

## **A SHORT HISTORY OF THE ROYAL AUSTRALIAN SURVEY CORPS – 1915 to 1996**

### **Introduction**

Military Mapping in Australia began in 1907 as a part time activity of the Australian Intelligence Corps (Citizen Forces). In 1910 the Survey Section, Royal Australian Engineers, was created and raised as a full time unit within the Permanent Forces to cope with increased mapping tasks. This unit initially consisted of two Australian draughtsmen – Hon. Lieutenant Raisbeck and Warrant Officer Constable, plus one corporal and three sappers on loan from the British Royal Engineers.

### **Formation**

On July 1st 1915 the Australian Survey Corps was raised as a unit of the Permanent Military Forces in an Order-in-Council which proclaimed that all members of the Survey Section Royal Australian Engineers be transferred to the new Corps with their present rank and seniority. The unit was commanded by Lieutenant Lynch with Lieutenant Vance as his second-in-command. It is of interest to note that the extract of this Order-in-Council also carried what became the Corps Motto - '*Videre Parare Est*', formally adopted in 1965, meaning 'to see is to prepare'.

### **World War 1**

Of the three officers and 17 other ranks who constituted the Survey Corps in 1915, all but three other ranks enlisted in the AIF and saw service in France, Belgium, Egypt or Palestine. Two members, Lieutenant Murray, and Sergeant Stafford, were awarded the Distinguished Conduct Medal. The first use of air photos for mapping was made during World War 1. Photography was also used to plot trench detail on existing maps compiled by laborious field plotting methods (about 1 sq km per day).

### **Between the Wars**

In 1921 the Survey Corps lost its separate Corps status to become the Survey Section – Engineers (Permanent) but was re-established as the Australian Survey Corps in 1932. Limited military mapping continued throughout that period. In 1927 the RAAF commenced flying aerial photography for mapping purposes and the first map produced using aerial photographs was of Albury at a scale of one inch to a mile. When the Corps reformed in 1932 the total strength was fourteen but it increased steadily and by 1935 it stood at thirty five.

### **World War 2**

The Corps entered World War 2 with nine officers and forty one other ranks. Total strength reached a peak of 1,700, with some 5,500 men and women being engaged on mapping tasks during the war period. Corps members served with distinction in the Middle East, the Australian mainland, New Guinea, Pacific Islands and Borneo. It was in Borneo where HQ 1st Australian Corps praised the efforts of the Survey Corps by recording that '*...never in this war have Australian troops been so well provided with accurate maps, sketches and photo reproductions ...*' their tasks culminated in the production of the Japanese 'Instrument of Surrender'. At the end of the war the Corps had 862 all ranks serving overseas which together with mainland personnel had produced a total of 1,419 maps of various scales.

### **Post War Development**

By mid 1947 Corps strength had declined to 430. In 1948 the Australian Survey Corps was granted the prefix 'Royal' in recognition of its service during the war. That same year saw the initial establishment of the Army School of Survey at Balcombe, Victoria, on the Mornington Peninsula. In the late 1940s Corps surveyors undertook exploratory surveys for the Snowy Mountains hydro-electric project, hydrographic surveys in Flinders Gulf and later the Woomera Rocket Range. Anaglyphic stereoplottting equipment was introduced into the Corps in 1952 and was used extensively for over 10 years.

Despite the efforts of pre-war Corps surveyors, in 1950 the Australian continent could only be described as being very poorly mapped. At this time mapping consisted of inch to the mile mapping of some limited coastal areas and emergency maps at four miles to an inch produced by civilian agencies during the war. These four mile maps were based on existing property surveys and what are commonly called 'traveller's tales' and had no or limited height information and many were of dubious accuracy. Both national development and defence demanded better.

In 1957 the decimal map scales of 1:50,000, 1:100,000 and 1:250,000 replaced the imperial scales. At about this same time scribing replaced conventional pen and ink draughting methods. In 1957

helicopters were first used for mapping by army surveyors in Western Australia. 1957 also saw the introduction of electronic distance measuring equipment to field surveying superseding traditional methods of triangulation and in the early 1960's map compilation from aerial photography was greatly expedited by the use of electronic computers for analytical photogrammetric processes.

