



THIRD SUPPLEMENT

TO

The London Gazette

Of FRIDAY, the 20th of FEBRUARY, 1948

Published by Authority

Registered as a newspaper

THURSDAY, 26 FEBRUARY, 1948

REPORT ON THE AIR OPERATIONS DURING THE CAMPAIGNS IN MALAYA AND NETHERLAND EAST INDIES FROM 8TH DECEMBER, 1941 TO 12TH MARCH, 1942.

The following report was submitted to the Secretary of State for Air on July 26th, 1947, by Air Vice-Marshal Sir PAUL MALTBY, K.B.E., C.B., D.S.O., A.F.C., Assistant Air Officer Commanding Far East Command, Royal Air Force, from January 12th to February 10th, 1942, and Air Officer Commanding Royal Air Force in Java from February 11th to March 12th, 1942.

FOREWORD.

A report on the operations in Malaya and the N.E.I. would be incomplete without a survey of the situation in the Far East before war broke out there. A convenient date for beginning such a survey is 1st June, 1941, soon after the date, 24th April, 1941, on which the late Air Vice-Marshal C. W. Pulford became Air Officer Commanding R.A.F. Far East Command.

A number of other newly posted Senior Officers also took up their new duties about the same time, the more important amongst them being Lieut.-Gen. A. E. Percival (G.O.C. Malaya—16th May, 1941), Air Commodore C. O. F. Modin (A.O.A. at A.H.Q. 10.6.41), Group Captain A. G. Bishop (Group Captain Ops. at A.H.Q. 1.6.41) and the late Group Captain E. B. Rice (Fighter Defence Commander of Singapore and Co-ordinator of Air Defences of Malaya, both newly established appointments, 10.7.41).

Although 1st June, 1941, has been chosen as the datum line from which to start the survey, full recognition is given to the large amount of preparatory work which was done by the predecessors of the officers whose names are mentioned above. Some reference is necessarily made to matters which occurred during the time

they were in office, but in general the survey deals with the period between 1st June, 1941, and the outbreak of war. It indicates the energetic measures which were taken immediately beforehand to prepare the Command for war, and points a picture of the situation as it existed at the outbreak of hostilities.

The narrative contains only brief reference to developments in Hong Kong, Burma and the Indian Ocean, operational control of which passed out of the hands of the A.O.C. Far East Command soon after the Japanese had landed in Malaya. Their presence in the Command during the pre-war period did, however, appreciably divert attention and work from pressing matters of local application, and to this degree affected preparation for war in Malaya.

Some reference is necessary to sources of information on which the report is based.

Official records from the Far East are few and incomplete. Most of those which were maintained there had to be destroyed to prevent their capture by the Japanese. The few which survive consist of brief situation reports and a few files of important signals and correspondence, now with the Air Ministry. To make good the loss of the destroyed documents reports have since been obtained from a number of officers who held important appointments in the Far East Command. But these are far from authoritative. Most of them were written in December, 1945, and January, 1946, nearly four years after the events which they describe had taken place, during which years their authors had been prisoners-of-war in Japanese hands, or alternatively had been actively employed in other theatres of war. A number of important individuals who could have given

valuable evidence, I regret to report, died in captivity or during subsequent operations. Discrepancies have been slow and difficult to reconcile between sources of information now scattered throughout the world, despite the ready help I have received from the authors of such reports.

On the other hand valuable information has been freely supplied to me from the Cabinet War Library, the Air Ministry, the War Office, the Colonial Office and by the authors of several other despatches relating to the War in the Far East. To them also I am much indebted.

For the sake of brevity only those matters are mentioned in the report which are necessary for establishing important events, for elucidating the factors which governed action at the time, and for compiling before it is too late a reasonably comprehensive narrative of what happened in the Far East.

Within these limitations every effort has been made to ensure accuracy, and the report, as a whole, is believed to give a reasonably true picture of the campaign from the air aspect—although doubtless it may display inaccuracies of detail brought about by the circumstances in which it has been compiled. It should, however, contain the necessary data from which correct deductions can be drawn. In order, however, that inaccuracies may be corrected, readers are invited to call attention to them through the Air Ministry.

The whole report has been written under my direction, the first two sections on behalf of the late Air Vice-Marshal Pulford who held his command until 11th February, 1942, two days before he left Singapore. In my opinion there is nothing in these sections, or in Section V, with which he would not agree.

I myself took over my duties at his headquarters on 12th January, 1942, from which date the report is written on my responsibility, and largely with my personal knowledge. This part of the report continues in the third person for the sake of continuity in the narrative.

P. C. MALTBY,
Air Vice-Marshal
Royal Air Force.

London.

July 26th, 1947.

LIST OF ABBREVIATIONS USED IN THE REPORT.

- G.H.Q.—General Headquarters of the Commander-in-Chief, Far East.
H.Q.M.C.—Headquarters of the General Officer Commanding, Malaya Command.
A.H.Q.—Air Headquarters of the Air Officer Commanding, R.A.F. Far East Command.
Norgroup—Code name for Group H.Q. controlling air operations in Northern Malaya.
Abdacom—Code name for Supreme Allied Headquarters, S.W. Pacific, which formed on 15th January, 1942, and absorbed G.H.Q.
Abdair—Code name of the Air Section of Supreme Allied H.Q., S.W. Pacific.
Westgroup—Code name allotted to A.H.Q. on the formation of Supreme Allied H.Q., S.W. Pacific.
Recgroup—Code name for the Allied Air Reconnaissance Group responsible for sea-ward reconnaissance of whole sphere of Supreme Allied Command, S.W. Pacific.

- Britair—Code name for A.H.Q. in Java after the dissolution of Supreme Allied H.Q., S.W. Pacific.
A.A.C.U.—Anti-Aircraft Co-operation Unit.
A.H.K.—Headquarters of the Dutch Commander-in-Chief at Bandoeng, Java.
A.I.F.—Australian Imperial Forces.
A.L.G.—Advanced Landing Ground.
A.M.E. Station—Air Ministry Experimental Station (Radar).
A.O.A.—Air Officer in charge of Administration.
A.S.P.—Air Stores Park.
(B)—Bomber.
D/F—Radio Direction Finding.
(F)—Fighter.
(F.B.)—Flying Boat.
F.E.C.B.—Far East Combined Bureau—a combined service intelligence organisation for obtaining intelligence, under Admiralty administration, throughout the Far East.
(G.R.)—General Reconnaissance.
I.E.—Initial Equipment.
I.R.—Immediate Reserve.
M.U.—Maintenance Unit.
M.V.A.F.—Malayan Volunteer Air Force.
N.E.I.—Netherlands East Indies.
[N.F.]—Night Fighter.
O.T.U.—Operational Training Unit.
P.R.U.—Photographic Reconnaissance Unit.
R.T.—Radio Telephony.
R. & S.U.—Repair and Salvage Unit.
S.A.O.—Senior Administrative Officer.
S.A.S.O.—Senior Air Staff Officer.
(T.B.)—Torpedo Bomber.
V.H.F.—Very high frequency radio.

SECTION I.

PRE-WAR PREPARATIONS.

SCOPE AND FUNCTIONS OF THE ROYAL AIR FORCE, FAR EAST.

By mid-summer 1941 the geographical area of the Far East Command, Royal Air Force, included Hong Kong, Borneo, Malaya and Burma; then, embracing Ceylon, it stretched across the Indian Ocean to Durban and Mombasa.

2. The main functions of the Command were firstly to protect the Naval Base in Singapore, and secondly, in co-operation with the Royal Navy to ensure the security of the trade routes in the Indian Ocean and South China Sea. The Headquarters of the Command was in Singapore.

3. In November 1940, Air Chief Marshal Sir Robert Brooke-Popham was appointed Commander-in-Chief, Far East. He was responsible for operational control and general direction of training of all British land and air forces in Malaya, Burma and Hong Kong, for co-ordinating the defences of those territories; and for similar responsibilities for additional British Air Forces it was proposed to locate later in Ceylon, the Indian Ocean and the Bay of Bengal. He set up his headquarters at the Naval Base in Singapore where he was provided with a small operational staff, but no administrative staff.

4. The formation of G.H.Q. in no way relieved the Air Officer Commanding, Royal Air Force, of his responsibility (which was now within the policy laid down by the Commander-in-Chief) for ensuring the effective co-operation

of his Command with the Naval and Military Commands throughout the area, nor did it alter his position vis-à-vis these Commands or the Air Ministry and the several Civil Governments with which he dealt.

THE BASIS OF DEFENCE IN THE FAR EAST.

General Plan.

5. The general defence plan was based on an appreciation written by the Chiefs of Staff in July 1940. Briefly stated, this paper laid down that defence was to rely, in the absence of a Fleet, primarily on air power.

The Chiefs of Staff recognised that, for the defence of the Naval Base, it was no longer sufficient to concentrate upon the defence of Singapore Island but that it had become necessary to hold the whole of Malaya. Their intention now was to replace, by the end of 1941, the existing establishment of 88 obsolete and obsolescent aircraft by an air strength of 336 modern first-line aircraft backed up by adequate reserves and administrative units. This strength was allocated to the defence of Malaya and Borneo and to trade protection in the N.E. half of the Indian Ocean; it did not include aircraft necessary for the defence of Burma.

6. On the basis of this C.O.S. paper, the three Services in Malaya produced a tactical appreciation, which became the agenda of a conference held at Singapore in October 1940 attended by representatives from all Commands in the Far East. This conference recommended that the C.O.S. figure of 336 aircraft should be increased to 582, which it considered the minimum strength of Air Forces required to meet defence commitments in the Far East. The Chiefs of Staffs' reply on this point stated "we agree that 582 aircraft is an ideal, but consider 336 should give a fair degree of security taking into account our experiences in Middle East, Malta, and Air Defence of Great Britain". The conference also recommended that until the additional air forces were provided, the Army in Malaya should be substantially reinforced.

7. Meanwhile, talks had been initiated between the British, U.S.A. and Dutch Staffs with the object of obtaining concerted action in the event of war breaking out with Japan. After the appointment of the Commander-in-Chief, Far East, in November 1940, further Allied conferences were held in Singapore. By April 1941 agreed general plans had been drawn up.

Allied Air Plans.

8. For the purpose of planning, it was assumed that the Japanese would not be able to attack simultaneously at several widely dispersed places in the Far East, in particular that they would not challenge the combined British, American and Dutch might. It was assumed, therefore, that Allied air forces would be able to reinforce one another. Preparations for mutual help were to be made as follows:—

(a) For Malaya to reinforce the N.E.I.—4 Bomber Squadrons, R.A.F.

(b) For N.E.I. to reinforce Malaya—3 Bomber and 1 Fighter Squadrons, Dutch Army Air Service.

(c) For the Philippines to reinforce Malaya—All U.S. Army and Navy Air Service Units available, but only if the Philippines were evacuated.

Each service accepted responsibility within its own territory for providing the necessary bases, where stocks of bombs, petrol and lubricants, peculiar to the respective air forces which might use them, were to be laid down.

9. Further matters of importance which were settled at these conferences were:—

(a) Responsibility for air reconnaissance over the South China Sea; this was co-ordinated and defined.

(b) Allied cypher and signal procedure.

(c) Allied Naval/Air recognition signal procedure.

10. Concurrently with the above, the Far East Command R.A.F. was authorised to provide the means for operating general reconnaissance aircraft in the Bay of Bengal, Ceylon and the Indian Ocean.

Implications of the Plans.

11. Here it is opportune to stress the implications of the expansion programme authorised by the Chiefs of Staff; for the mere statement that the strength was to be raised from 88 obsolete or obsolescent aircraft to 336 modern types conveys no true impression of the extensive preparatory measures required before this force could be accommodated and operated.

12. It should be remembered that until the new policy had been decided by the Chiefs of Staff, defence had been largely confined to the vicinity of Singapore Island: thereafter it included the whole of Malaya.

13. The first step was the construction of bases. Sixteen new ones had to be found and built in Malaya, a country largely covered with secondary jungle remote from human habitations. Of the bases in existence in the colony 5 needed modernisation and 2 reconstruction. Concurrently, construction of new maintenance, repair and storage units was necessary, also throughout the colony.

Fighter defence had to be built up *ab initio*; none whatever had existed hitherto. In addition to bases for fighter squadrons, provision was necessary for an extensive radar system, for a modernised Observer Corps expanded on a primitive one already existing, for communications throughout the colony, and for Fighter Headquarters to control the whole.

At the same time, 8 new bases had to be built in Burma and 3 in Ceylon. Refuelling bases for flying boats were needed at numerous islands in the Indian Ocean from the Andamans to the coast of Africa.

14. The second step was to provide the authorised increase—the new units, the new aircraft; the ancillary services and the staffs for operating them on modern lines; and finally the modern equipment, supplies and local reserves for all.

15. The third step was to train the whole Command in conjunction with the Navy, Army and Civil Defences under the circumstances existing in the Far East, and concurrently to introduce up-to-date methods of operating.

16. The whole presented a truly formidable expansion programme, made still more formidable by the fact that time was short. The end of 1941 was the date by which the Chiefs of Staff planned for the expanded force to be ready for war. A combination of circumstances was, however, to result in realisation falling far

short of the mark, dominating all being the prior and acute claims of the war in Europe and the Middle East.

ACTION TAKEN IN MALAYA TO IMPLEMENT PLANS

Development of Air Bases

Problems of construction

17. The siting of aerodromes in Malaya was mainly influenced by the topography of the country. A rugged, heavily forested mountain chain runs down the centre of the peninsula cutting off the eastern and western coastal belts from each other until Johore is reached at its southern end. Much of both coastal belts is covered by a medley of broken hills; the rest consists of plains planted with rubber and paddy, or of potential mining sites. Rainfall is heavy throughout the year, increasing as the central mountain range is approached. Constant cloud over this range handicaps flight from one side of the peninsula to the other. Consequently, in order to provide reconnaissance over the South China Sea, from which direction the threat to Malaya by sea was greatest, a number of aerodromes had to be sited on the East Coast.

18. Workable sites were difficult to obtain. Every effort was made throughout 1941 to accelerate construction, but progress was not as rapid as had been hoped, despite the fact that, in some cases, sites involving a minimum of work were selected at the sacrifice of operational requirements.

19. There were 11 separate provincial government authorities in Malaya concerned with the acquisition of land; negotiations with each had to be separate. In the earlier stages, delay occurred owing to misunderstanding of the land acquisition legislation; later, emergency powers of acquisition were invoked and this source of delay ceased.

20. Mechanical plant was very short. That which was available was in poor condition, whilst there were few personnel qualified to operate or maintain it, a combination which constituted a primary handicap to progress.

21. Labour generally throughout Malaya was insufficient to meet the needs of the defence expansion programmes of the three Services, and later of the Civil Government. A permanent Labour Committee existed but its function was, in practice, mainly limited to controlling wages in order to eliminate expensive and wasteful competition between the three fighting Services and Government departments. The powers of this Committee were limited; all labour was voluntary, not conscripted, and no control could be exercised over the rates paid by civilian firms. By mutual agreement, however, it was possible to arrange a certain priority of employment of the labour available; and this was exercised to the benefit of the Royal Air Force in Kelantan State (in N.E. Malaya).

To improve the labour situation, negotiations were opened with the Civil Government in May, 1941, for forming locally enlisted works units to be clothed in uniform and officered by Europeans. Approval was obtained in August, 1941, and the matter was then put to the Air Ministry, but by the time final sanction was given it was too late to be effective. Fortunately an aerodrome construction unit arrived from New Zealand at the end of October, 1941. It did excellent work.

22. Most R.A.F. sites were in remote and sparsely populated spots to which it was necessary first to build roads. Native labour had to be collected, conveyed to the spot and housed. When this had been done it was still necessary to carry to the area almost all the building material required.

23. Much effort was necessarily diverted to anti-malarial measures, which had to be put in hand concurrently with construction in order to protect labour from epidemic. On completion, drained areas had to be maintained and oiled.

24. Supplies of material fell far short of the total needs of the services and civil departments. A Joint Priorities Committee was established in the Spring of 1941. It sat regularly and allocated supplies in accordance with the priorities decided from time to time. During the latter half of 1941, some shortages became particularly acute. Metallurgical material for runways was also always particularly short, a serious matter on aerodromes constantly subjected to tropical rainfall, which in itself was a major handicap to rapid construction.

25. It is clear, therefore, that the problems which confronted the Air Ministry Works Department were as numerous and complicated as any encountered in other theatres in war time. That it did excellent work does not alter the fact that it was severely handicapped in executing quickly a very large and urgent programme of expansion by the absence, particularly during the early stages, of the accelerated administrative procedure which the situation demanded.

State of Construction, 1st December, 1941

26. The locations of R.A.F. Stations and Establishments in Malaya and Singapore Island, together with remarks about their state of completion a few days before war broke out in the Far East, are shown in Appendix "A."

27. Of the occupied bases in Malaya, both Alor Star and Kota Bharu were old civil grounds with little room for dispersal. The buildings at Alor Star had been constructed on the old R.A.F. peace-time layout and were congested and too near the runway. This station was high in the priority list for reconstruction when opportunity offered. Both stations were in the forefront of operations in the first days of the war; their deficiencies proved a great handicap.

28. The old bases, and the first of those built on the new programme, had no form of camouflage. The ground had first been deforested and no attempt had been made to use natural surroundings or irregular outlines to obtain concealment. They stood out stark and bare, against the surrounding country. This was largely due to failure before 1940 to realise, not only in the Far East but in Europe also, the need for dispersal and camouflage on the scale which war experience proved to be necessary. In later bases, excellent concealment was obtained by retaining natural surroundings, avoiding straight lines and using a type of construction which, amongst the trees, was indistinguishable from the native huts. Financial considerations, however, continued to prevent the acquisition of sufficient land for effective dispersal.

29. Dispersal areas and splinter-proof pens at aerodromes in Malaya were arranged on what was then thought to be an adequate scale based on:—

(a) The scale of attack in accordance with the information then available about the Japanese Air Services.

(b) The ultimate scale of A.A. defences to be provided at each aerodrome.

(c) The development of a fighter defensive system.

By the 1st December, 1941, however, neither time nor resources had permitted satisfactory development of the fighter system, and few anti-aircraft weapons were available. The Commander-in-Chief, Far East, had laid down that each aerodrome was to be protected by eight heavy and eight light A.A. guns. At no aerodrome in Malaya was this scale approached; on the outbreak of war, some aerodromes had no A.A. guns at all (for details see Appendix A, Column 5 (b)).

30. Each base was provided with a supply of road metalling and labour for the repair of aerodrome surfaces in the event of damage by enemy attack. The reason for mentioning this apparently trivial point will become clear later.

Ancillary Construction

31. In addition to aerodromes the following important works were either completed or in hand on the 1st December, 1941:—

(a) Combined Army/Air Operations Room: This was completed and occupied by H.Q. R.A.F. Far East Command (A.H.Q.) and H.Q. Malaya Command (H.Q.M.C.) at Sime Road, Singapore.

(b) Alternative Combined Army/Air Operations Room: Provided because of the above-ground vulnerable position of the main Combined Operations Room.

(c) Fighter Control H.Q. in Singapore: This was ready for occupation. It had an operations room, a filter room, a W.T. station, etc.

(d) A.M.E. Stations: The ultimate intention was to have 20 Radar Stations throughout Malaya. Six stations only, all in the vicinity of Singapore Island, were completed by the 1st December, 1941.

(e) Radio Installation and Maintenance Unit: This was partially completed at Ponggol, Singapore.

(f) Ammunition Park: Construction at Batak Quarry, Singapore; it was occupied although extensions were in progress.

(g) Storage of Petrol:

(i) Reserve storage accommodation for 6,500 tons of aviation petrol was under construction at Woodlands North, Singapore.

(ii) Reserve storage accommodation for 7,500 tons of aviation petrol at Port Dickson was more than 50 per cent. complete.

(iii) Reserve storage accommodation for 930 tons at Kuantan was completed.

(h) Universal Holding Unit: This was completed and was occupied by 152 M.U. at Bukit Panjang, Singapore; extensions were in progress. This reduced the congestion and concentration of stores held at Seletar.

(i) Engine Repair Depot and Universal Holding Unit: This depot was completed at Kuala Lumpur, provided with its own railway siding and occupied by No. 153 M.U. It was designed to service squadrons based in North Malaya and so to reduce further the congestion and concentration which had hitherto persisted at Seletar.

Allied Reinforcement Arrangements

U.S.A. Reinforcements from the Philippines

32. The actual number of aircraft that might be expected in Malaya, should the evacuation of the Philippines occur, was of necessity indefinite; so was the amount of equipment peculiar to the U.S. Naval and Army Air Services which might accompany them.

33. Reconnaissances were carried out and dispersed moorings planned for a total of 20 reinforcing Catalinas of the United States Naval Air Service. A provisional plan for maintaining them was also prepared.

34. The Commander-in-Chief ruled, in September, 1941, that four bases were to be prepared for accommodating B.17's of the United States Army Air Corps; two in the North and two in the South of Malaya. Gong Kedah and Butterworth in the North, Tebrau and Yong Peng in the South, were selected. Extensions of the runways to 2,000 yards at each were put in hand but only those at Gong Kedah were completed by the time war came.

Dutch Reinforcements from N.E.I.

35. In the mutual reinforcement programme arranged with the Dutch Army Air Service, it was assumed that:—

(a) Three Bomber Squadrons (27 Glenn Martins) would be based at Sembawang;

(b) One Dutch Fighter Squadron (9 Buffaloes) would be based at Kallong; and plans were made accordingly.

36. The Dutch Squadron and Flight Commanders concerned visited these stations, toured Malaya and were given a short course in R.A.F. operational methods. Appropriate stocks of Dutch bombs were procured.

37. The Dutch Naval Air Service had been allotted, in the initial seaward reconnaissance plan, responsibility for the area Kuantan-Great Natunas-Kuching (B. Borneo). To execute this task, it had to base a Group (3 Catalinas) of Flying Boats at Seletar. Provision was made for this; and stocks of petrol and moorings were also laid down at Kuantan. The Group remained under Dutch operational command.

38. Liaison Officers of the Dutch Army Air Service and the Royal Air Force were interchanged and were attached to A.H.Q. in Singapore and at Dutch Army Air H.Q. in Java respectively.

Preparations within R.A.F., Far East Command.

Role of Squadrons in War.

39. In July, 1941, a memorandum was circulated outlining the rôle of squadrons in war, and training syllabi were issued. Strict supervision was imposed to ensure that the fullest training value was obtained in all exercises and that the maximum number of practices of different kinds was arranged whenever a training flight was undertaken.

Preparation of Initial Reconnaissance Plan.

40. Seaborne invasion from the N.E. constituted the main threat to Malaya. A reconnaissance plan was therefore drawn up to detect its approach at the maximum distance, responsibility for its execution being divided amongst the Allies. R.A.F. Far East Command was allotted responsibility for the area Kota Bahru-Southern tip of Indo-China-Great Natunas-Kuantan. A reconnaissance plan was prepared accordingly. Its execution necessitated the employment of one G.R. (Hudson) Squadron based on Kuantan and one based on Kota Bahru. The use of two Catalinas was superimposed to ensure an overlap with the Dutch area immediately to the South. Squadrons were exercised in this plan from their war stations.

41. When the Japanese occupied Indo-China in July, 1941, A.H.Q. queried the fact that this reconnaissance plan made no provision for searching the Gulf of Siam, but G.H.Q. confirmed that the limited reconnaissance force available must be concentrated initially upon the more likely area of approach.

Concentration of Squadrons in War.

42. In accordance with the principle that squadrons were to be concentrated in the defence of whatever area was threatened, alternative locations for squadrons, dependent on the axis of attack, were prepared.

Transition to a War Footing.

43. In the past, a considerable number of code words had been issued, each governing the action of units in various kinds of emergency. As a whole, they were most confusing and liable to result in unco-ordinated action. To rectify this situation, G.H.Q. instructed all Commands, in May, 1941, to prepare for three "degrees of readiness" and laid down the general principles governing each. A.H.Q. took the opportunity to issue Units with an exact description in detail of the action to be taken on promulgation of these degrees of readiness. The transition to a full war footing was thereby made smooth and rapid.

Co-ordination of Night Flying Arrangements.

44. Before the autumn of 1941, arrangements for night flying had not been co-ordinated, each Unit employing its own method of laying out a flare path and other lighting. A standardised procedure was drawn up in November, 1941, as it was essential to ensure that all squadrons could operate by night with confidence and could use any aerodrome in the Command.

Establishment of Air Corridors.

45. Air corridors "in" and "out of" Singapore were established and promulgated, whilst a standardised procedure for "approach" to all aerodromes in the Command was issued in July.

Establishment of Operations Rooms.

46. Operations rooms were opened at each base as it became available for use, the ideal aimed at being that squadrons on arrival should find the same layout, information and procedure as that which existed at their parent aerodromes. This was designed to avoid the delay and disorganisation caused by the necessity of transferring material and documents: it speeded up the efficiency of operations.

Mobility of Squadrons.

47. A high degree of mobility was necessary for squadrons to fulfil their laid-down role as the primary defence of the Far East in general, and of Malaya in particular. But the composition of the forces allotted to the Far East included no transport aircraft; and although A.H.Q. drew attention to the deficiency on several occasions no aircraft could be provided. The Dutch Army Air Service had a fleet of some 20 Lodestars and promised assistance, provided their own circumstances permitted. In the autumn of 1941, some Lodestars were borrowed, and selected squadrons were practised in the organisation required for moving.

48. A shortage of M.T. in Malaya made the position more serious. Orders for the M.T. required were placed in the U.S.A. but they could not be met in time. There was no M.T. unit in the Command nor were there sufficient spare vehicles to form a Command pool. Individual units were themselves below establishment in M.T.

DEVELOPMENTS IN HONG KONG.

49. No Air Forces were allotted for the defence of Hong Kong. There was a station flight at Kai Tak on the mainland for target towing purposes, but apart from local reconnaissance no war role was envisaged or arranged for this flight.

50. In the summer of 1941, an urgent request was received from Hong Kong pressing for some fighter aircraft because of the great support they would give to civilian morale. This request could not be met. In case it should prove possible later to meet the request for fighter aircraft, a Fighter Sector Control room and Radar Stations were sited and plans were prepared for the provision of a fighter defensive system.

DEVELOPMENTS IN BRITISH BORNEO.

51. Facilities for land planes in British Borneo were confined to one aerodrome and one landing ground, at Kuching and Miri respectively. The former was not large enough for bomber aircraft but its extension was in hand when war broke out. Flying boat moorings were also laid in the river nearby. There were no A.A. defences, but a battalion of the Indian Army, with H.Q. in Kuching, was located in Borneo for the protection of the aerodrome and landing ground areas and the Miri oilfields.

DEVELOPMENTS IN BURMA.

52. As a result of the Singapore Conference in the autumn of 1940 (para. 6), the findings of which were generally endorsed by the C.-in-C. Far East on his arrival, the Government of Burma co-operated actively in constructing and developing the eight air bases, and additional satellite strips, considered necessary for air operations from Burma. These bases stretched from Mergui on the Tenasserim Coast in a half circle round the Siamese frontier to Lashio in the Northern Shan states. In anticipation of approval, Flight Lieutenant C. W. Bailey, Inspector of Landing Grounds at A.H.Q., had been sent by A.H.Q. to Burma in November, 1940. He had drawn up plans for extending old, and constructing new, aerodromes. Further, in co-operation with the Government of

Burma, arrangements had been made for re-organising the Public Works Department so that it could undertake supervision of construction, which was immediately begun.

53. In March, 1941, H.Q. No. 221 Group (Commander, Group Captain E. R. Manning) was established at Rangoon to develop these bases and to command the Air Forces located in Burma. Although the Group staff was very small, progress was so good that all bases were completed by the end of 1941 with accommodation at each for some 450 all ranks. Facilities for dispersal were reasonable, pens being provided, as were some satellite strips. There was a measure of A.A. protection in the Rangoon area but none elsewhere.

54. Co-operation with the Army in Burma was excellent. Army H.Q. in Burma and No. 221 Group R.A.F. were in close proximity and the G.O.C. and his staff could not have done more to assist the R.A.F. in its preparations. From the outset of planning in November, 1940, the G.O.C. was in the picture of R.A.F. development. The raising and training of aerodrome defence troops was consequently conducted in parallel with construction.

55. During 1940, an air observer system was developed by the G.O.C. under the active direction of the Postmaster-General. From the outset, its functions were made clear and, despite difficulties of training, it developed and operated usefully on the outbreak of hostilities; control of it passed to the R.A.F. on the formation of 221 Group Headquarters. One Radar Station was completed at Moulmein and two others in the Rangoon area were nearing completion when war broke out. A Fighter Control Operations room was designed and constructed in Rangoon.

56. No. 60 (B) Squadron (Blenheim I's) ex India, was located at Rangoon from February, 1941. G.H.Q. considered it important to ensure some measure of fighter defence at Rangoon; consequently, pending the availability of an established fighter squadron, half of No. 60 was re-equipped with Buffalo fighters for the period August-October, 1941, somewhat handicapping the squadron's operational efficiency. As soon as No. 67 (F) Squadron (Buffaloes) in Malaya was fully trained it was transferred to Rangoon; the transfer took place in October, 1941.

Heavy demands on No. 60 (B) Squadron for communication flights occupied much of its flying effort; and although it had a very high standard of flying in monsoon conditions over Burma, it became desirable to transfer the squadron to Malaya to bring it operationally up-to-date in practice. All its aircraft and crews were therefore sent to Kuantan, the new Air/Armament Station of the Command, where they arrived shortly before the Japanese attacked Malaya.

57. In addition there was a flight of six Moths used for training Burma's Volunteer Air Force. The aircraft of this flight were allotted the role of maintaining communications and carrying out certain limited reconnaissance.

58. A plan was drawn up in co-operation with the Army in Burma, the object of which

was to destroy communication facilities in the Siamese Isthmus. Land forces were to advance across the isthmus and conduct a "burn and scuttle" raid on port, rail and air facilities at Prachuab Kirrikand. Their arrival was to synchronise with air attack from Malaya under A.H.Q. arrangements.

59. The question of the Command of the forces in Burma had been raised on more than one occasion. Those who considered it from the angle of India's defence recommended that control should be by India. A.H.Q. supported the opposite view, namely the retention of Burma in the Far East Command, because it considered that effective co-ordination of the air forces operating from Burma and Malaya in defence of the Far East could only be achieved by unified command. This view was accepted. In the actual event, however, the control of Burma had to pass to India seven days after war broke out—at 0630 hours on 15th December, 1941.

60. Finally, reference must be made to the American Volunteer Group under Colonel Chennault, who was given all possible assistance, particularly in relation to maintenance, training and accommodation. R.A.F. Base, Toungoo, the training aerodrome for the Force, was visited by the A.O.C. and Staff Officers from A.H.Q.; officers who had had fighter experience in Europe were sent to lecture and to assist in training. Excellent work was later done by this Force, in co-operation with the R.A.F., in the defence of Burma.

DEVELOPMENTS IN N.E.I.

Dutch Borneo.

61. In accordance with the mutual reinforcement plan, the Dutch allocated Sinkawang and Samarinda in Dutch Borneo for use as bases for four R.A.F. bomber squadrons. Each of these bases was to be provided with accommodation for two bomber squadrons and to be stocked in peace with supplies peculiar to the Royal Air Force. Their only method of supply was by means of transport aircraft provided by the Dutch, who deliberately avoided making roads to them through the dense jungle in which they were situated, and which thus remained an undisturbed defence. By December, Sinkawang was ready and had been inspected by the C.O. and Flight Commanders of one of the squadrons allocated to it. Samarinda was not ready.

Sumatra.

