2 SQUADRON RAAF - VIETNAM BOMBING TAPES - 1969-1970

Australian War Memorial Series S00693

INDEX

TAPE #	SIDE	MISSION DATE	TYPE OF MISSION	LOCATION
1	A, B	18 August 1969	Daytime Close Air Support Mission	Mekong Delta Region - IV Corps
2	A, B	Ditto	Ditto	Ditto
3	A, B	30 September 1969	"Combat Sky Spot" High Altitude Night-time Ground-controlled Interdiction Bombing Mission	Demilitarised Zone [DMZ] - I Corps
4	A	Ditto	Ditto	Ditto
4	B	5 October 1969	Daytime Visual Close Air Support Mission - Landing Zone [LZ] Preparation	Mekong Delta Region - IV Corps
5	A, B	Ditto	Ditto	Ditto
6	A, B	24 December 1969	Daytime Visual Interdiction Mission - Pre-strike Preparation	Mekong Delta Region - IV Corps
7	A	Ditto	Ditto	Ditto
7	B	18 September 1969	Daytime Close Air Support Mission	Mekong Delta Region - IV Corps
8	A	Ditto	Ditto	Ditto
8	B	27 April 1970	Daytime Visual Interdiction Bombing Mission	Tiger Mountains, A Shau Valley, I Corps
9	A	Ditto	Ditto	Ditto
9	A, B	4 May 1970	Formation Daylight Visual Close Air Support Bombing Mission	Long Hai Hills near Vung Tau, III Corps
10	A	21 February 1970	Daytime Interdiction Mission	North East of Saigon, III Corps
11	A,B	2 September 1969	Night-time Visual ["Night Owl"] Interdiction Bombing Mission	South East of Saigon, III Corps

Tape #1 Side A begins

Date of Mission: 18 August 1969.

Type of Mission: Daytime Close Air Support Mission

Region: Mekong Delta Region, IV Corps

Introductory Notes:

This is an edited taping and covers internal pilot-navigator crew intercommmunications as well as external radio communications with air traffic control authorities and tactical/bombing mission controllers.

It is single Canberra jet bomber aircraft close air support mission conducted in daytime in the Mekong Delta region.

Aircraft: Canberra B Mark 20 [Avon Mk 109 engines], A84-247.

The two-man crew of Magpie 71 is Squadron Leader Ivan Grove [pilot] and Flight Lieutenant Bob Howe [navigator].

Magpie 71 is the second last of 8 daily missions flown by 2 Squadron and has been given mission number 5026.

The Canberra is carrying 6 x M117 750 lb bombs [4 in the bomb-bay and 1 on either wing tip], with instantaneous or delayed fusing which can be set electrically from the cockpit before bomb release.

Normal radio procedure was for the pilot to handle radio calls on taxi, takeoff and departure frequency, while the navigator undertook en route communications, handing over to the pilot again to coordinate the bombing mission.

Recorded Events:

The record starts after takeoff with Magpie 71 checking in with ground-based air traffic control flight-following radar service [callsign "Portcall"] reporting communications interference [possibly jamming] on the frequency.

Explanatory Note:

- "Portcall" was the callsign of a Control and Reporting Center [CRC] with overall responsibility for tactical aircraft flying in the II Corps Region of South Vietnam. The CRC was operated by Detachment 11 of the USAF's 619th Tactical Control Squadron, a radar element of the Vietnam-wide 505th Tactical Control Group comprising three radar squadrons [the other two callsigns being "Paris" at Tan Son Nhut and "Panama" at Da Nang] , five Tactical Air Support Squadrons with their Forward Air Controllers [FACs] and a Tactical Control Maintenance Squadron. The Portcall radar site was located on the island of Hon Tre a few miles offshore from Nha Trang. 2 Squadron RAAF personnel would occasionally visit Portcall to show appreciation for their excellent flight following services supporting Magpie bombing missions. For an informal history of these South Vietnam sites see http://www.itjob4u.com/tcs/.

Magpie 71 is climbing to 24,500' ["Angels 24.5"] after taking off from Phan Rang [referred to by its TACAN Channel number - 75], heading south-west to work with "Paddy" mission control and with on-board IFF switched to Code 3 Mode 51 and "flashing".

Explanatory Note:

- TACAN Channels - Virtually all tactical aircraft operating with the 7th Air Force in South Vietnam carried Tactical Air Navigation [TACAN] equipment which enabled them to receive a bearing and distance from selected TACAN ground beacons located across the country and providing complete airborne navigational coverage. Through familiarity, both aircrews and their ground controllers referred to key base locations by their TACAN Channel number rather than the actual location, thus Phan Rang was known as "Channel 75".

- "3 51 flashing" stands for Code 3 Mode 51 which was a particular setting the Canberra crew would select manually on the aircraft's Identification Friend or Foe [IFF] control to enable interrogation and identification at any time by ground-based air control radar stations. In addition to these code settings which could identify individual aircraft, a spring-loaded switch could be flicked by a crew member which triggered a distinct blip flaring up on the ground controller's radar screen to provide positive identification amongst a myriad of other radar "skin" contacts. This was variously referred to as "flashing" or "ident".

- "Paddy" - Although sometimes referred to as a major Control and Reporting Centre [CRC], "Paddy" was in fact the call-sign for a smaller Control and Reporting Post [CRP] located at Binh Thuy air base in IV Corps, with both tactical and flight following functions. Operated by the USAF's Detachment 3 619th Tactical Control Squadron [TCS], "Paddy" employed an ex-truck mounted radar with up to 4 operators using control scopes. Magpie missions to IV Corps came under the Tactical Scope operator whose function was to hook together IV Corps Forward Air Controllers [FACs] with tactical fighters. "Paddy"s services were always top notch. For more information on Paddy check out the same web site as for Portcall.

"Portcall" advises good radar contact with Magpie 71 who is clear of "artillery" en route to its assigned rendezvous.

Explanatory Note:

- "Artillery" is the term used for friendly live firings which could be from ground-based artillery shells, ships shelling the mainland from the Gulf of Tonkin or South China Sea or large clusters of high explosive bombs being dropped by high flying B-52 bombers.

Also heard on frequency, Magpie 31 reports its departure from Phan Rang, climbing to angels 20.5 [20,500'] travelling westbound, [IFF] "51 flashing".

En route to its assigned rendezvous, Magpie 71 transfers to another ground-based flight following radar, callsign "Paris".

Explanatory Note:

- "Paris" - was the callsign of a Control and Reporting Center [CRC] with overall responsibility for tactical aircraft flying in the III and IV Corps Regions of South Vietnam. The CRC was operated by the USAF's 619th Tactical Control Squadron located on the Tan Son Nhut air base, Saigon. Magpies were provided with flight monitoring services from "Paris". For an informal history of this site see http://www.itjob4u.com/tcs/.

"075 @ 88 off 73" means that the Canberra's position at the time is determined by a bearing of 075° and a distance of 88 miles from a TACAN beacon located at Bien Hoa air base [Channel 73].

Heard on frequency is the anguish of one American flyer, possibly a C-130 Hercules pilot urging a helicopter pilot to quickly leave the runway he's trying to land on.

Explanatory Note:

- "Guard" frequency is the International Distress Frequency, either 243 Mhz on the UHF band or 121.5 mhz on the VHF band. These frequencies were universally used by all pilots as an emergency frequency and during the Vietnam War such was the use of these frequencies by people experiencing trouble or even minor communications difficulties that significant voice "clutter" could occur, in some cases masking genuine emergencies. During all missions flown by 2 Squadron RAAF these emergency frequencies were tuned in, simultaneously with the normal operating frequency.

Magpie 71, mission number 5026 at angels 24.5 [24,500'], requests QSY [change frequency] to "Paddy" who, after they finally make good contact identifies the Canberra at 073º bearing and 49 miles from TACAN station/channel 115 [Binh Thuy].

"Paddy" assigns the Magpie crew a rendezvous with a Forward Air Controller [FAC] callsign "David 32" [Cessna O-1 Bird Dog] who is airborne and waiting at 159º 18 miles from TACAN station/channel 115 on 341.5.

Explanatory Note:

- The David FACs were part of the 19th Tactical Air Support Squadron [TASS] which was created in July 1963 in South Vietnam, where it flew missions for the Vietnamese Air Force as well as training Vietnamese pilots and observers in the 0-1 aircraft. The TASS's operations including forward air support, combat support liaison, visual reconnaissance, forward air control of fighters, artillery adjustment, and escort for convoys, trains, and helicopters. They also flew psychological warfare, radio relay, and re-supply missions. Primarily the TASS provided visual and photographic reconnaissance and airborne forward air control for fighter aircraft and also trained USAF and Vietnamese pilots and observers in 0-1 and, from 1968, 0-2 and OV-10 operations. By 1971the Vietnam Air Force [VNAF] had taken over the TASS's responsibilities under the US Government's "Vietnamisation Program".

Magpie 71 is told that "Pigeons" [direct bearing and distance to the rendezvous] are 232º, 49 miles.

Approaching the rendezvous Magpie 71 requests approval to change frequency [QSY] to talk with the FAC.

Another 2 Squadron Canberra - Magpie 51, piloted by Flying Officer Peter Salvair [with navigator Flight Lieutenant Lloyd Brown] is ahead of Magpie 71 and on the same frequency, who advises that they are holding high over a revised rendezvous 137º 32 miles from the Binh Thuy [Channel 115] TACAN.

Magpie 71 navigator informs the pilot that the rendezvous is a large island in middle of Mekong delta in IV Corps. The pilot has selected TACAN Channel 119 [Soc Trang] which puts the Canberra 30 miles to the north. The navigator suggests a heading of 190º towards the rendezvous.

The FAC advises that the Navy [presumably riverine watercraft] is awaited to check out the junk [target ?] but they are taking too long to arrive.

Probably instructed by a TASS Ground-Air Liaison Officer on another frequency, the FAC gives his mission briefing but advises of a diversion to the original target which is a VC Base area, 15' elevation, with 20' high trees, surface winds calm, winds given at 1000' levels to 4000'. Altimeter [barometric pressure] setting is 29.84 inches.

Magpie 71 confirms the rendezvous and advises Magpie 51 that it is well clear at angels 25.5 [25,500'] and confirms receipt of the FAC's data.

David 31 advises that the closest friendlies are 1km to west and 2km to north of attack heading and there is no reported artillery in the vicinity. Recommended bail out area if the aircraft is hit by ground fire or otherwise in trouble is over the friendlies. During this strike, Magpie 51 can expect light automatic

weapons fire from possible enemy in the target area, and if the aircraft experiences an emergency requiring it to land, the closest air base is Bin Thuy.

The FAC advises that he has 10 minutes to reach the target area as he was on the other end of the big island.

Magpie 71advises that it is Mission Number 5026 and its "line up" is 6 x M-117 750lb bombs, with either instantaneous or delay fuzing.

The FAC asks both Magpie 51 and 71 to select delayed fuzing for the bombs so that they can penetrate down into large bunkers under the foundations which have been reported by intelligence personnel to remain intact in the midst of a previously bombed area.

Magpie 51, who is orbitting Soc Trang, asks where the target is. David 31 responds that the bombing area consists of canals coming out from a large river towards Soc Trang. The area is to east of that canal forming a W shape. Positive identification ["tally"] is achieved between Magpie 51 and the FAC.
.
Because the target is not readily identified by Magpie 51, the FAC fires his a White Phosphorous ["Willie Pete"] smoke marker to enable the general target area to be more easily located and advises that he intends to hold at 2500' altitude over the friendlies.

Magpie 51 is instructed by the FAC to drop the aircraft's 6 bombs in three passes of two, selecting [from within the Canberra's cockpit armament panel] a spacing of 25 metres between each.

Magpie 51 advises that the target will be pretty hard to spot on the run in.

Explanatory Notes:

- Bombing Technique. Most of the Canberra jet daylight bombing missions in South Vietnam involved standard straight and level bombing runs. Upon reaching the target area, the bomb-aimer [navigator] unstrapped from his ejection seat leaving behind his parachute pack, and crawled down a passage-way on the right-hand forward side of the aircraft. Lying in a prone position more or less beside the pilot the bomb-aimer would be able to look down at the target beneath the aircraft through a clear perspex nose canopy. He would adjust a T-4 bomb-sight not dissimilar from the Norden bomb-sights used by World War 2 bomber crews to line up the target visually with an illuminated graticule [cross-hairs] reflected off a small gyro-stabilised glass platform. The bomb-sight could be connected to the Canberra' s actively transmitting "Green Satin" doppler radar to provide instantaneous ground speed and drift readings, however with IV Corps missions over flat terrain, fixed bombsight techniques were generally employed and manually setting doppler-indicated drift and ground-speed corrections. Other adjustments included allowing for [a] aircraft bombing attitude which depended on the amount of fuel carried and [b] temperature variations to height readings on altimeters which were set to atmospheric pressure settings [QNH] obtained from the nearest airfield or provided by the FAC.

- Bombing Run. The bombing run was based on a pattern similar to approaching an airport, i.e. flying a downwind leg, turning 90 degrees onto base leg, then a further 90 degrees onto a final approach to the target for straight and level bombing where the bomb-aimer would advise final corrections. Standard bombing speed was 270 knots indicated air speed [IAS] at 3000 feet altitude above the target unless weather or other conditions required flying lower. The bombs could be selected for single or multiple [ripple] release with a range of time settings between each release enabling a string of bombs to stretch across an extended target. Actual bomb-release was effected by the bomb-aimer pressing on his electrical thumb control when the moving target was coincident with the illuminated cross-hairs. The RAAF Canberra bombing pattern differed from all other tactical aircraft employing dive bombing techniques and 2 Squadron crews acquired a reputation for accurate bombing and a considerable respect from the US 7th Air Force community and troops on the ground.

On this mission, Magpie 51 is instructed to conduct its final bombing run from a general direction of north to south in order to remain clear of friendly forces/people on the ground - parallel to a large canal and perpendicular to a small one. Magpie 51 suggests 230° as a final heading; whereas David 31 prefers 210° heading as a "teeny weeny bit better".

