



## **CHAPTER 5 – SPECIALIST SIGNALS**

### **PART 1 - 547 SIGNAL TROOP**

#### **Preparations**

547 Signal Troop's involvement in Vietnam began in March of 1966 when Army Headquarters proposed that the troop be allocated in direct support of the 1 ATF. The Task Force was due to assume the responsibility for Phuoc Tuy Province in May of 1966. The Troop was initially only established at half strength of fifteen men. Captain Trevor Richards was appointed to command the Troop. This was an appropriate appointment as Captain Richards had been involved with a similar unit during the Borneo Campaign.

The need to deploy the troop in Vietnam was largely due to the appreciation of two officers, Lieutenant Colonel Ken Whyte and Major Colin Cattnach. Major Cattnach spearheaded the Troop's deployment with a visit to Vietnam. Whilst in Vietnam he made contact with local Australian and Allied authorities and did much to ensure that the unit would be committed to a solid role and enthusiasm was reflected in the high standard of commitment and tasking which he set for the Troop.

#### **7 Signal Regiment**

547 Signal Troop was a sub unit of 7 Signal Regiment and soldiers were taken from the Regiment's outposts throughout Australia. 7 Signal Regiment would feed replacement specialist Electronic Warfare (EW) personnel to 547 Signal Troop during its deployment in Vietnam.

#### **Deployment**

In a frenzied round of visits between 12<sup>th</sup> and 20<sup>th</sup> May 1966 the details were settled for the troop's deployment. The troop was to take its own weapons, stores and vehicles but would receive its maintenance and administrative support from 103 Signal Squadron which at that time was serving as the Task Force Signal Squadron. In the subsequent years a strong bond of friendship was built between these two units and 103 Signal Squadron's replacement unit, 104 Signal Squadron.

On 21<sup>st</sup> May 1966 the unit's advance party left Borneo Barracks (7 Signal Regiment) for embarkation at Sydney on HMAS Sydney. On 8<sup>th</sup> June 1966 landing craft of HMAS Sydney deposited the advance party of 547 Signal Troop on the beach at Vung Tau.

The main party of the Troop was moved by air from Sydney to Vung Tau via Saigon.





On 14<sup>th</sup> June 1966 they met up with the advance party and the following day headed off to Nui Dat. There, the OC of 103 Signal Squadron, Major Mudd allocated the Troop a position opposite the Task Force Headquarters, fairly close to where the communications centre was later to be built.

Operations commenced on 24<sup>th</sup> June 1966 and were continuous for the next five and a half years.

## Operations

Operationally, the troop was committed to a role of intermediary between allied 'Radio Research Units' and the Task Force Headquarters. This was implemented quickly but with a few teething problems. Within a fortnight of arrival at Nui Dat, independent research began.



Photo 5-1.1 – 547 Sig Tp Set Room (1966)

Radio equipment provided some problems as it had suffered a rough passage and was not handling the local heat very well. Repairs had to be effected under adverse conditions, without the services of a technician.

Highly classified for many years is the radio work of 547 Signal Troop in Vietnam. For example in the lead up to the Battle of Long Tan. Two weeks before the Battle,





547 identified the radio callsign of 275 (VC) Main Force Regiment, a fresh unit to Phuoc Tuy Province and under the control of HQ 5 (VC) Division. On the same day the Troop fixed the location of 275 Regiment's transmitter by radio direction finding. That, in the Troops opinion, should have stirred the possums - or mongooses - at HQ 1 ATF. It caused hardly a ripple.

One of the problems was the little understanding, by the staff of HQ 1 ATF of the importance of information provided by 547 Signal Troop at the time. Also only four people outside the Troop at Nui Dat, were authorised to be told the sources of 547's information (The Commander, Operations Officer and the G2 plus G3 Int) by the Australian Department of Defence. US intelligence came in reams, but often it was not parochial enough for the Task Force, so most reliance was placed on reports from Australian sources, especially patrols. Also the Task Force HQ treated intelligence from the South Vietnamese Army and Police as suspect due to the conflicting nature of their reports.

