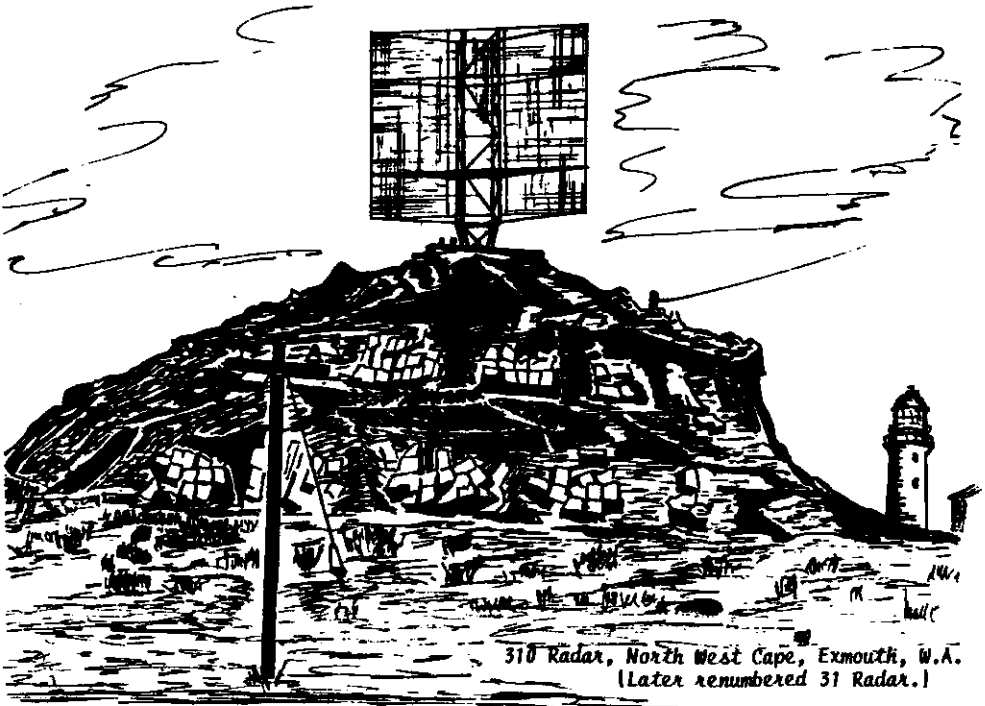


*Al. Ferguson
R. 2/16/44*

The EXMOUTH RADAR STORY.

310 RS; 31 RS; 161 RS; 155 RS.



310 Radar, North West Cape, Exmouth, W.A.
(Later renumbered 31 Radar.)

COMPILED BY MORRIE FENTON.

Regards Allan
Compliments
of
Morne Jentzen

The

EXMOUTH RADAR STORY.

310 RS; 31 RS; 161 RS; 155 RS.

The North West Cape and Exmouth Gulf region in Western Australia became a strategic area in World War II. An American submarine fuelling base was established in the gulf with supporting Australian forces - an air base was maintained at Learmonth to provide the protection of an Australian fighter squadron until 1943, after which Spitfire squadrons were on call from other bases. And the cape became the landfall and first port of call for the tenuous air link across the Indian Ocean from Ceylon and India to Australia,

The cape and its lighthouse must also have been a significant navigational landmark for both Allied and enemy naval units - and air force units - as they turned south towards Perth, or northwards to the war zones.

Four RAAF Radar Stations guarded the area over a period of three years. Two were destroyed by a cyclone - two were destroyed by fire - nevertheless during the critical years of the war, an almost constant watch was maintained to the highest traditions of RAAF Radar.

This is The Exmouth Radar Story - 310 RS, 31 RS, 161 RS and 155 RS - all located at North West Cape near the Vlaming Head lighthouse which was then an 'active service area in a southern location.'

The history records only briefly the station exploits at other locations. Hopefully, by making it only the Exmouth story of their service, it will prove of general and local interest, rather than being merely an enlarged unit history.

COMPILED BY MORRIE FENTON.

THE
EXMOUTH RADAR
STORY.

310RS 31RS 161RS 155RS.

ISBN 0 646 18554 3

MORRIE FENTON.

(M.E.Fenton.)

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Produced and Published

by

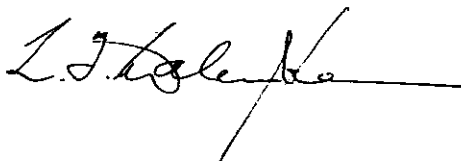
M.E.Fenton,
27 Lasscock Avenue,
LOCKLEYS 5032.

FOREWORD.

Morrie Fenton has kindly asked me to write a Foreword to his Exmouth Radar Story. I was posted to this area in August 1944 and saw service there until November 1945 as Commanding Officer of No. 31 (earlier No. 310) Air Warning radar station and also No. 155 G.C.I. (Ground Controlled Interception) radar after the unfortunate death of its Commanding Officer, Flight Lieutenant K.N. Drummond. I came to know this isolated area quite well.

Morrie has produced a most interesting account of the radar stations in the Exmouth Gulf area which fittingly has rewarded his painstaking research into documents and archives, and his persistence in tracking down and obtaining accounts from those still available to relate them after fifty years. Little did I then think that such an account would eventuate from what many of us regarded as a harsh isolated environment in which to serve our country. It was and still is a location of strategic importance.

Morrie is to be congratulated for his effort to capture this history before it is lost...and I commend The Exmouth Radar Story to those who still have memory of those years and others who have the interest, enthusiasm and desire to learn something of the early application of then secret equipment to the defence of Australia in such isolated and secret locations.



L.T. Malempre.
B.E. (Hons.), B.Ec., B.A.
Melbourne, May, 1994.

THE EXMOUTH RADAR STORY.

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#

THE EXMOUTH RADAR STORY.

PREFACE AND ACKNOWLEDGEMENTS.

Station Diaries have proved notoriously unhelpful to those seeking to extract a story from their 50 year old pages. Some Diaries are non-existent even - some just non historical. Pages are missing. maybe even months are missing. Some are just a visitors' book, others a statistical or technical record only. All are faded or illegible, with the minimum of human interest. In actual fact, really good historical information is rare indeed in station records.

For all those reasons, 'The Exmouth Radar Story,' first edited from the Diaries, then brought to life with the rich memories of men who served on the stations, is a story far more comprehensive and descriptive than the usual Radar unit history.

Then add the incomparable Diary comments of C.O. Bill Tucker, which, to contradict me, are so refreshing, descriptive and entertaining, and 'The Exmouth Radar Story' becomes a regional Radar picture not attempted before. A selection of photographs completes the picture.

It is my hope that this story also makes a unique addition to the local history of the Exmouth region.

The sources for this story have been:

The A50 Diaries of	310 RS.
	161 RS.
	155 RS.
	31 RS.

The Personal Memories of	Wal Cornish	161 RS.
	Bill Hoiberg	161 RS.
	Lou Malempre	31 RS.
	Gordon Mills	155 RS.

And the A50 Diary comments of H.E. (Bill) Tucker 31 RS.

Photos - RAAF Radar Pictorial II (Bill Babb and Alan Browne) and Gordon Mills.
Also from Lou Malempre and Denis Holmes.

Personnel - The lists of Personnel of 310 RS and 161 RS at time of formation were supplied by the Air Force Office, Department of Defence.

Compiled by Morris Fenton.

FURTHER RADAR READING.....

For almost fifty years, the fascinating story of Australian Radar has remained unrecorded, and something of a mystery.

However, since the Canberra Radar Reunion in 1988, a series of related histories and pictorials have been produced, the principal five books being the first five listed below. And there will be more !

#

RADAR YARNS. Edited by Norm Smith and Ed Simmonds.
MORE RADAR YARNS. Edited by Ed Simmonds.
PICTORIAL I (Overseas) Norm Smith and Ed Simmonds.
PICTORIAL II (Mainland) Morrie Fenton, Norm Smith
and Ed Simmonds.
PICTORIAL III An Album of All Areas.
Morrie Fenton and Ed Simmonds.

The books listed above are obtainable from:
Ed Simmonds,
2/13 Cromer Court.
BANORA POINT 2486.

THE STORY OF 319 RADAR. Allan Ferguson.
154 RADAR TRUSCOTT. Morrie Fenton.
327 RADAR BROOME. Morrie Fenton.
RADAR SKETCHBOOK. Morrie Fenton.
THE RADAR COUNTRY
SKETCHBOOK. Morrie Fenton.
SECRET ACTION OF 305. Norm Smith and Frank Coghlan.
A SAGA OF ACHIEVEMENT. G/C E.R.Hall (Retired)

#

INTRODUCTION TO THE EXMOUTH RADAR STORY.

Four RAAF Radar stations were set up at North West Cape on the Exmouth Gulf, W.A., during World War II. These four stations were located at five different sites, and were identified by four station numbers.

310 RS was the first. It was an Air Warning (AW) Transportable station erected close to the Vlaming Head lighthouse, which had been a cape landmark since 1912. 310 RS and its neighbour 314 RS along the coast at Onslow came on air at much the same time in January and February 1943, and these two stations gave effective long range radar cover for the Allied war bases established in the area, particularly the American submarine refuelling base.

In June 1944, 161 RS arrived. This was a Light Weight Ground Control (LW/GCI) station, sent probably to control fighter cover assembling at POTSHOT (Learmonth) as land based air cover for a large Allied naval force which formed up at the gulf before moving north. 161 RS flew in from Truscott, and was first set up at the Learmonth air strip, but quickly moved on to the North West Cape area where the station was erected on the flat, low ground in east of the lighthouse. After only a few days, the station was accidentally destroyed by fire, and 161 RS disappeared from the scene as quickly as it had appeared.

Two months later in August, 155 RS arrived by road, apparently to replace the burnt out station. This unit was a Mk. V GCI station, a large mobile type, English gear mounted in large International trucks; and these were set up on the previous 161 site, east of the lighthouse, and adjoining the small local airstrip which the radar men constructed east of the lighthouse area.

Meanwhile, on July 1st, 1944, 310 RS had been instructed to change its station number to 31 RS, which brought it into line with the number series allotted to AW Transportable stations. (At the same time at Fenton, N.I., the historic 31 RS, now equipped with new LW/AW gear for overseas service, changed to 310 RS, the 300 series being for light weight stations. So the two stations effectively changed numbers.)

In February 1945 when a fierce cyclone devastated the Exmouth region, 31 RS and 155 RS were virtually destroyed. 31 RS was beyond repair, but was quickly replaced with an LW/AW which retained the station number. This was erected at a new location a short distance from the old. 155 RS was slowly repaired, but the station was not called on to operate again on a regular schedule, and was disbanded eight months later in October. The new 31 RS, now a Light Weight Air Warning station (LW/AW) again sustained severe cyclone damage almost a year later, then was destroyed by fire shortly afterwards. The station was disbanded in February, 1946.

The role of the Exmouth stations was to give early warning cover to the Exmouth Gulf area, also ground control for fighter cover should this be necessary. A further important role was to cover the approaches of the overseas air route which had its first landfall at the Learmonth air base, from where the planes proceeded on to Sydney or Perth after refuelling. This air traffic increased significantly immediately the war ended.

This history concentrates principally on the Exmouth life of the four stations, so making it a local history as well as a radar history. Perhaps by so doing, it will answer some of the questions aroused by the gaunt remains of the old station at Exmouth - the skeleton remains of 31 RS, still there in 1994 near the Vlaming Head lighthouse.

#

RAAF RADAR AT VLAMING HEAD.



Above;

The lighthouse quarters at Vlaming Head after the cyclone. The building was vacant when the RAAF arrived, and was used as sleeping quarters, orderly room/office, signals room and medical room for 31 RS, and for 155 RS after the cyclone of 2/2/1945.

Below;

The 155 RS Dodge weapon carrier was the first vehicle to escape from the devastated area after the cyclone.



12.1.1943. *A party of eleven airmen under the command of Pilot Officer C.R.Meckelburg (A6601) arrived at the present site and commenced installation of equipment.*

This brief Diary entry is the first record of the early history of the Exmouth Radar Stations. There is no entry telling of the formation of 310 RS, where it first assembled or how the first party travelled to Exmouth, or the North West Cape. The men would have had the responsibility of installing the Transmitter and Receiver, probably also the Wireless Telegraphy equipment, for when they arrived at the station site, construction of the camp was well in hand. This was being attended to by 22 AWC workers and tradesmen, and their tasks would have included the construction of the control tower, the installation of the heavy aerial, the power units, the Mess, and ablutions.

The tasks associated with setting up a station were quite numerous, taking two or three weeks at least to settle in properly and to come on air. First priority was an adequate water supply, then the enforcement of camp hygiene, and the drawing of stores and rations so that the all-important cook could be comfortably installed in his kitchen. Then came the matter of finding sufficient wood fuel so that the big stove could be fired up. Meanwhile, the technical groups were seeking out their places - the motor transport and diesel generators, the wireless telegraphy, their schedules and reporting to the Zone Filter Centre at Broome; and the Radar equipment needed testing, calibrating, and fine tuning. In addition to all these tasks, the somewhat more mundane jobs such as the sleeping quarters, the Orderly Room and C.O.'s quarters and the Mess were all attended to as the station prepared to begin its work. All these problems, and others, would have immediately confronted the eleven good men who first accompanied their C.O. to the station site.

Lou Malempre, who later was to become C.O. of the station, recently made these observations which are quite relevant: *Apparently one of the reasons for having the Radar there was to cover the American submarine base at what was then called 'Potshot.' The base was transferred to Fremantle with the mother ship, the USS PELIUS. After the Japanese had bombed the base a few times before I got there, submarines still used the place to top up with diesel fuel before going out to sink Japanese ships further afield. They were very large ocean going vessels all painted a light blue. Apparently the mother ship was vital to the whole operation, and when the Japanese bombed the place it cleared out to Albany and later moved back to Fremantle. There was usually a small tanker anchored off Potshot to provide the diesel fuel. This base was supposed to be secret, but the Japanese knew about it. The base was staffed with US Navy staff and consisted of several igloo type huts near a jetty. We had little to do with them.*

And (the station) was not at North West Cape but close by, a few miles away on the peninsula, on the northern end of Cape Range, close by the lighthouse at Vlaming Head. We were very much in Western Area, and had nothing to do with North Western Area. The radius of detection was about 200 miles, at least from the elevated site at Vlaming Head. Vlaming apparently was an early Dutch navigator who sighted the head and so his name is recorded. He probably sighted it near the end of the seventeenth century. From the Radar tower and the lighthouse, we had a good view of the surf breaking on what is now called Ningaloo Reef. The Transmitter and Receiver were housed in a permanent structure, well camouflaged, and the aerial system was mounted on structural steel angles

and turned by an electric motor. Because of this arrangement, it was called an 'AW Transportable' station. Why transportable I do not know because it was quite a permanent set-up.

At this time, January 1943, the Vlaming Head lighthouse apparently was not lit, and the lighthouse quarters were empty - so the RAAF moved in, using the quarters for sleeping, and for the Orderly Room and C.O.'s quarters. The separate Mess and camp area was constructed some distance away to the west of the lighthouse.

The new Commanding Officer, though at the time a lowly Pilot Officer, came with some little experience from 14 RS at Wilson's Promontory (which experience was to be rewarded in due time with the rank of Squadron Leader), and by the end of January his station was shaping up quite well with a Massey Ferguson tractor, and a GMC tender on strength, not to mention the 26 men who had now gathered at the station. And already there had been many Army, Air Force and USN visitors to the new unit - an invasion which was to increase almost to flood status through the coming months. Indeed, with the dearth of reports on station activity, personnel and technical details in the A50 Station Diary, it appears to be a splendid record of visitors, with little else recorded.

