Numb. 39173

THIRD SUPPLEMENT TO

The London Gazette

OF TUESDAY, 13th MARCH, 1951

Published by Authority

Registered as a Newspaper

MONDAY, 19 MARCH, 1951

AIR OPERATIONS IN SOUTH EAST ASIA 16TH NOVEMBER, 1943 TO 31ST MAY, 1944.

NOTE.—A set of maps for this despatch is on separate sale at 1*s.* 0*d.* net. This set of maps also covers the operations described in the other Air and Army despatches of the Burma campaign from 16th November, 1943 to 12th September, 1945.

The following despatch was submitted to the Secretary of State for Air on 23rd November, 1944, by AIR CHIEF MARSHAL SIR R. E. C. PEIRSE, K.C.B., D.S.O., A.F.C., Allied Air Commander-in-Chief, South East Asia.

PART ONE

INTRODUCTORY

1. As a result of the formation on 16th November, 1943, of South East Asia Command, I assumed operational control of all Air Forces in the South East Asia theatre, with authority to employ them in conformity with the policy of the Supreme Allied Commander, Admiral The Lord Louis Mountbatten, G.C.V.O., C.B., D.S.O., A.D.C. Thus I had at my disposal what had constituted R.A.F. India Command, and those American units in this theatre which comprised the 10th U.S.A.A.F. It was my task to ensure that these forces operated as a coherent body and that the best use was made of the potentialities of each.

2. In addition it was my continued responsibility to develop India as a base for future air operations, as a supply centre, and as a training area for R.A.F. and I.A.F. personnel. Such activities absorb a considerable proportion of the energies of the Command, and constitute a task of which the importance and results are not immediately apparent. I have therefore devoted Part Four of this Despatch to the progress that has been made in this direction.

3. Responsibility for operations on the North West Frontier and for the Indian Air Force was relinquished to the formation which replaced the Inspectorate-General of the I.A.F. and to which was bequeathed the name Air Headquarters, India.

* * * * * *

4. To ensure the integrated operational control of Units in Bengal and Assam, a new Headquarters was set up under Major-General G. E. Stratemeyer, U.S.A.A.F., designated Eastern Air Command and located initially at Delhi. This formation, which had previously existed under the title Headquarters, U.S.A.A.F., India-Burma Sector, China-Burma-India Theatre, had administered and controlled the 10th U.S.A.A.F. and provided in addition base facilities for the 14th U.S.A.A.F. The new Headquarters consisted basically of the Operations Section of the old organisation with the addition of an R.A.F. element. This Command, and all those comprising the 10th which had formerly come under Bengal Command and all those comprising the 10th U.S.A.A.F. in the same area. These forces were subdivided into a Tactical Air Force under Air Marshal Sir John Baldwin, and a Strategic Air Force under Brigadier General Howard C. Davidson, U.S.A.A.F. I was authorised to effect such re-grouping of operational units that I considered necessary to achieve maximum operational efficiency, and as a result R.A.F. and U.S.A.A.F. transport units were merged on 15th December into one organisation which was given the title of Troop Carrier Command. This new formation was commanded by Brigadier General D. Old, U.S.A.A.F. Similarly R.A.F. and American photographic reconnaissance units were incorporated into one command which assumed the title of

Photographic Reconnaissance Force. Wing Commander S. G. Wise, R.A.F., was appointed Air Commander from the date of formation.

5. In exercising operational control of these forces, the integrity of U.S. Groups and R.A.F. Wings was retained and administrative control and responsibility remained with the respective American and British Commanders. The Chiefs of Staff agreed to the integration with the qualification that in view of American commitments to China, it might become necessary to transfer units from the 10th to the 14th U.S.A.A.F.

6. The chain of command and the conduct of operations by the merged forces almost without exception worked well, and mutual concessions and adjustments were made by each element. In ancillary services, examples of co-operation were most notable in the sphere of maintenance, signals and flying control. Major General G. E. Stratemeyer has said in his report on operations during this period—"The various obstacles which might be expected to arise as a result of combining U.S.A.A.F. and R.A.F. units have been overcome as a result of integration of staffs at Headquarters, Eastern Air Command, Strategic Air Force, Third Tactical Air Force, Troop Carrier Command and Photographic Reconnaissance Force. Such a revolutionary change in staff organisation might well have produced many difficulties and misunderstandings, but such has not been the case, and we have undoubtedly derived mutual benefit, not only on the staff side, but in the tactical operating of air forces". With these and other evidences of the working of integrated forces I have dealt in detail in the appropriate sections of the narrative.

THE TASKS TO BE ACCOMPLISHED.

7. The tasks which lay before the combined Air Forces were:—

(*a*) To conduct a strategic air offensive in conformity with the general plan to destroy enemy air forces and installations, selected rail, road and river communications, and depots and maintenance facilities.

(*b*) To ensure the air defence of the U.S. Air Transport Command airfields in North-East India and to provide for the defence against air attack of Calcutta and adjacent industrial areas.

(*c*) To provide support for the operations of Fourteenth Army.

(*d*) To provide support for the Chinese-American forces under command of General J. W. Stilwell which were operating from bases in the Ledo area.

(*e*) To support the operations of Long Range Penetration forces, and

(*f*) To conduct photographic reconnaissance and survey.

8. The prosecution of the first of these tasks was not only the best method of maintaining a favourable air situation, which was my principal charge, but would also force the enemy on the defensive and thus provide the best protection for the air route to China, for the Calcutta area and for sea communications in the northern Bay of Bengal.

9. Offensive fighter operations were to be undertaken to the greatest possible extent and it was proposed to use long range fighters in particular in the offensive against enemy airfields and air installations. Moreover, in order to overcome the wide dispersal of my available fighter strength, it was necessary to maintain at the highest pitch of efficiency the early warning system.

10. I planned to employ the strategic bomber force against targets in the following order of priority: enemy occupied airfields and installations, shipping, railways, oil installations in Burma and suitable objectives in Bangkok. The course which the battle took, however, made a readjustment of these priorities necessary and a considerable proportion of the total bomber effort was directed to tactical targets in support of the Army and later, to carry supplies to the garrison at Imphal. Another task which assumed increasing importance during the period was the evacuation of casualties. Much had to be done to build up a successful organisation which could deal with the transhipment of sick and wounded from battle areas and casualty clearing stations to better equipped hospitals in the rear.

THE FORCES AVAILABLE.

11. To accomplish these tasks there was a total of forty-eight R.A.F. and seventeen U.S.A.A.F. squadrons deployed for operations. By May these totals had increased to sixty-four and twenty-eight respectively.

12. The disposition of tactical units in Bengal and Assam was designed to provide defence and support over the three main areas of land operations; in the Arakan, along the line from Tiddim to Homalin, and the Ledo Sector in Northern Burma; they were under the control of 224 Group, 221 Group and the U.S.A.A.F. Northern Air Sector Force respectively. Strategic units continued to be stationed further to the west since the marshy areas of the Sunderbunds and the poor lines of communication in that area made the construction of airfields east of the Brahmaputra up to heavy bomber standards a matter of extreme difficulty which neither the labour, transport nor supply position would allow me to undertake except as a relatively long term plan.

THE SITUATION IN NOVEMBER.

13. Facing the enemy from India there was a more modern, more powerful, and numerically stronger air force than had hitherto been available in this theatre. Moreover, during the monsoon much had been achieved to give the units comprising this force greater striking power. Communications, although overstrained were now better geared to carry war supplies than at any time since the outbreak of hostilities. Advanced landing grounds which had been constructed afforded short-range aircraft a greater radius of action, both offensive and defensive, during the dry weather that was to come and the warning system was now able to give ample notice of the approach of hostile aircraft.

14. The enemy for his part disposed of a force of approximately 250 aircraft concentrated in the airfield groups at Heho, Anisakan, Rangoon and Chiengmai with the remainder at lay-back bases in Siam and the Netherlands East Indies. His ground forces faced ours along a front of 700 miles. In Arakan he held the line from Maungdaw to Buthidaung and was opposed by XV Corps, thence north-west across the inhospitable Chin Hills to Kalemyo and northwards up the Kabaw Valley where

IV Corps was deployed. Further north still he was confronted by two Chinese Divisions based on Ledo, and beyond this we held positions as far as the River Salween with a small force based at Fort Hertz. The enemy's bases and lines of communication stretched for 900 miles from Bangkok to Myitkyina, over the whole length of which it was possible to attack him.

15. The security of sea communications meant that General Reconnaissance aircraft had to cover an area ranging from South Africa to Sumatra. The patrol of this vast expanse of sea contributed a problem that could only be met by the careful husbanding and disposition of the small forces available.

* * * * * *

16. The account of a campaign covering such a wide area and diversity of activities does not admit of chronological treatment. I have therefore dealt separately with each strand of the pattern of operations, commencing with the primary task, the maintenance of air superiority, and placing air transport operations next in view of the importance they were to assume.

* * * * * *

PART TWO

OPERATIONS

I.—THE MAINTENANCE OF AIR SUPERIORITY

17. The advent of Spitfires in Bengal early in November had already begun an era of successful interceptions in which the enemy discovered for the first time in this theatre the efficacy of modern fighter aircraft backed by a well developed system of warning and control.

18. The first squadrons (Nos. 615 and 607 A.A.F.) were based on Chittagong in order to protect and cover that vital port and to cover the Arakan front which was to be the scene of the first major battles of the campaign. Within the month the Spitfires destroyed four enemy photographic reconnaissance aircraft of the Dinah type whose excellent performance had hitherto allowed them to range with impunity over our forward bases at a height and speed which Hurricanes could not equal. The enemy reacted by sending out fighter sweeps to test the new arrivals and whittle down our Spitfire strength in order that he could once again range over the Arakan suffering only the minor casualties that Hurricanes could inflict. In both these objects he was unsuccessful, and by the end of December had lost twenty-two aircraft, probably lost seven and had suffered damage to twenty-six against our loss of thirteen. The greatest success scored in these raids was by No. 136 Squadron who, on the last day of the year, scored 12 destroyed, 3 probably destroyed, and 8 damaged against a mixed force of bombers and fighters which were attempting to attack light Naval forces off the Arakan coast. As a result of this victory the Secretary of State for Air signalled his congratulations and commented that the newly arrived Spitfires had come into good hands.

19. The one occasion the enemy could claim as a success at this time was a bold strike aimed at Calcutta with the double object of damaging port installations and demoralising the city. He divined that over a front of 700 miles, defence in depth could not be so uniformly effective and that in the rear areas which included Calcutta, he would probably be met with Hurricanes. On 5th December he sent a mixed force of approximately sixty bombers and fighters in two waves which succeeded in bombing Calcutta for the loss of 2 destroyed, 1 probably destroyed, and 4 damaged, while the three and a half Hurricane squadrons (the half being night fighters) suffered five destroyed and six damaged. That the enemy put his maximum effort into the attack is evidenced by the fact that the second wave included Naval aircraft.

20. During January the Spitfire squadrons gained valuable experience in air fighting and tactics that was to stand them in good stead in the greater battles to come. The enemy continued to send fighter sweeps over the Arakan, but Spitfires were able to inflict casualties upon them in the ratio of eight to one. By this time two squadrons of Spitfire VIIIs (Nos. 81 and 152) had arrived from Middle East, and I now had at my disposal in the forward areas of Bengal four squadrons of Spitfires and nine of Hurricanes for fighter operations; the stage was thus set for the opening of the battle in Arakan on the 4th February. Anticipating our own ground offensive by four days the enemy launched an attack with the object of annihilating the 5th and 7th Indian Divisions and pressing on to capture Chittagong. This ambitious plan was attended by the most impressive measure of air support afforded by him in this theatre, sweeps by formations of fifty plus aircraft being reported daily. The objects of the J.A.F. appear to have been firstly to intercept our aircraft engaged on close support, secondly to increase the morale of his own troops and thirdly to give some measure of ground support by attacks on our positions and forward bases. As the battle developed, one other task assumed overriding priority for the enemy air forces. The 7th Indian Division, cut off from its supply bases, was being supplied wholly by air. It was of vital importance to the enemy that our supply-dropping aircraft should not succeed in this task, but the air superiority which we had established, the provision of standing patrols—particularly in the Kaladan Valley where, owing to the intervening hills, no radar cover below 10,000 feet was available—and resort to supply dropping by night enabled transport aircraft to maintain the beleaguered forces for the loss of only one Dakota (C.47) to enemy fighters.

21. The tactics which were employed to gain this dominance over the Arakan battle front centred around the three forward squadrons equipped with Spitfire Vs and a few Spitfire VIIIs. Hurricanes were used for airfield cover when Spitfires were re-fuelling and re-arming, and for standing patrols over possible target areas during hostile raids in case of a missed interception. The enemy countered by introducing the Tojo, whose performance exceeded that of the Oscar, adopting the defensive circle and splitting into small groups when the circle was broken. This brought them a relative measure of success inasmuch as their losses decreased whilst those of the Spitfires gradually increased.

22. The advantages of the Spitfire VIII in this battle were not immediately apparent, for

the enemy continued to operate at his best performance height, that is 10,000 feet. No. 136 Squadron, who re-equipped with these aircraft in February, could not effectively employ their high overtaking speed against an enemy who exploited the manoeuvrability of his aircraft to the full. At first attacks were delivered at too high a speed with a resultant falling off in marksmanship.

23. When the battle switched to the Chindwin front in the second week in March and it became clear that the main Japanese ground effort was to be aimed at Imphal and the railway to the north, 243 Wing and eight squadrons were moved into the area from 224 Group. Spitfires did not immediately repeat their successes of the Arakan campaign for the following reasons. Firstly, although the three Ground Control Interception Stations were excellent and brought off fine interceptions against Dinahs (No. 81 Squadron scored their first successes in this theatre by destroying two in four days at the beginning of March), the rugged nature of the terrain produced technical difficulties in the way of echoes which left many blank spots in the radar coverage. Secondly, the substitution of Indian Mobile Wireless Observer Companies for R.A.F. Wireless Units resulted in a lower standard of reporting. Thirdly, squadrons which had already lost a number of experienced pilots in action were now losing many more as operational tours were completed. Moreover, the sudden influx of personnel, both Army and R.A.F. could not be met with a similar growth of transport, accommodation and communications. Finally, as the Japanese advanced, more and more of our early warning system was overrun, and the Army Corps Commander decided that he could not employ troops on local protection of airfields and the warning net. Squaddon personnel became exhausted through disturbed rest, and guard duties by night combined with operations by day. Certain squadrons were therefore withdrawn from the Imphal Valley whilst others were flown out every night.

24. Once again the problem of protecting transport aircraft operating so near to Japanese bases asserted itself. Deteriorating weather and absence of warning made it increasingly difficult to ensure interception, but that our superiority was never lost is shown by the fact that between the opening of the battle and the end of May, thirty-one enemy aircraft were destroyed, twenty probably destroyed and sixty-six damaged in air combat over the Manipur area, for the loss of seventeen. Of this number, three were destroyed by No. 176 (Beaufighter) Squadron operating at night from advanced airfields near Imphal.

25. Meanwhile the accretion to the Command of long-range American fighter aircraft enabled tactics to be developed which were to have most damaging results for the Japanese Air Force. Already Mustangs (P.51) had proved their worth, notably in a combined victory with Kittyhawks (P.40) against an enemy formation in the Digboi area on 27th March, claiming 26 destroyed and 4 probably destroyed, for the loss of two. The Army reported finding twenty-two crashed enemy aircraft in the area after the interception. At the same time, No. 459 (U.S.) Squadron, equipped with Lightnings (P.38) began to operate under 224 Group. Thus, it was possible to employ Lightnings (P.38) and Mustangs (P.51) to supplement the work of the Spitfires which were still in short supply, and had to be husbanded for purely defensive work. The serious contraction of the warning system around Imphal could now be partly offset by sending the American long range fighters to intercept the enemy on his return to the Central Irrawaddy strips.

