens, Chairman

Dr N.A. Barcza	J.L. Nel*
T.R. Curr*	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	Dr L.A. Cramer
B.R. Broekman	R.M. Whyte*
P.M. Craven*	

*Co-opted

Adjudication Committee—Metals Technology

Dr P.R. Jochens, Chairman

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

*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
1993	Prof. D.A. Pretorius

This year the award is being made to Dr Horst Wagner for his outstanding and unique contribution to the South African mining industry over the past twenty years.

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	Member
June	
1924	E.C. Polkinghorne*
1926	R.M. Martin
1927	W. Allen*
1930	E.T. Dunstan* (posthumously)
	P.L. Ward
1931	F. Bowdler

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1932	J.E. Laschinger*	
1933	F.D. Cartwright	E.R.C. O'Connor
	C.H. Coxon	B.M. Roberts
	J. Levin	A.A. von Maltitz
	D.D. McWilliam*	T. Waterman
1934	A.C.M. Cornish-Bowden*	J.W.V. Mortleman
	H.E. Cross	K. Rood*
	E.F. Laschinger	A. Siff*
	E. Margo	O. Weiss*
1935	O.B. Swallow*	
1936	O. Deane	A.H. Mokken
	T.L. Gibbs	H.L. Monro
	R.C.J. Goode	R.M.F. Seawright
	F.G. Hill	J.S. van Zijl
	D.M. Jamieson	L. Walter*
	D.J. Rogers	
	A.C. Pigott*	
1937	W. Bleloch*	J.J. Klein*
	L.A. Bushell*	C.D. Storrar
	K.W. Findlay	
1938	V.C. Barnes	C.A. McKechnie*
	E.T.S. Brown*	J.A. Nixon
	R.S. Cooke	E. Popplewell
	J.K.E. Douglas	C.G. Sowry
	A.L.A. Forder	E.W. Thiel*
1939	G. Armstrong-Smith	T.A. Newman
	D.E.R. Ayres	R.S. Pearson
	L.D.C. Bok	D.C.J. Squirrel*
	A.W.L. Brereton	G.G. Stanley
	E.H.D. Carman	R.F.J. Teichmann
	G.D. Gettliffe*	I.S. van Eyssen
	W.G.H. Jackson*	S.J. Venning
1941	A.H.H. Davison	D. de V. Oxford
	D.J. Forder	E. Pavitt
	A.R.C. Fowler	A.C. Petersen
	H.F.W. Ketelbey	E.R. Rudolph
	J.D. McNamara	P.W.J. van Rensburg
	T.F. Muller	
1942	R.E. Burton	O.L. Papendorf
	R.C. Espley-Jones	V.O. Steed
	N.M. Hayne	J.E. van Leeuwen*
	R.T. Naudé	W.C. Walmsley
1943	R.B. MacGillivray	J.D. McMorran
	D.J. Molony	R.P. Plewman
1944	J.L. Curtis	K.E. Steele
	A.F. Dick	A.S. Swartz
	E.T. Pinkney	A.H. Taute
	L.J. Prince	P.B. Weehuizen
	J.F. Reid	

* Deceased since becoming members of club

Gold and Silver Medals

Papers published in the *Journal* from March 1993 to February 1994 by members of the Institute were considered for medals.

Gold Medals

No gold medals were awarded.

Silver Medals

W.D. Ortlepp for his paper entitled 'Grouted rock-studs as rockburst support: A simple design approach and an effective test procedure', published in the February 1994 issue of the *Journal*.

A.J.S. Spearing for a suite of papers on 'Corrosion and wear of steel pipelines conveying backfill slurry', published in the May 1993, June 1993, and February 1994 issues of the *Journal* and recognizing a paper on the same theme published in June 1992.

Certificates were awarded to A.J. Buchan, N.R. Steward, and R. Cooke (non-members).

M.J.U.T. van Wijngaarden for his paper entitled 'Bottom-stirring in an electric arc furnace: Performance results at Iscor Vereeniging Works', published in the January 1994 issue of the *Journal*.

Certificate to A.T. Pieterse, a non-member.

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	S.H. Pearce
	A.F. Crosse	J.P. Williams
	J. Littleton	
1923	Dr J. Moir	
1930	H.A. White	
1931	P. Cazalet	Prof. J.A. Wilkenson
	A. Whitby	
1932	J.R. Thurlow	
1934	Dr Wm. Cullen	A. McArthur Johnston
	W.R. Feldtmann	Prof. G.H. Stanley
	E.H. Johnson	
1938	G. Melvill	F.W. Watson
	S. Newton	
1941	J. Henderson	
1943	Sir R.N. Kotzé	
1946	Dr J. van N. Door	T.K. Prentice
	C.J. Gray	R.S.G. Stokes
	Jas Gray	Prof. S.J. Truscott
	J.V. Muller	Prof. G.A. Watermeyer
	Prof. John Orr	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	A.J. Walton
	Dr A.J. Orenstein	F. Wartenweiler
	Dr H.J. van Eck	
1961	Dr C.S. McLean	
1966	Dr F.G. Hill	Dr F. Meyer
1970	H.E. Cross	D.M. Jamieson
	R.C.J. Goode	
1974	R.J. Adamson	C.J. Irving
	Dr W. Bleloch	J.F. Reid
	H. Britten	

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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	
1993	No award	

In 1994 this award is to be conferred on Mr B.C. Alberts for the outstanding contribution he has made to the Institute and industry over a number years.

Student Prizes

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

Mining

M.A.W. Gericke, University of Pretoria

'Chilled service water at West Driefontein Gold Mine'.

Extractive Metallurgy

E. Bauernschmitt, University of Pretoria

'Die direkte reduksie van vanadiumpentoksied deur middel van mikrogolf-verhitting'.

Metals Technology

P.S. Buys, University of Pretoria

'The effect of welding parameters on the resultant hardness in the heat affected zone of pressure vessel steel'.

Other Prizes

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	No nomination
Metallurgy	Luana Iorio

Book Prize

Mining	Daniel Limpitlaw
Metallurgy	Luana Iorio

University of Pretoria

Prestige Prize

Mining	Z.J. van Zyl
Metallurgy	J.H. Zietsman

Book Prize

Mining	E. Bauernschmitt
Metallurgy	J.F. Janse van Vuuren

Technikon Prizes

Metalliferous Mining	M. Wilsenach
Coal	M. Nell

University of Cape Town

Prestige Prize

Chemical Engineering	D.P. Amm
Materials Engineering	S.L. Vismer

University of Stellenbosch

Prestige Prize

Chemical Engineering	G.J. Annadale
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Cape Technikon

Prestige Prize

Extractive Metallurgy	S. Kruger
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The Chemical Engineering prizes will be awarded at the '13th Minerals Engineering Symposium' dinner in August 1994.

Delfos & Atlas Copco Travel Grant

The winners of the 1994 Delfos & Atlas Copco Travel Grant for Mining Engineers are Mr G.A. Cochran, Production Manager, Matla Coal Limited, and Mr J.S.J. Dudas, Manager Mining, Winklehaak Gold Mine Limited. They will be travelling to Brazil, Mexico, and Chile later this year.

1.4 Banquet

J.A. Cruise, Chairman

P.R. Janisch

P.D.K. Robinson

A.A.B. Douglas

The Centenary Banquet was held on the 25th March, 1994, exactly one hundred years and one day after the inaugural meeting of the Institute in 1894.

In accordance with past traditions, in which eminent public figures addressed the Institute at Annual Banquets, the State President, Mr F.W. de Klerk, addressed the Centenary Banquet, and the Institute was honoured to have him and Mrs De Klerk as distinguished guests.

It was a night of Presidents and Past Presidents. The current President, Dr Scott-Russell, delivered the opening address, the Immediate Past President, Mr Hoffman, said Grace, Past President Mr Goode (who was President in the 75th anniversary year) proposed the toast to South Africa, State President Mr de Klerk gave the Banquet Address, and Past President Mr Alberts replied.

On the tables as gifts to the attendees were miniature car-bide and Davy lamps and chocolate bullion bars with the Institute's crest moulded into the top face.

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The evening will long be remembered for the extended toast to the old South Africa by the oldest Past President, for the scrapping of the proposed speech by the State President who then 'spoke from his heart' and, finally, the *savoir-faire* (*capaci occasio?*) of Past President Alberts, who 'het sy man gestaan' by scrapping his prepared reply to the State President's prepared speech and also spoke from the heart, although now 'sy hart het in die keel geklop'.

1.5 Committee of Past Presidents

J.P. Hoffman, Chairman

P.W.J. van Rensburg

Prof. R.P. Plewman

Dr R.E. Robinson

Dr P.R. Jochens

G.Y. Nisbet

Prof. A.N. Brown

H.E. James

Dr H. Wagner

B.C. Alberts

C.E. Fivaz

Dr O.K.H. Steffen

H.G. Mosenthal

R.D. Beck

A committee of Past Presidents serving on Council and chaired by the Immediate Past President was formed. The function of this Committee is to debate and advise Office Bearers and Council on policy matters and issues of strategic importance to the Institute and its members.

Office Bearers and Council were, *inter alia*, advised on the following:

- membership of SAVI
- rules for the Conduct of Branches
- establishment of a Conference Division or Business Unit to organize conferences, seminars, symposia
- Honorary Presidents and Vice Presidents of the Institute for the next Council session.

1.6 Special Projects

J.P. Hoffman, 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 SAIM3

J.A. Cruise, Chairman

R.D. Beck

P.D.K. Robinson

Discussions are ongoing.

1.6.2 Centenary Committee

R.D. Beck, Chairman

J.A. Cruise

J.P. Hoffman

P.R. Janisch

P.D.K. Robinson

D.A.J. Ross-Watt

Dr H. Scott-Russell

This Committee met regularly to plan and coordinate the activities to mark the Institute's centenary on 24th March, 1994. The following were the results of this activity.