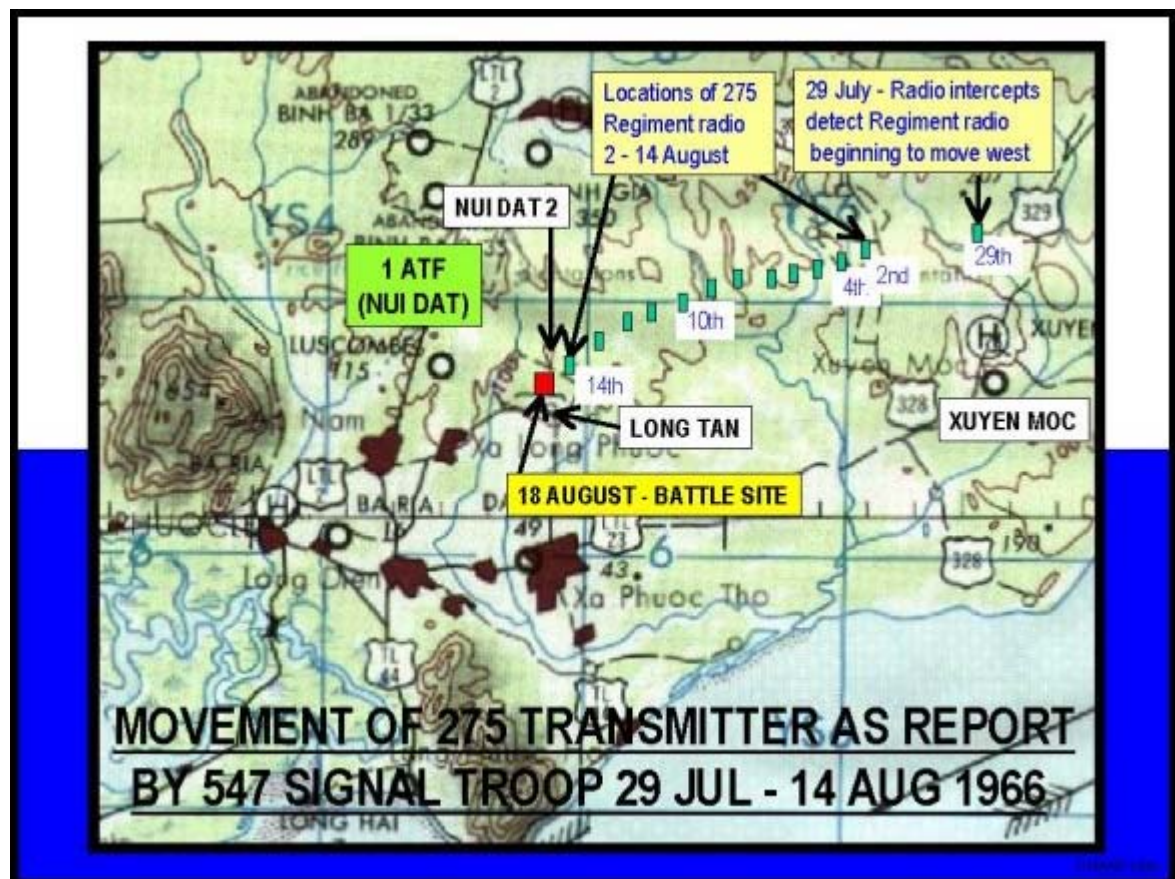


Diagram 5-1.1 - Movement of 275 Regiments transmitter towards Nui Dat as reported by 547 Signal Troop (29 Jul 1966 to 14 Aug 1966)

On the 29<sup>th</sup> July 1966, 547 reported a considerable increase in radio traffic from the east, which suggested to the Troop OC (Captain Trevor Richards) and his analysts





that something significant was in the offing. On the same day, the 547 operators located the transmitter of 275 Regiment a couple of kilometres north of Xuyen Moc, it then approached the Nui Dat base in steady deliberate stages, as though moving tactically, taking sixteen days to cover the seventeen kilometres from there to the area of Nui Dat 2 (near Long Tan), with 547 operators locating the transmitter twelve more times along the way from the 2 to 14 August.

On the 18<sup>th</sup> August 1966, D Company, 6 RAR, near Long Tan fought a major battle, which is now known as the 'Battle of Long Tan' with one to two thousand enemy.



Photo 5-1.2 (left) - Huey's doing resupply mission

Photo 5-1.3 (right) - SSgt Bill Irwin (left), Capt Trevor Richards (centre) and SSgt Jim Rayner at Christmas, Nui Dat (1966)

At 1700 hours as the besieged D Company were requesting a desperate resupply of ammunition by helicopter, another significant event occurred. The Commander, at last, called the OC of 547 Signal Troop to his side and asked for his analysis of the enemy attacking D Company.