26. The first success of the policy of intrusion fell to No. 1 Air Commando Force, which surprised a large concentration of aircraft on the Shwebo group of airfields on 8th March, and destroyed 46 of them. Three days later, the Lightnings (P.38) squadron scored 15 against the enemy at Heho. The primitive nature of the Japanese warning system in the area augured well for the successful continuance of the operations. Pilots became increasingly familiar with the details of those airfields which were within range, and photographs and models aided quick identification of dispersal areas and anti-aircraft posts. In early strikes of this nature the enemy were not airborne and awaiting attack, and it was possible to make more than one run over the target, the first run being utilised to locate aircraft in their dispersal pens.

27. In May, an improvement in the enemy's warning system became evident, since often fighters were airborne and awaiting the attack. However, losses remained low, since No. 459 Squadron discovered that if they maintained an indicated airspeed of 300 m.p.h. and refused to enter into combat with the slower and more manoeuvrable Oscars and Tojos, they were still able to deliver their attacks at aircraft on the ground, perhaps fire one burst at any fighter which attempted to intercept and make their withdrawal without loss. The prospect of combat during the intrusion therefore proved no deterrent. In this manner No. 459 Squadron destroyed 121 enemy aircraft on the ground or in the air in March, April and May. The enemy was forced in consequence to discontinue the use of the Shwebo group of airfields and even Heho and Meiktila became practically untenable. By the end of May, the J.A.F. had been forced into the humiliating position of providing such support as their army, 600 miles away in the northern mountains, could receive from the comparative safety of airfields around Rangoon.

28. To sum up, the extent of Allied superiority in the air throughout the period can be seen by a comparison of the effort and losses of the opposing forces. The enemy scale of effort amounted to 2,700 sorties sighted or plotted, or less than three per cent. of the Allied effort. To achieve this, the J.A.F. lost 402 aircraft destroyed in the air or on the ground, or some 14 per cent. of their effort, while the comparable total for British and American forces amounted to 230 or less than one-third per cent. of the effort. The air superiority maintained over the period needs no further emphasis.

* * * * * *

II.—AIR TRANSPORT OPERATIONS

29. Throughout the period under review the number of transport squadrons under my command steadily increased, though their growth was by no means out of proportion

to the continually increasing importance of their task in the operational areas. Indeed, it is not too much to say that their services were instrumental in preserving the existence of the Fourteenth Army as a striking force on the Burma frontier. Operations on the Eastern front made calls upon them at an ever increasing rate, so that despite reinforcement, transport squadrons worked at a high rate of effort from the moment they became operational. In consequence, crews underwent a period of considerable strain, for not only does supply dropping in this theatre involve intricate low flying over the dropping zone for as much as an hour in a hot aircraft interior, but the crews were normally responsible for the arduous work of unloading 6,000 to 7,000 lbs. of freight.

Development of Troop Carrier Command.

30. In November, the only R.A.F. transport squadron operating was No. 31, an experienced and pioneer unit, but the 1st and 2nd Troop Carrier Squadrons U.S.A.A.F. had begun to work over the northern sector of the front and there were other squadrons both British and American, either in training or on their way. Unified operational control of these forces was effected by the institution in December of Troop Carrier Command, Eastern Air Command, under Brigadier General W. D. Old, U.S.A.A.F., administrative control remaining in the usual British or American channels. Headquarters was established at Comilla on 2nd January, 1944, in close proximity to the Headquarters of Fourteenth Army and of the Third Tactical Air Force, as well as to main Army supply bases. Subsequent operations illustrated the dependence of air transport operations upon the tactical air situation, and in order to combine final responsibility for the former with the exercise of our air superiority—as well as to integrate air transport with army policy—Troop Carrier Command was placed under the control of the Air Commander, Third Tactical Air Force, from 1st May. Subsequently Troop Carrier Command was dissolved as from 4th June, by when its component squadrons numbered 8—4 R.A.F. and 4 U.S.A.A.F. Moreover, in February the Air Transport Command had loaned to me twenty-two Commandos (C.46) to meet the emergency in the Arakan, and when it became necessary to return these in April, five U.S.A.A.F. Troop Carrier squadrons and the larger part of 216 Squadron R.A.F. were detached to work with my Command from M.A.A.F. Upon their return to the Mediterranean theatre in June, aircraft and crews from the Strategic Air Force were attached to the Third Tactical Air Force to fill the gap until the first of the U.S.A.A.F. Combat Cargo Groups became operational. During its short but eventful life of little over six months, Troop Carrier Command had thus increased more than four-fold in size, and even more in significance.

31. The routine supply dropping missions of No. 31 Squadron over the Chin Hills and Arakan were being continued at the time of the formation of South East Asia Command. The first additional need was that of 81 (West African) Division which already in December received supplies landed for it at Chiringa by U.S.A.A.F. It then moved eastwards over the mountains to the Kaladan Valley at Daletme and began its advance southwards, being dependent throughout for its maintenance upon air supply. From 7th January, 1944, onwards, this became a commitment of No. 62 Squadron R.A.F. At the same time U.S.A.A.F. aircraft came to the help of No. 31 Squadron in building up a large reserve of supplies at Tiddim, while further north, Nos. 1 and 2 Troop Carrier Squadrons U.S.A.A.F. in addition to maintaining the air warning centres screening the Assam Valley, began to supply on a much larger scale the two Chinese Divisions advancing south-east from Ledo down the Hukawng Valley. They also gave help to the Kachin levies waging guerrilla warfare in the Fort Hertz district, as well as to the Gurkha garrison of Fort Hertz itself.

The Arakan Battle—February, 1944.

32. When the Japanese offensive in the Arakan opened on 4th February, the needs of the 14th Army for air supply greatly expanded with only a few days' warning. The land communications of 7th Indian Division were soon cut and those of 5th Indian Division in danger, and it was only by supply dropping that the encircled forces could be expected to stand their ground and turn a potential catastrophe into a decisive victory. Japanese preparations for an offensive had been observed, however, and the possibility of encirclement envisaged, so that when supply by air was called for on 8th February, there was no delay.

33. On the first day some of our transport aircraft encountered an enemy fighter sweep and one was shot down. Such was our air superiority that throughout the Arakan operations this was the only loss sustained by transport aircraft from enemy fighters, although many aircraft were damaged by fire from the ground. Later, as a measure of protection, much of the supply dropping was done by night with but little falling off in efficiency. The operation while it lasted was of such unexpected magnitude that I was compelled to request the loan of a number of Commandos (C.46) from the India-China Wing of the U.S. Air Transport Command. These aircraft were promptly and unstintingly supplied. The critical period from the 8th February to 6th March inclusive involved the delivery of 2,010 short tons of supplies of all kinds, including rations, animals, ammunition and P.O.L.* With such large scale help, ground forces were able to break out of their encirclement and inflict a decisive defeat on the enemy—significant in that it pointed the way towards the neutralisation of the long familiar Japanese offensive tactics. By the end of the month, air supply to the Arakan, though it still continued, was no longer of an emergency nature.

Operation "Thursday".

34. The major offensive action planned and carried out by 14th Army before the onset of the monsoon, was a penetration of enemy-occupied territory by columns of Special Force under Major General O. C. Wingate. Its purpose was to disrupt enemy communications and thereby aid the recapture of northern Burma and create a favourable situation for the 14th Army to exploit. The operation as

* Petrol, Oil, Lubricants.

finally planned involved the large scale use of transport aircraft to fly in and supply the brigades, and the energetic employment of close support aircraft to make up the mobile columns' deficiencies in artillery. The First Air Commando Unit under Colonel Cochran, U.S.A.A.F., had been specially created and sent to this theatre to fill these needs, and acted as a task force in support of General Wingate. I have dealt with the activities of this force separately.

35. The long range penetration brigade which was making its way across the Chindwin overland towards Katha received its first airborne supplies on 10th February, and its maintenance thereafter became a continuous commitment. The remaining two brigades were landed on two strips improvised in the jungle during the nights of 5th/6th and 10th/11th March, and a fourth and fifth brigade were flown into another landing ground during the nights of 24th/25th March and 5th/6th April. The successful accomplishment of the air side of this operation was shared directly by the First Air Commando Unit and by the British and American Transport squadrons which participated, although the whole operation was only made possible by the high degree of air superiority gained by the tactical air forces in the preceding months.

36. The initial fly-in was the work of gliders which carried an American airfield engineer company whose task it was to receive Dakotas (C.47) on the following night, and also a sufficient number of combat troops with equipment to defend the locality meanwhile. Although this preparatory operation was a complete success, it was twice in danger of being compromised. The first occasion was when at the last moment it was discovered by photographic reconnaissance that one of the jungle clearings earmarked for use and called " Piccadilly " had been deliberately obstructed by the enemy. The commanders on the spot decided to continue with the operation and divert the aircraft intended for " Piccadilly " to the other landing zone—" Broadway ". Secondly, the towing of gliders in pairs proved impracticable under the difficult flying conditions encountered; tow ropes snapped and a number of gliders failed to reach their destination. Moreover there existed in the clearing a number of undulations not visible on air photographs, so that even on making the best of landings the earlier gliders frequently crashed, and each wrecked glider became a source of danger for its successors. Worse confusion and damage was avoided by the airfield control improvised by Lt.-Col. Allison of the U.S.A.A.F. who was able to stop the arrival of additional gliders. Despite these difficulties, by the next night the American airborne engineer unit and British troops had levelled " Broadway " sufficiently for Dakotas (C.47) to land. The Air Commander 3rd T.A.F. commented particularly on the quality of the airfield control and the excellent flying discipline that were features of the operation, which enabled the strip to be used almost to saturation by a constant stream of transport aircraft in the short hours of darkness available. His report remarks as follows: " Nobody has seen a transport operation until he has . . . watched Dakotas coming in and taking off in opposite directions on a single strip all night long at the rate of one landing or one take-off every three minutes ".

37. By D plus 6 day there had been flown in 9,052 personnel, 175 ponies, 1,183 mules and 509,083 pounds of stores.

38. The element of surprise which had accompanied the entry of these forces and which had been aided by diversionary bombing around Bhamo and Indaw was maintained throughout. Even when the enemy divined our intentions, our air superiority was instrumental in rendering his attacks ineffectual. It was not until 11th March and 13th March that the enemy attacked the two landing grounds which had been first extemporised—by which time one had already been evacuated and a detachment of Spitfires of No. 81 Squadron had been installed on the other. Other landing strips were contrived as the occasion arose, though for the most part the thirty columns of the division were supplied by dropping. Much of the effectiveness of this air supply depended upon the standard of training of the Dakota crews. The dropping zones were continually being changed as the columns moved from place to place. Delivery normally took place by night and there was often no other guide than navigational skill supplemented by pre-arranged light signals which became visible only when the aircraft arrived in the vicinity of the dropping zone. Danger from ground fire whilst dropping was a frequent and accepted risk. This was no less true of occasions on which Dakotas were able to utilise a landing ground, for enemy detachments were often in the neighbourhood. The strip opened in the later stages of the operation at Hopin was evacuated because of small arms fire through which our aircraft had unavoidably to pass before landing.

39. Before the advent of the rains made the use of fairweather landing grounds impossible, one Brigade (No. 16) was flown back to its base in India. The others subsequently joined the Chinese-American forces advancing upon Myitkyina under General J. W. Stilwell, and participated in the operations around Myitkyina, to whose success their columns, supplied entirely by air, had contributed.

First Air Commando Unit.

40. This unit came to my command with the specific duty of assisting the fly-in of Special Force, the initial maintenance of its columns and the evacuation of casualties. These functions were extended to include direct support of the ground forces and sustained attacks on installations and communications to hinder the eventual mobilisation of the enemy against these forces. The Bomber-Fighter component was engaged from the 3rd February onwards in attacks on railways and airfields and, as soon as the fly-in had been accomplished, in direct support when called for by the columns. In these tasks the Mustangs (P.51) flew 1,482 sorties and the Mitchells (B.25) 422. Their claims against enemy aircraft destroyed on the ground and in the air amounted to ninety. The glider component of the force carried out fourteen separate operations involving the release of 99 gliders which took into Burma a variety of equipment ranging from bulldozers to rivercraft.

41. An important part was played in the operation by the hundred light communication aircraft which the Air Commando possessed.

These aircraft (L.1s and L.5s) could land more or less at will even in bad country to convey messages and supplies of small bulk, to carry commanders from one unit to another, evacuate casualties and perform a host of miscellaneous services without the risks attendant upon wireless silence or employing heavy aircraft. I consider their widespread use in future comparable operations essential.

42. The record of the small force of selected personnel with first-class equipment, which constituted the Air Commando, was naturally good, but that record cannot be advanced in support of extending the principle of Air Commando Units. Such a principle gives rise to the danger of tying down fighter and bomber aircraft permanently and exclusively to one particular Army formation with the consequent risks of duplication and lack of flexibility.

43. Such units have a place as spearheads for airborne and air transit operations, but as soon as normal supply can begin, fighter cover and air support, as requisite, should be provided by the tactical air forces as a whole under the direction of the appropriate air force Commander.

* * * * * *

The Siege of Imphal.

44. Concurrent with the heavy claims on Troop Carrier Command from Special Force and General Stilwell's forces arose an emergency that surpassed in importance all other transport operations, and on whose successful solution by air supply depended the fate of Imphal and the continuance of support to China.

45. On the 7/8th March the enemy crossed the Chindwin in force with the three-fold object of occupying Indian soil, capturing our main base at Imphal, and cutting the Bengal-Assam railway which fed the airfields from which supplies were flown to China.

46. Before the end of March, the enemy had cut the Tiddim-Imphal and Imphal-Kohima roads, occupied Tiddim and part of Kohima and swept round to the Bishenpur area west of Imphal. From the air point of view, the over-running of our warning system and the loss of advanced landing grounds on the perimeter of the Imphal plain were a serious inconvenience. The encirclement of the IV Corps divisions at Imphal, however, had immediate and heavy repercussions upon the transport situation, since I was forthwith confronted with unprecedented demands for the large scale delivery of reinforcements and supplies, not merely to the beleaguered forces in the Imphal Plain, but also to the garrisons holding out at Kohima and elsewhere. These demands were met, though not without considerable strain upon an already hard-worked force.

47. It was clear that the needs of our ground forces could not long be satisfied by the existing number of transport aircraft under my command. Thus, when the threat of a Japanese offensive westwards from the Chindwin had become apparent, although before it actually materialised, I made strong representations for further reinforcements of transport aircraft. As a result I received on loan from M.A.A.F. the services of the 64th Troop Carrier Group, U.S.A.A.F., consisting of five squadrons and a detachment of No. 216 Squadron, R.A.F. These six squadrons were all operating on the Burma Front by the second week in April. In addition, I was permitted to retain for a further period the Commandos (C.46) temporarily withdrawn from the India-China Wing of the Air Transport Command for supply dropping in Arakan.

48. The needs of our forces in the Manipur area were many and pressing. No. 50 Parachute Brigade was flown from the Punjab to reinforce the garrison at Imphal, and a little later No. 5 Indian Division was moved by air complete from the Arakan in 758 sorties. Between 10th/15th April, an infantry brigade was flown from Amarda Road, south-west of Calcutta to Jorhat in Assam. 99 Commando (C.46) and 189 Dakota (C.47) sorties lifted 3,056 all ranks, 937,000 pounds of stores and the following equipment: 50 motor-cycles, 40 jeeps, 31 jeep trailers, 16 25-pounders and eight 3.7 howitzers. An Army Air Support Control unit was taken by air from Poona to Jorhat for service with 33 Corps. The movement by air of the servicing echelons of tactical squadrons became a matter of routine. In regard to the maintenance of our troops, the most varied articles were delivered to the forces momentarily engulfed within the flood of Japanese infiltration. At Kohima, for instance, owing to the enemy seizure of the wells, it was necessary to drop drinking water as well as routine supplies and medical necessities. Three hundred and seventy tons of bitumenised hessian were delivered by air at Tulihal to make the airfield there all-weather. On the return journeys all transport aircraft brought out with them casualties or troops not needed for active combat.