62. Permission was also obtained from the Dutch in the summer of 1941, to reconnoitre all aerodromes in Sumatra. This was required because A.H.Q. anticipated that, in the event of war, Sumatra would be required for:—

(a) An alternative air reinforcement route from India owing to the vulnerability of the old route to Singapore via Burma and N. Malaya once the Japanese had penetrated into Siam.

(b) Potential advanced landing grounds for operations against the flank of a Japanese advance down Malaya.

The main preoccupation was therefore with those aerodromes which were situated in the Northern half of Sumatra.

63. As the result of this reconnaissance, extensions to the grounds at Lho'nga and Sabang were put in hand to make them suitable for modern aircraft.

64. Assistance was also given to B.O.A.C. to organise facilities at Sabang for the operation of an alternative seaplane route Rangoon—Port Blair—Sabang instead of the normal one via Bangkok.

Java.

65. Visits were paid to Java by a number of staff officers from A.H.Q. who thus gained useful information about Dutch maintenance establishments and resources generally.

DEVELOPMENTS IN INDIAN OCEAN AND BAY OF BENGAL.

66. A memorandum was prepared about June, 1941, and issued by A.H.Q. detailing the bases to be developed in this area; their status was defined and priority of provisioning was laid down. By December, 1941, the position was as follows:—

Andamans and Nicobars—at Port Blair and Nancowrie, moorings and petrol had been laid, and limited accommodation constructed for operating flying boats. Port Blair was also prepared by B.O.A.C., with R.A.F. assistance, as an alternative to the route Rangoon—Penang.

Ceylon—H.Q. No. 222 Group was established, with a joint Naval/Air Ops. Room, at Colombo.

China Bay—one flight of Vildebeestes was located here for target towing and local reconnaissance. This station was being developed as a permanent base for one G.R. Squadron and one F.B. Squadron, the accommodation for which was practically completed.

Ratmalana—Aerodrome was being constructed for one G.R. Squadron.

Koggala—was being developed as the main base for flying boats operating in the Indian Ocean. Accommodation for one Squadron was nearly ready.

Christmas Island

Cocos Islands

(Direction Island).

Maldives (Male)

Seychelles (Mahe)

Chagos (Diego-Garcia).

Mauritius ...

Tanganyika (Lindi).

Fuel and moorings had been laid and limited accommodation provided for operating flying boats at each of these places.

Durban ...

Mombasa ...

Were being developed as permanent bases for one F.B. Squadron each.

Much credit is due to the Air Ministry Works Department for the great volume of construction which had been carried out in these outlying parts of the Command, as well as for that executed in Malaya, in a relatively short space of time despite many and considerable handicaps.

OPERATIONAL EFFICIENCY OF UNITS IN MALAYA.

Intelligence Organisation.

67. In June, 1941, A.H.Q. had no Intelligence Organisation of its own. All air intelli-

gence personnel and records in the Far East had been centralised in the Combined Intelligence Bureau (F.E.C.B.) which functioned under the control of C-in-C. China Station. Theoretically it served, inter alia, the needs of A.H.Q. In practice, however, its means for obtaining air information throughout the Far East was totally inadequate; its staff was insufficient to cope fully even with G.H.Q. Air Intelligence requirements; and although the information it possessed was always available to A.H.Q., F.E.C.B. had not the means of supplanting the missing intelligence machinery at A.H.Q.

Representations were therefore made by A.H.Q. of the need for a thorough intelligence system throughout the Command. About July, a conference was held with G.H.Q., who wished to create a second Combined Intelligence Centre to serve the joint needs of A.H.Q. and H.Q.M.C. A second joint organisation of this nature would not, however, have been suitable for building up the Intelligence organisation required throughout the Command at all levels from A.H.Q. downwards. This view was accepted.

An establishment for an Intelligence organisation for the whole Command was drawn up and submitted to the Air Ministry, and in late autumn, in anticipation of approval, personnel were made available locally and were appointed to H.Q. and Units. The nucleus organisation thus formed was fortunately in being when hostilities broke out, but its development was backward, and in particular the information it had collated for briefing crews was scanty.

68. According to intelligence current in the Command, the efficiency of the Japanese Naval Air Units was known to be good, but that of their Army Air Units was not high despite the fanatical valour of their personnel.

This wrong assessment of their Army Air Units was partly due to the fact that the system for collecting intelligence throughout the Far East was only sufficient to enable F.E.C.B. to obtain incomplete air information, and the reliability of most of this was far from high. And it was partly due to the fact that A.H.Q., stations and squadrons possessed only the embryonic intelligence organisation already referred to: the result was that such intelligence as the Command received, was not effectively digested, promulgated or acted upon.

A particular outcome of this state of affairs, which was destined to have far-reaching consequences in Malaya, was that the personnel of the Command remained unaware up to the outbreak of war of the qualities of the Japanese fighter squadrons, whose Zero fighters were to prove superior in performance to our own fighters. This naturally affected training in our squadrons, particularly in the tactics to be adopted by our fighters.

The need for an Operational Training Unit.

69. The Air Ministry had been unable to approve requests made during the year to establish an O.T.U. in Malaya. But in September, 1941, owing to the fact that large numbers of personnel required operational training, A.H.Q. established a makeshift O.T.U. at Kluang from the resources available in the Command. Its rôle was:—

(a) To train pilots for Fighter Squadrons who had been, for some time, arriving from

New Zealand direct from Service Flying Training Schools, and who therefore lacked operational training.

(b) To convert personnel of No. 36 and No. 100 (T.B.) Squadrons from Vildebeestes to twin-engine aircraft in anticipation of their re-equipment with Beauforts.

(c) To train pilots from New Zealand on twin-engine aircraft to fill vacancies in Bomber Squadrons.

Training aircraft were provided from Wirraways thrown up by No. 21 (F) Squadron when it re-armed with Buffaloes, and by Blenheims borrowed from No. 34 (B) Squadron. The Wing Commander Training at A.H.Q. (Wing Commander Wills-Sandford) was appointed Commanding Officer. The Unit had to be disbanded on 8th December, on the outbreak of hostilities, but it had completed most valuable work.

Lack of Armament Training Facilities.

70. Up till October 1941, the only armament training facilities in the Command were on Singapore Island, and at an improvised air range near Penang. Maximum use was made of the Singapore ranges, but they were very insufficient to meet requirements. In October 1941, the new Command Armament Training Station at Kuantan was opened, but there was time for one squadron only to complete a course before the outbreak of war.

71. The air firing situation was particularly unsatisfactory. There was an acute shortage of target towing aircraft, and the few available were slow.

Lack of Transport and Communication Aircraft.

72. The lack of transport and communication aircraft was acutely felt during the pre-war period when training was all important. G.H.Q. and H.Q.M.C. had frequently to ask for communication flights, aircraft for which had necessarily to be found, mainly by G.R. Squadrons. Although such requests were pruned and co-ordinated, flights were nevertheless sufficiently frequent to interfere seriously with the training of squadrons, many of whose vital flying hours were thus expended. Furthermore, visits to subordinate units by A.H.Q. staff had to be correspondingly curtailed.

Fighter Squadrons.

73. In June-July 1941 a Fighter Group Operational Cadre was formed to take over the training and operation of all fighter aircraft in Singapore: the Senior Officer (Group Captain E. B. Rice) at the same time being appointed Air Defence Co-ordinator, Malaya.

74. The following Fighter Squadrons, with an establishment of 16 I.E. and 8 I.R. Buffaloes, were formed on the dates shown:—

No. 67 (F) Squadron, formed at the end of March 1941. The Squadron and two Flight Commanders to be appointed from U.K., the remaining pilots from bomber squadrons within the Command. Establishments were completed with pilots from New Zealand F.T.S's. The Squadron was transferred to Burma in October 1941, shortly after it had been passed as operationally efficient (para. 56).

No. 243 (F) Squadron, formed in April, 1941. Personnel were found as in the case of No. 67 Squadron, but a slightly higher proportion were F.T.S. personnel.

No. 453 (F) Squadron, formed October 1941. The Squadron and two Flight Commanders were appointed from U.K. This was an R.A.F. "infiltration" squadron* filled from F.T.S's in Australia. Some of the personnel were not entirely suitable for a Fighter Squadron, and the Squadron Commander was in Australia selecting replacements when war broke out.

No. 488 (F) Squadron, formed in October-November 1941. The Squadron and two Flight Commanders came from U.K. This was an R.N.Z.A.F. infiltration squadron and was filled from F.T.S's in New Zealand with excellent material; but their standard of flying on arrival was backward. This squadron had taken over the aircraft on which No. 67 (F) Squadron had trained, and many of these were in poor condition.

No. 21 (F) Squadron, R.A.A.F., which had formed as a General Purpose Squadron in Australia and moved into the Command in 1940, was in October 1941 re-equipped with Buffaloes and converted into a Fighter Squadron, with 12 I.E. and 6 I.R. aircraft. The Squadron had been previously equipped with 2-seater Wirraways, some of which were returned to Australia, the remainder being retained to assist in training Nos. 453 (F) and 488 (F) Squadrons. It will be observed, therefore, that the pilots of this squadron had not been selected originally for fighter aircraft, and some were not in fact entirely suitable for this role.

75. The main role of the Buffalo Squadrons was "day defence" only, primarily of the Singapore area, but night flying training was instituted to ensure that pilots could take off before dawn and land after nightfall.

76. Except for No. 488 (F) Squadron all the above squadrons were considered operationally trained by the outbreak of war. No. 488 (F) Squadron was deficient in squadron and flight training and was not passed as operationally ready until the latter half of December 1941. Training and assessment of operational readiness had, however, been based on an under-estimation of the enemy. The tactics thus taught and practised proved unsuitable and costly against the Japanese Navy "O" fighter, which was greatly superior to the Buffalo in performance. Moreover, advanced training had suffered because, prior to the formation of an O.T.U. in September 1941 (see para. 69), all pilots had joined their squadrons without having received individual operational training.

77. The standard of gunnery in all-squadrons was low because:—

(a) Towing aircraft were very slow and there were very few of them,

(b) Cine gun equipment was lacking,

(c) Continual trouble was experienced with the .5 gun and synchronising gear. This was largely overcome by local modification by

* The R.A.F. as distinct from a Dominion squadron but manned by Dominion personnel.

October 1941. Nevertheless, pilots were still not confident about their armament when war overtook them.

78. The Buffalo had a disappointing performance. It was heavy and underpowered and had a slow rate of climb. Maintenance was heavy, which meant a low standard of serviceability. Wastage during training was high, and many of the aircraft in Squadrons suffered from rough handling. The Buffalo had no V.H.F. radio, and the maximum range of R.T./W.T. was 9 miles, being frequently less when atmospheric conditions were bad. Intercommunication between aircraft was unreliable.

79. There was one multi-seat fighter squadron in the Command, No. 27, a night fighter squadron equipped with Blenheim I's. Aircraft were old and in poor condition and were thus of limited value in a night-fighting role. Its conversion into a bomber squadron, for which personnel were available, came up for consideration but could not be adopted owing to the need for retaining a night fighter unit.

Observer Corps.

80. In July, 1941, control of an existing Observer Corps system was transferred from the Army to A.H.Q. It had been organised chiefly as part of the civil air raid warning system, and needed a great deal of development for use in an active air defence system. The personnel were enthusiastic, but unfortunately little time was available to train them in their new duties. It was found impossible to establish the necessary Observer Posts in the jungle-clad mountainous country of Central Malaya where there was, therefore, a serious gap in the warning system. Observer Corps Operations Rooms were established at Kuala Lumpur and Singapore, and were linked up to the Dutch system in the Rhio Archipelago to the South, but difficulty was experienced in organising the whole through lack of existing telephone communications in Malaya and to an acute shortage of telephone material and equipment.

Radar Stations.

81. The approved policy of priority for the development of radar facilities was:—

- (a) Singapore Island.
- (b) The East Coast of Malaya.
- (c) Penang and the West Coast.

All Stations were to look seaward with only restricted overland cover behind, the hinterland being covered by the Observer Corps.

82. By December, 1941, four stations were operating—Mersing, Tanah Merah Besar (in East of Singapore Island), Bukit Chunang (S.E. tip of Johore) and Tanjong Kupang (S.W. tip of Johore). A further station, Kota Tingi, in Johore was nearly ready and was being accelerated partly to close the gap down the central portion of Malaya. A sixth, at Kota Bahru, the most northerly point on the East Coast of Malaya, had been built but no radar had yet been installed.

The general position was, therefore, that there was fair cover for Singapore but little elsewhere.

Fighter Operations Room.

83. A Fighter Group Operations Room in Singapore was designed, constructed and occupied by December—almost too late to do more than break the ice of training its staff and

fighter squadrons in the intricate art of fighter defence. It had an operational staff only, no administrative branches: it was in fact an offshoot of the Air Staff of A.H.Q.

Fighter considerations in general.

84. Thus an Air Defence system had been organised by the time war came. Whilst it was by no means as efficient as it would have been if the resources, time and equipment had not been so short, yet it provided Singapore with a scale of defensive effort which was by no means insignificant. Great credit is due to those who achieved this result with so short a time for preparation, outstanding amongst whom was the late Group Captain E. B. Rice.

Bomber and G.R. Land-based Squadrons.

85. There were two light bomber and two landplane G.R. squadrons in Malaya:—

- No. 62 Squadron (Blenheim I)—Alor Star.
- No. 34 Squadron (Blenheim IV)—Tengah.
- No. 1 (R.A.A.F.) Squadron (Hudson II)—Kota Bahru.
- No. 8 (R.A.A.F.) Squadron (Hudson II)—Sembawang.

These two types of squadron, Bomber and G.R., are bracketed together because, owing to the small size of the total force, specialisation was impracticable. Although the Hudson squadrons were the main overseas reconnaissance force, the Blenheims had also to be trained in these duties. Similarly, both types of squadron had to be trained in all types of bombing over the sea and over the land, both by day and by night.

86. From May, 1940, until the Spring of 1941 there had been severe flying restrictions imposed on Blenheim Squadrons owing to the lack of spares in the Command. During this period, flying hours were restricted to 5 hours monthly per I.E. aircraft. In Spring, 1941, selected pilots had to be withdrawn from these squadrons to assist in the formation of the first two fighter squadrons in Malaya.

87. Nos. 1 and 8 (G.R.) Squadrons R.A.A.F. had reached a higher standard of training, but it was necessary for the Australian Air Board to withdraw crews as they became fully trained and to replace them by untrained crews, the former being required for the further expansion of the R.A.A.F. in Australia.

There was, therefore, in both types of squadron a wide variation between crews in the degree of their training, and especially in their efficiency in night flying, in which a high degree of skill was desirable for operating through the violent tropical thunderstorms which prevail over Malaya at night during the monsoons.

Torpedo/Bomber Squadrons.

88. There were two Torpedo/Bomber Squadrons, Nos. 36 and 100, both based on Seletar, the personnel of which were highly trained and of long experience. But their aircraft, Vildebeestes, which had a speed of 90 knots and an action radius of 180 miles, were obsolete. With modern aircraft these highly trained squadrons would have been invaluable, especially in the first days of the war. But their approved rearmament programme, with Beauforts, had been delayed by technical complications in production in Australia. In their training more emphasis was placed on the torpedo than the

bomb, because their main role was to attack enemy convoys well out to sea. Facilities for them to operate with torpedoes from Kota Bahru had been established.

Flying Boat Squadron.

89. There was one Flying Boat Squadron in the Command, No. 205 Squadron, based at Seletar with a detachment in Ceylon.

90. The squadron did not have sufficient trained crews. When its establishment was raised from 4 I.E. Singapore III's to 6 I.E. Catalinas, no additional crews were available. These were therefore trained by the squadron. One or two trained crews were based in Ceylon for work in the Indian Ocean, where, unfortunately, two crews were lost in accidents in September/October, 1941.

Photographic Reconnaissance.

91. Long-range Hurricanes had been requested for photographic purposes but were not available. In November, 1941, a P.R.U. with 2 I.E. (later raised to 4) aircraft was formed in Singapore with Buffaloes drawn from local resources, and personnel were trained in photographic reconnaissance. By stripping all armament and non-essential equipment and providing additional tankage, the Buffaloes range was increased to 1,400 miles. The formation of this flight proved a most valuable asset to the resources of the Command. Concurrently a Photographic Interpretation Unit was formed.

Malayan Volunteer Air Force

92. The Malayan Volunteer Air Force had flights located in Singapore, Kuala Lumpur, Ipoh and Penang. Its miscellaneous collection of about 30 aircraft comprised two Rapides, one Dragonfly, and a number of Moths and Cadets. Flights were organised for transport duties under A.H.Q., and for communication and reconnaissance in affiliation with Army formations. Moths were fitted with 20-lb. bomb racks and pilots were trained in their use, but none of the aircraft could be fitted with defensive armament. The enthusiasm of the unit was most marked and it made excellent progress.

Elementary Flying Training School

93. An E.F.T.S. had been established at Kallang in 1940 from local resources: instructors and technical personnel were obtained from units stationed in Malaya, and from the M.V.A.F., whose club aircraft were made available for its use. It did excellent work. A number of pilots were trained by it, some subsequently serving in other theatres of war and some in Malaya.

Signals Organisation

94. Signals organisation was generally backward. There was a shortage of W/T equipment, particularly of mobile sets.

Teletypewriter lines existed between A.H.Q. and aerodromes on Singapore Island, but not between A.H.Q. and aerodromes up the peninsula.

There were two telephone lines from Singapore to N.W. Malaya and one to the N.E. and east. These were quite insufficient for joint needs, Army, Air Force and Civil, and all passed through civil exchanges. Secraphones were very few and were apportioned between the services in a strict order of priority.

There was no V.H.F., which limited the effective control of fighters to about 10 miles; this was still further limited by atmospherics during thunder periods.

Centralisation of Work at A.H.Q.

95. Appendices A and C will show how many, and scattered, were the units in the Far East Command and how varied were their duties by land, sea and air: their administrative problems were correspondingly numerous and varied.

A degree of decentralisation of work from A.H.Q. was achieved by:—

(a) forming, in March, 1941, No. 221 Group H.Q., with a small staff in Rangoon, to which all work of formations in Burma was decentralised,

(b) forming, in March, 1941, No. 222 Group H.Q. in Ceylon for controlling flying boat operations based on Ceylon: this Group had no administrative staff, so that A.H.Q. continued to administer direct all its bases throughout the Indian Ocean.

(c) forming, in August, 1941, No. 224 (Fighter) Group H.Q. in Singapore, for supervising fighter training and air defence arrangements within Singapore Island: this Group also had no administrative staff (*see* para. 83) so that A.H.Q. dealt direct with its stations and units on administrative matters.

But this was the limit of decentralisation. It resulted in a heavy load of centralised work at A.H.Q. This was particularly felt once the expansion programme began to take effect. It fell heavily enough on Air Staff, but still more so on the Administrative Staff and on that of the Air Ministry Works Department.

The need for an A.O.C. Malaya, with an appropriate staff to whom to decentralise local problems in Malaya, became increasingly apparent during 1941, but it was not found possible to meet this need.

This state of affairs was complicated by a shortage of qualified officers—(*see* next paras.)—caused by the demands of the war in Europe.

Supply of Officers for Staff and Administrative Duties

96. Officers for filling vacancies on the staff of the greatly expanded A.H.Q. and at the new stations were largely found by enrolling personnel from Australia and New Zealand. More than 140 were obtained from this source. It was possible to give them only a short disciplinary course combined with a brief survey of their duties. Their average age was 45. They naturally varied much in their qualifications. The remainder, more than 50 in number, were obtained by commissioning local business men in Singapore; most of them just before, but some after the outbreak of war in the Far East. For them no training was practicable. The majority of these officers were willing and able, but their value was limited owing to their unavoidable lack of service knowledge, experience and training.

97. Of the regular officers, there were few with Staff experience; and the brunt of the work consequently fell on the few. The work of A.H.Q. was increased by the inexperience of officers at stations, which needed more "nursing" than is normally the case.

98. The strain fell particularly heavily upon the A.O.C., who despite the great increase of work which was caused by the expansion of his Command, undertook much supervisory staff work which he would have delegated to others in normal circumstances. He did so in order to ensure that it was properly carried out. This reacted unfavourably on his health, which was poor even when he arrived. He overtaxed his strength, and was a tired man when war descended on Malaya.

Equipment Problems

99. The equipment position was bad in many important items. Except for Buffaloes there were no reserve aircraft whatsoever in the Command. There was an acute shortage of spares, especially for Blenheims and even more for Hudsons, and also of all tools. M.T. was very short, with an effect on mobility that has already been noted. Small arms were insufficient to arm more than a proportion of R.A.F. personnel. All these were items which were badly needed during 1941 in Europe and Africa, and the requirements of the Far East had necessarily to take second place.

On the other hand, stocks of petrol and bombs laid in with G.H.Q.'s particular assistance were good.

Personnel Problems.

100. The following major personnel problems affected the efficiency of the Command:—

(i) There were no reserve aircrews.

(ii) The strength of the Command in airmen was doubled during the last six months of 1941, but most of these reinforcements came direct from training establishments in the United Kingdom and needed further training. At the same time, a number of time-expired airmen were relieved, with the result that at the outbreak of war three-quarters of the strength was new to Malaya.

(iii) A number of the reinforcements were posted to the Command in anticipation of the completion of the expansion programme. They arrived faster than the expansion programme could absorb them. A surplus was therefore built-up, which was employed partly as infantry guards on Singapore Island to relieve the Army of such duties.

(iv) Special courses were organised in musketry and, in the expectation of the defection of native employees, in cooking and M.T. driving.

Other Measures.

101. The following preparatory measures were also put in hand:—

(i) An Air/Sea Rescue Service was organised. It was given six launches, and some light aircraft of the Malayan Volunteer Air Force. It commenced operations in mid-December, 1941, and altogether saved the lives of 24 aircrew. Five of the launches were provided locally.

(ii) A Bomb Disposal Unit was formed in June, 1941, to serve all Services, including Civil Defence.

(iii) Welfare Services were organised. Holiday facilities were provided at Butterworth and Malacca. A fund of 20,000 dollars was raised and used by a central welfare committee. Mobile canteens were made and equipped locally.

(iv) Arrangements were made for hospitalisation and evacuation of R.A.F. sick and wounded; these facilities were provided by the Army everywhere except within the bounds of R.A.F. stations, where they were provided by the R.A.F.M.S.

RELATIONS WITH G.H.Q.

102. The Commander-in-Chief, Far East (Air Chief Marshal Sir Robert Brooke-Popham) being an Air Force officer naturally took a keen personal interest in the R.A.F.; and relations between G.H.Q. and A.H.Q. were correspondingly close.

103. But G.H.Q., had no administrative staff, only an operational one. It was felt at A.H.Q. that the lack of the former prevented the latter from fully appreciating the day-to-day impacts of the multitude of administrative problems which arise in the subordinate command during the period of preparation for war. Without this full experience the operational staff must have found it hard to grasp in their full significance the difficulties which faced the subordinate command. This statement is made in no critical spirit of G.H.Q.'s staff, who were sympathetic and helpful about matters which came their way, but merely to disclose the weakness of an organisation which is vested with operational responsibility but which has no administrative branches of its own through which to keep its finger on the pulse of the administrative problems arising at the level of the subordinate command.

104. The difficulty which G.H.Q. experienced in obtaining full and accurate intelligence about air matters in the Far East has already been referred to (paras. 67 and 68). Its estimation of the Japanese Naval Air Arm was high. Its estimation of the Japanese Army Air Forces was that, although numbers were great and they were known to possess long-range fighters, efficiency was low and that, despite their fanatical bravery, reasonable opposition would turn them from their targets.

105. To turn to the enemy's probable actions. For most of 1941, G.H.Q. was in doubt about the date and place Japan would challenge the Allied position in the Far East. The chance that she would do so early was reduced when in the late summer of 1941 the U.S.A. decided to reinforce the Philippines. Further support for this view came from the Chinese, who, in the early summer of 1941, considered that the next major Japanese effort would be made on the line Hanoi-Kunming to cut the Burma road. Nevertheless, throughout the summer, G.H.Q. stressed the need for pressing on with all preparations necessary for meeting an attack, realising that Japan could strike at her selected moment so long as no British fleet was based on Singapore.

Early in November, 1941, the C.-in-C. reaffirmed the opinion that Japan was unlikely to attack Malaya now that the N.E. monsoon had set in, because the heavy surf, which beats upon the beaches of the East coast of Malaya throughout the season, would make it difficult for assaulting troops to land. It was reckoned that the attack, although possible, was unlikely before February, 1942; by which time the monsoon would be over.

By 22nd November, however, the Japanese intention of further aggression had become clear to the C.-in-C. (para. 140).

106. Meanwhile, during the autumn, preparations were initiated for giving air support to the Chinese, on the assumption that the next Japanese move would probably be towards Kunming. It was the intention to form an International Air Force, consisting of R.A.F. bombers and fighters and of an American Volunteer Group under Col. Chennault, to operate in South China. Administrative preparations were begun, petrol stocks were sent to the Chinese airfields, and bombs and components were prepared for despatch. Early in November, 1941, an R.A.F. Commission was sent from the Far East to investigate operational conditions: it included several senior staff officers of A.H.Q. and the station commander of Tengah, who were still away when the Japanese landed in Malaya. The project was no small commitment for A.H.Q., as G.H.Q. had insufficient staff to undertake all the detailed planning and administration which would normally have been done at the level of the higher command: much of this had necessarily to be done by the staff of A.H.Q., which was already insufficient for dealing with its own work (paras. 96-98).

CO-OPERATION WITH NAVY.

107. A.H.Q. had advocated a combined Naval/Air Operations Room in Singapore to co-ordinate and control the seaward air operations of the Command with the naval forces of the Commander-in-Chief, China Station, but it was decided that such co-operation would be better conducted on a G.H.Q./C-in-C. China Station level. To ensure liaison, however, a Naval liaison officer was attached to A.H.Q., for some months before war broke out: later a Naval air-maintenance officer was added.

108. It was recognised that should a full scale Eastern Fleet be based on Singapore, many detailed arrangements for liaison would become necessary. But a full Eastern Fleet staff could not be assembled owing to a shortage of naval officers; indeed, it was considered unwise to assemble one in Singapore before the situation cleared, namely until a fleet arrived in Singapore and its future role could be estimated.

Five days after the outbreak of war, however, a staff of junior Naval officers was provided for watchkeeping in the Army/Air Combined Operations Room, a step made possible when additional officers were thrown up by the loss of H.M.S. Prince of Wales and Repulse. They proved adequate for subsequent needs, but had the Far Eastern Fleet remained in being in Singapore it would have been necessary to strengthen them in order to provide the close co-operation which would have been then essential.

109. Co-operation with the C-in-C, East Indies was close, and a Combined Operations Room had been established at Colombo. There was real understanding of the problem facing the R.A.F., particularly the difficulty, owing to shortage of flying boats, of assisting in the control of sea communications in the Indian Ocean. There were never more than two Catalinas, often only one, available in Ceylon for this work.

110. Invaluable memoranda about Naval/Air matters, obtained by G.H.Q. from Coastal Command and other sources, were available at A.H.Q. These were collated and revised to suit

local conditions and a Far East Command handbook was printed. It was issued in August, 1941, to R.A.F. Units and Naval Commands for guidance in carrying out all types of operations over the sea.

CO-OPERATION WITH ARMY IN MALAYA.

Close Support.

111. Co-operation with the Army in Malaya had not been highly developed or exercised in the past. No. 21 Squadron, R.A.A.F., when it was equipped with Wirraways, had been regarded in part as an A.C. Squadron, and had carried out some limited exercises with troops in the field. The methods of co-operation which had been practised were, however, not in line with recent developments in Europe and the Middle East.

112. There was much material available at A.H.Q. of the experience gained in other Commands but, owing to lack of staff, the lessons had not been digested. Active steps were taken to remedy this, and instructions for the joint information of Army and Air Force Units to cover the operations of bombers in support of troops were produced and issued in September, 1941, with the concurrence of the G.O.C., Malaya Command. Similarly, instructions were compiled and issued for joint information to cover the operations of fighter aircraft employed on tactical reconnaissance.

113. Classes were started for training aircrews in Army organisation and tactics. Each bomber and fighter squadron in the Command was affiliated to an Army formation and was allotted so many flying hours per month for combined training. But owing to lack of signals equipment, communications were improvised and primitive, which severely restricted the type of support which could be given.

Aerodrome Defence.

114. For some years before war broke out, considerable difference of opinion had existed between the Army and the R.A.F. about the siting of aerodromes on the peninsula of Malaya. Until 1937 the army's policy had always been to have the East Coast undeveloped as far as possible because insufficient forces were available to defend the long coast-line.

The need then arose for aerodromes on the peninsula well forward of the Naval base at Singapore. Sites for them on the eastern side of the mountainous backbone of the peninsula, hitherto undeveloped, were essential for two reasons. Firstly to obtain maximum air range over the sea to the east, from which direction the threat to Malaya was greatest. Secondly in order to avoid the cloud-covered mountainous backbone which, in those days, effectively prevented aircraft based on aerodromes on the west side from operating over the sea on the east, the threatened, side.

Unfortunately there had been insufficient co-operation on the spot in Malaya between the two interests involved, with the result that some of the sites selected were tactically weak to defend. But in the Spring of 1941 the necessary full co-operation was established between the services on the spot, in this important matter of selecting aerodrome sites.

115. However, those aerodromes that were located in the Singapore fortress area were well sited for defence. They were, furthermore,

covered by the fortress A.A. umbrella. Sabotage was regarded as the main threat, particularly during the initial stages of war.

116. The defence of aerodromes on the mainland was a more difficult problem. There were three areas of major importance:—

- (i) *N.E. Malaya*—Kelantan aerodromes.
- (ii) *E. Coast Malaya*—Kuantan.
- (iii) *N.W. Malaya*—Kedah aerodromes.

It was some of these aerodromes which had been sited in tactically weak positions for the reasons given in para 114. Some were even in exposed positions close to favourable landing beaches. The desirability, from an administrative view-point, of selecting sites close to existing communications and sources of labour had contributed to this dangerous situation.

It meant that the Field army on the west coast, down which the main enemy thrust on land was expected to develop, had to make large detachments to protect aerodromes on the east coast.

117. On the east coast, the direct defence of aerodromes was the prime function of the Army. Accordingly, the Brigadiers at Kota Bharu and Kuantan were, by agreement between the A.O.C. and G.O.C., appointed Aerodrome Defence Commanders in their respective areas. The arrangement, with certain safeguards, worked well and resulted in good co-ordination of the resources available for defence.

118. The training, experience, quality and numbers of the forces manning the defences of the aerodromes other than those at Kota Bharu and Kuantan were much under requirements. They were mostly Indian State troops, who had had little opportunity for training in this specialised work. A further handicap was a general paucity of weapons of all kinds, particularly A.A. guns and their equipment.

119. Every effort was made to improve the defences of aerodromes against ground attack. Old tanks, armoured cars and any form of weapons were sought from other Commands and from the U.S.A. H.Q.M.C. did its best, but the men and weapons required could not be made available. Assistance was also given by the Naval Base and later by the Dutch. Financial authority was given by the A.O.C. in the autumn to put in hand urgent work on defence schemes of mainland aerodromes without the necessity for prior reference to A.H.Q.

120. Joint Army and R.A.F. Aerodrome Defence Boards were set up about July, 1941, throughout Malaya to co-ordinate defence schemes; and thereafter care was taken to ensure that the defence aspect was considered at the outset when new aerodrome construction was put in hand.

121. Full instructions were prepared and issued to guide local Commanders in preparing denial and destruction schemes, and arrangements were made for obstructing airfields not in use.