- Past-Presidents' Luncheon. A luncheon was held for Past-Presidents in the President's Room at Gold Reef City on 24th March. There are 28 surviving Past Presidents. Five were currently overseas and two, unfortunately, were too frail to attend. The remainder attended with the current Office Bearers. Dr Scott-Russell expressed the Institute's appreciation of the contributions made by Past-Presidents.
- Centenary Distinguished Lecture. A special evening event was held on 24th March to which all members of the Institute and special guests from a wide spectrum of the mining industry were invited. Mr P.R. Janisch, Chairman of the Journal Committee, started the evening with an illustrated talk giving a historical overview of the Institute. The President, Dr Scott-Russell, introduced the guest speaker, Mr R.A. Plumbridge. This was followed by the Distinguished Lecture 'Mining in a Global Context—Can South Africa Compete?' given by Mr R.A. Plumbridge, Chairman of the World Gold Council and of Gold Fields of South Africa. A vote of thanks by Prof. R.E. Robinson, President in 1975–76, concluded a most enjoyable programme. Drinks were then served.

- Centenary Banquet. A banquet for members, wives, and honoured guests was held in the Carlton Hotel on Friday, 25th March. A toast to South Africa was proposed by Mr R.C.J. Goode (President 1968–69). Dr Scott-Russell introduced the State President, Mr F.W. de Klerk, who spoke of the valuable contribution made to the country by the mining industry, and who proposed a toast to the Institute. Mr B.C. Alberts (President 1987–88) replied on behalf of the Institute. Guests were entertained by the Soweto String Quartet and received a miniature Davy or carbide lamp mounted on an agate slice.
- Commemorative Issue of the *Journal*. Mr P.R. Janisch, Chairman of the Journal Committee, produced a special issue of the *Journal* containing reprints of the seminal papers presented over the 100 years of the Institute's existence.
- Supplement to *The Star* and *Sowetan*. A special supplement written by Wharrie Nelson was produced to publicize the notable achievements of members of the Institute during the past century. Appreciation is recorded to all those companies associated with the minerals industry who advertised in the supplement.
- Calendar. A calendar was produced in conjunction with HL&H Mining Timber. Each month highlighted technical achievements reported in the *Journal* of the Institute. The Institute thanks HL&H for their contribution.

Appreciation is expressed to Mrs Celeste Mackintosh and all the staff of the Institute for their hard work in making these activities so successful.

2. Technical Meetings

Portfolio Holder: P.D.K. Robinson

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

K.C. Owen, Chairman

A.A.B. Douglas

Dr W. Assibey-Bonsu*

J.R. Dixon*

F.M.G. Egerton

B.R. Fleetwood

*Co-opted

P.J. Knottenbelt

R.P. Mohring

P.S. Piper

K.A. van Gessel

D.J. van Niekerk

The year was again a busy one for the Committee.

Table II

Schedule of Technical Conferences, 1993/94

Description	Title	Venue	Attendance
Mining Schools	Drilling and Blasting in Narrow Reefs and Their Effect on the Profitability of Gold Mines	AAC, West Rand Regional Training Centre, Carletonville	85
	Repeat School: Drilling and Blasting in Narrow Reefs and Their Effect on the Profitability of Gold Mines	Ferdi Meyer Hall, Civic Centre, Stateway, Welkom	117
Mining Colloquia	Improving the Productivity of Human Resources	Mintek	281
	Preparation of EMPs for Mines: Facing the Realities	Mintek	202
	Quo Vadis?—The South African Mining Industry	Mintek	144
	Productivity for Present Profitability and Posterity's Prosperity	Mintek	103
	Manning the New South African Minerals Industry	Mintek	117
	Radiation Protection	Mintek	79
	Process Simulation, Control and Optimization	Mintek	72
Extractive Metallurgy Schools	Metallurgical Process Design	Mintek	137
Extractive Metallurgy Colloquium	Materials Selection for Extractive Metallurgy	Mintek	59
Metals Technology School	G.T. van Rooyen Seminar—Materials in Action	Senate Hall, University of Pretoria	81
International Conference	Minefill '93—Mining with Backfill	Sandton Holiday Inn, Sandton	222
Special Interest Group—Computer Applications Seminars	Practical Applications of Time and Attendance Systems, Including Leading Edge Technology, Such as TRIAD and Transponder Systems	JCI Auditorium	15
	Image Processing for the Minerals Industry	Anglovaal Auditorium	35
	Why Downsize Information Systems? A Practical Look	JCI Auditorium	45

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The 5th International Symposium on Mining with Backfill—Minefill 93, held in September, was very well attended, with 222 delegates from 17 countries. The organizing committee under the chairmanship of Dr John Stewart is to be congratulated.

The school on 'Drilling and Blasting in Narrow Reefs and Their Effect on the Profitability of Gold Mines', organized by a team headed by Roger Dixon, was over-subscribed, and a follow-up school was held in Welkom to satisfy the demand.

The colloquium 'Productivity for Present Profitability and Posterity's Prosperity' drew 281 delegates and also prompted a follow-up productivity colloquium ably organized and chaired by Alistair Douglas.

Peter Robinson almost single handedly produced the well-attended colloquium 'Quo Vadis the South African Mining Industry?', and Peter Knottenbelt and Ken Owen convened the colloquium 'Manning the New South African Minerals Industry'.

The Committee was also involved in arrangements for the XVth CMMI Congress, and will be available for duties at the conference.

The Committee is to be commended, as in the past, on an excellent year, and it is with confidence that they will take on the challenges of the future.

Without the dedicated services of the highly skilled and competent secretariat, these events would not have been possible, and the Technical Programme Committee expresses its appreciation for this service.

2.2 Technical Programme Committee — Extractive Metallurgy

Dr N.A. Barcza, Chairman

Dr R.V.R. Handfield-Jones

G.A. Brown

B.R. Broekman

Dr L.A. Cramer

**Co-opted*

P.M. Craven*

J.J. McEwan*

W.W. Stange*

R.M. Whyte*

A three-day school on 'Process Simulation, Control, and Optimization' was held from 18th to 20th August, 1993, at Mintek. The technology of process simulation and control has advanced rapidly over the past few years owing mainly to the enormous progress made in the field of computer hardware and software. The Keynote Address was presented by Prof. Peter King, a Past-President of the Institute. The lecture topics covered included the following: steady-state simulation, modelling of metallurgical processes, material-balance smoothing, simulation of comminution and classification, dynamic simulation, artificial intelligence, control of milling and flotation, instrumentation, and supervisory systems. Altogether, 72 delegates attended the School. Special thanks are due to Wayne Stange and Peter Craven for their efforts.

A three-day School on 'Metallurgical Process Design' was held from 10th to 12th November, 1993, at Mintek. The objective of the School was to provide a logical sequence of the stages that are required to design, construct, and commission a metallurgical plant. The lectures included the following: the role of the metallurgist in project management, environmental management, Hazop studies, R&D testwork — the key to successful design, process selection techniques for identifying an optional treatment route, mass and energy balances, capital- and operating-cost estimation, and plant commissioning. The school was attended by 137 delegates. Special thanks are due to Dr Rad Handfield-Jones for his excellent work in arranging this school.

A one-day colloquium on 'Materials Selection for Extractive Metallurgy' was held on 22nd June, 1994, and a total of 59 delegates registered. The aim of the colloquium was to provide a forum for the exchange of ideas on the latest developments in the materials used in extractive-metallurgical plants. The following topics were addressed: the use of coatings, the use of aluminium, corrosion- and abrasion-resistant materials, mill-liner design, manganese steel and cast iron grinding balls, ceramic metal composites, and polymer lining systems. Thanks are due to John McEwan for arranging the Colloquium.

2.3 Technical Programme Committee—Metals Technology

Prof. R.J. Dippenaar, Chairman

Dr N.A. Barcza

J.W.P. Bennie*

A.M.P. Henderson*

Dr. B. Metcalfe*

J.L. Nel*

**Co-opted*

C.A. Scheepers*

Dr H. de V. Steyn*

Dr W.H. van Niekerk*

C.J.C.J. van Vuuren*

The Committee participated in the organization of the XVth CMMI Congress, which is to be held in September 1994. Altogether, 32 papers on metals technology were accepted, refereed, and prepared for presentation.

'Materials in Action' was the theme of the G.T. van Rooyen Symposium, which was held at the University of Pretoria in honour of Prof. G.T. van Rooyen, who retired after 34 years of unstinting service to the metallurgical fraternity. A number of leading industrialists, all former students of Prof. van Rooyen, reflected on the state of their respective technologies. All the available doctorandi who had completed their studies under the supervision of Prof. van Rooyen presented papers on their respective contributions in putting materials into action. The Symposium was attended by 81 delegates.

A school on 'The Continuous Casting of Steel Billets and Slabs' was organized in collaboration with the Minerals, Metals and Materials Society. A three-day course was presented by Prof. J.K. Brimacombe, Director: Centre for Metallurgical Process Engineering, University of British Columbia, and Prof. I.V. Samarasekera, Professor: Department of Metallurgical Engineering, University of British Columbia. The School, held in Vanderbijlpark, was attended by participants from all walks of engineering life. The School was well attended, with a total of 96 delegates.

Long-term planning of events received considerable attention, and exciting events are planned for the immediate future, notably an international iron and steel congress and a school on direct reduction technology.

2.4 Minerals Legislation

R.P. Mohring, Chairman

D.A.J. Ross-Watt

B.C. Alberts

B.R. Fleetwood

No issues were addressed during the year.