Magpie 51 starts its first run and FAC rolls in to fire a WP smoke rocket which ignites on contact with the ground to serve as a reference point for the preferred bomb drop point. The FAC instructs Magpie 51 to drop its first bomb short of the smoke marker by 10 metres, however he fails to see Magpie 51 running in on 210° and leaves his bomb drop clearance too late - thus the first run is a "dry run", i.e. no bombs are released.

The FAC, flying in his O-1 Bird Dog which carries a total of 8 WP rockets mounted on under-wing launcher racks, apologizes for not seeing Magpie 51 in time.

Mission taping ends.

Tape #1 Side A ends

Tape # 1 Side B begins

Introductory Notes: This tape continues with a recording of 18 August 1969 mission.

Recorded Events:

The Magpie 71 crew still circling high overhead, discuss the name of FAC David 32 [Lloyd] who has met with them at Phan Rang as part of an inter-change arrangement between the 20th TASS and the RAAF.

David 31 fires a smoke marker and instructs Magpie 51 to bomb it. Magpie 51 reports two bombs gone and is rewarded with the FAC's observation - "very fine bombing". The FAC moves in to have a closer look to see if the target has been demolished.

Magpie 71 crew note that the cloud is building up below.

David 31 advises that he's found another target, directly across from last hit on the other side of canal, 100 metres to the south east. It's a large concrete building with two concrete walls still standing.

Magpie 51 has turned right instead of left as before so they agree to keep this circuit direction. David 31 doesn't want to drop smoke assuming Magpie is coming through dry. They agree to come in "hot" [i.e. to drop live bombs], the FAC instructs them again to "hit my smoke" - but Magpie 51 is unable to do so as the pilot has his hands full avoiding another unidentified aircraft which has stumbled into the bombing circuit.

The FAC calls up on guard advising the aircraft over Dong Island that it is in the middle of an air strike and that it should go to the south.

Magpie 51 is advised of further traffic at 1 o'clock heading north, and confirms a sighting.

The FAC rolls in for another smoke, says it's not good enough and announces his intention to fire another one, with Magpie 51 bomb-aimer saying he'd better be quick.

FAC suggests that Magpie 51 again go through dry as 2 of his smokes have malfunctioned. Magpie 51 bomb-aimer identifies target as short 40 metres of the FAC's earlier smoke, FAC clears Magpie 51 in hot but it's too late. They agree that the building is left and 60 metres short of the still burning smoke marker.

Magpie 51 reports that the same aircraft with which they had the near miss is back in the bombing pattern at same height of 3000'. However, the FAC [probably talking with ground troops on another frequency] fails to hear this.

The FAC fires another smoke, which is not good, having landed in the rice paddies. Magpie 51 runs in again and is cleared to bomb.

With 2 away, the bomb-aimer estimates a 20 metres overshoot noting that the mud patch at the target is the same colour as the building. The FAC reports that the building still stands, with the two bombs having dropped, missing by 20 metres too long and 20 metres to the left.

For the final bombing run for Magpie 51, they try for the same building. It's a very small smoke not seen from Magpie 71 and the bombs fly over the target.

The FAC moves in for a Bomb Damage Assessment [BDA].

End of mission taping on Tape #1 Side b.

Tape #2 Side A.

Introductory Notes: Continuation of 18 August 1969 mission

Recorded Events:

FAC David 31 is now out of smoke rockets and has to return to base to collect a new set. Magpie 71 advises that he can wait until David 31 returns.

Also on frequency, David 32 agrees to conduct his mission with the "Panthers" [Vietnamese Air Force Cessna A-37s, armed with 2 x Mk81 1000 lb bombs, 2 x Mk 82 500lb bombs, 6 rockets and 20 mm guns].

He instructs the A-37s to rendezvous at 174º 27 miles off Channel 115 [Binh Thuy], holding high and remaining on this frequency until he gets there in 5 minutes time. Target coordinates for the VNAF [Mission number 4733] are WR830614.

Magpie 71 descends and confirms visual sighting with FAC David 31.

Magpie 71's bomb-aimer is concerned about the nose fogging up as the Canberra has been holding at high altitude for a long time in cold conditions. Due to a fairly rapid descent of the cold aircraft to a tropical target with high temperature and humidity conditions, condensation has formed inside which obscures the navigator/bomb-aimer's vision as he tries to familiarise himself with the target area while preparing the T-4 bomb-sight for the bombing run.

David 31 advises that the target is the same building as before with two walls still standing.

Pre-bombing checks are conducted by Magpie 71 with 7,500 lbs of fuel remaining. The pilot advises the bomb-aimer that the aircraft is flying at 1800' altitude and the crew agree that the first pass will be a dry run.

The bomb-aimer reports that there is moisture all over the glass bomb-sight and as the pilot turns from base leg onto final approach run, he agrees to pipe some hot air into the nose to try to help remove the moisture. Although this remedy seems to be working in the nose, the pilot's cockpit instruments start to mist up.

Magpie 71 calls for a smoke, the FAC obliges and advises that the target is short 40 metres of it and concurs that it is not a very good smoke, being in the rice paddy.

As Magpie 71 flies directly overhead the target, the bomb-aimer observes that some fairly large trees are covering the building [from the slant view of the bomb-aimer's perspective]. They request a run in from opposite direction and the FAC agrees, with a left-hand break.

David 32 is told that if the Magpie 71 crew can see the smoke then they will run through "hot" this time. The bomb-aimer notes that the bomb-sight's collimator glass is clearing up. Magpie 71 calls for a smoke, is instructed to drop right of it by 60 metres and is cleared "hot".

The bomb-aimer loses sight of the smoke, experiences some last second cloud interference and also complains about the glazed nose canopy as well as target shadows. Magpie 71 goes through "dry" [i.e. without dropping any bombs].

On the next run, the FAC fires his smoke marker and instructs Magpie 71 to drop its bombs 30 metres to the right of it. The bomb-aimer calls the pilot to fly steady, notes that the clouds are getting bigger, but nevertheless the first 2 bombs are gone. He notes that they fell to the left while the FAC confirms this by noting that that they hit the smoke. The "boom" expression indicates that the pilot may have felt the shock wave from the two exploding bombs.

The "structure" [with large bunkers reported underneath] is difficult to see due to poor colour contrast and mud patches. The FAC advises that the bombs fell to the right by 35m, and long by 20m and the structure is still standing.

The next run uses 2 of the 4 remaining bombs with a new smoke marker. Magpie 71 is instructed to drop "right 20m" of the smoke. This time it is sighted more readily, although smoke from the marker drifts across the target causing sighting difficulties. The bombs are dropped and according to the FAC, end up 30m short of the intended target while the navigator/bomb-aimer assesses the miss distance as even greater [40m under, 30m left]. The pilot is somewhat surprised as aircraft height, speed and attitude were "spot on".

The FAC decides to move to a new [target designation] position to avoid target obscuration from the drifting WP smoke.

Magpie 71's pilot advises the FAC that on the next bombing run the bombs will fall from the wingtips and be 20m apart.

The WP smoke marker is launched by the FAC who instructs Magpie 71 to aim 30 metres left of the smoke.

Magpie 71 pilot sights the smoke but the bomb-aimer again has difficulty lining up, feeling that the aircraft is wandering off track slightly and so the Canberra bomber again runs through dry with no bombs dropped.

The bomb-aimer comments that because of the mud, the target can only be seen when very close in and by then it's too late for correcting aircraft direction.

Tape #2 Side A ends

Tape #2 Side B starts

Introductory Notes: Continuation of 18 August 1969 mission

Recorded Events:

In positioning for the next run, the pilot turns onto final approach heading and assures the bomb-aimer that he's never more than 2 knots either side of the required bombing speed of 270 knots Indicated Air Speed [IAS].

The FAC drops another smoke, with the new aim point given as short 5 metres, left 15 metres, i.e. almost on the target. The bombing run is reasonable although the FAC disrupts it as he tries to talk with the crew.

The FAC then reports he's receiving ground fire [i.e. being shot at].

The bomb-aimer watches the bombs fall from the aircraft onto the target area and both crew are disappointed to find that the last two bombs have landed 30m past the aim point although right on line. The pilot advises that he was spot on and they cross-check 285 knots ground speed and no wind drift. The bomb-aimer reports that on the last run it was the first time he'd really seen the [structure] target.

The FAC radios his BDA [Bomb Damage Assessment] to Magpie 71 for the record. Target coordinates for the bombing mission are XR175715/175700 with 500m radius. Total time on target was 30 minutes with 1 large bunker damaged. 100% bombs on target, 10% coverage due to size.

David 32 relinquishes control of the bombing mission by advising the Canberra crew that they are clear to RTB [return to base].

In a post-mission check-in with "Paddy" control and reporting post, Magpie 71's position is given as 100º 40 miles from TACAN Channel 115 [Binh Thuy], with the Canberra climbing to angels 35.5 [35,500'] returning to base at TACAN Channel 75 [Phan Rang].

En route, radio contact is made with "Paris" CRC, with Magpie 71 reporting its position based on TACAN as 190º 59 miles from Channel 73 [Bien Hoa], climbing to Angels 35.5 and with IFF [Identification Friend or Foe] transmitting [squawking] [Mode] 3 [Code] 75 "flash".

"Paris" advises Phan Rang weather and runway, that he has radar contact and that no artillery is reported on Magpie 71's return path to Phan Rang.

Radio contact is made with "Portcall" CRC with the crew reporting the aircraft's position by TACAN as 233º and 64 miles from Channel 75 [Phan Rang], flying at Angels 33 [33,000'], IFF is squawking Mode 74 "flash", they "have the numbers" and plan on a visual recovery [arrival] at Phan Rang.

Explanatory Note:

- "Have the numbers" means that the crew have checked and received the latest Phan Rang weather and runway reports.

Portcall advises Magpie 71 that they are still clear of all reported artillery. QSY local is effected by changing to local Phan Rang approach control frequency .

"Mustang" [Phan Rang approach control] is advised by Magpie 71 of its return-to-base [RTB] intentions and is advised of local ground-based artillery ranging across an arc 062º to 092º from Phan Rang, distance from 11 to 15nm, with shells firing up to 10,000' maximum altitude.

As part of its normal return-to-base routine, Magpie 71 calls up "Kangaroo workshops" [2 Squadron RAAF maintenance section] with RTB confirmation and welcome advice that there are no problems with the aircraft.

Magpie 71 then makes contact with Phan Rang tower when 35 miles south-west of the airfield and is advised to report on "initial" [approach] with the active runway being 04 left. The navigator notes that artillery advised to Magpie 71 was mapped as being out to the east of Phan Rang [i.e along the coast, possibly from ships].

Explanatory Note:

- Initial - An " initial" approach with a "pitch and break" was the normal Canberra jet arrival back at Phan Rang air base. Magpie 71 flew at circuit altitude [normally 1500 feet above ground level] directly overhead the active runway then turned across wind sharply 90 degrees to the left, in the process reducing speed, rolling out to wings level, then turning again 90 degrees left onto downwind leg, lowering undercarriage once below 250 knots before turning onto base leg and final approach to land.

The pilot reports 3000lb fuel remaining to allow calculation of planned optimum threshold speed [rule of thumb formula = 95 plus 3].

During the descent, pilot and navigator cross-check altimeter readings at 25,000' altitude to ensure that both sets are functioning well [100' difference] and are being interpreted correctly.

Magpie 71 checks in at 6 miles on initial and is advised to report on the break. Magpie 71 reports on the break, and is instructed to report turning on base leg. The navigator advises that threshold speed should be 97-98 knots. Magpie reports on base, with three greens [one light is illuminated for each wheel] and pressure up and is cleared to land.

The momentary hilarity occurred when the landing Canberra experienced slight ballooning upon landing caused by a relatively light aircraft landing in hot humid weather conditions.

After landing the [undercarriage] circuit breaker was switched off to ensure that the wheels couldn't be retracted inadvertently while the aircraft was on the ground.

Explanatory Note:

- Undercarriage Circuit Breaker. On rare occasions, a crew might forget to switch the circuit breaker on before departure but generally only once as controlling a bomb-laden aircraft just above the runway at low airspeed in the hot and humid tropics with an undercarriage still locked down was not a pleasant experience.

Anecdotal comment:

- On one unforgettable occasion however, this bomb-aimer did experience a mission where the undercarriage could not be raised after takeoff. Rather than take the risk of landing with a full complement of live bombs the crew sought and received help from a local Phan Rang FAC on standby duty, who was assigned a target close to the Phan Rang perimeter. This mission was successfully completed dropping all 6 bombs in single runs with good results. The extreme nose up attitude of the bombing aircraft flying at around 120 knots indicated airspeed [IAS] required extrapolation well beyond the normal bomb settings used at 270 knots, however the first bomb was used as a "sighter" and corrections made on successive runs. The unladen Canberra then returned to land without further incident.

The taxying B-57 advised as traffic by Phan Rang Tower was from USAF 8th Bomb Squadron also based at Phan Rang. Post landing checks are completed. Mission duration was 3 hours 5 minutes.

Tape #3 Side A.

Date of Mission: 30 September 1969

Type of Mission:

"Combat Sky Spot" high altitude night-time ground-controlled interdiction bombing mission against a North Vietnamese troop concentration

Region: I Corps at Demilitarised Zone [DMZ] separating North and South Vietnam.

Introductory Notes:

Aircraft: Canberra B Mark 20 [Avon Mk 109 engines], A84-232.

Magpie 81 crew - Squadron Leader Ivan Grove [pilot], Flight Lieutenant Bob Howe [navigator], carrying as passenger Squadron Leader Arthur Barnes who was the incoming Executive Officer [XO] of 2 Squadron. It was squadron routine to have all newly posted in aircrew fly familiarisation trips with an experienced crew before they started their own year-long operational tour of duty.

2 Squadron at this time normally conducted eight Canberra sorties daily, comprising 7 day-time missions using call-signs Magpie 11 through to Magpie 71 and one night mission flown by Magpie 81.

Recorded Events:

The tape starts as the passenger is plugging in to the Canberra's on-board intercommunications.