49. The 79 aircraft borrowed from the Middle East were due to be returned at the beginning of May. If this arrangement had been adhered to the consequences might well have been disastrous. General Stilwell's forces would have been forced to withdraw to their Ledo base, the Imphal Plain would have become untenable, the air route to China threatened, the morale of the Fourteenth Army troops encircled in the Imphal Plain would have been considerably affected and the all-weather airfields and warning system in the Surma and Brahmaputra Valleys would have been lost. Moreover, the major victory the enemy might have won would have had serious repercussions in India.

50. I was compelled to represent that these vital aircraft must stay until the reinforcements envisaged by the Chiefs of Staff arrived and became operational. Agreement was obtained, and I instructed the Air Commander, Eastern Air Command, to employ aircraft of the Strategic Air Force in a transport rôle should there be any gap between the departure of the M.A.A.F. squadrons and the new reinforcements becoming fully operational.

51. On 15th April my commitment for air supply to the besieged garrison at Imphal was established at the figure of over 400 short tons per day—which even then entailed the occupants going on short rations. The fulfilment of this contract depended upon a modicum of fair weather and upon the speedy loading of aircraft at Army supply bases. Neither of these conditions was entirely fulfilled, and it was only by reorganisation of the ground

elements of the air supply system and the unstinted efforts of the U.S.A.A.F. and R.A.F. transport squadrons available that the target figure was reached and surpassed in June. But by the end of May it was clear that the enemy's disregard of air transport as a major factor in the battle was to render his ambitious and costly offensive a failure.

The Advance from Ledo.

52. Throughout the whole period the supply of the Chinese-American forces operating from Ledo under General Stilwell had been proceeding. These troops were advancing down the Hukawng and Mogaung Valleys and thereby gradually bringing the opening of an overland route to China nearer realisation. Each advance took them further from their bases, and consequently their calls for air supply were increasing, necessitating up to 100 sorties per day. Landing grounds were constructed wherever possible along the path of the advance, and light aircraft were employed with good effect. The Dakota (C.47), however, remained as the greatest single factor in maintaining the advance. In April the entire 50th Chinese Division, numbering almost eight thousand men, was flown from Sookerating to Maingkwan, while by then all the combat troops in North Burma, both American and Chinese, had become dependent upon air supply. In May, a fast moving column of American troops, known as Galahad Force and supported entirely by air, made a considerable detour and caught the enemy unawares, seizing the main airfield at Myitkyina on 17th May. All units of Troop Carrier Command in the north had been standing by to carry in those forces which General Stilwell believed adequate to defeat the expected enemy counter attack. Brigadier-General Old was waiting at Shinbuiyang to conduct the initial glider operation in which troops and engineering equipment were to be conveyed, and himself towed the first glider into Myitkyina. Transport aircraft followed the gliders almost at once. In the course of thirty-six hours of intensive operations by both day and night, during which ground fire was continually encountered, and one enemy air attack was successful in shooting down a Dakota (C.47) and destroying others on the ground, there were landed a complete Chinese Regiment, six light anti-tank batteries, twelve Bofor guns and crews, one airborne engineer company and a Chinese mortar company. Many loads of ammunition, food and stores were also conveyed. Before the end of the month further troops, in numbers equivalent to a division, had been taken by air to Myitkyina, and the first stage of the reconquest of Burma and the reopening of the Burma Road was completed.

Evacuation of Casualties.

53. It would be incomplete to close this account of the operations of transport aircraft under my command without some mention of a further aspect of their work. During the first five months of 1944 the aircraft of Troop Carrier Command flew no less than twenty-three thousand sick and wounded back to safety. It may safely be said that but for the provision of air transport the greater proportion of these would have had little hope of survival. The alternative was many days' journey by sampan, mule and ambulance, and perhaps rail, to the nearest base hospital. Moreover, a proportion of the casualties evacuated were from the columns of Special Force fighting in enemy occupied territory. The 2,126 casualties evacuated from the division by the end of May would have been a total loss had they not been flown out by air.

54. Although evacuation of casualties by air was no new phenomenon in this theatre of war, nevertheless it first assumed considerable proportions during the Arakan battle in February and reached its peak during the struggle for Imphal in April. Transport aircraft, when they landed to deliver supplies frequently received casualties for the return journey. When, however, supplies were dropped, the intervention of light aircraft was necessary for the journey from a small advanced landing ground to a strip further back where a Dakota might land. But since neither heavy nor light aircraft could be spared throughout this period specifically for the evacuation of casualties, the removal of sick and wounded remained an "ad hoc" matter arranged on a basis of expediency and improvisation. R.A.F. medical personnel at airfields were insufficient to deal with the load of casualties which, due to operational exigencies, might be entrusted to them with little or no warning by a flight of transport Dakotas. And so, although the care of all wounded at airfields was officially an R.A.F. responsibility, nevertheless help in this matter was gladly accepted from the Army.

CONCLUSION.

55. Thus air transport played a decisive part in the three great battles of the period. By the end of May the reconquest of portions of northern Burma was in sight, and the garrison of Imphal was still an offensive force. The events related above make a reiteration of the importance of transport aircraft unnecessary. In connection with the operations, however, certain lessons were learned which I would emphasize. First, it is essential that Army Commanders should not be allowed to regard air transport as an auxiliary arm upon which they can call without reference to the appropriate Air Force Commander. Secondly, the Army must be impressed with the necessity for the quick turn-round of aircraft; during intensive operations loads must be ready for the aircraft as they land. Too often crews wasted valuable hours waiting at an Army Supply Base because their freight had not been assembled ready for loading. Thirdly, when the Army are the main customers of air transport forces, the fullest day-to-day liaison and discussion of problems must be combined with clear statements as far in advance as possible of what they require in the way of air transport, and for what purpose, in order that priorities may be allotted.

56. It is to be noted that the inadequacy of the Army ground organisation for supply by air operations became recognised by the Army as and when these operations became large-scale undertakings. Steps were taken to improve the ground organisation in the light of the experience gained during the operations. The first step was to provide Indian Air Supply companies at supply loading airfields. A further important development was to create Army staff organisations both to control the

activities of the Army elements on the airfields, and to organise the flow of Army supplies both from base to airfield and from airfield to aircraft. These developments did not, however, reach completion during the period covered by this despatch.

* * * * * *

III.—Strategic Air Force

57. Operations by heavy and medium bombers sought to accomplish the following tasks:

(i) Denial and destruction of *the enemy's lines of communication.*

(ii) Destruction of *airfields and other military installations.*

(iii) Destruction of *industrial and stores areas.*

58. In addition to these, the Strategic Air Force was often called upon to furnish direct support to ground forces and to provide aircraft and crews for transport operations.

59. For the transhipment of sea-borne supplies to Burma, there were available to the enemy the ports of Rangoon, Moulmein, Tavoy and Mergui; the three latter are all connected by rail or road to Rangoon. In addition to these, the enemy could use the port of Bangkok and two lesser ports in the Gulf of Siam, Koh Sichang and Sattahib, both with adequate communications to Bangkok. From here the vital Burma-Siam railway, which was completed about the beginning of the period under review, could transport supplies to Moulmein, thence across the Salween by ferry to Martaban, rail again to the Sittang River where the bridge was down, once again a ferry, and so to all points of use by rail. Among the measures designed to deny these facilities to the enemy was the laying of a total of 89 mines in the harbours of Rangoon, Moulmein, Tavoy and Mergui, and, further afield, at Bangkok and the Gulf of Siam ports. Though the number of mines laid was not large, the results exceeded expectations. Moreover, it must be remembered that the effort involved was considerable, sometimes necessitating flights of 2,300 miles. The enemy's lack of efficient minesweeping equipment caused much delay in the clearance of harbours, and intelligence reports show that considerable dislocation and damage was caused to shipping.

60. Attacks against rail communications accounted for almost 25 per cent. of all operations. Destruction of the larger installations was allotted to the heavy bombers, with particular emphasis on Rangoon, Bangkok and Mandalay. Wellingtons operating by night were directed mainly against railway centres. The Mitchells' (B.25) performance and characteristics made them particularly suitable for railway sweeps and the destruction of bridges. In this connection, the spiked bombs that came into use in March proved invaluable and were used to tear up stretches of the permanent way at intervals over many miles of track. Bridges of strategic importance were attacked continuously and attacks were repeated each time the enemy completed repair work. An excellent example of this was the Sittang Bridge at Mokpalin. Destroyed during the evacuation from Burma, the bridge was repaired after long and arduous work by the enemy. The progress of the work was carefully followed by reconnaissance, and as soon as it was completed the bridge was wrecked once more in a single operation. It has not been repaired since this attack.

61. The overall strategy of rendering each part of the railway system ineffective was exemplified in the spirited low-level attack on the Burma-Siam railway by American Liberators (B.24), the series of attacks on marshalling yards at Bangkok and Moulmein, and the mining of the ferry crossings at Martaban and Mokpalin. At shorter range, the railway from Rangoon to Myitkyina was subject to continuous attacks, with the result that throughout its length there was always one bridge or more out of action. Amongst these bridges which were put out of action were the Mu River, Myittha, Meza, Kyungon, Zawchaung, Budalin, Songon, Natmauk, Tantabin, Swa, Tangon, Ye-u, Sinthe, Pyu, Bawgyo, Pyawbwe, Myingatha, Natkyigon, Daga and Myothit. Whenever intelligence indicated that enemy troops or supplies were moving in quantity, sweeps were undertaken along the stretches of track approaching the battle fronts.

62. Attacks on road facilities and communications began in earnest in April 1944, when the threat to the Imphal Plain assumed serious proportions. One enemy division moving north from the Tiddim area had, as its main line of supply, the motor road leading from Ye-u. Two other divisions attacking from the east across the Chindwin were largely dependent upon the road from Wuntho. Mitchells (B.25) and Wellingtons began on the 18th April an almost daily assault upon these vital arteries and the supplies moving along them. While the former carried out low-level daylight sweeps, the latter took up the rôle of intruders by night, replacing Beaufighters which Third Tactical Air Force considered could not be usefully or economically employed on moonless nights. The sum of these attacks, other aspects of which I have described elsewhere in this Despatch, contributed greatly to the constant shortage and slow transit of men and supplies which dogged the enemy throughout his offensive.

63. The effort by strategic bombers to neutralise the Japanese Air Force was directed primarily to the destruction of airfield installations and supplies. At the beginning of February a large-scale operation by night was undertaken against the Heho group of airfields in conjunction with Beaufighters, who were to follow up the attack at dawn. From the Strategic Air Force point of view, the operation was highly successful, photographs revealing many bomb patterns in vulnerable areas. The Beaufighter attacks were hampered, however, by early morning mist.

64. Of industrial targets, oil installations were one of the primary objectives. A concentrated bombing programme was carried out against facilities at Yenangyaung in which American daylight bombers demonstrated their accuracy to such an extent that twice Beaufighters operating in the area the following night reported large fires still burning. In late 1943 this plant was producing 600 barrels of crude oil daily, from which were extracted 5,000 gallons of petrol. By May, 1944, the daily processed yield had been reduced to 1,680 gallons. Installations at Chauk, Lanywa, and Thilawa were dealt with in a like fashion. Attacks against other industrial areas were reserved for the few large towns where targets

of a reasonable size presented themselves, notably Rangoon, Moulmein, Bassein, Insein and Prome. The Aircraft Factory and Arsenal at Bangkok received many hits from the 106 tons of bombs aimed at it. When considering the relative lightness of the attack, allowance must be made for the distance involved, which is equivalent to a return flight from London to Tunis.

65. While I had not originally planned to use strategic bombers in close support of ground troops, the Commanders on all three sectors of the front requested their help and were accorded it. I have dealt with these operations in more detail in the section devoted to Army Support, where it will be seen that the greater proportion were in direct support of IV Corps in front of Imphal. Wellingtons were initially employed on this task by daylight, with fighter escort, since the Mitchells (B.25) could more usefully be employed on sweeps along the various Lines of Communication. Subsequently, when Wellington crews had to be withdrawn for air supply duties, the Liberators (B.24) were used in a similar daylight rôle. This method of employment of strategic bombers was all the more acceptable to me since monsoon conditions made night bombing wellnigh impossible. The frequency of these attacks increased, and by the end of May No. 231 Group alone had been able to achieve the creditable total of 646 short tons of bombs dropped on Army Support targets.

66. The above duties of Strategic Air Force involved the dropping, from January onwards, of 6,741 short tons of bombs, of which R.A.F. and U.S.A.A.F. dropped almost equal proportions. The distribution of this effort was as follows:

	Per cent.
Military installations, dumps, etc.	54.7
Railroad communications ...	22.6
Airfields and landing grounds ...	10.2
Bridges	5.5
Shipping	3.5
Jettisoned	3.5

67. The Strategic Air Force carried out one more duty during the period, the reinforcement with crews and aircraft of the transport squadrons maintaining the life-line to forces cut off on the Imphal Plain. On 19th May forty Wellington crews were attached to Troop Carrier Command to help the over-worked crews there, and five aircraft and crews were detailed to carry 250-lb. bombs to the tactical squadrons operating at high pressure in the Imphal Plain. Despite bad weather, 544 bombs were delivered by 31st May. In the same period, No. 490 U.S. (Mitchell) Squadron delivered 380 tons of ammunition to the forces defending Imphal. The offensive power which these loads represented contributed to the eventual breaking of the Japanese offensive and enabled the normal transport aircraft to concentrate on delivering other supplies of which the Army was in urgent need.

* * * * * *

IV.—Support of Ground Forces

68. Operations on land were renewed and maintained on a large scale during this period, so that there were greatly increased opportunities for giving support to our land forces. The fact that we possessed and held air superiority enabled full advantage to be taken of these opportunities, and throughout the big battles—first in Arakan and then in Manipur and around Myitkyina—ground support reached dimensions which absorbed a large part of the total effort.

69. The successful provision of direct support to our armies in this theatre is faced by two great difficulties. The first of these is the nature of the terrain over which the fighting was taking place. Much of it is close, densely wooded, or covered with thick undergrowth, so that the recognition of targets presents a problem to even the most experienced crews. The second is the nature and characteristics of the enemy as a fighter on the ground. Three things distinguish him: his tenacity and stamina, which enable him to take great punishment from the air and still retain his fighting spirit; his skill in camouflaging his positions and dumps, which makes it very difficult to locate them from the air or the ground; and his beaver-like propensity for digging himself into the ground by excavations that range from a number of shallow fox-holes to hold one or two men to an elaborate system of bunkers unharmed by all but direct hits from heavy bombs. By virtue indeed of the nature of each, the terrain and the enemy are strikingly suited to each other.

70. The difficult nature of the terrain and the enemy's complementary skill in camouflage were overcome, to a great extent, by the intimate knowledge that aircrews came to have of the country over which they were operating. Another aid to target recognition was the use of artillery or mortar smoke shells. The enemy, however, on several occasions put down diversionary smoke to mislead our aircraft. One remedy to this ruse is the employment of coloured smoke which has recently arrived in the theatre.

71. The enemy's capacity for absorbing punishment from the air without losing his will to continue fighting was countered by the application to his positions of a fire-power or a bomb-load of such a magnitude as would seem in a European theatre to be out of all proportion to the objects it was hoped to achieve, having regard to the forces available.

72. Such a concentration of bombs over any area held by the enemy also helped in finding an answer to the gift of the enemy for camouflage and to the fact that the terrain lends itself to concealment. An area was often found to contain more bunkers than even the most careful and thorough reconnaissance had disclosed. If these attacks were confined to pinpoint bombing of those bunkers whose existence was known, then when the bombing ceased and ground troops followed up, other enemy positions were found untouched by the bombardment. For instance, at Kyaukchaw, attacked on 17th January by heavy bombers, it was thought even after bombing had taken place that there were only three bunkers, whereas there were actually eight. Only complete saturation of an area can ensure a chance of all bunkers being hit or the troops in them being at least held down.