P.D.K. Robinson

D.J. van Niekerk

2.5 Committee for the Environment

D.J. van Niekerk, Chairman

K.A. van Gessel

Dr N.A. Barcza

G.A. Brown

P.M. Craven*

A.E.W. Fletcher*

J.S. Freer*

J.C. Greeff*

Dr A. Patterson*

A.L. McLaren

R.P. Mohring

*Co-opted

The year 1993–94 was again very eventful in terms of environmentally related events and issues. The Committee participated in the following activities:

- nominating suitable candidates for some of the 1994 EPPIC awards;
- evaluating nominations for the 1994 EPPIC award for the best South African technical paper or environmental publication;
- preparing numerous short articles for publication in the Green Pages of the Institute's *Journal*;
- representing the Institute on EPPIC's Central Committee;
- representing the Institute on the Mine Water Division of WISA so as to liaise with members with related interests;
- adding environmentally related schools, seminars, colloquia, and conferences to the SAIMM's long-term schedule of events;
- submitting comments to Zille Shandler Associates, who are coordinating the preparation of a Coastal Zone Management Policy for South Africa;
- arranging a Think Tank on 1st March, 1994, to identify the needs of the mining industry with regard to environmentally related issues, for inclusion in the Technical Programme Committee—Mining's long-term schedule of events; interested institutions such as the Mine Ventilation Society of South Africa, WISA Mine Water Technical Division, Environmental Engineering Division of the Institution of Civil Engineers, and the Geological Society of South Africa, were invited to participate;
- submitting comments and suggestions on the Proposed Policy on the Classification of Protected Areas in terms of Notice 1122 of 1993 to the Habitat Council;
- arranging a most successful one-day colloquium 'Preparation of EMPs for Mines: Facing the Realities' at Mintek, on 3rd August, 1993; delegates commented most favourably on the design and management of the Colloquium, and on the topical, well-presented, and stimulating discussions;
- arranging specialist lectures and providing an opportunity for members to meet some of the major decision-makers in interested and affected State departments:
 - Mr Phil E. Metcalf, Council for Nuclear Safety, 13th April, 1994
 - Drs de Villiers and Engelbrecht, Mintek, 20th May, 1994;
- submitting comments for the final report by the Assessment Management Committee with respect to the 'Environmental Impact Report for Mining of the Eastern Shores of Lake St Lucia (Kingsa/Tojan Lease Area)'; the final report recommended that mining of the Eastern Shores should not be allowed.

The Institute is concerned that, if all future projects are exposed to the type of confusion and misapprehension typifying the St Lucia saga, the mining industry will find it difficult to contribute towards the provision of the most needed growth and job opportunities in the new South Africa.

The recommendation not to proceed with mining is indicative of the emergence in South Africa of the 'Precautionary Principle', which is comparable in the public law of being guilty until proved innocent—an approach that is expected to open the door to even more prejudice and emotions with respect to environmental issues.

2.6 Special Interest Group—Surface Mining (SIGSM)

C. Swart*, Chairman

*Co-opted

The Special Interest Group—Surface Mining has been fully resuscitated through a successful programme of technical presentations, mine visits, and seminars.

A group of 22 members visited Palabora Mining Company in August 1993, at which technical presentations were made by mine personnel covering the Phase III mining plan, which envisages a change to underground mining.

Barlows Equipment Company sponsored a half-day seminar, which was held in Johannesburg in September 1993. The theme of the seminar was 'Surface Mining Transport Systems', and local and overseas experts presented papers on current transportation topics. The seminar was very well attended, with some 225 delegates.

During October 1993, members of the Group visited Middelburg Mine, at which they were afforded a first-hand opportunity to see and hear of new developments in loading technology, from the points of view of both equipment suppliers and users.

A visit to Syferfontein Mine heralded the start of the Group's activities for 1994. The visit in March was attended by 45 members. Technical presentations by mine personnel covered production and environmental-management topics.

2.7 Special Interest Group—Computer Applications (SIGCA)

Dr I.C. Roselman, Chairman

The first Annual General Meeting of SIGCA took place on 5th August, 1993. The rules were adopted and a new Committee elected.

Three half-day seminars were held during the year, on the subjects of 'Time and Attendance', 'Image Processing in the Minerals Industry', and 'Downsizing Information Systems'. A planned seminar on process control did not take place. In addition to these seminars, the Committee organized a visit to Potgietersrus Platinum Mine.

Activities suggested for next year include seminars on executive information systems, electronic trading, production/ore accounting, tele-conferencing, global positioning systems, and the latest in mine-planning software. The last would be an opportunity for vendors of mining software to present their products. It is unlikely that more than four of these seminars will be scheduled for one year. A visit will also be arranged to the Iron Ore Mine in Thabazimbi.

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2.8 Special Interest Group on Process Control (SIGPC)

W.W. Stange, Chairman

This Group, which is affiliated to the Technical Programme Committee—Extractive Metallurgy, held two events in 1993–94.

The first was a seminar on the kinetic simulation of pyrometallurgical processes. The seminar was presented by Mr Lloyd Nelson of the University of Missouri, Rolla. This institution has developed SMAK, which is a software package that simulates the steady-state and dynamic behaviour of multi-phase pyrometallurgical processes. Delegates who attended the seminar were given a detailed presentation of the principles on which the software is based. Case studies illustrating typical applications of the software were also presented. Delegates were also given the opportunity to try out the program in a hands-on manner. Thanks go to Dr Nic Barcza for organizing this event.

The second activity was a visit to the Palabora Mining Company (PMC) in order to view some of the recent developments, of both a metallurgical and process-control nature, that have taken place at PMC recently. These developments include the installation and operation of a Waterflush crusher for pebble crushing in the large autogenous-mill circuit, the use of several particle-size indicators for on-line size measurement, the on-line mineral analysis system, and the installation of a supervisory control system. This was an enjoyable visit from both a technical and a social perspective. Gratitude is expressed to PMC staff for hosting this visit.

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.

3.1 Journal

P.R. Janisch, Chairman

J.D. Austin*
Dr L.A. Cramer
A.A.B. Douglas
F.M.G. Egerton

*Co-opted

R.P. Mohring
D.A.J. Ross-Watt
Dr A.J.S. Spearing*
P.M.T. White

Only eleven issues appeared this year since the November and December 1993 issues were combined. The January 1994 issue appeared with a new layout and typeface, but the highlight of the year was the Centenary issue in March 1994.

This issue carried a new cover and consisted of 280 pages covering seminal papers published in the *Journal* from 1894 to the present day. It was well supported by advertising, and thanks go to the secretariat for their added effort in securing these advertisements.

The supply of refereed papers was adequate. The Committee is grateful to the 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 Metallurgy	Dr N.A. Barcza	B.R. Broekman
	G.A. Brown	Dr P.R. Jochens

Metals Technology	J.L. Nel*	Prof. G.T. van Rooyen*
	Prof. R.F. Sandenbergh	

*Co-opted

3.2 Book Publications

R.P. Mohring, Chairman

J.D. Austin*	J.W. Klokow*
P.M. Craven*	Dr A.J.S. Spearing*
J.R. Dixon*	Dr H. Wagner
A.A.B. Douglas	P.M.T. White
Dr L.A. Cramer	L. Woollacott*
F.M.G. Egerton	

*Co-opted

The Desk-top Publishing Department of the Institute experienced another very busy year producing volumes for the Book Publications Committee, conference proceedings, and the *Journal*. A significant proportion of the Department's time was spent in preparing three volumes of proceedings for the forthcoming XVth CMMI Congress, which is to be held from 4th to 9th September, 1994.

During the year, the proceedings of the MINEFILL Conference were published.

The volume on 'Measurement, Control and Optimization' has, after many delays by authors, now been printed, and the text for two other volumes, namely 'An Overview of Minerals Processing' and 'Minerals Engineering Management', are complete and awaiting publication. The 'Handbook on Strata Control' has progressed satisfactorily despite Dr H. Wagner's relocation to Austria.

New volumes in the pipeline include publications on back-filling and an update of *Rock Mechanics in Mining Practice*, which was initially published in 1983.

Sales of Institute publications showed a disappointing decline during the year, and the Committee is re-evaluating the marketing strategy.

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The Committee records its appreciation of the valuable contribution made by the DTP Department and the Institute Secretariat, especially Susan Higgs, Karen Norman, and Debby McLellan, for their efficient administration of the Committee's affairs.

4. Regional Development

Portfolio Holder: P.D.K. Robinson

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

P.D.K. Robinson, Chairman

A.A.B. Douglas	K.G. Ludwick/C.A.F. Sweet
B.J. Addison	Dr L. Lorenzen
R.D. Beck	H.G. Mosenthal
A.M.L. de Sousa	Prof. R.F. Sandenbergh
A.E.W. Fletcher*	K.A. van Gessel
P. Gericke	P.W.J. van Rensburg

*Co-opted

Probably the most notable achievement of the year was the successful implementation of a new branch at Richards Bay. Mr John Selby and his committee members are to be congratulated on their efforts.

Programmes arranged by the branches continue to play an important part in supplementing the events planned by the technical committees of the institute. The planning of these events on a decentralized basis is progressing well, with co-ordination between branches.

Because of the heavy commitments of members of the Committee in preparing for the CMMI Congress in September, the review of the boundaries of branches and the identification of mining areas not suitably covered by existing branches are still ongoing.

The Branch Chairmen and their committees are to be congratulated on their efforts to arrange stimulating technical and commercial meetings and excursions for their members.

4.2 SAIMM Branches

4.2.1 Johannesburg Branch

K.A. van Gessel, Chairman

J.G. Allen	G.S. Lee
P.L. Brogan	R.P.H. Willis
J.R. Dixon	C.L. Workman-Davies

The Johannesburg Branch enjoyed another year of interesting presentations and technical visits. Unfortunately, there was not sufficient interest in the lunch-time lectures. Whilst none was held during the year, the Committee will arrange lectures when suitable topics can be identified.

A variety of technical presentations were made at general meetings:

20th July, 1993	Social Responsibility and Change in the Mining Industry, presented by Mr Gary Maude, Chairman and Managing Director, Gengold Limited
24th August, 1993	Students' technical evening
21st October, 1993	Richards Bay Coal Terminal, presented by Mr M.B. Dunn, Managing Director of the Richards Bay Coal Terminal
19th May, 1994	Mining Research: The Way Ahead, presented by Dr Geoff Garrett, Vice President Operations, CSIR, and Mr Johann Fritz, Director, Division of Mining Technology.

The attendance was disappointing compared with that of previous years, although on average some 60 to 80 people showed keen interest. The Committee's appreciation goes out to the speakers and sponsoring companies. The presentations and cocktail parties provided a forum for members to exchange ideas and renew acquaintances.

Very interesting visits were conducted to the following companies:

4th November, 1993	Lyttelton Engineering Works
17th March, 1994	Potgietersrus Platinum Ltd.