Early in February, the new unit had its first distinguished visitor of note - Air Commodore R.J.Brownell, DFC, and Air Officer Commanding Western Area - who over the next few years was to make many visits to the station: (indeed his successor, A/C Wilson, later spent one Christmas Day at 31 RS.) Midmonth a party from the 11 Mobile Fighter Sector, then at Yanrey (Death Valley) arrived for a few days, and the Diary continues as a visitors' book rather than as a record of station activities. Nevertheless, the impression gathered is that there were several Army installations in close vicinity, probably A.A., searchlight etc., and by late March as calibration tests were being carried out, 310 RS must have been operating. Two 18 pounder guns arrived on 29th. March, in the charge of Sgt. Horsnell and Lance Sgt. Yeomans - these were installed near the unit, and usually the men formed part of the guncrew - and with 'Morale very good,' the station appeared to be fully operational by the end of March.

(Although no entry in the Diary mentions the accident, Squadron Leader 'Bluey' Truscott, then in command of 76 Squadron at Learmonth (Potshot) was tragically killed at Exmouth on 28th. March, hitting the water while escorting in a Catalina.)

The pioneer of RAAF Radar, Wing Commander A.G.Pither visited the unit on 2nd. April, and left the next day. A short visit, but one which can only be described as a notable distinction for station 310 - few stations were so honoured. The remainder of the month was distinguished by a continuous stream of Army and Air Force visitors, with other notable guests being Captain J.Eggleston of M.V.KOOLINDA, Lieutenant Commander Johnson of the U.S.N., and F/Lt. Kerville of 76 Squadron - who all arrived at the station by launch.

An Air Raid Alert was sounded at 12 noon on 29th., with the All Clear sounding at 12.15 hours.

On 12th. May, a practice shoot with live ammunition was carried out with the 18 pounders, the target being the wreck of S.S.MILDURA, just north of the cape. Three hits were scored. and Major Moseley, O.C. of 4th. Heavy A.A.Battery, expressed his satisfaction with the results of the practice shoot.

At 2244 hours on 20th. May, a Yellow Warning was sounded followed by a Red at 2300 hours. Enemy aircraft were heard passing over the camp as they continued towards Potshot where they were engaged by Anti Aircraft fire. Only one bomb was dropped. Again the next night at midnight an Air Raid commenced at 0020 hours with the planes passing over Mindaroo and Yanrey until Potshot was reached where a stick of bombs was dropped. A fighter gave chase, indicating that at least one 76 Squadron pilot was still on the job at Learmonth, but there was no result - and no damage from the bombs either.

The morale and discipline of the men was good during the raid.

On 4th. June, Pilot Officer R.M.O'Hanlon arrived from Radar School to take over command of the unit. The actual changeover was effected ten days later on the 14th., when Flying Officer Meckelburg departed for 48 RS at Jurien Bay W.A.

A/C. Brownell, AOC Western again visited on the 20th., and two days later heavy machine gun fire was heard, and flares seen near Yardie Creek. To protect the camp against the possibility of attack, reinforcements arrived from Potshot, Army and Air Force, and patrols were sent to investigate. The source of the alert was found to be an American sub-chaser, wrecked while on patrol. A Catalina picked up 30 survivors, but one Ensign missing was presumed drowned.

July proved a rather unremarkable month - visitors and inspections only are noted in the Diary, and there were 37 men on strength.

August. Many visitors, Army, Air Force and civilian came to the station this month, but the outstanding event proved to be the completion of the small unit airstrip on the 18th., permitting quick communication and some transport by air between the Radar at Vlaming Head and the Learmonth base. The strip was capable of handling aircraft up to the size of Ansons and Dragons, but the most frequent visitor over the coming months was a Tiger Moth from Learmonth.

And the term RADAR was now officially adopted:- until this month the term Radio Direction Finding (RDF) had been used.

Early in September, Mr. L.S.Hogan, camoufleur of the Department of Home Security, and accredited to the RAAF, arrived at the station from Onslow, and as he was attached to 310 RS for the next six weeks, it would seem that at this time the Control Tower, or Doover, of the big AW Transportable was camouflaged. Lou Malempre described the work: *The Radar was originally surrounded by a high wooden wall with sandbags in between the walls. It came up about to the floor where the electric motor was mounted to turn the aerial. Over the lot was wire netting covered with spinifex for camouflage purposes. A Vickers gun was mounted not far from the aerial, hopefully to cover the track up facing away from the sea. The other side facing the sea was a vertical cliff which ran along the front of the hill past the lighthouse.*

Pilot Officer Balfe, Commanding Officer of 328 Radar at Wallal Downs, also visited the unit this month and stayed one night.

Another Air Raid occurred at midnight on the 15th., with 3 to 5 hostiles approaching from the North East to fly over Potshot. No bombs were dropped, but two bombing runs were made over Onslow. The raiders were tracked over a total distance of 325 miles. There was no panic, and discipline was good.

At the end of this month there were 43 men on strength.

October was proceeding quietly with the usual visitors and inspections until the 12th. when an Army vehicle caught fire about three miles from the camp, and the flames spread to the spinifex. Fanned by quite a strong wind, the fire quickly increased in size and travelled towards the Radar camp, but the unit personnel were able to extinguish the flames and subdue the fire.

Mr. Hogan the camoufleur, his job completed, departed on the 19th, and on the 23rd., A/C. Brownell the AOC Western arrived by Anson with a small party and departed the same day.

November also proved a quiet month with visits from Canteen, Signals and Accounts officers. Another fire was discovered about three miles away, burning on a half mile front, and a party from the unit was again able to control and extinguish it.

December 1943. A few visitors only - one being a Wing Commander from RAAF Headquarters who with his party had come to inspect Works and Buildings. The year ended with 40 men on the unit.

January 1944 - and the Commanding Officer, Flying Officer O'Hanlon left on three weeks' leave. Pilot Officer Hickman assumed temporary command of the unit. Later in the month, a trial shoot with the beach guns was arranged, and a high ranking party of Army officers arrived - Brigadier, Lieutenant-Colonel and Captain.

February saw the return of the Commanding Officer, after which Pilot Officer Hickman departed to take temporary command of 325 Radar at Corunna Downs. On the 21st., a small concert party of four attended, probably a musical group.

March. Early in the month, G/C. Eaton and a party of North Western Area officers visited the unit, possibly in relation to the movement of fighter aircraft down towards Perth from the Darwin area. These returned on the 24th. Mr. Hogan the camoufleur again visited and stayed for two weeks. At 1515 hours on the 22nd., a fire broke out in the mechanics' tent next to the operations room. The fire was extinguished in thirty minutes, but a tent and some equipment was destroyed.

On April 4th., Mr. Hogan the camoufleur departed, and the Western Area Canteen Officer and Messing Officer called on inspection. The AOC Western Area again arrived at the unit with a party of officers, evidently by Anson aircraft.

And at the end of the month a party of Army officers arrived by air from Corunna Downs with a trial shoot of the 18 pounder beach guns being arranged as a consequence.

In May the GCI station, 161 Radar arrived from Potshot where it had first been set up, and 310 Radar provided Mess arrangements and accommodation for the technical crew which accompanied the equipment. This was on May 11th. At 1610 hours on 16th., 161 Radar was destroyed by fire. An investigation was carried out the next day by the Signals officer from Potshot, and the 161 men departed with the remains of their station to return to Radar Wing at Darwin.

On the last day of the month, an unidentified plane was observed on reconnaissance over the area. The aircraft was presumed Hostile, and a Red was sounded. The All Clear came an hour later. This was the month when the Spitfires moved down from Darwin to cover the assembling of a large fleet.

Lou Malempe arrived at the cape about three months after the fleet left the gulf, but he knew of the operation:-Before I got there apparently a large fleet with the battleship RICHELIEU as flagship anchored in Exmouth Gulf and went up to the Dutch East Indies and bombarded some target(s). Exmouth Gulf was regarded as a strategic location. The lighthouse was re-activated while this fleet was there. Possibly this is when 161 Radar was there but I did not hear of it. I did hear they had a Spitfire squadron at Potshot to give some coverage for the fleet and the odd one visited the rough strip near the Radar at the time.

June proved a most unremarkable month with various visitors only.

July proved more noteworthy because a change was noted in the events recorded in the Diary - for the first time, some aircraft plotting and station personnel received mention, which makes for a little more historical content. On the 4th., a Skymaster, or C54 was plotted to 163 miles, which indicates the station was performing well.

Then on the 6th., a signal was received from Western Area Headquarters advising that the station had been renumbered as from 1.7.44....the station would henceforth be 31 RS.

And a new Gun I/C replaced Sgt. Dewar after 10 months - the new man was Sgt. V.L.Smith. Also an entry on the 25th. indicates that a QANTAS Liberator was tracked to 145 miles.

August proved to be quite eventful, for on the 1st., a DH84 landed at the Radar strip with a cinema operator and his gear, and the station was treated to its first picture show. And on the 7th., 155 RS arrived by motor convoy comprising 13 vehicles - an impressive spectacle. Their tents were pitched around the Mess which they then shared with 31 RS.

Now about 155 RS. I do not know why it was sent there. Possibly they had some idea of another naval strike from Exmouth Gulf, but this did not eventuate during my time. American, some Dutch and British submariners continued to use Potshot as a staging port.

155 RS was set up in what would be the flat area near the V.L.F. towers on the map nearby the rough airstrip. It consisted of a transmitter truck in an International vehicle, a receiver truck in a similar vehicle, two separate power trailers with Lister diesel generators, and aerial system mounted on a Bofors gun chassis. The transmitter was an English COL type, of 120 Kw peak pulse power operating near 200 Mhz. The receiver was also of the COL type and comprised two units side by side, one being the Plan Position Indicator, and the other being an 'A' scan display with a horizontal time base and the ability to split the aerial beam which, noting the relative sizes of the same echo when split, enabled one to assess the height of the targets, very necessary if one wanted one's own fighters to intercept them. Its range, from memory, was about 100 miles as being an interception Radar, it performed a different function to the AW long range Radar.

(Lou Malempe)

On the 11th., The ADC Western arrived by Tiger Moth - possibly checking on the arrival of 155 RS - and two days later on 13th., Flying Officer Malempe arrived to take over the station.

I took over from Dick O'Hanlon who later became a doctor. I had the usual spread of Radar mechanics, operators, some W.T operators, a diesel mechanic, messing staff and guards. We were quite isolated, and had some ATF Artillery staff to protect us with 18 pounder guns, and we had Vickers guns on Vlaming Head, Bren guns, sub machine guns, rifles, grenades and gelignite. One had to learn quickly about human nature in such a place. We were about 33 miles north of 76 Operational Base Unit at Potshot near the American base.

By chance we were housed better than many other Radars which had tents only. We had the generously dimensioned lighthouse quarters at the foot of Vlaming Head. The Mess was in a separate building on the sea side of Vlaming Head. The bend where the road (such as it was) turned from going north on the sea side to going south on the Exmouth Gulf side was known as Madman's Corner. That is where we lived. I remember an isolated grave nearby.

We supplemented the rations we got from Potshot with such items as fish, oysters and turtles. We also had an arrangement with a nearby station owner, Eric Payne, to supply us with sheep which the guards turned into mutton. He was some miles away at Yardie Creek station - a genial gent in his early forties, living there with his wife, young daughter, and an efficient Chinese stockman named 'Tommy.' We also had kangaroo tail soup and steaks at times. There were plenty of kangaroos (euros) and emus about. He ran about 10000 sheep I think in low rainfall country. I think its average was about ten inches a year, but that was not regular. The country was mainly covered in spinifex and rather rugged.

(Lou Malempre)

After the arrival of the new Commanding Officer and of 155 RS, routine life continued with a couple of good plots recorded - a Skymaster en route to India was tracked to 186 miles, and a Liberator was followed to a range of 177 miles. A new grid map was installed in the operations room on instructions from the Zone Filter Centre at Learmonth, and as has been recorded in the story of 155 RS, a boxing competition was arranged with disastrous results.

September began with one of those unusual incidents recorded in similar fashion at a number of stations - a white flare was seen above 155 RS, and another was seen over 31 RS. A patrol by armed guards revealed no explanation, but there were general suspicions at these stations that 'fifth column' was at work.

On the 16th. of the month, a cricket match was arranged on the two Radar stations. 155 won the match, but this was to be expected as that station had the larger complement. With confidence at a high level, a combined Radar team challenged a team from 35 ZFC, and emerged the victors. Towards the end of the month, an inspection by an officer of the Public Works was made regarding work to be done on the Mess and the powerhouses, and on the last day, Warrant Officer Dickson, of 7 Com. Unit, while taking off from the small strip in a Tiger Moth, crashed into the scrub. Fortunately, it was a 'good crash,' for the pilot was able to walk away from the wreckage.

In accordance with instructions, the lighthouse was lit at sunset.

October. The story of the illness and death of Flight Lieutenant Drummond, Commanding Officer of 155 RS, has been told in the story of that unit. On the 12th., a salvage crew arrived with suitable transport to remove the crashed Tiger Moth; and on the 18th., F.D. Malempre, C.O. of 31 RS and Temporary C.O. of 155 RS, flew to Learmonth for an administrative conference. And on the 19th., a maintenance crew arrived to instal a new Air to Surface Vessel (ASV) beacon. On the last day of the month, a combined party from both Radars attended a bushfire burning some 15 miles from the camp.

November was noteworthy because of a day spent fishing with wire nets - a huge haul of 42 dozen fish of various sorts was made. Doubtless fish

featured on the menu of the two stations for several days. And on the 15th., another unusual event was a singles tennis tournament, with keen interest shown by all who took part.

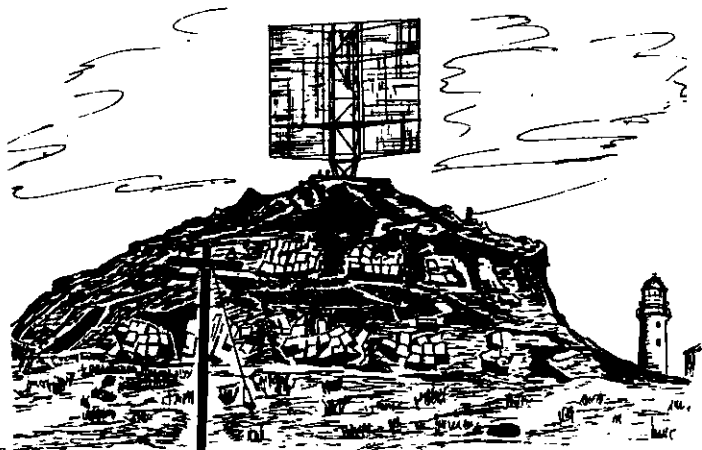
December 1944. Another year ending, but routine life continued with the usual visitors and inspections. Boring operations were being carried out to secure a more reliable local water supply, and the presence of unidentified surface vessels was expected. This event has also been well recorded in the story of 155 RS, and in view of evidence since obtained from Naval records, the possibility was that the vessel was U-boat 862 of the German Navy, operating from Batavia.

Christmas dinner was held in the Mess at 1800 hours on Christmas Eve - no details are recorded in the Diary, but the likelihood is that some 'extras' were provided from Welfare funds and Canteen funds - the cooks made an extra effort, and the sergeants and C.O. waited on the men of the unit. The Christmas season continued with a competitive beach sports day arranged at a good surfing beach three miles down the coast. The year ended with the film, 'The Battle for China,' being shown in the Mess at 1900 hours to all personnel.

January 1945 commenced with the entry - 'Nothing of interest occurred.' Camp life continued quietly until the 12th., when a competitive beach sports day was held for members of both units, and on the 16th., A/C. Brownell ADC Western Area arrived on another of his almost regular visits to the unit.

W.T. tests between the Zone Centre at Broome and the Radar commenced on the last day of the month, and it is recorded that there were 24 men on the unit.

February.....came the 'Big Blow.' (Chapter 4)



310 RS was re-numbered 31 RS on 1st. July 1944, and Lou Malemprè states that before the tower was destroyed by cyclone, an ASV beacon was erected.

161 Radar was a Light Weight Ground Control station, (LW/GCI) Mk. 1, the gear being modified from American equipment, technically known as the SCR 602 I6. The purpose of the portable station was to control and direct fighter aircraft; and the equipment was designed to rapidly calculate speed, height and course of target and interceptor. This in turn enabled the controller - usually an officer - to direct his fighters on to an interception course, all this being done from the consoles inside the operations tent.