73. The problem presented by the strength and depth of many of the enemy's bunker positions was never properly solved. The

bombs carried by light bombers and fighter-bombers did little damage unless they made direct hits, and the use of medium and heavy bombers for the task was of necessity restricted. Moreover, when heavy attacks were carried out with the help of the Strategic Air Force no really decisive success was achieved, and as yet the Army has not been able to make an effective assault in conjunction with these attacks. What advantage medium and heavy bombers have in the weight of their blow is offset by their greater margin of bombing error, which makes it necessary to allow a safety margin and so forces troops to start their assault at a greater distance from their objective than is the case with light bombers and fighter-bombers. A good example of the difficulty of co-operation between heavy bombers and ground forces is given in the operation at Razabil, which is described later. Of such attacks, the Air Commander, Third Tactical Air Force, noted in his report for this period: "The Army have not yet been able to carry out an effective assault in conjunction with these attacks. . . . However, the accession of Mitchells in a forward location and under Third Tactical Air Force is expected to be a very considerable help in enabling us to put an adequate and timely weight of attack on . . . strongpoints".

74. Another way in which such bombing assisted ground forces was in disclosing the enemy's positions by clearing thick undergrowth from around them. This tactic was of great assistance to our artillery and tanks, but was inclined to be a double-edged weapon in the opinion of the infantry, since not only was the enemy exposed to view, but their own line of advance was also stripped of cover so that they were forced to attack either at night or by a flanking movement.

75. The technique of air attack was determined by the nature of the terrain in which the target lay. Where thick jungle made approach necessary at a height sufficient to locate the target by reference to its surroundings, then dive or shallow-dive-bombing was used. When the location of targets, as for instance on the lines of communication, was not so difficult, then low-level attacks could be carried out. Dive-bombers therefore and fighter-bombers were used principally against pin-points and specified areas, the ground attack fighters against concentrations of troops and supply dumps immediately to the rear.

76. The results of attacks made in ground support could not always be observed from the air, but an analysis of the reports of Army units that followed up the attacks or watched them as they took place, testifies to their effectiveness in terms of men and animals killed and positions weakened, if not destroyed. Although great destruction of life was not necessarily the primary object of these attacks and was not always achieved, the Army was unanimous in its belief that the air support given helped it to advance when the initiative was ours and to hold out and later counter-attack when the enemy were attacking. Army formations repeatedly expressed their thanks to the air force units that had helped them, and further tribute to the effectiveness of this support is to be found in many reports. One of these may be quoted as being typical of many others: "10th May air strike on Japanese in Lynch position (near Tengnoupal) reported by forward troops to be most successful. Bunkers were seen to be blown in and bodies flying about". This was the work of twelve aircraft of No. 42 Squadron.

77. A more intangible result of direct support was the effect that it had on the morale of our troops. It was the opinion, for instance, of the Commander of the garrison at Kohima in April, that the audible and visible evidence of the arrival of air support on the two critical days, the 15th and 18th April, put new heart into his men towards the end of the siege. The obverse side of the picture is given by prisoners of war who bore complete witness to the effectiveness of our bombing and machine gunning.

* * * * *

78. In November and December, squadrons gave the limited scale of support called for by Fourteenth Army, which was then occupied in regrouping for forthcoming operations.

79. In the 4 Corps area the enemy advanced into the Chin Hills and occupied the line Fort White—Falam—Haka. They were held south of Tiddim, and both sides spent the rest of the year consolidating their positions. During this phase Nos. 45 and 110 Vengeance Squadrons did good work in direct support and in destroying supply dumps particularly around the area of Milestone 52 on the Tiddim—Kalemyo road.

80. During the same period in the Arakan, 15 Corps was also regrouping in preparation for an advance, and many attacks were made on enemy positions in order to inflict casualties and disperse enemy troops. Among the targets successfully attacked were the Headquarters of the Japanese 55th Division at Rathedaung.

81. In January the rate of effort increased to support the several intended thrusts forward. 4 Corps took the offensive during this month, and on the 25th occupied Kyaukchaw in the Atwin Yomas, an enemy fortress that blocked their line of advance from Tamu to Yuwa on the Chindwin. From the air point of view this was the most interesting operation of the month, since the first ground assault was preceded by an air attack in which aircraft of both the Strategic and Tactical Air Forces took part. Eighteen U.S. Liberators (B.24) and nine Mitchells (B.25) escorted by R.A.F. fighters, dropped thirty-five tons of bombs including depth-charges; twenty-four Vengeances and twelve Hurricanes dropped eighteen tons. The bombing was accurate and the whole area of jungle and undergrowth was covered. On the other hand there were no direct hits on bunker positions, and the near misses did little damage to personnel or to positions. The attack took place at 16.30 hours in the afternoon, but the Army did not advance until 08.30 hours the next morning, by which time the effect of the bombing had mainly worn off. The unintended result of the operation, therefore, was that the Army's advance was made more difficult by the lack of cover where blast had laid the undergrowth flat.

82. Meanwhile in Arakan, 15 Corps had begun to move forward shortly before Christmas towards the line Indin—Kyauktaw. At the beginning of January, Maungdaw was taken and the approach towards the Maungdaw—Buthidaung road was continued till the

end of the month. The major part of the available direct support effort was now being expended on this front, and our advances at Buthidaung and Maungdaw were both preceded by intensive dive-bombing of enemy strongpoints. More than once the two Vengeance squadrons, Nos. 82 and 8 I.A.F., mounted nearly fifty sorties between them in a day. In the Arakan too this month, the Strategic Air Force took part in direct support bombing to clear a salient in anticipation of the general advance. The target was a position near Razabil, another enemy fortress, three miles east of Maungdaw. The attack was carried out by sixteen American Liberators (B.24) and ten Mitchells (B.25), with an escort of R.A.F. Spitfires and Hurricanes, preceded by twenty-four R.A.F. and I.A.F. Vengeances which indicated the target. The majority of the bombs fell in the area, one 2,000-lb. bomb obliterating the top of a small hill containing enemy positions, but again there was an appreciable time lag before the Army moved to the assault, and the enemy appeared to have suffered no appreciable or lasting damage from the bombardment. The area of attack was 1,000 by 600 yards and the bomb load 145,250 pounds. The target area was too large for the weight of the bombardment, and it is clear that, to be really effective, future attacks will have to be more concentrated.

83. Early in February, the enemy, anticipating our intended offensive by four days, himself attacked in the Arakan. His plan was to separate 5 and 7 Indian Divisions, cut off their overland communications, and then destroy them in detail. 224 Group, therefore, instead of assisting this offensive, found itself involved in a very grim defensive battle. The enemy's move to outflank 7 Indian Division reached as far as Taung Bazaar, harried the whole time by the two Vengeance squadrons. Although there was some difficulty in finding targets in the battle areas, every opportunity was taken to attack reported concentrations, bunkers and lines of communication. Over 600 Vengeance and 800 Hurricane sorties were directed to this end during the month.

84. At the height of the battle, additional weight was lent to the support given the ground troops by the employment of Wellingtons, carrying 4,000-lb. bombs, from Nos. 99 and 215 Squadrons in a tactical rôle. Targets included enemy headquarters at Godusara and Rathedaung, and enemy-held villages were reported completely devastated. In addition one operation with R.A.F. fighter escort was carried out, with excellent results, by nine Mitchells (B.25) of No. 490 U.S. Squadron against the entrances to the tunnels on the Maungdaw-Buthidaung road.

85. By the 4th March the battle in Arakan had been brought to a successful conclusion. There is little doubt that our overall air supremacy was largely responsible for this, since it enabled transport aircraft to drop food and ammunition to 7 Indian Division, which could not otherwise have maintained the fight, the Strategic Air Force to lend its weight against tactical targets, and the close-support squadrons to break up many attacks, to maintain a constant harassing of the enemy's line of communication, and to pin him down in his bunkers while our own troops moved in deployment or attack. Air Commander, Third Tactical Air Force, commenting on operations in this area, says "It is interesting to note that in 15 Corps support was allied with artillery rather more than infantry H.Q. This was considered by the Corps to be more satisfactory in that gunners are more used to thinking in terms of supporting fire. . . ."

86. In the first few days of March the enemy launched an offensive across the Chindwin on the 4 Corps front. This was not unexpected. During February he had shown increased activity on the east bank of the river, and attacks had been made by Vengeances and fighter-bombers on enemy storage areas along the river as far north as the Uyu river and upon small vessels and concentrations of rafts on the Chindwin. The battle in Arakan had precluded any large reinforcement of the Imphal Plain, although during the preparations for operation "Thursday" it became evident that the enemy's preparations threatened Imphal and the Assam railway. It was indeed a question which only events would resolve, whether the fly-in or the enemy's offensive would start first. As it happened, although the first enemy units crossed the Chindwin on the night of the 7/8th March, the fly-in was begun on the 5/6th, in sufficient time to release important air resources for dealing with the new situation. Had the reverse been the case, the demands of defence and counter-attack against the enemy's thrust and of support for the fly-in could not both have been fully met. The brunt of air support was now switched from the 15 Corps to the 4 Corps front.

87. The Army's intention was, in the event of Long Range Penetration Brigades creating a favourable situation, to push forces across the Chindwin. To give air support to these forces airfields had been developed in forward areas, including one as far forward as Tamu. Now, however, instead of fighting in support of an offensive, direct support squadrons again found themselves taking part in a defensive battle, and Tamu itself was overrun.

88. Having crossed the Chindwin the enemy pushed onwards towards Imphal by the Tamu and Tiddim roads, and towards Kohima through the Somra hill tracts and from Homalin via Ukhrul. Air support to meet the threat was provided to the maximum from the resources available, the two Vengeance squadrons already on this front being joined by No. 82 Squadron from the Arakan and, towards the end of the month, by No. 7 I.A.F. Squadron. There was also at this time a welcome increase in the number of Hurricane squadrons equipped to carry bombs. No. 42 Squadron had been so equipped since January, No. 34 since the end of February; now, at the end of March, No. 60 and No. 113 Squadrons, too, began to carry out bombing operations.

89. In April Kohima was seriously threatened as well as Imphal, and support was consequently divided between 4 and 33 Corps, although till May the greater part of the effort was centred around Imphal. The four Hurricane fighter-bomber squadrons flew over 2,200 sorties, the majority of which were in the Churachandpur area, on the Imphal-Tiddim road, against the road block set up at Kanglatongbi on the Imphal-Kohima road, against concentrations of enemy troops attempting to

open the Tamu-Palel road westwards, and against 31 Division which was operating against Kohima. The four Vengeance squadrons flew over 2,000 sorties during this month. Their bombing was extremely accurate, and in addition to direct support tasks they attacked enemy dumps and camps. On the 8th April No. 82 Squadron carried out its last operations on this front and then rejoined No. 224 Group. Over 750 sorties were flown by Hurricanes in offensive sorties against fleeting targets and troop positions.

90. In May, direct support operations centred around Kohima, where the town itself and the Aradura Spur to the south were eventually cleared of the enemy after intensive attacks by Vengeances and Hurricane fighter-bombers against bunker positions and slit trenches. To the south of Imphal, where the enemy made several attacks on the Tiddim road from the west and also on Bishenpur, fighter-bombers and ground-attack fighters attacked concentrations of enemy troops and vehicles. Further south on the Tiddim road, Moirang was also attacked by fighter-bombers and Vengeances. During this month Vengeances flew over 1,000 sorties on the 4 and 33 Corps fronts and Hurricane fighter-bombers 1,693.

91. In this battle the Strategic Air Force again assisted with its heavier striking power. In May the Wellingtons of Nos. 99 and 215 Squadrons flew 125 sorties against tactical targets, American Liberators (B.24) 12, and Mitchells (B. 25) 106. Apart from one attack on the Mintha-Tamu road, the whole of this effort was made against targets on the Imphal-Tiddim road, especially in the neighbourhood of milestones 120 and 87, two points of great tactical importance in preventing enemy reinforcements from coming up the road. Attacks against enemy strongholds included one against the village of Ningthoukhong, which was accurately bombed by forty-eight Wellingtons and Mitchells (B.25) on the 9th May. Once again, however, the enemy withstood the effects of the bombardment and was able to repulse the subsequent assault by ground troops.

92. The enemy's efforts to deploy in the Imphal Plain during the month were decisively defeated by the Hurricanes and Vengeances which attacked at extremely short intervals any concentrations in the foothills reported by ground troops through the Army Air Support Control operating at a high standard of efficiency. By the end of the month, Fourteenth Army were going over to the offensive and it was possible to predict that the threat to Imphal had been averted. Constant attacks on the tracks through the jungle which served as his Lines of Communication had prevented the enemy bringing his full potential strength up to the perimeter of the plain, and the effectiveness of air attack in thick jungle had impressed on him the futility of advancing over open country without overwhelming forces. The attacker was becoming the attacked; the period of attrition and defence was over, and the squadrons supporting 4 and 33 Corps could look forward to the prize for which all air forces hope—the annihilation of an enemy in retreat.

93. Positive results in the form of men killed, storage areas devastated, and transport destroyed are hard to achieve against an enemy with such a high standard of camouflage and concealment who, when on the offensive, moves in small groups with little impedimenta. No army can maintain its standard of camouflage in retreat, however, and as this despatch is being written, the air forces in this theatre are proving again what has been and is being demonstrated in every other theatre of war, that an enemy experiencing overwhelming pressure from advancing ground forces provides the best targets for air attack. The experience gained by Army Commanders, who have come to realise the limitations and possibilities of air support during the period of trial, is now paying full dividends, the results of which should form an impressive achievement during the monsoon operations now beginning.

94. During these six and a half months the American squadrons of the Northern Air Sector Force had, as their primary task, the maintenance of the air superiority necessary to guarantee the safety of the air route to China and of the bases of the Air Transport Command. They were also, however, responsible for giving air support to General Stilwell's Chinese-American Forces in their advance down the Ledo Road, which culminated in the assaults on Kamaing, Mogaung, and Myitkyina.

95. By February the ground forces had successfully advanced as far as Maingkwan in the Hukawng Valley, and the Mustangs and Kittyhawks comprising the force had given valuable support in the form of attacks against camps, concentrations of troops, M.T. and stores, both in the valley and along the road from Kamaing to Mogaung. The work of ground attack squadrons in sweeps along the flanks of the road was reported by prisoners of war as particularly effective. Liberators (B.24) and Mitchells (B.25) were also used in attacks on this sector of the front, dropping 155 tons of bombs on Kamaing, 93 on Mogaung and 40 on Myitkyina. This support continued when the Hukawng Valley had been left behind, and by the end of the period covered by this despatch Mogaung was being invested by ground forces and the main strip at Myitkyina, taken on 17th May, was in the hands of the N.A.S.F., forming a potential advanced all-weather base.

* * * * * *

V.—Attacks on Communications

96. The comparative lack in Burma of large static targets suitable for heavy bombers has been offset by the extreme vulnerability of the Japanese lines of communication. No. 27 Squadron, R.A.F., has been operating on Beaufighters against these communications since January, 1943, and No. 177 Squadron, R.A.F., similarly equipped, from September of the same year. As a result of their persistent and ubiquitous attacks, both by day and by night, the enemy has been driven to remove the main weight of his transport from road to river and from river to rail. His major movements have been restricted to the hours of darkness, and for protection during daylight he has been compelled to resort to an ingenious and complex system of camouflage coupled with the establishment of an extensive network of gun posts as a supplement to his more orthodox anti-aircraft defences. The Taungup Pass road, the shipping on the Irrawaddy, the Ye-u and Myitkyina railway lines, as examples, have long

afforded daily targets for Beaufighters and, latterly, Lightnings (P.38) and Mustangs (P.51). In November, 1943, there occurred an event of prime importance as regards the supply problem of the enemy troops in Burma—the opening of the Burma-Siam railway. This did not diminish the importance of the routes of Northern and Western Burma, but it did bring into strategical prominence their relationship to these routes from the south and east. New objectives such as the railway junction at Thanbyuzayat, the ferry termini at Moulmein and Martaban, the bridge over the Sittang river at Mokpalin and in general the railway system north, south and east of the all-important junction at Pegu became of cardinal significance.

97. The armament of the Beaufighters of Nos. 27 and 177 Squadrons, consisting of four 20 mm. cannon and six machine guns, proved very suitable weapons for attacking the river-craft, motor transport, rolling stock and locomotives on these routes. They first reached Moulmein on 27th February; thereafter they regularly attacked targets as far south and east as the Burma-Siam railway itself, and the terminus of the main Siamese railway to Bangkok at Chiengmai.

