

AIC GOLD MEDAL AWARDED TO BRUCE LAMBERT

At the 7th Cartographic Conference the Australian Institute of Cartographers' inaugural **Gold Medal for Distinguished Service to Cartography** was awarded to Dr Bruce Lambert, OBE. The following is the citation which led to the award.

Bruce Philip Lambert was born in Gosnells Western Australia in 1912 and qualified as a Surveyor in Melbourne in 1936. He gave distinguished service during World War II with the then Australian Survey Corps in the Middle East with the 2nd/1st Corps Field Survey Company, in Australia and later in the SW Pacific campaigns and subsequently as Assistant Director of Survey, 2 Corps.

In 1946 his appointment as Deputy Director of National Mapping heralded the commencement of an outstanding contribution to Australian surveying and mapping, active representation of Australia in a wide

International forum culminating in his retirement in February 1977 after 26 years as Director of the Division of National Mapping and Chairman of the National Mapping Council. He continued his life long contributions in retirement with publication of a number of papers in the professional journals of learned societies. Notable among these is the article "The National Mapping Council of Australia Forty Years On", *Cartography*, September 1985, Vol 14, No. 2.

The National Mapping Council was established for the purposes of planning, organising and co-ordinating the geodetic survey and mapping activities of Australia on a national basis with the Commonwealth and States participating with an avoidance of duplication of effort. Under his leadership the major achievements during the time he was Chairman of the Council include:

1. Aerial photography of the whole of Australia by 1967, for the first time.



Dr Bruce Lambert, OBE, receives the AIC inaugural Gold Medal for Distinguished Service to Cartography from Federal President, Keith Smith

2. Completion of first coverage of Australia with 1:250 000 scale mapping in 1968, jointly between the Division of National Mapping and the Royal Australian Survey Corps. This lead shortly afterwards to the completion of the overall geological mapping of Australia at 1:250 000 scale, also for the first time.
 3. Completion of the National Geodetic Survey to the stage of providing a basis for a homogeneous system of mapping with the adoption of a National Geodetic Datum and the Australian Map Grid in 1967, based on a single mathematical geodetic adjustment.
 4. Completion of a similar network of third order levelling covering the mainland of Australia in 1971 to form the Australian Height Datum on which all contouring and most engineering surveys are now based.
 5. The combination of first order astronomical stations with gravimetric observations to depict the geoid over the whole of Australia: later extended to Papua New Guinea in such detail never before achieved over such a large area in the world.
 6. Considerable progress towards the completion of basic contoured topographic map coverage of Australia at 1:100 000 scale with contours at intervals of 20 metres or less, undertaken by all governmental agencies and supported by commercial mapping companies under contract.
 7. Agreement in respect of recommended standards of accuracy, map symbols, air photography specifications and joint participation in geodetic and levelling surveys and mapping.
 8. Introduction of electro-magnetic distance measuring equipment (EDM) for geodetic surveys and associated standards of accuracy.
 9. Introduction of Doppler Satellite receivers for accurate position determination and intergration with EDM traverse junction points for geodetic re-adjustment on a world geodetic system.
 10. Commencement of the production of a Bathymetric Mapping Series covering the continental shelf to a depth of 200m at a scale of 1:250 000.
- In addition to these activities other activities undertaken within the Division of National Mapping while he was Director include:
1. First edition, and subsequent revisions, of the World Aeronautical Charts of Australia (1:1 Million Scale) and its conversion to the International Civil Aviation Organisation (ICAO) standards.
 2. Australia's contribution to the 1:1 Million coverage of the International Map of the World (IMW) series.
 3. Atlas of Australian Resources.
 4. Cartography for Australian Bureau of Statistics census collections at periodic intervals.
 5. Responsibility for the Photographic Zenith Telescope at Mount Stromlo which maintained astronomical time for Australian National University.

6. Installation of a Lunar Laser Ranger to measure Earth/Moon distances using the retro reflectors placed on the moon by the Apollo astronauts.

Bruce Lambert has actively participated in international cartography since he first became involved as an Australian Government representative at the International Civil Aviation Organisation (ICAO) Conference in Montreal in 1946. Since that time he became a well known and respected figure at meetings of IAG, ISP, SCAR, UN Cartographic Conferences and at the Commonwealth Survey Officers Conferences. In 1959 he was elected Secretary of the then SCAR (Scientific Committee on Antarctic Research) Working Group on Geodesy and Cartography.

From 1964 to 1970 he was leader of the Australian team that successfully negotiated with an Indonesian survey team to arrange the joint survey of the Indonesia-Papua New Guinea Border, and later the seaward boundary between Indonesia and Australia. In 1971 he was invited by the United Nations to join a group of six cartographers to form the Ad Hoc Group of Experts on Projection and Planning in Cartography who published their report in 1972.

He was appointed Executive Director for the General Assembly of the International Union of Geodesy and Geophysics held in Canberra in December 1979. He represented Australia at no less than four meetings of the United Nations Cartographic Conference for South East Asia leading the delegation on three occasions.

For many years he was the Australian member of the International Society for Photogrammetry and played a leading role in getting the position replaced by a society formed jointly by The Australian Institute of Cartographers and the Institution of Surveyors, Australia, which

subsequently became the Australian Photogrammetric Society.

Since Bruce Lambert joined the Institute in October 1954 he has served it in a conspicuous manner by representing it officially on many occasions. He was always an active participant in the ACT Division, and his valuable contribution as a member of the Advisory Committee for a Degree course in Cartography is a further example of his efforts for the benefit of the profession and the image of the Institute.