Both excursions were over-subscribed, and the companies organized very interesting technical visits. The visit to Potgietersrus was, in fact, so popular that a follow-up visit has been arranged for those members who could not attend. The Branch records its thanks to the companies who hosted these visits.

A cheese and wine evening was organized to provide for a social, non-technical get-together. The numbers were disappointing, but the evening was enjoyed by all who attended.

The change of venue for general meetings from Johannesburg Country Club at Auckland Park to Delta Park was necessary because of rising costs. Whilst this change may have contributed to the lower attendance, the facilities are far superior to the former venue, and the catering for cocktail parties very good indeed. The Committee is confident that the positive aspects will more than offset the perceived negative aspects, and hopes that the new venue will be supported by all its members.

4.2.2 Orange Free State Branch

B.J. Addison, Chairman

D.R. Fleming	D.J.R. Ras
D.E.J. Jordaan	J.J. Watt
N. Liebenberg	E.N.D. Westgate

The Annual General Meeting on 18th August, 1993, was attended by more than 60 members and guests. Mr Ken Field, Chairman designate of AMMSA, spoke at length on currently important issues of the mine officials' pension fund. The topic evoked lively discussion between members. Mr John Cruise, Senior Vice President of the SAIMM, spoke next on the complex issues surrounding the newly proposed re-structuring of the

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engineering professional bodies in the Republic (proposed SAIM3). Although the subject matter of the two addresses was complex, the long-term interests of members were well explained. Once again, Freegold provided an excellent venue for this meeting, and Boart International (SA) sponsored snacks and drinks.

A technical visit was paid to St Helena's underground Transvac operations on 17th November, 1993. The mine management fully explained the benefits achieved so far in the extraction of high-grade pillars and the life extension of some of the oldest shafts in the Free State. The visit was attended by 25 local members.

Planning for the Institute's school on 'Drilling and Blasting on Narrow Reefs and Their Effect on the Profitability of Mines' started from the beginning of 1994. The event was held in Welkom over two days, 22nd and 23rd March, 1994, and was attended by 117 delegates. The quality and topicality of the presentations were of a very high standard, and evoked interest from all the mining areas of South Africa where this means of mining production is common. A Welkom venue for future similar Institute activities should be considered, because there is likely to be good support from the local membership and mine management.

Freegold's Diamond Wire Project provided the next opportunity for members to examine a new mining technology. Owing to many local operating problems at that time, the visit was not well supported, although it was well advertised.

The technical activities were generally well supported over the year, although, as other national events interacted with the operation of the local mines, members correctly focused more attention on their urgent work-related responsibilities.

The Branch Committee changed during the year as S. Goodwin, P.G.L. Hol, R.I. Klintworth, and H. Laycock were transferred or retired. Their contributions to the Institute's local activities were much appreciated by the members.

4.2.3 Pretoria Branch

Prof. R.F. Sandenbergh, Chairman

Prof. A.N. Brown	P. Pretorius
G.S. Esterhuizen	F. van der Colf
P.G.H. Pistorius	Dr T. von Moltke

The Pretoria Branch again had a 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 its members.

The Annual General Meeting of the Branch was held on 26th July, 1993, in the Minerals Sciences Building at the University of Pretoria, and was attended by some 50 people. It was a pleasure to again have the attendance of the incoming President, Dr Hugh Scott-Russell, who gave a talk on 'Mining in Africa'. The Branch also said farewell to Mr Willem van Wyk, the retiring Managing Director of Iscor Ltd. The cocktail party after the meeting was sponsored by JCI and Iscor.

The Branch, together with the Departments of Materials Science and Metallurgical Engineering and of Mining Engineering of the University of Pretoria, again presented a series of metallurgical forums and mini-symposia. These events were structured to arouse the interest of both the students and other members, and allowed ample time for discussion. The attendance at these events usually amounted to about 40. Cocktail parties after each meeting served as get-togethers for the members and also allowed the younger members to make contact with senior engineers from industry. The Branch was again fortunate to have a number of prominent speakers at these events.

A mini-symposium on 'Heat Treatment' was held on the afternoon of the Annual General Meeting, and the following lectures were given:

Prof. G.T. van Rooyen	'n Herwaarding van die Austemper Hittebehandeling
Dr R. Mostert	Spanningsvrye Uitgloeïing van Groot Strukture
Dr C. Grobler	Die Invloed van Spanningsverligting op die Vermoeidheidsgedrag van Gesweisde Strukture
G. Pienaar	Versterkingsmeganismes in Verbard en Getemperde Lae Legeringstaal.

A mini-symposium on welding was held on 4th August, with the following speakers:

Mr G.H.J. van der Bergh of the SABS	Changes in European Welding codes
Mr Leon Rosenbrock of ESKOM	The Rehabilitation of Turbine Components
Prof. P.G.H. Pistorius	The Weldability of 12% Cr Steels.

C.J.C.J. van Vuuren gave a lecture on 'Strategic Planning' on 1st September.

A mini-symposium on 'Surface Science and Engineering' was held on 4th October, with lectures by Prof. T. Bell of the University of Birmingham ('The Role of Surface Engineering in the Development of Wear-resistant materials') and Dr R. Hutchings of ANSTO, Australia ('Plasma-assisted Ion Implantation').

At the first event in 1994, on 9th February, Mr Hans Smith, Managing Director of Iscor Ltd, gave a lecture on 'Toekomstvisie vir die Suid-Afrikaanse Staalbedryf'.

A mini-symposium on 'Surface Science and Metallurgical Processing' was held on 7th March, with lectures by Dr V. Leroy, of CRM, Belgium ('The Influence of Surface Oxides on the Pitting Resistance of Tinplate') and Dr T. von Moltke, Iscor Research ('The Properties of Surface Layers on Steel').

Mr Chris Rowan of De Beers gave a talk on the extraction of diamonds on 15th May.

A mini-symposium on welding was again held on 25th May, with the following speakers:

M. Coetzee	'Sweisbaarheid van Eksperimentele Austenitiese Cr-Ni-Mn-Cu Roesvrystale'
Prof. P.G.H. Pistorius	The Welding of Creep-resistant 9% Cr Steels.

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The Committee is satisfied with the format and attendance of the events that were hosted during the year. The Branch was fortunate in having a number of distinguished speakers at the meetings, and is grateful to them for their time and effort. It also acknowledges the contributions of Iscor, JCI, and De Beers, who made it possible for these meetings to be hosted at no cost to the members.

4.2.4 Vaal Triangle Branch

A.M.L. de Sousa, Chairman

F. du Toit

G. Panapoulos

H. Mocke

H. Parsons

The year 1993–94 was very successful for the Institute in the Vaal Triangle area. The Branch hosted eight events, including three technical evenings, three plant visits, and one joint lunch meeting. A total of 178 participants attended the various functions.

The two most popular events were Dr W. van Niekerk's presentation entitled 'Iron and Steel Production—Recent Developments' (attended by 40 delegates) and Mr R.D. Beck's presentation entitled 'Gold Processing—Technical and Commercial Developments during the next Five Years' (attended by 41 delegates).

Innovations included the hosting of the following:

- a technical evening at Iscor Vanderbijlpark (iron and steel issues) and at the GFTS, Carletonville (extractive metallurgy and mining-related issues)
- joint lunch meetings with MMMASA.

Two members joined the Institute.

The monthly meetings of the Vaal Triangle Branch were held at the Vaal Triangle Technikon.

The outgoing Chairman of the Branch expressed his gratitude to Caroline Jansen (Regional Secretary of the SAIMM), to members of the Committee of the Branch, and to Messrs van Zyl and Nel for kind assistance with the typing of the minutes. He also expressed his sincere appreciation to the incoming Chairman, Mr Frans du Toit, for his unfailing support and commitment to the Branch.

4.2.5 Western Cape Branch

Prof. L. Lorenzen, Chairman

J.J. Cilliers

Dr R.D. Knutsen

Prof. F.L.D. Cloete

F.W. Petersen

Dr C.T. O'Connor

Prof. J.S.J. van Deventer

Dr J-P. Franzidis

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

It is customary for the Branch to hold at least one symposium every year, which until now has taken the form of an Annual US/UCT Minerals Processing Symposium held at Gordon's Bay. However, in 1993 the annual symposium took the form of an international event, i.e. Minerals Engineering '93, which was held from 25th to 27th August, 1993, at the Cape Sun Hotel in Cape Town. This event was organized by the Branch in collaboration with Dr Barry Willis, editor of the international journal *Minerals Engineering*. A total of 166 delegates attended the conference, and 80 papers and posters were presented. The Branch received about R16 000 for its portion of the profit made. This money will be transferred to the Branch's conference account for the organization of future conferences.

The Department of Materials Engineering at UCT held an international conference 'Materials into the 21st Century' from 6th to 8th October, 1993, at the Van Riebeeck Hotel in Gordon's Bay. This conference was fully supported by the Branch, and 120 delegates attended. A total of 29 papers were presented, 15 being by overseas authors.

This year's Annual Minerals Processing Symposium will be held from 3rd to 5th August, 1994, again at Gordon's Bay.

During April 1994, the Branch once again organized a tour for the minerals processing undergraduates from both universities and the Cape Technikon. The tour, undertaken by 40 students, was led by Prof. Leon Lorenzen from the University of Stellenbosch, assisted by Mrs Leonie Strydom, a technical officer associated with the Western Cape Minerals Processing Facility. Visits were made to Rössing Uranium Mine at Swakopmund, Navachab Gold Mine at Karibib, and Imcor Zinc at Rosh Pinah.

A very well-received seminar on the likely future of the South African mining industry, organized by Mr Jan Cilliers of UCT, was held on 24th March, 1994, in the Department of Chemical Engineering at UCT. The date of the seminar was very significant in that it was the 100th birthday of the SAIMM. This was a highly successful technical meeting, and was attended by 110 people. The main speaker was Dr Palo Jordan from the ANC's Department of Economic Planning. Afterwards a social function was held, which served as an introduction to the SAIMM for students from the US, UCT, and the Cape Technikon.

Owing to the elections, no school days were organized at UCT and US this year. This event will feature again prominently on next year's calendar.