98. In January, 1944, a third squadron of Beaufighters (No. 211) began to operate under my command using rocket projectiles (R.Ps.). The enemy had by this time instituted a system of pens and shelters to protect his locomotives, and although a target thus protected was immune from cannon and machine-gun fire, it was often vulnerable to R.P. attacks. Another development rendered the advent of rocket projectiles even more timely. The opening of the Burma-Siam railway now allowed the Japanese to bring replacement engines into Burma by this quick and easy route. Accordingly, the emphasis of attack was moved to the more permanent installations on Burmese and Siamese railway systems, since the destruction or damaging of locomotives was not now so serious to him. In attacks on stations, water-towers, curved portions of the track which could not easily be replaced, and bridges, the rocket projectile proved a valuable supplement to existing weapons.

99. The delay fuse which was all that was available with which to arm R.P.s was soon found to be unsuitable for attacks on bridges, and their destruction was left more and more to bomb-carrying aircraft of both the Strategic and Tactical Air Forces. I have dealt in more detail with this aspect of strategic bombers' work in the section devoted to their activities. In attacks by tactical aircraft the long range of Mustangs (P.51) and Lightnings (P.38) was exploited to the full. The Shweli suspension bridge for example had often been attacked by bombers but its position rendered bombing from any height difficult. Fighter-bomber attack was not possible until the long-range Mustangs (P.51Bs) of No. 1 Air Commando Unit arrived. Immediately after their arrival the bridge was destroyed by them in April and its emergency replacement a fortnight later. Other attacks on communications by Mustangs (P.51) and Lightnings (P.38) included many against the vital Mandalay-Myitkyina railway particularly on the section between Shwebo and Wuntho which fed both the divisions attacking Imphal and the forces opposing Special Force.

100. Although not primarily intended for attack on rivercraft, the 40 mm. cannon, with which the Hurricane IIDs of No. 20 Squadron were fitted, did great damage to hundreds of assorted craft with which the enemy supplied his forces dispersed among the waterways of the Arakan coast. This squadron began to operate in December, 1943, using A.P. shells. In February, H.E. ammunition became available and the rate of destruction increased. Craft when holed could no longer be beached, but disintegrated in the water, with the inevitable instead of occasional loss of their cargo. When, finally, aircraft with additional internal tankage arrived, the effective radius of attack was extended south of Akyab, and the rate of destruction reached a peak which seriously hindered the reinforcement and supply of all Japanese forces occupying the coastal region from Cheduba Island northwards to the front line, a distance of roughly 150 miles.

101. The damage and hindrance that the enemy suffered from these widespread attacks are hard to assess, but one criterion of their effectiveness was the energy with which the Japanese attempted to defend their communications. The statistics show that in 1,276 effective sorties by R.A.F. long-range fighter aircraft, 35 were destroyed by enemy action or did not return from operations, and 29 were seriously damaged by enemy fire, but no statistical summary can adequately record all the damage and delay that the enemy suffered. For example, it was estimated that in April reinforcements travelling from Bangkok to Manipur took six weeks to reach their destination.

* * * * * *

VI.—General Reconnaissance

Control and Planning.

102. The vast areas of ocean for which aircraft in this Command were responsible in November precluded the density of patrol that was desirable. Moreover, it was difficult to maintain a sufficiently close liaison with those formations responsible for the security of sea communications in neighbouring areas. In December, however, a new directive from the Chiefs of Staff enabled a more clear-cut policy to be introduced and better defined the system of control and responsibility. The boundaries of the Naval C.-in-C.'s Command were extended to include Aden. This facilitated co-operation with coastal aircraft there, which were, in the interests of consistency, to come under my command. I thus became responsible for all flying boats, G.R. landplane and coastal striking force units allotted for operations in the Indian Ocean, the Mozambique Channel, the Gulf of Aden, the Gulf of Oman and the Bay of Bengal. Day-to-day operational and administrative control remained with the A.O.C. in whose command the aircraft were located. Broad control was normally to be exercised through A.O.C. 222 Group, who was to work in close liaison with the appropriate Naval authorities and South African Air authorities. Thus A.O.C. 222 Group had a dual responsibility, combining with the command of his own Group the organisation and direction of all G.R. operations in the Indian Ocean. To aid him in this latter task a new body was formed—Indian Ocean G.R. Operations, or "IOGROPS"—with a Deputy A.O.C. and separate staff.

103. In order to make the best use of the relatively few aircraft available to patrol these areas, a new policy was introduced with the object of making G.R. forces as mobile as possible and to concentrate in areas where submarines were known or suspected to be. In addition, the generous allotment of air escort to convoys in areas where no threat existed was reduced to the minimum, and flying hours were thereby conserved for concentrated action where necessary.

104. C.-in-C. Eastern Fleet is in complete agreement with this policy and co-operates to the fullest extent.

105. The concentrations of aircraft needed to implement the policy and carry out intensive patrols when necessary demand considerable shuttling of aircraft between bases. These movements are used to good effect by routeing the aircraft over shipping lanes so that they may carry out traffic patrols while in transit.

106. One of the first tasks carried out by "IOGROPS" was an investigation of the practical application of the system used in the Atlantic, by which air cover is given to shipping in accordance with the degree of risk and the value of the convoy. By the standards of this procedure—known as "Stipple"—the wastage in flying hours during May was assessed as follows:

	Per cent.
(*a*) Aden area	17
(*b*) East Africa	59
(*c*) 225 Group	55
(*d*) 222 Group	2½

107. Negotiations are now proceeding with C.-in-C. Eastern Fleet to introduce the procedure, modified to suit local conditions, in this Command.

108. Finally, all operations by Indian Ocean General Reconnaissance aircraft are in process of coming under the control of five Naval Air Operations Rooms at Bombay, Vizagapatam, Kilendini, Aden and Colombo. The resultant cohesion over the areas controlled, and closer liaison with the Navy of which these N.A.O.R.s will permit, promise well for future control of coastal aircraft in this theatre.

* * * * *

Operations.

109. A decrease in enemy submarine activity in November permitted a reduction in air escorts and a subsequent saving in aircraft hours.

110. The lull was utilised to carry out a more intensive training programme as a necessary initiation for No. 203 Wellington Squadron, newly arrived at Santa Cruz; and as a refresher for the other squadrons already operational but in need of training to fit them for their more versatile work in the revised policy of mobility and aggression then being introduced. Otherwise, traffic patrols and shipping escorts were the main features of G.R. activity.

111. Survivors of a tanker torpedoed in the Seychelles area were located and rescued as a result of continuous sorties flown from the 28th January to 30th January. One Catalina crew flew for forty-two hours on the 29th-30th and was particularly mentioned in the telegram of congratulation from C.-in-C. Eastern Fleet. The sinking of this tanker was the only one of the month in either 222 or 225 Group areas.

112. December opened with considerable activity and movement of G.R. aircraft in order to protect large shipping movements in the Bay of Bengal. To relieve the congestion on the Bengal communications system, Fourteenth Army were to be reinforced from east coast ports, and extensive patrols were provided to cover the entire eastern approaches to the Bay of Bengal. This involved a large-scale and rapid movement of forces over distances varying from 1,000 to 1,400 miles to concentrate suitable aircraft in strategic positions.

113. Round-the-clock patrols began at first light on the 6th and finished at midday on the 9th as the ships reached Chittagong. The redeployment between Groups, and the conduct of the operation were notable for the high state of efficiency and serviceability maintained. During the operation there was only one sighting of a submarine, thought to be a Japanese of the "I" class. Unfortunately the Catalina was not positioned for an immediate attack and further searches failed to locate the enemy again. Two enemy aircraft were sighted over the Bay of Bengal but were not allowed to come within range of the surface vessels.

114. On the 23rd December the enemy torpedoed the s.s. Peshawar in convoy off the south-east coast of India. The attack was made in perfect weather at midday and while a Catalina was escorting. This was the first example of such an attack while escort was provided. Continuous day and night cover and a hunt to exhaustion was instituted, but apart from a report from the same convoy on the 25th, which caused an extension of the air cover, no other sightings were made.

115. On the 27th, H.M.I.S. BERAR (escort vessel) carried out a submarine attack near the south-west tip of India without any known result. A Catalina of 225 Group witnessed the attacks, and the detailed report and photographs taken by the aircraft's crew were of great value in assessing the results. Further south-west, on the same day, a merchant vessel was torpedoed, and to counter the threat to the many convoys in these waters, Catalinas were moved from Ceylon to Kelai, and Addu Atoll was reinforced.

116. Since commitments in 222 Group were heavy, especially in affording air cover to units of the growing Eastern Fleet, Beauforts were used to escort coastal convoys, and long-range aircraft reserved for the forward island bases and the Australia-Colombo convoys.

117. During this month No. 354 Liberator (B.24) Squadron took over the G.R. patrols previously flown by Wellington medium-bomber squadrons, and extended them to cover the N.E. Bay of Bengal, and the Arakan coastal areas. No sightings of enemy surface or underwater forces were made during these patrols, but this did not detract from their value as negative reconnaissance. Several small craft off the Arakan coast were attacked and sunk with bombs and gunfire.

118. The early part of January was conspicuous for the dearth of enemy activity in southern and eastern waters, in spite of the

increased number of convoy sailings and movements of naval forces. One U-boat was known to be in the Maldives area, and on the 16th another made an attack off Pondicherry, sinking one vessel. A Catalina assisted in the rescue work, but the offensive anti-submarine search which was immediately instituted proved fruitless. What was probably the same submarine was sighted and attacked by a Catalina of No. 240 Squadron returning from a convoy escort on the 22nd. Probable damage was done in spite of the difficult conditions of light and angle of attack, and a hunt to exhaustion was immediately initiated using Catalinas of both 225 and 222 Groups. The enemy was not destroyed, although depth-charges were dropped on a possible sighting, and no further attacks were made on convoys in the area.

119. 225 Group aircraft continued to search for the submarine until after dawn on the 25th, but the 222 Group detachment returned to Ceylon to provide cover for units of Eastern Fleet. Beauforts carried out anti-submarine sweeps in front of Trincomalee harbour, while the Catalinas escorted the arriving ships to port.

120. In spite of defensive air patrols, one independently routed merchant vessel was sunk in the Maldives area, but aircraft again located survivors and guided a cruiser to the spot.

121. Considering the great amount of shipping activity, the month witnessed comparatively few attacks. It is probable, however, that enemy submarines were being employed on reconnaissance, particularly of the growing concentration of naval forces. There is no doubt that the provision of patrols and escorts of the greatest density possible with the forces available was responsible for denying to these enemy reconnaissance submarines much useful information.

122. In February the number of enemy submarines estimated to be in the Indian Ocean rose to ten, and patrol activity was intensified to meet the threat. It became necessary to augment air cover for the threatened areas around Ceylon with Catalinas and Wellingtons from 225 Group. Sinkings were heavy during the month, but one submarine was destroyed by escort vessels with the co-operation of the covering aircraft, and another, after it had sunk H.M.T. KHEDIVE ISMAIL, by H.M. destroyers who were guarding the troopship in such a strength that no air escort was deemed necessary.

123. The sinkings necessitated many rescue operations by aircraft, and the survivors of three ships were located and covered while surface craft were guided to them. The outstanding rescue was that of survivors of a ship torpedoed fourteen days earlier 800 miles from the mainland.

124. The other major operation of the month, which absorbed a considerable number of aircraft hours, was the cover given to a slow-moving floating dock from Bombay to Trincomalee—cover which would probably not have been afforded had the "Stipple" procedure been in force.

125. Towards the end of February there arose a potential threat to the east coast of India from the move of a considerable portion of the Japanese Fleet to Singapore. Plans were laid for the assembly and despatch of air striking forces including all heavy bomber squadrons should the occasion arise. Bases in Southern India and Ceylon were prepared and stocked for the possible advent of large forces from Bengal, and No. 200 (Liberator G.R.) Squadron from West Africa and No. 47 (Torpedo) Beaufighter Squadron from the Mediterranean arrived as reinforcements. No. 27 (Coastal Fighter) Beaufighter Squadron was detached from Bengal to work with No. 47 Squadron at Madras. The threat did not materialise but the organisation built up has been retained in skeleton form.

126. March witnessed a peak of activity which began on the first of the month with a hunt to exhaustion following the sinking of a merchant vessel twenty-five miles south-west of Galle. In the forty-fourth hour of the search a Catalina sighted and attacked a surfaced submarine by moonlight. The enemy U-boat was not seen after the attack, and although it was probably damaged the search was continued for two more days.

127. Further enemy attacks resulted in two sinkings in the Arabian Sea, four in more southerly waters, and one of a troopship in the northern Bay of Bengal, an area hitherto almost completely immune from submarine attacks. There were regrettable delays in reporting the sinking, and thus the assembling of forces to search for the submarine, but the limited number of aircraft available to 173 Wing which controlled the area, eked out by Beaufighters from 224 Group, carried out a modified search until the arrival of reinforcements. The flying effort and quick turn round of the few aircraft available, however, was particularly creditable, one Liberator of No. 354 Squadron being airborne again forty-seven minutes after landing.

128. No. 230 (Sunderland) Squadron arrived in the Command during March, but it did not begin to operate fully until later, since lack of spares kept its serviceability low.

129. In April the number of submarines operating in the Indian Ocean fell to an estimated two. One was believed to be in the Maldives area and the other to be operating on the trade routes between Freemantle and Colombo, out of range of aircraft operating from the Maldives. Beaufort aircraft were thus employed on coastal convoy escort, and long-range aircraft were held at Ceylon in readiness for a threat further afield. No ships were sunk in the waters around India during the month, and the gradual change-over from the defensive to the offensive was symbolised in this month by the successful escort provided to Eastern Fleet in their strike with carrier-borne aircraft against Sabang in North-West Sumatra.

130. In May, Eastern Fleet was again covered during its journey to and from Sourabaya. During the month, it became possible to discontinue the Arakan coast patrols. No sightings of any importance had been made in the six months that the patrols had been carried out, and the continued absence of a threat in this area now allowed of a diversion of these aircraft to more positive work.

131. The loss of Liberators (B.24) engaged on photographic reconnaissance of the Andamans, Nicobars and North Sumatra led

to the investigation of enemy radar by two specially equipped Liberators allotted to my Command. Twenty-six sorties were flown from Ceylon to the Andaman Islands, Car Nicobar, Simalur, and Northern Sumatra. Conclusive evidence was obtained on these flights that the enemy employ in this theatre beam-swept radar of the type found on Attu and Guadalcanal. At the end of April the aircraft were transferred from Ceylon to Bengal in order to operate along the Burma coastline and in the Bangkok area, but the results of their investigations have not been sufficiently conclusive to be included in this despatch.

132. Searches carried out by coastal aircraft during the period assisted in the location and rescue of a total of 535 survivors from torpedoed vessels in the waters around India.

133. The results of coastal activity are seldom tangible, and an account of the work of forces engaged on this work must of necessity draw attention to those occasions when the enemy's positive attacks overcame the efforts of negative reconnaissance. Such attacks in the area patrolled by India and Ceylon-based aircraft did not and could not meet with sufficient reaction to provide a continual deterrent to the enemy's intrusions, nor was the rate of destruction of submarines high enough to prove a serious obstacle to him, since the maximum forces available in India and Ceylon during the period consisted of ten long-range and three medium-range squadrons.

* * * * * *

VII.—PHOTOGRAPHIC RECONNAISSANCE

134. In November it was the intention that No. 681 and 684 P.R. Squadrons should eventually come under the control of Strategic Air Force. To this end No. 171 Wing, which had originally been formed as a Tactical Reconnaissance Wing, was moved from Southern India to take over administrative and operational control. The 9th P.R. Squadron, U.S.A.A.F., was still under the control of 10th U.S. Army Air Force.