122. The first two major aerodrome defence exercises were held in the late summer in the presence of large numbers of Army spectators for instructional purposes: one was held at Tengah with the co-operation of Fortress troops, and one at Kluang in Johore with the Australian Division.

123. Finally, in conjunction with A.H.Q. and H.Q.M.C., G.H.Q. produced about this time a handbook on aerodrome defence which detailed the probable scale of attack to which each would be subject, the minimum defences required, and the priority of their provision.

Co-operation with A.A. Defences.

124. During the latter half of 1941, A.A. equipments rapidly increased in number, in Singapore especially, and demands for air co-operation for the training of A.A. crews multiplied accordingly. Special aircraft for the purpose were few, so A.A. defence exercises were combined with other forms of training in order to make full use of flying hours. Nevertheless, this resulted in many flying hours of operational units, which were all too precious for their own training, being expended on this work; yet the A.A. Defence Commander's requirements were never approached.

Photographic Survey.

125. Photographic survey of large areas in Malaya for both the Army and the Civil Government was another commitment which had to be met. It necessitated the allotment and training of a special flight.

Joint Army/Air Planning: Operation "Matador".

126. During July, 1941, a staff conference was held at H.Q. Malaya Command which was attended, it is believed, by representatives of G.H.Q., H.Q.M.C., III (Indian) Corps and A.H.Q. It was called to consider a War Office project for the occupation of the Kra Isthmus by a joint Army/R.A.F. force from Malaya, the object of which was to deny to the Japanese the port and aerodrome facilities in it (which, if exploited, constituted the main threat to Malaya) by meeting and defeating him on the beaches.

127. It was evident that the development of the aerodromes there by the Siamese could only be linked up with the spread of the Japanese over Indo-China and their increasing influence in Bangkok. It appeared obvious that they would soon contain all the facilities required by Japanese aircraft, particularly fighters, which would then be able to support effectively landings in Southern Siam and Northern Malaya. The A.H.Q. representative was consequently in favour, at the least, of a raid to destroy these facilities.

128. The conference finally adopted a plan for seizing and holding the Singora area and "The Ledge" position on the Patani Road, but only if:—

(a) a minimum of 24 hours' start of the enemy was available;

(b) the opportunity occurred during the North-East Monsoon (October/March), i.e., when the Japanese would not be able to employ tanks off the roads.

This plan was known as "Operation Matador". The A.H.Q. representative was strongly pressed to state definitely what squadrons would be available to take part in it, with particular reference to breaking the railway running south from Bangkok, along which it was presumed a Japanese advance would come concurrently with any attack from seaward. An offer was made of a Singapore III flying boat to

carry a demolition party to some suitable stretch of railroad near the Siamese coast, but it was not taken up. Otherwise, no definite allotment could be made because of the meagre air strength in Malaya and its many commitments. The force available would have to depend on the situation at the time and on the priority of tasks allotted by G.H.Q. to the R.A.F. as a whole. From the Army point of view this was a most unsatisfactory reply.

129. At this conference the chances of executing this operation successfully appeared remote, dependent as it was upon most accurate timing for forestalling the Japanese in the Singora-Patani area and for doing so without precipitating war with Japan or appearing to be the aggressors. Moreover, there seemed some doubt whether sufficient Army resources would be available to carry it out. However, the benefits deriving from it, if it were successful, were held by G.H.Q. to outweigh the risks involved. Careful and comprehensive plans were therefore drawn up with the Army to move elements of the IIIrd (Indian) Corps by road and rail to Siam, with the R.A.F. supporting from aerodromes in Northern Malaya with such units as the situation at the time permitted.

Control of Army/Air Operations.

130. For the control of operations in support of the Army in the north of Malaya A.H.Q. formed a nucleus Operations Group H.Q. It was designated Norgroup. Its functions were:—

(i) to command such air forces as A.H.Q. might allot to it from time to time;

(ii) to advise G.O.C. IIIrd Corps on air matters and to control such air forces as might be allotted to IIIrd Corps. A Combined IIIrd Corps/Norgroup Headquarters was established at Kuala Lumpur with an advanced H.Q. close to Butterworth.

Norgroup Headquarters was formed in July, 1941, was exercised in its functions, and was then disbanded. But it was held in readiness for mobilization when required.

131. On Singapore Island, under G.H.Q. orders, a combined Army/Air Operations Room was constructed alongside A.H.Q. in Sime Road, Singapore. It was ready for use just before war broke out. (As it was very vulnerable the construction of an alternative Operations Room was put in hand.) It functioned at the level of A.H.Q. and H.Q.M.C. Thus G.H.Q. and C.-in-C. China Fleet were not represented in it. Five days after the outbreak of war, however, the latter provided a staff to represent him in it.

SUMMARY OF SITUATION, 22ND NOVEMBER, 1941.

General pre-war situation.

132. Enough has been said to paint a pre-war picture of the Command and, it is hoped, of the vigorous efforts which were made to carry out the expansion programme authorised by the Chiefs of Staff. But the fact remains that by December, 1941, the R.A.F. Far East Command was not yet in a position to fulfil its responsibility of being the primary means of resisting Japanese aggression. The calls of the war in Europe had allowed it to develop only a fraction of the necessary strength.

133. Re-equipment of squadrons had not taken place and was not likely to do so in the near future; Vickers Vildebeestes were still our main striking strength. Buffalo fighters had arrived, it is true, but their performance and armament were disappointing, and inexperienced pilots were still being trained to man them.

134. The aerodromes in Northern Malaya on which so much was to depend, especially during the early stages of the war, had none of the pre-requisites of secure air bases for occupation in the face of the enemy. The number of fighters available was very inadequate for providing effective fighter cover. Both heavy and light A.A. guns were quite insufficient. Dispersal arrangements for aircraft and their protection from blast were not as complete as was planned. And, in the absence of an adequate air raid warning system the aerodromes were open to surprise attack.

135. But the role of the Command remained constant. It was not practicable to alter it. It was:—

(a) To find the enemy at sea as far away from Malaya as possible: then

(b) to strike hard and often,

(c) to continue attacks during the landing operations: and

(d) in co-operation with the Army to delay his advance.

While real progress had been made in fitting the Command for its allotted tasks, deficiencies were still apparent in almost every aspect of its functions.

136. The Army in Malaya was also still weak: its additional interim strength considered necessary to ensure security until such time as the air strength had been built up was not present in the Colony. It was over-extended in its dispositions, a state of affairs forced upon it by its many and widely scattered commitments.

137. In a country like Malaya it was not difficult for the enemy to obtain information about our forces. He was well served by a long-established system of agents.

138. For their part the Japanese had already occupied Indo-China. While no certain information could be obtained by F.E.C.B. it was patent that they were building up their forces there and were preparing operational facilities in Siam. Japanese reconnaissance flights over Borneo and Malaya had become so frequent by October 1941 that a section of Buffaloes had been stationed at Kota Bahru to curb those over Malaya.

Deterioration of the Political Situation.

139. During 1941, relations with Japan became increasingly strained. The attitude of the Siamese Government was doubtful. It professed great friendship for Britain and sent two goodwill missions to Singapore to cement this friendship. Nevertheless, the Japanese continued to reconnoitre Siam and to make preparations for utilising that country as a Base: they accelerated the provisioning of the aerodromes at Singora and Patani, which they also extended to make them suitable for modern aircraft. As November 1941 progressed, evidence of Japanese activities increased until, on 22nd November, 1941, the information at G.H.Q.'s disposal was sufficient to indicate that Japan was about to embark upon a further major

venture in South-East Asia. The resultant action initiated by G.H.Q. is dealt with in Section II.

SECTION II.

NARRATIVE OF OPERATIONS BASED ON MALAYA.

EVENTS FROM 22ND NOVEMBER TO MIDNIGHT 7-8TH DECEMBER, 1941.

G.H.Q. Appreciation of the Situation—22nd November, 1941.

140. On 22nd November, 1941, G.H.Q. issued their appreciation of the situation. Briefly, this appreciation considered that any further major action by Japan in the near future would take place from South Indo-China against Siam, rather than from North Indo-China against the Burma road. G.H.Q. did not, however, disregard the possibility of Japan making a "gambler's throw" against Malaya or even against Singapore itself. G.H.Q. concluded that the most likely operation which would be called for on our part in the immediate future would be to the set plan "Matador," namely an advance by our land forces into South-East Siam. A.H.Q. was accordingly instructed to make all preliminary moves and to be ready to support "Matador" at 72 hours' notice, and was informed that this support for "Matador" was to take precedence over the preparations then being made for an International Air Force to operate in South China. A.H.Q. was also warned that the full reconnaissance plan for detecting the approach of a sea expedition against Malaya might be ordered later.

141. The Order of Battle of the Far East Command in Malaya at this stage is shown in Appendix "C".

Action taken by A.H.Q. to implement Operation "Matador".

142. A.H.Q. immediately adopted the following measures for reinforcing N. Malaya.

(a) Formed Headquarters Norgroup which assembled on 24th November at Kuala Lumpur alongside Headquarters IIIrd Indian Corps. The Commander appointed was Wing Commander R. G. Forbes, Station Commander, Alor Star, in the absence of the Commander designate, Group Captain A. G. Bishop, who was away in South China. (See para. 106.)

(b) Ordered No. 21 (F) Squadron, R.A.A.F., to move to Sungei Patani: move to be completed by 25th November.

(c) Put No. 34 (B) Squadron (Blenheim IV) at short notice to move to Alor Star.

(d) Made provisional arrangements for the move of No. 60 (B) Squadron aircraft (7 Blenheims) out of Kuantan to Butterworth. This move would be necessary if the reconnaissance plan were to be brought into force because No. 8 (GR) Squadron, R.A.A.F. would require the accommodation at Kuantan for carrying out that plan.

(e) Instituted certain other precautionary measures, including the warning of our

fighters at Kota Bahru, Sungei Patani and Singapore of the action they were to take if unidentified aircraft were sighted. Training was allowed to proceed with certain restrictions.

143. Commander, Norgroup, was informed that the following squadrons would support Operation "Matador":—

(a) No. 62 (B) Squadron (Blenheim I) from Alor Star.

(b) No. 34 (B) Squadron (Blenheim IV) from Alor Star.

(c) No. 21 (F) Squadron, R.A.A.F. (Buffaloes) from Sungei Patani.

(d) No. 27 (NF) Squadron (Blenheim I) from Sungei Patani.

Further G.H.Q. Appreciation—28th November, 1941.

144. On 28th November, 1941, G.H.Q. informed A.H.Q. of a report received from Saigon that the Japanese intended landing troops in South Siam on 1st December, 1941. G.H.Q. stated that the Japanese had adequate forces to carry out such a move but placed no great credence in the report. They assumed that if such a convoy did leave Saigon it would travel at 15 knots or less and anchor off Nakwan or between Singora and Patani on the S.E. coast of Siam on the morning of either the 30th November or 1st December. G.H.Q. ordered A.H.Q. to despatch air reconnaissances daily with a view to locating this Force, but in view of the danger that the Japanese might, by holding out a bait, induce us to strike the first blow and thus appear to be the aggressors, with consequent loss of American sympathy, stated that "a striking force will not be ordered to attack the convoy if found". From this day until 3rd December, reconnaissances proceeded without event except that on the 3rd December two large cargo boats were sighted.

145. On 29th November, 1941, the notice for Operation "Matador" was shortened by G.H.Q. from 72 hours to 12 hours.

Assumption of No. 2 Degree of Readiness.

146. On 1st December, 1941, G.H.Q. ordered the Command to be brought to "No. 2 degree of readiness". The promulgation of this degree informed the Command that "the international situation was deteriorating" and brought it into a position to operate at short notice. Inter alia it meant that the full air raid warning system was to be brought into being.

Arrival of Naval Reinforcements.

147. On the 2nd December, H.M.S. "Prince of Wales" and H.M.S. "Repulse" arrived in Singapore as a counter-measure to continued Japanese encroachment in the South-West Pacific. The former wore the flag of Admiral Sir Tom Phillips, the new C.-in-C., Eastern Fleet.

Initiation of full Air Reconnaissance Plan.

148. On 3rd December, 1941, orders were issued by G.H.Q. for the full reconnaissance plan to be put into force on the following day. As a result, in the afternoon of the 3rd, a Dutch group of three flying boats arrived at Seletar in accordance with prearranged plans (see para. 37). The reconnaissance areas

allotted to the Dutch and British respectively were:—

Dutch: Kuantan - Gr.Natunas - Kuching (British Borneo).

British: Kota Bahru-Southern tip of Indo-China-Gr.Natunas-Kuantan.

An extension of the reconnaissance area into the Gulf of Siam as part of routine reconnaissance was not possible owing to a shortage of aircraft.

The task of executing the British section of the reconnaissance plan was allotted to Nos. 1 and 8 (GR) Squadrons, R.A.A.F., based on Kota Bahru and Kuantan respectively. Their effort was reinforced by Catalinas of No. 205 (FB) Squadron to fill in gaps and to ensure overlapping the Dutch.

The initiation of the full reconnaissance plan cancelled the special reconnaissance which had been carried out hitherto, and involved the movement of No. 8 (GR) Squadron, R.A.A.F. from Sembawang to Kuantan. Owing to lack of transport aircraft and inadequate land communications, the ground personnel and equipment of this squadron proceeded there by sea.

Reconnaissance period 4th-6th December, 1941.

149. On the 4th December, owing to bad weather, aircraft at Kota Bahru (No. 1 (GR) Squadron, R.A.A.F.) were unable to operate, but those at Kuantan (No. 8 (GR) Squadron, R.A.A.F.) carried out their part in the reconnaissance plan, as did the Dutch, with nothing to report. Reports of the sightings of strange submarines in the reconnaissance area had been received, so a special reconnaissance was carried out by No. 60 (B) Squadron from Kuantan; but it was negative. On this day a Catalina took Admiral Sir Tom Phillips, Commander-in-Chief Eastern Fleet, to Manila.

On 5th December, 1941, bad weather still prevented No. 1 (GR) Squadron, R.A.A.F., at Kota Bahru operating, but again the Dutch Reconnaissance Group and No. 8 (GR) Squadron, R.A.A.F., at Kuantan gave negative reports. On this day a special anti-submarine patrol was maintained by three Vildebeestes ahead of H.M.S. "Repulse" which proceeded at slow speed en route from Singapore to Australia.

On the 6th December, 1941, three crews were despatched to Sourabaya to collect three Catalinas loaned by the Dutch. The anti-submarine patrol in co-operation with H.M.S. "Repulse" was also maintained.

First sighting of Japanese Expedition—6th December, 1941.

150. On December 6th Kota Bahru aerodrome was serviceable and the full reconnaissance plan was operated. The N.E. monsoon was blowing; its tropical downpours periodically made unaided navigation and accurate ship recognition matters of considerable difficulty.

A Hudson of No. 1 (R.A.A.F.) Squadron, Captain F/Lieut. J. C. Ramshaw, was the first to sight the enemy. He located two approaching convoys:—

(a) at 12.12 1 Motor vessel, 1 minelayer and 1 mine sweeper in a position 185 miles, and on a bearing of 52°, from Kota Bahru, steering a course of 310°.

(b) at 12.46 1 battleship, 5 cruisers, 7 destroyers and 25 merchant vessels in a position 265 miles, and on a bearing of 86°, from Kota Bahru steering a course of 270°.

Another Hudson of the same squadron shortly afterwards reported another convoy:—

(c) at 13.00 2 cruisers, 10 destroyers and 10 merchant vessels in a position 260 miles, and on a bearing of 76°, from Kota Bahru steering 270°.

151. Information about the latter convoy was subsequently amplified to the effect that it contained 21 merchant vessels which were cruising in two lines astern. This amplification was received by telephone at A.H.Q. at 1517 hours.

152. The position of the first of these convoys was such that it had the appearance of having recently rounded Cape Cambodia and was now headed N.W. into the Gulf of Siam. The position of the other two convoys was about 80 miles S.S.E. of Cape Cambodia, the Southern tip of French Indo-China; both were steering west, one slightly ahead of the other. They might, or might not, be following the first small convoy and in turn head N.W. into the Gulf of Siam.

One of the Hudsons had been chased by an enemy aeroplane and there could be no doubt that the Japanese knew that they had been spotted.

153. In the meantime, reports were received of aircraft, apparently Japanese, taking photographs at various points. G.H.Q. confirmed that no offensive action was to be taken by fighters against them, although A.A. defences were given authority to open fire on unidentified aircraft.

154. As a result of the enemy sighting reports, Kota Bahru was instructed to send Hudsons from No. 1 (GR) Squadron, R.A.A.F., to shadow the convoys. Catalinas of No. 205 (FB) Squadron from Seletar were ordered to take over this shadowing from the Hudsons, and to maintain it during the night 6/7th December until relieved by Hudsons again in the morning of 7th December.

155. On receipt of sighting reports, the Command was put by G.H.Q. at "No. 1 degree of readiness" which meant that it was to be "ready for immediate operations and prepared for enemy attack without prior warning."

Action taken by A.H.Q. on Enemy Sighting.

156. The following action was taken by A.H.Q. as a result of the reconnaissance reports received:—

(a) 7 Vildebeestes of No. 36 (TB) Squadron were despatched from Seletar to Kota Bahru. (9 were ordered but only 7 could proceed). Aircraft were armed with torpedoes on arrival at Kota Bahru.

(b) Norgroup was informed that No. 62 (B) Squadron at Alor Star was removed to A.H.Q. control.

(c) No. 34 (B) Squadron was retained at Tengah at short notice to move to Alor Star.

(d) The one Beaufort* still in the Command was moved to Kota Bahru to stand by there for a special photographic reconnaissance required by G.H.Q. (see para. 162).

* 6 Beauforts had recently been delivered, but 5 were sent back to Australia owing to "teething" troubles with the aircraft Nos 36 (TB) and 100 (TB) Squadrons were due to be rearmed with this type.

Attempts to maintain contact with Enemy.

157. On the afternoon of the 6th December, Hudsons despatched at 1620 hours from Kota Bahru to shadow were unable to contact the convoys, and bad weather prohibited relief aircraft being sent. The first Catalina of No. 205 (FB) Squadron left Seletar at 18.30 hours according to programmes to shadow the convoy during the night.

158. During the late evening of the 6th, scrutiny of reports and records revealed that the Japanese convoys were probably one hour ahead of the positions reported. It was assumed, therefore, that the convoys on rounding Indo-China had turned to the N.W. into the Gulf of Siam, thus passing out of the reconnaissance area (vide para. 152). This, perhaps, appeared at the time to explain why Hudsons despatched to shadow had not contacted the enemy; visibility conditions, however, had been poor.

159. No reports having been received from the first Catalina despatched to shadow the convoys, orders were issued to a second Catalina, before it took off to relieve the first, that if no contact was established, a search was to be made off the West Coast of Cambodia.

This was done because G.H.Q. considered the convoy had probably anchored at Ko Kong, for which it might be making as the next step towards Siam. The second Catalina left Seletar at 0200 hours on 7th December. After it was airborne it was ordered to keep 10 miles away from the coast of Siam. No report was ever received from this second Catalina, which was afterwards confirmed as having been shot down by the Japanese.

Reconnaissance Plan for 7th December, 1941.

160. For the 7th December, 1941 the Dutch flying boat "Group" and No. 205 (FB) Squadron at Seletar, and No. 8 (GR) Squadron, R.A.A.F., at Kuantan were instructed to continue the set reconnaissance plan covering the more direct line of approach to Singapore in case a further invasion convoy should attack from that direction. Such an attack would have been most dangerous, particularly if it were directed against the beaches in the Mersing/Endau area, where a successful landing would have gravely jeopardised the field army in Northern Malaya and might even have threatened Singapore itself before the same field army could come to its defence.

But the G.R. Squadron at Kota Bahru was detailed to carry out a special reconnaissance sweep into the Gulf of Siam with the object of re-establishing contact with the Japanese convoys known to be in it.

Vildebeestes were despatched to maintain an anti-submarine patrol ahead of H.M.S. Repulse which had been recalled from Australia.

Events on the 7th December, 1941.

161. Owing to bad weather, it was not until 0645 hours on the 7th that the reconnaissance aircraft from Kota Bahru, of which there were three, were able to take off for a sweep into the Gulf of Siam. Shortly afterwards, owing to rain, low clouds and bad visibility, two of them returned; the third proceeded alone.

162. At 1025 hours the C.-in-C., Far East, visited the Combined Army/Air Operations Room and stated that he:—

(a) Wished B.O.A.C. to continue using Bangkok until the last possible moment, and

confirmed that flights on the 8th December were to go through Bangkok.

(b) Was considering allowing our aircraft to fire at aircraft not established as friendly.

(c) Would issue orders shortly for the reconnaissance of Ko Kong anchorage, which he wished the P.R. Beaufort, now at Kota Bahru, to carry out.

163. Shortly afterwards, G.H.Q. issued their orders for the reconnaissance of Ko Kong. The aircraft left Kota Bahru at 1220 hours, but returned at 1445 hours owing to bad weather. During the morning, the Catalina with Admiral Sir Tom Phillips on board returned from Manila.

164. Meanwhile at 1345 hours on the 7th December, A.H.Q. was informed that air reconnaissance from Kota Bahru had sighted a 6,000-8,000 ton cargo vessel in the Gulf of Siam steaming west, and this was followed by a further sighting at 1545 hours, by a Hudson of No. 8 (R.A.A.F.) Squadron, of one other Japanese merchant vessel steering south. This latter vessel was stated to have a large number of men on deck in khaki.

165. Two Hudsons from Kota Bahru were immediately directed on a diverging search north of that place and 10 miles off the Siamese coast. At 1750 hours one merchant vessel and one cruiser steaming 270° were sighted about 112 miles north of Kota Bahru. The cruiser opened fire on the aircraft. At 1848 hours, under conditions of very bad visibility, four Japanese naval vessels, perhaps destroyers, were seen 60 miles north of Patani steaming south.

166. Owing to subsequent destruction of records, the exact positions of some of the ship sightings mentioned above cannot now be given with any certainty.

Resulting Action.

167. In consequence of these reports, G.H.Q. decided, late on 7th December, not to put "Operation Matador" into effect that night, and issued orders for B.O.A.C. aircraft to avoid Bangkok and to use the West coast route.

168. Conditions at midnight 7th-8th December, 1941 were therefore:—

(a) Contact with the main Japanese convoys located on the 6th had not been re-established.

(b) Conditions for air reconnaissance in the Gulf of Siam had been bad, but in the late evening four ships had been sighted off Singora steaming south.

(c) "Norgroup," with Nos 21 (F) R.A.A.F., and 27 (NF) Squadrons at Sungei Patani, was standing by in support of IIIrd Corps, but Operation Matador had not been ordered.

(d) The following aircraft under the command of the Officer Commanding Kota Bahru were fully armed and ready to take the offensive:—

(i) No. 1 (GR) Squadron R.A.A.F., and one Section (2) Buffaloes of No. 243 (F) Squadron at Kota Bahru.

(ii) Seven Vildebeestes (No. 36 (TB) Squadron), with torpedoes, at Gong Kedah, to which they had been transferred owing to congestion at Kota Bahru.

(e) The remainder of the squadrons were under A.H.Q. control as follows:—

(i) Reconnaissance:—

No. 8 (R.A.A.F.) Squadron at Kuantan.

No. 205 (F.B.) Squadron at Seletar. Dutch (F.B.) Group at Seletar.

(ii) Bombers:—

No. 60 (B) Squadron at Kuantan (N. Malaya).

No. 62 (B) Squadron at Alor Star (N. Malaya).

No. 34 (B) Squadron at Tengah (Singapore).

No. 100 (T.B.) Squadron at Seletar (Singapore).

(iii) Fighters:—(decentralised to 224(F) Group for the direct defence of Singapore).

No. 453 (F) Squadron at Sembawang.

No. 243 (F) Squadron at Kallang.

No. 488 (F) Squadron at Kallang.

The Command was at the fullest degree of readiness, but there was no undue alarm owing to G.H.Q.'s view that the Japanese expedition was directed against Siam.

169. A.H.Q. decided to send at first light on the 8th December a coastal reconnaissance to the Lakon Roads, north of Singora, to identify whether or not the Japanese had landed in S.E. Siam as forecast in the G.H.Q. appreciation (para. 140).

OPERATIONS FROM 8TH TO 23RD DECEMBER, 1941.

Japanese landing at Kota Bahru.

170. At midnight 7th-8th December, the weather at Kota Bahru cleared, but the aerodrome surface was extremely boggy owing to heavy rains. About 0030 hours on the 8th, O.C. Kota Bahru rang up A.H.Q. and stated that three ships had been seen by the beach defences. This message was followed by another at 0100 hours confirming the presence of these ships, stating that shelling was taking place and that Brigade H.Q. were being asked to clarify the situation. On this, A.H.Q. ordered the despatch of a single Hudson with flares to see what was happening. Before this could be done, at 0115 hours definite information came through from Kota Bahru that landing on the beaches by the Japanese had started from 3-5 ships lying three miles off shore.

Orders issued by A.H.Q.

171. O.C. Kota Bahru was immediately ordered to take offensive action with all available Hudsons, and to order the Vildebeestes at Gong Kedah to deliver a torpedo attack at first light. It must be remembered that the orders issued to O.C. Kota Bahru as a result of G.H.Q. instructions (para. 144) specifically stated that no offensive action would be taken against the convoy when sighted. He could not, therefore, initiate the first offensive action of the campaign without further orders.

172. A.H.Q. also issued orders to Nos. 8 (GR), 27 (NF), 34 (B), 60 (B) and 62 (B) Squadrons to take off at first light and attack shipping in the Kota Bahru area whilst No. 100 (TB) Squadron was ordered to proceed to Kuantan on the following morning and stand by for orders.

173. Norgroup was informed that No. 27 (NF) was also to revert to A.H.Q. control, leaving only No. 21 (F) Squadron (R.A.A.F.), for co-operation with IIIrd Corps.

174. The Beaufort at Kota Bahru was instructed to carry out the photographic reconnaissance at first light to Lakon Roads (para. 169)

First Operations against enemy landings at Kota Bahru.

175. At Kota Bahru the first seven Hudson sorties of No. 1 (GR) Squadron R.A.A.F. had taken off to oppose the landing, and by 0300 hours the two available Buffaloes had been despatched against landing barges entering the river which flows into the sea within the frontage of the beach defences guarding the aerodrome.

176. At 0730 hours on 8th December, the O.C. Kota Bahru gave a résumé of the night's operations. 17 Hudson sorties had been carried out, one transport had been destroyed and two others damaged and perhaps sunk. Landing barges en route to the beaches had been attacked and casualties had been inflicted amongst the troops in them. Intensive A.A. fire had been experienced, particularly accurate from a cruiser covering the landing. Two Hudsons had been shot down and a third badly damaged, leaving him still six. One Buffalo had also been hit. The Vildebeestes from Gong Kedah were in the air.

177. Apparently some 8 transports covered by one cruiser and several destroyers had been involved, and O.C. Kota Bahru thought all vessels had now retired to the north. He intended to carry on using the Hudsons for mopping up small craft and beach parties still visible. At 0800 hours, he confirmed that all vessels had retired to the north and that he was mopping up the few small craft left with bomb and machine-gun fire. He added that there had been some infiltration into the Brigade area.

178. Meanwhile the Vildebeestes of No. 36 (TB) Squadron from Gong Kedah, in heavy rain, found the cruiser, delivered an attack with torpedoes which it evaded, and landed at Kota Bahru on their return.

179. Nos. 8 (GR) R.A.A.F., 27 (NF), 34 (B) and 60 (B) Squadrons also arrived on the scene and found little to attack in the area; a signal sent them whilst they were airborne to search further north was not received by all units. One flight of No. 8 (GR) Squadron at least received it but was unable to find the enemy owing to a very heavy rainstorm. Nos. 8 and 60 Squadrons returned to Kuantan, No. 27 to Sungei Patani, whilst No. 34 Squadron landed at Butterworth. All squadrons were ordered to refuel and re-arm.

180. No. 62 (B) Squadron which had also been ordered to attack, not finding any target, proceeded north to Patani to bomb transports there. This squadron (11 Blenheim I's) encountered fighter opposition and fairly intensive A.A. fire. It carried out its attack from 8,000 ft. but the results obtained were not seen.

First Air Attack on Singapore.

181. Whilst the first landings had been taking place at Kota Bahru, Singapore had its first

air-raid shortly after 0400 hours on the 8th December. Radar detected the approaching raid at a distance of 130-140 miles from Singapore (giving more than 30 minutes warning). Its approach was promulgated from the Fighter Control Operations Room. Unfortunately the staff of this room was unable to obtain any response from the H.Qs. of the Civil A.R.P. organisation, with the result that the civil population received no effective warning, nor was the Civil Air Defence Scheme put into effective action until it was too late. Some 17 aircraft took part in this raid, the majority of the bombs falling at Seletar and Tengah. At the latter place 3 Blenheims of No. 34 (B) Squadron were damaged and the aerodrome was cratered.

Japanese attacks on Northern Airfields.

182. Between 0730 and 0800 hours, Kota Bahru, Gong Kedah and Machang aerodromes were attacked by bombers and low-flying fighters; except for dummy aircraft, the latter two were unoccupied at the time. These attacks were repeated throughout the day mainly by low-flying fighters, with little effect save in delaying the refuelling and re-arming of aircraft at Kota Bahru.

183. Sungei Patani, Penang and Butterworth in N.W. Malaya were also attacked throughout 8th December by formations of from 27 to 60 bomber aircraft, with serious results. The Japanese used light bombs only, directed against aircraft and personnel; they studiously avoided damaging aerodrome surfaces. Personnel on the spot noted that for the next few days Japanese attacks in this area frequently synchronised with aircraft landing or getting ready to take off. This indicated a leakage of information to the Japanese, but it was never definitely proved that such a leakage actually occurred.

184. There was a particularly serious attack against Alor Star, delivered immediately after No. 62 (B) Squadron had landed after its attack at Patani (para. 180). The aerodrome was first bombed by 27 Japanese aircraft, which then came down low and machine-gunned aircraft on the ground. As a result No. 62 (B) Squadron had only two serviceable aircraft left.

185. Nos. 21 (F) R.A.A.F. and 27 (NF) Squadrons at Sungei Patani also suffered badly and were each reduced to 4 serviceable aircraft; and in consequence of the repeated low attacks on this airfield both squadrons, with their personnel, were withdrawn to Butterworth. It was later learnt that the guns in the Buffaloes had given trouble and were all unserviceable from lack of solenoids. The serviceable Blenheim fighters of No. 27 Squadron had carried out periodic patrols over N.W. Malaya without result. No 34 (B) Squadron at Butterworth was also seriously reduced.

Ground Situation in N.W. Malaya.

186. Aircraft losses from enemy attack thus gravely weakened the air forces available in N.W. Malaya for supporting the army, where the main enemy advance on land was expected to develop. On the 8th there was little enemy air activity against our own ground forces, owing to the enemy's concentration on the bombing of our aerodromes.

187. "Matador" had been cancelled during the morning, and the Army was taking up positions forward of a partially prepared line at Jitra. Covering forces were advancing north and north-east from Kedah province: one to make contact along the line of advance from the Singora area, the other (Krohkol) to occupy what was known as the Ledge, an important tactical feature across the Siamese frontier on the Kroh-Patani road, which protected the communications of the force in North Kedah.

The first of these covering forces made contact with the enemy at 2130 hours on the 8th, at Ban Sadao, ten miles inside Siam. The other (Krohkol) reported some opposition from Siamese forces, but continued its advance.

Enemy landings in Singora and Patani area.