Wal Cornish described his station thus: *161 RS was all housed in a heavily oiled tent, like a Dryz-a-bone. It was about 10 feet square and 8 feet high with small diameter pipework for a frame. The floor was plywood. The turntable was probably 8 feet in diameter and similar to the LW/AW units. However, everything seemed lighter, lower and smaller than the LW/AW.*

Wal expressed the thoughts of many when he said: *I suppose our main concerns were*

1. *Where were we ?*
2. *Where were we going ?*
3. *What would we be doing ?*

The station had formed up in December 1943 at Richmond, N.S.W., and in the new year had moved up by rail through Queensland, then by road to Adelaide River. Along the way, the men experienced the usual small adventures of most service units, but at the new site, after the dust and dirt of the road across to the Northern Territory, the new camp experience was flooding, which caused considerable concern.

At the end of April 1944, the station found itself struggling to set up camp at the new base on Anjo Peninsula, later known as Truscott. This was out in Kimberley country, and the 14 Mobile Works Squadron was still hard at work finishing the airstrip and base. By this time, the men had acquired more than a little skill in packing up and moving their portable station in a matter of hours. Bill Hoiberg claimed that *We were so expert we could assemble or dismantle in a very short time, in the darkness of the darkest night, and without the help of artificial lighting.*

So when yet another order to move was received - this time for the equipment and technical men only, the guess was that something pretty big was on.

The unit was quickly packed and ready for an early morning departure from Truscott, taking off from the unfinished airstrip. This time the destination proved to be POTSHOT, or Learmonth air base, near the North West Cape in Western Australia which they reached after practically a day's flying in the transport aircraft. As soon as they arrived, the operations tent and gear - the Doover - was erected and assembled very quickly. By midnight it was working, after which the men slept in the open alongside the tent. At Learmonth they found that a squadron of about 40 Spitfires had assembled, their job being to protect an Allied fleet which was expected to assemble there.

The operators commenced their training with the Spitfires, and Bill Hoiberg noted: *During calibrations and test flying with the Spitfires, 161 was proud to be associated with Group Captain Peter Jeffries, an Australian who flew in the Battle of Britain. It was certainly a thrill to us 'rookies' to observe Jeffries and his pilots come screaming over us, do a roll, and fly upside down about 30 feet above the strip. Certainly 'Spitfires over Australia' which to my knowledge has never been tabulated. Jeffries and his pilots quickly taught us all the tricks of the trade when working with Fighter Control Units (FCU).*

But then came another move - this time a matter of 30 miles from Learmonth to North West Cape - probably considered a more favourable site for a GCI station because of its restricted range. Once again the gear was packed

and the gear dismantled ready to move.

Wal Cornish recalled: *I remember the day we travelled to North West Cape from Potshot. We had to pass through the American submarine base camp on our trucks and in so doing some dipoles were ripped off the array (aerial) when they got caught by an overhead cable stretched between two huts.* While travelling slowly along the rough bush track which took them towards the cape and the Vlaming Head lighthouse, they were surprised to meet a sheep farmer and his wife (probably Eric Payne from Yardie Creek station) who were able to describe their destination for them - and there they eventually found 310 Radar, the big transportable station. They erected their tents around the existing campsite and Mess, and were glad to clean up and eat. Work started again, and this time the Doover was erected on the low flat ground east of the lighthouse, and over the next day or so the set was again brought up to peak efficiency.

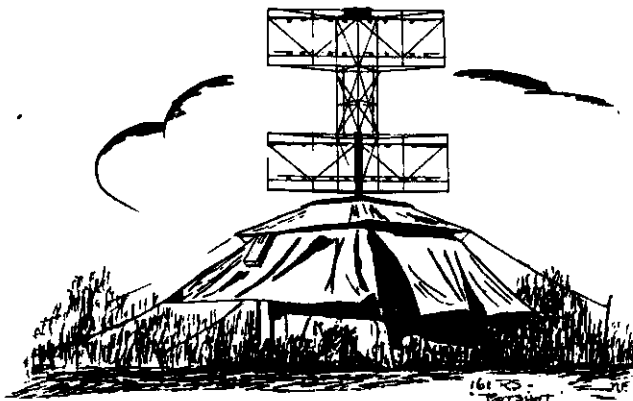
It was soon apparent why 161 Radar and the Spitfires were there! Bill Hoiberg wrote: *The gathering of warships was the biggest I have ever seen. If I remember correctly, they took twenty four hours to pass a given point, and were packed into the landlocked port at Exmouth Gulf for victualing and organisation.*

The Allied fleet comprised capital and smaller naval ships of the Americans, British and French, and the story circulating was that they were assembling for a bash at Sourabaya. True or not - the task of the Spitfires and 161 Radar was to provide an effective air cover while the fleet assembled and sailed from Exmouth.

Then.....Disaster struck! Suddenly the Doover with its state of the art equipment at peak efficiency was in flames, and soon was a burnt out shell with all the sophisticated Radar gear completely ruined. Bill Hoiberg had the opinion that during testing and adjusting, a hot soldering iron was placed on the pipe frame, touched the oiled canvas, then in a flash came the flames.

A Court of Enquiry was convened...the fire was accidental...and so after a very short tour of duty at Exmouth, 161 Radar was on its way back to Radar Wing at Darwin. There the unit was re-equipped, and in January 1945 embarked for service at Morotai.

#



155 RS was formed at Richmond, N.S.W., in December 1943 and first became operational at Ash Island, Newcastle, in May 1944. It was a twin station in every way to 154 RS - the same advanced English Mk. V Ground Control Interception equipment with a motorised aerial, the Receiver and Transmitter being mounted in large International trucks. The two power units were Lister diesel generators on four wheel trailers. The large rotating frame aerial was also mounted on a 4 wheel trailer/carriage.

At Ash Island, the new 'state of the art' station was paired with 131 RS for testing, and it is likely that WAAAF operators from 131 RS took part in the comparing and testing operations.

Suddenly the operators were an all male crew - and movement instructions were received in July, within a month or two of the destruction by fire of 161 RS at North West Cape in Western Australia - a fact obviously not known by the 155 men across the nation at Newcastle where they had begun packing stores and spares, personal gear and technical equipment. Their future destination was unknown to them.

Additional motor transport was allocated to move all the non-technical equipment, and the Commanding Officer, F/Lt. Ken Drummond, was instructed to have his station ready to move out on 6th. July.

The convoy of technical vehicles - the Internationals and trailers - rolled away on 9th. July on a slow, quiet route to Sydney. Here the vehicles were loaded onto the freighter, "River Glenelg," which sailed for Perth on 16th. July. Meanwhile, the station personnel and other vehicles entrained at Newcastle on 24th. July to cross the nation by rail to Perth, a journey very trying and involving many days and many changes of gauges. At Port Pirie, they set off across the Nullarbor in cattle trucks, with two meals a day, until their troop train stopped a few miles from Kalgoorlie. Gordon Mills remembered: *We had two meals per day - at 10 a.m. and 4 p.m. The meals were prepared at the rear of the train which stopped anywhere for the meals. Porridge for breakfast, and bully beef for tea. Eventually the train stopped at a staging camp five miles outside Kalgoorlie where we transferred to a normal train for the overnight trip to Perth. We did not stop at the Kalgoorlie station. Apparently the authorities considered that the health of the boys would be endangered by the welcome extended to them by the good ladies in certain establishments in Kalgoorlie.*

155 Radar reached Perth on 29th. July, one day behind their technical vehicles which had already left to travel overland on the appalling northern roads to POTSHOT, at Learmonth on Exmouth Gulf.

The well known and very popular coastal steamer KOOLINDA was the usual way to travel north from Perth - and by now the C.O. was aware of their destination - so they embarked on a comfortable sea trip along the coast to Onslow where the 314 RS C.O., F/O Flett and his men made them all as comfortable as possible. A waiting convoy of vehicles then took them to Potshot where they at last met up with their technical vehicles, which they had last seen on site at Ash Island. But they were to find that their trucks and equipment had suffered some damage on the trip. Gordon also recalled that: *...the transport driver Leo Lamont had acquired six chooks, a bag of wheat and some wire netting....he didn't like powdered eggs!*

On again to their new site at North West Cape and the Vlaming Head site of 31 RS, as the station there was now known. So one month after the unit had left its previous location at Newcastle, and after a marathon journey

across Australia, their Headquarters finally declared itself open on 8th. August, with the 155 technical vehicles set up on the old 161 site. Gordon Mills remembered that: *The personnel of 31 Radar were quartered in the lighthouse keepers' house; their kitchen and Mess were about ½ mile west. Our camp was built around their Mess which was apparently where the 161 RS men were camped. The camp area today is a parking bay with toilet facilities.*

And from Lou Malempre: *The 155 staff were camped in tents around the Mess on the sea side of Vlaming Head. Because of their proximity to the sea they were not allowed electric lights. They had an Orderly Room truck in a Chevrolet vehicle in the same area. They were probably ½ to ¾ mile from the lighthouse quarters on the Gulf side of Vlaming Head. So there was not all that much fraternising between the staff of the two Radars. 31 RS personnel were mostly Western and South Australians, and 155 RS seemed to all come from New South Wales, Victoria and Queensland.*

Air Commodore Brownell, the ADC Western Area, arrived a few days later on what was probably a morale boosting visit, and for the remainder of that first month installation proceeded steadily with test flights, calibration, vehicle levelling and communications schedules with 35 Zone Filter Centre at Learmonth. As soon as possible, the station commenced operating as an Air Warning station each morning while 314 RS at Onslow and 31 RS attended to maintenance. At other times 155 was on standby.

Towards the end of the month, a boxing competition was arranged, which was to have disastrous results.

Gordon Mills: *When 155 Radar was formed, it appeared they must have recruited boxing champions - we appeared to have every champion that ever was: so Ernie Holmes suggested a Boxing Contest to decide the Unit Champion. A ring was built and the Flying Doctor arrived to referee the fight. Norm Wilson, a radar operator, became the Champion. The Flying Doctor had a biplane with either 2 or 4 inline motors and a crew of three. The next morning on take-off, there was an explosion and they crashed into the gulf. All three men died.*

A mysterious event was recorded on the last day of the month when the station at last became operational was the sighting of two white flares near the operations site, but investigations by the guards found nothing. At this time the unit was 50 men strong.

It soon became apparent that with about 100 men on the two stations, the limited water resources at the camp were just not adequate. More water had to be found and found quickly. Mr. Eric Payne, of Yardie Creek came to the rescue. He made a well available, but this was 15 miles from the camp, and a decision was made that a bore be sunk two or three miles from the camp. Meanwhile, work progressed on establishing a telephone hook-up from the Orderly Room tender to the operations site, which suggests that the vehicles were now located near the small unit airstrip. Towards the end of the month, some alterations to the Mess were planned also, as with so many men eating there, some expansion was obviously necessary. And the camouflage officer arrived to start the work of covering and disguising the all too obvious technical vehicles - the Doover.

On the sports scene, cricket, that favourite sport of most Radar stations, had started with a match between the two stations (results not recorded) and then a combined Radar team played a team from 76 OBU and 35 ZFC at Learmonth.

Early in October, the Commanding Officer of 155 Radar, F/Lt Ken Drummond

was taken sick - he had long been unwell - and arrangements were made for him to be flown to 4 MRS at Broome for an appendectomy. Lou Malempre remembered him : *Ken boarded with me at the lighthouse quarters, and I got on well with him. He was not a well man and in his condition I believe the RAAF was blameworthy in sending him to such an isolated place with an appendix condition that gave him pain and trouble. I remember he used to take paraffin oil for relief.*

Corporal Cooper was to accompany him from Learmonth on the regular transport flight. Accordingly a Tiger Moth landed on the small unit strip to fly him to Learmonth where the courier plane called. Within a week came the distressing news of the death of their Commanding Officer. Flying Officer Malempre then assumed Temporary Command of 155 RS.

155 unit life continued, however;- Cpl. Jennings achieved a moment of fame (plus a mention in the unit Diary) when he landed a 69 lb. groper - a return cricket match was played at Learmonth in 110 degree heat, with victory to Radar - the Mess improvements were completed - and a beach sports day was arranged with a very comprehensive programme including a chariot race and a musical race.

The month ended with the men fighting a bushfire.
37 men on strength.

Work continued on the equipment in November. Calibration, matching and phasing was attended to which again suggests that the equipment was being tuned to peak performance at its new permanent site at the airstrip. A card evening and a fishing and shooting party was organised. Boredom was always a problem at isolated Radar stations, and morale was improved with a programme of varied events and outings, so that as many men as possible found something of interest to do. And on units where fresh rations were always scarce, the odd kangaroo or two offered a change of diet that was always welcome.

The food (was) hardly worth mentioning. Powdered egg, thick dry bread, running margarine, baked beans, bully beef and mutton supplied by the "King of the Spinifex," Eric Payne, the owner of Yardie Creek Station of 220000 acres and carrying one sheep per 8 acres, and they were about the size of rabbits. He had a Chinese cook and one jackaroo. His wife and daughter spent four months of each year at the cape, the remainder of the year in Perth.

On one fishing expedition we got nineteen dozen fish with one grenade - fish was on the menu until all had been eaten, so we did not do that again. [Gordon Mills.]

GCI stations were equipped with Radio Telephone facilities, and it was difficult to test the 155 equipment with few planes at Learmonth so equipped, so when it was learned that an Avro York from India, and RT equipped, regularly passed the cape on its way to Learmonth, a test session was arranged - and a route march from the camp to North West Cape was undertaken, which was followed by another beach sports day, offering a big selection of events.

December commenced with the usual camp routines and duties - and an AWC overseer called to check the water bore progress. Advice was received of unidentified surface vessels in the vicinity, and extra guards were placed on watch, just in case.....

Gordon Mills recalled that : *About one month before Christmas Eve 1944,*

*the two field guns were taken away, and shortly afterwards word came through of a Japanese submarine moving south. It passed North West Cape during the night about three weeks before Christmas, but did not land. A signal was sent to Fremantle for permission to extinguish the lighthouse; a reply arrived three days later refusing the request. Three English destroyers at Fremantle chased the submarine around Cape Leeuwin, and we learned that the crew of the sub. were spotted exercising on a beach in the Bight. On Christmas Eve a ship was sunk outside Sydney Heads. I wonder if this sub. was the villain. * The morning after the submarine went past, the Tiger Moth from Potshot flew over; the pilot waved to us with a .38 revolver, then headed out over the Indian Ocean looking for the sub !*

Advice came that the casing material for the water bore had arrived at Onslow, and the contractor arranged to collect it and bring it on site. The unit Christmas Dinner was served at 1800 hours on Christmas Eve - no doubt the Air Force tradition of sergeants and officers waiting on the men was carried out. A few days later a combined beach party and sports day was held at a good surfing beach three miles down the coast - and on the 29th. the Diary notes that a full length film, "Battle for China," was shown in the Mess to a combined and appreciative audience.

And so ended the year 1944 and the Christmas Season at 155 and 31 RS.

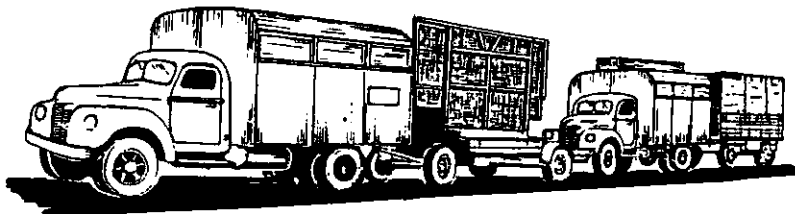
At this time it is noted that the combined total of men on the two units was 53 - a very considerable reduction on the total of a few months before.

January 1945 was ushered in quietly - on the 4th. a range shoot was organised; and through the month a series of postings, mainly of guards, saw many men departing from the unit and not replaced.

Air Commodore Brownell, AOC Western Area, again visited the unit on the 16th. January, and several officers, no doubt the specialists and the officers-in-charge in their various fields, also called to inspect facilities as varied as camp hygiene and unit records, to communications and technical equipment. These 'spit and polish' inspections were a continuing process each month - and a proven way of maintaining efficiency.