Richards had no problem responding in detail, relieved that his team efforts had, at last, won recognition. From that day the Australian 'Agency' charged with passing on US information quietly became an agency producing and passing on its own information back to US authorities, as well as the Task Force.

It was not until February 1967 that the Troop welcomed its first technician. With the close liaison established with the HQ 1 ATF, it became apparent that the Troop could perform more than an intermediary role. In fact, some agencies soon began to request more of the Troop's results and soon became dependent on the Troop as a source of information. This fact was acknowledged in a letter of commendation from the Troops Operational Command to the highest authority concerned.

Early in 1967, the Troop workload was increased with the introduction of aerial experiments. Operators, who seldom ascended more than twenty feet up a mast, now found themselves being hurled around the sky in a Cessna 180A belonging to 161 Independent Reconnaissance Flight. Early tests consisted of a Receiver with a length of 'copper' wire trailing out of the aircraft. This wire (aerial) was wound in/out







of the aircraft on a 'fishing reel'. Meanwhile, purpose built equipment was being designed and tested at 'Weapons Research Establishment' in Australia. The equipment was simple, but very effective and accurate. Once operational, the skills of the 161 Independent Reconnaissance Flight pilots contributed greatly to the accuracy of and credence placed upon the end results attained by the Troop.



Photo 5-1.4 (left) - SSgt Bill Irwin (left) and Sgt Sammy Rogers with unit sign at Nui Dat (1968)



Photo 5-1.5 (right) - Sig Bugsy Harper at Nui Dat (1967)

## ARDF

The Troop commenced Operational Airborne Radio Direction Finding (ARDF) missions in August 1967 with equipment mounted in the 161 Independent Reconnaissance Cessna 180A aircraft. Allied visitors to the Troop were surprised by its capabilities and many Senior Officers and boffins flew missions in the aircraft to see the gear in operation.



Photo 5-1.6 - Cessna 180A with ARDF equipment at Nui Dat - Note antenna pod in the up position





In this period Corporal Dick Schafer of 547 Signal Troop earned fame as an ARDF operator. His first ARDF incident was simply a matter of running out of gas in the Cessna 180A. The pilot just managed to glide home to Nui Dat (Luscombe Field), to Dick's joy!

The second incident was more serious. His Cessna 180A engine stopped and had to force land into a paddy field twenty kilometres north of Nui Dat near Route 2 around Courtenay's Plantation.



Photo 5-1.7 - Cessna 180A fitted with ARDF equipment.

After crash landing Dick scrambled from the broken aircraft to face an encircling patrol dressed in black. The pilot (Lieutenant Steve Tizzard) and Dick prepared for a desperate stand. The tallest member of the patrol put his hands into the air shouting ***"Don't shoot, I'm an American adviser"***. To this day Dick and the pilot are not sure whether they or the adviser enjoyed the greater relief.

Dick, the pilot and their highly classified equipment were extracted under the protection of Helicopter Gunships and a SAS protection patrol, which arrived within minutes of the forced landing.





Subsequently it was discovered that the aircraft came to a stop on the EW antenna pod after its undercarriage collapsed in the crash landing. The EW equipment was undamaged in the incident however the aircraft was a write-off because it was dropped in the recovery operation.

### **Upgraded ARDF**

Early 1970 saw the installation of an upgraded piece of equipment into the 161 Independent Reconnaissance Flights new Pilatus Porter aircraft. The new equipment proved to be a joy to operate and a vast improvement on the older models, much to the delight of the operators and technicians.

An example of the number of hours flown and sorties carried out per month in support of 547 Signal Troop by 161 Independent Reconnaissance Flight in 1971 is as follows:

June 1971	181 hours	100 sorties
July 1971	171 hours	93 sorties
November 1971	312 hours	156 sorties
December 1971	84 hours	41 sorties