188. At 0915 hours on the 8th December the P.R. Beaufort returned from its reconnaissance of the Lakon Roads (para. 174). En route, it had been heavily attacked by fighters and landed in a badly shot up condition, subsequently having to be destroyed. The pilot reported verbally that a large concentration of vessels was landing troops in the Singora-Patani area. His photographs were flown back to Singapore by the remaining Buffalo fighter. Shortly afterwards, Norgroup, under orders from IIIrd Corps, despatched 3 Buffaloes of No. 21 (F) Squadron R.A.A.F. on a tactical reconnaissance to Singora. This reconnaissance confirmed the presence of the main convoy in the Singora area and also revealed a force of about 60 Japanese aircraft, mainly fighters, on Singora aerodrome.

Squadrons driven out of aerodromes in N.E. Malaya on 8th December.

189. It is now necessary to return to the Kota Bahru area. Heavy fighting had been going on on the beaches all day, and reserves had been put in to try and regain the beaches by counter attack. At 1245 news was received at A.H.Q. of the landing of further troops from one transport covered by a cruiser and several destroyers. The Station Commander at Kota Bahru had at 1200 hours despatched 4 Hudsons and 3 Vildebeestes to deal with this threat. It transpired later that the report of this further landing was false, but aircraft continued mopping up barges and machine gunning beaches. At 1530 a Hudson from Kota Bahru bombed the railway bridge across the South Golok River west of Kota Bahru, but with doubtful success; the crew, however, observed that the line itself had been partially destroyed already at a point further eastward.

190. Towards 1600 hours reports received at A.H.Q. indicated that the situation on the ground had become serious. The Station Commander reported that penetration had been made up to the aerodrome boundary, and that aircraft and personnel had come under sporadic fire. On his representation A.H.Q. approved the evacuation of the aerodrome. All aircraft were ordered to Kuantan, personnel and stores to proceed by train, whilst the denial scheme was to be put in operation. This was successfully achieved, and 5 Hudsons and 7 Vildebeestes arrived at Kuantan. This withdrawal as far south as Kuantan was unavoidable because Gong Kedah, the only aerodrome in the Kota Bahru

area that might have been used, was virtually undefended and was in a very exposed situation near the coast.

191. During the day, various reports of suspicious vessels off the East coast had been received, necessitating reconnaissances which, however, were all negative.

Summary of situation on the evening of the 8th December, 1941.

192. That night (8th-9th December) the situation was, therefore:—

(a) The Japanese expedition to capture the Kota Bahru aerodrome area was succeeding; and the use of aerodromes in this area was now denied to the R.A.F. Our troops in the area were thus without close air support.

(b) The Japanese main forces were landing unimpeded in the Singora-Patani area, covered by air operations against our aerodromes in N. Malaya. Their advance towards the north-west frontier of Malaya had already begun, and our forward troops had made contact. The shipping at Singora had not been attacked, partly because the aircraft at Kota Bahru were fully engaged locally by the time it was reported, and partly because heavy Japanese air attacks against our virtually undefended aerodromes in N.W. Malaya had seriously reduced the squadrons available on them.

(c) The Japanese Air Force was already operating in strength from Singora aerodrome. From the narrow view point of the Royal Air Force, it was apparent that the cancellation of Operation "Matador" was to have a far-reaching influence on air operations in Northern Malaya.

Air Operations in North West Malaya—9th December, 1941.

193. In the N.W. aerodrome area, enemy air attacks continued, and early on the 9th No. 62 (B) Squadron was forced to withdraw from Alor Star to Butterworth.

194. To counter these attacks, it was decided to destroy the Japanese fighters based on Singora. Two attacks against this aerodrome were planned. The first was to be made by the aircraft of No. 34 (B) Squadron still located at Tengah, reinforced by No. 60 (B) Squadron, which had by now moved there from Kuantan. No. 34 Squadron was ordered to land at Butterworth, re-arm and take part in the second attack. The second attack was to be made by all available aircraft of Nos. 34 and 62 Squadrons, from Butterworth. A.H.Q. issued orders that both attacks were to be escorted by the maximum strength of Buffaloes from No. 21 (F) Squadron, R.A.A.F.

195. The first attack, consisting of 6 Blenheims of No. 34 (B) Squadron, three of which were manned by crews of 60 (B) Squadron, was made in the early afternoon of the 9th. Heavy fighter opposition was encountered, and 3 of our aircraft were shot down. Results of the attack were not observed, but returning crews claimed that, at least, a congested aerodrome had been hit.

196. No fighter escort had been available. No. 21 (F) Squadron, R.A.A.F., had two aircraft serviceable only, which were on tactical reconnaissances for IIIrd Corps. It may be noted here that these aircraft, on the morning

of the 9th reported the presence of Japanese light tanks, which were observed at Ban Sadao moving south.

197. The second attack—a mixed force of Blenheim I's and IV's from Nos. 34 (B) and 62 (B) Squadrons—due off from Butterworth at 1700 hours, was never launched. Just before the time of "take-off," Japanese bombers carried out a high bombing attack followed up by machine-gunning aircraft on the ground. One aircraft only of No. 62 (B) Squadron—Captain, Flight Lieutenant A. S. K. Scarf—took off as the attack was developing; the remaining aircraft on the ground were all rendered unserviceable. Flight Lieutenant Scarf circled the aerodrome until it became apparent that no other aircraft were joining him. He then proceeded to Singora and pressed home his attack. During his approach to the target and subsequent get-away, A.A. fire and heavy fighter opposition were encountered, and Flight Lieutenant Scarf was mortally wounded. This very gallant officer felt unable to make the longer journey back to Butterworth, but managed to retain consciousness until he reached Alor Star, where he crash-landed without injury to his crew. He died in hospital that evening. He was subsequently awarded the Victoria Cross.

198. As a result of this day's operations against Singora, A.H.Q. decided that no more bombing by day should take place over land until such time as fighter escort could be provided.

Preparations for withdrawal from the N.W.

199. At 0900 hours on the 9th, Adv. H.Q. Norgroup opened at Bukit Martajim (near Butterworth), but it became evident that the evacuation of the N.W. bases could not long be delayed. Up till this time there had been no A.A. defences at Butterworth. Eight Bofors guns arrived on the afternoon of the 9th but their presence was not, of course, any deterrent to high flying bombers.

200. A.H.Q., therefore, issued instructions that all airfields on the mainland to the southward were to be got ready for immediate operational use. At the same time, orders were issued to do everything possible to improve dispersal arrangements at aerodromes on Singapore Island.

Evacuation of Kuantan Aerodrome on 9th December.

201. During the night of the 8-9th there were many reports of further landings on the East coast, fears of which were to persist throughout the brief campaign and cause many hours to be spent on coastal reconnaissance.

202. On the 9th, two pairs of Vildebeestes were sent at 0300 hours to sweep the coast north and south of Kuantan. During the day, 6 Hudsons were employed on similar duties whilst Catalinas extended the search area into the South China Sea. The remainder of the aircraft at Kuantan stood by to attack whatever might be found. Confirmation was obtained of the large concentration of ships of all natures unloading in the Singora-Patani area, but no threat of further seaborne attack was discovered although 3 Vildebeestes were despatched on a false report to attack a ship 60 miles east of Kuantan.

203. However, with the destruction of aircraft on the ground in N.W. Malaya in mind, it became evident to A.H.Q. that a dangerous congestion of aircraft existed at Kuantan, particularly vulnerable because there was no A.A. protection there at all. Orders were issued to O.C. Kuantan, early on the 9th, to retain 12 Vildebeestes and the 13 Hudsons of Nos. 1 and 8 (GR) Squadrons, R.A.A.F., and to despatch the remainder to Singapore.

204. At noon the expected attack took place, and Kuantan was subjected to its first experience of high bombing, followed up by the bombers flying low and shooting up at will. A.H.Q. thereupon decided to evacuate Kuantan, the surviving 10 Hudsons and 8 Vildebeestes returning to Singapore. The withdrawal of the ground party from Kuantan might have been better controlled. From then on Kuantan was available as an A.L.G. for refuelling only.

Reports of a landing at Kuantan—9-10th December, 1941.

205. During the night 9-10th, reports were received of a landing north of Kuantan. Six Vildebeestes and 3 Hudsons were ordered to attack. The Vildebeestes found 3 small ships and bombed them with doubtful results, but the Hudsons which arrived later found no target although they prolonged their search of the area past daylight. There is reason to believe that the beaches at Kuantan had been fired on during the night, but that the enemy force was only a light reconnaissance to test the defences, and its size had been magnified in the telling.

206. Further bombing of Kuantan aerodrome on the morning of the 10th added to the uncertainty of the situation and all available bombers in Singapore were put at short notice to await developments. Sharks from the target-towing flight carried out reconnaissance of the approaches to Singapore, whilst Blenheim IV's from No. 34 (B) Squadron, using Kuantan for refuelling purposes, continued reconnaissance of the east coast up to 50 miles north of Singora, confirming once more the large concentration of shipping off the Siamese coast.

207. The false report of a landing at Kuantan proved to have a vital bearing on the movements of H.M.S. "Prince of Wales" and H.M.S. "Repulse", and it is now necessary to turn to the events leading up to the sinking of these two vessels.

Sinking of H.M.S. "Prince of Wales" and "Repulse"—10th December, 1941.

208. The C.-in-C. Eastern Fleet, Admiral Sir Tom Phillips, decided to sail on the 8th December, 1941, with H.M.S. "Prince of Wales" and H.M.S. "Repulse" accompanied by four destroyers, with the object of attacking the concentration of Japanese transports reported between Singora and Patani. He intended to arrive in the target area at dawn on the 10th December.

209. Before leaving on the 8th December (p.m.) the C.-in-C. asked for the following:—

(a) Reconnaissance 100 miles to north of the force from daylight, Tuesday, the 9th December:

(b) Reconnaissance to Singora and beyond, ten miles from the coast, starting at first light on the 10th December:

(c) Fighter protection off Singora at daylight on the 10th December.

The A.O.C. gave tentative replies that he could provide (a), hoped to be able to provide (b), but could not provide (c). It was decided that he should go thoroughly into the problems involved and give definite replies to the Chief of Staff, Eastern Fleet (Rear Admiral Palliser), who remained at the Naval Base in close liaison with G.H.Q.

210. The doubt about the reconnaissance required in (b) above was due to the fact that the reconnaissance would have had to be provided by Blenheim IV's based on Kuantan, and it was uncertain whether this aerodrome would be out of action or not.

211. The reason why the fighter protection asked for in (c) could not be provided was mainly that the northern aerodromes were either untenable or else had been badly damaged by bombers; this meant that the fighters would have to operate from aerodromes at considerable distance from Singora, and, owing to the short endurance of the Buffalo, would have been able to remain only a very short time over the Singora area before having to return to refuel. These factors meant that a short patrol might possibly have been provided at intervals at Singora, but that it was impossible to guarantee appreciable fighter protection.

212. On the evening of the 8th December the A.O.C. confirmed his tentative replies to the Chief of Staff, Eastern Fleet, and this information was passed by the latter to the C.-in-C. The signal as received on board "Prince of Wales" expressly stated that no fighter protection could be provided on 10th December, 1941. The words "off Singora" did not appear in the text of the signal, but were implied in the light of Admiral Phillips' request (para. 209 (c)).

213. The agreed air reconnaissances were carried out on both the 9th and 10th December.

214. In the early hours of 10th December a signal was received at Singapore indicating that the Fleet might return sooner than was originally planned. Apart from this no communication was received from the C.-in-C. and his position was unknown.

215. Suddenly, shortly after 1200 hours on the 10th December, a signal, originating from H.M.S. "Repulse", was received in the Operations Room at A.H.Q. of enemy air attacks on H.M.S. "Prince of Wales" and "Repulse" in a position some 60 miles Eastwards of Kuantan. No. 453 (F) Squadron (11 aircraft), which was standing by specifically to provide protection for these ships in case of their return to Singapore, left six minutes later, only to arrive in the area, 165 miles away, to find destroyers picking up survivors from these two great vessels. For the rest of the day a number of sorties by flying boats and fighters was carried out in connection with the return of these destroyers to Singapore.

216. It subsequently transpired that the Fleet had been located by Japanese reconnaissance p.m. 9th December, and that later the

same day the C.-in-C. received news of a landing at Kuantan (in para. 205). These two events must have decided the C.-in-C. to abandon the Singora operation and to close Kuantan on the 10th December.

217. Had the C.-in-C. notified his change of plan, it is conceivable that A.H.Q. might have moved No. 453 (F) Squadron to Kuantan where it could have stood by at call: R/T inter-communication between the two ships and the squadron aircraft had already been arranged. Some effective support might then have been given. Actually no call for assistance was sent until the Japanese attack had been pressed home, by which time intervention from Singapore was impossible.

218. It also transpired later that the ships had been attacked by a force of high level bombers backed by a large number of torpedo-bombers, that both ships had suffered a number of hits by torpedoes and had thus been sunk. The sinking of these two ships was a serious shock to the morale of everybody in the Far East. Their loss, combined with the American losses at Pearl Harbour, gave the Japanese an undisputed command of the sea in Malayan waters. The reactions of this state of affairs upon the subsequent dispositions of air units, with particular reference to the share they were able to take in the land battle, will become clear later in the narrative.

Arrival of Dutch Reinforcements.

219. During the morning of 9th December the three Dutch Bomber (22 Glenn Martins) and one Fighter (9 Buffaloes) Squadrons arrived at Sembawang and Kallang respectively in accordance with the mutual reinforcement plan. It was found that the Dutch bomber crews were not trained in night flying, and so one squadron (9 aircraft) was sent back to the N.E.I. to train; the intention being, on its return, to send back the other squadrons in succession for the same purpose. As A.H.Q. had already decided not to use British bomber squadrons in their bombing role by day until fighter escort or cover could be provided (see para. 198), it was obviously essential to apply the decision to the Dutch bomber squadrons, particularly as their Glenn Martins were slower and no better protected than the British Blenheims.

Air Forces driven out of Aerodromes in N.W. Malaya.

220. Meanwhile in Northern Malaya it was evident that the main line of advance by the Japanese Army was from Singora across Malaya to the Alor Star area. The advanced troops of the 11th (Indian) Division were still holding a position near the frontier but the vital Ledge position on the Kroh-Patani road had not yet been secured.

221. Bombing of our aerodromes in N.W. Malaya continued during the 10th December and A.H.Q. decided that the area must be evacuated. From Butterworth No. 62 (B) Squadron (reduced to 2 aircraft) was evacuated to Taiping: No. 21 (F) Squadron R.A.A.F. (6 repairable aircraft) to Ipoh, where 8 Bofors guns had by now been installed, leaving No. 27 (NF) Squadron (nil serviceability) still at Butterworth. All the unserviceable aircraft of Nos. 27, 34 (B) and 62 (B) Squadrons which were capable of flying were flown to Singapore for repair.

222. The withdrawal of the ground parties was carried out under difficult circumstances.

Units had been subjected to severe and constant bombing and machine gun attacks on scantily defended aerodromes where they saw no effective means of hitting back, and aircraft were remorselessly destroyed on the ground without replacement. The apparent opportuneness of the enemy's attacks (see para. 183) and pernicious rumours of disaster in the land fighting added their influence. There was no senior officer at Butterworth with sufficient weight to take control, and some of the personnel of No. 21 (F) Squadron R.A.A.F. and No. 27 (NF) Squadron R.A.F., both of which had already been driven out of Sungei Patani, did not behave at all steadily. Other units, however, maintained their order.

223. The difficulties of all units was intensified by the wholesale, but understandable, disappearance of unenlisted native followers—cooks, M.T. drivers, sanitary personnel etc.—and only improvised arrangements were possible for replacing them by European personnel at the dislocation of the latter's normal work.

The defection of labour spread to the railway area.

224. Withdrawals were nevertheless effected successfully and, in the case of units other than those mentioned above, in good order. It was due to the untiring energy of a small party headed by Flight Lieutenant R. D. I. Scott, who himself drove a locomotive, that much R.A.F. equipment was removed south.

225. In an endeavour to improve repair and maintenance facilities in N.W. Malaya, an R. & S.U. was formed at this time from No. 151 M.U. at Seletar and was ordered to Taiping; on arrival it detached a Mobile Salvage Section to Butterworth to assist in the work of salvaging material.

226. Meanwhile, during the commencement of the denial schemes at Alor Star on 10th December, the sight of large fires and the sounds of explosions in their rear had caused some concern amongst our forward troops. Orders were therefore issued to the Commander, Norgroup, that no fires were to be started and no demolitions by explosives carried out. Buildings were to be damaged only, petrol and oil run to waste, and the demolition of aerodromes with the help of explosives was to be left to Corps Royal Engineers to co-ordinate with the operations of our troops.

Scale of Enemy Air Effort.

227. It was computed that on the 8th, 9th and 10th December the Japanese had used a daily average of over 120 aircraft in N. Malaya, mostly against R.A.F. aerodromes. Fighters and some bombers were based on S.E. Siam, the majority of bombers on Indo-China. It was estimated that over 100 aircraft were based in the Singora—Patani area and at least 280 in Indo-China. Types identified were:—

Fighters—Navy "O".

Twin-Engine Bombers—Navy 96 and Army 97.

Dive Bombers—Junkers 87N (Japanese version).

Formation of War Council, Malaya.

228. On the 10th December Mr. Duff Cooper, whose ministerial duties had taken him to Singapore, formed a War Council, the composition of which was as follows:—

Mr. Duff Cooper, Chairman;

H.E. the Governor of the Straits Settlements,

C.-in-C., Far East;

C.-in-C., Eastern Fleet;

G.O.C., Malaya;

A.O.C., Far East;

and later, Sir George Sansom as being responsible for propaganda and Press control, and the late Mr. Bowden as representative of the Australian Government.

This War Council met daily for deliberation, mainly in connection with the conduct of the war in Malaya.

Events on the 11th December, 1941.

229. On 11th December the squadrons in N. Malaya were not in a position to take offensive action. Coastal reconnaissance, however, to the north of Kuantan by sections of Hudsons, continued. Catalinas extended the search into the S. China Sea, whilst P.R. Buffaloes continued to register Japanese activities off the South Siamese coast. Enemy submarine reports necessitated the despatch of sections of *Vildebeestes* without result.

230. No. 21 (F) Squadron, R.A.A.F. at Ipoh had no aircraft available for tactical reconnaissance for IIIrd Corps, and so A.H.Q. issued orders that the squadron was to be brought up to strength (16 I.E.) immediately with a proportion of new pilots.

231. Eighty Japanese aircraft attacked Penang Town; no aircraft were available for its protection.

232. On the ground, in addition to advances in the N.E. and N.W., the Japanese had infiltrated down the east coast as far as Trengganu. In the north-west, where the main Japanese forces were advancing, there was considerable pressure on the 11th (Indian) Division, but no major action had been fought. Attacks from the air on our forward troops increased in weight on the 11th, though the enemy air effort was still being expended chiefly on our aerodromes.

233. To assist in the defence of Borneo the Dutch placed at Sinkawang under A.H.Q. operational control one squadron of (9) Glenn Martins and one flight of (4) Buffaloes.

Consideration of Bomber Policy.

234. On the evening of the 11th December it was decided to attack Singora aerodrome once more, the arrival over the objective to be just before first light on the 12th. Eight aircraft of No. 34 (B) Squadron at Tengan were detailed. The attack was unsuccessful: few aircraft got through the bad weather and others were lost as a result of it.

235. This raid was carried out as part of the current policy for bombing Japanese aerodromes in order to reduce the scale of their air activity against our ground forces. The Air Staff at A.H.Q., however, favoured the view that the correct employment of air forces was in the attack of the shipping and troop concentrations in the Singora area, where the main landing had taken place, and through

which reinforcements were still entering. They felt that the time had not yet come to concentrate on co-operation with the Army to delay the Japanese advance on the ground. Furthermore, the resources available for the bombing of aerodromes were not sufficient to produce any real effect on the Japanese effort. This was the view of the A.O.C., but he considered that he could not alter the policy which was selected to meet the wishes of the G.O.C., Malaya, who was anxious that action should be designed to reduce the scale of air attack on our troops. The G.O.C. was approached again at about this time, but reiterated that "bomber policy must give immediate relief to his troops" which, in his view, could only be achieved by bombing aerodromes. (See next paragraph.)

236. Note by Lieut.-General A. E. Percival.

"I have no recollection of this approach. In any case I am quite certain that there was no strong difference of opinion on the subject between the late Air Vice Marshal Pulford and myself. I would point out that there had been practically no air attacks on the ground troops up to that time, so it was very unlikely that I should press for immediate relief of the troops. At the same time I have always held, and still do, that the first essential in any campaign is to obtain some measure of control in the air. By 11th December the Japanese fighters, most of which were based on Singora aerodrome, had established control of the air over Northern Malaya. As long as they held that control the chances of our aircraft doing damage to Japanese shipping and troop concentrations in the Singora area was remote. Before that could be done it was necessary to regain some measure of air control. The only chance of doing this was to destroy a number of enemy fighters on their congested and weakly defended aerodrome. Therefore, if I did press for an attack on the aerodrome, it would have been for that reason and not to provide immediate relief for the ground troops."

237. The G.O.C.'s point of view was confirmed by G.H.Q. who, on 12th December, issued a War Instruction, the relevant paragraph of which read:—

"For the present, assistance to the 11th Ind. Division is to take precedence over other R.A.F. offensive tasks."

On the 12th December the C.-in-C. visited A.H.Q. and re-emphasised the importance of providing support to the Army in the north-west.

Provision of Support for the Army.

238. On the 11th/12th December the land position in the north-west worsened. The 11th (Indian) Division was attacked in and forced to evacuate the Jitra position, and Krohcol came under heavier attacks. The withdrawal of the latter force would have had grave consequences as it would have exposed the communications of the 11th Indian Division and thus necessitated a general withdrawal out of Kedah province.

239. The only aircraft still available in the area for direct support of the Army were two or three Buffaloes of No. 21 (F) Squadron, R.A.A.F., at Ipoh; the rest of the squadron was being re-equipped at Singapore. The

A.O.C. decided, therefore, to send the aircraft and pilots of No. 453 (F) Squadron from Singapore to Ipoh where they would be serviced by the ground crews of No. 21 Squadron. It was intended to return them to Singapore when the rest of No. 21 Squadron had been re-equipped.

240 No. 453 (F) Squadron arrived at Ipoh on the morning of the 13th and began operating from there, using Butterworth as an advanced landing ground. Connection was established with the Observer Corps Operations Room at Kuala Lumpur in the hope of obtaining at least a short warning of attacks upon the station.

241. Operations were vigorously undertaken from Ipoh between the 13th and the 15th December. Japanese convoys were attacked on the road Simpang—Alor Star—Kepala Bantas. Tactical reconnaissances were carried out, and enemy bombers and reconnaissance aircraft in the area were engaged with some success, notably on the 13th when five enemy aircraft attacking Penang were claimed by the squadron. As a result, it was reported that the morale of our troops sharply appreciated

242. On the 15th December No. 21 (F) Squadron, R.A.A.F., left Singapore to reinforce Ipoh, but owing to bad weather five aircraft force-landed and crashed and only six aircraft got through.

243. Operations in support of the Army seriously reduced the serviceability of No. 453 (F) Squadron, and further losses were caused by the intensive bombing of Ipoh aerodrome, which now started. In consequence, on the 15th December, G.H.Q. issued an instruction that the role of the Ipoh fighter force was primarily reconnaissance for IIIrd Corps: it was not to be used against ground targets, and wastage was not to be made good at the expense of the squadrons allotted to the defence of Singapore. In practice, the squadrons in the north functioned mainly in the defence of the Ipoh area, carrying out such tactical reconnaissance as was required by IIIrd Corps. They continued in this role at Kuala Lumpur, to which enemy air attacks drove them on the 19th December.

Demolition of Aerodromes.

244. The salvage of equipment from aerodromes in north-west Malaya continued. Sungei Patani, Butterworth and Taiping were successively cleared, and all stores and personnel sent back to Kuala Lumpur by road and rail for sorting.

245. Experience was to show that the demolition of aerodrome surfaces had little more than nuisance value, and only slightly retarded the Japanese efforts to bring them into service for their own forces. Speedy repairs were possible because:—

(a) large stocks of road-metal had been accumulated on each aerodrome for repairs, and it proved too bulky for removal and denial to the enemy (para. 30);

(b) occupation by the Japanese followed demolition so quickly that the heavy rains had no time to take effect;

(c) the abundant native labour was forcibly impressed by the enemy for repair work.

Air Forces driven out of North-West Malaya.

246. As early as the 20th December Japanese bombers and fighters were using aerodromes in the north-west, particularly Sungei Patani, and the scale of attack in the Kuala Lumpur area correspondingly increased. By the afternoon of 22nd December these attacks had reduced the combined strength of Nos. 21 (F) R.A.A.F. and 453 (F) Squadrons to four operationally serviceable aircraft.

247. In view of the enemy's great numerical superiority, further attempts to reinforce these squadrons only meant dissipating aircraft from their main role—the defence of Singapore. It was decided, therefore, to withdraw the force to Singapore, and this was done on 23rd December. It meant that operations in support of the Army in the north-west could be undertaken only by using Kuala Lumpur and other airfields to the south of that place as advanced landing grounds.

248. These two fighter squadrons had been forced to operate under very difficult conditions. Maintenance and servicing facilities had been necessarily primitive, whilst the warning system gave little, if any, notice of attack.

249. However, the unexpectedly high calibre of Japanese aircraft and pilots, and the superior numbers of the enemy, had proved too much for them.

250. Nevertheless, the work of these squadrons had had a good effect on the attitude of our troops to the air, although the number of enemy aircraft shot down was only small.

251. With the withdrawal of the R.A.F. from the north-west, Norgroup was disbanded, and a Liaison Officer was left at H.Q. IIIrd Corps.

Army Situation.

252. While these operations and moves of air forces had been taking place the Army had been compelled to give more ground. On 15th December the Japanese forced the 11th (Indian) Division to evacuate the Gurun position, and threatened to push through the gap between the division and Krohcol. A big withdrawal had therefore to be made out of Kedah province to the Krian river. Penang was thus left isolated and was evacuated on the night of 16th/17th December.

253. Between the 17th and 26th December our forces fought for the Taiping—Ipoh area, preparatory to taking up positions in the Kampar district, which offered the best possibilities for prolonged defence in this part of Malaya.

254. The prospects of stabilising the situation, however, were not good; and as early as 16th December the sole Command reserve, consisting of a Brigade Group, had been committed to the fighting in the north-west.

255. In the rest of Malaya were:—

(i) A Brigade Group which was in process of being withdrawn from the State of Kelantan.

(ii) A Brigade Group at Kuantan which was already threatened by Japanese infiltration down the Trengganu coast.

(iii) A Division (2 Brigades) of the Australian Imperial Forces in Johore, whose

particular role was to guard against landings in the Mersing area on the east coast of Malaya.

(iv) The garrison of Singapore Fortress.

All these formations were either already committed actively or potentially. Adequate reinforcement for the main battle area therefore depended upon the safe arrival of reinforcements from outside Malaya. But before dealing with this aspect it is first necessary to dispose of some other matters.

Preparations for basing squadrons in the N.E.I.

256. The evacuation of the northern aerodromes had been foreseen, and as this would eventually result in congestion of aerodromes on Singapore Island, A.H.Q. issued orders as early as the 14th December for stocks of bombs together with refuelling and re-arming parties to be sent to aerodromes in Sumatra. Shortly afterwards, two staff officers from A.H.Q. and an officer of the A.M.W.D. were ordered to Sumatra to accelerate work in connection with:—

(a) providing facilities for the transit of reinforcing aircraft;

(b) the operation of bombers from Sumatra, including the selection of a Bomber Group H.Q.

257. For these movements it was possible to call upon an Air Transport service from Singapore-Sumatra-Java which had been instituted by the Dutch Army Air Service. The number and capacity of the transport aircraft were limited, but they enabled the movements to Sumatra to be carried out rapidly. They illustrated the value of transport aircraft. It was considered inadvisable to operate these aircraft in Northern Malaya where little fighter protection could have been provided for them.

258. A warning order was also issued on the 22nd December for moving No. 153 M.U. from Kuala Lumpur to Java. By that date the Japanese had advanced as far south as Taiping, and Kuala Lumpur was threatened. Thus it was felt that the work of the unit could be more satisfactorily carried out in Java.

Japanese Attack on Borneo.

259. It is now necessary to revert to operations off the East coast of Malaya leading up to the Japanese attack on Borneo.

On the 13th December G.H.Q. received information from a reliable source that a large convoy of well over a hundred ships was heading S.S.W. from the direction of Saigon. Its destination was not known for some days. It constituted a serious threat to Malaya, on the east coast of which existed several good landing beaches with little or no defence, where a successful landing would have seriously jeopardised our army formations still closely engaged with the enemy on the western side of the peninsula.

260. Accordingly, reconnaissance activity from Malaya was materially increased, and during the period 13th to 24th December most of the available bombers stood by to attack the enemy convoy in the event of its approach.

261. An average of 2 Catalina, 6 Hudson and 6 Glenn Martin sorties was sent out daily from Malaya to locate the expedition, whilst Dutch Glenn Martins from Sinkawang in Dutch Borneo were similarly employed. On the 14th, 6 cruisers were reported south of Saigon, and on the afternoon of the 16th a landing was reported at Miri, in British Borneo. The ships in the area were attacked by the Dutch in bad weather on the 17th, 18th and 19th. Hits were claimed on a cruiser and transports, and several near misses against transports.

262. The reconnaissance activity continued, spreading south-east to the Rhio Archipelago, and on the 23rd December an expedition heading towards Kuching was detected. Both Kuching and Sinkawang aerodromes had been attacked by Japanese aircraft on the preceding days, and the former had been "blown". The Dutch aircraft at Sinkawang were withdrawn to Palembang in Sumatra on the 24th, though before they were transferred they were able to carry out a few attacks against the enemy convoy.

263. This same convoy was attacked on the 24th by 3 Hudsons and also by 5 Blenheim IVs of No. 34 (B) Squadron. Several near misses were claimed but no positive sinkings. A Dutch submarine claimed to have sunk 3 transports and 1 tanker in the area.

Increased Air Reconnaissance activity.

264. Seaward reconnaissance at this time absorbed almost all the G.R. and bomber aircraft in Malaya. In addition to major Japanese expeditions east of Malaya, Japanese forces were still infiltrating southwards down the East coast towards Kuantan; and on the 15th December a flight of M.V.A.F. was established at Kahang to carry out local coastal reconnaissance for the Australian forces in Johore who were responsible for guarding against landings in the Mersing-Endau area. Reconnaissance up the West-coast also became an increasing commitment during the second half of December. Regular reconnaissances were instituted from 22nd December, as the Japanese were already showing signs of infiltrating in small boats by day and night down the West coast behind our Army's left flank. The discovery and attack of these infiltrations was difficult because the boats moved in waters flanked by luxuriant tropical undergrowth. By day the Japanese protected their movements with fighter patrols.

265. The possibility that the Japanese might spread across from Malaya to Sumatra had also to be faced, thus a squadron of Dutch Glenn Martins at Pakenbaroe in Sumatra were employed on reconnaissance to detect any such movement with effect from 15th December.

Minor Reorganisations.

266. Meanwhile, certain reorganisation of squadrons had taken place. One flight of Wirraways (6) was formed at Kluang on the 18th and training in dive-bombing commenced. The aircrews of No. 60 (B) Squadron were sent back to Burma by sea by B.O.A.C. to join their ground personnel at Rangoon; the squadron's aircraft were taken over by No. 62 (B) Squadron.

Order of Battle—24th December, 1941.