Magpie 81 pilot calls "Mustang" mission control for mission clearance, is cleared and advised of "artillery" in the local area ranging from an arc of 270º to 010º out to 17 miles up to a height of 11000'.

Explanatory Notes:

- "Mustang" was the call-sign for a local Phan Rang mission control post which didn't have a self-contained radar system as did other Control and Reporting Posts [e.g. Paddy] or Control and Reporting Centers [CRCs [e.g. Portcall and Paris]. It provided [relayed ?] tactical mission clearances to Phan Rang based tactical aricraft as well as reporting on "artillery" in the local Phan Rang area.

- The "artillery" cited was often retaliatory or pre-emptive mortar or shell fire from inside the Phan Rang perimeter aimed at enemy activity to the north of the air base into the nearby hills - an occasional day-time but more often a night-time occurrence.

"Shadow 61" was also on Mustang frequency awaiting mission clearance.

Explanatory Note:

- "Shadow" was the call-sign for USAF C-119 aircraft located at Phan Rang. These aircraft were optimised for night-time air-to-ground protection of the base perimeter. They were painted black and equipped with powerful night-time scopes and high-speed rotating-barrel gatling guns. It was a spine chilling experience to witness night-time action by the Shadows as they circled overhead firing on enemy troops attempting to infiltrate Phan Rang perimeter defences - the arcs of fire highlighted by the tracer bullets were an unforgettable phenomenon.

Magpie 81 taxies and has its "Music Box" checked out by "Checkmate".

Explanatory Note:

- "Music Box" was a special transponder fitted to 2 Squadron Canberras for high altitude "Combat Sky Spot" bombing missions so that the ground controller [usually from the US Marine Corps operating a TPQ radar] could have positive identification of the bombing aircraft and be able to determine the position of the bombing aircraft relative to the ground target. As the Sky Spot mission would be useless without the "Music Box" it was essential to have it checked out and operating properly before take off. This was the responsibility of US technical personnel at Phan Rang working with the callsign - "Checkmate".

Phan Rang Tower is contacted and receives take off clearance on runway 04 Left.

Radio contact is made with "Portcall" CRC [Control and Reporting Center] radar flight-following service after take-off from Channel 75 [Phan Rang] advising of Magpie 81's plan to climb to angels 28.5 [28,500'] heading for TACAN Channel 103 [Dong Ha].

Following a discussion with "Portcall" on the position of other "artillery" to the north of Phan Rang the Canberra crew decide to head "feet wet", i.e. over the South China Sea, thus avoiding on-going combat activity overland while flying towards the assigned I Corps rendezvous. "Portcall" advises that steering 040º will keep Magpie 81 clear of "artillery" until "feet wet".

Radio contact is made with "Peacock" CRC radar flight-following service [based at Pleiku] and radar contact is confirmed with Magpie 81 reporting in Visual Meteorological Conditions [VMC] flight at angels 28.5 [28,500'].

Making contact with "Panama" CRC radar flight following service [Da Nang], Magpie 81 reports its position as 195º 43 miles off TACAN Channel 50 [Chu Lai], cruising at angels 28.5 [28,500'], "squawking" IFF Code 3 Mode 60.

Magpie 81 changes frequency to another known "Panama" channel [366.0 mhz], reporting its location this time as 160º 60 miles from TACAN 77 [Da Nang] heading for Channel 103 [Dong Ha]. Callsign is confirmed as Magpie 81. IFF is operating on Code 3 Mode 61. Radar contact is confirmed.

The crew hold a discussion while heading towards Demilitarised Zone [DMZ] dividing North and South Vietnam at the 17th parallel. "Feet wet" was cited as a more suitable location for bail out should the aircraft experience difficulties - as "the US Navy owns the sea" rather than overland as "Charlie owns the land".

[Historical Note:

- Two Canberras were lost/shot down near the DMZ during the Vietnam War. On 3 November 1970, Magpie 81, with Flying Officer Mike Herbert, pilot and Pilot Officer Bob Carver, navigator, was reported missing in the Da Nang area while conducting a Combat Sky Spot night mission. To this day what really happened remains a mystery. Four months later, on 14 March 1971, Wing Commander John Downing [pilot] and Flight Lieutenant Alan Pinches [navigator], in Magpie 41, were conducting a middle altitude day-time mission near the DMZ when they were hit by an SA-2 surface-to-air missile [SAM]. They ejected safely over land and were lucky to be rescued the following day. For more details on these incidents included in a concise history of the Magpies in Vietnam refer to "Highest Traditions - The History of No 2 Squadron, RAAF" by John Bennett, AGPS Press, 1995].

Asked to say what type aircraft, Magpie 81 responds with "B-57".

Explanatory Note:

- The RAAF's daily rate of 8 bombing missions was a small percentage of the total daily sortie rate of the entire US tactical effort which included US Air Force, US Navy and US Marine Corps as well as RAAF and VNAF strikes. As a consequence, especially to the north of Phan Rang, US ground-based controllers were usually unfamiliar with the Canberra bomber and it's Magpie call-sign. To avoid

confusion and lengthy radio explanations it was simpler to use B-57 even though the Australian-built Canberra bomber configuration and its tactical applications were quite distinct.

Magpie 81 proceeds over Da Nang - "Panama" CRC temporarily loses radar contact as the Canberra flies over head.

A "heavy artillery" warning is transmitted on "guard" frequency [243 mhz], being located at 213º 22 miles from TACAN Channel 103 [Dong Ha] - interpreted as a B-52 strike and to be avoided.

Magpie 81's pilot reports a large storm in the area, requests QSY [frequency change] to Dong Ha ASREP/D but fails to make contact on the pre-assigned frequency and changes back to "Panama" frequency.

Further "artillery" warnings on "guard" signify that there is significant bombing and/or shelling activity underway in I Corps.

Magpie 81 reports in with Dong Ha ASREP/D at 090º 34 miles from Dong Ha TACAN [20 miles north of Da Nang] with assigned Mission Number 6429.

The crew is told to proceed inbound along the 090º radial to 20 miles, with plans to conduct a port orbit. However Magpie 81's pilot also reports a big storm in this area. Dong Ha then suggests that Magpie 81 heads for 180º 10 miles and take up a port orbit where the weather is believed to be clearer.

Tape #3 Side A ends

Tape #3 Side B begins

Introductory Notes:

30 September 1969 Magpie 81 mission continues with crew dialogue en route to the target.

Recorded Events:

Dong Ha reports an aircraft contact "locked up" at 089º 31miles from Channel 103 [Dong Ha] which is confirmed by Magpie 81.

Dong Ha requests Magpie 81 to "light your [Music Box] beacon 11 single pulse".

The pilot reports that it he is flying in light cloud with lightning flashes all around and that he can't see very much. While running up north along the coast, there was one continuous line of storms inland.

Dong Ha suggests that Magpie 81 turn back to 060º 15 miles [from Channel 103 - Dong Ha].

"Panama" calls up on guard [243 mhz] with a "heavy artillery" warning. Target coordinates YD100200 or TACAN 212º 22 miles off Channel 103, i.e. 10 miles south east of Khe Sanh. Magpie 81's pilot temporarily switches the guard frequency off as he concentrates on flying the Canberra in poor weather conditions.

Magpie 81 reports in at 125º 32 miles [from Channel 103].

The crew refer to another aircraft heading for "Bullseye", presumed to be code for Hanoi.

The crew is experiencing some difficulty with cockpit lighting as well as outside lightning.

Dong Ha ASREP/D again asks Magpie 81 to "light your beacon 11 single pulse".

Two operators - Dong Ha A and Dong Ha B - discuss the "bird's" [Magpie 81] altitude. Magpie 81's pilot observes roughly 28,500' and the crew hear the ground radar measurement reported as 28,600', which impresses the Magpie 81 crew with its accuracy.

Dong Ha advises that Magpie 81's bombs will be dropped as one in a salvo with all 6 M-117 [750lb] bombs in a 200m ripple. The aircraft turns onto it's initial attack heading.

Dong Ha advises preferred bomb-drop speed of 290 Indicated Airspeed [IAS] but as this would risky damaging Magpie 81's open bomb-bay doors, the pilot asks for less. They agree to 250 knots IAS.

The crew sets the bomb spacing and is told to use instantaneous fuzing.

In anticipation of the Magpie 81strike, and presumably on guard radio frequency [243 mhz], Dong Ha ASREP/D issues a "TPQ [radar controlled bomb drop] warning" for 350^{o} 13 miles off Channel 103 [Dong Ha] and advises all aircraft to remain clear for next 15 minutes.

In directing Magpie 81 to its calculated 3-dimensional high altitude bomb release point, Dong Ha ASREP/D instructs the crew to lose 500' in altitude.

"Armstrong" is the term for total armament of 6 Mk 117s. Further instructions are "port 1 [degree]", "down 200'", "port 1", "2000m to go", "1000m to go".

Dong Ha ASREP/D calls "standby, standby" in preparation to release the bombs, but then calls for "check switches safe" and "turn port 090", i.e. this run has been aborted as the ground controller is not satisfied that all conditions are acceptable for the drop.

The pilot continues to be concerned about frequent lightning flashes in the area.

In asking about conical fins for the bombs the ground radar controller would have been calculating relevant Mk 117 bomb ballistics to solve the geometry of determining the right high altitude bomb release point.

Magpie 81's navigator advises the crew that they will be bombing right on the border/DMZ.

Dong Ha ASREP/D instructs Magpie 81 to turn onto 270^{o}, the crew discuss bombing altitude, lightning flashes continue.

Dong Ha ASREP/D lines Magpie 81 up for its second run in at the target, advising - "up 500 feet", "70,000 feet from target", "starboard 2 degrees", "down 50 feet", " 9000 metres to go", "Armstrong [i.e. bomb complement] - 6 MK 117 bombs, 200m ripple, conical fins", "turn starboard 1 degree", "breakaway heading port 090", "down 100 feet", "2000m - standby", "1000m - standby".

Explanatory Note:

- 2 Squadron RAAF Canberra jet pilots achieved such a high reputation for flying accuracy during Sky Spot missions that some were told by US Marine Corps ground radar operators to change heading in half degree increments.

Dong Ha finally calls "Mark, mark" which was USMC Sky Spot operator terminology to signal that Magpie 81 should release its bombs. Bombs are confirmed gone. "Port 090^{o}, request tight turn" [to avoid heading into North Vietnam],

Being a night-time mission, no Bomb Damage Assessment [BDA] could be given by the mission controller, however other routine information was provided, i.e. target coordinates YD24507980 [for a target right on the DMZ slightly inland from the coastline], and that Magpie 81 had hit at a troop concentration in support of the 2nd ARVN and under controller #12 of Dong Ha ASREP/D.

The navigator advises the pilot to steer 090º until "feet wet", over the coast, then turn onto 150º heading for Phan Rang. "Panama" [post-mission] recovery frequency is UHF 366.0 mhz.

Magpie 81 checks in with "Panama" CRC radar flight-following service at 030º 11 miles from Channel 103 [Dong Ha] at angels 27.5 [27,500'] returning to base at Channel 75 [Phan Rang] .

Magpie 81 is told to set its on-board IFF to Mode 3 Code 600 and squawk "ident", then switch to standby and back to normal to ensure firm radar contact.

This "Panama" operator is also uncertain about Magpie 81's aircraft type and is told "Australian B-57".

Navigator shows the passenger the map of the area and "Buckshot" F-4 Phantoms are heard calling "Panama".

Crew discussion on return to Phan Rang air base included reference to TACAN accuracy in mountainous country. Mention is made of an earlier visual calibration run by a 2 Squadron crew [Canberra A84-241, 8 September 1969, Flight Lieutenants Merv Lewis, pilot and Bob Howe, navigator] conducted for Dong Ha radar. On this occasion, the Canberra flew as directed from Hue to Dong Ha at 2000' above potentially hostile territory in 1 Corps.

Magpie 81 checks in with "Peacock" CRC flight-following radar service and reports TACAN position as 160º 87 miles from Channel 77 [Da Nang] flying at Angels 27.5 [27,500'] returning to Phan Rang [Channel 75].

Magpie 81 requests a "TACAN 6" arrival, with estimated arrival time at "Point Becky" on the hour.

Explanatory Note:

- "Point Becky" was the start point for one of a number of published and standard TACAN let down procedures used in South Vietnam and which 2 Squadron crews often practiced on return from night missions.

"Peacock" CRC advises that it has radar contact with Magpie 81at 60 miles north east of Pleiku and advises that there is no "artillery" of concern. Commercial altitude term - "flight level 275" - is also used for 27,500' altitude.

Tape #3 Side B ends

Tape #4 Side A begins.

Introductory Notes: 30 September 1969 mission continues.

Recorded Events:

"Peacock" CRC advises radar hand off to "Portcall" CRC is expected.

Magpie 81 checks in with "Portcall" CRC at 310º 32 miles from Channel 83 [Tuy Hoa] at angels 27.5 [27,500'] estimating Point Becky at 0900 GMT, IFF squawking Mode 3 Code 74 and flashing.

"Portcall" CRC advises "pigeons" to Point Becky are heading 185º, distance 105 miles. Magpie 81 descends to angels 15 [15,000'].

Pilot reports to "Portcall" that Magpie 81 is "intermittant popeye", i.e. the aircraft is flying in and out of cloud.

On the descent, passing angels 20, a 20,000' altimeter cross-check is conducted between pilot and navigator.

Magpie 81 reports to "Mustang" mission control post that it is returning to base. The crew is advised that there is "wrap around arty tonight" but the Tacan final approach laneway to Runway 04 is clear of artillery.

Phan Rang Tower is contacted on descent at 10,000' altitude. The 225º TACAN radial from Phan Rang is intercepted at 17 miles out. Pre-landing checks are carried out.

Magpie 81 reports at 8 miles out with other air traffic in the area. Local artillery is advised as being from 060º to 120º, 2-7 miles out, up to 11000'.