At the end of the month, the Diary reads as though the station at last had reached a satisfactory standard.

February...came the 'Big Blow.' (Chapter 4)



* It is interesting to read in the RAN history by Herman Gill, Vol 2, page 548, that a German U-boat, U862, based at Batavia, left that port on 17th. November to travel down the W.A.coast, crossed S.A. where it shelled a Greek ship, then travelled towards Sydney where it sank a Liberty ship on Christmas Eve. On the return journey, it sank a second Liberty ship 700 miles west of Fremantle, with the loss of 40 lives.

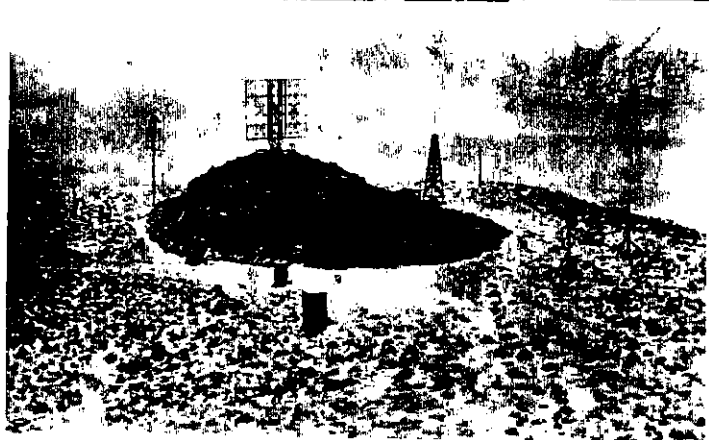
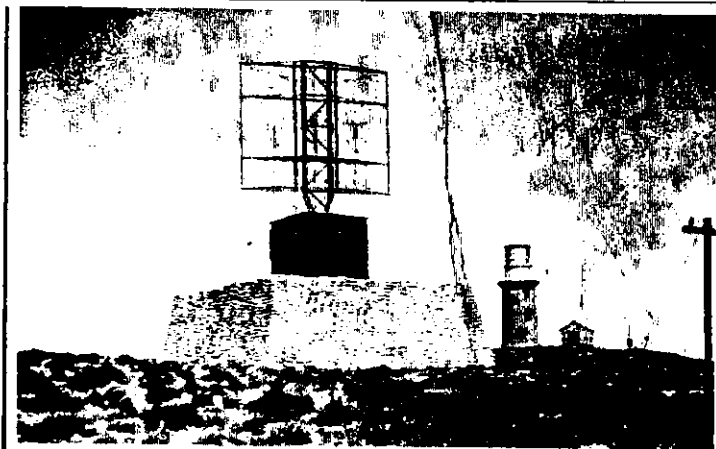
The devastating cyclone which hit the Exmouth area on February 2nd. 1945 is best described in the eyewitness accounts of those who were there. Fortunately, Lou Malempre and Gordon Mills have each given a rich description which in slightly edited form to avoid some duplication, enlarges greatly on the two Station Diary entries which are more matter of fact. F/Lt. Lou Malempre, effectively the Commanding Officer of both stations, was responsible for both Diaries, but the 31 RS record offers a far better description than the 155 RS effort.

So... first from the 31 RS Diary, 1st - 6th. February.

- 1st.. Cyclone warning was received and all tentage was fastened down. Valuable stores were deposited in safe places.
- 2nd.. Heavy winds commenced blowing at approx. 1500 hours, increasing all day and at approx. 1600 hours power lines were blown down and it commenced to rain. Electric power was then switched off as, owing to moisture, camouflage and even wet doors about the power house were alive. At 1700 hours an attempt was made to lash the aerial tower with rope as the wind was steadily increasing. This, however, was a physical impossibility and would have endangered life to attempt it. At approx. 1815 hours the Mess was blown away together with all outbuildings. Between this time and 2359 hours the wind was at its height, trucks were turned over, tents were blown into the sea and general damage inflicted.
- 3rd.. A scene of utter desolation presented itself. The quarters and roads were covered with feet of sand. Both powerhouses were filled with sand. All motors were in the same condition and had to be stripped right down before it was deemed wise to run them.
- 4th.. W.T. communications were re-established with A.D.H.Q. The kitchen was set up again, but for four days 31 RS and 155 RS lived on two meals a day. The weapon carrier was made serviceable again. A RAAF Liberator flew over the camp site.
- 5th.. An attempt was made to clear debris from the quarters. Much kit lost or damaged. Weapon carrier managed to get through to Learmonth for supplies.
- 6th.. A Beaufort aircraft circled the camp-site and enquired if medical assistance was required.

155 Radar ate in the 31 RS Mess, and the men were quartered in tents on the same camp site. The actual station comprised 5 vehicles - International Receiver and Transmitter trucks, aerial and 2 Lister diesel trailers, and the Orderly Room was apparently a sixth vehicle, a Chev. The 155 version of the disaster was recorded a little differently, because of damage to the vehicles:

- 1st.. A cyclone warning was received.
- 2nd.. Cyclone struck at 1800 hours. All tents were in ribbons. Sheets of water covered the camp site and canteen and store were blown down. Orderly Room tender was turned over. At the strip the receiver truck, one diesel trailer and an aerial trailer were turned over and the transmitter truck was blown off its blocks.
- 3rd.. Campsite was a complete wreck. Personnel shifted to lighthouse quarters and barracked with 31 RS.
- 4th.. RAAF Liberator flew over.
- 5th.. Weapon carrier brought badly needed supplies from Learmonth.
- 6th.. Beaufort bomber encircled campsite and enquired whether medical assistance was required.

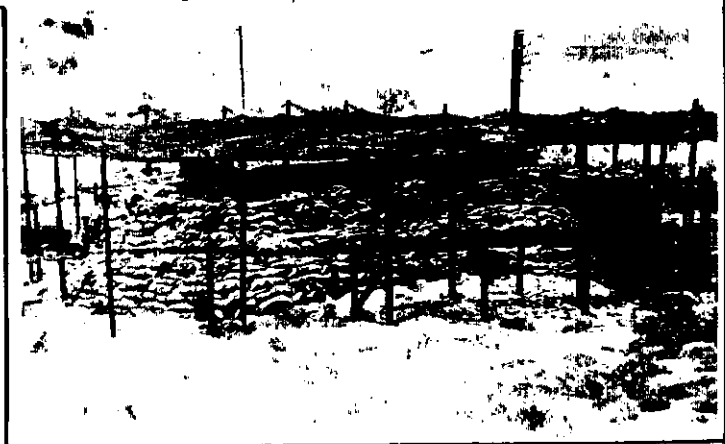


Above and Centre;

310 Radar, an AW (Air Warning) Transportable set, shown before and after camouflaging.

Below;

One of the two power houses.





Above.

Yardie Creek proved a popular place for the men from the Radar stations.

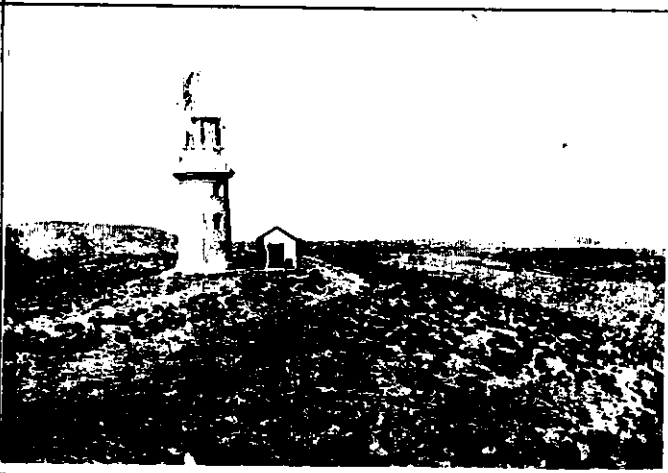
Centre.

Water trough for the sheep of Yardie Station. The harsh, rocky nature of the terrain is clearly visible.



Right.

This photo shows the isolated, desolate and deserted appearance of the cape area when the Radar men arrived to establish their station.



155 RADAR STATION, AFTER THE CYCLONE.



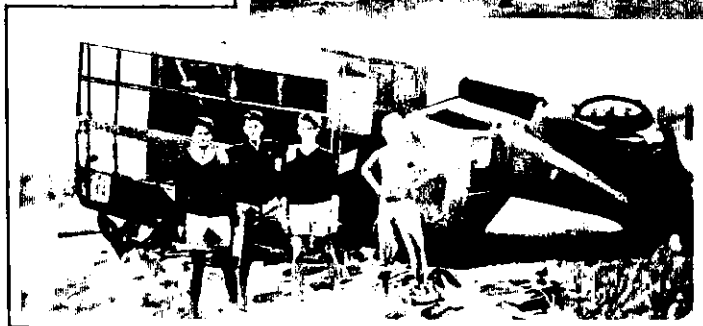
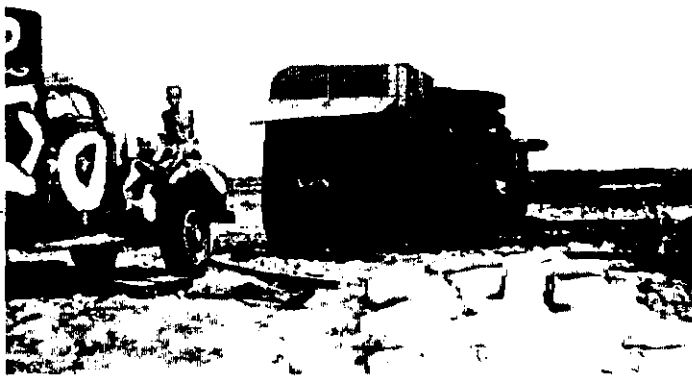
From Top:

The wrecked 155 station - generator trailer, receiver van and aerial overturned and wrecked.

The receiver van - the nerve centre of the station.

The station Mess building, with water still lapping at it.

The 155 Orderly Room Chev. - now anything but orderly!



AFTER THE CYCLONE.



Top photos;

These were taken immediately after the cyclone, and show.....

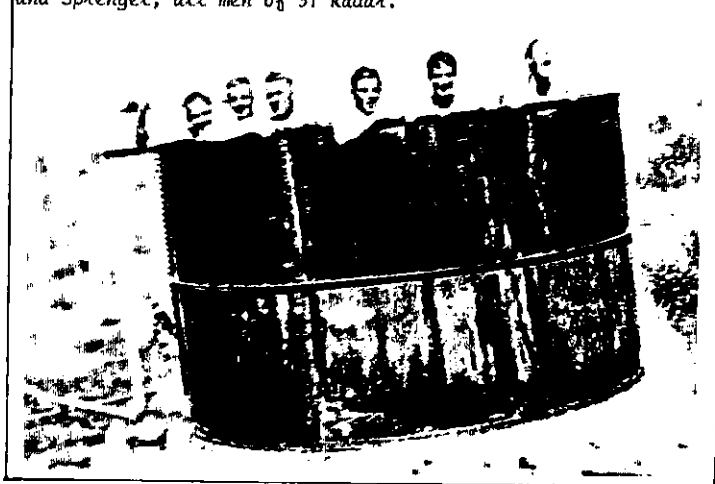
1. The west wing of the lighthouse quarters.
2. The wreckage of the toolshed, workshop and garage.



The rails were used when the lighthouse men hauled their supplies up to their quarters by horse and trolley.

Below.

Cooling off a little in the salt water tank at the rear of the lighthouse quarters. LAC's Hill, Bawden, Davidson, Erwin, McBean and Sprengel, all men of 31 Radar.



THE EXMOUTH RADAR REGION.

Right;

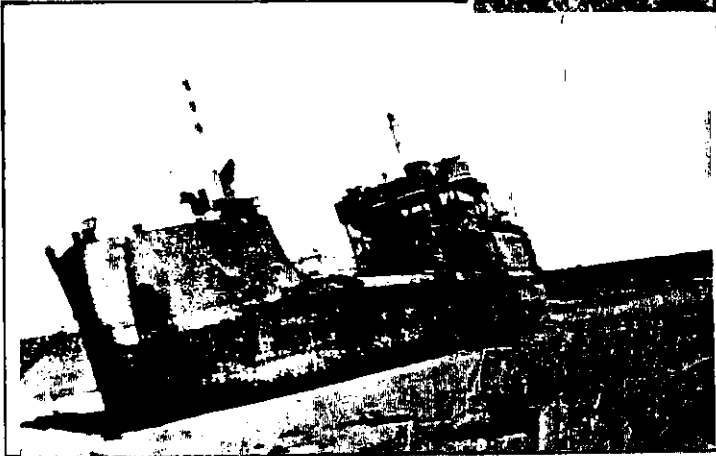
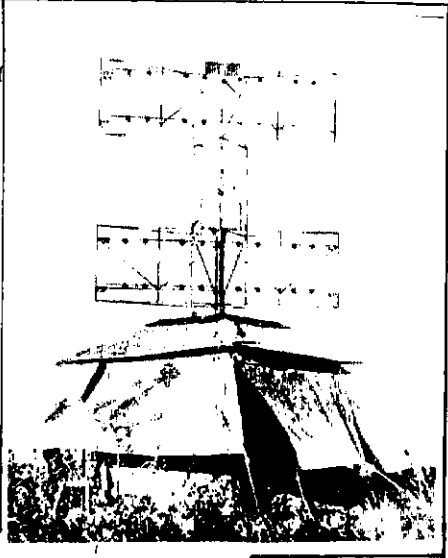
An LW/GCI - 161 Radar was equipped with similar gear.

Centre;

The small American tanker was stranded on the beach by the tidal wave which followed the cyclone. Refloated, it was brought back into service, but when it called at the Radar station, it hit a reef and sank.

Below;

A recent photograph taken at Vlaming Head. The aerial has been recovered from below the cliff and returned to the frame of the 310/31 Radar tower, which seems to have become a landmark, almost as well known as the lighthouse.





From Top.

In front of the lighthouse quarters: Front row; Sgt. Cooper; Commanding Officer, F/O Malempre; and Sgt. Holmes.

At Onslow Hospital; Two sisters with F/O Malempre of 31 and 155 Radars; F/Lt. Hanlon and F/O Andrews, the M.O and Sigs Officer from Learmonth.

F/O Malempre and Cpl. Cochrane from 155 RS try a bit of emu hunting while on the track to Yardie Creek. The Dodge weapon carrier was the 'maid of all work' at 155 Radar.



Below.

LAC's Roberts, Ivill, Young, Woodward and Barron.



Right:

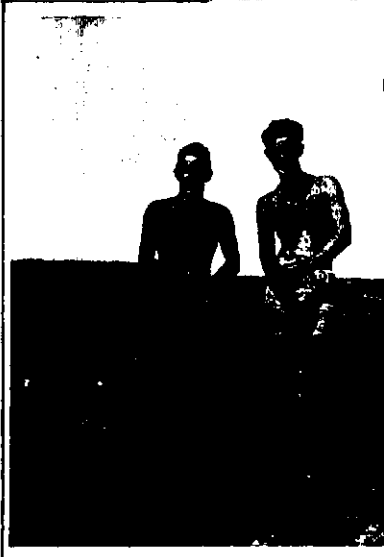
A tent in the 155 Radar camp, showing Vlaming Head in the background.



Centre Left.

Gordon Mills and Kerry Horton.

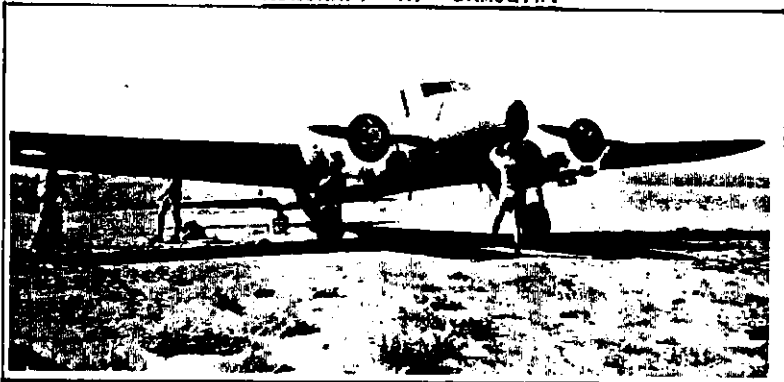
Centre Right:
Cpl. F.A. Jennings and Cpl. S. Holley in front of a screened 155 tent.