135. No really long-range reconnaissance had been carried out by this time, since No. 684 Squadron had only recently received Mosquitoes, and there had not been time to explore the potentialities of this aircraft under tropical conditions. The radius of P.R. cover on the 1st December, excluding the Andaman Islands, was only 680 miles. On 15th December the first cover of Bangkok was obtained and provided much valuable information regarding Japanese dispositions and their use of lay-back airfields. Although Bangkok is now a routine target, the sortie was at that time an outstanding achievement, since the range of the Mosquito in this climate was still undetermined.

136. At this time the main rôle of the two squadrons was to provide airfield cover for aircraft counts, to photograph communications and areas indicated by the Army, and to cover potential target areas for attacks in Burma. Twice weekly sorties were flown to Port Blair in the Andamans to secure information on the enemy's anti-shipping activities. In January one of the few Mitchells (B.25) belonging to No. 684 Squadron photographed Mergui on the Tenasserim Coast for the first time, involving a journey of 1,600 miles. Survey photography was also begun during the month to meet a long-felt need for accurate and up-to-date maps of Burma. By the end of May, not only immediate battle areas had been surveyed, but also approximately 57 per cent. of the whole of the country. The remainder of the effort was absorbed in assessing the extent to which communication facilities were being used and the damage inflicted upon them. The record number of eighty airfields were covered in one day, as was the greater part of the Burma railway system, allowing of an accurate aircraft count and a reliable estimate of the engines and rolling-stock in the country. Another valuable result of the large-scale airfield cover was the issue of target mosaics to long-range fighter squadrons, which proved of great assistance, especially when airfields were attacked.

137. Meanwhile, the American P.R. squadron equipped with Lightnings (F.5) was still working independently. This often resulted in duplication of effort, and closer co-ordination was clearly desirable. Thus on the 1st February, Photographic Reconnaissance Force was formed, incorporating No. 171 Wing Headquarters. This month and March were notable for many sorties to obtain airfield information and to assess the damage to communications by aircraft of Third Tactical Air Force and No. 1 Air Commando Force. Survey work was also carried out, together with regular flights to the Andamans and the vast area bounded by a line joining Kentung, Sittang, Mergui and Koh Si Chang Island (South-East of Bangkok).

138. Small country-craft were now being increasingly used by the enemy, and the waterways of the Arakan and Central Burma were also frequently photographed to assess the density of traffic and staging points. On 27th March the longest flight yet, of 1,860 miles, was achieved by a Mosquito of No. 684 Squadron when a large stretch of the Bangkok-Singapore railway was covered.

139. In April a substantial increase in the number of Army requests entailed numerous sorties over the battle and reinforcement areas. A Mosquito improved upon the record flight of the previous month by photographing many stretches of railway in the Malay Peninsula, flying 2,172 miles to do so.

140. The advent of the monsoon affected photographic reconnaissance work perhaps more than any. In May, instead of concentrating on the programmes laid down, it became a question of finding areas where the weather was best and photographing the highest priority targets in them.

141. The outstanding achievement of the month was the photography of islands in the Great Nicobar group. The flight was intended to discover if it were possible to reach these islands, but on arrival there was sufficient fuel remaining to take photographs before returning. Short-range squadrons during May obtained routine cover wherever possible and were also instructed to bring back as full a weather report as possible, which proved valuable in planning the next day's sorties. Only three of the twenty-three sorties flown on survey photography were wholly successful. An idea of the achievement in the field of survey photography before the bad weather is shown by the following figures, which represent the

photographing of an area three times the size of England in four and a half months:

Net area covered ...	152,000 square miles (approx.)
Made up of:	
6 in. cover ...	134,000 square miles
12 in. cover ...	18,000 square miles
In addition:	
12 in. cover of areas photographed on a smaller scale ...	38,000 square miles

142. The foregoing account will give an indication of the great advance in the regularity and extent of the cover obtained. Targets as far away as Rangoon, Bassein and Lashio came to be regarded as routine even by Lightnings (F.5) and Spitfire aircraft, while the ranges achieved by Mosquitoes were little less than phenomenal. A high standard of photography and technical work was maintained.

* * * * *

PART THREE

SURVEY OF RESULTS AND LESSONS LEARNED

143. Although territorial gains in the campaign until the end of May were small, the ground won back from the enemy in Northern Burma marked the first step towards the reopening of overland communications with China. The advance of the Chinese-American forces, and the disruption of enemy communications by Special Force which aided it, would have been impossible without the air superiority which had been gained, allowing the free use of transport support aircraft and of fighters and bombers in close support. The same is true of both the less positive achievements of the campaign, the breaking of two large-scale enemy offensives—one aimed at Chittagong and the other at Imphal. Of the attack on Imphal, C.-in-C. 11 Army Group stated: "There is absolutely no doubt that had we not had air supply we should have lost the Imphal Plain, and the position on the eastern frontier of India would have been very grave". He might with equal truth have said "Had we not had air superiority".

144. The campaign established that the employment of air transport in this theatre is capable of indefinite expansion, and yields dividends that could not be gained by any other agency. Moreover, there is scope for a wider range of transport aircraft than obtains in Europe, where thick jungle and high mountain barriers do not impede swift communication. Light aircraft which can land in a space too small for Dakotas are able to carry out a multitude of tasks for commanders, and, by eliminating the feeling of isolation brought on when fighting so far from established bases, have a beneficial effect on the morale of the forces engaged.

145. Close support of ground troops in such terrain has proved the value of accurate bomb and gun attacks in a locality where pin-points are few and targets difficult to identify, requiring a thorough knowledge of the sector. Such knowledge is clearly of special significance in this theatre. Air liaison officers when briefing crews can give targets that would often be refused in other theatres as too difficult for identification. The same is true of dropping zones for supply-dropping aircraft. Crews and staff officers from the European theatre of operations state that the dropping points given here would be considered impossible there. Thus, complete familiarity with the area over which they have to operate has been found essential for crews engaged in ground or transport support work.

146. I have discussed the complexities of close support in Burma in the section dealing with that type of operation. Certain conclusions follow that are worthy of note. First, unless used in overwhelming strength, the heavy bomber is no more the answer against an entrenched enemy than has been found in other theatres. Secondly, if air bombardment on a heavy scale is used, the infantry must follow the attack immediately in order that the limited effect on the enemy is not lost before the attack goes in. Thirdly, specialised trials are necessary to determine the best types of bombs for use against jungle targets. These are now being carried out in this Command. Finally, the fighter-bomber and the dive-bomber, with their extreme accuracy, proved excellent aircraft in close support in difficult terrain. The Hurricane, for example, could be employed against targets in valleys hemmed in by cloud, conditions that demanded high manoeuvrability if the target was to be reached at all. Comparable aircraft of higher performance and with the ability to carry a greater weight of bombs should prove an even more decisive weapon.

147. In combating the Japanese Air Force, the lack of long-range fighters was acutely felt until Mustangs (P.51) and Lightnings (P.38) of the U.S.A.A.F. became available. Once our air superiority was established in the forward areas the enemy utilised bases too far away for normal-range aircraft to reach them. I have recounted later how it was that pressurised long-range tanks were not yet ready for the Spitfires, which could not therefore be used in the rôle of long-range counter air offensive. In this theatre, where distances are so great and the enemy so widely dispersed, long-range fighters are essential both for escort and offensive operations.

148. Finally, it has been proved in this theatre as in others that air power is co-equal with land power, and that Army and Air Commanders should work from a Joint Headquarters if they are effectively to implement the principles of command required by a combined Army/Air Plan. It is according to this broad principle, which has been agreed with the General Officer Commanding-in-Chief 11 Army Group and approved by the Supreme Allied Commander, that future air operations in South-East Asia will be conducted.

* * * * *

PART FOUR

EXPANSION AND DEVELOPMENT

I.—ORGANISATION, REINFORCEMENTS AND BASES

149. The remoteness of this theatre of war from centres of control at home, together with the obligation of developing so economically backward a country as India as a supply base, has inevitably led to the assumption by my Headquarters Staff of functions which rightly

belong to an Air Ministry, a Ministry of Aircraft Production, a Ministry of Labour, a Ministry of Economic Warfare, and perhaps even a Board of Trade. Estimated at its lowest, Air Command, South-East Asia, exercises the powers at least of Deputies to such bodies.

150. The formation of South-East Asia Command resulted in extensive developments in organisation, and a whole hierarchy of Headquarters has been called into being. Headquarters, Supreme Allied Commander, South-East Asia, moved from Delhi to Kandy in March, 1944. It was not possible to move my Headquarters to Kandy at this time, as the expansion and development of my Command necessitated maintaining the closest contact with G.H.Q. India, and so it was necessary to form an Advanced Headquarters, A.C.S.E.A., consisting of a Planning and Liaison Staff, to accompany H.Q. S.A.C.S.E.A. in its move to Kandy. Air Headquarters, India, was set up as an autonomous unit to control operations on the North-West Frontier and assume responsibility for the I.A.F., directly responsible under its own A.O.C. to C.-in-C. India. Eastern Air Command was established to co-ordinate air operations on the Burmese frontier. Its Headquarters moved on 15th April to Calcutta in order to maintain closer touch with its subordinate units—the Strategic Air Force, Third Tactical Air Force, Troop Carrier Command and Photographic Reconnaissance Force. Thus administrative control of American units also gravitated to Calcutta, since this remained the responsibility of Major-General G. E. Stratemeyer in his other capacity, that of Commanding-General of the U.S.A.A.F. in the India-Burma Sector of the China-Burma-India Theatre.

151. In December, 1943, three new R.A.F. Groups were formed—Nos. 229 (Transport) Group, 230 (Maintenance) and 231 (Bomber). Within the period covered by this despatch eleven R.A.F. and I.A.F. squadrons were added to my command either by formation or on transfer from another theatre. In addition, a second flight has been added to Nos. 681 and 684 P.R. Squadrons, whilst at the height of the defence of Imphal, No. 216 Transport Squadron was operating under my command on detachment from the Mediterranean. A further eight squadrons were held in back areas for re-equipment, and seven others changed their battle rôle. The conversion programme has been mainly bound up with the further infusion of Mosquitoes and Spitfires into the Command, while Thunderbolts are also arriving, and plans to re-equip the Hurricane squadrons with them have been formulated. The flow of aircraft in support of this modernization has been steady, though the R.A.F. in South-East Asia remains, as far as aircraft types are concerned, at least a year behind other theatres. Parallel to this expansion and re-equipment has been the rationalisation of the areas for which Groups in India are responsible to correspond with the boundaries of Army Commands.

152. The large programme of airfield development has been continued, with the ultimate purpose of providing accommodation for the approved number of squadrons included in my long-term target. Save for certain new sites in the forward areas and in Ceylon, all development has been of existing airfields. Five airfields west of Calcutta have been developed for the U.S.A.A.F. as bases for V.H.B. aircraft. The need for pressing forward our offensive and air transport operations has been responsible for the expansion of a number of airfields in the Fourteenth Army area east of the Brahmaputra. In Ceylon, work has begun on the development of two new airfields at Kankesanturai and Negombo for heavy aircraft, while, for special operations, runway extension and strengthening of taxi-tracks has been undertaken at China Bay. Work is being started on a plan for reinforcement route development. In this field of development effective use has been made of bitumenised hessian—" bithess "—for both runways and apron hardstandings. The serviceability of this experimental material under monsoon conditions is being closely observed.

153. The procedure of implementing works projects was altered slightly in January, 1944, though the difficulties and delays remained as before. In the Fourteenth Army area, priorities awarded to the R.A.F. services have been liable to alteration by Army commanders without any reference being made to the Air Commander concerned, and without any appreciation of the effect of such alterations on the future of the air offensive. Labour and material has been diverted and moved without giving any notification to the R.A.F. authorities concerned; frequently the first intimation that they receive of such action is the complete cessation of work upon some R.A.F. project.

154. The expansion of establishments connected with the formation of new Headquarters units and the preparation of cadres for the reception of future reinforcements has aggravated the manpower shortage. The overall Command deficiency of effective strength against current establishments has throughout the period been approximately 12 per cent.; but although this deficiency may not appear unduly in excess of the global R.A.F. shortage, nevertheless there has been very severe lack of personnel in individual trades. Since reinforcements in the period reached this Command in only negligible quantity, various alternative sources of supply to meet the deficiencies have been tried. An extensive scheme has been inaugurated for remustering British other ranks from lower trade groups into the more severely deficient higher trade groups, but this, besides merely transferring the shortage from one trade to another, has also meant a loss to effective strength of the airmen undergoing conversion training. The recruitment of Indians both as officers and men to fill the vacancies has also offered some solution, but this has continued only at a diminished rate and it has been very difficult to find suitable officer candidates. Further, some months must elapse even after the period of formal training before such reinforcements can be counted on as fully effective. The question of substitution by women has also been given special attention. The W.A.A.F. mission from the Air Ministry led by Air Chief Commandant Dame Trefusis J. Forbes arrived in February. As a result of her investigations discussions have been begun with the Government of India. Meanwhile W.A.C. (I) recruiting for the Air Forces in India has been at a standstill. It may be added that with the

advent of the decentralised system of establishment control introduced at the end of 1943 manning has been placed on an entirely new basis. Personnel are now demanded against ceiling establishment figures as fixed by the Asian Establishments Committee after consultation with my Headquarters.

* * * * * *

II.—MAINTENANCE AND REPAIR

155. I referred in my last despatch to the uphill task confronting the maintenance organisation in this Command. Without actual knowledge of the conditions, however, many of the inherent difficulties cannot be fully appreciated and deserve further emphasis.

156. The low standard of industrialisation in India throws a heavy burden on the shoulders of Service maintenance personnel, who receive none of the assistance from contractors' working parties that is available at home establishments. Even when it is possible to sub-contract work to civilian firms, the quality of the products leaves much to be desired. Secondly, the vast distances involved call for a wide dispersal of existing stocks and make A.O.G. procedure extremely slow. Thirdly, there is a case for stating that it is not sufficiently realised that more manpower is needed per unit of output than in other theatres of war where spares are more readily available, the sickness rate lower, and base repair not rendered so difficult by the distances between depots and the operational areas, with the inevitable deterioration of damaged aircraft in transit. It is in the light of these and similar difficulties that the work of maintenance and repair should be considered.

157. Expansion during the period was directed mainly to preparations for dealing eventually with the load of 156 squadrons envisaged under the Long Term Target for the Command. Additional civilian capacity has been mobilised; one unit—No. 2 Command Maintenance Unit Trichinopoly—is in process of being doubled in size, and three new C.M.U.s have been formed. No. 322 M.U. at Cawnpore is now in operation, constituting the largest service base repair depot in India. When it reaches full capacity it will be able to deal with major repairs to about 55 large aircraft and with the overhaul of nearly 500 engines per month.

158. A comprehensive organisation has been built for holding reserve aircraft at Aircraft Storage Units and Reserve Aircraft Pools so disposed as to cover the whole of India in three zones. The A.S.U.s hold a two-months' reserve, while the R.A.P.s hold a fortnight's reserve of aircraft ready for immediate issue. This organisation has contributed in no small measure to the high rate of serviceability in squadrons, since it is generally possible to replace aircraft within twenty-four hours.

159. Lack of storage accommodation for holding main stocks has been due to poor progress in the erection of new buildings planned long since, and is a most serious problem at the present time, when approximately 30,000 cases of R.A.F. stores have had to be stored in the open.

160. Often in this Command an aircraft which has crashed or force-landed away from an airfield has to be written off because of the fundamental and ineradicable shortcomings of the transport system. Even if a damaged aircraft can be taken to the nearest railway, the journey thence to a repair depot generally causes so much further damage that a machine that was capable of repair is fit only for write-off when it reaches its destination. One remedy, which is having encouraging results, was the formation of an Airborne Salvage Section in November 1943 to fly to the scene of a crash in a specially fitted transport aircraft which can carry spares, tools and engines. On reaching the site, patch repairs are effected and the damaged aircraft nursed to the nearest depot. The Airborne Salvage Section was given one of the first Dakotas it salvaged, and in that aircraft mainplanes of large aircraft and complete Spitfires have been carried. Up to date, the Section has salvaged eighteen aircraft; the possibility of forming further similar sections is under consideration.