At 5 miles out, Magpie 81 is cleared to land runway 04 left. Phan Rang Tower then advises all traffic of outgoing tracer fire from north-east corner of the field

Traffic includes "Scatback Papa" a C-54 [DC-4] carrying VIPs from Camh Ranh Bay to Saigon via Phan Rang.

Magpie 81 is requested by Phan Rang Tower to expedite its landing, taking a left turn on the north high-speed exit, due to landing F-100s behind.

Post-landing checks - navigator turns off undercarriage circuit breaker to ensure no inadvertent recycling.

Magpie 81 checks in with Phan Rang Ground Control and receives clearance to taxy to the 2 Squadron ramp. Pre-shut down checks are carried out.

Crew comments on visible friendly fire [tracer shells] heading out of Phan Rang onto nearby northern hills where VC are known to be operating.

Pilot notes glare of hangar and associated lights on taxying into 2 Squadron area.

Tape concludes with engine shutdown and power switched off.

Tape #4 Side B begins

Date of Mission: 5 October 1969

Type of Mission: Daytime Visual Close Air Support Mission - Landing Zone [LZ] Preparation.

Region: IV Corps - Mekong Delta Region

Introductory Notes:

This is a partial record of a planned strike by a formation of four Canberra aircraft led by Squadron Leader Ivan Grove pilot [Magpie 11] with navigator/bomb-aimer Flight Lieutenant Bob Howe. Other pilots were Flying Officer Peter Nuske [Magpie 21], Squadron Leader Brian Sweeney [Magpie 31] and Squadron Leader Arthur Barnes [Magpie 41].

The taping was made on board Magpie 11. Aircraft: Canberra B Mark 20 [Avon Mk 109 engines], A84-232.

Recorded Events:

Tape begins with recording of pre-start up briefing in 2 Squadron briefing room. Right hand "finger 4" loose formation en route to the target. Specific bombing mission will be up to the FAC on the spot.

Mention is made of holding in the area. Compared with shorter range tactical jet fighters, the RAAF Canberra bombers which were more or less being used in South Vietnam in a tactical fighter role, could spend three or more hours in flight. Once the FACs were aware of this loiter capability, it was not unusual to be asked to interrupt bombing missions in order to let aircraft with less on-target endurance drop their bombs first.

The formation leader requires a 30 second interval between aircraft on take-off. Planned cruise altitude is 24,500' down, and 23,500' back.

Magpie 11 calls the formation to check in and contacts "Mustang" mission control post, who passes on mission clearance and advises that there is no "artillery" in the Phan Rang area.

Pre and post-start up checks are undertaken with ground crew communications including checks on bomb-bay doors, flaps [slow functioning], speed-brakes [also slow]. Finally, ground electric power is disconnected and the Canberra's right- hand side-door entry hatch is closed.

Pre-taxi checks. Frequency change. Formation check-in. Phan Rang Ground Control gives taxy clearance to Runway 04 Left, QNH [ground level atmospheric pressure] is 1009 millibars, wind is calm, no artillery.

Explanatory Note:

- Phan Rang air traffic/tower personnel were aware that RAAF Canberra altimeters were calibrated in metric pressure settings [millibars] whereas US aircraft altimeters used pressure settings in inches.

Bookie 522 [C-123 tactical transport based at Phan Rang] calls for taxy clearance. QNH/altimeter setting is given as 29.80 inches.

Switch to Phan Rang Tower frequency. Formation check-in. Taxy clearance to the active runway and hold. Cleared for takeoff.

Take off run.

Explanatory Notes:

- Acceleration Checks. With the pilot's attention concentrated on getting the fully-laden bombed-up Canberra airborne it was 2 Squadron standard operational practice for the navigator to assist in monitoring initial acceleration to 80 knots and 100 knots indicated air speed reference points. This showed that the trustworthy Avon Mk 109 engines were producing normal thrust.

- Speed Checks. He would continue then to read the airspeed out and to confirm critical milestones [i.e. refusal and safety speeds] were being met for the crew to know that they would get airborne safely. Refusal speed was around 120 knots - below this the pilot can still lose an engine and safely pull up by the end of runway. The critical time was between refusal speed and safety speed where the aircraft was too heavy and slow to climb away safely. Safety speed was reached around 170 knots airspeed and at this speed a fully laden Canberra could safely climb away.

Led by Magpie 11, the Canberra formation checks in by radio with "Portcall" CRC radar flight-following service, advising of intention to climb to angels 24.5 [24,500'].

"Portcall" advises that the Magpies are clear of artillery going down [i.e. in a southerly direction] to "Paris". Airborne traffic in the vicinity is advised and Magpie 11's pilot confirms a visual contact ["tally"] with a Caribou on climb out.

The Magpie formation checks in with "Paris" CRC radar flight-following service, reporting its TACAN position as 075º 91 miles from Channel 73 [Bien Hoa], climbing to angels 24.5 [24,500'], squawking IFF selected to Mode 3 Code 51 "flashing" for individual ground radar identification. Traffic is reported - "no joy" [not seen]. Magpie 11 is heading 234º to rendezvous.

"Paris" CRC asks Magpie 11 to squawk IFF Code 3 Mode 70 "ident" for Paddy [Binh Thuy] control and reporting post [CRP] identification, and then advises frequency change to 270.1 mhz.

"Paris" CRC is overheard calling "Hades Alpha", a call-sign believed to be aptly named for USAF C-123 tactical transport aircraft conducting Agent Orange defoliation missions.

Magpie formation changes frequency to contact "Paddy" CRP and is told to vector [steer] 240º for the rendezvous point. Paddy confirms that the planned FAC [forward air controller] is David 71 with rendezvous point 220º at 57 miles from Channel 115 [Binh Thuy].

The Magpie crew is having trouble achieving a distance lock [DME = Distance measuring equipment] on TACAN Channel 115, probably because Binh Thuy is still too far away.

Tape #4 Side B ends

Tape #5 Side A begins

Introductory Note: 5 October 1969 Magpie 11 mission continues.

Recorded Events:

The crew try out different TACAN stations [73 - Bien Hoa and 115 - Binh Thuy] due to inconsistent readings possibly caused by instrument malfunction. Weather is good. QSY [change frequency to] FAC.

David 73 answers and is advised that today's line up is 4 Magpies with mission numbers - 5000, 5006, 5002, 5018. They carry a total of 24 M-117 [750lb] bombs.

David 73 confirms the rendezvous as 220º 57 miles [from TACAN Channel 115, Binh Thuy] - and he expects to be there in 5 minutes.

David 73 explains that he will control Magpie 11 and 21 bombing missions while Magpie 31 and 41 are to hold at high altitude with David 75 to work with them.

Mission briefing: The mission is described as a "tree buster", a landing zone [LZ] preparation in support of a ground operation along a "small wiggly river".

Recommended bailout is over open sea and recommended recovery airfield is Binh Thuy.

On their bombing runs, the Canberras are to be 200 metres apart with Magpie 21 following Magpie 11, working closely together.

A "Panther" bombing mission [conducted by Vietnamese Air Force A-37 jets usually with excellent accuracy] is finished and smoke still lingers from the bomb drop.

The nearest friendly troops are 9 clicks [kilometres] to the east.

David 73 wants the bombs to drop in the middle of a river on the south side, employing a string of 6 bombs, with 75 metres separation between them and instantaneous fuzing set. Recommended attack run in heading is 210º.

The Magpie crew lines up as the FAC has trouble with firing his smoke rockets. Magpie's 21 White Phosphorous [WP or "Willie Pete"] smoke marker is fine, however Magpie 11 is to get another smoke. David 73 instructs Magpie 11 to drop his bombs on the left side abeam the smoke marker.

Magpie 11 pilot and bomb-aimer have some confusion as to the best approach direction, debating whether or not to perform a quick S turn or not, as the river changed direction. The pilot looking out from his canopy had a much broader perspective than the bomb-aimer whose vision was restricted by the limitations of the nose configuration.

Magpie 11's bomb-aimer advises his following bomb-aimer colleague in Magpie 21 of the port wind drift.

The FAC reports Magpie 11's string of 6 bombs a "wee bit long" while Magpie 21 drops his 6 on the smoke.

David 75 then contacts Magpie 31 and Magpie 41 to start their mission. Magpie 11 bomb-aimer advises the second Magpie pair that the measured wind on the bomb drop was 227º at 17 knots.

David 73 reports on Bomb Damage Assessment [BDA] for Magpie 11. Target coordinates were VR973403 with a 300m radius. 100% bombs landed in target area, with over 50% of target area covered by the bombs. There were 5 structures destroyed, 4 structures damaged, 4 bunkers destroyed, 3 bunkers damaged, 1 sampan destroyed, 1 sampan damaged and an estimated 4 KBA [killed by air].

BDA for Magpie 21 - target coordinates VR977397, 300m radius. 4 structures destroyed, 4 structures damaged, 4 bunkers destroyed, 2 bunkers damaged, 2 sampans damaged, estimated 3 KBA.

FAC [David 73] explained that he had trouble firing his WP smoke rockets.

"Artillery warning" - FAC advises that he'll be off the air while he plots the coordinates to where the artillery fire is going.

Tape #5 Side A ends

Tape #5 Side B begins

Introductory Notes: 5 October 1969 mission continues

Recorded Events:

Magpie 11's pilot notes that their bomb drop has "redesigned the river".

David 75 takes over the bombing mission with Magpie 31 and 41 while Magpies 11 and 21 climb high above the target area together to await the second pair of Canberras and to observe their bomb strikes.

The slight confusion experienced at this stage was normal for newly posted-in 2 Squadron crews still adjusting to the reality of South Vietnam conditions compared with simulated conditions of Australian training conducted by Number 1 Operational Conversion Unit [OCU] at RAAF Base Amberley, near Ipswich in Queensland.

Magpie 31 complains about the poor quality of the smoke marker but manages to line up for the run in and drops his stick of 6 M117 bombs. Magpie 11 crew observes good bombs from Magpie 31.

David 75 fires a second smoke marker for Magpie 41 but the Canberra goes through dry [no bombs dropped].

The FAC suggests that Magpie 41 change his run-in heading as during the bombing pattern the aircraft is over-flying friendly but nervous ground troops 9 km away from the target area. [Presumably these troops were used to high angle dive bombing by other tactical fighters and were unfamiliar with the unique straight and level bombing pattern of the Australian Canberra jet bombers].

Magpie 41 calls for a smoke marker from the FAC who obliges and nominates the aim point as just left of the new smoke.

The FAC reports that Magpie 41's bombs have dropped "a little short", and the Magpie 11 crew flying high above the strike observe the drop as "50 metres right and 70 metres under" the aim point.

David 75 advises BDA [Bomb Damage Assessment] for Magpies 31 and 41 as:

- Magpie 31 - Checked in 0800 local. Target co-ordinates VR992382, with 500m radius. 100% of bombs in target area, 40% of the target destroyed, 1 structure destroyed, 3 structures damaged, 4 bunkers destroyed, 3 estimated KBA based on what remains of partially destroyed concrete bunker.

- Magpie 41 - Landing Zone [LZ] preparation, 1 structure damaged, 3 bunkers destroyed. Target coordinates VR989387 with 500m radius. 100% bombs on target, 60% of the target destroyed.

The 4 Canberras join up and as a formation change to frequency 351.9 mhz to check in with "Paddy" CRP at 50 miles south-west of Binh Thuy at angels 23.5 [23,500'] returning to base Channel 75 [Phan Rang]. IFF squawking Code 3 Mode 57 and "ident". "Paddy" advises no "artillery" along track to Phan Rang.

Magpie formation checks in with "Paris" CRC radar flight-following service in position 200^{o} 53 miles off Channel 73 [Bien Hoa] at angels 23.5 [23,500'], rtb Channel 75. "Paris" asks for IFF Mode 75 "ident" and confirms radar contact, advises no "artillery" en route to Phan Rang.

Magpie 11 formation checks in respectively with Mustang, Kangaroo workshops and Phan Rang tower [at 25 miles south-west of the field].

End of mission taping.

Tape #6 Side A begins

Date of Mission: 24 December 1969 [Christmas Eve]

Type of Mission: Daytime Visual Interdiction Mission - Pre-strike Preparation.

Region: IV Corps

Introductory Notes:

This was supposed to be a planned formation bombing mission led by Magpie 71 [pilot - Squadron Leader Ivan Grove] with Magpie 81 [pilot Flying Officer Peter Nuske, navigator/bomb-aimer Flight Lieutenant Bob Howe]. However with a fault detected after start-up by Magpie 81, Magpie 71 departs for its mission leaving Magpie 81 to follow independently.

The recording is conducted on board Magpie 81. Aircraft: Canberra B Mark 20 [Avon Mk 109 engines], A84-241.

Recorded Events:

"Mustang" mission control clearance is called for by Magpie 71, however Magpie 81 advises that his Canberra has a stuck tail fin and he will need to shut down the engines and attempt to get the problem fixed. Magpie 71 goes ahead on its mission.

The recording resumes following resolution of the problem. Magpie 81 requests and obtains individual mission clearance from "Mustang".

Magpie contacts Phan Rang Ground control for taxy clearance and Phan Rang Tower for take-off clearance, with air traffic including F-100 tactical fighters and C-123 [call-sign "Bookie"] tactical transports.

Magpie 81 takes off, checks in with "Portcall" CRC radar flight-following service, climbing to angels 24.5 [24,500'], en route to "Paddy" CRP region with IFF on Code 3 Mode 51 and flashing. Initially "popeye" [in cloud] but soon in the clear.

Magpie 81 transitions to "Paris" CRC radar flight-following sevice, still climbing to angels 24.5 [24,500']. "Paris" advises of radar contact with Magpie 81 and advises that there is no reported "artillery" en route to rendezvous.

During this time, various unauthorised and unidentified Xmas references are heard on guard [243 Mhz].

Magpie 81 QSY's [changes frequency] to "Paddy" CRP, operates IFF on "70 flash" and is advised to vector 263º to it's rendezvous.

Mission briefing is for rendezvous at 270º 50 miles from TACAN Channel 115 [Binh Thuy] to work with FAC - David 63 - on 343.9 mhz UHF. Binh Thuy altimeter setting [QNH] is 29.83 inches, and active runway is 06.