As can be seen from the range of activities, the Branch is very active, notwithstanding its distant geographic location. A few other technical visits to operations such as Namaqua Sands are currently also being initiated. One of the Committee members, Prof. J.S.J. van Deventer, was nominated by the Council to serve on the International Scientific Committee of the International Mineral Processing Congress.

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 two Universities and the Cape Technikon. The continued interest shown by industry in the Branch's main event, the Annual Minerals Processing Symposium, is most gratifying. The Branch is planning an international conference, 'Minerals Processing '96', in September 1996.

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The Chairman thanks the members of the Committee for their support and help during the past year. Without their enthusiasm, the smooth running of the Branch would not have been possible.

4.2.6 Eastern Transvaal Branch

P. Gericke, Chairman

W.J. Abel	R. Jennings
B.G. Bell	J.A. Johnson
K.T. Bladwell	A. Pix
C.P. Goodale	M.H. Rogers
A.M.P. Henderson	D. Smith
R.R. Hendry	C. Sonnekus
P.A. Henry	

The Branch once again enjoyed a very successful year. Several technical and social events were hosted by various companies in the region, all of which were very well supported by members and guests.

The year started with a technical visit hosted by Highveld Steel & Vanadium at which papers on coal combustion and the upgrading of the iron plant at Highveld were presented, followed by a short plant visit.

This was followed by a social dinner during November 1993 at Middelbult Colliery, at which a very interesting paper and slide show on the Olifants Forum was delivered.

A second technical meeting was hosted by Goedehoop Colliery at which papers on the EMPR were delivered by representatives of the Departments of Mineral and Energy Affairs and Water Affairs. This was followed by a lively discussion on the problems experienced by the industry in the preparation of EMPRs.

Bank Colliery hosted a social dinner during March 1994, at which Mr Neville Finch shared with members and their wives his experiences during a visit to China.

A technical visit to the SMX explosives plant in Secunda during May had to be postponed at short notice owing to communication problems, and will be held in the near future.

The Annual General Meeting of the Branch was held on 28th June, 1994, at the SA Coal Estates Recreation Club, followed by a dinner by courtesy of SA Coal Estates.

During October, the Branch organized technical and career-guidance visits for students from PROTEC to the ferro-alloy industries in the area. These visits were well attended, and participants found them to be very helpful. It is the intention to maintain contact with PROTEC as part of the Branch's social responsibility.

4.2.7 Northwestern Transvaal Branch

C.A.F. Sweet, Chairman

R. Drummond	K.G. Ludwick
K.E. Field	W. Muir
N.A. Fortmann	G. Watson

For the year 1993-94, the Branch was inactive after the resignation of Mr J.B.D. MacLennan, who was transferred to Lonrho Head Office, Johannesburg.

A new Committee has been formed, and plans have been formulated to give momentum to the Branch for the coming year.

4.2.8 Zululand Branch

J.H. Selby, Chairman

F.W. Kluckow

D. de Wet Smith

The objectives of the Zululand Branch are as follows:

- to encourage and develop interest in all the technical disciplines involved in the practice of mining and metallurgy in the Zululand area
- to encourage the exchange of technical information between the various disciplines involved in mining and metallurgy
- to encourage interest in the technical disciplines among scholars and students, with the aim of developing more scientists and engineers.

The past year was particularly significant in that it saw the formation and official inauguration of the Zululand Branch. The first meeting was held on 2nd September, 1993, at the Richards Bay Library Hall and was chaired by J.H. Selby. Twenty persons attended the meeting, which resolved to form a local branch of the Institute. The listed Committee was selected to steer the formation.

Under the direction of the Committee, the Branch was formed and underwent its official inauguration by the President of the Institute, Dr H. Scott-Russell, on 28th October, 1993. Since that date, regular meetings have been held covering various technical topics. On 9th June, the first Annual General Meeting was held to elect the Committee for 1994-95.

The Branch has operated successfully with a committee of three—chairman, vice chairman, and treasurer. The option to co-opt extra members was available but was not used in the 1993-94 year. The Committee met seven times during the year. Regarding the election of the Committee, agreement was reached with the Council of the Institute that all members of the Branch could vote regardless of their membership status of the Institute. However, it was also agreed that the Branch Chairman would always be a Corporate Member.

The Committee has established a mailing list of interested persons to which all Branch communications are sent. This list currently stands at 123.

The following technical presentations were held at the Richards Hotel. The meeting times were fixed at 18:30 for 19:00, and the meetings were generally held on the second Thursday of each month.

28th October, 1993	Inauguration of Branch by Dr H. Scott-Russell (President, SAIMM) Plans for the centenary celebrations of the SAIMM described by Dr H. Scott-Russell 'A Professional Structure for the Minerals Industry' by Mr J.A. Cruise (Treasurer, SAIMM)
11th November, 1993	'The Role of Technical Ceramics in Industry' by Mr T. Bubenzer (Technical Services Manager, Multotec)
9th December, 1993	Plant visit to Richards Bay Minerals
27th January, 1994	'Partnerships in Automation' by Mr G. Yingling (Director, Global Industry Sales, Allen Bradley)

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10th February, 1994	'The Background to the Hillside Smelter' by Mr P. de Waal (Operations Director, Alusaf)
10th March, 1994	'Selection and Design of Pneumatic Conveying Systems' by Mr L. Bromley (Senior Engineer, Batemans Materials Handling)
14th April, 1994	'Management Information Systems and Their Applications' by Mr P. de Villiers (Systems Engineer, Bateman Process Instrumentation)
May 1994	Meeting cancelled due to elections
24th May, 1994	Plant visit to Alusaf
June 1994	Annual General Meeting 'Five Famous Teachers' by Prof. M. Laing (University of Natal).

The Committee decided to plan three visits or tours per year. The first took place on 9th December, 1993, to Richards Bay Minerals (RBM) and included tours of the mining, mineral-separation, and rehabilitation areas. A braai, kindly sponsored by RBM, was held after the tour at the Indaba Inn on the RBM site. The second visit was held on 24th May and took place at the Alusaf Bayside Smelter. Altogether 22 persons attended the tour, which was very informative and covered all aspects of smelting and casting. Alusaf sponsored a braai after the tour, which was held at the Richards Bay Country Club.

The Committee has requested the Education Sub-committee of Council to assist with brochures and pamphlets that can be supplied to local schools to inform scholars of the benefits of a career in mining or metallurgy. No response has yet been received, and the Branch may decide to itself produce such brochures in future.

The Vice Chairman, Mr F.W. Kluckow, presented a paper at an Education Seminar held by the University of Natal. The paper covered the technical aspects of the production of titania pigment and zircon.

Mr Kluckow also arranged for Mr A. Crichton of RBM to address black scholars at the Tisand Technical College on the benefits of technical education.

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>
Dr H. Scott-Russell	J.P. Hoffman
J.A. Cruise	D.A.J. Ross-Watt

The main thrust of the AS&TS is to extend the organization's influence in bodies such as government, research councils, and a myriad of NGO's, which, traditionally, have set the policies in the fields of Science, Engineering and Technology (SET).

In tandem with the Government's policy of 'building a strong and growing economy', the AS&TS intends using its vast membership, in collaboration with other interested parties, to press for intelligent SET policies.

A start was made by the ANC, COSATU, and SANCO alliance, which commissioned a report entitled: 'Towards a Science and Technology Policy for a Democratic South Africa'. This was produced by the Science and Technology Initiative, an off-shoot of the International Development Research Centre (IDRC), which enjoys the support of the principal bodies within the state research system, industry, the AS&TS, SAVI, and JCSS.

Earlier this year, in accordance with its new lease of life, the AS&TS decided to reinforce its involvement in education. A consultative document, 'Contribution towards developing an education policy for technology', was issued and distributed to all societies. The resulting widespread discussions bode well for influencing the re-structuring of the education system.

5.2 Engineering Council of South Africa (ECSA)

	<i>Mining</i>	<i>Metallurgy</i>
<i>Representative</i>	R.P. Mohring	Prof. R.F. Sandenbergh
<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 activities as related 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.

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The Institute 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 Institute in the accreditation of courses offered by universities and technikons in the disciplines of mining and metallurgy.

Mr Henry James resigned from the Council of ECSA and also as Chairman of PAC Metallurgy, but will continue to serve on PAC Metallurgy. He is thanked for the valuable contributions that he made through the years.

Prof. G.T. van Rooyen and Mr C.E. Fivaz also resigned from PAC Metallurgy during the year, and they are also thanked for their efforts over many years. Council has recommended that the vacancies be filled by Prof. R. H. Eric and Mr W.I. Watson.

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

Representative

P.J. Knottenbelt

Representation on ASARET during the year was only through indirect liaison with patron members of ASARET. It is a great pity that, despite the active promotion of registration by the Institute, virtually no mining, mine-survey, or metallurgical technicians are registered with ECSA or ASARET. It is clear that, whilst this situation exists, there is little chance (or purpose) in obtaining a higher level of representation (i.e. election to their council as one of the two allowed patron members). Further, it is unlikely that, whilst a mining or metallurgical technician does not have to depend on registration for employment or promotion opportunity, any change in the current position can be expected. It is clearly the ambition of mining technicians to obtain competency certificates (Mine Overseer's and Mine Manager's Certificates) that will allow them to be selected for legal appointments in production mining.

Until such time as the industry recognizes that all first-line supervisors (shift bosses) should be properly qualified as mining technicians (National Diploma), and require registration through ECSA to hold the position, no change is likely to occur.

Representations through ASARET have secured the commitment from ASARET that mining and metallurgical engineering will receive exposure equal to that of other engineering disciplines, e.g. civil, electrical, and mechanical.

5.4 South African Association of Registrable Engineering Technologists (SAARET)

Representative

Dr R.V.R. Handfield-Jones

Attempts by the Institute to obtain technologist status for National Higher Diploma (NHD) students in mining and metallurgy were unsuccessful. SAARET, however, advised that NHD students could obtain Professional Engineering Technologist status via the 'grandfather' clause. SAARET continues to be involved with SAVI and participated strongly in the SAVI/ECSA workshop on experimental training in technikons.