Survey for mapping programs in the then Territory of Papua and New Guinea commenced in 1954 with ship based surveys of New Britain (1954) and New Ireland (1956/57). These were carried out conjointly with the United States Army Mapping Service providing logistic support. From 1961 through to 1979 mapping surveys were undertaken annually on the mainland of Papua New Guinea, finally providing total map coverage at the scale of 1:100,000 and culminating in the presentation of a three volume atlas to the Prime Minister of Papua New Guinea Sir Julius Chan on the 26th June 1980.

From the early 1950's until the disbandment of the Corps in 1996 extensive geodetic surveys and mapping operations were undertaken in all mainland states of Australia as part of the National Mapping Program. Co-participants were the various state and federal mapping agencies. The Corps' specific area of responsibility was north of the Tropic of Capricorn but included other substantial areas in all States. Total map coverage at the scale of 1:250,000 had been achieved by 1965 and a 300 kilometre band of 1:100,000 mapping around the coast by 1980.

The School of Military Survey moved to Bonegilla late in 1965. '*Wandering the Kings Highway*' was adopted as the Corps marching song.

### **Defence Cooperation Program**

From 1970 to 1996 the Corps participated in Australia's Defence Cooperation program. Survey operations and mapping programs were undertaken in Indonesia and later the South West Pacific island nations.

### **Vietnam**

In 1965 the 1st Topographical Survey Troop was raised to provide direct mapping support to military operations. In 1966 a detachment of the Troop, later re-designated 'A Section', was deployed with the 1st Australian Task Force to Phuoc Tuy Province in South Vietnam and saw continuous service through to 1971.

### **Technology**

In its final three decades the Corps developed into a highly professional and technical organisation employing advanced mapping systems and equipment. Examples in field survey include the use of the satellite positioning system and airborne laser terrain profiling; in map production, computer based analytical photogrammetry to produce photo control for stereo plotting of map detail, computer-assisted cartography, orthophoto mapping equipment and in map printing; a large format computer controlled cartographic camera and computer controlled lithographic colour printing presses.

### **Changing Times**

Although one of the smallest army corps, the Royal Australian Survey Corps retained a position of seniority in the corps listing being preceded only by Armoured, Artillery and Engineers. The strength of the Corps in the mid-1980s stood at approximately 650 all ranks, including 100 officers.

On completion of 1:250,000 and 1:100,000 mapping programs of Australia the Corps commenced a program of 1:50,000 mapping of areas of tactical significance. While the Corps entered its most productive time in map output, two successive reviews of defence mapping and charting capabilities were to decide the future of the Corps. The Baker-Byrnes Review of 1988 refocussed the Corps to a more operational role in direct support of the Australian Defence Force. Much of the Corps' field assets were rationalised and the 1st Topographical Survey Squadron was raised in Brisbane to support the 1st Division.

The advent of the Wrigley report was to signal the end of the Corps when sweeping government reform resulted in the civilianisation of many Defence activities. The mapping activities of the Corps were handed over to public service organisations. The operational assets of the Corps were considered too small to exist as a separate corps and on the 1st July 1996 the Royal Australian Survey Corps was disbanded. A geomatic trade of approximately 120 all ranks was raised within the Royal Australian Engineers to provide topographic support to the Army.

The achievements of the Survey Corps were threefold. It supported our forces overseas in three of the major conflicts of the 20th century, it made a major contribution to the mapping of Australia and surrounding countries essential to their defence and development and finally, it achieved a reputation as a world standard technical mapping organisation. This last achievement is evidenced in the sense of achievement and pride that marks the character of any ex-serving member of the Royal Australian Survey Corps.

**For further information see**

**[http://en.wikipedia.org/wiki/Royal\\_Australian\\_Survey\\_Corps](http://en.wikipedia.org/wiki/Royal_Australian_Survey_Corps)**