"Paddy" cautions on airborne traffic 220º 3 miles to the east passing on Magpie 81's port side.

Magpie 81 changes radio [QSY] to the assigned FAC frequency to find Magpie 71 completing it's bombing mission.

The FAC [David 65] rolls in with a smoke rocket, sees that it is on the target and asks Magpie 71 to hit it. The FAC sees 3 bombs leave the Canberra and advises Magpie 71 to "go high and dry" and await BDA.

Tape #6 Side A ends

Tape #6 Side B begins

Explanatory Note: Xmas Eve 1969 mission continues.

Recorded Events:

Tape begins with various intermittant Xmas references on "guard" frequency.

David 65 passes the Bomb Damage Assessment [BDA] to Magpie 71 - target coordinates VS919162, 10 fighting positions destroyed, 3 trail cuts in 3 different locations. 100% of bombs on target, 25% of it destroyed. No duds, no secondary explosions.

The FAC admits that these missions are not particularly useful and wishes Magpie 71 a merry Xmas from the "Davids".

Magpie 71's bomb-aimer [Flying Officer Peter Growder] advises Magpie 81 that the wind in the target area gives on a heading of 242º a ground speed of 315kt and 1/4 starboard drift and cautions about changing wind conditions presumably associated with the hills close by the sea.

Magpie 81 is told that the rendezvous is near the "three sisters" [three small hills standing out prominently from an otherwise flat terrain in the Mekong Delta flood plains - a well known and frequently used rendezvous for the Magpies and the Davids].

Magpie 81 advises FAC David 65 that mission number is 5024. Bomb line up is 4 x 1000lb bombs in the Canberra's bomb-bay fitted with instantaneous fusing, and 2 x 750lb bombs on the wing-tips with selectable instantaneous or delay fusing.

David 65 advises that the required bomb run is to drop 2 sticks of 3 bombs each, with 50m spacing between them and using instantaneous fuzing.

David 65 advises that the mission is a pre-strike interdiction with cloud at 7000' and overcast. Intermittant light rain showers. Visibility is 10 miles with moderate haze. Target elevation is sea level with 40' trees.

There are no friendlies in area, emergency bail out location is "feet wet" [code for over the sea], and emergency recovery location is Binh Thuy airfield.

Ground fire - expect light automatic weapons with 0.50 calibre gun sites on the "sisters" reported by intelligence back up.

Magpie 81 is to run in towards "the sisters" and break away immediately after bomb drop. Attack heading is to be 250º with a left break.

Barometric pressure [QNH] is 29.84 inches, 1010.5 millibars.

The FAC provides estimated winds as surface - 020º @ 06 knots, 1000' - 360º @ 10 knots, 2000' - 360º @ 25 knots, 3000' - 360º @ 28 knots and 4000' - 010º @ 12 knots. The crew note the difference with this data and the wind calculated from Magpie 71's advice of 070º @ 20 knots.

Positive identification of FAC by Magpie 81 is achieved but not immediately for David 65.

David 65 gives target familiarisation briefing - 4 general lines of bomb craters aiming to hit green area between 2nd and 3rd line, aiming for nothing specific but FAC will mark the aim point with a WP smoke marker on the trails.

David 65 then advises that he's found a better target between the 1st and 2nd lines of bomb craters almost at the north west edge/end - fresh trails found in thick trees.

On downwind leg, Magpie 81 crew conduct their pre-bombing checks, e.g. with the on-board "Green Satin" doppler radar indicating 270 knotts ground speed, which equates to an run-in ground speed of 320 knots.

Fuel remaining is 11,000 lbs [and a T-4 bomb-sight correction is made].

Turning on right base leg, then onto run in heading, Magpie 81 calls for the FAC to launch a smoke marker.

The bomb-aimer observes that the aircraft's ground speed at 310kts.

David 65 advises that the smoke is away and instructs Magpie 81 to drop left 20 metres from the smoke.

The bomb-aimer has trouble sighting the smoke initially as the pilot does a last second S turn to get the target under the nose.

The master bomb switch goes on and the pilot advises 3 bombs away, master goes off, bomb-bay doors are closed and the camera is on.

The FAC calls "real nice' and the bomb aimer estimates that they have fallen 15 metres right and 15 metres under the target. The FAC confirms that the bombs have fallen 15 metres right of the tree line, i.e. they hit the smoke. Bomb-aimer admits his mistake in aiming for smoke rather than 20 metres left.

David 65 comments sardonically - "Isn't this a nice way to spend Xmas Eve". The FAC - Steve - is known personally to Magpie 81's pilot - Flying Officer Nuske - who visited 19th TASS earlier at Rach Gia. David 65 is anticipating participating in Xmas parties but he'll miss supper due to this mission.

On the 2nd run, the aim point is 20 metres over ["long of"] the smoke marker. Master safety switch is turned on, final run in corrections are made and the remaining 3 bombs are gone. It's a "real thin smoke". The camera is operated to record the strike and measure accuracy after mission.

The bomb-aimer observes the bombs to fall 70-80 metres under the target, suggests speed is low. The FAC says that the bombs are 50 metres short. The bomb-aimer suggests a possible cause is wind variability around the coastal hills, with 315 knots ground speed on the first drop, 308 knots on the second.

David 65 provides Bomb Damage Assessment [BDA] with the target at map coordinates VS913158, the result being 5 fighting positions destroyed. 100% of the bombs were on the target area with 50% of the target covered.

Magpie 81 is cleared to switch back to "Paddy" CRP and Xmas greetings are exchanged.

David 65 is heard talking with David 60 [at TASS base operations] re the lack of utility in busting trees, and suggests that the tree area is good for "seeding".

The Magpie 81 crew notice a thick inversion layer as they climb out of the target area in the early evening over IV Corps.

"Paddy" CRP is contacted with slight difficulty. Magpie 81 checks in at Angels 17.5 [17,500'], to "recover" [land] at Channel 102 [Tan Son Nhut].

"Paddy" requests Magpie 81 to switch IFF to Code 3 Mode 5700 and "ident". Magpie 81 complies, is advised that there is no artillery en route and Paddy confirms radar contact.

End of taping.

Tape #6 Side B ends

Tape #7 Side A begins.

Introductory Note: Xmas Eve 1969 mission continues.

Recorded Events:

"Dust Off 6" is heard talking with "Paddy". "Dust Off" was the call-sign for medical evacuation [medevac] aircraft, usually US Army UH-1 Iroquois helicopters.

More Xmas messages are heard on guard frequency [243 mhz].

"Paddy" CRP OKs Magpie 81 frequency switch to "Paris" CRC flight-following radar service on 276.1 mhz and advises that it's radar service is terminated.

"Paris" CRC asks Magpie 81 to squawk [Code 3 Mode] 57 "ident" using IFF.

Magpie advises its TACAN position as 240° 37 miles from Channel 102 [Tan Son Nhut], at angels 17.5 [17,500'], planning to land at Tan Son Nhut, and requesting a GCI/GCA [ground controlled intercept, ground controlled approach].

Magpie 81 is told to turn right onto 090° and given Tan Son Nhut weather conditions and runway details.

"Paris" CRC asks the reason for diverting to Tan Son Nhut and is advised "to pick up a passenger".

Magpie 81 is cleared to descend VMC [visual meteorological conditions] to 10,500', squawking [IFF Code 3 Mode] 04 "ident".

Saigon approach is contacted on 270.6 mhz, advises of radar contact at 21 miles south west of airport. Magpie 81 is told to head 080° and descend to 7,000' to position for landing on runway 25 left. Magpie 81 reports leaving 10,000' for 7,000' and is then cleared to descend to 4,000'.

Saigon is also in touch with B1811 [Chinese Airlines aircraft presumably on VHF [Very High Frequency] whereas Magpie 81 is on UHF [Ultra High Frequency].

Saigon approach advises that Runway 25 Right is closed. Magpie 81 levels off at 4,000', and is advised to turn left to head 040°.

Magpie 81 switches to Saigon Arrival Control, descends to 3,000' and is advised that it is 11miles south east of airport.

Saigon arrival advises that the MA-1A [arrestor barrier] at runway 25 left departure end is out of action, instructs Magpie 81 to turn left to heading 360°, then descend to 1500' and perform landing checks. New heading 270°.

Saigon Final Control takes over with radar-based talk-down to runway 25 left, wind is calm. Decision height is announced, then over the runway threshold and pilot is instructed to take over and land visually. After-landing checks are carried out including undercarriage circuit breaker off.

Saigon Ground Control is contacted on 275.8 mhz. The Magpie 81 crew observes that a C-130 Hercules was blocking runway 25 right and the cause of it being out of action.

Magpie 81 is cleared from Taxiway Whisky 5 to Tan Son Nhut Base Operations. A Vietnamese controller asks if Magpie 81 needs a "follow me" truck, answer - no.

The tape resumes with Magpie 81 taxying out, requesting a "tactical takeoff" and is cleared to taxy to runway 25 left [25 right is still closed].

The passenger [a RAAF padre] is connected into the intercommunications.

Saigon Tower sends a DC-3 around due to conflicting traffic including departing C-141 and landing DC-4.

Magpie 81 takes off from Saigon.

End of mission.

Tape #7 Side A ends.

Tape #7 Side B begins.

Date of Mission: 18 September 1969

Type of Mission: Daytime Close Air Support Mission.

Region: IV Corps - Mekong Delta Region.

Introductory Notes:

2 Canberra jet formation with crews - Magpie 21: Pilot Officer Peter Nuske [pilot], Flight Lieutenant Bob Howe [navigator], and Magpie 31: Pilot Officer Dick Allchin [pilot], Flying Officer John Bushell [navigator].

Taping is from Magpie 21. Aircraft: Canberra B Mark 20 [Avon Mk 109 engines], A84-236.

Recorded Events:

Recording starts with mission clearance from "Mustang" mission control with scheduled artillery to the south-west.

Start up occurs with electrical sound heard of twin cartridge engine starts.

Magpie 11 and 21 check in, obtain taxy clearance to runway 04 left from Phan Rang tower.

Crew plan to fly "feet wet" [over the coast] to avoid local artillery.

Several "Bookie" call-signs are heard on frequency.

Explanatory Note:

- The "Bookies" were USAF C-123 tactical transport aircraft based at Phan Rang. They mainly conducted all-day missions around South Vietnam starting off early in the morning returning late in the day.

Phan Rang Tower clears the Magpie formation to take off from runway 04 left with a right turn, cautions against wake turbulence from departing C-123.

Magpie 21 crew cross-check acceleration and speeds on take-off. An emergency beacon is heard operating intermittantly on guard [243 mhz].

Following departure from Phan Rang, contact is made with "Portcall 13" CRC radar flight-following service, advising formation is climbing to Angels 24.5 [24,500'], squawking IFF [Mode] 3 [Code] 51 flashing. "Portcall" cautions on air traffic bearing 270º at 2 miles, angels unknown. Pilot responds with "tally ho" upon sighting the traffic.

Contact is then made with "Paris" CRC [Tan Son Nhut] radar flight- following service. IFF squawk "flash", "Paris" advises radar contact and approves frequency change [QSY] 268.1 mhz. Rendezvous with "Paddy" CRP. QSY to 270.1 mhz.

Air traffic in the Binh Long area are experiencing bad weather.

The Magpie pair change frequency to "Paddy" CRP and are given bearing and distance [pigeons] to rendezvous with the pre-assigned FAC of 245º at 113 miles.

Magpie formation switches to FAC [David 21] frequency on 360.8mhz but being unable to make radio contact, the two Magpies revert back to "Paddy" frequency to be reassigned to another FAC [David 61] on 343.9 mhz.

Magpie 21's crew discuss the geography below - noting the "toilet plunger".

Explanatory Note:

- In tactical air missions in South Vietnam in order to facilitate recognition of targets the FACs coined expressions such as the "toilet plunger" and "three sisters" which were readily understood by all aircrew flying at medium to high altitudes while avoiding ground fire.

Magpie 21 calls David 61, but is answered by David 60 [19th TASS base operations controller] who arranges for David 63 with a rendezvous at 275º at 42 miles from Channel 115 [Binh Thuy] with which Magpies are familiar. David 63 suggests that the two Canberras bomb with 30 to 45 seconds separation.

The FAC gives his mission briefing - target is VC in caves, bunkers and structures and are pinned down, with reports of about 60-70 killed over the last five days.

Magpie bombing run is to be across a ridge line from sea level, and the "mountain" extends to 250'. Altimeter setting [QNH] is 29.79 inches and wind information is given.

Magpie 21 advises that it is mission 5007 and its line-up is 6 M-117s with instantaneous or delay fuzing.

David 61 advises that the friendlies are down in the rocks 600m to 700m away and Magpie 21 can expect ground fire up to and including 0.50 calibre. They have taken small arms fire in past few days. Best bail out area is in the open rice paddies or in the ocean [where USN PBRs can pick people up] and Bin Thuy is the nearest recovery airfield.

The bombing run is to be across the western base of the "mountain" on either 175º or reciprocal [355º] attack heading depending in sun conditions.

The Magpie 21crew recognise the FAC's voice as belonging to USAF Lieutenant Gary Cave who has visited 2 Squadron as well as hosting RAAF crews at Binh Thuy to familiarise themselves with FAC O-1 Bird Dog operations.

Upon seeing explosions in the area, David 63 advised that he might have to "dee dee out of here" and changed frequency to talk with army units on the ground.

The Magpie 21 crew see cumulus clouds starting to build up quickly as the morning heats up over the Mekong Delta.

Tape #7 Side B ends

Tape #8 Side A begins.

Continuation of 18 Sep 1969 mission.

Recording resumes as David 63 returns on frequency advising that friendly demolition teams are blowing up cave entrances.

Suggested bombing run is from south to north around heading of 355º, extending out over the water, parallel to the two southern "mountains". FAC suggests each aircraft drops two sticks of 3 with instantaneous fuzing, 75m spacing between each bomb.

FAC is advised that Magpie 11 is 20 minutes behind the Magpie pair [21 and 31].