SAARET introduced a competition 'Technology into 2000' to promote the cause of affordable tertiary education in engineering. To this end, they secured a first-year bursary from one technikon.

The SAARET award for the best Master's Diploma of the year was made to Mr Seitz of Port Elizabeth Technikon.

SAARET continues to maintain a high profile in ECSA committees, and is involved in a number of initiatives to gain full recognition for the Professional Engineering Technologist. A number of bodies, both governmental and private-sector, continue not to recognize the Professional Technologist status.

In keeping with its intentions to improve its services to its members, SAARET is to change its name and adopt the status of a learned society. As from July 1994, SAARET will become The Institute of Professional Engineering Technologists (IPET).

5.5 Engineers' Liaison Committee

Representative

Prof. A.N. Brown

The Pretoria Engineers' Liaison Committee, comprising ten branches of engineering learned societies, functioned under the chairmanship of Mr W.F. Cronje. A social excursion was arranged by the SA Akademie (Engineering Branch) to the Pretoria Zoo during an early evening in November 1993 to observe the activities of nocturnal animals. The annual Hendrik van der Bijl Memorial Lecture for 1994 is scheduled for August instead of May.

5.6 Programme for Technological Careers (PROTEC)

The Institute continued with financial support for Protec. The 1569 Protec students in the post-school programme who wrote exams at the tertiary level achieved a pass rate of 95 per cent. The total number of students involved in the post-school programme was 1782 in 1993. Of these, 83,9 per cent have chosen careers in technology with a ratio of 1:2:0,6 in respect of university students, technikon students, and apprentices.

The past year has not been without its severe disappointments. The recession has left many students unplaced in either post-matric studies or employment. Many of the technikon students have been unable to complete their studies as a result of scarce in-service opportunities.

Protec attempted to address these and other related problems by creating a forum for the technikons, employers, and the trade unions to jointly discuss solutions.

5.7 Centre of Research and Development of Mathematics, Science and Technology (RADMASTE)

Representative

P.J. Knottenbelt

The operations of the Phoenix Programme have now been fully taken over by RADMASTE at the University of the Witwatersrand. The Institute still supports the programme but without the financial resources of the Chamber of Mines. The activities of RADMASTE and the team of staff who used to control and operate the Phoenix Programme have broadened. Activities are more generally directed towards promoting science and technology in the education curriculum. Work books for teacher and scholar are being developed, and it is hoped that, with the continued involvement of the Institute, the original aim of promoting the minerals industry will not be too severely diluted.

5.8 South African National Council on Tunnelling (SANCOT)

Representative

J.A. Cruise

SANCOT maintains its international links by being an active member of the International Tunnelling Association (I.T.A.). At the I.T.A. '94 conference, held in Cairo, South Africa was one of the 28 member nations (41 in total) who attended and was well represented by a delegation of 7 SANCOT members.

SANCOT held informal meetings during the year at which the topics included the Lesotho Highlands Water Project, the Inanda Wiggins Project, and the Edinburgh Castle Tunnel.

With the advent of the Occupational Safety and Health Act (OSH Act) to replace the existing Machinery and Occupational Safety Act (MOS Act), SANCOT members constituted the majority of Technical Committee No. 9, which was formed by the Department of Manpower to draw up regulations for non-mining tunnels. The Institute's representative played a major role on this committee.

5.9 The Environmental Planning Professions Interdisciplinary Committee (EPPIC)

Representative

D.J. van Niekerk

Alternate

K.A. van Gessel

Representatives of the Institute participated actively in the activities of the Central Committee, which included *inter alia* the following items:

- attending four Central Committee meetings during 1994,
- participating in active EPPIC regional groups
- drafting comments on the proposed National Environmental Policy
- submitting the SAIMM's Environmental Goals, resulting in some very stimulating comments and constructive suggestions for improvement
- making nominations for the different 1994 EPPIC awards (suitable nominees for the 1994 Premier Award could regrettably not be identified), but the Institute's representative on the EPPIC Central Committee coordinated the evaluation of the nominations for the 1994 EPPIC award for the 'Best South African Technical Paper/Environmental Publication'
- undertaking an initiative to establish EPPIC's role as coordinator of environmentally related colloquia, symposia, conferences, etc.
- investigating the following with respect to EPPIC's changing role:
 - structure of the membership
 - proposed name change
 - extension of EPPIC's resource base
 - proposed joint conference venues.
- participating in the World Environment Day Symposium, held at Mintek on 1st June, 1994, the theme being 'Art, Engineering, Science and Environmental Management'
- organizing the EPPIC 1994 conference held in September 1994 with the most topical title of 'Awareness of Education in the Environment'.

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.

6.1 Council of Mining and Metallurgical Institutions (CMMI)

National Representative

Dr H. Scott-Russell

Alternates

Prof. C.T. Shaw

Prof. D. Buchanan

6.1.1 15th CMMI Congress

Registrations for the Congress seemed rather low initially. However since the inauguration of the first democratically elected President of South Africa, registrations have picked up somewhat. Lower numbers seem to be a problem experienced by most Conference organizers. Arrangements for the Congress have been downscaled accordingly, and the Committee is confident that this will ensure a more manageable Congress. The theme for the Congress is 'Resources and Technology'. Over 700 participants will attend, and the technical sessions will include 133 high-calibre technical papers.

6.2 APCOM

National Representative

Prof. D.G. Krige

During the year, the XXIV International APCOM Symposium was held in Montreal, Canada, from 31st October to 3rd November, 1993, in the Sheraton Centre. The Canadian Institute of Mining, Metallurgy and Petroleum, in collaboration with the Department of Mineral Engineering of Ecole Polytechnique, hosted the Symposium.

The plenary session on Monday, 1st November, consisted of eleven keynote addresses by leading experts, featuring advanced visual presentations on computer animation in mine planning; modelling of orebodies via 'virtual reality'; visualization in geophysics, geochemistry, and geology; global databases of the mineral industries and total integration of geological information; and production systems and data of a mining company.

On the Tuesday and Wednesday, three parallel sessions were held both in the morning and the afternoon, and covered the topics of geological and geostatistical modelling of mineral deposits, project development, mine valuation, designs of mine concentrators and smelters, and short- to long-range production planning. There were also interesting papers on expert systems, artificial intelligence, neural works, and fuzzy logic. Papers were contributed by authors from no fewer than 28 countries from all over the world. Post-symposium tours covered the Université Laval, Quebec City, and the Noranda Research Centre.

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The International APCOM Council meeting was held during the Symposium, and Prof. F.L. Wilke of Berlin was elected Chairman for the next three years in succession to Prof. Danie Krige, the preceding Chairman. The following programme for future meetings was agreed upon:

20/24 June, 1994	First Regional APCOM in Bled, Slovenia
10/14 July, 1995	25th APCOM in Brisbane, Australia
Fall 1996	26th APCOM, Penn State University, U.S.A.
1997	2nd Regional APCOM, Moscow, Russia
20/22 April, 1988	27th APCOM, Royal School of Mines and IMM, London
Fall 1999	28th APCOM, Colorado School of Mines, U.S.A.
2000	29th APCOM, Peoples Republic of China.

The Australasian Institute of Mining and Metallurgy and the Royal School of Mines were elected as permanent Council members to represent Australia and the United Kingdom respectively. Together with the University of Arizona, Colorado School of Mines, Penn State University, The Society of Mining Engineers, Canadian Institute of Mining and Metallurgy, the Technical University of Berlin, and The South African Institute of Mining and Metallurgy, the Council now consists of nine members from six countries.

6.3 World Mining Congress

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

Arrangements for the 16th World Mining Congress to be held in Bulgaria from 12th to 16th September, 1994 are progressing.

7. Management and Administration

Portfolio Holder: Dr H. Scott-Russell

The Secretariat have coped well with the additional workload. Electronic equipment has been upgraded in various departments.

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)
Miss Karen Norman (Receptionist and Bookkeeper)
Ms Susan Higgs (DTP Operator)
Mrs Aliwiya Jardine (DTP Operator)
Mrs Claire Kearney (Publications Co-ordinator)
Mrs Debby McLellan (Publications Secretary)
Mrs Anna Panana (Clerk)
Mr Stan Hickin (Accountant, part-time).

7.1 Finance

J.A. Cruise, Treasurer

The provisions made last year for the Centenary Year expenses proved prudent, with the result that the Institute is able to declare a net income of R89 053 for the year.

Subscriptions received showed an increase on last year, being company affiliates R86 450 (R83 400) and individual membership R233 839 (R226 095).

Although income from colloquia and schools was down on last year's outstanding R459 689 (due mainly to the successful MASSMIN symposium), this year's value of R168 265 was greater than expected or budgeted. Credit for this must be given to the Technical Programme Committees, who continue to produce excellent colloquia and schools. However, it has recently become apparent that international symposia no longer hold the attraction that they once had, and the Institute will have to rely more and more on one-day colloquia and short-course schools. The Institute relies on this income to keep subscription fees at a low level.

Expenses have risen markedly this year owing mainly to two causes: firstly, a salary survey and re-evaluation of staff brought them into line with the industry, and secondly, expenses of some R37 000 were incurred in the maintenance of property.

Fortunately, during the Centenary Year the stock market was kind and, despite realizing R285 553 on the sale of investments, the listed investments increased in value from R1 981 200 to R2 760 645. Thanks are due to Martin and Company, who continue to act as the Institute's investment advisors.

Thanks are also due to the accountant and auditors for the financial services rendered during the year.

Addendum

New Members

Fellow

H.G. Albertyn, M.H. Carlisle, R. Edwards, R.J. Fisher, C.C. Hamilton, D.R. Hardman, T.G. Heslop, R.L. Howard, C.A. Lee, V.C. Liddiard, A.S. Macfarlane, G.T. Mans, J. Markgraaff, J.D. Mwanza, W.A. Naismith, F.W. Peters, C.S. Russell, E.U.H. Sachse, J.D. Salter, D. Smith, J.M. Stewart, J.F. van der Colff, T.V.S. von Moltke.