267. At this stage of the campaign the disposition of squadrons and their approximate strengths in serviceable aircraft were as follows:—

Bomber Squadrons :

Blenheims	...	...	...	No. 34 Squadron	...	...	10	...	Tengah
				No. 62 Squadron	...	...	9	...	Tengah
Dutch Glenn Martins	...	...	...	Two Squadrons	...	...	15	...	Sembawang
Wirraways	...	...	...	One Flight	...	...	6	...	Kluang

T.B. Squadrons :

Vildebeestes	...	...	...	No. 36 Squadron	...	...	16	...	Seletar
				No. 100 Squadron	...	...	13	...	Seletar
Albacoeres	...	...	...	One Flight	...	...	5	...	Seletar

Fighter Squadrons :

Buffaloes	...	...	...	No. 21 Squadron R.A.A.F.	...	...	} reorganising Sembawang	
				No. 453 Squadron	...	...
				No. 243 Squadron	...	15		...
				No. 488 Squadron	...	14		...
				Dutch Squadron	...	9	...	Kallang
Night Fighter (Blenheims)	...	...	...	No. 27 Squadron	...	...	...	reorganising Kallang

G.R. Squadrons :

Hudsons	...	...	...	No. 1 Squadron R.A.A.F.	...	5	...	Sembawang
				No. 8 Squadron R.A.A.F.	...	8	...	Sembawang
				No. 205 Squadron	...	4	...	Seletar

Miscellaneous :

No. 4 A.A.C.U. Swordfish	...	...	...	One Flight	...	...	4	...	Tengah
Sharks	...	...	...	One Flight	...	...	4	...	Tengah
M.V.A.F. (Various)	...	...	...	Recce. Flight	...	...	—	...	Kahang
M.V.A.F. (Various)	...	...	...	Comm. Flight	...	...	—	...	Kallang
Dutch Squadron (Glenn Martins)	...	...	...	One Squadron	...	...	9	...	Pakanbaroe (Sumatra)

Reinforcement Situation

268. From the 8th December onwards many messages had been interchanged between the Air Ministry and the Far East on the subject of reinforcements, which, commencing with a long-range policy of supply, developed, with the steady advance of the Japanese Army, into an emergency arrangement of diverting to the Far East squadrons from other Commands which it was hoped could arrive in time. By the 25th December, the position as understood by A.H.Q. was:—

Hudson II's—6 arrived from Australia on 25/12 to reinforce Nos. 1 and 8 (GR) Squadrons, R.A.A.F.

Hudson III's—52 to be flown out from England commencing about 20/12.

Blenheim IV's—12 from Middle East—7 arrived by 25/12; remainder en route.

Hurricanes—51 in crates with 24 pilots en route by sea due on or about 8th January, 1942. These had left England as reinforcements for the Middle East but were diverted to Singapore whilst at sea.

Catalinas—4 en route with 2 spare crews. The Plan for their disposition was:—

Hudson III's—to (a) re-equip No. 62 (B) Squadron; and

(b) reinforce Nos. 1 and 8 (GR) Squadrons R.A.A.F.

Blenheim IV's—to be absorbed into No. 34 (B) Squadron.

Hurricanes—to be used from Kallang and Johore in defence of Singapore; it was anticipated Buffalo Squadrons would be whittled away by the time these Hurricanes arrived.

Catalinas—One to remain at Ceylon, remainder to reinforce No. 205 (FB) Squadron at Seletar.

Thus some air reinforcements, urgently wanted, were now on their way despite the still critical state of the war in Europe from which they had had to be diverted to Singapore

NARRATIVE FROM 25TH DECEMBER, 1941, TO
30TH JANUARY, 1942

Changes in Higher Command

269. Before proceeding further with the narrative, it is appropriate to mention some changes in the Higher Command in the Far East which were about to take place during the next few weeks.

On 27th December, General Sir Henry Pownall relieved Air Chief Marshal Sir Robert Brooke Popham as Commander-in-Chief, Far East. The former's instructions differed from those of the latter, as described in para. 3. General Pownall was instructed to deal with "matters of major military policy and strategy", but that it was not the intention that he should "assume operational control". These instructions were given before the outbreak of the Japanese war, which occurred however whilst he was en route. As their consequence, the system described in para. 3, under which G.H.Q. was responsible for the control of operations, now came to an end.

270. On 1st January, 1942, the small Fighter Control H.Q. in Singapore was expanded, albeit on a restricted scale. It became known as No. 224 (F) Group. Group Captain E. B. Rice remained in command. Circumstances, however, did not permit full administration of its units and stations being transferred to it from A.H.Q.

271. On 4th January, Air Vice Marshal P. C. Maltby arrived in Singapore as Chief-of-Staff

designate to the newly appointed C.-in-C. Far East. He remained in Singapore to assist the A.O.C., being attached to A.H.Q. on 12th January for the purpose.

To resume the narrative of events

Arrival at Singapore of Reinforcement Convoys

272. With effect from the 26th December, arrangements for the reception of reinforcement convoys at Singapore became of overriding importance, not the least factor being the urgent necessity to maintain the secrecy of their arrival. This was successfully accomplished, it is believed.

273. In view of the importance of these convoys to the defence of Malaya, G.H.Q. issued an instruction on the 27th December that "air protection for convoys bringing reinforcements will now take precedence before the other tasks".

274. Reinforcements were, if anything, more important to the Army even than to the R.A.F. All the fighting since the beginning of the campaign had fallen on the IIIrd Corps, particularly the 11th (Indian) Division, and the troops badly needed a rest; and as the reinforcements contained a complete fresh Division (18th) as well as anti-aircraft regiments, it was vital from the Army point of view that the Air Force in Malaya should do everything in their power to ensure that the convoys got through.

275. Air protection for these convoys was provided by means of widespread reconnaissance sweeps into the S. China Sea, close anti-submarine patrols from the Banka Straits onwards and fighter escort for the final approach to Singapore. An extremely vulnerable part of the route was that which lay through the Banka Straits off E. Sumatra. For the protection of the convoys in this area, the Dutch Fighter Squadron based at Kallang was moved to Palembang on the 29th December, and again on the 9th January. Apart from the fighters, operations for shepherding these convoys, for periods of three days for each convoy, employed at least 2 Catalinas, 6 Hudsons and 4 Glenn Martins daily. In addition, during these 3-day periods, all other available aircraft in the Command were kept at short notice in case the convoys were attacked by enemy naval or air forces. In this situation the absence of effective Naval strength in Malayan waters was aggravated by the insufficiency of air forces to reinforce the Navy, and at the same time to meet the needs of the battle on the land. In these circumstances there was no alternative but to withdraw appreciable numbers of our aircraft, and to make them stand by for the protection of convoys when they might otherwise have been participating in the battle on land.

276. The task was successfully accomplished. The first convoy arrived in Singapore on 3rd January and a second on 13th January. The latter included the first brigade of the 18th Division to arrive. It also contained 51 crated Hurricanes accompanied by more than 20 Hurricane pilots.

It is difficult here adequately to convey the sense of tension which prevailed as these convoys approached Singapore, and the sense of exultation at their safe arrival. The feeling spread that at least the Japanese were going

to be held on the ground if not driven back, whilst many confidently expected that the Hurricanes would sweep the Japanese from the sky.

Withdrawal of the Army to Johore

277. But by the time that the first reinforcements arrived the position of the Army had seriously worsened. On the West coast a withdrawal from the strong Kampar position had been forced upon IIIrd Corps by an out-flanking landing at Telok Anson on the West coast.

278. The forcing of a line on the Slim river and further landings in the Kuala Selanger region led to the evacuation of Kuala Lumpur and Port Swettenham on the 10th January; and by the middle of January the bulk of our forces were back to the northern frontier of Johore, little more than 100 miles from Singapore.

279. On the East coast, the Brigade that had originally held the Kota Bahru area had fallen back, without serious losses, to Central Malaya. The Brigade Group defending Kuantan, which had been attacked from the north on 30th December, had also to be withdrawn to prevent its communications being cut as the result of the West Coast withdrawal.

280. Thereafter, the Japanese on the East coast began to move steadily down towards Mersing. There had been no attacks in this area up to the middle of January, but a major Japanese landing was expected daily.

281. Thus the progress of the Japanese Army was quicker than had been anticipated, chiefly as the result of its possession of an armoured component, its superiority in jungle warfare, its superiority in the air, and its ability to pass parties in boats down the West coast round the left flank of our Army. Infiltrating Japanese frequently got behind our forward troops and formed road blocks on their lines of communication which proved difficult, and sometimes impossible, to clear. Our own demolitions were swiftly repaired or circumvented by the enemy; and in general the speed and aggression of his follow-up came as a surprise.

Co-operation with the Army on the West coast

282. The heavy commitments of the air forces for reconnaissance, convoy protection and the air defence of Singapore, reduced the number of aircraft available for the direct support of the Army during this period. But, within the limitations thus imposed, air action was carried out on both West and East coasts, increasing in quantity as the battle area came within range of aircraft based on aerodromes in Singapore.

283. In response to requests from H.Q.M.C. and IIIrd Corps, action was taken against Japanese landing parties on the West coast. Daily offensive reconnaissances were carried out by 4 to 6 Glenn Martins or Blenheims, unescorted at first, but later, after 4 aircraft had been shot down in one day, with fighter protection. Five Shark aircraft were moved up to Batu Pahat on 2nd January: they also took part in this type of operation.

284. Barges off Port Swettenham were attacked by Blenheims on the 2nd, 3rd and 4th January: several near misses were observed but no definite sinkings.

285. As Japanese activity against the West coast increased, so, from 15th January, air attacks were made on an increased scale:—

15th Jan.—by 6 Hudsons, 6 Glenn Martins and 3 Blenheims escorted by 12 Buffaloes attacked barges in the Linggi River: two barges were sunk and three damaged by the Hudsons.

16th Jan.—15 Buffaloes attacked transport and movements on the road Tampin/Gemas whilst 9 Blenheims and 6 Glenn Martins followed by 4 Buffaloes attacked barges in the Muar River where further landings were taking place.

17th Jan.—9 Vildebeestes escorted by 6 Buffaloes continued attacks on barges in the Muar River, whilst fighter cover was provided for a move by road of the A.I.F. in the area.

18th Jan.—Attacks on barges in the Muar River and on troop concentrations in the Gemas area continued—a total force of 6 Blenheims, 5 Hudsons and 14 Buffaloes being employed.

286. In addition, tactical reconnaissance by one or two sections of Buffaloes was carried out for IIIrd Corps, chiefly in the Seremban-Tampin-Gemas area. Special bombing attacks were carried out by Blenheims on 10th January to destroy trains full of Army stores, which, owing to the congestion and dislocation of the railway system, had been stranded at Malacca. The attacks were at least partly successful, as were others made on 12th January against some oil tanks which had been left intact at Port Swettenham.

287. Part of our offensive effort continued to be made against Japanese-held aerodromes in order to meet the wishes of G.O.C. Malaya for reducing enemy air action against our forward troops, which had been carried out concurrently with attacks against our aerodromes both in Malaya and on Singapore Island and against our road and rail communications behind the battle front.

288. Daily flights over Northern Malaya by our P.R. Buffaloes revealed that aerodromes "blown" in the withdrawal were quickly repaired and occupied. Gong Kedah was occupied by the enemy on the 31st December, Ipoh on the 4th January and Kuantan on the 9th January.

289. Consequently our aircraft made attacks on aerodromes in Northern Malaya at frequent intervals during the latter part of December and the first half of January. They entailed long flights by night, often in the face of violent tropical thunderstorms. Altogether, between 20th December and 15th January, some eighty sorties were carried out against this type of target. Sungei Patani was attacked six times, Gong Kedah twice, Ipoh and Alor Star once. Good results were achieved by Blenheims of No. 34 (B) Squadron at Sungei Patani on 27th/28th December: photographic reconnaissance on the following day confirming that at least 7 fighters had been destroyed and 5 fighters and 3 bombers damaged.

290. Good results were also obtained at Gong Kedah on 1st/2nd January by Catalinas. These aircraft had by this time largely been withdrawn from reconnaissance work, which was instead carried out by Hudsons, owing to the vulnerability of the Catalina to fighter

attack. The range and bomb load of the Catalinas proved very useful for night bombing operations. Twice in January they attacked the main enemy base at Singora, a target which by this time was beyond the range of any other aircraft in the Command.

291. In addition, two attempts were made to carry out strong fighter attacks against Kuantan aerodrome; but tropical thunderstorms on each occasion forced our fighters to return.

292. That these operations inflicted losses upon the enemy is certain. It is equally certain that he had more than sufficient reserves to replace his losses without delay.

Air Activity off the East coast.

293. Off the east coast there was considerable reconnaissance and activity. On 27th December, photographic reconnaissance confirmed the arrival of 34 ships at Singora, which were proved subsequently to have brought a reinforcing Division. Further reports of enemy shipping necessitated sweeps by Hudsons to the Natunas on the 3rd and 4th January.

294. Daily East coast reconnaissances to the north from Endau beyond Trengganu occupied at least 6 Glenn Martins or Hudsons, whilst the M.V.A.F. continued close reconnaissance for the A.I.F. in the Endau-Mersing area.

295. On the 8th January, 9 Glenn Martins and 4 Hudsons bombed and scored direct hits on a ship anchored in the South China Sea, believed to be used by the Japanese as a navigational aid for their aircraft. On 9th January, 9 Glenn Martins bombed with success ships unloading at Kuantan.

296. Meanwhile, Kuantan had been occupied by the Japanese on the 9th January. Infiltration down the coast towards Endau and Mersing immediately commenced. By the 13th January A.H.Q. became convinced of the possibility of a landing in this vital area, and a general direction was therefore issued to all squadrons governing their action in such a contingency. A daily reconnaissance by 6 Hudsons was instituted to detect the approach of any convoy from Indo-China; reconnaissance northwards up the east coast, although restricted, was still maintained.

Capture of Borneo.

297. Borneo had been lost by this time. Kuching had been captured on 26th December, and its garrison of one Indian Battalion forced to retreat. It was located by our reconnaissance as it made its way to Sinkawang, where supplies were dropped for it by three aircraft on 31st December. Apart from a further reconnaissance on 9th January to ascertain the state of Kuching aerodrome, no further air action in the Borneo area was possible.

Japanese air operations against Singapore.

298. During the first half of January the Japanese extended their air attacks to Singapore Island, directing them mainly against its aerodromes, with the evident intention of neutralising our squadrons. Tengah, on which the Blenheim force was based, received particular attention. Night raids were a constant occurrence, but these were mainly of a nuisance value and little damage was done by them. No. 27 (NF) Squadron, which had been reorganised at Kallang, and which now had 5

Blenheim I's serviceable, was used in an endeavour to intercept these attacks, but without success owing to the poor performance of their aircraft.

299. Day raids by the enemy took place with increasing intensity, at first by bombers alone, and later by bombers escorted by fighters. On the 1st January the first serious attack against Tengah took place, as a result of which native labour disappeared. This was to happen at all aerodromes as they became attacked, necessitating the replacement of domestic personnel by Europeans and making it increasingly difficult to repair damage to aerodrome surfaces. At all Stations on the Island dispersed accommodation was provided for personnel normally quartered at them, mobile kitchens were improvised, and, in the case of Seletar, married families were moved to alternative quarters.

300. Tengah was attacked again on the 6th January, 9th January, 12th January, 13th January and 14th January. On the 15th, the naval base was attacked, and on the 16th, aerodromes and the docks. The 17th was a particularly bad day. Attacks on aerodromes were carried out by escorted bombers, and, under their cover, low flying fighters slipped in and attacked Sembawang and Seletar. At Seletar, 2 Catalinas at their moorings were burned out and another 2 damaged. Six Blenheims at Tengah were damaged to a varying degree, whilst at Sembawang 3 Buffaloes on the ground were destroyed and 4 damaged. Attacks were carried out by some 80 bombers, of which 2 were brought down and another 4 damaged. The attack was repeated on the 18th against the naval base and the docks, and again 2 were brought down and possibly 6 damaged for the loss of 8 Buffaloes.

301. The absence of a first-class fighter aircraft prior to the second half of January was a handicap. An attempt was made to improve the performance of the Buffalo by reducing its petrol load and replacing the unsatisfactory .5 guns, which were heavy and possessed faulty interrupter gear, by .303 machine guns, but it remained inferior to the Navy O particularly in "dog-fighting".

302. Moreover, owing to the short warning of enemy raids, our fighters were frequently still climbing to meet the enemy when they were themselves attacked. A warning of at least thirty minutes was required to enable the Buffalo to reach 24,000 feet, which was the height at which the enemy formations often flew. But the successive evacuation of Observer Corps Posts on the mainland as the Japanese advanced, and the inadequate radar cover available, meant that the period of warning was almost always insufficient.

303. The Dutch Fighter Squadron in Singapore was transferred in the middle of January to Palembang (para 357), leaving only 2 squadrons of Buffaloes—Nos. 243(F) and 488(F)—for the defence of Singapore, because Nos. 21(F) R.A.A.F. and 453(F) Squadrons based at Sembawang were used primarily for Army co-operation and for escorting bombers operating by day on the West coast. Apart from other handicaps, therefore, defending fighters were outnumbered in the air by the Japanese fighters in varying degrees between 6-1 and 15-1.

304. The A.A. defences of the Island were of limited effect in countering air attacks. Bofors guns gave protection against all but a few surprise low level attacks. But the great majority of the enemy's bombing was carried out from altitudes of over 20,000 feet, where they were well above the effective range of the 3-in. guns which formed one-third of the heavy A.A. defences. At such heights only the 3.7-in. guns, of which there were only 40 for the defence of the many targets on the Island, could reach them.

Further changes in the Higher Command.

305. At the beginning of January it had been decided by the Allied authorities to unify the command of all their forces in the South West Pacific under a Supreme Allied Commander. General Sir Archibald Wavell was appointed to this post. He arrived in Singapore on 7th January and commenced to form his staff, absorbing into it the Commander-in-Chief, Far East, and his staff. On 11th January he moved to the site selected for his Supreme Allied Headquarters, South West Pacific Command, namely to Bandoeng in Java. There on 15th January he assumed command of operations throughout the S.W. Pacific, and G.H.Q. as such ceased to exist. The code name for General Wavell's H.Q. was Abdacom.

306. It is unnecessary for the purpose of this report to describe the organisation of Abdacom. Suffice it to say that it included a department, the code name of which was Abdair, whose head functioned in the dual capacity of Chief-of-the-Air-Staff at General Wavell's H.Q., and of Commander of all the Allied air forces in the S.W. Pacific. This appointment was temporarily filled by Major General Brereton, U.S. Army Air Corps, pending the arrival of Air Chief Marshal Sir Richard Peirse, R.A.F., who was appointed to it and who took up the duty during the last days of January.

307. To facilitate control of air operations within the S.W. Pacific Command, the area was divided by Abdair into six Groups, of which only two need be mentioned in this Narrative:—

(i) *Westgroup*—consisting of R.A.F. Far East Command, including Units in Malaya and those in process of being transferred to the Netherlands East Indies.

(ii) *Recgroup*—consisting of all seaward reconnaissance units in S.W. Pacific Command, British, Dutch and American. Its Headquarters was in Java.

Directive to Air Forces in Malaya.

308. On the 18th January Abdacom stressed the importance of Singora as a target and issued a general directive to govern the operations of the Air Forces in Malaya. This directive stated that "protection of convoys at present takes precedence over action against other Japanese forces. If, however, new expeditions are located threatening the east coast of Malaya or endeavouring to pass south of Singapore, all available air effort should be directed to destroying such targets". The directive also stressed the importance of slowing up the Japanese advance on land by attacking Singora, intervening in the land battle, and of reducing the scale of Japanese air attack.

Relative Strength of Air Forces in Malaya.

309. To carry out efficiently all these tasks was beyond the strength of the Air Forces available. On the afternoon of 18th January, the serviceability state of the Air Forces in Malaya showed 74 bomber and G.R. aircraft and 28 fighters, all based on Singapore with the exception of a small detachment at Kahang. Moreover, many of these aircraft were obsolete or obsolescent. Against these it was estimated that the Japanese were maintaining in Malaya at this time a force of 150 fighters and 250 bombers. Concentration was therefore made, in general, on one task at a time in the order of priority indicated in the directive, but influenced by the situation.

Arrival of Further Convoys and of Air Reinforcements.

310. Special attention, as the directive instructed, continued to be paid to the provision of protection for reinforcing convoys arriving at Singapore. Further convoys came in on 22nd, 24th and 28th January, bringing the remainder of the 18th Division, except for a few units, a Brigade Group from India, two to three thousand troops from Australia, and more anti-aircraft units.

311. Five Hudson sorties were made daily over wide areas around the convoys to detect the approach of Japanese naval forces. One Catalina was maintained on anti-submarine patrol, and during the final approach to Singapore a fighter escort of six aircraft was maintained. All other aircraft were kept at short call as the convoys approached, in case the enemy should attack them.

312. Three reinforcing Catalinas arrived on 7th January and were allotted to No. 205 (FB) Squadron.

313. During the third week in January, the 51 Hurricanes which had arrived on the 13th January (para. 276), were being assembled preparatory to joining Buffaloes in the defence of the Island. Spares were ample but tool kits were scarce.

314. On their arrival they were immediately unloaded, and the majority dispersed to previously selected concealed positions, where they were erected and wheeled to nearby airfields for test; the remainder proceeded direct to No. 151 M.U. for erection at other dispersed points. The speed with which these aircraft were erected was a very remarkable achievement (see Postscript).

315. Twenty-four pilots from Nos. 17, 135 and 136 (F) Squadrons had arrived with them: some had had experience in the Battle of Britain. When A.H.Q. first heard of their diversion to the Far East, it had been planned to give aircrews a spell before employing them in operations. This spell was obviously desirable, not only because of the length of their sea voyage, but also because of the need for acclimatising pilots to local conditions. However, events had moved too fast and the stake was too high for delay to be acceptable. The Hurricanes had to be used immediately they had been erected and tested. They were in action as a squadron by the 20th January, exactly a week after they had been landed in crates.

316. The aircraft were accompanied by some ground personnel of No. 232 (F) Squadron, deficiencies being made good by personnel from the transit camp. They were based at Seletar and Kallang, and the whole operated as No. 232 (F) Squadron.

317. Sixteen Hudson III's arrived in Singapore from the United Kingdom, the first of them during the third week of January. They were allotted to 62 (B) and No. 8 (GR) R.A.A.F. Squadrons. They came at somewhat scattered intervals, and as long as the air route to the Far East remained open, i.e., until mid-February. The balance of the 52 which had been expected were unable to get through before the enemy cut the air route from India.

318. Two reinforcing bomber squadrons, Nos. 84 (B) and 211 (B) Squadrons, began to arrive on 23rd January from the Middle East. They were diverted to Sumatra, for reasons which will be related in due course. They, too, arrived at scattered intervals and were far from complete when the enemy cut the air route. Their ground crews and equipment were to follow by sea (para. 417).

A.H.Q. was notified that a further 48 Hurricanes, over and above those mentioned in para. 313, would be flown into Singapore from H.M.S. Indomitable about the end of January, and that 39 more in crates were en route by sea.

Further withdrawal of the Army—to Singapore Island.

319. Despite the arrival of reinforcements the position on land continued to develop adversely during the second half of January.

320. On the west coast, the Japanese took full advantage of their command of the sea to land behind the Army positions. Between the 16th and 18th January there was a succession of landings on the Johore coast between Muar and Batu Pahat, which, combined with heavy frontal attacks, forced our troops to withdraw to the line Batu Pahat—Mersing.

321. On the East coast, the long expected landing in the Mersing—Endau area took place at Endau on 26th January. The lateral communications available in north Johore permitted a junction between the Japanese forces in the east and west of the peninsula, while a Japanese advance from the Endau area threatened the communications of the main British forces in the west.

322. Our losses in the west coast battle and the new threat from the East dictated a general withdrawal of our forces to Singapore Island itself, a decision which was taken on the 27th January. The withdrawal was achieved in good order. Nevertheless it had been hoped that the arrival of reinforcements would permit the holding of a bridgehead in Johore, but this now proved to be impossible.

Air Action against the Japanese Advance: West Coast.

323. The Japanese exploitation of their superiority at sea led, on the west coast as well as the east, to a number of air reconnaissances and sweeps being undertaken over the left flank of the Army. Attacks against Japanese-held aerodromes in Central Malaya were also carried out.

324. On the 19th January the situation at Muar was reported to be serious. Twelve Buffaloes carried out an offensive sweep of the area, using surplus ammunition on barges during their return. The latter were also attacked twice during the day by 3 Hudsons escorted by Buffaloes. That night, 19th/20th January, 9 Vildebeestes bombed the aerodrome at Kuala Lumpur, where some twenty fighters had been observed by Buffaloes of No. 488(F) Squadron.

325. On the 20th January two Blenheims made an offensive reconnaissance against shipping off the coast. Later, 6 Buffaloes carried out an offensive sweep of the Muar—Gemas area where the Army reported heavy dive bombing against troops of IIIrd Corps. They met a formation of 6 Army 97's, destroyed one and forced the others to jettison their loads. That evening, at last light, 7 Blenheims bombed and machine-gunned Kuala Lumpur with great success, claiming the destruction of over 20 fighters. 6 Hudsons attacked Kuantan at the same time. These attacks were followed up that night by 24 Vildebeestes, 12 bombing each aerodrome.

326. From the 21st to 24th January, many requests for support of the Army in the Muar area were received, but these were days during which the protection of convoys took precedence, and little was available with which to meet them. On the 21st January, 6 Buffaloes carried out sweeps in the morning and afternoon in the Parit Salong—Batu Pahat area; 2 Albacores and 2 Buffaloes attacked small boats near Batu Pahat; and 2 Albacores dropped supplies successfully for troops who had been cut off, and thus assisted them to extricate themselves.

327. On 22nd January the Japanese were infiltrating from Muar to Batu Pahat. This road was attacked by 2 Albacores, 1 Shark and 6 Buffaloes. More supplies were dropped by Albacores of No. 36 Squadron to troops cut off in the Parit Salong area. That night, 22nd/23rd January, 21 Vildebeestes again bombed Kuala Lumpur.

328. On the 23rd January, 5 Buffaloes patrolled over the withdrawal of troops from the Yong Peng area (N.N.E. of Batu Pahat) and engaged 12 Navy 'O' fighters which were harassing them. All available Sharks, Albacores and Wirraways attacked enemy troops on the road leading south from Muar. That night, 23rd/24th, 12 Vildebeestes bombed Kuantan aerodrome.

329. On the 24th January, 6 Vildebeestes attacked troops on the bridge at Labis on the Segamat—Singapore road, whilst 3 others bombed oil tanks left standing at Muar.

330. On the 25th January, 12 Buffaloes carried out sweeps, morning and evening, in the Kluang—Gemas—Batu Pahat area, whilst that night 24 Vildebeestes and 3 Albacores carried out 2 sorties each to cover the sea evacuation of a battalion which had been cut off in the Batu Pahat area. During that day 5 U.S.A. Fortresses from Java bombed Sungei Patani under Abdair direction. At night, 3 Hudsons attacked Kuala Lumpur.

331. By the evening of the 25th January, the airfields at Kahang, Kluang and Batu Pahat became untenable and were demolished, as were also the strips which had been prepared in S.

Johore. Their loss was a severe blow, as it had been hoped they would be available for the reinforcing Hurricanes; they had been specially prepared and equipped for that purpose. Seletar, which had now to be used instead, was not so well equipped with dispersal points.

Air Action against the Landing at Endau.

332. To turn to the East coast. On the 26th January, at 0930 hours, Hudson reconnaissance sighted 2 cruisers, 11 destroyers and two 10,000 ton vessels accompanied by barges, 10 miles off the coast approaching Endau. (para 321). They were being protected by Japanese fighters based on Kuantan.

333. The forces available for opposing them were:—

9 Hudsons of Nos. 1 and 8 (GR) Squadrons, R.A.A.F.

21 Vildebeestes, 3 Albacores of Nos. 36 and 100 (TB) Squadrons.

334. The attack was organised in two waves. The first wave comprised 9 Hudsons and 12 Vildebeestes and was escorted by 15 Buffaloes and 8 Hurricanes; the second, 3 Albacores and 9 Vildebeestes, escorted by 4 Buffaloes and 8 Hurricanes.

335. Unfortunately, as the Vildebeestes and Albacores of Nos. 36 and 100 (TB) Squadrons had been operating throughout the whole of the previous night (para. 330), the first wave of attack could not be launched until the early afternoon. By this time most of the Japanese troops were probably clear of their transports.

336. However, the first wave, consisting of 9 Hudsons and the Vildebeestes of No. 100 (TB) Squadron, was able to press its attack home, being helped by rather cloudy conditions. 5 Vildebeestes were lost. It was claimed that one cruiser and two destroyers were sunk, both transports were hit (one set on fire), and casualties were caused to troops in barges and on the beaches.

337. With the arrival of the second wave, the Vildebeestes of No. 36 (TB) Squadron, the weather in the area suddenly cleared and enemy fighters intercepted the squadron before it could attack. 6 Vildebeestes and 2 Albacores were shot down and other aircraft damaged and aircrews wounded. Later, 5 Hudsons of No. 62 (B) Squadron from Sumatra arrived in the area and attacked barges.

338. The fighter escort problem had not been easy owing to the slow speed of the T.B. aircraft and the distance of the target from their aerodrome. During these two attacks, 12 Japanese Navy "O" fighters were shot down and 4 damaged for the loss of 2 Hurricanes and 1 Buffalo, one Hurricane pilot personally accounting for 4 Japanese fighters.

339. No. 36 & 100 (TB) Squadrons suffered very heavily. More than half their aircraft were shot down, including those of both Commanding Officers. The remainder were badly shot about, and a number of aircrews in them were wounded. Both were withdrawn to Java on 29th/30th January for reorganisation after their very gallant effort.

Sustained Japanese Air Attacks on Singapore

340. During the second half of January the Japanese carried out air attacks on targets on Singapore Island with increasing intensity.

Two, and sometimes three, attacks were delivered by formations of 27 to 54 enemy bombers escorted by fighters. The main targets were our aerodromes, but a number of attacks were delivered against Singapore harbour, the naval base and other military objectives. Raids were made in perfect formation despite A.A. fire, and the accuracy of bombing from heights over 20,000 feet was marked.

341. This continual pounding made it difficult to keep aerodrome surfaces serviceable. Kallang was built on reclaimed salt marsh, which oozed up through the bomb craters. The drainage at Tengah had never been satisfactory. Effective repairs were thus difficult. Rainfall at the time was exceptionally heavy, which in itself was a further handicap to repair work.

342. To complicate matters further, practically all native labour, which had many disabilities to face under air bombardment, disappeared. On the 7th January the Director General of Civil Defence had appointed a Director of Labour who was to organise and control all labour, allotting it to the services in accordance with an arranged priority programme.

There was also an acute shortage of M.T., without which labour, and the material for labour to use, could not be transported to the places where it was needed. The collection and allocation of M.T. was also placed under the Director General of Civil Defence.

Both these measures had become acutely necessary—to provide and organise labour in the face of repeated air raids, and in order to make the best use of limited supplies of motor transport.

343. First priority for what labour there was, was given to the repair of aerodromes. The G.O.C. Malaya diverted some of his reserves, at the expense of the construction of defence work, to reinforce R.A.F. labour parties. Later, parties of 100 sailors, survivors from H.M.S. "Prince of Wales" and "Repulse", were stationed at each of the 4 airfields in the Island.

344. Heavy attacks on our aerodromes on the Island had been anticipated some weeks beforehand by A.H.Q. In order to augment the number of airfields on the Island, six sites for landing strips had been selected, and work on them was put in hand on various dates during the latter half of December. Labour difficulties slowed up their construction, and, as will be narrated later, they had all to be demolished before they could be brought into use.