Target is on "little bitty mountain to north of two sisters in rice paddy all by itself on the western side of the mountain".

FAC and Canberras have slight difficulty seeing each other and also acknowledge each other personally.

David 63 advises that he only has 4 WP smokes left and is planning to conserve them by advising corrections to the second Canberra based on Magpie 21s bombing results.

The Magpie 21 crew confirm bombing altitude as 3000', note 11,000lb fuel remaining [for T-4 fixed bomb sight attitude correction] and 4º of drift with 20 knots of westerly wind. Standard pre-bombing checks are carried out, and the lead Canberra turns onto base leg, then base to final.

The bomb-aimer is concerned about the run in from the south over the water as the Doppler radar has trouble locking on to a calm sea as the aircraft approaches the land.

Magpie 21 calls for smoke and is advised by David 63 to hit it. A quick bomb run is undertaken with 3 bombs away. The FAC notes that it is looking very good - "excellent hits'.

He then advises "2" to go long and right 25 metres from Magpie 21's first bombs.

The Magpie 21 bomb-aimer estimates that their bombs have dropped 50m under the aim point with doubts about target altitude. The crew plan to correct on the second run, maybe up 50 feet ? Magpie 31's bombs are very good and David 63 advises that the lead will get another smoke as soon as he comes around the corner [of the bombing pattern].

David 60 [TASS ops] advises David 63 of demolitions on Hon Bai, which he already knows.

David 63 warns Magpie 31 ["22"] of a CH-47 Chinook helicopter crossing his flight path in 45 seconds, dead ahead, same altitude.

Magpie 21 rolls in on final bombing run as the crew confirm that the master safety switch on, FAC calls smoke gone and instructs Magpie 21 to again hit his smoke marker on the ground. Major heading corrections are difficult close to smoke, and the bombs are gone - "3 away".

The Magpie 21 bomb-aimer estimates that these 3 bombs have dropped left of the smoke which is confirmed by the FAC who instructs Magpie 31/22 to bomb 30 metres to the right of 21's bombs while Magpie lead is to go "high and dry".

David 63 reports an excellent hit for Magpie 31/22 who joins up with Magpie 21 holding at 8000' above the target.

David 63 provides Bomb Damage Assessment [BDA] for Magpies 21 and 31/22. Target coordinates are VS893214, time on target 40, off target at 55. 100% bombs on target, 50% coverage. 3 cave entrances destroyed, 1 secondary explosion, 1 sustained fire from the secondary explosion with white smoke coming out.

The FAC advises Magpie 31/22 that if he looks at his photos back at base, 1st bomb on second stick, will see a body 10m to right - 1 confirmed kba [killed by air], plus estimated 3 kba..

David 63 concludes the mission by noting that the Magpies have done an "excellent job as usual" and notes that he hasn't see any Magpies for two months.

Magpie 11 now checks in with David 63 and is also advised that they will be working on "the sisters" again.

Mission brief is given by the FAC who advises that the results of the previous strike will be verified by troops on the "mountains". VC are held up in caves and friendly troops have them pinned down. Nearest friendlies, who are 700 metres distant, were impressed by Magpie 21/22 bombing and want to bomb the same target again.

Magpie formation contacts "Paddy" CRP and is told to squawk IFF [Mode] 3 [Code] 70 "ident", advises climbing to [angels] 29.5 [29,500'].

Magpie 21 formation then switches frequency to "Paris" CRC radar in-flight following, reporting position by TACAN as 210º 32 miles off Channel 73 [Bien Hoa], level at angels 34 [34,000'], "popeye" [in cloud] and returning to base [RTB] TACAN Channel 75 [Phan Rang].

"Paris" reports radar contact, 20 miles south-south west of Tan Son Nhut and Magpies will avoid any reported artillery en route Phan Rang.

"Portcall" CRC radar flight-following is contacted, with Magpie 21 formation located by TACAN 239º 64 miles from Channel 75 [Phan Rang] cruising at angels 23.5, IFF "flashing". Portcall advises that he is "unable" [i.e. radar is inoperative] and cautions the formation to stay east of 230º radial from Phan Rang to avoid artillery up to a height of 12,000'.

Formation changes [QSY] to local frequency, squawking IFF [Mode] 06 00. Contact is made with "Mustang" mission control advising RTB and the pair of Canberras is informed of additional reported "artillery" extending from 290º to 340º radials from Phan Rang, distance 3-4 miles, up to 8000'.

Magpie 21 advises Kangaroo workshops [2 Squadron] of RTB.

Contact is made with Phan Rang tower, 12 miles to the south-east, landing 2 aircraft. Tower acknowledges, advises active runway is 04 left and asked for a call on "initial", i.e inbound at circuit altitude over the runway before turning 90º left to crosswind and then onto downwind leg.

An Australian voice is heard [from a departing Canberra bomber] - "the cowboys are back in the circuit" [meaning Magpies 21 and 31].

Magpie 21 reports "through initial", and is advised to report on base, check wheels down and is cleared to land.

Pilot notes fuel remaining is 6000lbs which equates to a planned threshold speed of 101 knots.

Tape #8 Side A ends.

Tape #8 Side B begins.

Date of Mission: 27 April 1970

Type of Mission: Daytime Visual Road Interdiction Bombing Mission - Suspected Truck Park.

Region: Tiger Mountains, A Shau Valley, I Corps

Introductory Notes:

Magpie 91. Flying Officer Barry Carpenter [pilot], Flight Lieutenant Bob Howe [navigator/bomb-aimer].

Aircraft: Canberra B Mark 20 [Avon Mk 109 engines], A84-237.

Recorded Events:

Tape starts with "Mustang" mission control advising of two lines of artillery to the south. Crew agree to proceed feet wet to their northern rendezvous.

Phan Rang Ground Contol clears Magpie 91 for taxying, navigator checks operation of "Music Box" [special transponder used in conjunction with US ground radar bombing control] with "Checkmate", and Phan Rang Tower clears Magpie 91 for take off. Crew conduct normal acceleration and speed checks.

Magpie 91 checks in with "Portcall" radar flight-following, climbing to angels 27.5 [27,500'] and proceeding feet wet, northbound. Mission number 6433.

Heard on guard frequency - heavy artillery warning 339º 53 miles off Channel 107 [Pleiku], coordinates YB900400 [12 miles northeast of Laos-Cambodia-South Vietnam border intersection] until 0247 zulu.

Asked if requires a hand-off to "Peacock" radar flight-following, Magpie 91 advises it is scheduled to be [ultimately] working with "Panama" radar flight-following.

Heard on guard frequency - TPQ warning [Combat Sky Spot high altitude bombing ?] 293º 26 miles off Channel 74 [Chu Lai], coordinates BT1123, all aircraft remain clear for next 15 minutes.

Magpie 91 checks in with "Panama" reporting position at 045º 19 miles off Channel 87 [Hammond ?] at angels 27.5 [27,500'] - mission Number 6433. To work with Bilk FAC. Repeats callsign Magpie 91and squawks IFF Mode 3 Code 50. Panama reports possible contact 045º 25 miles off Channel 87 which is confirmed by Magpie 91.

Magpie 91 reports in to Bilk [FAC] Control at 40 miles out, overhead Channel 69 [Hue Phu Bai] at angels 27.5.

Pilot spots a formation of 4 white USN/USMC F-4 Phantoms.

Bilk Control advises Magpie 91 that its assigned FAC is Bilk 23 on frequency 339.1 mhz, with rendezvous 270º 34 miles off Channel 69 [Hue Phu Bai].

Bilk 23 is contacted advising he's north of Tiger Mountain [5820 feet high ?] on the edge of cloud bank.

Magpie 91 advises bomb load as 6 x Mk 117 750lb bombs with 3 instantaneously fuzed and 3 delay fuzing. Bilk 23 advises that 2 passes are required.

Mission briefing - Suspected truck park, target elevation 1350'. Altimeter [barometric pressure] 29.94 inches. No friendlies in immediate vicinity. Expect small arms and light auto fire and probably 37mm and

23mm. Heading of 050° to feet wet [Gulf of Tonkin], and Channel 77 [Da Nang] for landing. Cloud will give trouble.

Crew discusses target area - 3000' hills either side, run in from NE direction heads into 4500' mountains. FAC sighted. "Top job" at 12 o'clock. [Presumed to be a higher level command aircraft].

Target - road running east-to-west, creek running north-to-south. Target area looks clear. Pilot will roll in and put a marker on it, while Magpie 91 pilot decides to hold at 15,500'. Both crew members are initially optimistic about completing the mission with clear weather over the target.

Bilks 23 rolls in for smoke heading down the valley and advises that the target is 50 feet to north east of his smoke, east of a road in trees along the river - a suspected truck park.

Bilks 23 asks if Magpie 91 can we drop 1 at a time and is advised in the affirmative. Bilk 23 wants to saturate the whole area and the bomb-aimer is pleased as it enables a sighter to correct for subsequent bombs.

The crew discuss bombing altitudes and headings as the cloud starts to come in fast. The crew decide that it would be better to drop in pairs rather than singly.

The T-4 bomb-sight gearbox [connected in to Green Satin radar] is in operation however with variable altitudes, there is some concern re bombing accuracy . Pre-bomb checks are carried out - 10,500 lb fuel remaining.

On the run in the bomb-aimer is having difficulty seeing the target area. Bilk 23 reports that the target is 9 o'clock at 200 yards from smoke however the crew is confused on how to best to approach the target due to cloud problems.

The pilot calls for another smoke flying at 7000' above the target. Bilk 23 launches a WP marker and advises that the target is 12 o'clock from his smoke 70 feet distance. The bomb-aimer sights the target at the last minute, too late to get into correct bombing position, so they go through dry again.

The pilot suggests a quick right handle circle and warns that there will be little time to spot the target on the next run in. He calls for another smoke marker

Tape #8 Side B ends.

Tape #9 Side A begins.

Introductory Notes:

This is a continuation of the 27 April 1970 mission.

Recorded Events:

Bilk 13 advises that his smoke is away and the target is 2 o'clock from the smoke, distance 200-300 yards.

The bomb-aimer advises that the first 2 bombs have gone too late and asks the pilot to remain steady for the camera recording. Bomb-aimer observes the bombs to drop right of the river and FAC advises that they were "kinda long" and right.

Explanatory Note:

- Cameras: 2 Squadron Canberra bombers were equipped with a long focal length F-52 camera fitted in a fixed position in the bomb-bay to record bombing results. Unlike all other US tactical fighter squadrons whose pilots competed for monthly "top gun" awards based on target damage incurred, 2

> Squadron judged its crews on bombing accuracy. Upon returning from their missions, bomb-aimers were required to record in a bombing log each aim point, which would become a reference point when the processed photos were examined by the Bombing Leader. Distances [left and right of the target and under or over it] could be calculated accurately from the known aircraft bombing altitude and Magpie top gun crews were chosen with the best average bombing score for each month. This was seen as a good technique to promote bombing efficiency.

The crew are still uncertain about how best to approach the target and the FAC admits he is having trouble keeping the target area visible himself.

The FAC advises that the next smoke is in and that the target is to the right of smoke 100 yards. The bomb-aimer sights the target late and releases 2 bombs slightly late. In addition he notes that they are wobbling which raises questions about their weight and balance.

Bilk 23 reports "not bad", and suggests that the next run, 200 feet at 2 o'clock would be real good. He confirms that the two bombs tended to open and have dropped short.

The next smoke is away, with the target 2 o'clock at 200 feet, the pilot confirms they are on finals, bomb-aimer asks for right turn of 20º, then steady, and bombs are gone.

The FAC confirms "Winchester" - all bombs gone. Bomb doors stay open for camera operation. The bomb-aimer advises bombs dropped to the left of the target. FAC advises "very nice hit".

Bilk 23 advises Bomb Damage Assessment [BDA] - on target 1131, off target 1150. 100% bombs on target. "Good smack on the road".

Pilot observes previous B-52 bomb craters on ground.

Magpie 91 checks in with "Panama" in-flight following, notifies climb to angels 26.5 [26,500'] and is located by TACAN at 250º 25 miles off Channel 69 [Hue Phu Bai], returning to base [RTB] Channel 75 [Phan Rang].

"Panama" requests Magpie 91 squawk IFF Mode 3 Code 6100 and "ident". Not being familiar with 2 Squadron Magpies, he asks for a spelling of the call-sign, advise he's unable to get IFF/radar contact, and asks for a recycle of the IFF settings. Magpie 91 advises position as 255º 12 miles off Channel 69.

End of 27 April 1970 mission.

Tape #9 Side A [continued].

Introductory Notes:

Start of new mission immediately after 27 April 1970 mission.

Date of Mission: 4 May 1970

Type of Mission: Formation Daylight Visual Close Air Support Bombing Mission of a cave/tunnel complex in conjunction with the Australian Task Force.

Region: Long Hai Hills near Vung Tau, III Corps

Introductory Notes:

From a national perspective the Australian Defence Force was unable to co-locate all its air and ground forces or to perform in South Vietnam as an integrated national task force. Its various units were spread amongst US forces, e.g. 2 Squadron RAAF was based at Phan Rang - a US air base in 11 Corps, individual RAAF pilots served with disparate Tactical Air Support Squadrons flying FAC aircraft generally in III Corps and RAAF Caribou tactical transports were based at Vung Tau in III Corps.

This was a special mission to show the Australian flag and was negotiated by Air Commodore "Spud" Spurgeon, then Commander of the RAAF in Vietnam [COMRAAFV], who received 7th Air Force approval for 2 Squadron RAAF to demonstrate to the Australian Task Force what it was capable of doing in a tactical bombing sense.

A total of 6 Canberras was planned to conduct a coordinated bombing strike on the Long Hai Hills as well as showing the flag to the Australians at Vung Tau and Luscombe Field.

The flight was divided into two three-aircraft sections, the first led by Squadron Leader Brian Sweeney [Magpie 51] in company with Magpies 52 and 53 and the second by Squadron Leader Arthur Barnes [Magpie 61] in company with Magpies 62 and 63 [pilot - Pilot Officer Harry Bradford].