Member

C. Aldrich, N.H. Barkhuysen, E.C. Butler, M. Chlambe, D.C. Cockcroft, D.W. Cohen, M.H. Cotterrell, S.N. Dixon, J.P.W. Fisher, J.S.A. Folkard, H.J. Fourie, C. Heili, G. Huckle, E.M.L.E. Jackson, P.M. Johnstone, M.S. Jones, K.K.J. Kabongo, J.F. Kotze, D.H. Kullman, G.T. Lewis, W.G. Limerick, D.R. Lougher, M.P. Marriott, F. Muyuni, A.Y. Oti-Brako, F. Owusu-Mensah, T. Pahla, W. Pulles, G.J. Taylor, J. Theobald, G.M. van Niekerk, G.J. van Niekerk.

Associate

Y. Asamoah-Bekoe, M.C. Bekker, J.G. Boshoff, G.V. Brooker, H.J. Burger, K.J. Daly, J.W. Dewhurst, E.R. du Toit, P.A. Faber, H.N. Gouws, C.W.M. Hand, V.G. Harris, D. Ho Wing, P.A. Hucl, V.E. Hugo, N.O. Ingham, W.S. Jackson, D.J. Kent, F.C. Levy, J.M.S. Mtonga, S. Nana, J. Ndlovu, H.B. Nyirenda, F.X. Prins, J.P. Reade, S.M. Rupprecht, P.T. Saar, C. Sima, A.J. Smit, A.C. Snowdowne, E.J. Thompson, R.S. Thompson, K.S. Vantillard, S.F.W. Village, J.C. Visagie, E. Vogel, D. Whittle.

Annual Report

Student

R.S. Abrahams, A. Acker, D.P. Amm, S.N. Badenhorst, R.V. Bagley, W. Bender, P.T. Beukes, F.R. Brits, I.R. Buchanan, R.L. Buckle, B.E. Campbell, K.M. Chaplin, C.L. Claasens, P.P. Cloete, P.H. Coetzee, J.D. Collins, J.H. Combrink, J.C.K. de Beer, B. de Jager, K.B. de Lange, D.J. De Swardt, A.J. Deale, S.C. Drews, A.F. du Preez, H.A. du Toit, G.A. Durrant, A.M. Eksteen, A.G. Fair, G.J. Ferguson, J.D. Fourie, G.A. Francis, R. Goeller, S.V. Green, R.M. Greyvensteyn, G.J. Grobler, F.R. Hardy, D.D. Harvey, T. Heinzle, I.J. Horner, L.E. Iorio, H.C. Janse van Rensburg, A.L. Jansen van Rensburg, B.R. Jones, S.S. Jooste, J. Joubert, W. Joubert, S.M. Khumalo, J.D. Kirsten, M.D.T. Kotze, C. Kritzinger, R. Lombard, B.G. Lord, Z. Madaka, S.T. Mafora, J.F. Malan, D. Mamphitha, M. Mazibuko, R.I. McAdam, V-R. Ming, M. Mpepe, F.F. Muller, N. Naude, M.H. Oosthuysen, T.J. Otto, M.J. Papo, A.A. Patel, J.A. Pearse, J.W. Pretorius, C.R. Rademann, F.C. Reinecke, G. Richardson, M.J. Roberts, G.V. Rorke, M.A. Rossouw, W.N. Scholtz, P.P. Segalo, N.A. September, J.H. Shafashike, Z.P. Sithole, W. Smart, A.M. Smit, V.C. Smith, T.G. Songo, M. Steenkamp, H.S. Swart, G.M. Swart, W.C. Sweet, P.C.F. Swiegers, B.D. Taunyane, S.G. Thomas, D.P. van den Berg, I.Z. van der Bank, A.P. van der Westhuizen, J.P. van Dyk, E. van Dyk, E. van Niekerk, J.W. van Wyk, Z.J. van Zyl, E.L. Venter, S.J. Venter, A. Vermeulen, S.L. Vismer, A.A. Visser, G. Webber, R.J. West, W.D. Wieland, H.J. Wiese, N.R. Williams, M. Wilsenach, J.H. Zietsman.

Company Affiliate

Altech Mining Technologies, Amcoal Environmental Services, CSIR—Division of Mining Technology, Deton Engineering (Pty) Limited, General Metallurgical Research and Service, Harnischfeger SA (Pty) Limited, Knights Gold Mining Company Limited, Lindum Reefs Gold Mining Company Limited, Outokumpu Mintec South Africa (Pty) Limited, Winkelhaak Mines Limited.

Resignations

Retired Fellow

T.B. Beeton, A.C.W. Comyn, D.E.H. French, T. Harvey, A.L. Melvill, F.K. Wright.

Retired Associate

I.S. Haggie.

Retired Member

C.J. Boshoff, R.W. Impey, J.C. Watson.

Fellow

D.A. Bulled, C.W. Ehmke, A.J. Freemantle, D.B. Gaynor, J.A. Gibbon, R.M. Green, K.D. Hester, G.M. Lownds, D.M. Morely, T.L.F. Muller, W.A.H. Poppmeier, H.G. van der Merwe, W.M. Wedderburn.

Member

M.E. Berger, W. Bock, C.J. Brown, R.P.M. De Villiers, S.J. Godden, P.L. Gouws, J.E. Keller, I.D. Macrae, D. Mitchell, J.J. Petschnigg, O.F. Rheeder, M.T.R. Smith, R.L. Soden, B.W. Stott, M.A.O. Suhr, R.B. Sutherland, J.F. Taylor, J.M. Vosloo, T.M. Yasbek.

Associate

V.A. Barton, C.F. Blair, C.A. Boothroyd, I.D. Coetzee, L.A. Coetzee, N. Corlett, G.A. Davies, K.F.W. Eick, B.E. Fort, F.W. Fouché, E.A. Frommolt, P. Holzapfel, T.J. King, K.H. Kruger, J.A. Saunders, S.H. Spargo, P.R. van Wyk.

Student

R. Bradford, A.D. Clough, R.J. Douglas, I.M. Crundwell, R.B. Downing, B. Eigenhuis, C. Green, E. Wurth.

Company Affiliate

Babcock Engineering Contractors, Libanon Gold Mining Company Limited, Sandvik (Pty) Limited.

Members Transferred to Higher Grades

Transfer to Fellow

M.J. Day (Member), M.A. Keen (Member), F.W. Klückow (Member), P.G.H. Pistorius (Associate).

Transfer to Member

L.M. Booysen (Associate), Q.P. Campbell (Associate), F.A. Hathorn (Associate), Q.J. McLennan (Associate), A.J. Murdoch-Eaton (Associate), P.C. Pistorius (Student), K. Premachandra (Associate), R.C. Spargo (Associate), Z.B. Swanepoel (Associate), G.J. Sweby (Associate), S. Wade (Associate), I.M. Wolff (Associate).

Automatic Transfer to Associate

K.I. Afewu, C.M. Armstrong, M.F. Ashworth, R.C. Austin, A.W. Bailey, E.H. Bekker, J.A. Bester, M.E.J. Bezuidenhout, K. Botha, J.P. Botha, D.A. Botha, J.S. Bothma, H.J. Breytenbach, R. Bryla, M.J. Brönn, F.M. Burger, N. Burger, W.A. Carvelas, R. Coetzee, M. Coetzee, S.J. Coward, M.J. Daniel, J.C.K. de Beer, C.P. de Villiers, J.R. de Wet, A.C. Deneys, P. Doubell, A.F. Drake, I. du Plessis, C.E. du Raan, S.T. Eichstadt, D.E. Erasmus, J.D. Fabricius, L.G. Fouche, C.M. Fryer, M.A.W. Gericke, N.P. Glossoti, M.J. Hartmann, L.D. Hartnick, R.J. Hattingh, R.P.H. Hayes, R.E. Howard, R.H. Hummel, J.G. le Roux, A.N. Lewis, C.G. Lightfoot, E.V. Lilford, G.M.I. Lock, G.W. Lok, J. Lucas, C.A. Macdonald, M.F. Mattera, K.W. Meintjes, C.N. Moalahi, E. Moller, M.P. Molotsi, C.J. Moolman, B.A. Murphy, G.A. Nino-de-Guzman, O. Nolle, J.P. O'Brien, H.G. Oltmann, C.P.M. Orsmond, P.L.D. Pege, M.R. Pledger, G. Pretorius, M.R. Proudfoot, J.J. Raath, L. Rabe, M.A. Rabe, J.A.M. Rademan, N. Raftopoulos, G.F. Rautenbach, G.S. Rautenbach, A.S. Reynolds, M.J. Robertson, S.M. Saffy, T.G. Salamon, R.I. Smart, J.W. Steyn, J.C. Terblanche, P.M.J. Thomson, I.L. Thomson, W.H. Till, W.F. van der Vyver, P.V.A. van der Westhuyzen, A.J. van Ghent, P.L. van Vuuren, L.C. van Vuuren, J.J. van Wijk, W.W. van Wyk, P. Vermeulen, D. Visage, R. Webb, W. Whitaker, R.G. Wienand, S.E. Wilkens, S. Willmer, T.G. Wilson, D.N. Winn, N.E. Young, J.J.J. Zaayman.

Deceased

Life Fellow

J.E. Laschinger, E.A. Nugent, O.B. Swallow, L. Walter, O. Weiss.

Retired Fellow

W.W. Bath, H.L. Butlin, N.M. Hayne, D. Koliassnikoff.

Annual Report

Retired Member

H.M.W. Eschenburg.

Retired Associate

R.F.J. Teichmann.

Member

M. Algeo.

Associate

J.E. Collins.

Retired Membership

D.A.G. Blair Hook, J.J. Blom, A.J. Boggett, H.S. Botha, D.W. Bulmer, H.K.R. Cahnbley, G.C. Clatworthy, B. Collins, M.O. Ebell, T.M. Espach, C.T. Fenton, B.G. Fordyce, M.B. Forsyth, N.Z. Goldblatt, G.A. Haasbroek, J. Hall, R.J. Hosking, B.H.L. Leach, A. Marsh, A.D. Ochse, C.E. Ogilvie, R.P. Plasket, J. Pope, R. Retief, A.J. Rossouw, G.D. Tainton, B.S. Tattersson, D.J. Tutt, L. Vercueil, C.H. Wiggett.