161. An example of the shortage of manpower to meet emergencies arose in April when transport operations necessitated the maximum output of Dakotas both from major inspections and repair. By diverting all available resources, the time taken on the floor was progressively reduced until it became half of what it had been at the end of 1943. This rapid turnover was only achieved, however, by concentrating maintenance personnel on Dakotas at every stage of their travel, with a consequent reduction of work on other types. The output of Dakotas from repair rose from two in December to ten in April and eleven in May. The later figures would have been higher still but for the complete lack of certain spares in this Command which had to be demanded from America.

162. Attempts to produce locally jettison tanks exemplify the difficulties and delays experienced in indigenous production. The tanks were requested in October/November 1943 to implement the long-range fighter policy. The most suitable firm for their manufacture was chosen, but found that it could not work to the required limits laid down in the standard Vickers' drawings, and more generous tolerances had to be permitted. In spite of this, one difficulty after another arose, and metal tanks are still not available for issue. I have already indicated the urgency with which they were needed in the Third Tactical Air Force. As an alternative, a plywood tank was developed and successfully flight tested in December 1943. There were, however, the inevitable delays in getting it into production, and they were not actually available for operational use until May.

163. Simple types of equipment more suited to the manufacturing resources of the country have been produced to the fullest extent, and British production thereby relieved of a considerable burden. The monthly output of supply-dropping parachutes increased from 35,000 to 144,000, and it is anticipated that this figure will be increased to 250,000 by the end of the year.

164. Very close liaison has been maintained with the U.S. Air Service Command. There is a free and complete exchange of technical information and liaison officers are established at both Headquarters. At the time when the Dakota position was acute, the Air Service Command released to the R.A.F. one-third of

their total stocks of Dakota spares in the country.

165. Despite the increased operational effort, the serviceability of squadrons has been well maintained. To some extent the higher wastage of aircraft has had to be met from reserve stocks, whilst the number of airframes and engines under or awaiting repair has increased. It is not certain that this back-log will be fully eliminated during the monsoon, because of shortage of personnel in the various trades and the inherent shortcomings of an organisation of rapid growth working with inadequate local resources.

* * * * * *

III.—SIGNALS, COMMUNICATIONS AND RADAR

166. One of the major problems of the Command has always been the provision of efficient communication facilities over long distances. Trunk telephone and telegraph systems give poor and unreliable service, nor can any appreciable improvement be expected until the Indian Posts and Telegraphs Department is reinforced by Military signals units. Meanwhile the construction of long-distance overhead carrier systems is proceeding, although the maintenance problems that will arise when they are complete cannot be solved without additions to personnel. The six Air Formation Signals units within the Command have worked well in view of their deficiency of seven Officers and 270 British Other Ranks on the 1943 target. Indeed, shortage of personnel has been the greatest single limiting factor in the expansion of signals facilities. The situation was further aggravated by the need to supply to Special Force 185 Wireless Operators and Mechanics and eight Officers. These personnel are still with the Division.

167. The formation of Eastern Air Command resulted in a high degree of co-operation and exchange of technical information between American and British forces, particularly in the sphere of radar. Two G.C.I. stations were sited to cover American bases in the Brahmaputra Valley and another was sited at Shinbuiyang in May to provide early warning for the Chinese-American forces advancing down the Hukawng Valley. Further British and American Light Warning sets were also deployed in the area. Another G.C.I. set has been modified in order that it may be carried by air and made available to U.S. forces. New American Light Warning sets have been tested jointly by R.A.F. and U.S.A.A.F. officers. Moreover, with the prospect of Loran stations for the use of A.T.C. aircraft proceeding to and from China being installed, the operational use of this device by the R.A.F. in the Command has come nearer to realisation. Information on Radio Counter Measures has been provided to XXth Bomber Command and to other American units. Finally, all American units in this theatre have adopted the R.A.F. call-sign procedure.

168. All signals planning for future operations has been undertaken with mobility as the keynote. Specialist signals vehicles have been produced within the Command and are designed to meet needs peculiar to this theatre. Moreover, static establishments in operational units in the Third Tactical Air Force have been replaced by mobile units with the result that Group and Wing Headquarters will in future be self-contained and fully mobile as regards signals requirements. The formation of No. 5 Base Signals Unit provided the cadre for operational training under field conditions. Personnel thrown up by the substitution of Wireless Observer Units by Indian Mobile Wireless Observer Companies were among the first to use these training facilities. It has thus been possible to establish No. 4 Group Control Centre and 104 Mobile Air Reporting Unit which will replace the existing organisation in the Tactical Air Force of Group Operations Rooms, Filter Rooms, etc. The installation of Radar units in barges has been used to good effect already. In November, the most advanced units were those along the Cox's Bazaar—Ramu Road and the terrain in front of these was unsuitable for more extended siting. As soon as the Army had advanced to Maungdaw, an Air Ministry Experimental Station (A.M.E.S.) was anchored off St. Martin's Island. This station, together with a G.C.I. and Mobile Radar Unit (M.R.U.) sited at Maungdaw, provided most useful cover and assisted in successful interceptions off the Arakan coast. G.C.I. sets have also been installed in a jeep, amphibious jeep and an amphibious DUKW.

169. There has been an overall increase of 30 per cent. in navigational aids since November. The installation of static H.F. D/F* stations is practically completed and the delivery of V.H.F. D/F† equipment permitted a start to be made on its erection at all airfields along the main transport and reinforcement routes within India. An up-to-date map is issued quarterly giving details of all aids to navigation, and the combining of R.A.F. and U.S.A.A.F. facilities has been of great value.

170. Details of the airborne investigations of enemy Radar have been given in Part Two of this Despatch.

171. Signals traffic saw a large increase with the creation of Advanced Headquarters, Air Command, South East Asia, in Ceylon, and of Eastern Air Command, Strategic Air Force, No. 230 and 231 Groups in Bengal. Cypher traffic increased from 11¼ to 15½ million groups per month, and a High Speed Automatic W/T channel was installed to handle the increased traffic between Delhi and Colombo arising from the move of the Supreme Allied Commander's Headquarters to Ceylon. To offset the increase rendered inevitable by the creation of many new Headquarters, an airgram service has been started within the Command. That such a step was necessary is an apt comment on the vast distances over which messages have to travel in this theatre.

* * * * *

IV.—FLYING CONTROL

172. Although the value of Flying Control facilities has always been recognised in the Command, development has been hampered by the continued shortage of trained personnel and necessary equipment. An efficient Flying Control organisation has become more and more essential in this theatre where bad weather, a lack of land-line communications, and widely dispersed landing grounds make diversion a

* H.F. D/F—High Frequency Direction Finding.
† V.H.F. D/F—Very High Frequency Direction Finding.

complicated task. Moreover, air transport operations into the Imphal Valley could have been intensified but for the low standard of proficiency among the inexperienced controllers on the few airfields available. Within these limitations, however, much has been done, and its value is evidenced by the fact that at the only two airfields in 221 Group which could be provided with proper flying control, there were in February no avoidable accidents among the four squadrons accommodated there.

173. In November there were only thirty trained British Flying Control Officers in the Command. This small body was reinforced by forty resting aircrew and thirty I.A.F. officers. There were forty main airfields along the reinforcement routes and in Ceylon, with no airfield controllers, no trained airmen and very little equipment, among which these personnel were distributed.

174. In anticipation of the arrival of trained controllers from England, plans were made to institute a full Flying Control organisation in the operational areas and along the reinforcement routes by February. Unfortunately the flow from U.K. was stopped in January and the plan could not be implemented. The urgent needs of operational airfields had to be met by stripping other areas below the safety margin and diluting their establishment with too high a proportion of I.A.F. officers. At the end of May deficiencies on current establishments amounted to 150 officers and 100 airfield controllers.

175. One of the most encouraging features of the development is the progress made towards complete integration with the U.S.A.A.F. Liaison has been pursued since September 1943, and in March of this year a joint conference proposed the setting up of one system of Air Traffic Control throughout the Command. A committee was set up to examine the technical problems involved and make recommendations. These included a Joint Flying Control Board which will meet at intervals and, it is hoped, maintain the unanimity achieved by the initial committee. Application was made to U.S.A.A.F. H.Q. to send to the Command officers trained in the joint system now working in U.K.

176. I therefore anticipate that a unified system of Flying Control will soon be operating throughout the Command, and that every crew will receive standard briefing and standard aids on all flights.

* * * * *

V.—ARMAMENT

177. The slow receipt and dissemination of up-to-date information on armament matters, as indeed in all technical branches, has hindered the work of making the best use of weapons and developing the striking power of the Command. New publications take two months to arrive and an even longer period to reprint and distribute. One remedy has been an extensive use of the microgram service to hasten the process of keeping technical personnel informed on all current developments.

178. Operational failures have been reduced in spite of the fact that fighter squadrons do not possess Armament Officers. It has been found that the stoppage rates on squadrons more than twenty miles from their Wing Armament Officer are from 1.5 to 2.5 times those on squadrons less than twenty miles from the wing. In spite of the fact that there are established posts for only ten squadron Armament Officers in the Command, which are naturally allotted to the bomber squadrons, and that there are many establishment vacancies which have not been filled because of the serious shortage of armament officers, .303 gun failures have fallen from 0.11 to 0.08 and 20 mm. from 2.07 to 1.48 per thousand rounds. Bomb failures have similarly fallen from 0.47 to 0.25 per hundred bombs. The measures which contributed to this improvement were a decentralisation of the training and maintenance branches, a better system of check on failures, and careful distribution of available manpower. To aid in this distribution a certain dilution of I.A.F. personnel has been accepted. These have proved suitable and efficient tradesmen at certain tasks and have enabled the following dilution to be effected:

	per cent.
(i) I.A.F. Squadrons ...	100
(ii) M.U.s	50
(iii) Other non-operational units	25
(iv) Operational R.A.F. Squadrons	25

(provided British Other Ranks are substituted when available.)

179. A number of new weapons have arrived in the Command and come into use, operationally, during the period. Hurricane IID aircraft armed with 40 mm. cannon first operated in No. 20 Squadron in December, 1943. The initial A.P. ammunition was supplemented in February by H.E. which has proved very effective against rivercraft. R.P. has been used by No. 211 Squadron since January. It was at first employed against bridge targets, but the delay fuse was found to be unsatisfactory for this type of attack and no proper facilities were available for modifying it. In view of this, R.P. attacks have been directed against rolling stock, transport convoys, oil installations, factories and rivercraft with good effect. 500 lb. M.C. bombs came into use early in the new year, and in addition to the supply to Bengal, stocks have been built up at selected stations in Southern India and Ceylon should action become necessary against a Japanese Naval Task Force. 2,000 lb. A.P. bombs have been distributed for the same purpose.

180. A 4,000 lb. bomb was dropped on Burma for the first time in November, 1943, against railway targets at Sagaing; its employment since then has been extended both by day and night. Among American weapons which have been introduced since November are parachute fragmentation bombs, 300 lb. spike bombs for use against railway lines, the noses being of indigenous manufacture, and the rocket-gun employed in the same manner as the R.A.F. rocket-projectile.

181. Close liaison between British and American Armament Staffs resulted in much inter-change of information and resources. American aircraft used R.A.F. flares and the R.A.F. used American mines, incendiaries and drift lights.

* * * * *

VI.—TRAINING

182. The re-orientation of the training organisation early in the period allocated responsibility on a geographical basis, and No. 227 Group was no longer regarded primarily as the training group. From January onwards, each group supervised and administered training within its own area.

183. Much of the available resources have been absorbed by the need to convert crews to the latest types of aircraft, since reinforcements arriving in the Command have not been familiarised with these types, and many existing squadrons are re-equipping. The change-over from Vengeances to Mosquitoes, from Wellingtons to Liberators and from Hurricanes to Thunderbolts are the outstanding examples. As a result, it is hoped that there will be five trained Liberator and nine Thunderbolt squadrons by November, and two Mosquito squadrons by October. Wastage replacement crews are trained concurrently and provide a valuable reserve without calling upon outside assistance.

184. Refresher flying training was provided at Poona for 614 aircrew either newly arrived in the Command or returning to operations after a period of rest. Air Gunner Instructor courses, I.A.F. ab initio W/Op. A.G. courses and R.A.F. Pilot Refresher courses have been carried out continuously at Bairagarh in Bhopal where two I.A.F. squadrons (Nos. 3 and 9) also completed armament and gunnery training. The Air Fighting Training Unit gave advanced courses on tactics and gunnery control, through which 71 pilots and 83 gunnery leaders passed, and which were attended by many U.S.A.A.F. personnel. No. 22 Armament Practice Camp carried out six bomber and fighter refresher courses, one of which was attended by No. 459 Squadron U.S.A.A.F. whose results improved markedly during the course. No. 231 Group Navigation School passed 420 aircrew through its courses.

185. I.A.F. G.D. recruiting did not come up to expectations. The following table of output during the period indicates the scale of I.A.F. production and wastage:

From I.T.W.	...	...	224
From E.F.T.S.	...	...	101
From S.F.T.S.	...	...	80
From O.T.U.	...	...	113

186. Ground training was mainly of I.A.F. personnel, of whom 8,049 were admitted to Recruit Training Centres. A fraction over 9,000 I.O.R.s were under training of all kinds at the end of the period. One important task, the training of flight mechanics, was taken over from the Director of Civil Aviation, and as a result the civilian schools were closed or taken over as Schools of Technical Training.

* * * * *

VII.—INTERNAL AIR ROUTES

187. The formation early in December of No. 229 Group of Transport Command enabled me to introduce a stricter supervision of internal transport flying, passenger and freight services, and of the movement of aircraft in India and Ceylon. The need for this had long been apparent but the means had been lacking. One of the more positive results of the decentralisation of control I was able to make was a reduction in the accident rate for the aircraft which came under No. 229 Group's control from 46 per 10,000 in December, 1943, to 13 in May, 1944.

188. The number of aircraft available for internal services continued to be small in comparison with requirements and the distances involved. Since it was necessary to earmark nearly all Dakotas for the replacement of wastages in squadrons operating at pressure on the Eastern frontier, the formation of another transport squadron (the sixth) had to be continually postponed, and the conversion of No. 353 Squadron from Hudsons to Dakotas delayed. This squadron, based on Palam at Delhi, together with the B.O.A.C. and the few aircraft belonging to Indian civil air lines, was all I could make available for the Air Routes. No. 229 Group's task was thus no easy one. In the six months from December to May, Hudson aircraft of No. 353 Squadron flew 7,570 hours on transport work. The age of the Hudsons makes this a creditable figure. It was only achieved by a high standard of maintenance and by using as engine spares such parts from obsolete Mohawks as were available. Six Dakotas were also made available to the squadron in April and May as a detached flight based on Dum Dum. They flew 860 hours in these two months on services between Calcutta, Colombo and Bombay. This flight was given concurrently two Dakotas to maintain a service to China which had formerly been carried out by No. 31 Squadron. Thus this one squadron was operating services extending from Ceylon to Kunming and Calcutta to Bombay.

189. Ferrying and the movement of reinforcing aircraft accounted for an average of over 1,300 aircraft deliveries a month within the Command. These flights were used to the fullest extent to supplement the internal air services. By this means, over 1,060 passengers and 500,000 pounds of freight were flown from Karachi alone.

190. I am glad to say that trunk routes to the United Kingdom have been vastly increased. The weekly R.A.F. Liberator service from Karachi has been doubled and a weekly service by R.A.F. Dakota from Colombo has been started. In May a B.O.A.C. Sunderland began to ply twice weekly from Calcutta. For communications with the Mediterranean there has been since March a B.O.A.C. Ensign service three times a week between Cairo and Calcutta. The establishment of No. 229 Group in my Command, followed by a personal visit of the A.O.C.-in-C. Transport Command and many representatives of his staff has been amongst the happiest auguries for the future that I have to record in this Despatch.

* * * * *

VIII.—R.A.F. REGIMENT

191. The strength of the R.A.F. Regiment throughout has been insufficient to justify the acceptance of full responsibility for the local defence of Royal Air Force Stations and to meet the threat of infiltration by enemy ground raiding parties to airfields and Radar stations. A remedy was sought in November, 1943, whereby the Army agreed to withdraw all static garrisons from R.A.F. stations in areas remote from enemy action, and to provide them at stations where attack was possible. The R.A.F. was to have made a contribution

to the defence of its stations within the limit of available resources.