The recording is conducted on board Magpie 62, crewed by Flying Officer Adrian Slootjes [pilot] and Flight Lieutenant Bob Howe [navigator/bomb-aimer]. Aircraft: Canberra B Mark 20 [Avon Mk 109 engines], A84-240.

Recorded Events:

The mission recording starts with Magpie 61 section taxying at Phan Rang with its 3 Canberra bombers, being advised by Phan Rang Tower of an F-100 ["Bobcat 61"] returning from a mission to land with a hung bomb under its wing.

Magpie 61 takes off with the navigator calling acceleration, speed cross-checks for the pilot.

Contact is made with "Portcall" CRC radar in-flight following service, then followed by "Paris" CRC, with the Magpie formation climbing to angels 16.5 [16,500'] with mission number 5298.

Radar contact is made and rendezvous advised as 125° 35 miles from Channel 73 [Bien Hoa] working with Jade FAC on frequency 312.1mhz. The formation is clear of artillery in 12 o'clock position. Frequency change [QSY] to the FAC is approved.

The Magpie 61 section of three Canberras arrives on frequency just as Magpie 53 is running in on its bomb run causing Sqn Ldr Sweeney to say "keep off the air". Magpie 53's bombs are away and the Jade FAC [and Magpie 62 crew] observe a tremendous secondary explosion.

Magpie 51 advises that his team is over the target at 4000' altitude.

Possum 09 is an Australian helicopter checking Magpie 53's bomb damage assessment [BDA] and who reports a "lot of smoke lingering from the secondary explosion".

Magpie 51 advises Magpie 61 section that they used a bombing height 1200' above ground level, with target height of 695', flying below a cloud base of 2000'.

Explanatory Note:

- 2 Squadron standard operating procedures [SOPs] stated that 1200' a.g.l. was the absolute minimum attack height and immediately after bomb release the Canberra was required to climb rapidly to 2000' which was roughly at the safety envelope of the exploding 750lb bombs. On several occasion Magpie aircraft were damaged by impacts of fragments from their own exploding bombs.

FACs Jade 23 and Jade 01 discuss problems about to be experienced with simultaneous bombing missions with diving fighters coming in from the sea. They agree that the next 3 Canberra bombers should change their bombing pattern with a right break rather than left.

The Magpie 51 bomb-aimer advises that wind at 1200' bombing altitude is 110^{o} at 12 knots.

Magpie 61 advises line up of 3 Magpies each with 6 x M-117 bombs, fuzed instantaneuous or delay, mission number 5298.

Jade 01 provides the FAC's mission briefing with target description, a cave and tunnel complex. Target elevation is 695' with a cloud base of 2000', tops about 4000'. Atmospheric pressure [QNH] is 29.78 inches.

Estimated winds to 3000' are 100^{o} at 10 knots. Friendlies are 2.5 klicks [km] to the west and 4 clicks to the east.

The formation can expect light automatic weapons fire. The best bail out locality is "feet wet", and best recovery base is Channel 73 [Bien Hoa].

The FAC advises that the bombing run is from the north-east to the south-west on a 200^{o} heading with a right break. He will be holding at the south-east between 1500' to 2000'. All bombs are to be dropped at minimum spacing using delay fuzing.

Jade 01 provides Magpie 51 with Bomb Damage Assessment [BDA]: map coordinates for the target are YS 463536. 100% of the bombs were on target, 100% of the target was covered. The rest of the BDA is to come later.

Squadron Leader Sweeney advises that the Magpie 51 formation of 3 Canberras will hold at Vung Tau at 5000' while the remaining 3 complete their bombing mission.

Jade 01 requests a low fly by Luscombe Field and Magpie 51 advises he'll do it once the other 3 join up.

Magpie 61 asks whether or not FAC wants the flight of 3 Canberras to bomb in formation or trail ? Jade 01 responds that the others [Magpie 51 flight] used trail. Magpie 51 suggests that a violent pull-up will be needed at the end of the run [due to the low bombing altitude] and suggests that bombing in close formation would be too dangerous.

Possum 09 continues checking the bomb damage from the Magpie 51 strike, noting that 1 bunker has been destroyed, 1 well damaged and 2 caves damaged.

The Magpie 62 crew begin their pre-bombing checks.

Jade 01 advises Magpie 51's BDA as 2 bunkers, 1 well, and 2 caves destroyed.

Magpie 61 asks Jade 01 for his location and is told 140º 43 miles by TACAN from 73 [Bien Hoa], i.e over the Long Hai Mountains.

Magpie 53 seeks and obtains confirmation of his 1 secondary explosion as BDA.

Jade 01 asks Possum 09 if he intends to move it [target] further up the hill.

Tape #9 Side A ends.

Tape #9 Side B begins

Introductory Notes: This is a continuation of 4 May 1970 mission

Recorded Events:

Magpie 61 advises that he is 3 miles north of target and the FAC advises that red smoke is marking the target. Visual contact is made between the Magpies and FAC.

Magpie 61is advised of a better heading from the north-east, and agrees to 200º.

The Magpie 62 crew determine a corrected bombing altitude and discuss expected wind drift based on downwind readings.

Possum 17is made aware of Magpie bombing mission, says he is on a voice mission [?] and will keep clear.

Possum 09 is told by FAC Jade 01 to drop the smoke and Magpie 61 is cleared to drop, being advised that the target is a "just a tad short of the smoke".

Jade 01 notes that Magpie 61 bombs are away, and that they dropped quite short of the target.

Magpie 62 is told to move his bombs up to the top of little re-entrance, 200 [metres] straight ahead.

Magpie 61's bomb-aimer [Flying Officer Ross Hardcastle] advises his run showed 2.5º starboard drift with 290 knots ground speed, and the bombs dropped 200 metres short. Magpie 62's bomb-aimer advises that the 6 bombs have gone and look as though they have dropped OK.

Magpie 63 is told to move its aim point to the right about 30 metres from the same position that 62's bombs landed.

Jade 01is talking during the bomb runs, disrupting Magpie 63's run in so the bomb-aimer transmits to alert him to as to what's happening.

The FAC notes that Magpie 63's bombs are away, and they have dropped a "little bit long".

Having all released their bombs, the Magpies start to join up as a formation of 6.

"Rap 21" [USAF A-37s from Bien Hoa] is orbiting over the strike at 16,000'

Jade 06 is taking photos of the Canberra formation.

Magpie 51 checks with Jade 01 that the area is clear of strikes preliminary to leading a formation low run over Luscombe Field.

Magpie 61's section joins up as Squadron Leader Barnes calls for speed-brakes out, then in, to slow down to co-speed with the first 3. Magpie 51 section then becomes 4, 5 and 6 in the formation of 6 Canberras.

Possum 9 reports that the last bombs [of Magpie 63] were dropped with fuzing set to instantaneous rather than delay and didn't penetrate the hills. He notes that 75 metres of communications trench is destroyed by the first cluster.

Jade provides BDA to Magpie 61 section, target coordinates YS463536. 100% bombs in target, 100% of target destroyed. On at time 30, off at 45. 75 metres of communications trench destroyed, plus 1 bunker destroyed.

Magpie 62's pilot mutters about the difficulty of maintaining formation as fifth of six Canberras as the formation heads in for a tight formation high speed low run over Luscombe Field.

Rap 21 calls in from high altitude to say that he can tell everyone where they are ! The lead pilot advises That they are mission number 5224 - two A-37s, each with 4 high drag Mk 82 [500lb] bombs, with 0.01 second delay fuzing, and 2,200 rounds each of "tiny pistol".

Magpie 61 advises sighting an OV-10 [FAC] aircraft at 10 o'clock - "no trouble".

The Magpie formation of 6 overflies Luscombe Field and finishes with the formation leader increasing power, calling to ease off the close formation and starting into a climb.

Magpie 51 formation checks in on "Stud 7", makes contact with "Paris" CRC radar in-flight following service at 130º 36 miles off Channel 73 [Bien Hoa] at angels 5 [5,000'], climbing to 17.5 [17,500'], returning to base [RTB] Channel 75 [Phan Rang], IFF on Mode 57 and flashing.

"Paris" advises that there is no artillery of concern, that it's radar is not working ["unable"] and instructs the Magpie formation to contact "Portcall" CRC 75 miles from Bien Hoa, with IFF squawking "74 normal".

The formation checks in on Stud 1 with "Portcall" CRC radar in-flight following service at angels 17.5 [17,500'] flashing IFF [Code] 74 and then switches frequency to Stud 4.

Formation leader [Squadron Leader Sweeney] advises Phan Rang Tower of "multitudinous magpies returning to roost". The tower responds that they expect a good show.

The 6 Canberras change to echelon right formation, slowing down with a "speed-brakes go" command.

"Bookie 599" [a C-123 landing on runway 04 right] advises that it wants to watch the show.

The formation flies overhead Phan Rang air base, Magpie lead [51] reports "on the break" and Phan Rang Tower notes that "it’s a beautiful show, mate".

Landing on runway 04 left, the Magpies in turn report "gear green and pressures up".

Magpie 62's navigator advises his pilot that 103 knots should be the threshold speed. The crew is wary of wake turbulence from the preceding landing aircraft.

"Wallaby 05" [a RAAF Caribou] is heard on frequency, on the high speed taxyway and ready for takeoff.

Mission/Tape ends.

Tape #10 Side A

Date of Mission: 21 February 1970

Type of Mission: Daytime Interdiction Mission - Underground Bunker Complex

Region: III Corps

Introductory Notes:

Aircraft: Canberra B Mark 20 [Avon Mk 109 engines], A84-240

Callsign - Magpie 61

Crew - Flying Officer Bob Sivyer [pilot], Flight Lieutenant Bob Howe [navigator/bomb-aimer]

This is a recording of Magpie 61's mission. The internal aircraft intercommunications [intercom] is not good quality however external communications are reasonable quality.

Recorded Events:

The taping starts with Mission Clearance from "Mustang" Mission Control, followed by pre-start checks and startup.

Magpie 61 obtains taxi clearance from Phan Rang Ground Control, with the active runway being 04 left. Altimeter/pressure setting is given initially as 29.91 inches but when the operator remembers that 2 Squadron uses metric, he advises 1016 millibars.

Phan Rang Tower clears Magpie 61 for takeoff, and crew share acceleration/speed check points.

Magpie 61 checks in with "Portcall" CRC radar flight-following service, advising it is climbing to angels 18.5 [18,500'] and is Mission Number 5226.

"Portcall" CRC advises of "heavy artillery" from Dalat to Papa Tango [Phan Thiet] to a maximum height of between 31000' and 45,000' and recommends that Magpie 61 proceed via the coast.

290 27 7 miles due north of PT.

Magpie 61 checks in with "Paris", angels 18.5 [18,500'] and is advised of rendezvous 095º 34 miles from Channel 73 [Bien Hoa] to work Drama FACon 276.9 mhz. Bien Hoa altimeter [QNH] is 29.91 inches.

The crew QSYs [changes frequency] to the FAC advising that it is 30 miles out from the rendezvous.

The FAC, Drama 03, is a RAAF Exchange Officer - Flight Lieutenant Ray Butler - notes that he is awaiting his helicopter support team. 055º 27 miles from Channel 73 [Bien Hoa]. Magpie 61's line up is 6 M-117 [750 lb] bombs.

Mission Briefing: The target is reported bunker complexes, target elevation is 165', QNH is 29.93, winds are 100º 5 knots, 030º 5 knots, 120º 5 knots, 080º 10 knots.

Nearest friendlies are 5 clicks [kilometres] to the south. Bailout area is 5 miles south along the highway at a Fire Support Base [FSB], and recovery base is Channel 73 [Bien Hoa].

Magpie 61 advises that he has 1 hour's holding as FAC implies a slight delay as his support people have found signs of movement in the area.

Drama 03 suggests that Magpie 61 should drop two single bombs - then his support people will take a look. He would like the 1st bomb with instantaneous fuzing [to remove tree covering] and the 2nd with delay fuzing [to penetrate into possible bunkers].

Magpie 61 asks where he is related to the sand bar near the river loop ? Drama 03 replies that he's over a River Y junction, TACAN coordinates from Bien Hoa roughly 055º 28 miles.

The bomb-aimer sights a helicopter ["chopper"] and the FAC is sighted over a bridge 2 miles to the east.

Drama O3 suggests a bombing run in from west to east, with a left break. The choppers will hold on the other side of the river.

A crew discussion follows re the bombing height and pre-bombing checks are carried out including reference to 10,700 lb fuel remaining which is used to adjust T-4 bomb-sight settings.

The 1st run sees a single bomb dropped after smoke marker launch by the FAC who advises "beautiful bomb - spot on".

The FAC advises that he is getting low on gas, with only 10 minutes endurance left, and therefore prefers that Magpie 61 drops 3 bombs at once.

For the 2nd run, the aim point is 10 metres over ["long on"] the smoke. Two bombs are gone, which are estimated by the bomb-aimer to impact 60 metres over the aim point, however the FAC says that they were "right where I wanted them - beautiful".

A replacement FAC - Drama 06 [Captain Mike Phillips, USAF] arrives on the scene - he has Flying Officer Dave "Stumpy" Palmer [a 2 Squadron navigator/bomb-aimer] flying as an observer with him. Drama 06 has just returned from Phan Rang [where the USAF's FAC Training School is located as well as 2 Squadron RAAF].

Banter includes reference to Flying Officer Sivyer "getting short", i.e. close to finishing his one-year Vietnam tour of duty and due to go back home to Australia soon.

Drama 03 passes to Drama 06 the original target coordinates [YT] 430410 and advises that Bomb Damage Assessment [BDA] so far is 3 bunkers destroyed.

Drama 06 wants a single sighter bomb with instantaneous fuzing, the next with delay fuzing.

Magpie 61's pilot advises that he's turning onto base leg, the FAC launches a WP [White Phosphorous] smoke marker and advises that the aim point is 25 metres short of it. The bomb is dropped and the FAC reports "real fine - just perfect". The bomb-aimer observes that it fell 15 metres under. Magpie 61's pilot confirms with the FAC who advises that the bomb was right where he wanted it.