Right:

Gordon Mills and Paul O'Gorman relax in the 155 camp. Today the area is a car park.





From Top.

An Anson pre-
pares to take off
from the Radar
strip.

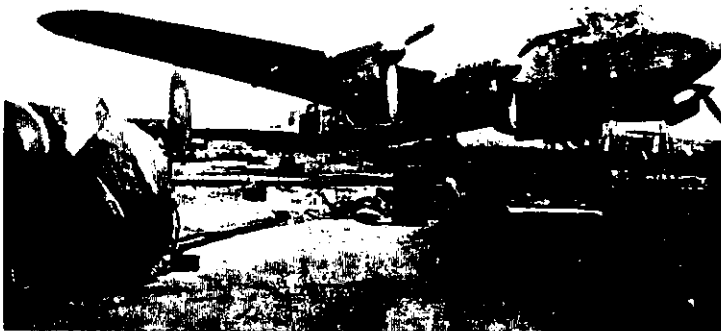
Below.

Three photos of
a Lancastrian
at Learmonth
preparing for
an engine change.



Another photo
appears on p.23.

The principal
work of 31 RS
after the war
ended was to
watch for these
aircraft as
they neared
North West Cape.



F/Lt. Lou Malempre was Commanding Officer of 31 Radar when F/Lt Ken Drummond the C.O. of 155 Radar died at 4 M.R.S. Broome. Lou was then made Temporary C.O. of 155 Radar. That was in October 1944. He was still Temporary C.O. of 155 Radar 12 months later when the unit disbanded. By reason of his joint position, his reminiscences are of considerable import:

Then came 2nd. February, 1945.

The war was moving now rapidly north and we seemed to be left behind in Western Area. The day was very hot and sultry, and very still. Away to the north there developed a strange pale green sky. This went on all day and we took little or no notice. There was not a breath of air. In the late afternoon a slight breeze blew up - nothing much. Near dusk it was really blowing but we had no inkling it was a cyclone. We received no warning of it. Rain started falling and I conceived the idea of securing the AW aerial somehow with ropes believing that I would be held responsible if anything happened to it. On ascending the track to the Radar from the lighthouse quarters, it really started to blow. I had a groundsheet on but not much more. There was no hope of doing anything at the Radar site and with some difficulty we descended to the Mess as we could not go back against the wind to the lighthouse quarters. By the time we got to the Mess it was raging. Tents were blown over, the Orderly Room truck was overturned, and the Mess was disintegrating. The Mess had a secure cold room and a concrete stove recess. We doused the fire in the stove, and with some other airmen, I holed up in the concrete recess on top of the stove while sheets of corrugated iron floated past at a great rate. Had one met one, it would have cut one to pieces. Other airmen holed up in the cool room which had a concrete slab floor and solid walls. We spent hours crouched in such shelter and I have never heard wind howling as it did. Rain pelted along horizontally. We could also hear the sea roaring and I was concerned it would jump the sandhills or dunes and drown us, as we were close to them. Air/sea rescue personnel in the Bay of Rest in Exmouth Gulf were so drowned we later learned. Fortunately, Ningaloo Reef broke the force of the waves further out, a mile or so, but the sea was still very angry by the time it reached the sandhills, but it did not jump them. Thank God for Ningaloo Reef!

Then came an eerie still, apart from the sound of the sea. The wind completely abated. We stirred but not for long. The eye of the cyclone was right over us as it wound its convoluted way south. After this lull which did not last very long, the wind started howling again as the eye of the cyclone moved away from us. So we all huddled together again and all the debris came back tracking the other way, stirred up by the wind. Some time after dawn the cyclone roared away and we took stock of things.

Everything was flattened, steel 'H' beams supporting power lines were bent horizontal to the ground; tents were flattened and buried in sand; any glass which remained on a very heavy 155 Radar truck was sandblasted to frosted glass; paint was stripped from vehicles back to shiny steel panels which, after a day, quickly started to go brown with rust as there was so much salt spray mixed with the rain.

The sea took days to calm down. The AW Radar aerial with its structural angle steel supports, which were quite strong, was torn off at the base and plunged a few hundred feet down the cliff on the sea side of Vlaming Head. From memory, the equipment room was sandbagged and apart from flooding, it survived. The lighthouse, apparently designed to withstand such conditions, stood up well with only its double doors at ground level blown off.

At 155 Radar site, a diesel trailer was overturned; the GCI aerial system was on its back, and various wooden supports broken. The Receiver truck was on its side, and the Transmitter truck off its jacks. Rain had penetrated both. The lighthouse residence, really like two semi-detached houses, cement rendered with spacious verandahs, had one wing unroofed and water penetration.

Gordon Mills was a Corporal Radar Operator who had been with 155 from its Ash Island Newcastle days, and who stayed with the station until after the cyclone when a large number of men were posted away, and the station began to wind down preparatory to disbanding. His memories of the cyclone are equally graphic.

The big cyclone came about February 1945 and completely wrecked the 31RS equipment. At 155 RS, the Rx truck, the aerial trailer, one diesel trailer and the 3 ton Chev all rolled over. Our camp was demolished, also the Mess - but the small freezing room and the kitchen chimney remained intact. By the time of the cyclone, our numbers were down to about 25, and shortly after the cyclone about 10 more of us were posted away, mostly operators. I heard later that the remainder stayed there for another twelve months.

31 Radar Station may have had advance warning of the cyclone and proceeded to tie everything down, but 155 certainly was not advised and no precautions whatever were taken.

We awoke in the morning to a strong wind blowing sand about, and as the day wore on the wind became stronger. At 4 o'clock p.m. I crawled up the sand dune to look at the ocean and the waves were pretty high then. During tea at 6 o'clock the full force of the cyclone struck. The Mess started falling apart, the roof blew off, a tank began bashing its way through a side wall. Some fellows outside were blown away; some climbed up in the chimney and some in the freezing room. We stayed like this until about midnight when the storm calmed down and the rain stopped.

The place was a complete shambles. We walked back to the lighthouse keepers' homestead and by 2 a.m. all men were accounted for. The tidal wave went down the gulf and then 40 miles inland at the south end where drums of petrol were washed. Three RAAF men from Potshot were drowned and a fourth man swam for 12 hours before he found land. There was plenty of sand in the lighthouse keepers' quarters and there were a few sheets of iron off the roof, but generally the building was O.K. But all of our buildings were demolished.

The morning after the cyclone a Liberator flew over, waggled its wings then returned to Potshot to report 'no one at the cape.' The officer who received the report said "Forty men dead."

The American oil tanker at Potshot was stranded on the beach by the tidal wave. The Americans bulldozed a hole alongside to let the water in, then used explosives on the other side to blow the ship back into the water. It returned to Fremantle to fill up with oil, and on passing the cape when on its way back, called in to say 'Hello.' It promptly ran on to a reef and sank!

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It is not difficult for any ex-serviceman to imagine the disbelief of the Exmouth Radar men when the cyclone passed at last, and they were able to survey the totally changed appearance and conditions of their previously well ordered camp at Vlaming Head. The two stations were completely wrecked - the 31 AW tower and aerial reduced to a skeleton frame - the 155 RS Receiver truck, one diesel generator trailer and the aerial overturned - so too the Chev Orderly Room tender (now not very orderly) - its records ruined.

The Mess was wrecked, and nothing whatsoever remained of the 155 tentlines and their personal contents; there was no power; no communications; sand and debris was everywhere - and the biggest problems of all - hardly any rations for the 50 odd men to exist on, and no sleeping quarters for the 155 RS men.

Previously somewhat divided as two separate units, the problems and difficulties now united the men under their Commanding Officer and the sergeants, and some sort of an immediate priority plan evolved, first to survive - then to begin to restore their units.

First the easy problem, where to sleep, and the twenty two men of 155 RS moved into the remaining wing of the lighthouse quarters and bunked in with the 31 RS men - not too difficult with the total numbers now well down.

Next problem - rations - and the only way to attend to that problem was to make the Dodge weapon carrier serviceable again, at the same time clearing the worst of the blockages on the road to Learmonth.

Gordon Mills: We completely dismantled our weapon carrier vehicle to clean and clear it of sand; we cleared all the road etc and set out for Potshot where we arrived with about 8 men scratched and cut to have treatment, and to pick up supplies. During this time we each had one dessertspoon of baked beans at 10 in the morning and again at 4 in the afternoon. By the time supplies arrived we were pretty hungry. And when our vehicle arrived at Potshot, the greeting was "We thought you blokes were dead !"

At Potshot, the C.O., F/Lt Lou Malempre met the Commanding Officer of Air Defence Headquarters at Broome, S/L. Hebden, and accompanied him back to Broome where no doubt a plan of action was worked out and endorsed by Western Area at Perth. When the C.O. returned, he noted:

In view of the damage, it was expected the place would be evacuated, but No ! The Americans apparently wanted the Radar coverage, and a shuttle force of Liberators flew in with the latest, portable, mobile Light Weight Air Warning (LW/AW) Mark 1A equipment in lightweight carrying cases. The boys were disappointed ! So we set to and installed nearby the damaged installation on Vlaming Head this new equipment. Some radio mechanics were sent to help instal Type AT14A 500 Watt transmitters to replace the blown out telephone line to the signals set up at Potshot. We then used Wireless Telegraphy, RADCO Coded, to Perth.

*Area Headquarters sent up building staff to restore the damage on the lighthouse residence, assisted by our own personnel. I was told that Met. Staff at Potshot assessed the wind velocity during the cyclone at over 100 miles*per hour, and the bent channel steel power poles seemed to support this.*

By some means, we dragged the 155 RS diesel generator trailer upright. The 31 RS powerhouse near the foot of Vlaming Head was filled with sand and

water, and I remember helping the diesel mechanic, LAC Flaherty, pull the heads off and replace them in the cleanup. 155 was not set up again to operate at the site it had occupied. The war had moved on and there were different plans.

Meanwhile, many hands were making lighter work of the big task of cleaning up and restoring...on the 14th, the Orderly Room tender was righted, and an Area Finance officer was assisting with the unit records: a Medical Officer was on the unit to check the health of the men, and a maintenance party took over the installation of the LW/AW which unbelievably was ready to operate on the 20th. of the month. Transport men were on the unit to bring the motor transport back in good order; the Area Radar Officer and the Area Filter Officer attended and all the work was looked over by the Commanding Officer of ADHQ at Broome.

While all this activity was proceeding, eight men from 155 RS were posted away, all Radar men. But before he left with the group, Gordon Mills noticed: After the cyclone the Indian Ocean was red for many days, and the beach near the camp was littered with debris, and sea life which had been disturbed.

Prior to the cyclone one night the turtles came up on the beach, dug holes and laid their eggs, then returned to the water. We never ever found any eggs, for they put them well down, and the beach looked as if it had been cultivated.

Apparently from the tourist information they don't come up on the beach now - too many people.

The whales going past were always worth seeing - it's hard to believe the cape is now a tourist attraction.

By the time of the cyclone, our numbers were down to about 25, and shortly after the cyclone about 10 more of us were posted away, mostly operators. I heard later that the remainder stayed there for another twelve months. At the cape, the climate was the same every day until the cyclone hit - cloudless sky, temperature about 40, and it never rained. For drinking we had bore water only - very thick. The doctor granted a ration of a bottle of beer per day per man, but it never arrived.

However, there must have been several who were getting more than their fair share of the amber liquid, for Lou Malempre recalled: And talking of drink.....Beer !..... We were never short of beer after an amphibious Catalina was based at Potshot for air-sea rescue. It used to fly to Onslow where the publican had great quantities of cased beer based on an Army issue about 1942 when the Third Australian Corps with the Armoured Division were rushed to Western and North Western Australia as it was thought the Japanese would or might come down from the East Indies. Nobody withdrew these huge stocks of cased beer, 48 bottles to a case at 1/- per bottle. It was Emu and Swan beer and we got our share through Potshot. Thus we were not treated like other Radars out in the scrub.

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* Gordon Mills is quite certain that they were advised the wind velocity was 125 miles per hour.

And despite the entries in both unit Diaries that early warning of the cyclone was received, both Gordon Mills and Lou Malempre remain quite certain that no advance warning was received.

March 1945 began with the threat of yet another cyclone. With the assistance of the 155 RS men, the new portable Radar unit was dismantled, and Air Defence Headquarters at Broome was advised by wireless. The operations tower - the Doover - was pulled down in 3¼ hours - a good effort - but although the winds peaked at an estimated 60 miles per hour, no damage was sustained. The tower was re-assembled four days later - the power racks were replaced and connected, and the station was back on air.

The co-operation and assistance between the men of the two stations evident in this first action of the month at the cape continued on until 155 RS was disbanded in October. Indeed the various activities of both stations can be read in either Diary, indicating that the two can be called almost an integrated unit from now on. For that reason, the story of both units now becomes combined.

During the month, two aerodrome officers came to inspect the surface of the small airstrip which had suffered damage and had become unserviceable. A few days later, an A.W.C overseer arranged for grading work to be carried out. As Learmonth was some 30 odd miles from Vlaming Head, the radar airstrip was really essential for quick transport between the Radar camp and the OBU.

At the same time, the unit records of 155 RS were being re-organised, and the big Receiver was made serviceable again after five days work.

Towards the end of the month, another shooting party was organised for Mangrove Creek, and a quantity of fish and kangaroos were prepared for the kitchen as the result.

Yet another cyclone warning was received on the 24th. Once again the racks were removed and stored, and the aerial was lashed down - the station being brought back on air the following day.

April began with another day of relaxation for the boys - a fishing party at Mangrove Creek was arranged for members of 31 and 155. Fifty pounds of fish were netted - a welcome addition to the provisions. A few days later came the strange story of a 45 lb. barracuda dragged from the surf by a swimming party. A 14 foot shark was in pursuit - fortunately of the barracuda, not the swimming party - and the next day 30 dozen garfish and two kangaroos were added to the kitchen supplies.

As part of the continuing restoration work, a carpenter arrived, also a radar mechanic to begin installing a new Air to Surface Vessel (ASV) beacon which began working the next day; and a party from camp on a mail run to Learmonth was able to attend a picture show at the U.S.N., evidently local shows were 'off' for the time being.

On the 15th., a barbecue picnic was held at Mangrove Creek - a big haul of fish was grilled, and a sheep was roasted over an open spit. The novel outing ended with a sing song around the fire.

Towards the end of the month, and with installation of the ASV now complete, a day's hike was organised for relaxation and recreation was important in improving morale in the post cyclone period.

S/L Failes, Temporary C.O., ADHQ Broome, visited the unit in May, no doubt to see for himself the damage and recovery at the station, and Mr. Bell, a road contractor who was working on Learmonth airport, conferred with the C.O. concerning repairs to the unit airstrip. A Sergeant Wallace also arrived to carry out a major overhaul on the diesel generators.

On the 9th. May, Victory in Europe, VE Day, was celebrated with a half day stand-down for non-essential personnel - and a few days later a fishing expedition brought in a fine haul of mullet, whiting and garfish - a rich Ningaloo Harvest no doubt.

On the 20th., was an unusual sports event for an Australian Radar station - 'Taffy' Lewis arranged a soccer match on a ground well grassed and in perfect condition after all the rain.

And by the end of the month the generator units were pronounced in good condition after the overhaul.

A total of 23 men only remained for both stations.

June began with the C.O. visiting a Civil Aviation Controller* at Learmonth to arrange Radar coverage for incoming and outgoing Lancastrian aircraft, and the arrangements made proved satisfactory to the aircraft captains. On the 19th., a carpenter/rigger arrived from Perth to effect repairs to the 155 RS Radar vehicles damaged in the cyclone - three of the Doover vehicles had been blown over and damaged; and this work continued until the end of the month.

Repairs to the 155 vehicles were completed in July, and the station seemed ready to move back to its old site.