345. A considerable number of aircraft was destroyed, or rendered unserviceable on the ground largely because dispersal points had not been widely enough scattered in the first instance, whereas, time and labour had not been sufficient afterwards to rectify this shortcoming.

Operations by Fighters in the defence of Singapore

346. During the second half of January our depleted fighter squadrons did their utmost to ward off the enemy's attacks. No. 21 (F) Squadron R.A.A.F. and 453 (F) Squadron were mainly employed in operations in support of the Army (paras. 323-330), leaving Nos. 243 and 488 (F) Squadron in a defensive role. To their assistance now came the newly arrived Squadron of Hurricanes (paras. 314-316).

347. The Hurricanes' first day, 20th January, was most successful. Twenty-seven bombers came over unescorted and 8 were shot down without loss. It appeared as if confidence in their decisive influence was to be justified. This was the last occasion, however, on which Japanese bombers came over unescorted. The following day 5 Hurricanes were shot down, including the C.O., S. L. Landells and a Flight Commander, against no loss to the Japanese.

348. From then on the Hurricanes were constantly airborne, carrying out 3 to 5 "scrambles" daily. Owing to their being constantly outnumbered by the escorting fighters, which were well handled, bombers could seldom be attacked. But with the realisation that "dog-fighting" did not pay, the revised "in and out" tactics adopted gradually gave increasing success.

349. The Hurricane pilots had been informed of the characteristics of the Navy "Os" and particularly warned of the inadvisability of getting involved in "dog-fighting" owing to the Navy "O's" small turning circle. Despite this, some of them had become involved in "dog-fights", which led to casualties.

350. The limitations of the warning system for Singapore have already been described (para. 302). Some help was obtained at this stage from Army G.L. sets; but the short time of warning, 10-15 minutes, remained a great handicap to efficient fighter defence. Operational control remained restricted owing to the lack of V.H.F. and to the unreliability of R/T.

351. These new aircraft were Hurricane IIs. They were fitted with desert oil filters because their original destination had been the Middle East. These deprived them of some 30 m.p.h. They were not quite so fast as the Navy "O" near the ground, but as height increased the Hurricane gradually overhauled the Navy "O" until at 20,000 feet it had an appreciable advantage in speed and climb. The Hurricane could always dive at higher speeds, but at all heights the Navy "O" was the more manoeuvrable.

352. It must be admitted here that too much had been expected of this handful of Hurricanes. Civilians and the armed forces alike had anticipated that these modern aircraft would carry all before them. That this was not achieved was no fault of the pilots, who under S/L. R. E. P. Brooker, D.F.C., achieved, in the face of overwhelming numbers, results which stand greatly to their credit. Nevertheless the false hopes which had been placed in them reacted keenly when they were not realised.

353. The average daily serviceability of Hurricanes from the 21st January to 28th January was 16, and by the latter date the position as regards the 51 crated aircraft was:—

- 17 destroyed (some of them at their bases).
- 2 repairable at Unit.
- 7 repairable at Depot.
- 21 available + 4 more in 24 hours.

On the 29th and 30th January, 20 were available.

354. During this period the Buffaloes of Nos. 21 R.A.A.F. and 453 (F) Squadrons were employed mainly on operations in support of the Army. Nos. 243 and 488 (F) Squadrons had continued in their role, in co-operation

with the Hurricanes, in the defence of Singapore. By the 30th January, the number of Buffaloes had so dwindled that all (6) were concentrated in No. 453 (F) Squadron, Nos. 21 R.A.A.F. and 243 (F) Squadron personnel were evacuated, whilst No. 488 (F) Squadron was retained to service the Hurricanes, together with a few of the pilots of all these squadrons to replace casualties.

Effect of Japanese Advance on R.A.F. dispositions.

Decision to Transfer Units to N.E.I.

355. The advance of the Japanese into Johore meant that our aircraft had to operate from the four aerodromes on Singapore Island. Thus a dangerous congestion of aircraft on the ground had come about. The dangers of congestion increased as enemy air attacks steadily grew in violence during January. When expected aircraft reinforcements should begin to arrive from the United Kingdom and the Middle East during January there were prospects of still greater congestion. Dispersal beyond the confines of Singapore Island would then become imperative.

356. During December, the first preparations had been made for operating R.A.F. Units in the N.E.I. (paras. 256-258). On 4th January No. 153 M.U. was moved to Java, and on 16th January No. 225 (B) Group Headquarters was formed in Singapore and moved to Sumatra two days later in order to make preliminary arrangements for operating bombers from aerodromes in that island.

357. By mid-January it was clear to A.H.Q. that the transfer of Units must be accelerated even though facilities for their operation and maintenance in Sumatra were not yet ready. In accordance with a prior agreement made with the Dutch Army Air Force, that Dutch Units should be moved first, a progressive withdrawal now took place from Singapore:—

15th January—Dutch Buffalo Squadron at Kallang was withdrawn. On arrival in the N.E.I. it reverted to Dutch control. Its main function was to maintain, as requisite, fighter cover required for future convoys through Banka Straits.

22nd January—2 Dutch Glenn Martin Squadrons withdrew to Java and reverted to Dutch control.

23rd-27th January—Nos. 27 (NF), 34 (B) and 62 (B) Squadrons, except for small aircraft handling parties, were transferred to Sumatra, as were also the main parties of Nos. 1 and 8 (GR) Squadrons, R.A.A.F.

358. Concurrently with the above moves:—

(a) No. 151 M.U. was ordered to prepare to move to Java, less a party approximately 100 strong who were to remain and salvage and pack equipment.

(b) Base Accounts and Record Offices were ordered to Java.

(c) Station H.Q. Sembawang was ordered to Sumatra.

359. Each Unit was instructed to proceed with 30 days' rations, certain barrack stores and 28 days' pack-up of aircraft equipment. All ground personnel proceeded by sea. It will be seen later that, owing to confusion at the Singapore docks caused primarily by bombing, and owing to enemy attacks on shipping

en route, the arrangements made for the transfer of our units to the N.E.I. were badly disorganised. Dutch Lodestars helped in these moves. Their assistance was invaluable.

360. When the decision was taken on 27th January that it would be necessary for the army to withdraw to Singapore Island, it became evident at once that one aerodrome only, Kallang, would shortly be available for use. The other three on the Island, Tengah, Sembawang and Seletar, were sited on its northern coastline and would soon be exposed to observed artillery fire from Johore at ranges as close as 1,500-2,000 yards: it would not be practicable to operate aircraft from them for long. Unfortunately Kallang itself was rapidly becoming of limited use. Its surface, a crust of marl laid on a salt marsh, was pock-marked with bomb craters which were most difficult to fill. Extension was impracticable, huddled as it was between the sea and the built-up area of Singapore Town. Consequently, further transfer of squadrons to the N.E.I. now became inevitable.

361. On the 27th January No. 8 (GR) Squadron, R.A.A.F., was sent to Sumatra, and No. 205 (FB) Squadron on the 28th to Java. The latter on arrival in Java, was placed by Abdair under Dutch control as part of Recgroup. No. 205 Squadron left 1 Catalina at Seletar until the 30th January in connection with the arrival of a further convoy. On the 29th and 30th January the remaining G.R. Squadron (No. 1, R.A.A.F.) was transferred also to Sumatra.

362. Thus by the end of the month the whole of the bomber force had been compelled to withdraw to air bases in Southern Sumatra, where they were now organising with the intention of providing air support from that quarter to the army invested in Singapore.

363. On the 31st January, apart from fighters, there were left in Singapore only 3 Swordfish. They were still under Army control for coast defence spotting purposes, as H.Q. M.C. at this stage still did not rule out the possibility of a landing from the sea on Singapore Island itself.

Changes in appointments in the Command.

To digress for a moment from the narrative:—

364. With the arrival of reinforcements a reorganisation of senior appointments became practicable in the second half of January.

365. About 17th January Group Captain G. E. Nichollets replaced Group Captain A. G. Bishop as Group Captain, Operations, at A.H.Q., the latter having been appointed to command the Bomber Group (No. 225) in Sumatra.

366. About 19th January Air Commodore W.E. Staton arrived and began taking the duties of S.A.S.O. from Air Commodore B. J. Silly. His recent and personal experience of air operations over Europe was to prove of great value to the Command.

367. On the 29th January Air Commodores S. F. Vincent and H. J. F. Hunter arrived from the U.K. They had been sent by the Air Ministry as Commanders designate of Fighter and Bomber Groups respectively. Air Commodore Hunter was sent to Sumatra on 1st February, to command No. 225 Group which had already formed at Palembang.

368. By the 30th January, owing to the transfer of units to the N.E.I., the A.O.C. decided to make preparations for establishing of a rear A.H.Q., in the N.E.I. Air Commodore Silly was sent to Sumatra as Deputy A.O.C. in order to select its site and begin its organisation

NARRATIVE—30TH JANUARY UNTIL THE FALL OF SINGAPORE.

Situation of the Army.

369. It will be remembered that the Army withdrew into Singapore Island on a programme to be completed on 31st January. This was successfully carried out.

Early in February a reinforcing convoy arrived in Singapore. It brought the few remaining units of the 18th Division.

370. But the position of the Army, now invested on the Island, was jeopardised by the presence of four aircraft landing strips which were being constructed to augment the airfields of the Island (para. 344). There was real danger that the Japanese might use them for establishing airborne troops behind the frontal defences of the Island in order to accelerate the reduction of the garrison, a danger which could only be averted so long as they remained serviceable, by means of large detachments of troops who could not be spared for the purpose. On 30th January it was therefore decided to blow them, and also to accelerate the obstruction of other open spaces.

Reduction of the Fighter Force in Singapore.

371. This action restricted our fighters to the four main aerodromes of the Island, and negated any possibility of their further dispersal. These aerodromes were under constant bombing, and considerable difficulty was being experienced in maintaining serviceable strips upon them. Further, three of them—Tengah, Sembawang and Seletar—were sited on the northern side of the Island and were therefore likely to be usable for a short time only (para. 360).

372. On the 30th January, therefore, Sir Archibald Wavell approved A.H.Q. plans to maintain in Singapore only a fighter strength of 8 Hurricanes reinforced by the remaining Buffaloes. It was agreed that the further reinforcing Hurricanes now arriving in H.M.S. "Indomitable" should be based on Sumatra, and from there not only maintain the strength at Singapore but also reinforce it as opportunity permitted.

373. To implement this policy A.H.Q.:—

(a) decided to retain in Singapore for the maintenance of the Fighter Force—an Air Stores Park, a Repair and Salvage Unit and an Ammunition Park.

(b) formed No. 226 (F) Group with H.Q. in Palembang and appointed Air Commodore Vincent the Group Commander. The staff for this Group H.Q. was to be provided partly from the reductions now possible in the Staff of the existing Fighter Group in Singapore and the remainder from H.Q. No. 266 (F) Wing, known to be arriving by sea in the N.E.I.

(c) issued orders for the move to Java of No. 151 M.U. less the repair and salvage party referred to in para. 358(a).

374. Concurrently with this reduction in strength, General Wavell approved the A.O.C.'s proposal that, consequent on the transfer of the bulk of the strength of the Command to the N.E.I., he should proceed himself with the main body of A.H.Q. to the N.E.I., whence it would be possible to control more effectively the conduct of further air operations. It was intended to leave in Singapore a small advanced A.H.Q. to maintain liaison with H.Q.M.C. H.Q. No. 224 (F) Group was also to remain to control fighter operations.

375. A.H.Q. was reduced in accordance with this plan, personnel being despatched to Palembang in Sumatra for attachment to H.Q. No. 225 (B) Group pending the decision about the site for the rear A.H.Q. which Air Commodore Silly had been instructed to find.

376. On 5th February Abdair expressed disapproval of the transfer of A.H.Q. to the N.E.I., being of opinion that A.H.Q. should remain in close contact with the G.O.C. Malaya, to ensure that future air operations were planned in relation to the best means for the defence of Singapore. The A.O.C., after an exchange of signals with Abdair on the subject, cancelled the transfer on 6th February. He decided to remain himself with A.H.Q. in Singapore, despite another signal he had received on 5th February which instructed him to proceed temporarily to Java when it was convenient for him to do so; he was badly in need of a rest. But circumstances moved fast, and he declined to go until the last of his subordinates had been evacuated (para. 394).

377. By the 5th February it had become clear that no suitable site for a Rear H.Q. existed in Sumatra, and so Air Commodore Silly was instructed to proceed to Batavia and take administrative charge there.

378. Not only were personnel and equipment from Singapore now arriving at that port, but also the ground personnel of the reinforcing squadrons. It was also anticipated that the site for a Rear A.H.Q. would best be located in the Batavia area.

Dislocation at Singapore Docks.

379. There was a scarcity of suitable shipping for conveying equipment, particularly M.T., to the N.E.I.: a difficulty aggravated because some vessels had to be loaded at their moorings by means of lighters. Those which did come alongside, of which there were many, deserve great credit. Owing to enemy air bombardment, ships had to be dispersed, which further delayed loading. Air bombardment also caused dock labour to disappear; its replacement by Service personnel could not be on a scale adequate to meet requirements. Conditions at the docks became confused as the scale and intensity of air attack increased. Plans made for the embarkation of personnel and stores were disorganised. Units became split up and personnel became separated from their equipment. Much equipment, urgently required by the Bomber Force in Sumatra, could not be loaded at all. In some instances, owing to air attack, ships sailed before being fully loaded.

Severe losses were inflicted by the Japanese air attacks on ships en route from Singapore

during the final 14 days of evacuation. Considerable quantities of equipment, including some 200 M.T. vehicles, were lost, all of it urgently needed in the N.E.I.

Final Air Operations from Singapore.

380. Except for a small number of Hudson sorties for convoy protection, and a sweep by Buffaloes over the Batu Pahat area on 28th January to cover the evacuation of troops cut off by the Japanese advance, air operations from Singapore itself from the last days of January to the fall of the Fortress were nearly all carried out by fighters for the defence of the Island. Bomber operations from Sumatra for the support of the defence of Singapore are narrated in Section III.

381. An attack was carried out on the night of 2nd February by the Swordfish flight, released by the Army for the purpose, against the aerodrome at Kluang, where the Japanese had by now established a strong fighter force. Subsequently this Flight had to be destroyed, as its aircraft were in no condition to be flown to Sumatra.

382. The P.R. Buffalo Flight, which had functioned almost daily with outstanding success under the command of Squadron Leader Lewis since the beginning of the campaign, finally lost its aircraft by enemy air attacks on the 7th February. This Flight had carried out over 100 sorties, the majority of which had proceeded as far north as Singora. Aircraft were intercepted by Japanese fighters and hit on numerous occasions, although none was shot down. Throughout, no armour or guns had been carried; pilots had relied entirely upon evasion in order to fulfil their missions. The greatest credit is due to them for the valuable work they did.

Final Fighter Operations from Singapore.

383. On the 31st January the fighter strength of Singapore was 8 Hurricanes of No. 232(F) Squadron and 6 Buffaloes taken over by No. 453(F) Squadron. The small Buffalo force gradually wasted away and 453(F) Squadron was evacuated to Java about 4th February. The Hurricanes were maintained from Sumatra at an average daily strength of 10 aircraft. This average was maintained firstly by the arrival on 29th January of No. 258(F) Squadron with 15 Hurricanes. This squadron was one of several which had been convoyed from the Middle East (where they had just arrived as reinforcements from England) to the Far East in H.M.S. Indomitable. They had been "flown off" south of Java and had proceeded by air via Batavia and Sumatra, No. 258 thence flying on to Seletar. They had had a long and varied passage from England, involving a sea voyage to Sierra Leone, followed by a long flight across the whole breadth of Central Africa to Port Sudan, where they had embarked in H.M.S. Indomitable. They came into action on 1st February after a delay caused by the necessity for removing all guns to clear them of anti-corrosion grease with which they had had to be protected for the journey. This squadron was relieved by 232(F) Squadron on 3rd February, also ex H.M.S. Indomitable. The latter remained in Singapore until the withdrawal of the last of our aircraft.

384. These fighters were far too few in number to affect materially the scale of enemy

attack. But they put up a stout fight, and throughout the first ten days of February they were almost constantly airborne throughout the hours of daylight, attempting to ward off the constant Japanese attacks.

385. Most of their sorties were for the defence of the Island. Fighter cover was provided on 30th January for the final withdrawal of the Army across the Johore causeway; and a few sorties were also flown against aircraft attacking our troop positions on the Island. On 9th February, the day following the Japanese landing on the Island, Hurricanes took off at the request of the Army and engaged enemy dive bombers, shooting down at least one.

386. A number of patrols were made for convoy protection. One convoy reached Singapore on 5th February. It had been shepherded through the Banka Straits, and during its onward passage towards Singapore, by reconnaissance and protective patrols from Sumatra. Fighters from Singapore covered its final approach. The "Empress of Asia" was attacked and set on fire, but that was the only loss incurred by reinforcing convoys. They escaped unscathed partly because of the protection they were given, but partly also because, it must be admitted, the Japanese made no very determined attacks against them. In contrast, many ships leaving Singapore during February were heavily attacked and there were many losses amongst them.

387. The devotion to duty of the fighter pilots and of the ground crews who serviced their aircraft and maintained landing strips during these last few days was exemplary. Warning of attack was short, and on occasion the Japanese bombers had dropped their bombs and were withdrawing before our fighters could reach them. But with experience of the enemy's tactics results steadily improved; and on the final day of operations, (9th February), 6 enemy aircraft were shot down and a further 14 seriously damaged for the loss of 2 Hurricanes and 1 pilot. It was significant that by 5th February the surviving pilots were mostly experienced men who had had previous battle experience before coming to the Far East.

388. On the 4th and 5th February, Seletar, Sembawang and Tengah came under steady observed shell fire, and all operations had then to be carried out from Kallang. The Japanese bombers concentrated their attack on this station, and the landing area was soon so riddled with craters that only by constant and arduous labour was a landing strip 750 yards long maintained in operation. Even so, by 6th February our pilots experienced very great difficulty in avoiding craters when taking-off and landing.

389. On the 10th February, by which time the Japanese were established in strength on the Island, all aircraft were withdrawn to Sumatra. G.O.C. Malaya concurred in this decision, which was also endorsed by C.-in-C. South-West Pacific who visited Singapore the same day. A few Buffaloes were left, owing to their condition, and had to be destroyed.

Results of Fighter Operations in Malaya.

390. Total results of the fighting in the air over Singapore are difficult to assess with any accuracy, as definite confirmation of successes was in most cases impossible. Group Captain Rice, who commanded the Fighter Force during

the whole of its operations over Malaya, estimated that 183 Japanese aircraft were destroyed, exclusive of others lost by them during our attacks on their aerodromes.

391. It is felt that this claim may be excessive, though not by much. Reports which have been received from all sources appear to establish that the Buffalo Squadrons shot down a total of 30 Japanese aircraft: others were damaged and a proportion of them probably crashed during their return to base.

It is probable that the Hurricane force destroyed, or so seriously damaged that they failed to return to base, a total of 100 Japanese aircraft. For this total, 45 Hurricanes were lost from all causes, including flying accidents and enemy air bombardment. In view of the odds which were faced these figures speak for themselves.

Final transfer of R.A.F. to Sumatra.

392. On 8th February the Japanese launched their attack on Singapore Island and rapidly obtained a firm foothold. It now became essential to transfer A.H.Q. to Sumatra in order to take control of the Command, whose combatant units were already there, for the purpose of carrying on the fight in the N.E.I.

A nucleus staff, including the S.A.S.O. (Air Commodore Staton) proceeded by air to Palembang on 10th February by order of the A.O.C.

Sir Archibald Wavell again visited Singapore the same day, 10th February. He ordered the immediate evacuation to the N.E.I. of all remaining R.A.F. personnel, which was commenced the following day. At the same time he instructed Air Vice Marshal Maltby, hitherto Assistant A.O.C. at A.H.Q., to take charge in the N.E.I. as soon as possible, that officer proceeding there by air the same afternoon accompanied by an addition to the nucleus staff which had preceded him. He was appointed by Abdair A.O.C. Westgroup in the N.E.I. with effect from 11th February.

393. Aerodrome surfaces were ploughed up. Bomb components, large stocks of petrol and much equipment which could not be got away was destroyed or rendered ineffective. But the volume of the whole was so great that neither time nor circumstances permitted its transfer or destruction, particularly a large quantity salvaged from Malaya which was housed in the town of Singapore where its destruction by fire was impossible. Special action was taken to destroy secret equipment e.g. radar apparatus, signals installations etc. It is believed that little of immediate value to the enemy was left to him.

394. On 13th February Air Vice Marshal Pulford, who had declined to leave until all R.A.F. personnel, who could be, had been evacuated, left Singapore. He did so at General Percival's instigation. He accompanied a party under the orders of Admiral Spooner, R.A. Malaya. When they sailed they were unaware that the Japanese fleet had interposed itself between Singapore and their destination, which was probably Batavia in Java. They were detected, attacked from the air and their boat was stranded on an island of the Tuju or Seven Islands Group some 30 miles north of Banka Island. There the whole party, some 40 in number, lived as best they could, the fishermen

inhabitants having deserted it. It was malarial, unhealthy, and contained little food. The party had few stores, practically no medicines and no doctor. After remaining at large for more than two months the survivors were compelled to surrender. By then 18 had died, including Air Vice Marshal Pulford and Rear Admiral Spooner. The remainder were in a bad way. Thus it was that these gallant officers lost their lives and that the former was unable to rejoin his Command in the N.E.I.

Fall of Singapore.

395. On the 15th February Singapore Fortress was compelled to surrender.

SECTION III.

SUMMARY OF OPERATIONS BASED ON SUMATRA.

INTRODUCTION.

396. As has already been narrated in Section II of this Report, by the 16th January, 1942, all Air Force units in Malaya had been driven back to Singapore Island. Even with the existing strength, aerodromes on the island were already congested, they would become more congested when reinforcements, now well on their way, arrived. The scale of Japanese air attack against these aerodromes was increasing. It had become imperative to disperse more widely. Extra elbow room was particularly desirable because H.M.S. "Indomitable," with 48 Hurricanes on board, was due to arrive at the end of January. If bomber units could be transferred to Sumatra, not only would they be dispersed more safely, but fighter squadrons could then be distributed to all the aerodromes in Singapore. It was not realised at the time how soon three of those aerodromes—Tengah, Sembawang and Seletar—would become untenable (para. 360).

General Conditions in Sumatra.

397. Sumatra, an island nearly 1,000 miles long, lies west of and runs parallel to the west coast of Malaya, but extends far to the southward. Its main features are a mountain range running down the west coast throughout the whole length of the island, and a relatively low-lying belt of country eastward of it, consisting mainly of jungle and swamp, which is intersected by many rivers with a west to east trend. It is developed in scattered areas only.

Roads are few, and although there are railway systems in the north and south, they are not connected, and communications are consequently poor. From the Allied point of view the chief economic importance of Sumatra was the oil field and refinery near Palembang, of which the normal outlet is to the east via Palembang river to the sea, though there is a single track railway running to the Port of Oesthaven in the extreme south. There was a radio telephone system inter-connecting the principal towns in Sumatra with an external connection to Java. This telephone system was open and insecure.

398. At the time this Section of the Report opens, the monsoon was still in progress over Sumatra. A feature of this monsoon was the prevalence of torrential thunderstorms, both by day and night. These thunderstorms are very violent indeed, and they completely black out

all visibility from aircrews flying through them, whose skill and endurance they test to the utmost: navigation through them is fraught with great risk. Unfortunately at this season several such thunderstorms were certain to be encountered during the course of every long flight.

State of Aerodromes.

399. Up to this date, 18th January, the policy of A.H.Q. had been to develop aerodromes in Northern Sumatra as refuelling grounds for reinforcements arriving by air from India, and as advanced landing grounds for operational use on the flank of Malaya. In consequence of this policy constructional work on them had been given priority over that at aerodromes in the south, and it was the aerodromes in the south of Sumatra which would now be wanted for our squadrons to use as their main bases. By the middle of January small refuelling and re-arming parties of varying strengths, up to 50, had been established at the following places:—

- (a) Sabang (also for Flying Boats),
- (b) Lho'nga.
- (c) Medan Civil Aerodrome (a large military aerodrome was also being constructed in this area);
- (d) Pakanbaroe,
- (e) Padang;
- (f) Palembang—at the civil aerodrome known as P.I ;
- (g) a secret military aerodrome 20 miles south of Palembang known as P.II.

In addition there was a strip at Lahat, and a field under construction by the Dutch at Oesthaven. Wing Commander Duncan, Squadron Leader Briggs and Squadron Leader Wightwick (A.M.W.D.) were already located at Palembang for liaison with the Dutch in connection with the development of these aerodromes.

DEVELOPMENT OF R.A.F. ORGANISATION IN SUMATRA.

400. A H.Q. therefore decided, on the 16th January, that the time was becoming imminent when bomber units would have to be transferred to Sumatra. For this reason H Q 225 (B) Group was formed at Singapore on this date, and was sent to Palembang in Sumatra on the 18th January, 1942. Initial appointments made by A.H.Q. were:—

Group Commander	Group Captain A. G Bishop.
S.A.S.O.	Wing Commander K Powell.
S.A.O.	Squadron Leader Briggs.
A.M.W.D	Squadron Leader Wightwick

Instructions to No. 225 (B) Group.

401. On formation of the Group Headquarters, the A.O.C instructed the Group Commander:—

- (a) to establish a Bomber Group H.Q.;
- (b) to accelerate, to the maximum, arrangements for operating bomber units from Sumatra; such arrangements not only to provide for all bombers then in Singapore but also for the following reinforcements:—

- (i) Nos. 84 and 211 (B) Squadrons (Blenheim IV) then en route from Middle East;

- (ii) Hudson III's en route from U.K. which were to re-equip in succession No. 62 (B) Squadron, and Nos. 1 and 8 (GR) Squadrons, R.A.A.F.

402 The A.O.C also decided that, dependent on the situation, when bomber units were located in Sumatra, either Group H.Q. would be responsible for the selection of targets (within the policy laid down by A.H.Q.) and for the briefing of squadrons, or alternatively squadrons would proceed to bases in Singapore and be briefed there under A H.Q. arrangements. To provide for this latter arrangement, refuelling and re-arming parties for bomber units would be maintained at aerodromes on Singapore Island. At this time it was fairly confidently anticipated that the situation on the ground in Malaya would be stabilised and that a bridge-head would be held of sufficient area for the deployment of reinforcements preparatory to a counter-offensive being undertaken (para. 322). That it would be necessary later to transfer fighter squadrons from Singapore was not at this time "on the cards".

Development by No. 225 (B) Group H.Q.

403. Group Captain Bishop, on arrival at Palembang on the 18th January, decided to:—

- (a) Establish Group Headquarters at Palembang.
- (b) Expand and accelerate the provision of accommodation at P.I and P.II aerodromes, and improve aircraft dispersal at each.
- (c) Develop Lahat for use by bombers.
- (d) Reconnoitre the area to the south of Palembang for the selection and development of further landing strips.

At the same time he put in hand reconnaissance for siting an Ammunition Park, an Air Stores Park and an R S.U., which were to be provided for the maintenance of the Force

A.H.Q. were informed and approved of these decisions.

404. P.I. was, at that time, a large 'L' shaped aerodrome with two hard runways. It possessed dispersal arrangements which were at once considerably developed by Dutch Engineers. There was no accommodation for personnel nearer than the town, 8 miles away.

P.II was a huge natural field about 10 miles in perimeter with good natural cover for aircraft. It was not visible from the road, and its construction had been successfully kept secret from the Japanese. Similar clearings in the neighbourhood made it difficult for air crews to locate it from the air, even by those who had been briefed as to its location. Great care was taken to preserve its secrecy and, although at one time more than 100 aircraft were based on it, Japanese reconnaissance, which frequently flew over it by day and night, never located it. Communications between Palembang and P.II were handicapped because there was no bridge over the Palembang river, on the north of which lay Palembang town and P.I, the river had to be crossed by a small ferry which had a limit of 4 to 6 vehicles. The Dutch put in hand the construction of huts for accommodation of personnel at P.II aerodrome.

405. There was a single line telephone linking each aerodrome with Group H.Q.'s., but instruments and wire were not available for developing an internal telephone system on either aerodrome.

For point to point communication a W/T set was improvised which was able to link up with A.H.Q., and with Sabang and Lho'nga on the air reinforcement route.

406. A civil Dutch Observer system existed at Palembang, consisting of two concentric circles of posts round Palembang, at 50 and 100 kilometers radius. There were a few posts still further out—one on the north end of Banka Island, one at the mouth of the Palembang river and one on Tanjong Pinang Island, just south of Singapore. Posts on the outer circle were unavoidably somewhat widely spaced: most warnings came from the 50 kilometre circle only. Communication between posts and the centre was by W/T or telephone. No radar was available to supplement the observer system, whose volunteer operators were most enthusiastic but unfortunately had had little experience in aircraft recognition. Warnings were consequently erratic.

407. With the most willing and energetic co-operation of the head of the Observer Corps, steps were immediately taken to improve the system. Additional posts were selected, manufacture of W/T sets began and additional personnel were trained. But events moved too fast for these measures to take effect. The original system only was available during the actual events which followed.

408. The Dutch army in the N.E.I. had no A.A. artillery, having been unable to obtain guns from the belligerents in Europe or from the U.S.A. Thus the aerodromes in Sumatra had no A.A. defences. The Dutch had already had aircraft destroyed on the ground at Medan and Pakenbaroe by Japanese low flying fighters.

409. By the end of January, however, Abdacom was able to allot A.A. defences to P.I. and P.II., 6 heavy and 6 Bofors guns to each aerodrome, and 4 of each type to the oil refinery at Palembang. Ships carrying ammunition for these guns were unfortunately sunk and there was little ultimately available. There were two Dutch armoured cars and 150 native Dutch troops allotted to the defence of each aerodrome. With the arrival of R.A.F. ground personnel, aerodrome defence parties were organised to reinforce them.

410. There was one Dutch native regiment for the defence of the whole Palembang area, but there were no defences on the river leading to the town. On the 23rd January representations were made both to the Dutch naval and military authorities, and to Abdacom, on the inadequacy of the defences in the Palembang area, but no reinforcements were available. It is thought that plans were in hand to strengthen the defences, as General Sir John Laverack, Commanding 1st Australian Corps, visited Palembang about 25th January and indicated that an Australian division might be expected in the near future. Presumably, owing to the general situation in the Far East, the move was cancelled.

411. In short, the aerodrome defences were very weak and few troops were available for the defence of the area against invasion.

Arrival of R.A.F. Units from Singapore.

412. However, Japanese progress in Malaya was quicker than had been anticipated. The transfer from Singapore had to be accelerated and expanded beyond what had first been contemplated. In the event, all aircraft had to be based on P.I and P.II, although the personnel of one bomber squadron moved to Lahat on 10th February, Group Captain Noble being appointed Station Commander. But events moved too quickly for that aerodrome to come into use.

413. This Report has already narrated the plans made by A.H.Q. in Singapore for transferring and re-organising in Sumatra and Java, and how these plans were largely frustrated by the speed of the Japanese advance in Malaya and by the dislocation caused at the docks in Singapore by air attack. These plans were further frustrated by Japanese action against shipping at sea en route to the N.E.I. Many ships were sunk and others re-routed at sea to other ports. The cumulative effect was disastrous. Practically all equipment destined for Sumatra went astray. In particular no M.T. arrived except some light motor cars about the 8th February and a few bomb trailers. There were only three refuellers available. Most important of all on the domestic side, few rations arrived and no tentage and field equipment. On aerodromes which were practically without accommodation, the last was a serious loss during the prevailing monsoon weather.

Aircraft spares were also scarce, particularly those for Blenheims, with which type the two reinforcing squadrons, Nos. 84 and 211(B) Squadrons, were also equipped.