The FAC launches his next smoke rocket, and calls for the next bomb to drop right on it. The bomb is dropped, the FAC reports "one away" then "beautiful, tad long", while the bomb-aimer reports 50 metres over the target and 50 metres right of it.

Drama 06 launches another smoke with the aim point 10 metres to the left of it. Bomb drop clearance is given, one bomb is dropped and the FAC advises - "One away - real nice - beautiful". Magpie 61's bomb-aimer estimates 30 metres over the aim point.

Magpie 61 advises that all 6 bombs are gone and "not bad bombs for a youngster, Bob" is heard from from Flying Officer Palmer from on board Drama 06.

Drama 06 advises Magpie 61 of the Bomb Damage Assessment [BDA] - target map coordinates are YT430410. Time on rendezvous was 55, first bomb was at 40, the last at 15. 100% of bombs fell within the target area, with 30% coverage. 4 bunkers were destroyed with zero dud bombs. "Real fine bombing".

Bob Sivyer on his 2nd last mission, does a high speed pass beside Drama 06 who reacts with "show off - you got to be joking".

End of mission record.

Historical Note:

Recorded on this tape immediately following the mission recording is an actual "Red Alert" with a siren alarm broadcast over the 2 Squadron PA system, in this case the Officers Sleeping Quarters, notifying of incoming fire/mortars or rockets into Phan Rang. The warning "All personnel are to take protective cover immediately [i.e. head for the specially prepared sand-bagged bunker nearby] - the base is being bombarded" is being given by the duty Operations Officer. Also heard briefly is outgoing artillery firing back at the estimated point of origin of the incoming rockets or mortars.

Also recorded are two Aussie songs on Vietnam the first of which includes a reference to Phan Rang and 2 Squadron Canberras.

Tape #11 Side A

Date of Mission: 2 September 1969

Type of Mission: Night-time Visual ["Night Owl"] Interdiction Bombing Mission

Region: III Corps

Introductory Notes:

This is a recording of an uncommon mission known as "Night Owl" which was conducted at night-time with external [C-130] airborne illumination based on powerful parachute flares to enable visual bombing at targets identified by white phosphorous [WP] smoke rockets fired by an airborne Forward Air Controller [FAC].

Callsign - Magpie 81

Crew: pilot - Squadron Leader Ivan Grove, navigator/bomb-aimer - Flight Lieutenant Bob Howe.

Aircraft: Canberra B Mark 20 [Avon Mk 109 engines], A84-235.

Recorded Events:

Pre-start checks.

Phan Rang Ground Control clears Magpie 81 to taxy to runway 22 Right, altimeter [QNH] setting is 1004 millibars.

Magpie 81 advises that he's been in touch with "Mustang" mission control and that an earlier reported indefinite weather hold on this mission no longer applies.

Taxying out in torrential tropical rain, Magpie 81's pilot observes a DC-3 parked without any lights. With a wet canopy he advises difficulty in seeing anything. The crew conduct their taxy and pre-take off checks.

Magpie 81 calls "Checkmate" to ensure that the Canberra's "Music Box" [specially fitted transponder to enable ground-based radar sites to remotely direct high altitude bombing strikes] and was advised that it was weak. The pilot observes that it is probably wet !

"Yellowbird 20" is heard on frequency. This was a call-sign for 2 Squadron's "sister" squadron - 8th USAF Tactical Bomb Squadron - flying US-converted Canberra jets, the B-57 dive bomber.

The Magpie 81crew agree that it is very hot and sticky on the ground.

Magpie 81 takes off on wet runway with an RCR of 18 out of 20, i.e. close to minimum braking effectiveness where aquaplaning might be expected.

The crew conduct acceleration/speed checks on take-off. The undercarriage circuit breaker was off and pilot was temporarily unable to raise the undercarriage. This error of omission is corrected promptly.

Magpie 81 makes contact with "Portcall" CRC radar in-flight following service, advising that it is airborne out of Channel 75 [Phan Rang], is climbing to angels 24.5 [24,500'], and has IFF set to Mode 3 Code 51 "flashing".

"Portcall" CRC advises good radar contact, reports on artillery up to 15,000' on the 230° radial at 14 miles from Phan Rang, and recommends that Magpie 81 could travel "feet wet" or 210° or 260°. Magpie 81 selects the latter option.

"Shadow 61" [call-sign of specially equipped C-119 with night scopes and door-mounted rotating barrel gatling gun] is advised of bad weather from the ground to 38,000' weather but with holes which may enable smoother flight. Shadow 61 advises that he "will be tactical" [i.e. conducting his ground attack mission] "some place around Papa Tango" [i.e. Phan Thiet] area.

Magpie 81 advises that it is "popeye" [i.e. in cloud], and "Portcall" CRC notifies of isolated weather returns ahead but they don't appear to be too dense. Magpie 81 advises on passing angels 13 [13,000'] and is confirmed as being clear of artillery.

An unknown jet [F-4 ?] "Strobe 27" is heard on frequency at 30,000', heading for TACAN Channel 81 [Qui Nhon] vicinity, planning to check with "Ragged Scooper" for local artillery.

Magpie 81's bomb-aimer, in looking at the planned rendezvous on his map, indicates that the Canberra could be turning base on its bombing runs close to Tan Son Nhut air base [the busiest in the world ?].

Magpie 81 is asked by "Portcall" CRC to flash its IFF for "Paris" CRC, does so and advises that it is still "popeye".

Magpie 81 QSY's [changes frequency] to "Paris" CRC radar flight-following service, advising that it is at 075º 85 miles from TACAN Channel 73 [Bien Hoa] still climbing to angels 24.5 [24,500'] with IFF set to Mode 3 Code 51 "flashing".

Unidentified aircraft with call-sign "Squeekie 72", flying at 4,500', reports that it is also "popeye".

"Bookie 72" [C-123] reports a thunderstorm, moving north-east.

Radio interference is experienced on VHF [121.3 mhz] guard frequency.

"Ramrod 41" [a pair of USAF F-100s ?] is trying to contact "Macon" [ground-based TPQ radar beacon bombing controller located at Tan Son Nhut], and reports its position as 030º 25 miles off Channel 73 [Bien Hoa].

"Paris" CRC is heard calling on guard to an aircraft north-east of Bien Hoa squawking [IFF] "emergency", positioned at 024º 32 miles off Channel 73 [Bien Hoa] or 030º 47 miles from Channel 102 [Tan Son Nhut]

Magpie 81 advises "Paris" CRC of its TACAN location at 075º 70 miles from Channel 73 [Bien Hoa] at angels 24.5 [24,500'] squawking IFF Mode 3 Code 51 with mission number 5819.

"Paris" CRC advises radar contact and is asked to confirm rendezvous as 179º 14 miles off Channel 73.

"Paris" CRC advises a rendezvous change to 160º 20 miles from Channel 73, to operate with FAC call-sign "Sleepytime" on 339.9 mhz.

A muffled call is heard on guard frequency - Binh Thuy will be secured for 10 minutes [closed due to a storm ?]

"Shadow 76" reports in to "Paris" CRC - flying at 2000', circling to the north-east.

An unknown source enquires of "Paris" CRC whether Magpie 81 has checked in. Magpie 81 notes that it is now 075º 26 miles off Channel 73 [Bien Hoa] and would like to QSY FAC which "Paris" approves.

Magpie 81 checks in with FAC "Sleepytime 15", expecting to be at the rendezvous in 6 minutes, flying at angels 24.5 [24,500'], with a line up of 6 x M-117 750lb bombs, either instantaneous or delay fuzed, mission number 5819

The FAC acknowledges and notes that he would like instantaneous fuzing. He advises that the weather involves a scattered cloud layer at 2000' and thus he would prefer to work at 2000' rather than [normal Magpie visual bombing altitude of] 3000'. The [C-130] flare-ship is at 5,000'.

Magpie 81 is asked if it is coming in from the Vung Tau area and advises not so. The FAC advises that Magpie 81 should run in from north to south with a left break, and is finally cleared to descend.

The target is a [VC] base camp area with hooches [huts] and bunkers. Nearest friendlies are 1.5 clicks [km] to the south-west. The FAC plans to hold over the friendlies.

Target height is sea level with 30' trees. The wind is 250º at 15 knots from the surface to 4000'. Altimeter setting [QNH] is 29.65 inches which the bomb-aimer converts to 1004 millibars.

"Sleepytime 15" advises that ground fire has been previously reported but they haven't observed any.

Magpie 81 asks for the flare-ship's location and is advised that it will be flying from west to east, with left hand turns.

"Sleepytime 15" suggests to "Moonshine 75" that he move his flares.

Magpie 81 pilot advises that he is over the rendezvous and has sighted some flares.

Tape #11 Side A ends

Tape #11 Side B begins

This side begins with Magpie 81 reporting over the rendezvous at 14,000' letting down. The pilot observes that 3 or 4 flares are out at this time.

The FAC advises his intention is to put flares on the ground for each bombing mark.

"Sleepytime 15" bombing instructions are to drop 2 bombs on each pass for 3 passes. "Moonshine" is dropping flares and is told to move to the north.

Required spacing between the bombs is 20 metres - they agree on 25 metres [the minimum that can be set in the Canberra].

An altitude cross-check is carried out between Magpie 61 pilot and bomb-aimer passing 3000' and "Sleepytime 15" advises as the clouds have cleared, bombing altitude of 3000' is acceptable.

Magpie 81's pilot is concerned that each aircraft is well separated in altitude - hopes "Moonship" is at 5000'

"Sleepytime 15" advises that a flare is on the ground and Magpie 81's instructions are to hit it. Magpie 81 overflies the target but can't locate it.

The FAC admits that the smoke is not putting out much light - "it's right on a stream" and the bomb-aimer reports light reflections off the water. The pilot spots the Moonshine C-130.

Pre-bombing checks are conducted, with fuel remaining 13000 lb.

"Sleepytime 15" advises that the target is directly under two flares, however Magpie 81's pilot is having difficulty seeing the target from his location. The pilot advises the bomb-aimer that cloud is obscuring target and turns downwind running north.

The FAC advises that another flight of fighters are airborne and there is a need to be "expeditious".

The FAC rolls in to drop his mark, the C-130 continues to drop its flares. "Sleepytime 15" advises that the aim point is between the smoke and the stream.

Magpie 81 confirms sighting the mark and the bombing run starts. Two bombs are dropped. Bomb-aimer reports smoke gone out and bombs appear to have dropped as required.

"Sleepytime 15" advises that the next aim point - add 50m and 50m to right - is on the stream this time.

Downwind, the bomb-aimer reports wind as 210º 25 knots.

Extra flares are worrying the crew, i.e. who's firing them and from which direction.

Magpie 61's bomb-aimer spots traffic at 12 o'clock low.

"Sleepytime 15" asks Moonshine re the flare situation, Magpie 81 calls for a smoke marker and the FAC obliges.

"Sleepytime 15" advises that the aim point is between smoke and stream, however Magpie 61 "goes through dry" [i.e. no bombs are released] as cloud is obscuring the drop.

The FAC is also concerned about the "doggone weather, noting that the only cloud in the area went right over the target. He suggests that Magpie 81 should set for the remaining four bombs to fall on the one pass.

2 Bien Hoa-based F-100s [Callsign "Rap 61"] check in on the FAC frequency, and are asked to rendezvous at TACAN position 165º 20 miles off Channel 73 and to conserve fuel for 10 minutes. The F-100s and FAC depart frequency for a briefing on FM frequency 40.90 mhz.

Magpie 81 calls for a mark, gets it and is told that the aim point is 50 metres short of the mark. The pilot loses sight of the target under nose and bomb-aimer controls the drop letting 4 go and suggests that they dropped pretty close to the target.

Magpie 81 confirms "winchester" [all bombs gone] and the pilot reports to the bomb-aimer that the cloud has now moved right off the target area.

The FAC provides a Bomb Damage Assessment [BDA] as "on at 00, off at 20, 100% bombs in the area, 50% coverage. No duds. Coordinates YS 100750".

Magpie 81 checks in with "Paris" CRC , reporting its position as 140º 22 miles off Channel 73, climbing to angels 23.5 [23,500'], RTB [returning to base] Channel 75 [Phan Rang].

Magpie 81 is advised to change frequency to 382.1mhz for "recovery", does so and advises position of 130º 24 miles off Channel 73.

"Paris" CRC asks Magpie 81 to recycle [IFF Mode 3 Code] 57 and "ident", which it does so and is advised that there is no threatening artillery en route. Phan Rang wind is 200/13, visibility 6 miles with rain showers in the area. "Paris" CRC advises of radar contact at 115º 28 miles from Bien Hoa.

The Magpie 81 crew discuss their lucky 2 Squadron members who have flown to Australia exchanging Canberra aircraft - they speculate as to a possible fortnight delay.

Explanatory Note:

- During August-September 1969, X-rays had revealed hair-cracks in virtually all Canberra bomber tails and they were to be progressively replaced, thus enabling the lucky crew to remain in Australia longer than the usual turn around time.

"Paris" CRC acknowledges Army 064's admission that he was the aircraft accidentally transmitting the earlier emergency call on guard frequency.

Magpie 81 checks in with "Portcall" CRC radar flight-following service on 278.9 mhz reporting position by TACAN as 235º 57 miles off Channel 75 [Phan Rang], at angels 23.5 [23,500'], with IFF on Mode 3 Code 75 and "flashing".

Magpie 81 is told to change frequency and squawk 3-74 "ident" on IFF. Phan Rang runway in use is 22 and QNH is 1004.7 millibars.

The crew agree on a "TACAN 4 approach" onto runway 04, planning to overshoot to land on runway 22.

Reporting at 235º 40 miles from Phan Rang, Magpie 81 is cleared to Point India and to descend to 15,000', checking in with Cam Ranh Bay Approach Control on 241.2 mhz.

Magpie 81 advises Cam Ranh Bay Approach Control that it is orbiting at Point India and descending to 15,000' for a TACAN 4 arrival at Phan Rang and is advised to expect approach clearance at 1240.

End of taping.