At the unit airstrip, the vehicles were lined up to cause minimum distortion to the lobes, and then raised on jacks and levelled. The repaired aerial frame was assembled and cables connected.

Calibration of both stations was carried out with the co-operation and assistance of an Anson aircraft.

And an old Commanding Officer visited the unit - S/L C.R.Meckelburg,(who as P.O. Meckelburg was C.O. of 31 RS,)inspected the stations.

With the 155 RS vehicles now back at their old site, cleaning up the area was carried out.

Lou Malempre had worked hard on the equipment in the technical trucks, and had noted : *I decided to try to restore the Transmitter and Receiver, and the power generators of 155 Radar. I was under no orders to do this, and I guessed in time the unit would be withdrawn to Perth. I was ably assisted by Sergeant Ernie Holmes. The International trucks were made serviceable without much trouble. We got the generators going, and we restored the Radar equipment to serviceable condition. During this time, with much rejoicing, most of 155 RS personnel were posted south to be redeployed. It was like letting people out of jail ! Eventually 155 Radar was withdrawn using its own transport via Potshot. It ended up in some RAAF warehouse in Perth.*

August saw the tracking and plotting of Lancastrians commence, by which means corrected courses were passed to the aircraft through the Signals Office at Learmonth, and they were 'Vectored' in to a safe landing after their long cross-ocean flights. Ranges of 140 miles were logged on these aircraft on several occasions during the month.

Two W.T.Operators who had completed over twelve months at the station were allowed to proceed on leave - a rare privilege indeed for men at Exmouth ! August 15th. was VP day or VJ day - no matter which ! Stand down for 24 hours for all except that at 0236 hours a Lancastian contact was made at 124 miles, making at least 9 Lanc. contacts for the month.

September proved another busy month for the overseas Lancastrians, and they were regularly picked up at ranges of 130 to 150 miles - a good confidence boost indeed for the aircraft captains after the long tiring haul

over the Indian Ocean; and probably because of the changed nature of the station duties, i.e, airport approach instead of air warning, control of 31 RS now passed to ADHQ at Perth.

October progressed quietly at the station - more Lancastrians were plotted as this overseas service built up - but the beginning of the month was noteworthy because of the preparations being made at 155 RS for departure from the cape. Trucks arrived to transport the men and equipment. Quickly the preparations were completed, the trucks were loaded, and on 10th. October, 155 Radar left the cape in convoy, and headed for Perth. 25 men were now left at 31 RS, and certainly impatience and frustration was quite noticeable in all of them, for men were now heading homewards from all over the Pacific areas. Beach sports were held, and a fishing party organised - fresh fish made a welcome addition to the regular rations, and a cricket match against 76 OBU was arranged, with 31 RS winning in the best tradition of Radar teams, by 40 runs.

On the last day of October, Commanding Officer Lou Malempre handed over command to Flight Lieutenant H.E.Tucker who came from 327 RS at Broome to take command. There his lighthearted comments in the station Diary were to be appreciated many years afterwards when the history of the station was recorded. So too with his Diary comments at 31 RS.

No notes have survived for November - but on December 1st., the new C.O. departed on special leave for Mackay, Queensland, leaving F/Sgt. Paindelli in charge.

A tender was despatched on 3rd. for the unusual task of collecting drums of kerosene from Onslow. This was needed so that the light could continue showing its reassuring beam for coastal traffic. The men of 31 RS obviously were quite proud that they were probably the only RAAF lightkeepers in the world. Then on 14th., an expedition set off for Point Cloates where the men spent a night at an abandoned Norwegian whaling station.

Another cricket match against the OBU was played on the 16th., and this time the Radar team was defeated - but postings had played havoc with the team, and the few cricketers remaining just failed to get going.

The AOC Western arrived on the unit on the 24th., Christmas Eve, Air Commodore D.Wilson was now the man in charge of Western Area, and apparently he had received word that the Christmas poultry was "off," for he brought with him fresh supplies and stayed over Christmas - he would have realised how unsettled the men had become. As the Diary notes: *Three months ago we thought that we had a sporting chance of spending this day at our homes, or at least in more congenial surroundings than our present ones.*

On Christmas Day the AOC led an expedition to Mangrove Creek to obtain crabs and oysters. Surely few LAC's could say that they had gone crabbing with the AOC after Christmas Dinner with him in the Mess !

Finally, on the last day of December, a cyclone struck at the station yet again..... (Chapter 8)

* *The Civil Aviation Controller was Mr. F.H.Anderson who subsequently became Regional Director of the Northern Territory in the Department of Civil Aviation based in Darwin.*

Lou Malempre.

The Exmouth region - and the Learmonth airbase - became the first touchdown for the planes and crews maintaining the tenuous and dangerous overseas air link across the Indian Ocean from Australia to Ceylon or India, and 31 RS certainly played an important role in this service.

Giant Qantas flying boats, the Short C Class, had established a regular link to Singapore in 1938 which was terminated when the giant base fell to the Japanese. Those flying boats were acquired by the Australian authorities for military duties as transports and high priority work, so forming the nucleus of the RAAF flying boat squadron.

Using Catalina flying boats, and then converted Liberators, a new air route was established, apparently in 1943, with Exmouth as its first landfall.

Gordon Mills recalled one incident: *On one occasion, the Liberator bringing the mail from Ceylon broke down: The RAF volunteered to take the mail by Catalina.*

Five hundred miles out from the N.W. Cape they ran into a cyclone. Everything in the plane was dumped - mail, fuel, all except IFF and WT gear. The IFF was working and was picked up by 31 Radar. The crew would let the plane glide down to sea level, then start the motors, climb a few feet, then glide again, expecting to run out of fuel at anytime.

They came in sight at Potshot, but were not prepared to try to climb over the range, so turned up the coast and when they saw our camp they landed on the water. A crash boat came up to get them and they found there was not enough fuel left to start the motors again.

Lou Malempre, the Commanding Officer, considered that he and his station filled a special role at the cape, as he described in his recollections:

The link with the U.K. was kept open from Australia by Catalina aircraft flying from Crawley, on the Swan River, to Ceylon. Sometimes they were in the air for over thirty hours. 32 RS at Rottneest Island sometimes tracked them out for over 500 miles due to abnormal propagation, an experienced phenomena in that area.

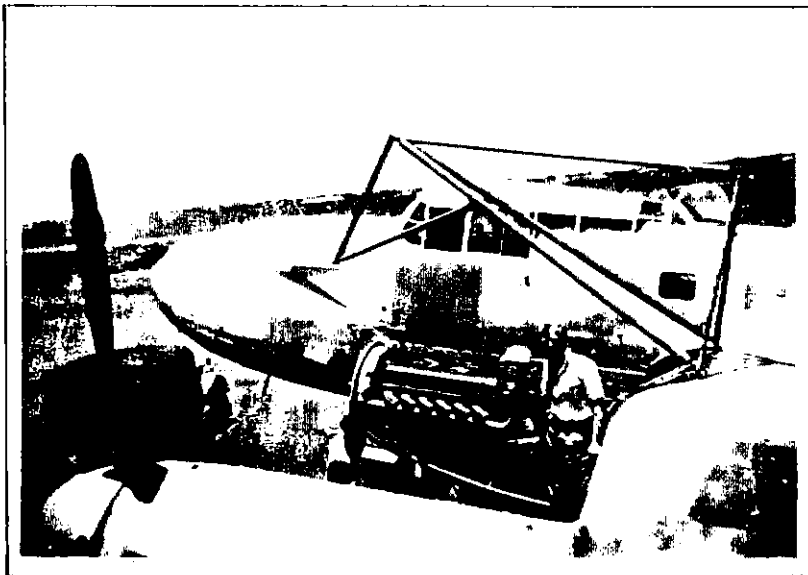
When the war in Europe ended, Lancaster bombers became available in quantity.

It was then decided to use some of them to fly from Ceylon to Potshot and not use Catalinas from Perth. If you look at a map of the globe, you will see what a really direct route this created - Ceylon - Potshot - Sydney. I don't think they developed a more direct route since. QANTAS pilots were used, and on the converted Lancasters, now called Lancastrians, there were ex-RAAF navigators and radio staff. I met at Potshot a highly decorated ex-RAAF navigator whom I well knew in Brisbane during schooldays, and lived next to his aunt there, and he was then on that run. The Japanese still held Singapore until August 1945, and I was requested to re-activate the lighthouse to act as a rotating beacon for the end of their long flight over the Indian Ocean of over 3000 miles. I was told to liaise with an Air Traffic Control Officer of the Department of Civil Aviation at Potshot, and to provide Radar control into Potshot. He lived alongside the extensive RAAF Signals Station at Potshot. We set him up with a gridded plotting board, coloured pencils, and restored the telephone line from Potshot to 31 Radar. Our operators phoned the plots to him and he established radio communication with the aircraft to bring them in. Sometimes, using celestial navigation when detected, they could be 40 miles off course. So I think I can claim something in being probably the first in Australian Aviation to provide regular radar control of civil aircraft. There is something else I believe is unique. I was the only lighthouse keeper in the RAAF! The equipment was beautifully made in England. The lenses were superb, and rotated in a bath of mercury by a weight which was wound up through the

core of the tower, which was reasonably high, and over a period of time slowly descended through gearing to turn the light. A guard on duty had the job of seeing that the light rotated and to keep the weight wound up. Kerosene with compressed air lit a gas type mantle to give an intense white light at the centre of the lens arrangement. Pilots told me how welcome it was to sight the light in excess of 60 miles after the tiring crossing of the Indian Ocean. The crew crowded into the cockpit to sight it first. Usually they seemed to come in at night, take on a change-over crew for Sydney, and the incoming crew 'rested' at Potshot until they, in turn, took over. I got to know quite a few QANTAS Captains this way. One was the son of a Queensland cattle man who used to honour cheques for fuel etc., for the battling Fysh and McGuinness who started QANTAS at Longreach in the early 1920's. He was a funlover who became Senior Operations Manager and died in the job. He flew the Queen around when she first visited Australia in 1954. They were all mighty drinkers off duty, but very good senior pilots.

Time went on and towards the end of 1945 we were still there thanks to QANTAS. Personnel at Potshot and the Radar got restless... there seemed no end to it, and I got restless myself. Eventually I was posted back east via Perth, and one Bill Tucker from 327 RS Broome took over from me some time in November 1945. Later I saw him in Brisbane and asked about the Radar; he told me it had burned down.

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At Learmonth... a fitter from Rolls Royce replacing an engine on a Lancastrian, converted from a Lancaster bomber. The Lancastrians were used regularly on the overseas air link after the war.

The final chapter in 'The Exmouth Radar Story' tells of impatience and frustration while waiting for discharge. Most of the longer serving personnel had been posted away from the unit - back to Perth or their capital cities where they could reasonably expect their discharge from the RAAF. Flight Lieutenant H.E.(Bill)Tucker was left in charge, with about sixteen men attached from Air Defence Headquarters forming his technical staff.

161 RS had been destroyed by fire - 31 RS, the original Exmouth station, had been destroyed by cyclone - and 155 RS had been almost destroyed by the same cyclone.

Strangely, in its final days, the second 31 RS was to be hit by another severe cyclone, and the final blow was to be dealt by fire, after which understandably the station succumbed to the inevitable and was closed. In describing the events leading up to the disbanding of the station, no improvement could possibly be made on the comments of the Commanding Officer Bill Tucker in the Station Diary beginning 31st. December, 1945:-

31.12.45 *At 0300 hours this morning a violent gale struck the unit. High winds and heavy rain were still present at 0700 hours. Because of the suddenness of the onslaught and due to the fact that the air warning equipment was off the air at the time, the tent housing the equipment was torn to ribbons by the force of the wind, which drove water into both the transmitter and receiver, drenching them thoroughly. The water also caused short circuits on the power lines so that when approached, the whole of the Radar equipment was found to be electrically charged. The power lines were severed with one blow of the axe (hardly orthodox but an action suiting the occasion) which solved that problem. Incidentally it was amusing to find that when rounding up the fowls to put them in safety, they became electrically charged whenever they came in contact with the wirenetting, and sparks from their feathers ran to the fingers of their pursuers. On top of the hill, (Vlaming Head) the wind was increasing and as the Radar could not be dismantled, it was with great difficulty lashed and braced against the force of the wind.*

Remembering the last disastrous cyclone that struck the unit in February last, it was decided that the safest place was the lighthouse dwelling place. Accordingly at lunch time all personnel stored foodstuffs in a safe place, and carried to the lighthouse dwelling enough food for three meals. Hurricane lamps were got ready as it was evident that the power would have to be cut off to obviate danger from overhead lines if they were carried away. In order that the lighthouse may shine throughout the night, a crew of three men have been stationed in the light with rations in case increasing winds make it impossible to ascend the face of Vlaming Head.

At 1400 hours, the wind had reached an estimated velocity of seventy to seventy five m.p.h., with gusts of greater velocity. Heavy rain driven by the wind stung face and body so that it was impossible to look ahead, and progress was only by groping except when strong gusts of wind blew us willy nilly, and we were able to clutch some supporting rope to save us from going over the edge of the cliff.

It was evident that we could do no more than had already been done for the safety of the Radar equipment. An attempt was made to

31.12.45. carry two Radar beacons into the safety of the lighthouse tower, but
(Cont.) the wind whipping over the exposed headland made this impossible, and they were stored in a stone building close by which although flooded out, and with roof flapping ominously, was much safer than their former position.

In order to enter the lighthouse it was necessary to crawl on hands and knees to the door, inside the lighthouse was damp and wet, and it was evident that our lightkeepers were in for a dismal night. They were pretty cheerful however, as they wiped the condensation from the lens and prisms.

2100 hours, and we are all now awaiting the worst. The wind appears to be changing its direction which is a good sign that the centre of the cyclone may bypass us. The force of the wind also appears to be diminishing. This is not the way we planned to spend our New Year's Eve; however, there's a strong chance that by next New Year's Eve we will have handed the lighthouse back to its rightful owners and be seeing 1947 in climes much more salubrious and congenial. And so to bed, hoping that all who read this are having a far happier time than we are. In our next thrilling episode you will hear how we fared during the last blow of 1945 and the first of 1946.

1.1.46. "Ring out the Old, Ring in the New" so sang Tennyson many years ago, but in this location it was a case of "Blow out the old, Blow in the New." It will be remembered that when the last A50 closed we were waiting for the roof of the dwelling to be blown off. Fortunately as the night wore on the wind showed signs of abating, and when morning came the rain had ceased, and the wind, although still blowing strongly, had lost most of its venom. There were no buildings damaged, but the Radar equipment was definitely the worse for wear. The aerial was strained and twisted, the grille reflector was twisted and strained. The legs too had given up the unequal struggle of bracing against the wind and had sagged in the centre. The light keepers had had a bad night. Any sleep was impossible because of the howling of the wind, to mention nothing of the pools of water that had collected on every floor. In addition the light had played up which meant excursions in the night in search of spare parts, and this, even with a rope tied round the middle and paid out by anxious colleagues was no sinecure. However, there was a light at all times.

2.1.46. The task of overhauling the Radar equipment began. All hands lowered the array. The racks were drained and placed in the sun to dry. We will be hampered by the lack of technical personnel. Many have learnt to do jobs they never thought they were capable of before. The work will take much longer than the week estimated.

12.1.46. Repairs have been completed, and the array has been erected once more.

13.1.46. Another cyclone is on its way, according to the Meteorological Section at Learmonth. The array was lowered and stored so that no damage could be done to it. The transmitter and receiver have been stored in appropriate waterproof transit cases. There does not appear to be any signs of a blow.