192. By December, 1943, R.A.F. Regiment personnel had been organised into units with independent establishments. It was possible to form only five field squadrons, the remaining personnel being organised into A.A. flights armed with light machine-guns, since there were not enough officers nor the requisite equipment to allow larger units to be formed. These units functioned with considerable efficiency and, in addition, station personnel instructors drawn from the Regiment trained in defence a large percentage of all personnel in threatened areas.

193. By January, 1944, Army garrisons west of the Brahmaputra had been withdrawn, but no static garrisons had been provided for the more vulnerable stations in either the 4 or 15 Corps areas. The local defence of these stations depended entirely upon the few R.A.F. Regiment Units and the station personnel. Despite repeated representations, the reduction of the Regiment to nearly half its initial strength was insisted upon by Air Ministry, and in February action to remuster personnel to other trades was initiated. The results were seen when in April the Air Commander, Third Tactical Air Force, was obliged to withdraw a number of operational squadrons from the Imphal Valley. I had no alternative but to direct that further reduction of the Regiment, already down to 3,434 all ranks, should be suspended. My Command Defence Officer was sent to England in May to explain the circumstances and to request, not only that the suspension of the Regiment reduction should be confirmed, but that a force adequate for the task of defending airfields and ancillary stations in the battle areas should be provided.

194. I append a comment by the Air Commander, Third Tactical Air Force, upon the Regiment units under his control:—

> "Units of the R.A.F. Regiment have proved themselves of the greatest value in this campaign, of which the insecurity of airfields and warning establishments in forward areas has been a feature. When Radar Stations were established at St. Martin's Island and later in the Maungdaw area, the unusual situation existed of Radar Stations being actually well in advance of the front line and within range of the enemy's guns and night patrols. It says much for the R.A.F. Regiment personnel that the Radar crews enjoyed undisturbed conditions in which to carry on their work under such trying conditions. It has proved to be quite unsound to rely on the Army maintaining troops for local defence in times of crisis when the land situation deteriorates. This is the time when they are really needed by us, but this is the time when they are invariably withdrawn to take part in the land battle".

* * * * *

IX.—Air Sea Rescue

195. The Air Sea Rescue organisation in this Command has been based on that of the United Kingdom, with the necessary adaptations for local conditions and the scale of equipment that is available. The responsibility for operations has been delegated to the A.Os.C. of Groups, to whom in turn the Group Controllers of Naval Air Operations Rooms, keeping constant watch, are responsible for initiating such operations.

196. Officers responsible to their respective A.Os.C. for the efficient arrangement of Air Sea Rescue and for keeping squadrons informed of any new developments in methods of search and ancillary equipment have been established in Commands and Groups as follows:—

Eastern Air Command—One Squadron Leader.
Third T.A.F.—One Flight Lieutenant.
No. 225 Group—One Squadron Leader; One Flight Lieutenant.
No. 222 Group—One Squadron Leader.

197. Twelve Warwicks have now after some delay arrived in India and are undergoing major overhaul at Karachi, Allahabad and Jessore. Seven Sea Otters are being off-loaded at Karachi and crews have been detailed to take a conversion course as soon as the aircraft become serviceable. When they are ready for operational flying, these aircraft will join No. 292 Squadron, the Headquarters of which will be at Jessore.

198. Meanwhile searches have been carried out by the four Walruses already in the Command, and by operational aircraft, which, whenever possible, carry the Lindholme Dinghy Gear. Experiments are being made to fit this gear to Liberators.

199. Little progress has been made in the formation of A.S.R. marine craft and Units. This is chiefly due to the slow rate at which launches have been delivered. By July, 1943, there were nine in the Command. Between this date and January 1944 no more arrived, and as a consequence no additional units could be formed. With the improvement, however, in the shipping position, four launches have recently arrived from the United Kingdom and four from the U.S.A. There has also been notification of another seventeen being shipped to this Command.

200. Air Sea Rescue Units have been formed or are now in the process of forming at the following places: Chittagong, Maiakhal Island, Calcutta, Dhamra River, Vizagapatam, Madras, Cochin, Bombay, Karachi, China Bay, Colombo, Galle, Kayts (Jaffna), Jiwani and Jask (Iraq). The craft, however, allocated to most of these units have not yet arrived in the Command, or are still being fitted out and so are not yet operational.

201. The maintenance of these craft has been a difficult problem owing to the limited supply of spares and special tools, to the great distances between operational areas and the overhaul workshops, and to the lack of transport that prevails. The problem has been met by using naval facilities where possible for shipping and engine overhauls and by locating rescue craft by types, so that they are within as easy reach as possible of the workshops capable of doing the overhaul of their respective types of engines.

202. Thirty-seven aircraft in all were searched for. The number of aircrew personnel in these aircraft was 168, of which 102 were saved. An American amphibious Catalina, based on Calcutta, was responsible for two ocean landings and the saving of twenty-one

aircrew, both R.A.F. and U.S.A.A.F., in the Bay of Bengal.

203. The demand made upon the marine craft has on the whole been light, except in the Chittagong area where some lone sorties have been made off enemy-controlled coasts, and where an advanced rendezvous position off Katabdia Island was manned day and night for several months. This position has now been superseded by an advanced base established on Maiakhal Island.

* * * * *

X.—BALLOONS

204. Balloons were flown subject to weather conditions at six sites: at Calcutta for the protection of the docks and Howrah Bridge; at Jamshedpur, defending the vital iron and steel works; at Colombo and Trincomalee to protect harbour installations and naval anchorages; at Chittagong to protect dock facilities and the Janali Hat Bridge; and, since 12th May, at Kharagpur airfield to protect the Very Heavy Bomber base established there.

205. There were no impacts with balloon cables by enemy aircraft, but two by Allied aircraft. During the enemy attack on Calcutta in December, many bombs were dropped in the area occupied by No. 978 Squadron, killing two and wounding ten other ranks. Some equipment was destroyed and buildings damaged, but the efficiency of the unit was unimpaired.

206. Indianisation of Balloon Squadrons has continued and by the beginning of May there were 1,246 I.A F. other ranks compared with 971 B.O.R.s. There are now no surplus R.A.F. Balloon Operators in the Command, and all those rendered redundant by the Indianisation are being absorbed into other trades. When the process is carried further it should be possible to release another 400 to 450 British airmen.

* * * * *

XI.—PHOTOGRAPHY

207. Photographic reconnaissance and survey commitments in India have produced a high quality of photographs, and the speed of reproduction has been good considering the many technical difficulties involved. The construction of mobile photographic processing vehicles is progressing, and a plan to construct two self-sufficient photographic units each comprising eleven vehicles will be begun in the near future.

208. Experiments in night photographic reconnaissance by Ceylon-based Liberators of 160 Squadron are proving satisfactory. Cameras and storage for 28 flashes have been installed in aircraft, together with the means of releasing the flashes at variable intervals to obtain line-overlaps. Other trials have proved the practicability of obtaining stereo pairs at night using two F.24 cameras installed in tandem. Plans to use carrier-borne aircraft for long-range reconnaissance have been implemented to the extent of installing and testing equipment in Hellcat aircraft. Experiments now wait upon the provision of American and British cameras.

209. R.A.F. and U.S.A.A.F. processing and interpretation in Eastern Air Command have been integrated at Photographic Reconnaissance Force Headquarters at Bally Seaplane Base, Calcutta, where British and American staffs work together and have achieved a high degree of co-ordination.

* * * * *

XII.—MEDICAL: WELFARE

210. The health of the Command as a whole shows only a slight improvement compared with the analogous period for the preceding year. The sickness rate for malaria and dysentery, although lower than that for 1943, has since February maintained the seasonal rise; that for venereal disease alone has steadily declined. The rate of invaliding in the Command has risen gradually. In 1943 the incidence was 1.44 per thousand, whilst in 1944 the rate has increased steadily from 2.00 in January to 2.50 per thousand in May; these figures are doubtless connected with the increasing average length of the sojourn spent by personnel in the Command. Malaria has continued to be the most important single cause of lost service days through sickness, and measures have been actively taken in hand further to combat it. A Deputy P.M.O. (Malariology) has been appointed to re-organise the plan for malaria control and to give the necessary technical directions. Action has been initiated to raise, by propaganda and instruction, the standard of personal anti-malaria discipline, and plans have been prepared for forming anti-malaria units. A further step has been the experimental spraying from aircraft of areas where malaria-carrying mosquitoes are known to breed, and a flight of No. 134 Squadron has been detailed for this purpose.

211. It is hoped to increase the liaison with the Army and the U.S.A.A.F., which has hitherto not been as close as desirable. Arrangements are being made to increase hospital accommodation to meet the potential needs of the eighty-five squadrons accepted as the short-term target. Work is now proceeding on the conversion of the buildings of La Martiniere School, Calcutta, to serve as the 500-bedded General Hospital, the first R.A.F. Hospital in the Command, for whose opening sanction was given in April. When open, the existence of this hospital should not only obviate to a very large extent the present necessity for sending R.A.F. casualties in the forward areas to army hospitals, with all the consequent administrative difficulties, but should also put the four R.A.F. Mobile Field Hospitals in a much stronger position with regard to the supply of stores and equipment. They have been frequently overcrowded, and on occasion it has been found that essential equipment for which they had vainly been asking was nevertheless being made available to neighbouring Army hospitals.

212. At the beginning of the year a representative of the R.A.F. Physiological Laboratory, Farnborough, toured the Command and investigated flying conditions, including such matters as oxygen needs, flying clothes, flying rations and length of operational tour. A report on his visit has since been received and action is being taken where necessary.

WELFARE

213. The provision of amenities for airmen has continued to be a pressing and difficult problem. The greater proportion of R.A.F.

personnel live in scattered communities on the eastern marches of India, housed in bamboo huts or tents, often widely dispersed in small groups of less than a hundred, and generally at least a day's journey from the nearest centre of what to them represents civilisation, and perhaps even from the nearest R.A.F. unit. To ameliorate as far as possible the drab and lonely life inevitable under these circumstances, 170 gramophones and 363 wireless sets have been made available during the period and distributed at special rates to units. It is the aim ultimately to provide a wireless set for every hundred men. Special arrangements have also been made for the distribution of books and the supply of sports gear. Correspondence courses which have been made accessible for airmen at a specially low fee have been meeting a heavy demand. Six mobile cinemas have been set up in Bengal to which the average attendance is 15,000 weekly, and touring concert parties have visited many units.

214. No single factor has conduced more to ill-feeling between the airman and the people of the country in which he is living than the uncontrolled operation of the laws of supply and demand at a time when so many men whose standards of self-respect and personal cleanliness are high were arriving, and stocks of tooth-paste, shoe polish and razor blades were short. The rise in the price of such essential goods was aggravated by the fact that there is in India no N.A.A.F.I. to cater for the essential needs of the serviceman, the Government of India preferring to retain the contractor system. Thus the only possible obstacle to the exploitation of the airman by bazaar store-keepers has been a progressively more rigid supervision of local canteen contractors. The problem has been made easier during the last few months by the provision from abroad of large stocks of essential articles which are disseminated through service channels and sold at controlled prices in canteens. The problem is now one of distribution rather than supply and in general it may be said that the airman can buy essential commodities at fair prices in his canteen—though not yet at all times or in all units.

215. Without the services of N.A.A.F.I., the provision of entertainment parties from England proved impossible for a long period. The Government of India have finally been prevailed upon to allow E.N.S.A. parties to perform in this country, and G.H.Q., India, has partly defrayed the cost from excess canteen profits.

216. Other advances which may be mentioned include the improved scales of accommodation and furnishings which have been sanctioned for Hill Depots, and the development of airmen's clubs. The number of beds available for personnel on leave has practically doubled during the past year, and Hill Depots have been made as informal as possible with no parades at all and a minimum of restrictions. In spite of this, approximately 70 per cent. of airmen still prefer to spend their leave in towns. I cannot see any alteration in this proportion until travelling facilities on Indian railways vastly improve, and proceeding to distant leave centres becomes less of an ordeal. The unhealthy nature of most large Indian towns makes this improvement even more desirable.

217. Assistance has been given by my Welfare Staff to 915 airmen in need of advice or undergoing avoidable hardship, in addition to the many cases handled by the welfare officers in subordinate formations. The provision of amenities has continued with grants from the Amenities, Comforts and Entertainments for the Forces Fund, while the Royal Air Force Welfare Grant has been received from 1st April onwards. To deal with the growing scope of welfare duties, six selected airmen have been commissioned in the A. & S.D. (Welfare) Branch and five welfare officers with the rank of Squadron Leader have arrived from the United Kingdom.

XIII.—INDIAN OBSERVER CORPS

218. In November, 1943, the Indian Observer Corps consisted of three control units, six mobile companies in Bengal, static units in four main areas, Calcutta, Chittagong, Vizagapatam and Madras, and fourteen other mobile companies under training. These together with Care & Maintenance companies and training centres made up a total strength of 10,851 personnel. In December it was decided to break down the static organisation and certain Care and Maintenance formations, and form from them seven additional mobile companies. By May, 1944, the number of control units had increased to four, and that of operational mobile companies to seventeen with ten others under training or in process of formation.

219. During the battle in Arakan, four companies were involved, and re-deployment of a number of posts was necessary. Such posts as were forced to retire succeeded in destroying their equipment before retreating. Similarly, when the enemy advanced towards Imphal, nearly 50 posts had to be evacuated or redeployed. The posts east and south of Imphal naturally lost much equipment, but a high percentage was saved and all abandoned equipment was denied to the enemy. Casualties, too, were light in view of the little or no warning provided, consisting of some six missing and six others wounded.

220. Experience gained during the period led at the end of April to the substitution of Mobile Control Units for the Base and Forward Control Units, with resultant closer supervision and greater flexibility. Ultimately there will be seven of these to control the seventeen companies, and each of the latter will control fifteen observer posts.

R. E. C. PEIRSE,
Air Chief Marshal,
Allied Air Commander-in-Chief.

23rd November, 1944.
Air Command, South East Asia.


80°
100°
120°
40°
30°
20°
10°
Tashkent
SINKIANG
SHANSI
Kabul
Peshawar
Kohat
TIBET
CHINA
Lahore
Simla
Dehra Dun
Ambala
Rawalpindi
Saharanpur
Quetta
Lhasa
Chungking
Shanghai
Changsha
Delhi
NEPAL
Siliguri
Parbatipur
ASSAM
Kunming
Cawnpore
Bihar
Karachi
INDIA
BIHAR
BENGAL
Argartala
Ramgarh
Ranchi
Barrackpore
Comilla
Mandalay
HONG KONG
Bilaspur
Calcutta
Dum Dum
Chhindwara
Raipur
Budge Budge
BURMA
Nasik
Deolali
Bombay
HAINAN
Poona
Dhond
Secunderabad
Vizagapatam
Coconada
BAY OF
Rangoon
PARACEL Is.
INDO-CHINA
SIAM
Manila
BENGAL
Bangkok
Shimoga
Madras
Bangalore
ANDAMAN Is.
Pondicherry
Saigon
SOUTH CHINA SEA
LACCADIVE Is.
Trichinopoly
PALAWAN
MASTINBOS I.
Victoria
Trincomalee
C. Comorin
Kandy
NICOBAR Is.
PHUKET I.
KALAI
Colombo
PENANG
MALACCA STRAITS
NATUNAS
CEYLON
MALAYA
Pt Swettenham
MALDIVE Is.
Pt Dickson
SUMATRA
Singapore
BORNEO
INDIAN
ADDU ATOLL
CELEBES
OCEAN
Batavia
CHAGOS ARCH.
DIEGO GARCIA
Sunda
JAVA
CHRISTMAS
COCOS Is.

LONDON
PRINTED AND PUBLISHED BY HIS MAJESTY'S STATIONERY OFFICE
1951
Price 2*s*. 0*d*. net.
PRINTED IN GREAT BRITAIN

S.O. Code No. 65–39173