Photo 5-1.8 - Pilatus Porter at Nui Dat



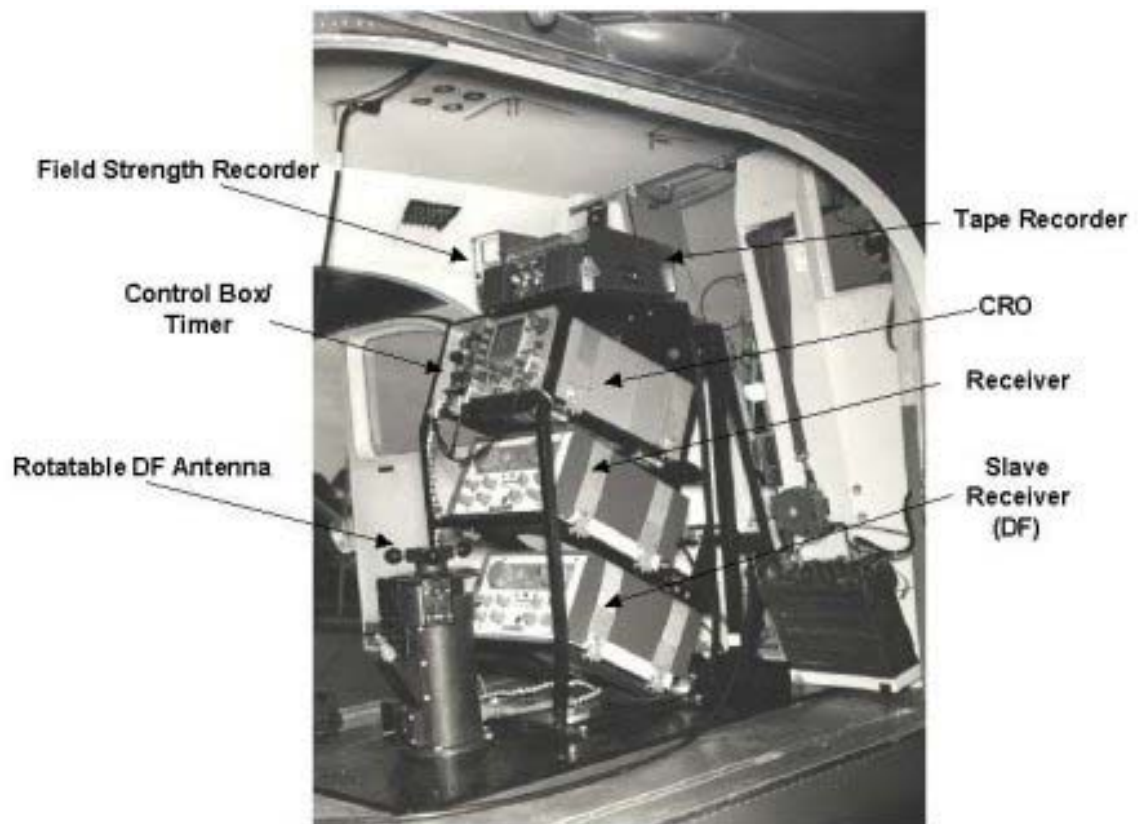


Photo 5-1.9 - Australian Designed Pilatus Porter ARDF equipment

### The Cell

October 1968 also saw the arrival of more experimental Direction Finding (DF) single station locator equipment. The equipment was to be located within the Nui Dat perimeter but away from the Troop's main operational base. The equipment was called the 'Cell' and was based on the World War II German 'Wullenweber' aerial system which used four aerials in a circle. The single station locator pinpointed the source of the radio wave by measuring the phased time and angle difference between two incoming radio waves striking the antennas in the circle and calculating the angle of deflection from the ionosphere. The Cell was a source of interest to many allied units. Streams of visitors came, and once the complexities of its functions were mastered and the operators and technicians gained confidence, the project went on to produce valuable results. This single station location method developed by Australia is now used world wide in sophisticated HF DF Systems.