19.1.46. Well, the threatened blow did not arrive. After a period of

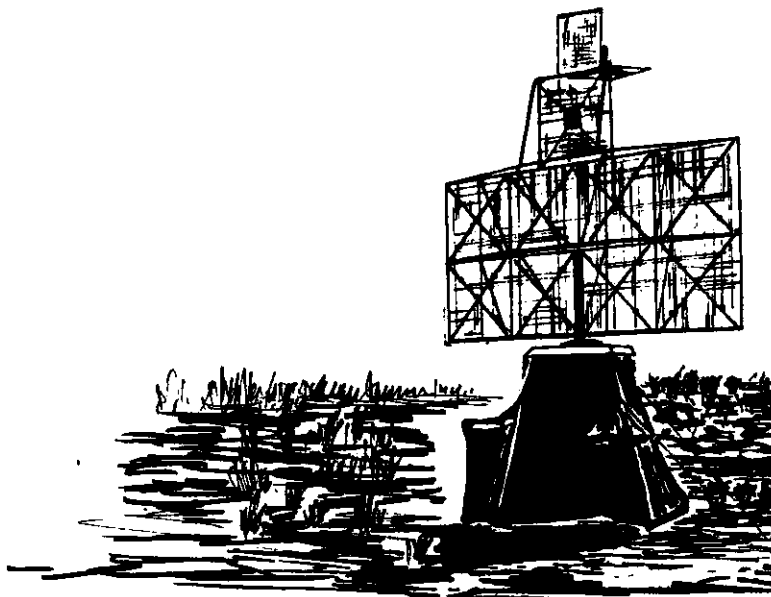
- 19.1.46. indecision, of expectation without realisation, it was decided to (Cont.) re-erect the array, and resume operations. So after being nineteen days out of commission, we are once more on the job.
- 24.1.46. An officer of the Department of Post War Reconstruction visited the unit today and addressed personnel on the work of his department. On the success of his lecture we will remain discreetly silent. Maybe letters from personnel who have been discharged are making the laddies a little cynical about their post-war life.
- 1.2.46. While in Perth, the Commanding Officer learned that this unit was to close in a short time, and discussions were made as to the easiest method of disbanding the unit.
- 17.2.46. Our luck ran true to form again today. After having been damaged by a cyclone, it was the last straw to have the Radar equipment damaged by a fire. The fire which occurred between the hours of 1000 and 1300 was unseen by any member of the unit. Investigation has shown that no blame was attachable to any member of the unit, and that the fire appears to have been caused by faulty insulation in some of the wiring of the equipment. The station is now fully unserviceable.
- 18.2.46. Much jubilation among the personnel this evening on receipt of a signal from Western Area Headquarters ordering the unit to cease to function and disband.
- 24.2.46. A Court of Enquiry convened by the Commanding Officer of Air Defence Headquarters, Perth, arrived to investigate the circumstances surrounding the fire which destroyed equipment on 17.2.46.
- 27.2.46. The Court found that all precautions to safeguard against fire had been taken, that no blame was attachable to any personnel, and that apparently the cause was due to faulty insulation in the electrical wiring.
- 28.2.46. The Radar equipment has been dismantled, and is being packed for shipment to Perth. The work of disbanding the unit is going on very satisfactorily.
- 1.3.46. The work of disbanding goes on. The target date depends on the return of the civilian lightkeepers.
- 10.3.46 The chances of being disbanded are very bright today, as we were very pleasantly surprised to be informed that two lightkeepers, (Mr. Carey and Mr. Carter) had arrived by aircraft and were requiring transport to Vlaming Head.
- 12.3.46. There's many a slip 'twixt the cup and the lip. When all seemed certain that we would vacate the unit on 16th. March, along came unexpected heavy rain, and has made the road impassable. This will delay us for two or three days. Our main worries, the loading of two heavy Diesels has been accomplished without casualties. The lighthouse has been handed back to its rightful owners, and so the only RAAF lightkeepers in the world have ceased to retain their unique, but very worrying title. The unit has a unique record in that without help from outside sources, it has maintained a lighthouse with unskilled personnel for about two years, and has

16.3.46. managed, despite cyclones and other upsets, to have a light showing
(Cont.) every night during those years.

18.3.46 The unit moved to Learmonth by tender to await posting. Much
happiness in the evening when a signal was received posting all
personnel to southern units.

25.3.46. The unit disbanded.

#



310 RADAR.

The Department of Defence, (Air Force Office) have now kindly supplied the names of Personnel attached to the station at the time of its formation.

P/O C.R.Meckelburg. Commanding Officer.

RADAR OPERATORS.

Sheaffe P.H.G.
Freeland M.E.
Edwards E.F.
Castle C.G.
Duke J.R.
Sheedy P.J.
Roberts A.S.
Rothberg M.

RADAR MECHANICS.

Ingall A.E.
Howarth E.W.
Akerman E.G.
Coyne P.J.

W.D.M.

Davey R.H.

CYPHER ASSISTANT.

Flaherty J.

CLERK GENERAL.

Doyle D.M.

CLERK STORES.

Brough G.C.

COOK.

Elliott J.W.

MESSMAN.

Rowland R.

MEDICAL ORDERLY.

Whyte B.

GUARDS.

Allom R.M.
Bezant W.E.
Harris K.
Whitely A.J.

AIR CREW GUARDS.

Flanagan A.F.
Gill L.
Hammond M.J.
Christensen V.W.
Steel K.J.

N.B. At the time of the formation of 310 Radar Station, the operators and mechanics were described as 'radio operators and mechanics.'
The 'Air Crew Guards' were described as 'AC2's.'

#

161 RADAR.

The Department of Defence, (Air Force Office) have now kindly supplied the names of Personnel attached to the station at the time of its formation.

F/O E.Bennett. Commanding Officer.
P/O T.J.Ling. Radar Officer. Sgt. K.S.Hammond. Clerk Stores.

RADAR OPERATORS.

Cahill K.T.
Mountain J.R.C.
Short J.H.
Takle W.G.
Turner R.S.
Beard D.H.
Davey J.B.
Forrest P.M.
Cornish W.G.
Clarke P.G.N.
Merry T.B.
Provan C.J.
Reynolds F.
Williams R.J.
Davidson R.W.
Jack R.C.
Burnett C.
Green L.A.
Bourne A.E.
Lloyd F.
McGregor J.A.
Smith W.H.
White R.D.
Carroll W.

RADAR MECHANICS.

O'Brien C.J.
Launder P.M.
Wilson C.E.
Shearman W.J.

W.T.OPS.

Molloy A.J.
Gunn F.K.

MEDICAL ORDERLY.

Mayne P.S.

FITTER DMT.

Brown S.E.

COOKS.

Dowling S.D.
Donchi R.J.

DMT.

Land C.H.

CLERK.

Worley A.S.

GENERAL HAND.

Parslow G.D.

MESSMAN.

Wilson J.T.
Fletcher R.J.
Leighton E.T.

GUARDS.

Ryan P.C.
Stewart A.J.
Tully R.W.
Spears D.
Kennedy D.G.
Battle S.K.
Sheehan L.F.

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THE EXMOUTH RADAR STORY.

The Commanding Officers of the Exmouth stations, showing their commissioned rank at the times of their appointment:

310/31 RS.	Pilot Officer C.R.Meckelburg.	January 1943.
	Pilot Officer R.M.O'Hanlon.	June 1943.
	Flying Officer L.T.Malempre.	August 1944.
	Flight Lieutenant H.E.Tucker.	October 1945.

161 RS. Flying Officer T.J.Ling.

155 RS. Flight Lieutenant K.N.Drummond.
Flying Officer L.T.Malempre. (Acting) October 1944.

#

Some of the Sergeants were:

J.Harvey.	Guard.	B. Butler.	M. Orderly.
M.S.Hill.	Radar Mechanic.	A.Baldwin.	-
F.B.Paindelli.	Radar Mechanic.	F.H.Gray.	Guard.
G.Griffiths.	-	L.Wade.	Radar Operator.
		J.Wallace.	-

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Other ranks were:

<u>Radar Operators.</u>		<u>Radar Mechanics.</u>	
McBain	G.D.	Talbot	J.R.
Britton	G.J.	Bawden	M.O.H.
Butt	R.F.	Horton	K.W.
Kenley	W.J.	Jolly	G.F.
Humphreys	R.N.F.	Slee	O.B.
Bates	O.	McBean	W.
Davies	R.S.	Sprengel	E.
Dwyer	R.V.	Power	A.
Hill	D.J.	Cornish	W.
Horne	R.J.		
Thornhill	W. ?		
Page	A.E.		<u>W.T.Ops.</u>
Beed	W.B.	Carveth	H.L.
Erwin	J.T.	Cordwell	T.J.
Garrett	A.R.	McCarthy	M.J.
Gorton	R.P.	Lewis	A.D.
Butcher	A.L.M.		
Podem	H.		<u>W.O.M.</u>
Watts	H.R.	Scouller	O.K.
Datson	N.A.		
Mills	G.W.		<u>Clerks.</u>
O'Gorman	P.K.	Bird	R.G.
Wilson	N.	Jennings	F.A.
Ehsmen	C.R.	Freeman	D.F.
Turley	T.T.	Jacoby	H.D.
Hogg	J.		
Smith	W.		

THE EXMOUTH RADAR STORY.

PERSONNEL. (Continued.)

<u>Medical Orderly.</u>		<u>Guards.</u>	
Cooper	L.C.	Barron	M.R.J.
Garcia	D.	Duncan	G.V.
		Bryce	C.M.
<u>Cooks.</u>		Hehir	J.
Blaney - Murphy	J.	Westerside	A.
McMinn	R.H.	Woodward	R.S.
Branley	J.E.	Roberts	W.O.
Hasse	R.C.	Young	R.M.
Stainsby	E.T.	Ivill	J.J.
Miller	D.M.	McKinley	C.R.
Veich	M.	Fimister	A.N.
Walmsley-McCaul	J.	Sloper	D.F.
		Wilson	L.D.
		Collett	H.W.
<u>Cook's Assistant.</u>		Mann	C.D.
Oldham	J.	Nutland	C.E.
Daniels	E.N.	Owens	J.J.
Watson	A.D.	Cobbin	V.E.
		Dawson	P.V.
		Kingdon	F.
<u>Transport.</u>		Davidson	C.C.
Cochrane	H.R.	Girling	A.C.
McCaskie	E.J.	Morris	W.D.
Bettes	-	Day	J.P.
John	L.S.	Berwick	I.B.
Ogden	W.H.	Rafter	D.O.
Keys	L.J.	Stonehouse	R.
Flaherty	P.B.	Holley	S.
Harvey	P.	Niven	M.
Hindge	L.F.	Kenny	P.H.
		Patrick	M.
		Truda	V.
		Johns	C.R.
		Barron	R.J.
<u>General Hands.</u>			
O'Neill	V.M.		
Donnelly	J.H.		
Rumbold	S.H.		
Small	R.S.		
<u>Unclassified.</u>			
Burgess	E.C.		
Crabbe	D.E.		
Springer	-		

The above list of personnel was compiled from names mentioned in the Diary, and must be considered as an incomplete record only.

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ADDITIONAL INFORMATION ON 155 RADAR SUPPLIED BY GORDON MILLS.

Radar Mechanics:

Sgt. Ern Holmes.
Kerry Horton.
George Jolly.

W.I.Operators (2).

Bert Carveth.

Radar Operators:

Sgt. Les Wade.
" Col McIntyre.
" Dobson.
Doug Wilson.
Paul O'Gorman.
Jack Leeman
Gordon Just.
Gordon Mills.
Tas Turley

Clerks (2).

Fred Harris.

Transport.

Leo Lamond.
Cochrane.
Holly.

Guards.

Medical Orderly (1).

Roy Stonehouse.

Cooks (2).

Doug Miller.
Darcy.

155 Radar formed at Richmond N.S.W. approximately February, 1944.
It was a Mobile Ground Control Interception station, mounted on International trucks, with an aerial trailer, and Lister diesel generators on two four wheel trailers. There was also a GMC vehicle with double dual wheels, and a Chevrolet 3 ton truck which served as a mobile Orderly Room.

THE EQUIPMENT.

COL Mark V Receiver, and English Transmitter.

The aerial rotated by Selsyn motors.

There were approximately 50 personnel, with 'Dave' Drummond as Commanding Officer.

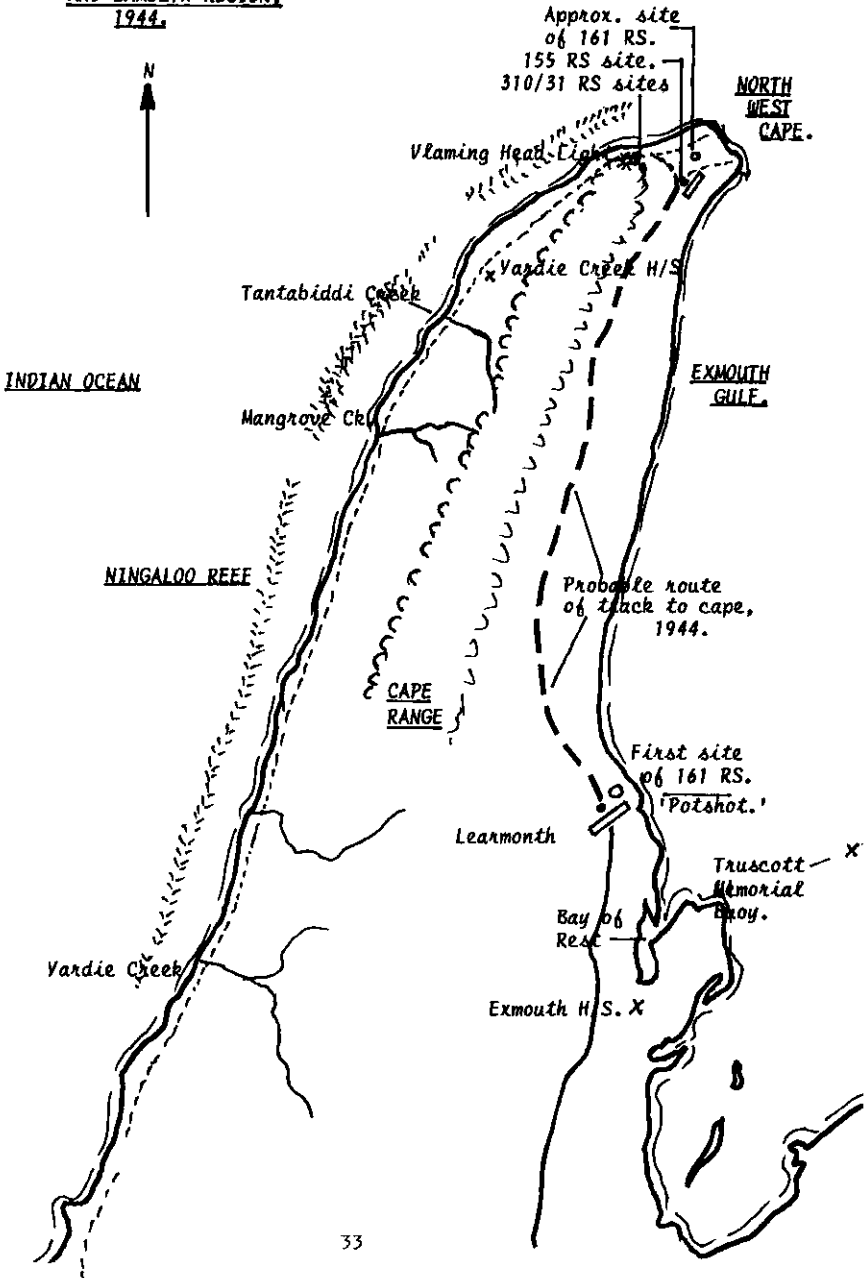
W.T. Equipment, 58.

.303 rifles, numerous Thompson sub machine guns, and two Bren guns.