Members Who Were Reinstated

Reinstated as Member

S.K. Maw, D.J. Norton, L.R. Smart.

Reinstated as Associate

I. Ashmole, P.D. Bates, D.S.R. Lawrence, R.J. Mostert, S.B. Sampson.

Reinstated as Fellow

A.C. Naude, V.C. Ward.

Reinstated as Student

S.J. Coward, I. du Plessis, G.P. Muller.

Reinstated as Retired Associate

R.F.J. Teichmann.

Reinstated as Company Affiliate

BCL Limited, Boart International (SA) Limited.

Names of Members Removed from the Membership Register as at 30th June 1994, and Published in Terms of By-Law 7.3 of the Constitution

Fellow

P.L. Ashcroft.

Member

B.N. Barnard, S.P.A. Gregory, V.K. Jumppanen, J. Lorosch, K. Martinek, D.S. Ngandu Kangudi.

Retired Member

J.G. Phimister.

Associate

T.D. Arnold, J.A. Barnard, R.H. Barnard, H. Cengizler, P.J. De Witt, Z.B. Fourie, R.D. Gordon, A.C. Kenyon, A.M. Kucuk, C. Marais, F.T. Olivier, J.P. Potgieter, M.H.E. Spitz, J. Strauss, H. van Dyk, M. Visser, A.S. Wagner, F. Weidtmann, I. Woermann.

Student

K.G. Bartie, R.E. Bronkhorst, D. Cloete, W.T. Cronk, J. Danckert, P.H. du Preez, C.H. Els, L. Eybers, R. Gerber, V. Govender, H.E.M. Henning, A.M. Heyes, E.L. Kirschner, E.Z. Kwini, D.J. Lock, I.T. Malata, L.C. Martin, C.P. Ntsele, G.F. Rajool, S. Uludag, A.J. van der Merwe, W.C.J. van Niekerk, M.J. van Wyk, A. van Zyl, A. van Zyl, J.T. Vuta.

Names of Members Removed from the Membership Register as at 30th June 1994, and Published in Terms of By-Law 7.3.1 of the Constitution

Fellow

G.F. Balderson, M.J. Barnard, A.J. Brasler, S.P. Pienaar.

Member

G. Akdogan, H.F. Bartles, P.R. Gent, T.N. Hawthorne, W.C.S. Kotze, P.J. Pienaar, A.P.S. van der Merwe.

Associate

A.D. Boniface, P.H.F. Bouwer, R.G. Calcott, L.M.C. Correia, W. Domin, R. Gover, F.E. Greyling, H. Grobler, K.R. Hengstmann, R.R. Jooste, R.M. Kepka, O.F. Kleynjan, P.K.P. Leary, L. Mabiza, W.R. Marsh, J.W. Milling, J.H. Steenkamp, E. Uslu, B.J. Vorster, B. Watson, J.J. Welmans.

Student

J.D. Botes, J.P. Britz, L.P. Coetzer, A.W. Dixon, O.P.J. Douglas, P.A.P. Fouche, J.F. Jansen van Vuuren, L.L. Joseph, A.C. Joubert, C.D.W. Joubert, H.J. Kriel, A. Labuschagne, P.J. Lumley, J. Marais, M. Mlilo, P.J. Nortje, P. Pascal van Alphen, D.G. Poolman, H.P. Potgieter, A. Pretorius, A. Prinsloo, W.H. Rossle, F.J.J. Steyn, P.J.J. Strobos, N.A. Swart, B. Swarts, J.A. Theron, A.J. van der Walt, D.H. van Eeden, A.J. van Rooi, R.M. Viljoen. ♦

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 on pages 257 to 262. These financial statements are the responsibility of the Institute's Council. Our responsibility is to report on these financial statements.

We have 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 30th June, 1994, and the results of its operations for the year then ended in conformity with generally accepted accounting practice.

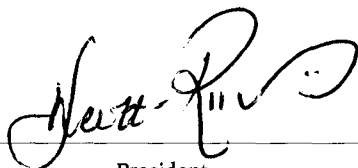
KPMG Aiken & Co. t

Auditors

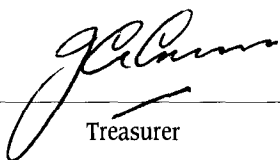
10th August 1994

Council's approval of the annual financial statements

The annual financial statements for the year ended 30 June 1994 set out on pages 257 to 262 were approved by the council on 10 August 1994 and are signed on its behalf by:



President



Treasurer

Annual Financial Statements

The South African Institute of Mining and Metallurgy

Balance sheet at 30 June 1994

	Note	1994		1993	
		R	R	R	R
Capital employed					
Funds	2		R1 125 796		1 332 028
Retained income			290 510		265 438
			<u>1 416 306</u>		<u>1 597 466</u>
Employment of capital					
Fixed assets	3		769 097		752 475
Listed investments	4		854 744		849 535
Current assets					
Publications stock		4		4	
Debtors for sales of journals and publications, less provisions			57 858		45 386
Advertisers in journal			38 410		21 889
Sundry debtors			113 560		104 234
Deposits			550		550
			<u>210 382</u>		<u>172 063</u>
Current liabilities					
Accounts payable			225 906		119 218
Subscriptions received in advance			6 616		4 350
Bank overdraft			<u>185 395</u>		<u>53 039</u>
			<u>417 917</u>		<u>176 607</u>
Net current liabilities			<u>(207 535)</u>		<u>(4 544)</u>
			<u>1 416 306</u>		<u>1 597 466</u>

Annual Financial Statements

The South African Institute of Mining and Metallurgy

Income and expenditure account for the year ended 30 June 1994

	<i>Note</i>	1994 R	1993 R
Income	<i>5</i>	833 911	1 047 193
Expenditure	<i>6</i>	744 858	588 432
Net income for the year		89 053	458 761
Transfer to funds	<i>2</i>	63 981	454 212
Retained income			
For the year		25 072	4 549
At beginning of year		265 438	260 889
At end of year		290 510	265 438

The South African Institute of Mining and Metallurgy

Notes to the annual financial statements for the year ended 30 June 1994

1. Accounting policies

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 and depreciation

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 R108 926 (1993 – R38 036), which relates to technical events to be held in future financial years.

	1994 R	1993 R
2. Funds		
2.1 Book Publications Fund		
– balance at beginning of year	72 985	71 407
– donations received	1 361	1 578
	<u>74 346</u>	<u>72 985</u>
2.2 Brigadier Stokes Memorial Fund		
– balance at beginning of year	87 672	81 900
– transfer from retained income	–	12 617
– awards and expenses	(170)	(6 845)
	<u>87 502</u>	<u>87 672</u>
2.3 Centenary Fund		
– balance at beginning of year	205 050	35 000
– transfer from retained income	–	150 000
– donations received	–	20 050
– expenditure	(205 050)	–
	<u>–</u>	<u>205 050</u>
2.4 Education Fund		
– balance at beginning of year	229 302	239 953
– expenses	(17 836)	(10 651)
	<u>211 466</u>	<u>229 302</u>

Annual Financial Statements

The South African Institute of Mining and Metallurgy

Notes to the annual financial statements for the year ended 30 June 1994 (continued)

	1994 R	1993 R	
2. Funds (continued)			
2.5 MacArthur Forrest Memorial Fund			
– balance at beginning of year	76 622	71 479	
– transfer from retained income	10 000	16 903	
– awards and expenses	(8 518)	(11 760)	
	78 104	76 622	
2.6 Safety in Coal Mining Award Fund			
– balance at beginning and end of year	38 205	38 205	
2.7 Infacon Bursary Fund			
– balance at beginning of year	372 192	–	
– donations received	–	360 000	
– expenses	(40 000)	(12 500)	
– transfer from retained income	53 981	24 692	
	386 173	372 192	
2.8 Observatory Refurbishment Fund			
– balance at beginning and end of year	250 000	250 000	
Total of funds at end of year	1 125 796	1 332 028	
3. Fixed assets			
	Cost R	Accumulated depreciation R	Net book value R
1994			
Land and buildings	618 620	–	618 620
Furniture and equipment	333 003	182 527	150 476
Medals, plaques, dies, and banners	1	–	1
	951 624	182 527	769 097
1993			
Land and buildings	618 620	–	618 620
Furniture and equipment	265 516	131 662	133 854
Medals, plaques, dies, and banners	1	–	1
	884 137	131 662	752 475

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.

The South African Institute of Mining and Metallurgy

	1994 R	1993 R
4. Listed investments		
Investments at cost	<u>854 744</u>	<u>849 535</u>
Investments at market value	2 760 645	1 981 200

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 R11 891 (1993 – R17 241).

5.3 Voluntary contributions by members amounting to R4 338 (1993 – R5 321) were collected and paid over by the Institute to the AS&TS Trust and are not included in the income statement.

Annual Financial Statements

The South African Institute of Mining and Metallurgy

Notes to the annual financial statements for the year ended 30 June 1994 (continued)

	1994		1993	
	R	R	R	R
6. Expenditure comprises				
Secretarial fee		230 667		189 019
Institute journal				
– Expenses	183 392		175 769	
– Secretarial fee	35 590		20 005	
	<u>218 982</u>		<u>195 774</u>	
Deduct				
– Advertising	42 460		45 836	
– Sales	63 284		36 370	
– Subvention – Bureau for Scientific Publications	–		3 600	
	<u>105 744</u>		<u>85 806</u>	
		113 238		109 968
Centenary		35 708		–
Administration expenditure		280 588		211 722
Apcom 1993		10 366		–
Audit fee		7 350		5 500
Contributions				
– SAVI	10 684		15 041	
– Environmental Planning Professions Inter-disciplinary Committee	4 045		3 033	
– South African National Committee of Tunnelling	847		770	
– Affiliation of Societies Representing Engineering Technicians	500		250	
– Council of Mining and Metallurgical Institutions	–		711	
		16 076		19 805
Depreciation		50 865		43 418
Donations				
– South African Federation of University Engineering Students	–		4 000	
– Programme for Technological Careers (PROTEC)	–		5 000	
		–		9 000
		<u>744 858</u>		<u>588 432</u>