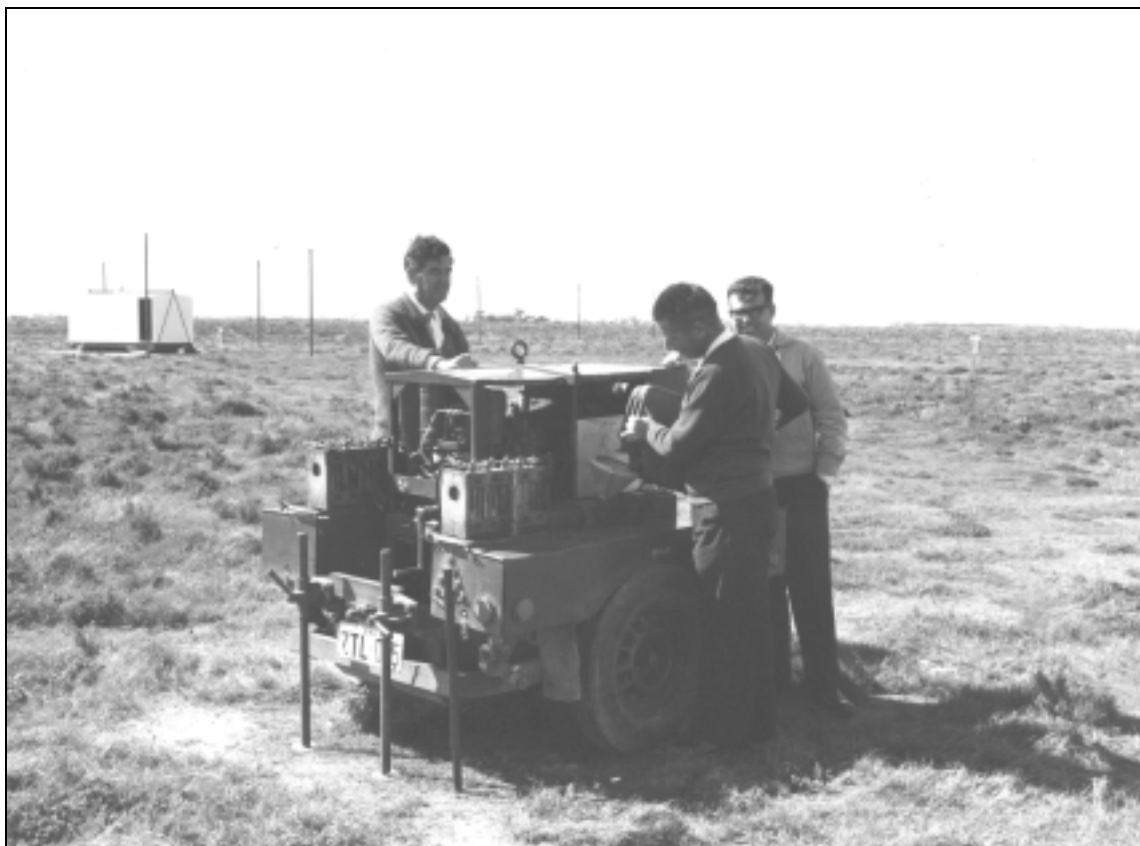


Photo 5-1.10 - The Cell in final testing before deployment to Vietnam. From Left Captain John Duncan, Warrant Officer Class One Jack Hooker and Corporal John Peters (1968)

### **Forward Deployments**

With the Task Force Headquarters deploying forward in operations, it was also necessary to improve 547 Signal Troop's representation at the forward HQ. An Armoured Command Vehicle (ACV) '84 Delta' was allocated to the Troop and was fitted and wired for the necessary communications equipment. By working on the Troops own links, the Troop representative was able to give rapid replies to staff questions.

### **Re-location to Vung Tau**

News of the Australian withdrawal came in August 1971. The Troop re-deployed to Vung Tau on 6<sup>th</sup> October, with no loss of circuit time. On 17<sup>th</sup> October 1971, the rear echelon joined the rest of the Troop at Vung Tau. They had remained at Nui Dat, with the ACV, and a two man rear party. 547 Signal Troop was the last vehicle to leave Nui Dat. On 13<sup>th</sup> December 1971, 547 Signal Troop closed operations in Vung





Tau. The flying team ceased operations at 1200hrs and the Communications Centre at 1800hrs. On 23<sup>rd</sup> December 1971, in the early hours of the morning, 547 Signal Troop boarded the buses for the airport. At 1000hrs, 23<sup>rd</sup> December, the Troop departed Vietnam.



Photo 5-1.11 - 547 Signal Troop compound gate at Nui Dat (1971)



Photo 5-1.12 (left) - 547 Signal Troop setting up at Vung Tau (1971)



Photo 5-1.13 (right) - 547 Signal Troop SIGCEN at Vung Tau (1971)

***Footnote: On Wednesday 9<sup>th</sup> February 1972, 7 Signal Regiment at Borneo Barracks (Cabarlah, Queensland) held a special parade to welcome 547 Signal Troop home. Major Herb O'Flynn, the last Officer to Command the Troop, then disbanded the Troop and returned the personnel to 7 Signal Regiment.***