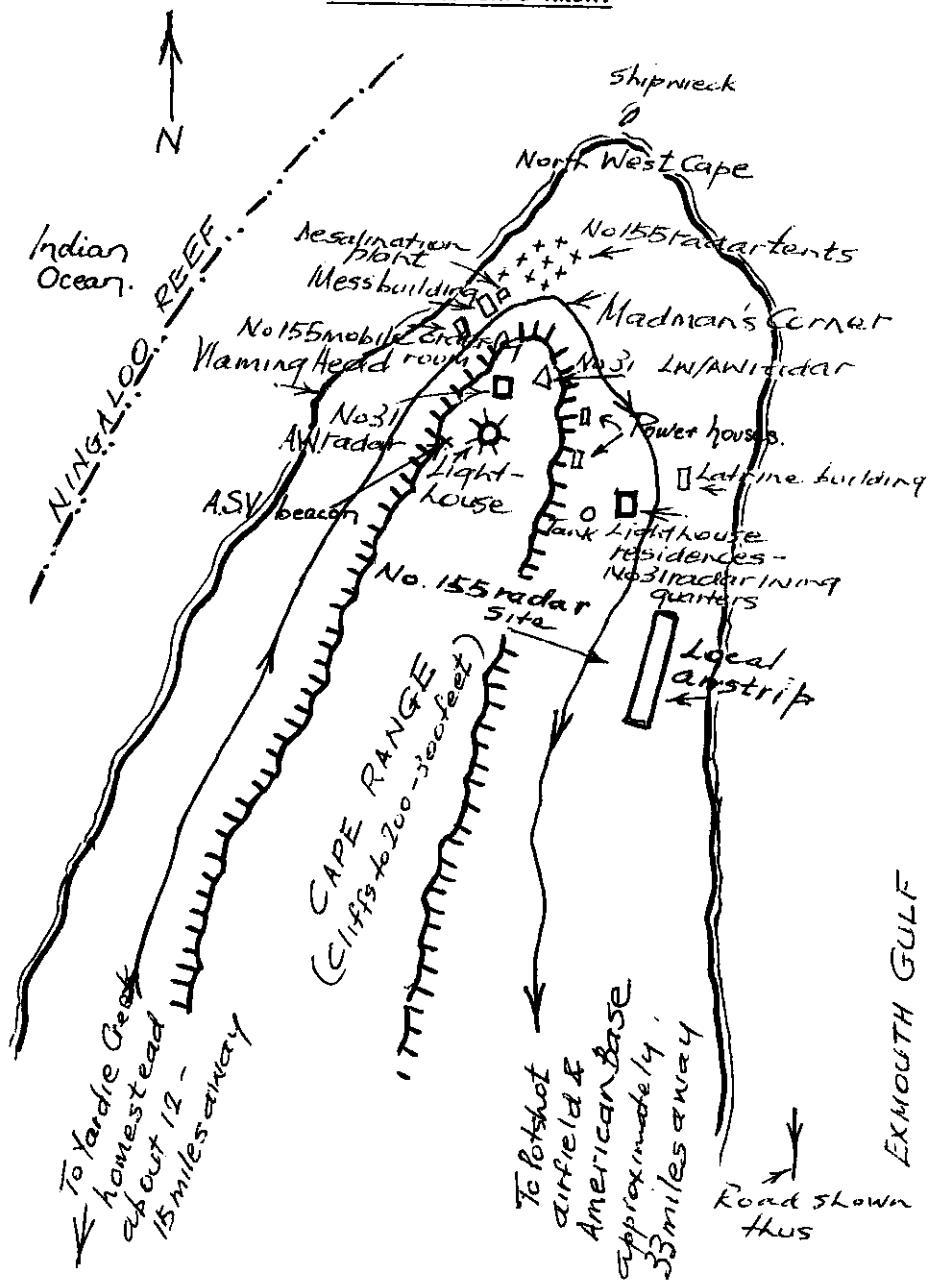
There were two 18 pounder field guns on the sand dunes in the camp area, manned by two Army men, and the 310 Radar personnel were trained to handle same, and to act as crew.

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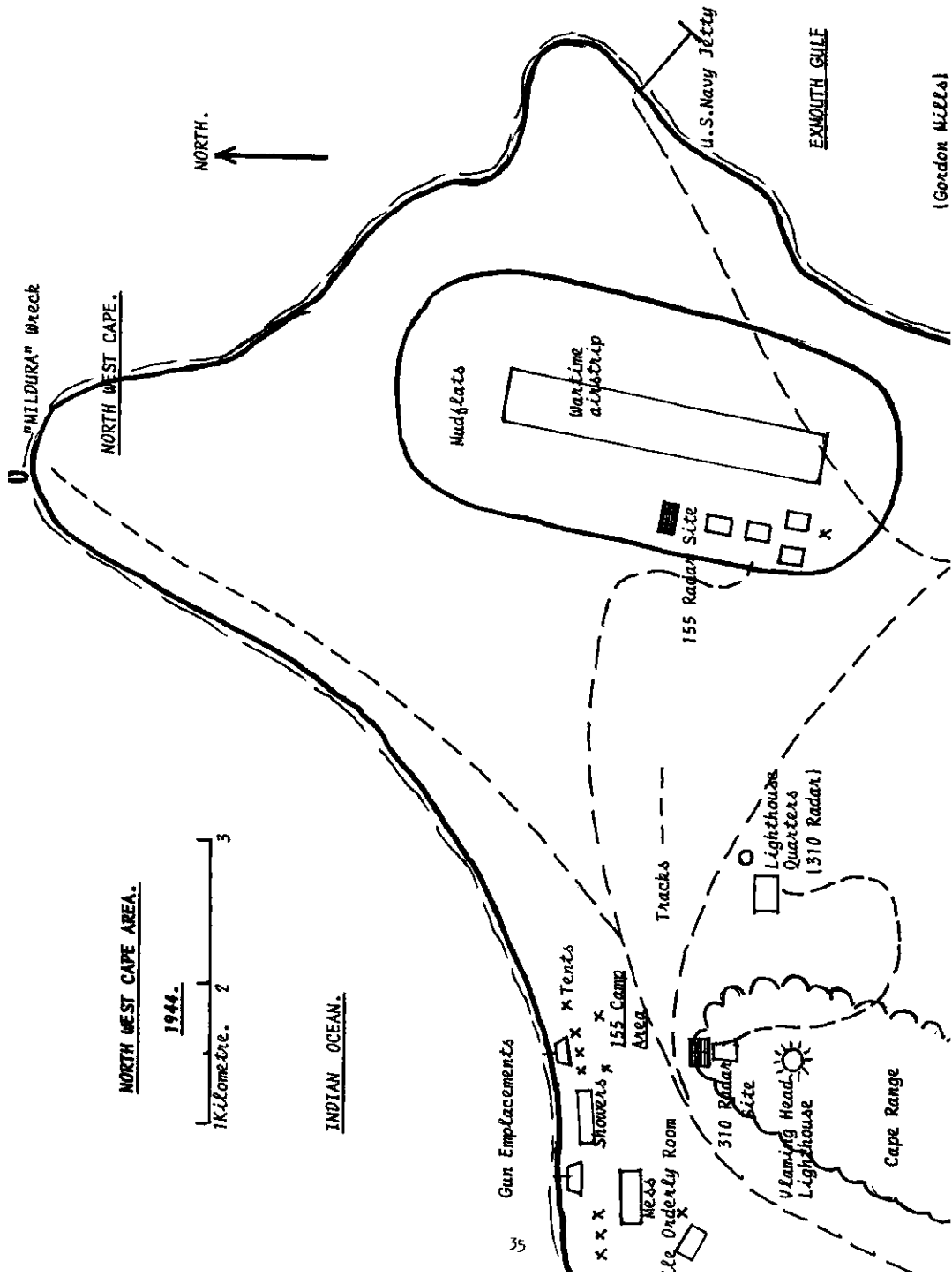
NORTH WEST CAPE
AND EXMOUTH REGION,
1944.

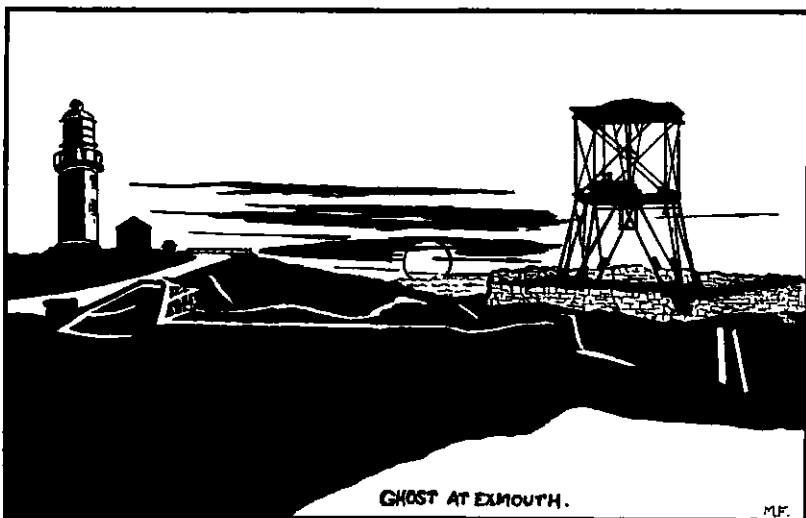


NORTH WEST CAPE AREA.



(Lou Malepre.)
 The few differences on the maps are understandable after fifty years.....
 The additional features on this map complement the other sketch map.





POSTSCRIPT.

Over the years, much curiosity has been aroused, and many questions asked by those who have ventured as far as the Vlaming Head lighthouse at North West Cape, Exmouth - for little was known about the gaunt remains of the old Radar tower - 'The Ghost at Exmouth.'

In more recent years, and with improved access roads, a number of Radar veterans have visited the place - many photos have been taken, and some little information has been passed on so that at least the old tower is recognized for what it is - the skeleton remains of the wartime 310/31 Radar station. There is nothing to be seen of the other stations, or the camp. But hopefully, with the telling of 'The Exmouth Radar Story,' the history of the Exmouth Radars, and of the all destroying cyclone which struck them in February 1945 will now be available to all.

Perhaps the importance of 'The Ghost at Exmouth' will now be recognized, and the old tower may be preserved for many more years.

Information on other Western Australian Radar stations and on other Radar publications and pictorials can be obtained from the publisher.

#

R. 13/1/1944



True it is that a history never seems to be quite complete - and so it is even with our little Radar histories. No sooner was this story in the hands of the printer than some more interesting and relevant facts came to light, this time from the recollections and the diary entries of Doug Hill, and I'm pleased to add his comments to the story.

And I take this opportunity to thank Lou Malempre, Gordon Mills, Wal Cornish and Doug Hill for their enthusiasm and willing support. They are actually co-authors. Unfortunately, Bill Hoiberg is no longer with us. The full story of 161 RS by Wal and Bill is recorded on p. 99 of 'RADAR YARNS' - and it was their account of the short history of 161 that prompted me to begin collecting material for 'THE EXMOUTH RADAR STORY.'

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The sketch above was drafted from a fairly old photograph. Les Harris, the local historian of Exmouth, advises that there are five names, with the date 7/1/43, appearing on the anchor blocks. These would be of the A.W.C men who worked on the tower five days before the RAAF arrived.

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ADDENDUM..... Selected extracts from the Diary notes of Doug Hill, who was an Operator on 31 RS. Unfortunately, his relevant notes were received after the history had been printed.

- 4.6.44. Boarded TSMV KOOLINDA at Fremantle. Left harbour 0930 hours.
6.6.44. Passed N.W.Cape. Arrived at Onslow. Stayed at 314 RS, the C.O. Flying Officer John Flett from S.A.
8.6.44. Left Onslow by light plane, (Dragon). Arrived at 31 RS N.W.Cape.
7.8.44. 155 Radar unit arrived from the eastern states. This is a Mobile Height finding unit (Ground Control Interception) It will operate separately but be used to complement our range and direction finding.
8.8.44. On shift 0700 to 1230 hours. Busy morning. Logged a record range for our station, an aircraft at 192 miles.
14.8.44. Eight Beauforts came up to Potshot from south.
15.8.44. More Beauforts came into Potshot
17.8.44. Several Beauforts out on anti-submarine patrols. Rumour of a ship being torpedoed just off the coast. Beauforts escorted a vessel into gulf during afternoon.
18.8.44. 1135 hours. Unidentified submarine tracked nine miles off coast.
25.8.44. 0520 hours. Gannet crashed half mile from Potshot and 120 yards off shore, killing three people including the pilot and doctor. This crew had visited our station the previous afternoon for Medical parade.
21.9.44. Orders received for our unit to man the lighthouse, and the light is to be lit from sunset to sunrise until further notice.
30.9.44. Tiger Moth crashed on strip during take-off. Pilot shaken but O.K.
6.12.44. Report of Japanese submarine in area. Green flare seen at sea. Station put on full alert. Full battle dress to be worn. Ammunition issued out and all guns to be manned. Guard doubled. On shift 1800 to 0100 hours.
Picked up unidentified submarine on radar. Tracked it into gulf during darkness and then it left before dawn.
7.12.44. Still on full alert.
8.12.44. On shift 1230 to 1800 hours when unidentified submarine was eventually identified as British.
NOTE...I still have grave doubts about this identification for the following reasons.
(1) British submarines were always 'spot on' with their identification signals.
(2) A few days after this occurred carcasses of slaughtered sheep were found on the beach close to where the submarine was tracked into the gulf.
(3) Stations further south also picked up a submarine not showing identification and tracked it down the coast.
27.1.45. On shift 0700 to 1230 hours. Picked up a Catalina which was showing IFF (Identification Friend or Foe) 198 miles out to sea. Ordered to 'fix' on this aircraft and pass a plot every 30 seconds. It had been hit by a cyclone 300 miles off the coastline and had jettisoned everything possible including the Royal Mail. It was running short of fuel and at 69 miles out was flying at only 650 feet. A DC3 left Potshot to escort it in but the Catalina's fuel ran out just as it came into sight. It landed in the sea about a mile off the point. It managed to taxi into the bay and drop anchor. A heavy surf and swell was running. English crew on board with two Australians. Following morning boat left Potshot and towed Catalina down the gulf to Bay of Rest.

Doug Hill's Diary notes continued.

- 2.2.45. A very nasty day. Looks like a storm brewing. About noon things began to happen. The wind started to get stronger and stronger. Sand was swirling around making it almost impossible to see. Then the rain pelted down turning day into night. Wind velocities reached 125 miles per hour and waves 20 to 30 feet in height were pounding down on the rocks and shore. The noise was deafening. At this stage the diesels cut out and we lost all power. Everything was pitch black. As all the windows had been blown out from the outer rooms of the house, we took refuge in the storeroom in the centre of the building. Later we found that other personnel had taken shelter in the two concrete diesel houses and the refrigeration room in the Mess. Sometime during the night the wind stilled then came from the other way as the eye of the cyclone passed directly over us.
- 3.2.45. Strong winds still blowing but the cyclone had moved on. The damage was unbelievable. Half the iron on the house roof was missing. All of the outbuildings such as the showers, garages, mess hut, water tank, wash houses and storerooms had disappeared. The aerial (array) on the Doover had been snapped off and lay twisted and bent on the ground. Everything was unserviceable; diesels, wireless equipment, telephone lines down, jeeps buried under tons of sand. The 8 ton diesel truck had been blown over on its side as well as several smaller vehicles. The verandah around the house normally used as our sleeping quarters had been stripped bare and tons of sand had built up against the walls of the house. The beach had changed completely. Whereas previously looking out from the front of the house we could only see two rows of sandhills, now there was a big blow-out directly in front and we looked straight out to sea. The swimming beach was strewn with large rocks, seaweed and hundreds of dead and dying fish, eels, sea-snakes and within twenty four hours the stench was unbelievable. After surveying the damage we went back to camp and started the big clean-up.
- 5.2.45. The motor mechanic eventually got the Jeep going after digging it out from under 3 to 4 feet of sand and stripping and cleaning it down. Urgent trip into Potshot to get some food supplies as there was little left, and we were on small rations for three days. Potshot was in a shambles. 3 Personnel missing and 1 seriously injured by flying debris. Relief planes were coming up from the south continuously ferrying in equipment and personnel. Refuelling barges blown inland and left high and dry.
- 6.2.45. Diesel generator started up so now we have some power for lights, W/T (wireless) and phone.
- 11.2.45. Jeeps went into Potshot to pick up new Radar unit, a Light Weight Air Warning (LW/AW).
- 17.2.45. Rumour unit is to be disbanded.
- 21.2.45. Ship sunk miles out to sea. Two lifeboats reported to be heading for the mainland. Beaufort patrols going out at regular intervals.

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Overleaf. Lou Malempre supplied a copy of a programme for a Boxing Tournament, held in July 1944. Some of the details had been carefully blocked out.

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