Three month's anticipated requirements in petrol, oil and lubricants had arrived at each aerodrome. A limited number of bombs also came across and these were distributed to P.I. and P.II.

414. Local buses were requisitioned and gradually came into service. An organisation for the local purchase of supplies was set up and contracts already placed for the manufacture of domestic equipment were expedited and expanded.

415. By the end of the first week of February personnel were reasonably fed and accommodated. But later when large numbers arrived, many unexpectedly, from Singapore, accommodation had to be found at short notice. Thus 1,500 were provided for in P.II, where provision was ready for only 250, whilst 2,500 were housed in schools and cinemas in Palembang town.

Throughout, however, operational and maintenance facilities remained primitive in the extreme. The aerodromes in Sumatra were virtually landing grounds "in the blue".

All the problems which faced the staff and units were tackled with energy and spirit, and the praiseworthy results which were achieved in the face of every handicap are a great credit to both.

The Dutch gave magnificent assistance in all these local preparations, headed by the Resident Palembang, who personally inspired and directed the civil authorities in their efforts.

416. From the 22nd January onwards, personnel and aircraft started streaming in. The former were in some disorder owing to loss of

kit and a splitting up of units through the confused conditions of embarkation at Singapore. The situation was further aggravated because the arrivals included units destined for Java, which had been re-routed at sea to Palembang. All had to be sorted and re-organised, and units for Java entrained for Oesthaven and shipped thence to Batavia.

417. On the 23rd January Blenheim IV's of Nos. 84 and 211 (B) Squadrons began to arrive from the Middle East. Their ground personnel, who came by sea, landed at Oesthaven about 14th February. The arrival of the latter coincided with the Japanese attack on the Palembang area (which will be related in due course), and they had to be re-embarked for Batavia before they could join their squadrons, which thus never had their own ground staffs with them in Sumatra. Each squadron had 24 aircraft when it left the Middle East. Sixteen of No. 84 Squadron arrived at P.I. 18 of No. 211 Squadron arrived on different days between 23rd January and 14th February (para. 318). Unfortunately the change of route from Singapore to Palembang resulted in the loss of 3 aircraft of No. 84 Squadron as a result of wrong briefing given to them on leaving Burma about the location of landing grounds in Sumatra.

Dispositions arranged for Units.

418. On the 23rd January P.I aerodrome received its first air attack. Twenty-seven unescorted bombers dropped their loads from 22,000 feet with great accuracy, but caused only slight damage to the surface of the aerodrome. The Dutch Buffalo Squadron on the aerodrome established contact with the formation and damaged at least two Japanese bombers without loss to themselves. It was now evident that our aerodromes in southern Sumatra were about to be bombed in their turn, in all probability with increasing severity. It was therefore decided to dispose our squadrons accordingly. Fortunately it was possible to take advantage of Japanese habits which by this time were well known, complete confidence could be placed in the fact that no daylight attack would take place before 0830 hours or after 1700 hours. Other factors which were taken into consideration were:—

(a) that P.I. was best adapted to the use of fighters, and it was soon realised that part of the Hurricane force, which was known to be arriving in H.M.S. Indomitable, would want to use it: thus it would be advisable to minimise the number of bombers on it.

(b) that P.II was suitable for all types of medium bombers, that its existence was believed to be unknown to the Japanese. Moreover it had good facilities for dispersal, and cover from view in the scrub jungle which surrounded it.

419. Squadrons were, therefore, to be disposed on them as follows:—

P.I. M.V.A.F., Nos. 84 and 211 (B) Squadrons, serviceable aircraft moving to P.I during Japanese raid hours.

P.II. Nos. 1 (GR), 27 (NF), 34 (B) and 62 (B) Squadrons, whose aircraft strength when they arrived from Singapore would be low.

It will be remembered that the ground parties of Nos. 84 and 211 (B) Squadrons had yet to

arrive by sea from the Middle East. Provision for servicing them was therefore made from amongst technical personnel who had been evacuated from Singapore. Those surplus to requirements were sorted out and despatched to Java.

420. Aircraft and personnel began to arrive from Singapore earlier than had been anticipated, so Wing Commander Powell, S.A.S.O. of the Group, was appointed Station Commander of P.II until the arrival of Group Captain McCauley on 29th January. The former then took over command of P.I from Wing Commander Duncan, the latter being placed in charge of the refuelling party at Pakenbaroe.

OPERATIONS CARRIED OUT BY No. 225 (B) GROUP.

22nd January-14th February.

421. No. 225 (B) Group was responsible for reconnaissance northwards from the Sunda Straits to cover several convoys that went through to Singapore during the last week in January and the first in February. During the passage of a convoy through the Banka Straits on the 27th January, Blenheim IV's maintained a fighter escort over it because no fighters were available in Sumatra; the Dutch Buffalo Squadron had by this time been withdrawn to Java. All other available bomber aircraft stood by during these periods in case convoys were attacked by Japanese naval forces. The whole resources of the Group were directed towards the protection of these convoys during the two-day periods each took to traverse the area for which it was responsible.

422. On the 26th January the Endau landing took place (paras. 332-339) and No. 225 (B) Group was ordered to despatch all available aircraft to the scene. A force of 6 Hudsons from No. 62 (B) Squadron and 5 Blenheim I's of the same squadron but manned by No. 84 (B) Squadron aircrews was scraped up. The Hudsons arrived on the scene during the late afternoon, and landed at Sembawang for the night, returning to Palembang on the 27th January. The Blenheims arrived too late to participate, and so were ordered to land at Tengah and await orders from A.H.Q. This force was used on the night 27th-28th January to bomb Kuantan, returning to Palembang on 28th January.

423. On 26th January 6 Blenheim IV's of 34 (B) Squadron and 6 Hudsons of No. 8 (GR) Squadron R.A.A.F. were withdrawn from operations and were sent to Java under orders of A.H.Q. in connection with the arrival of H.M.S. Indomitable with 48 Hurricanes on board. This carrier was met at a point some distance to the Southward of Java by the bombers or G.R. aircraft, on which the Hurricanes were flown off in Squadron formations and were navigated to Java by the former aircraft. Meanwhile a Catalina provided anti-submarine patrols for the carrier's protection. The Hurricanes were again navigated during their onward journey to P.I, one squadron No. 258 (F) Squadron onward again to Singapore. The bombers and G.R. aircraft returned to P.II on 2nd February and became available again for operations.

424. On the 30th January Air Commodore H. J. F. Hunter, who had been appointed by the Air Ministry as Commander designate of a Bomber Group in the Far East, arrived in Sumatra and took over Command, Group Captain Bishop becoming S.A.S.O. of the Group.

425. Incidentally, Air Commodore Silly, Deputy A.O.C., also arrived in Palembang on

No. 1 Squadron, R.A.A.F. ...	16 Hudson II
No. 8 Squadron, R.A.F. ...	6 Hudson III
No. 34 Squadron ...	6 Blenheim IV
No. 62 Squadron ...	10 Hudson III
No. 62 Squadron ..	5 Blenheim I
No. 27 Squadron ...	3 Blenheim I
No. 84 Squadron ...	10 Blenheim IV
No. 211 Squadron ...	4 Blenheim IV
M.V.A.F. ...	Mixed Flight

the 30th January with orders from the A.O.C. to site a Command H.Q. in Sumatra. In this he was unsuccessful and left on 6th February to organise the R.A.F. Base, Batavia.

426. By the 30th January Singapore was clear of all but fighter aircraft. The strengths of bomber squadrons in Sumatra then were:—

Many overdue for inspection and showing signs of wear and tear.

} Not available until 2nd February.

} Particularly poor condition.

} Most aircraft required inspection and minor repairs, after their long flight from the Middle East.

427. From the 30th January-5th February, as convoy duties permitted, the following attacks were carried out during the nights shown:—

30th January-31st January.

6 Blenheims—Ipoh aerodrome—using Pakenbaroe for refuelling.

31st January-1st February.

6 Hudsons—Alor Star aerodrome—using Medan for refuelling. Hits were scored on the runway and aerodrome buildings.

1st February-2nd February.

5 Blenheims—Penang aerodrome—using Medan for refuelling.

2nd February-3rd February.

7 Blenheims, 3 Hudsons—Singora docks—using Medan for refuelling.

4th February-5th February.

5 Blenheims, 4 Hudsons—Kluang aerodrome—using Singapore for refuelling.

5th February-6th February.

8 Blenheims—proceeded Medan en route Singora: cancelled owing to bad weather.

12th February-13th February.

12 Hudsons—Kluang aerodrome.

The policy was for aircraft to arrive at the advanced landing ground just before dusk, refuel and rest. Then after delivering their attacks aircraft either returned direct to base, or alternatively refuelled again at the appropriate advanced landing ground and returned to base at first light. On account of Japanese fighter patrols, aircraft could not remain on undefended grounds in Northern Sumatra during daylight hours.

428. These long flights in themselves imposed great strain on crews, it was still the wet monsoon season in Sumatra and torrential thunderstorms were prevalent, particularly at night. Not all the crews of reinforcing squadrons were up to the standard of night flying required for such conditions, particularly in the absence of radio aids to navigation: those that were showed outstanding determination and skill, and of them Wing Commander Jeudwine, C.O. of No. 84 (B) Squadron, was pre-eminent. It was only rarely that results of bombing could be observed in any detail owing to the bad conditions of visibility.

429. Up to the 6th February No. 225 (B) Group had maintained daily reconnaissances across the South China Sea to Borneo to detect any Japanese movement southwards.

On the 6th February there were reports of a Japanese force assembling in the Anambas. This was located by Hudson sorties; it was attacked on the night 7th-8th February by 9 Blenheims in most adverse weather conditions, and again on the 11th-12th February by 10 Blenheims.

430. Throughout this period many transit flights to and from Singapore were carried out by Hudson aircraft either escorting Hurricanes or assisting in the evacuation of personnel.

Serviceability in all units was low.

The M.V.A.F. at Palembang were invaluable throughout in maintaining communications between P.I. and P.II. and Lahat, providing a twice daily reconnaissance of the river approaches, and locating crashed aircraft.

ORGANISATION—No. 226 (F) GROUP.

431. It will be remembered that it had not been the intention until quite a recent date to operate any of our fighters on aerodromes in South Sumatra, but that the unexpectedly rapid Japanese advance right up to the confines of Singapore island had made it impracticable for them to use the aerodromes on the island except Kallang. It now became necessary, therefore, to make arrangements for them in Sumatra. On the 1st February, 1942, Air Commodore Vincent arrived in Palembang and formed H.Q. No. 226 (F) Group. For this purpose he brought with him personnel drawn from No. 224 (F) Group, Singapore, and absorbed those of H.Q. 266 (F) Wing which was now arriving in Sumatra from U.K. (para. 373 (b)).

432. In anticipation of the formation of a Fighter organisation, and with the energetic co-operation of the Dutch, a Fighter H.Q. Operations Room had already been established at Palembang on the 25th January by H.Q. 225 (B) Group. This Operations Room was connected to a naval transmitter in the docks some distance away, for communicating with aircraft. At first, orders from the Operations Controller had to be relayed to aircraft: later this arrangement was improved and the Controller was connected direct to the transmitter.

Arrangements were made for the Gun Operations Room to be in the same building. It was also connected with the Dutch Civil Observer System, which was in course of being improved (paras. 406 and 407).

433. The role of the Group was:—

(a) Defence of the Palembang area

(b) Protection of shipping in the Banka Straits, by means of escort patrols and offensive sweeps:

(c) Up till the 9th February 1942 maintenance of a token force of fighters in Singapore.

434. V.H.F. was not available, nor was D/F for assisting homing aircraft. The absence of the latter was a serious handicap because intense thunderstorms were frequent and fighter pilots were apt to lose their bearings when negotiating them.

All aircraft of the Fighter Group were based on P.I. aerodrome, the administrative shortcomings of which have already been related. It had a telephone from the Operations Room in Palembang but no instruments were available for dispersal points round the aerodrome, which slowed down the speed with which fighters could get away to intercept an enemy raid.

Strength of Fighter Squadrons.

435. About 50 Hurricanes were available when the Group formed, the majority direct from H.M.S. "Indomitable." The remainder were part of the original consignment which had arrived in crates in Singapore on the 13th January.

436. Forty-eight flew off H.M.S. "Indomitable" on 26th January. All flew off with their guns protected with anti-corrosion grease with which they had been provided for the journey. Fifteen flew via Batavia and P.I. to Singapore, arriving on the 29th January. Their guns were cleaned at Seletar. The remainder remained at P.II to have their guns cleaned before transfer to P.I. Cleaning of these guns was a slow operation owing to lack of all the usual facilities, and considerable delay occurred before squadrons were able to go into action.

437. Pilots were drawn from Nos 232, 242, 258 and 605 (F) Squadrons and operated as two composite squadrons—Nos. 232 and 258. Most pilots, with the exception of the Commanding Officers and Flight Commanders, were straight from O.T.U's., and deserve credit for the spirit with which they went straight into action. They had experienced a long sea voyage, but once again no time could be spared for acclimatization or training.

438. When they first arrived their aircraft were serviced by personnel from Buffalo squadrons. From the 6th February onwards however, ground personnel of No. 266 (F) Wing began to arrive via Oesthaven, including advanced parties and stores with an Air Stores Park and an R.S.U. There was a deficiency of Hurricane tool kits, few battery starters for aircraft, and no battery-charging facilities were available at the aerodrome: factors which contributed to a low standard of serviceability.

439. To improve the climb and manoeuvrability of the Hurricane the four outside guns were removed, as it was considered that eight guns were ample against the unarmoured Japanese aircraft.

OPERATIONS CARRIED OUT BY NO. 226 (F) GROUP.

440. From the 2nd-5th February many sorties were carried out escorting shipping proceeding north and south through the Banka Straits. On the 3rd February, nine aircraft of No. 258 Squadron left for Singapore to co-operate with a bomber force in a combined attack on Kluang aerodrome, returning the following day. They landed at Tengah, but owing to an error on the part of that Station, the squadron was not ready to take off at the appointed time, and the attack was a failure.

441. Meanwhile, Japanese reconnaissance was maintained daily over Palembang, and was quick to note our activity. Air attacks on P.I. aerodrome took place on 6th, 7th and 8th February by formations of bombers escorted by fighters.

442. On the 6th February warning was short, and the Hurricanes, caught at a tactical disadvantage, lost four and claimed one Navy "O". No. 232 Squadron were away at Singapore on this day conducting operations from the Island.

443. On the 7th February warning was even shorter, and results were serious. The Japanese combined a high bombing attack with a low attack by fighters. Three Hurricanes were destroyed and 11 others damaged on the ground, whilst three were shot down in the air. In addition four unserviceable Blenheims on the ground, and one Hudson, which arrived as the attack was in progress, were destroyed. Only one Navy "O" fighter could be claimed.

444. On the 8th and 13th February fresh attacks on the aerodromes took place, but more warning was received: on the 8th an inconclusive interception took place, but on the 13th, three Navy "O" fighters and two Army 97 bombers were shot down for the loss of one Hurricane.

445. On the 12th February the Group was reinforced by Wing Commander Maguire and eight aircraft. These were part of a reinforcing Wing, No. 226 (F) Wing which included 39 Hurricanes, a pool of 15 pilots, and the ground crews of Nos. 232, 258 and 605 Squadrons: it had arrived at Batavia by sea on the 4th February.

446. On the 13th February a further nine aircraft from Batavia arrived at P.I. Unfortunately they did so while the attack on the aerodrome was in progress. They were short of petrol, and in ensuing engagements six were either shot down or crashed.

447. It was quite evident that the Japanese already realised that we were endeavouring to establish our squadrons on P.I. and that they were devoting a very considerable effort, particularly with strong forces of fighters, to prevent it.

It is opportune at this juncture to digress for a moment.

Control of operations in Sumatra assumed by Abdair.

448. It will be realised that A.H.Q. in Singapore had, by the end of January, much depleted its staff in forming the staffs of the two new Groups, Nos. 225 and 226, in Sumatra, which were themselves much under requirements. This depletion particularly affected the

signals organisation. Firstly because its numbers were reduced at a time when signals traffic was on the increase consequent upon the splitting up of the Command between Singapore and Sumatra. Secondly because it was just as this time that the trained and experienced lady cypher staff had to be evacuated. The result was acute congestion of, and increasing delays in, signals traffic. This had reached such a pitch on 6th February as to constitute a breakdown between Palembang and A.H.Q. in Singapore. Abdair therefore assumed operational control of all R.A.F. units in Sumatra with effect from 7th February.

Formation of Westgroup H.Qs in the N.E.I.

449 Air Vice-Marshal P. C. Maltby and Air Commodore W. E. Staton arrived in Palembang on the 10th February, and on the following day the former became A.O.C. and the latter S.A.S.O. of Westgroup, which comprised all R.A.F. and R.A.A.F. Units of the Far East Command now located in Sumatra and Java. Whilst in Palembang they picked up a nucleus staff and moved with it on 12th February to Java, having first reconnoitred South Sumatra and ascertained that no suitable site for a H.Q. existed in that area. It was arranged that, pending the establishment of H.Q. Westgroup in Java, Abdair would continue in direct control of all operations carried out by Westgroup Units.

FURTHER OPERATIONS BY 225 (B) GROUP—
12TH TO 14TH FEBRUARY.

450. From the 7th February onwards, all reconnaissance by No. 225 (B) Group had been discontinued under orders from Abdair, who wished to economise air effort by centralising all reconnaissance under the Reconnaissance Group in Java and thereby increasing the size of the striking force available in Sumatra.

451. On the 13th February, however, the shipping situation as known at H.Q. 225 (B) Group appeared most confused. Reconnaissance reports made by Reconnaissance Group and received through Abdair showed that Japanese naval forces were in strength south of Singapore. These reports were 5-7 hours old by the time they reached 225 (B) Group owing to bad communications, locations of convoys had by then completely changed. To confuse matters still further, a stream of shipping of all kinds was at the same time passing south from Singapore to Java despite the presence of Japanese forces; friend was difficult to distinguish from foe.

452. By the 13th February (p.m.) it was felt at H.Q. 225 (B) Group that, despite orders to the contrary, a reconnaissance must be carried out to clear the situation and ascertain whether or not there was an immediate threat to Sumatra. One Hudson of No. 1 (GR) Squadron, R.A.A.F., was sent in the afternoon and reported a concentration of Japanese shipping north of Banka Island, which confirmed impressions that a landing at Palembang was imminent. All available Blenheims were immediately despatched to attack the enemy force, but results were difficult to assess owing to darkness and rainstorms.

453. On the 14th February an offensive reconnaissance of 5 Hudsons was despatched so as to be over the area at first light. This

located and attacked a convoy consisting of 25-30 transports, heavily escorted by naval vessels, at the northern entrance of the Banka Straits, heading towards the Palembang river. The convoy was protected by fighters believed to be from one or two aircraft carriers which were not, however, located. This was followed up by attacks by all available Hudsons and Blenheims, during which at least 6 transports were sunk or badly damaged. All of these attacks, except the first, were unescorted and carried out in the face of heavy A.A. fire and strong fighter defence. Six to eight of our aircraft were shot down or destroyed on landing in a damaged condition, whilst the majority were hit to a varying degree. Nevertheless, the successes already achieved more than balanced those losses and during the night of the 14th everything possible was done to prepare for further attacks the following morning.

454. The reason why no fighter escort had been available except for the first attack was because the Japanese had, in co-ordination with the approach of their convoy, staged a parachute attack on P.I. aerodrome, on which our fighters were based. It was the only occupied aerodrome which they had located in Sumatra. Presumably by attacking it they hoped to neutralize all air resistance to the convoy. As events will show, their failure to locate P.II and neutralize it as well was to prove costly. However, before proceeding further it is now necessary to turn to describe events at P.I.

*Parachute attack on Palembang I Aerodrome—
14th February.*

455. On 14th February all serviceable Hurricanes were airborne, escorting 225 Group's bombers which were attacking enemy shipping in Banka Straits. At about 0800 hours the approach of a large hostile formation was reported by the Observer Corps. Attempts to divert our Hurricanes to intercept it failed because they were beyond R/T range.

456. Shortly afterwards P.I. was attacked, first by bombers with light bombs, then it was well shot up by the large escort of fighters, and finally troop carriers dropped 2 groups of parachutists, each 150-200 strong, at two points 400-800 yards to the S. and W. in the scrub jungle which surrounds the aerodrome. Simultaneously 300 more were dropped on the oil refinery a few miles away near Pladjoe.

457. The aerodrome defences (8 heavy and 8 Bofors British A.A. guns, 150 Dutch infantry with 2 old armoured cars and about 60 R.A.F. ground defence gunners of 258 and 605 (F) Squadrons) warded off an attempt to rush the aerodrome, a number of casualties occurring on both sides.

458. Our absent fighters, now with empty tanks and guns, were diverted to P.II. and were subsequently employed against the main enemy attack in the Palembang river. Some landed at P.I, not having received the diversion order, were refuelled and sent on to P.II.

459. Shortly afterwards the A.A. guns, having by then almost exhausted their small stock of ammunition, were withdrawn to Palembang Town. Wing Commander Maguire organised the withdrawal of unarmed R.A.F. personnel at the same time. He remained himself with about 60 R.A.F. personnel and some Dutch native infantry to deny the aerodrome to

the enemy. One paratroop party had, however, reached the road leading to Palembang and ambushed part of the withdrawing parties, subsequently making a road block with overturned vehicles.

460. Two subsequent attempts from Palembang Town to reinforce the aerodrome were driven back at the road block after close quarters fighting. The first, at about 1100 hours, was by an R.A.F. party under F.L. Jackson and P.O. Umphelby who pressed their attack with determination: some of the party succeeded in reaching the aerodrome through the scrub and assisted in evacuating some wounded and unarmed personnel. The second, at 16.30 hours, was by a Dutch contingent which also was able to get some small assistance and information to the aerodrome.

461. Wing Commander Maguire's party, by now much reduced, was running out of ammunition, and had no water or food. Thus, this handful of men was in no position to continue their gallant denial of the aerodrome to the enemy in face of an attack in force which was certain to come at night. He therefore destroyed all material, including some unserviceable aircraft, and withdrew. Being cut off from Palembang Town the party made its way to the West Coast of Sumatra after an arduous trek of seven days, during which they destroyed a number of stocks of petrol and some rubber factories. They there rejoined their units in Java.

462. Our aircraft at P.II meanwhile were too busy dealing with far greater a threat to be in a position to help recover P.I aerodrome, as will now be related.

EVENTS FROM 14TH FEBRUARY (P.M.)— 18TH FEBRUARY.

Attacks on Japanese Convoy off Palembang, 15th February.

463. By 14th February (p.m.) therefore, the total Air Forces located in Sumatra were at P.II aerodrome. The strength consisted of:—

- 22 Hurricanes.
- 35 Blenheim I's and IV's—many of which were unserviceable.
- 3 Hudsons (the remainder of the Hudson force was flown to Java for repairs on the 14th February).

The whole was placed under the command of the Station Commander P.II, Group Captain McCauley, who was instructed by the A.O.C. No. 225 (B) Group to continue attacks on the Japanese convoy entering the Palembang River from first light on the 15th (paras. 452-4).

464. Reconnaissance on the 15th pin-pointed the position of transports and barges, and revealed approximately 20 naval vessels and transports steaming through the Banka Straits, whilst other transports and landing craft were in the river mouth.

465. The first attack, off at 0630 hours, was made by 6 Blenheims escorted by Hurricanes. It met strong fighter opposition but pressed home the attack. From then onwards until 1530 hours a constant stream of our aircraft proceeded to attack the convoy, and, as all enemy fighter opposition had ceased, Hurricanes were employed in shooting up barges whilst bombers similarly expended their ammunition after dropping their bombs. The

limiting factor in the number of attacks was the speed with which re-armament and refuelling could be carried out. The Japanese in barges and transports fought back for a time with A.A. and small arms fire but by 1100 hours this opposition ceased. By 1530 hours all movement on the river was stopped and surviving barges and landing craft had pulled in to the thick undergrowth. Troops had dispersed on to the river bank, and against them attacks continued.

466. It is difficult to assess the damage done. All pilots reported upon its extent. Thousands of troops in barges were caught in the open by machine gun fire, particularly by the Hurricanes, and very heavy casualties were inflicted upon them. Bombing accounted for many more, whilst in addition, 3 transports were sunk, a number of others were hit and an unknown number of landing craft were also sunk.

467. As a fitting finale to the day, a number of Navy 'O' fighters were located on a strip on the beach on Banka Island and were destroyed by Hurricanes. It is probable that these fighters were those which had been encountered during the initial sorties of this day.

468. Air action thus brought the landing to a standstill. The Japanese were punished heavily for their failure to locate P.II aerodrome. Unfortunately, there were no troops or naval light craft available in the area to take advantage of the situation

Withdrawal from Sumatra.

469. On the evening of the 14th February, A.O.C. 226 Group returned to Palembang from P.II. Both he and A.O.C. 225 Group were informed by the local Dutch Territorial Commander that the situation was well under control and that he had every hope of eliminating the paratroops. He gave the impression that a drive was to take place that night to clear the area. Contrary orders evidently were received later by him, because a start was made during the night in burning oil and rubber stocks in the town, and in the destruction of the oil refinery area

470. When A.O.C.'s Nos. 225 and 226 Groups saw the Dutch Territorial Commander early on the morning of the 15th, they found that the Dutch H.Q. had closed and that the Territorial Commander himself considered it too late to restore the situation. He was himself about to leave for Lahat in the South

471. The Dutch Territorial Commander also stated that the ferries across the river and the railhead facilities would be blown in one hour's time, with the object of embarrassing the Japanese advance towards the South. In consequence, A.O.C. No. 225 Group ordered the immediate evacuation of the town by all remaining R.A.F. personnel. This was effected by road and rail to Oesthaven.

472. A further paratroop landing took place at P.I. later during the morning of the 15th, and the Japanese established themselves in the vicinity of Palembang town. There was thus a distinct possibility that P.II aerodrome might be over-run during the night 15th/16th February. Also by 15th February (p.m.) stocks of bombs and ammunition at P.II were almost expended, whilst food supplies were cut off.

473. In view of these factors and the lack of any supporting troops, Abdair approved the

evacuation back to Java of all R.A.F. units, and this was effected by road and rail on the evening of the 15th via Oesthaven. All flyable aircraft were flown to Java, the remainder destroyed. Aircraft of Nos. 84 and 211(B) Squadrons, which had borne the brunt of the attacks during the day, finished their last sorties too late to proceed that evening. They remained on the aerodrome, flying to Java on the morning of the 16th February.

474. Personnel at landing grounds in N. and Central Sumatra were instructed to proceed by road to west coast ports for evacuation in accordance with pre-arranged plans.

475. Special mention must be made here of the valuable services rendered by the General Manager, Sumatra Railways. Despite orders received from his superior authorities he delayed destruction of rail facilities and personally arranged for the trains required during the night 15th/16th February. He himself did not leave until after the departure of the last train conveying R.A.F. personnel.

Credit is also due to Group Captain A. G. Bishop for the part he played in Sumatra. He put our squadrons on their feet and organised the staff despite primitive circumstances. He contributed in no small degree to the success of the operations which were conducted in Sumatra, and finally he personally supervised the successful withdrawal of the force from the Palembang area when its position there was no longer tenable.

476. At Oesthaven on the 16th February, it was found that the Dutch had already fired the bazaar and destroyed all military property. At the docks the British Military Embarkation Commandant stated that he had been given orders that all personnel were to be clear by midnight; personnel only were to be evacuated, not M.T. or equipment. As a result, essential and vital aircraft equipment, including that brought from Palembang, was left behind. This was particularly unfortunate because spare engines and other urgent stores for the Hurricanes which had been landed at Oesthaven with No. 41 Air Stores Park, of No. 266(F) Wing, were left behind. No. 266(F) Wing's R.S.U. similarly lost valuable equipment. A.A. guns and ammunition which had been brought to the port from P.I. and P.II aerodromes had also to be abandoned. Section IV of this Report will show that the loss of this R.A.F. and A.A. equipment had serious results during operations conducted later in Java. Fortunately the light tanks were re-embarked, and all personnel, Army and R.A.F., were evacuated.

477. The evacuation of the port was covered by a screen of R.A.F. personnel from No. 84 (B) Squadron acting under the command of Group Captain G. E. Nicholetts, who had been appointed R.A.F. Base Control Officer about ten days previously.

478. It was unfortunate that Oesthaven was evacuated so hastily. Two days later Group Captain Nicholetts, with a party of 50 volunteers of No. 605(F) Squadron, returned from Batavia to Oesthaven by sea in H.M.S. "Ballarat" which was commanded by a Royal Australian Naval Reserve officer specially appointed for the voyage owing to his knowledge of Oesthaven Harbour. On arrival, early on the 18th, twelve hours were spent by the party

loading the ship to the gunwales with R.A.F. equipment and some Bofors ammunition. At the same time the railway track was damaged, loaded rolling stock and petrol dumps were fired, and the water by the dockside was obstructed by pushing into the sea abandoned heavy M.T. and other vehicles.

479. That this work of salvage and destruction proceeded unhampered by the enemy must not detract from the spirit shown by both the R.A.F. party and the crew of H.M.S. "Ballarat," who volunteered for the adventure with a full knowledge of the hazards involved.

As it happened, air reconnaissances from Java had made it clear that the casualties and disorganisation caused as a result of our air attacks on the convoy off Palembang during the 14th and 15th February had been so severe that the Japanese were in no state to run through from Palembang to Oesthaven at the speed which had been anticipated when the port was evacuated, but Group Captain Nicholetts and his party were unaware of this fact.

SECTION IV.

SUMMARY OF OPERATIONS BASED ON JAVA.

INTRODUCTION.

Early Days of War in the N.E.I.

480. Before hostilities had broken out in the Far East the Dutch considered that their best interests lay in co-operating with the British from the outset with the object of repelling a Japanese attack in its early stages. They felt confident that, by joint means, an attack could be halted in the north and that war would never reach Java itself.

481. Dutch air units, therefore, operated from the first day of war in Malaya, Borneo and the northern islands of the N.E.I. There they suffered considerable casualties. Dutch naval units also played an early part and suffered considerably.

482. Early reverses caused apprehension but acted as a spur to Dutch co-operation. Their will to help was most marked although their resources were very limited.

Formation of H.Q. S.W. Pacific Command (Abdacom) in Java.

483. On 15th January, 1942, Sir Archibald Wavell arrived in Java to take control of all Allied Forces in the S.W. Pacific and formed his H.Q. (Abdacom) near Bandoeng. Confidence was raised by this and by the news of expected reinforcements—British, Australian and American—and still further by the actual arrival, towards the end of January and early February, of the first of them. More were on the way.

484. Even when the British forces in Malaya were, by 31st January, invested on Singapore Island, it was believed that that fortress, the key of the Far East, would hold out for some while. This would provide the necessary time for adequate forces to be built up in the N.E.I. for the successful defence of the rest of the Far East.

Then came a series of unpleasant events.

Effect in the N.E.I. of Japanese Capture of Singapore and Sumatra.

485. On 8th February the Japanese secured a foothold on Singapore Island and within a couple of days its imminent capitulation became evident.

486. On 14th February they attacked and overran South Sumatra, admittedly at heavy cost. The British forces, mainly air units, had to withdraw to Java.

487. Between 12th and 18th February large numbers of personnel, evacuated from Singapore and Sumatra, arrived in considerable confusion in Western Java: amongst them were approximately 10,000 R.A.F. of all ranks. They augmented considerable numbers of refugees who had preceded them in a steadily growing stream from the same places and from other N.E.I. Islands.

