

CURRICULUM VITAE

NAME Dr Johannes H De Beer
PROFESSION Geophysicist
DATE OF BIRTH 18 December 1945
NATIONALITY South African
NAME OF FIRM Retired from CSIR in 2006.
ASSOCIATION WITH CSIR 41 years

KEY QUALIFICATIONS

- Ph.D. (Geophysics), Alberta, Canada, 1976
Subjects: Geology 570; Plate Tectonics
Physics 523; Potential Fields
Physics 571; Quantum Mechanics
Physics 620; Geodynamics
Physics 623; Time Sequence Analysis
Physics 624; Theoretical Seismology
Physics 682; Electromagnetism.

Thesis: Magnetometer array studies and electrical conductivity in Southern Africa.

- M.Sc. (Geology/Geophysics), Stellenbosch, 1971.

Thesis: The theory and application of techniques for the interpretation of Schlumberger sounding curves.

- B.Sc., Stellenbosch, 1967.
Subjects: Chemistry I
Computer Science I
Mathematics II
Physics III
Geology III.

- Matric, Paul Roos Gymnasium, Stellenbosch, 1963.
Subjects: Afrikaans
English
German
History
Mathematics
Chemistry and Physics

EXPERIENCE RECORD WITH CSIR

- 2006/03 Retire from CSIR.
- 2005/10 Appointed Manager: Water Competence Area of Natural Resources and the Environment, CSIR.
- 1999/05 Appointed as Programme Manager, Water Programme (Stellenbosch and Pretoria) of the Division of Water, Environment and Forestry Technology, CSIR.
- 1996/08 Appointed as Programme Manager, Cape Water Programme, *in addition* to being the Western Cape Provincial Manager - both of the Division of Water, Environment and Forestry Technology, CSIR.
- 1996/04 Appointed as Western Cape Provincial Manager, Division of Water, Environment and Forestry Technology, CSIR.
- 1992/11 Appointed as Programme Manager, Coastal Development, Division of Earth, Marine and Atmospheric Science and Technology, CSIR.
- 1992 Appointed as Manager of Mineral and Water Resource Development Competence, Division of Earth, Marine and Atmospheric Science and Technology, CSIR
- 1988/04 Appointed as Programme Manager, Geoexploration Programme, Division of Earth, Marine and Atmospheric Science and Technology, CSIR.
- 1980 Appointed as Head: Geophysics Division, NPRL
- 1969/10 Joined the National Physical Research Laboratory of CSIR as Technical Assistant.
- 1969/01 Joined the National Physical Research Laboratory of CSIR as Student Intern
- 1965/02 Awarded bursary by National Institute of Road Research of the CSIR

MEMBERSHIPS

Membership of Scientific Societies:

- Geological Society of South Africa, 1968 to present.
- South African Geophysical Association, 1976 to present, Council member and President 1991/92.
- Ground Water Division, Geological Society of South Africa, Treasurer for 1983.
- American Geophysical Union, 1974 to present.

Professional Registration:

- South African Council for Natural Scientific Professions, 1983 to present.

Membership of national committees/delegate:

- South African Committee for the International Union of Geological Sciences: 1982- 84
- Subcommittee for Geophysics of the National Committee of Geological Science: 1984- 85
- Evaluation Committee of the SA National Geoscience Programme: 1985- 88.
- National Committee of the International Union of Geological Sciences: 1988-98.
- SA delegate to the International Geological Congress, Washington, 1989.
- Member of the Executive Committee for Ground Water Research of the Water Research Commission: 1990-1993.
- South African National Committee, International Water Association, 2001 – 06.

Membership of international committees:

- South African representative on Working Group 3 of the International Lithosphere Programme: 1982-1986.

Advisory boards:

- ❑ Management Board, Bernard Price Institute for Geophysical Research: 1982 - 1995.
- ❑ Steering Committee for the Institute for Groundwater Studies, University of the Orange Free State: 1981- 84.
- ❑ Steering Committee: School for Geological Science, Pretoria Technicon: 1989 -1992.
- ❑ Research Liaison Committee, Fishing Industry Research Programme, Foodtek, CSIR 1996 - 2000.
- ❑ Editorial Board: SA Journal of Geology, 1990 - 99.
- ❑ Director: RockRadar board, 1992 - 98.
- ❑ Coaltech Management Team, 2001 - 06.

Membership of Scientific Association:

- ❑ SA Akademie vir Wetenskap en Kuns.

HONOURS AND AWARDS

- ❑ CSIR award for outstanding achievement - Leadership and Commercialisation 1994.

TEACHING AND MENTORSHIP

- ❑ Supervisor or external examiner of 3 PhD and 12 MSc students from 4 South African Universities.
- ❑ Special Professor in Geophysics, Rand Afrikaans University, 1991-1993.

FIELDS OF EXPERTISE

- ❑ **Mineral exploration:** As a qualified geologist and geophysicist, the author has worked on mineral exploration projects for more than 20 years. Main fields of expertise are electrical and electromagnetic prospecting, gravity and magnetic surveying.
- ❑ **Groundwater exploration:** Since groundwater exploration in dry areas such as the Kalahari and Namib deserts depends on geophysics, extensive experience was attained running large ground water exploration projects. Main methods used were geoelectrical and electromagnetic.
- ❑ **Geophysical research:** Large research projects to study regional earth structure were carried out. Structures studied include Limpopo Belt, greenstone belts, Damara belt, borders of Kaapvaal craton, Bushveld Complex, Karoo Basin and Kalahari Basin.
- ❑ **Geophysical method development:** The author worked on the development of several geophysical methods e.g. interpretation of geoelectrical methods, magnetovariational studies, the Long Offset Transient Electromagnetic method, the application of transient electromagnetic methods to groundwater exploration and the mining application of ground penetrating radar.
- ❑ **Technology Management:** Since 1980 one of the components of the positions held was, to manage the investments in technology development. This was strengthened by attendance of the course Managing Research and Development at the International Institute for Management Development in Lausanne Switzerland in 1992.
- ❑ **General Management:** Courses, in-service training, working with several mentors and more than 25 years of hands-on experience have build expertise in general management. Through the years several assignments to problem units built a reputation in this area.

PUBLICATIONS

Dr De Beer has produced 52 refereed publications dealing with geophysical crustal studies, mineral exploration and ground water exploration during the course of his career. Some 50 project reports were produced and more than 50 conference papers presented. A full list is available on request.

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