Throughout his lifetime Bruce Lambert has advanced the surveying and mapping of Australia at an unprecedented pace, to the admiration of many other countries of the world, thereby providing a sound basis for earth science and land management and importantly the presentation of their practices.

He is an Honorary Fellow of The Australian Institute of Cartographers, a Fellow of The Institution of Surveyors, Australia, and has had the Degree of Doctor of Science *Honoris Causa* bestowed upon him by the University of New South Wales for his unique contributions to Australian science, while in 1970 Her Majesty Queen Elizabeth II recognised his public service and endeavour with his admission as an Officer to the Order of the British Empire.

During thirty-nine years devoted to public service, five of these war service, along with a further eleven years in "retirement" Bruce Philip Lambert has a magnificent record; truly promoting the advancement of the science and art of making maps in all operations from original surveys to final printing of copies and distribution to the user, which can only be classed as "second to none", and an admirable case study of pursuit and achievement of excellence.

Bruce Philip Lambert
Honorary Fellow

Dr B.P. Lambert, O.B.E. was elected an Honorary Fellow of the Institution at the 3rd meeting of the Council for 1988. The following citation accompanied his nomination:



Bruce Lambert was born at Gosnells, Western Australia, in 1912 but moved at an early age to Victoria. He attended Wesley College, Melbourne. Completion of a Diploma of Civil Engineering at the Melbourne Technical College was followed by the serving of articles under James G. Gillespie from 1932 to 1936. In the latter year, he qualified to practise as a land surveyor and was awarded the prize of the Victorian Institute of Surveyors. From then on until the outbreak of World War II, he was employed successively by the Titles Office, the State Electricity Commission and the Melbourne City Council.

When war started, he was a militia officer in an artillery brigade, but early in 1940 was appointed Officer Commanding the 3 Field Survey Unit, RAE. In the middle of that year, he enlisted in the AIF with 2/1 Corps Field Survey Coy and then served in the

Middle East and Australia. This was followed in 1943 by command of that unit in New Guinea, and subsequently staff appointments including service as an Assistant Director of Survey in Australia, the Dutch East Indies and Borneo.

Following the cessation of hostilities he was, in 1946, appointed Deputy Director of National Mapping in the Commonwealth Department of the Interior and, in 1951, Director of National Mapping and Chairman of the National Mapping Council, in which capacity he continued until his retirement in 1977. As Chairman of the Council, he was required to consult with individual members and draw up for Council approval operational plans for the National Geodetic and Levelling Surveys. These were successively completed in 1965 and 1971. An overall coverage of air photography, photoscale compilations and published 1:250 000 planimetric maps was completed in the mid-1960's.

In 1965, the Federal Government approved commencement of a program of 1:100 000 scale contoured mapping. In 1970, the Division of National Mapping was given the task of mapping the Australian Continental Shelf. Concurrently with these activities, the Division continuously maintained a program of mapping in support of Australian Antarctic research. During this period, the Division of National Mapping introduced into Australia electronic distance measuring (ground and airborne), geodetic satellite positioning, laser terrain profiling, super wide-angle air photography, automated photo-mapping, and the establishment of an astro-geodetic satellite observatory at Orroral, ACT. Two very long, precise baselines for the scaling of international geodetic satellite operations were measured north/south and east/west across the nation.

Throughout his career, Bruce Lambert was very active in international surveying and cartography. This included, from 1964 through to 1972, leading the Australian team which, jointly with an Indonesian team, brought about the survey of the New Guinea International Boundary. In the early 1970's, he was one of six internationally selected surveyor/cartographers who met in New York as a group of experts to advise on Projection and Planning in Cartography for the Second United Nations Decade, and on another occasion attended, as a

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United Nations nominated expert, an international conference in Brazil on the application to cartography of satellite geodesy and remote sensing. From 1960 to 1977, he was Secretary of an international working group on Antarctic Geodesy and Cartography. On a number of occasions he attended international conferences of the International Union of Geodesy and Geophysics (IUGG), the Scientific Committee on Antarctic Research (SCAR), United Nations Cartographic Conferences and Commonwealth Survey Officers Conferences.

On retirement in 1977, he accepted responsibility for organising, on behalf of the Australian Academy of Science, the 1979 General Assembly of the International Union of Geodesy and Geophysics (IUGG). During 1979-83, he was the IUGG representative to the United Nations Cartographic Office. In 1980 and 1981, he served for short periods as a United Nations Cartographic Expert in the Philippines.

Within The Institution of Surveyors, he joined the Victorian Institute as a Student member in the early 1930's, became a Member in 1936 and a Fellow of The Institution of Surveyors, Australia in 1959, has contributed numerous articles to "The Australian Surveyor" and, in 1959-60, initiated action to form the Canberra Division of the Institution, of which he was President in 1961. He was a Councillor of the Institution in 1960-61. He became a Member of the Australian Institute of Cartographers in 1954, a Fellow in 1974 and an Honorary Fellow in 1977. Bruce Lambert was awarded an OBE in 1970, and on his retirement in 1977, the University of New South Wales conferred on him an Honorary Doctorate of Science.

Bruce Lambert is pleased that he has lived long enough to see completion of the tremendous task undertaken by State and Commonwealth (civil and military) surveyors and cartographers, working together, to map the whole of this great continent of ours. It is appropriate that this task has been completed in Australia's Bicentennial Year.