488. At this time, mid-February, Abdacom was still established in Bandoeng, reinforcements were arriving and more were expected. Nevertheless it was evident now that Java would be attacked in the near future. A civilian exodus from Java on a grand scale replaced the small stream which had been leaving for some time through Sourabaya and Batavia.

Congestion in Batavia.

489. At Batavia the exodus became confused with incoming reinforcements and evacuees from Singapore and Sumatra. For several days the harbour of Batavia, and the roadstead outside, were congested with shipping. This unloaded as best it could. The result was that quays, warehouses and the roads leading from them rapidly became blocked with an inextricable confusion of merchandise, equipment, M.T., abandoned cars and goods of every description. The town of Batavia became congested with personnel—outgoing refugees, incoming reinforcements, incoming evacuees and Dutch troops mobilised for defence of the locality.

490. Into this confused area the R.A.F. evacuated from Singapore and Sumatra, arrived, for the most part between 12th and 18th February.

491. Those from Singapore had embarked there under heavy air attack on shipping of all kinds as it came to hand, and amongst a number of civilian refugees. Units had become much mixed, many personnel were separated from units and many had become separated from their equipment. It had proved impracticable to embark much equipment owing to conditions at Singapore docks, and some of what had been embarked had been lost at sea through enemy action.

492. Units from Sumatra had also suffered loss of their equipment by reason of the hasty withdrawal from aerodromes near Palembang, and still more so by circumstances at the port in South Sumatra, Oesthaven, at which they had embarked: such small amount of equipment as they had possessed in Sumatra, and which they had succeeded in removing to Oesthaven, could not be embarked and brought with them (para. 476).

493. An appreciable number of bombers and fighters had, however, reached aerodromes in the Batavia district, though a high proportion of them were unfit for operations.

494. Such was the situation in Batavia on 16th February. It was from personnel and equipment so placed that a maximum air fighting strength with ancillary services had to be evolved, and surpluses evacuated from Java. Twelve days were destined to be available for this work before the Japanese landed in Java.

R A.F. RE-ORGANISATION IN JAVA.

Situation on 16th February.

495. On the 16th February, the date of the evacuation of Sumatra, the position in Java was as follows:—

(a) *H.Q. Westgroup* (A.O.C.—A.V.M. P.C. Maltby)—A.O.C. and a nucleus staff had arrived at Soekaboemi on 14th February and were organising a H.Q. there; this was still known as Westgroup. Soekaboemi was chosen because it is centrally located in Western Java, where all Westgroup units were being located. Westgroup assumed administrative responsibility for its units on 16th February. As it was not yet ready to take operational control, this was retained by Abdair, which had assumed it on 7th February whilst units were still operating in Sumatra (para. 448).

(b) *No. 205 (F.B.) Squadron*—(Wing Commander Councell in Command) had arrived in Batavia on 1st February and was operating as part of the Allied Reconnaissance Group (Recgroup), using anchorages at Batavia and Oesthaven.

(c) *Nos 36 and 100 (T.B.) Squadrons*—(Squadron Leader Wilkins in Command). Aircraft had arrived on 29/30th January from Singapore for re-organisation. After being based on various aerodromes they were rejoined by their ground personnel on 15th February at Tjikampek.

(d) *No. 153 M.U.*—(G/Capt. Ridgway in command) had arrived in Java on the 9th January and moved to Djocjarta, where it was ready to start work on 15th January.

(e) *No. 152 M.U.*—(Squadron Leader S. G. Aylwin in command) had arrived in Batavia on 14th February and moved on the 17th to Poerbolinggo to form a transit store.

(f) *R.A.F. Base, Batavia* (Group Captain Ridgway in command until 18th February 1942 when Air Commodore Silly relieved him). This base had been established in Batavia on the 24th January to organise the reception, sorting and despatch of personnel arriving by sea from Singapore and Sumatra and of air reinforcements from the Middle East and the United Kingdom. It also organised the reception and erecting of a number of boxed Hurricanes. By 18th February this base was administering 5 transit camps in Batavia and one at Buitenzorg. Personnel of all other units not mentioned in (a) to (e) above passed through this base for re-organisation and disposal, a total of over 12,000 being handled.

(g) *Certain A.M.E. Units* were installing radar facilities in the Batavia and Sourabaya areas.

(h) Thirty-nine crated Hurricanes had been erected in Batavia during the first ten days of February. Seventeen had proceeded to No. 266 (F) Wing in Sumatra, where a number of them were lost. Twelve were handed over by Abdair to the Dutch

Army Air Force. For diplomatic reasons they could not be withdrawn in spite of the losses which our fighter squadrons had just sustained in Sumatra. Thus only 10 were left as replacements for our squadrons.

Allocation of Aerodromes.

496. On the evacuation of Sumatra, on 16th February, Abdair allocated aerodromes as follows:—

- (a) All Hudsons to Samplak:
- (b) All Blenheims to Kalidjati:
- (c) All fighters to Tjililitan.

These aerodromes had not been highly developed, dispersal being limited, aerodrome ground defence weak, internal signals and night flying arrangements lacking. No. A.A. defences were available.

497. On the 18th February, in view of the reduced strength of squadrons and the fact that no further bomber reinforcements could be expected, A.O.C. Westgroup decided to concentrate all aircraft by types into selected squadrons as follows:—

(a) *Semplak:*

Station Commander—Group Captain Brown, No 1 (GR) Squadron, R.A.A.F.—Commander, W/Cdr. R. H. Davies. Strength 14 Hudson II's and 12 Hudson III's (about 12 operationally serviceable).

(b) *Kalidjati:*

Station Commander—Group Captain Whistondale (pending availability of Group Captain Nicholletts) No. 84 (B) Squadron—Commander, W/Cdr. Jeudwine. Strength 26 Blenheims (about 6 operationally serviceable).

(c) *Tjikampek:*

No. 36 (TB) Squadron—Commander, S/Ldr. Wilkins. Strength 9 Vildebeestes and 1 Albacore. (No torpedo facilities were available in Java.)

(d) *Tjililitan:*

No. 232 (F) Squadron—Commander, S/Ldr. Brooker.
No. 605 (F) Squadron—Commander, S/Ldr. Wright.

Total strength of 25 Hurricanes (about 18 operationally serviceable).

The former had been in action since its arrival in the Far East, in Singapore and Sumatra, and had been kept up to strength by absorbing No. 232 (F) Squadron proper which had arrived in H.M.S. Indomitable. It was now very depleted again, and in turn absorbed practically the whole of No. 242 (F) Squadron also from H.M.S. Indomitable—but the original designation of the squadron, No. 232 (F) Squadron, was retained.

No. 605 (F) Squadron had hitherto been mainly employed in erecting Hurricanes for No. 266 (F) Wing. But it was now armed with a small quota of aircraft and came into action on 23rd February.

The decision to retain two fighter squadrons in Java was taken in expectation of the arrival of U.S.S. "Langley," a U.S.A. aircraft carrier, with a consignment of P.40 fighters on board, with which it was hoped to arm one of them, the other retaining Hurricanes. Unfortunately the "Langley" was later sunk when approaching Java and the expectation was never realised.

Re-formation of Bomber and Fighter Groups.

498. On 18th February H.Q. Nos. 225 (B) and 226 (F) Groups were re-formed in skeleton to assist Westgroup in re-establishing their squadrons in Java.

No. 225 (B) Group, under Air Commodore Hunter, re-formed in Bandoeng. Bomber aerodromes were visited and assistance given, in co-operation with the Dutch, to units to solve their acute problems of housing, rationing and transportation. Air Commodore Hunter was absorbed into Abdair on 19th February to act as A.O.A.; the remaining members of Group H.Q. were absorbed into H.Q. Westgroup on its arrival in Bandoeng on the 23rd February.

No. 266 (F) Group, under Air Commodore Vincent, took charge of Nos. 232 (F) and 605 (F) Squadrons, and of a fighter operations room in Batavia and its local warning system. This had made good progress during the preceding few days, thanks largely to the initiative of Wing Commander Bell, previously Station Commander at Kallang, Singapore. Owing to the highly developed nature of communications in Java, efficient operations and filter rooms were quickly connected to the Dutch Observer Corps, the fighter aerodrome, the A.A. defences of Batavia, and Abdair's (later Britain's) operations room in Bandoeng. Two R.D.F. and two G.L. sets were quickly erected in the Batavia district and were also connected with them. The Dutch provided the utmost assistance, including the provision of many volunteer Dutch youths and women to man the filter and operations rooms; their alertness and enthusiasm could hardly have been bettered.

499. To maintain this Force it was decided to retain:—

- (a) No. 153 M.U. (already organised for work at Djocjarta).
- (b) No. 81 R.S.U.
- (c) No. 41 Air Stores Park for Unit supply.
- (d) An improvised Air Stores Park for collection and sorting of equipment.

500. Establishments were drawn up and issued; and instructions were given that all personnel surplus to establishment were to be evacuated via the R.A.F. Base, Batavia, as shipping became available and as far as possible with their original units. Preference was to be given in the following order, after women and children evacuees—formed units, aircrews, technical personnel and selected details.

501. Aircraft serviceability for various reasons was low: the Hudson and Blenheim Squadrons had about six serviceable each, the two fighter squadrons not more than 18 in all. For the next few days minor operations only were carried out (under Abdair orders), and all efforts were directed towards improving the condition of aircraft and to getting ready generally for the serious operations to come.

AIR OPERATIONS 18TH TO 24TH FEBRUARY.

502. While re-organisation described above was progressing under Westgroup direction, the following operations were carried out under the directions of Abdair.

503. On the 18th February, one Hudson reconnoitred the port of Oesthaven and the road to Palembang. No signs of Japanese activity were observed.

504. On the 19th February all available (5) Blenheims attacked shipping at Palembang. On this day a bombing attack was launched by the Japanese against Semplak and 6 Hudsons were destroyed. Semplak had no A.A. defences and dispersal facilities were poor.

505. On the 20th February 4 Hudsons and 3 Blenheims again bombed shipping at Palembang in the face of severe fighter opposition from aircraft based on P.I. The following day 2 Hudsons and 5 Blenheims continued these attacks. On this occasion it was possible to observe results, hits were obtained and one 10,000-ton ship was set on fire.

506. On the 22nd February, Semplak, which had no A.A. defences, sustained low flying attacks by some 20 fighters. Six Hudsons were burnt out and three others damaged beyond repair. As a result of this raid Abdair approved the move of the remains of No. 1 (G.R.) Squadron R.A.A.F. to Kalidjati where a light battery (8 Bofors) had by 20th February been located as part of the aerodrome defence. Six aircraft were transferred the next day, a rear party being left at Semplak to repair the unserviceable aircraft on the aerodrome and to strip the rest of serviceable parts. Whilst they were there, another attack was sustained on 24th February, and more aircraft, unserviceable, were destroyed.

507. On the 23rd February, 3 Blenheims bombed 4 submarines off the coast and claimed that one had been sunk.

508. On the 24th February, Kalidjati was bombed by the enemy, and again twice on the 26th. The Bofors guns successfully prevented a low flying attack from developing on the latter date.

509. Four Blenheims attacked P.I on the 25th February. By this time there were only 2 Hudsons operationally serviceable, with 9 others repairable: the Blenheim position, however, was slowly improving.

SUPREME ALLIED H.Q. S.W. PACIFIC LEAVES JAVA.

510. The enemy's unexpectedly rapid advance had frustrated the hopes, originally entertained, of building up a large Allied strength in the S.W. Pacific under the direction of Abdacom in Java, which was by now under imminent threat of invasion. Being without appropriate forces to handle, Abdacom could serve no useful purpose by remaining in the island: on the contrary such action could only result in the loss of a valuable Allied staff, the capture of which would have given great prestige to the enemy. On 22nd February its withdrawal was ordered.

511. It was decided that the British forces remaining in the island should in future operate under the Dutch Naval and Army Commanders-in-Chief in the N.E.I. In conformity with this decision H.Q. Westgroup moved on 23rd February from Soekaboemi and took over the H.Q. in Bandoeng vacated by Abdair. It took over operational control of its squadrons from Abdair on 24th February and was renamed Britair. It was placed under the orders of Maj.-Gen. van Oyen, the Dutch A.O.C., whose staff was already installed in Abdair's operations room. Command passed to the

Dutch Authorities on 25th February, and personnel of Abdacom left Java on 25th and 26th February.

512. Before he left Java Sir Archibald Wavell issued his instructions to the A.O.C. Britair (Air Vice Marshal Maltby). They were to the effect that:—

(a) He was to command all R.A.F. units left in Java.

(b) He would exercise Command under the orders of General van Oyen, the Dutch A.O.C. in Java, who, in turn, was under Command of the Dutch C.-in-C., General ter Poorten.

(c) The British Army troops left in Java were under command of Major-General H. D. W. Sitwell who would receive his orders from General ter Poorten.

(d) To co-operate with the Dutch and to go on fighting as long as they continued effective resistance.

(e) Thereafter to do the utmost to evacuate remaining personnel.

(f) To ensure that no undamaged equipment fell into enemy hands.

(g) As senior British Officer in Java to act as signals link between all British forces in the island and their service departments in London, Delhi, Washington and Melbourne.

(h) That no help from outside could be expected for a long time.

513. Gen. van Oyen issued instructions that the operations room, vacated by Abdair, was to be maintained for the combined use of his H.Q. and of Britair, and that it was to be organised for covering all operations in the S.W. Pacific. This necessitated a last minute augmentation of Britair's staff.

514. As the Japanese invasion fleet began its approach to Java, from bases in and around Borneo, on 25th February, energetic action was essential for collecting and organising the necessary personnel and material, and for establishing the contacts with the various Dutch, American and British authorities with whom Britair was now to deal.

515. During the following days encouraging messages were received from the Prime Minister, the Secretary of State for Air, and from the Chief of the Air Staff, emphasising the importance of every day which could be gained by resistance in Java. These were promulgated.

FORCES AVAILABLE AND DUTCH PLAN FOR DEFENCE OF JAVA.

516. Before proceeding further with the narrative of events it is advisable to give a brief description of the outstanding topographical and climatic features of Java, of the Dutch naval, army and air resources, and of the Dutch plan of defence.

Topography and Weather.

517. Java is approximately 650 miles long with an average width of 80 miles. Its northern coast, the one most exposed to Japanese attack, affords innumerable landing beaches throughout its length. The western end is dominated by aerodromes in South Sumatra. Highly developed road and rail communications cover the Island, the main arterial lines of which run east to west: these are exposed at many points throughout their

length to attack by landings on the northern coast. An outstanding feature of the island is its mountainous southern coast, parallel to which run a series of mountainous massifs along the centre of the island. During the season under consideration, S.W. winds pile up tropical thunderstorms on them from midday until far into the night. Whilst these are raging, aircraft based on aerodromes in the southern (mountainous) half of the island are, for the most part, seriously handicapped by them.

Squadrons based on aerodromes along the northern coastal strip are, on the other hand, not so severely handicapped: although heavy cloud and rain occur throughout the afternoon and night, aircraft can effectively operate at all hours. Mornings are usually bright and cloudless. Aerodromes in the northern coastal strip are, however, sited not far from exposed landing beaches. Their occupation was, therefore, not unattended by risk.

Naval, Army and Air Resources.

High Command.

518. Bandoeng, in central western Java, was the wartime seat of the Dutch Government, and of Naval and Military Headquarters. The latter was known as A.H.K. (The Dutch have no separate air force—their navy and army having their own air contingents.)

The High Dutch Commanders were —

Governor-General of N.E.I.—Jonkheer Dr. A. W. L. Tjardo van Starkenborgh Stachouwer.

C.-in-C. Royal N.E.I. Navy—Admiral Helfrich.

C.-in-C. Royal N.E.I. Army—Lt.-Gen. ter Poorten.

Navy

519. A Combined Allied Fleet was based on Sourabaya, with a subsidiary base at Batavia. It consisted of 8 cruisers (3 British, 2 Australian, 1 American, 2 Dutch), 11 destroyers (5 British, 4 American and 2 Dutch) some Dutch submarines and other auxiliary craft, and was commanded by Vice Admiral C. E. L. Helfrich, Royal Netherlands Navy, as Commander of Naval Forces. He had assumed command on the 11th February.

Army.

520. (a) The Dutch had approximately 25,000 regular troops, made up of four regiments of infantry (native) with artillery, garrison and ancillary units. They had a few obsolete A.F.V.'s, having been unable to obtain modern tanks from the Allies. Units had been heavily depleted of white personnel for various reasons, from a proportion of one white to five native to a proportion of one to about forty. An attempt to re-arm and to re-organise on modern lines had failed because modern armaments were unobtainable for the new units which had been formed for handling them.

(b) In addition there was a Home Guard of about 40,000. They were static in role, and necessarily poorly armed and trained. Those in west Java were reported to be the best, particularly those in the vicinity of Soebang near Kalidjati aerodrome (eventually to be occupied by British bombers) where there were about 1,000 men with twelve armoured cars.

(c) To the Dutch Army was added a small British force under the direction of Major-General H. D. W. Sitwell. It consisted of a squadron of light tanks, two Australian infantry battalions (one a machine-gun unit without its machine guns) and a number of small administrative units. The whole was organised hastily into a mobile striking force for operation in western Java, and was under the command of Brigadier A. S. Blackburn, V.C. (Australian Imperial Forces). To it were added later an American Field Battalion much under strength, and a contingent of 450 R.A.F. airmen hastily armed and trained as infantry under Wing Commander Alexander. It was called "Blackforce". It co-operated closely with the Dutch troops (under the command of General Schilling) located in western Java for the defence of the Batavia area.

(d) Certain British A.A. batteries were concentrated on aerodrome defence in Western Java as follows:—

Tjilikitan—12 Bofors guns soon after 15th February. Also one battalion Australian Infantry relieved on 25th February by 15th Heavy A.A. Battery armed as infantry. The former were relieved from aerodrome defence duties because they were required as part of "Blackforce".

Kalidjati—10 Bofors guns soon after 15th February. Also some Dutch Infantry relieved on night 28th February/1st March by 12th Heavy A.A. Battery hastily armed as infantry. The former were wanted for service with the Dutch field army.

Thus there were no Heavy A.A. guns for the defence of these aerodromes. The few available on the island were wanted at more vulnerable places, including the Naval base at Sourabaya.

Air Forces.

521. (a) The Dutch had about 5 Bomber, 3 Fighter and 2 Observation Squadrons in Java, most of which were much depleted as the result of protracted operations in the north. Serviceability of aircraft was low. They and their administrative units operated under Dutch control decentralised from Bandoeng.

(b) There were 12 to 15 American heavy bombers (believed to be B.17's) and a few fighters (P.40's). Whole serviceability was low. These were located under American control in east and central Java.

(c) There was also a mixed Dutch, American and British Reconnaissance Group based in Java for seaward reconnaissance, which operated under a Dutch Commander. No. 205 (F.B.) Squadron formed part of it.

(d) To this force was to be added the British Air Contingent under Westgroup, alias Britair, whose re-organisation has already been described.

During the time that Abdair remained in Java, all the above air formations acted under its direction, control of the first two being exercised through the Dutch A.O.C., General van Oyen. When Abdair left Java, the latter took command of them all.

Strategy

522. An invasion of Java was considered most likely to approach down the east or west sides of Borneo, or both. The Dutch High Command feared simultaneous landings at both

ends of the islands, near Sourabaya in the east and in the Sunda Straits on the west: this was the most difficult form of attack to parry, and it was to be expected that the enemy would adopt it. A landing in central Java was not thought to be likely. The Dutch defence plan was laid accordingly.

Dutch Plan.

523. This was:—

(a) To watch, by means of air reconnaissance, as far northwards as possible on both sides of Borneo, and the whole of the Java Sea—this being undertaken by the Reconnaissance Group. Submarines supplemented this watch.

(b) An invasion was to be opposed as far out to sea as possible by air action: all bomber and reconnaissance aircraft were to be used for the purpose when occasion arose.

(c) A Combined Allied Naval Striking Force of 5 cruisers and 9 destroyers was based at Sourabaya and would engage the main threat when it appeared.

(d) Finally, should the enemy land, he was to be resisted on the beaches at certain points only. Suitable landing beaches were so numerous that only a few of the most obvious could be defended. Elsewhere the plan was to keep troops in local reserve and to counter-attack landings with them, the Army falling back if necessary on to previously prepared positions covered by demolitions.

(e) As a successful invasion was all too probable it was decided that there should be two centres for a final stand, a decision which was enforced by a shortage of troops and by the great length of the island. The two chosen centres were Malang Plateau in the east and Bandoeng volcanic plateau in the west.

APPROACH OF ENEMY CONVOYS.

524. On the 25th February air reconnaissance on the east side of Borneo reported that shipping, which had been collecting for some time past in ports in the Macassar Straits, was forming up at Balikpapan, evidently in preparation for putting to sea. The invasion of Java was imminent.

525. On 26th February a convoy of more than 50 ships and transports, accompanied by a strong naval escort, was located in the southern end of the Macassar Straits steaming south.

526. On the 27th February it was again located, now in the Java Sea, on a course and speed which would bring it to the north coast, westward of Sourabaya, at midnight 27th/28th February.

527. The Allied Fleet put to sea and fought an engagement with the escort of heavy cruisers and destroyers during the night 27th/28th February. The latter was very superior in numbers, weight and metal. The Allied ships were either sunk or disabled. This gallant action afforded the land defences another 24 hours' grace, because the transports turned away northwards at the beginning of the sea action and steamed towards Borneo during the night.

528. On 28th February the transports were again located steaming south at a speed which would bring them to landing beaches westward

of Sourabaya about midnight 28th February/1st March.

529. Meanwhile the situation on the west side of Borneo had not developed so clearly. Invasion forces had been suspected in the Natuna or Anambas Islands and possibly at Muntok on Banka Island. Reconnaissances had failed up to 26th February to clarify the situation.

530. On the 27th February, a small convoy with escort was located about 50 miles south of the southern tip of Banka Island steaming slowly on a north-easterly course. This might or might not be part of an invading convoy "marking time" before turning south towards Western Java.

531. On the 28th February about noon, the situation became clearer. A convoy was sighted at that hour approximately 100 miles north-east of Batavia steaming on an easterly course at high speed. It consisted of 11 transports; one cruiser and three destroyers were disposed some 30 miles to the south and on a parallel course. Another and larger convoy was located to the north-west: strength, course and speed were not clear. Both were at a distance which would make landings possible at two points in western Java about midnight.

532. The moon was one day past full, wind off shore, ideal conditions for landing. All was evidently set for simultaneous landings—one at the eastern end of Java probably just west of Sourabaya, and two at the western end of Java in the vicinity of Batavia.

BOMBER OPERATIONS 27TH FEBRUARY TO 1ST MARCH.

533. To revert to the night of 27th/28th February. It then appeared that the major threat would develop against Eastern Java. It was therefore decided to move No. 36 (T.B.) Squadron (9 Vildebeestes and 1 Albacore) at once to Madioen (near Sourabaya) to co-operate with American B.17's in resisting it. No. 36 (T.B.) Squadron arrived at Madioen on the afternoon of 28th February, and during the night 28th February/1st March carried out two sorties per aircraft, the first against transports, the second against landing barges. The first attack entailed a long search because reconnaissance information with which they had been briefed proved inaccurate. A convoy of 28 ships was eventually found 5 miles off the Coast, north of Rembang, some 100 miles west of Sourabaya. Most pilots claimed hits on transports, and execution amongst the barges. Subsequent reports received from American H.Q. in the area stated that attacks had been most successful and that No. 36 (T.B.) Squadron had sunk 8 ships—the Americans themselves claimed 7 others: but it has not been possible to verify this seemingly very high rate of success. On completion of the second attack, No. 36 (T.B.) Squadron returned direct to Tjikampek, less three aircraft which had been shot down including that of the C.O., Squadron Leader J. T. Wilkins, an outstanding leader who was unfortunately killed. Each aircrew of this squadron, operating from a strange aerodrome, thus carried out two night attacks in 24 hours, involving over 15 hours flying in open cockpits—an excellent achievement.

534! In the meantime, during 28th February, the threat to western Java had crystallised

(para. 531) in the form of two Japanese convoys approaching from the north with the evident intention of landing on both sides of Batavia.

535. All available Blenheims and Hudsons were directed against that convoy, which was approaching the beaches eastward of Batavia. During the night 28th February/1st March, 26 Blenheim and 6 Hudson sorties were carried out against it from Kalidjati. The first attack found it 50 miles north of Eritanwetan, a point on the north coast about 80 miles east of Batavia: it was steaming south at high speed. Weather conditions were bad and by this time only one narrow strip was serviceable on the aerodrome. Not all pilots were sufficiently well trained to cope with the conditions: of those that were, some carried out three sorties each. There is no doubt that attacks were successful and were pressed home from a low level with great determination. When attacks began, 15 ships formed the convoy: early on 1st March, only 7 were seen anchored off the disembarkation beach which was at Eritanwetan. At least three, perhaps more of its ships, are believed to have been sunk. The larger figure may be an exaggeration, as other Japanese ships were seen on 1st March lying off some miles N.W. of the main convoy.

536. Disembarkation at Eritanwetan began at about 0100 hours on 1st March and continued during the rest of the night, despite a number of attacks by our aircraft while landing was in progress.

537. During the night, the Dutch A.O.C., General van Oyen, advised Air Vice Marshal Maltby that the bomber force at Kalidjati would be more favourably placed for opposing the enemy landings if it remained there than if it were withdrawn to aerodromes further inland amongst the hills. He did not appear to have much confidence in the weak detachments of Dutch Home Guard which were watching the river crossings on the roads leading from the enemy landing at Eritanwetan to Kalidjati, a distance of more than 50 kilometres. But he placed more reliance upon the Home Guard of about 1,000 strong, supported by about 10 armoured cars, which were located at Soebang, a town on the road leading to the aerodrome. He also stated that a Dutch battalion at Cheribon had been ordered to counter-attack the landing. The British A.O.C., therefore, decided to keep the bomber force at Kalidjati where it was best placed to resist the enemy.

538. It was decided to "stand down" bombers at Kalidjati at the end of the night's operation because—

(a) Crews had been on a stretch for 36 hours, standing by during much of the night of 27th-28th February, and then operating at high pressure throughout late afternoon and the night of 28th February-1st March. They had worked splendidly, had achieved good results, and needed a rest.

(b) There would be plenty for the crews to do at high pressure for several days to come.

(c) Previous experience had shown that Blenheims and Hudsons were particularly vulnerable if employed in the cloudless conditions which prevail during the mornings at this season, because the Japanese normally

provided their landings with strong Navy 'O' fighter cover. It was therefore decided to employ bombers daily during the late afternoons (when cloud cover could be relied upon) and under cover of darkness, and to use all available fighters, which could look after themselves, to continue the opposition during the cloudless mornings.

539. On completion of the night's work, the Station Commander at Kalidjati, Group Captain Whistondale, was instructed at 0700 hours, 1st March, to disperse his aircraft and to prepare them for further operations later in the day.

Shortly after daybreak the Dutch squadrons withdrew from Kalidjati aerodrome, under General van Oyen's orders as it later transpired, although no information that they were going to do so was given to the A.O.C. or his staff. Nor were the latter kept informed that the Dutch counter attack had failed or that the Dutch defences between the beaches and Kalidjati had not been able to put up the resistance it had been understood they would offer. It is probable that this failure was due to the fact that time had been insufficient for the wheels of co-operation of the recently established staffs (see para. 514) to get run in, and that there was a similar unestablished close touch between the aerodrome and the local Dutch Commander in Soebang. It had a disastrous sequel.

540. About 1030 hours the aerodrome was overrun by Japanese light tanks supported by infantry in lorries—part of the force which had landed at Eritanwetan some hours earlier—and the aerodrome was captured. The whole force of Blenheims, by now reduced to 8 serviceable aircraft, being fully dispersed, was captured. 4 Hudsons which were dispersed on the aerodrome managed to take off under fire of light tanks, which were by now on the aerodrome, and to reach Andir near Bandoeng.

541. Subsequent inquiry made it clear that the aerodrome defence party, a combination of Army and R.A.F. personnel, put up a stout fight and covered the withdrawal of the ground personnel of the squadrons, the majority of the Bofors guns adopting an anti-tank role. It is believed that there are no British survivors of the aerodrome defence party. The Japanese appear to have given no quarter. Later the Japanese testified to the gallant and protracted defence the aerodrome defences put up, and this was supported by the number of bodies, both British and Japanese, which were found near the aerodrome and in the woods around it by the British salvage parties employed by the Japanese after the capitulation of Java. The Dutch aerodrome defence contingent, although it had been relieved during the night by the newly arrived British defence party, remained to assist in the defence. It located posts on the roads leading to the aerodrome on the N., E., and W., the two former of which were overrun by the enemy's armoured vehicles, to deal with which it had no anti-tank weapons. The number of Dutch bodies which were later found on both sides of the roads along which the Japanese attack came, testify to the opposition it put up.

542. It has been impracticable as yet to obtain a clear picture of what exactly happened at Kalidjati. Surviving British witnesses of

consequence are few. Much still remains unsatisfactorily explained. It is hoped that time may reveal the full facts.

543. The captured aerodrome was only a few miles from Tjikampek, the aerodrome on which No. 36 (T B.) Squadron was also resting after having operated throughout the night (para. 533). The latter aerodrome had no defences whatever and was in considerable danger of being overrun by the same troops which had already captured Kalidjati. The Squadron was, therefore, immediately withdrawn to Andir, and was later moved to Tjikamber in S.W. Java, Group Captain Nicholetts being placed in command of the Station.

FIGHTER OPERATIONS IN BATAVIA AREA—
1ST FEBRUARY TO 3RD MARCH 1942.

Consolidation of Fighter Strength.

544. Before proceeding further it is necessary to turn to earlier operations of the Fighter Force.

545. It will be remembered that Nos. 232 (F) and 605 (F) Squadrons were operating at Tjililitan under a Sector Control (a skeleton of No. 226 (F) Group) whose operations rooms and warning systems were installed in and around Batavia.

546. From 17th to 27th February this force was continually in action in its role of the air defence of Batavia. Normal odds met in air fighting were in the vicinity of 10-1. Its operations were handicapped, particularly during the earlier part of the period, by insufficient warning of approaching enemy aircraft.

547. A Fighter Group H.Q. became redundant by 27th February, its squadrons and overhead controlling organisation being established by that date. The Group Commander, Air Commodore Vincent, and several members of his staff, were ordered on that date by the A.O.C. to leave Java, which they subsequently did by sea.

548. By noon on 28th February the combined strength of the two fighter squadrons was less than that of one. The U.S. aircraft carrier "Langley" had been sunk by the Japanese when bringing in a full load of P.40 fighters, with some of which it had been hoped to re-arm one of the squadrons. Thus the last prospect of keeping two fighter squadrons at reasonable strength had gone. It was decided to retain No. 232 (F) Squadron which, under Squadron Leader Brooker's leadership, volunteered to remain in Java. Vacancies in it were filled from volunteers in No. 605 (F) Squadron. No. 605 Squadron, except the volunteers who could be employed, was withdrawn for evacuation after it had handed over its remaining aircraft to No. 232 (F) Squadron on the afternoon of 28th February.

Fighter Operations 1st—3rd March.

549. In accordance with the decision (para. 538 (c)) not to employ bombers during the cloudless mornings, but to oppose the landings during these hours by means of fighters, instructions were issued to No. 232 (F) Squadron to employ all its Hurricanes throughout the forenoon of 1st March, in co-operation with 10 Dutch Kittyhawks and 6 Buffaloes, in attacking two Japanese landings which had occurred simultaneously during the night in Western Java.

550. One of these landings was that which had been made at Eritanwetan (para. 536). Twelve Hurricanes took part in opposing it, and in doing so encountered intense A.A. fire. They pressed home their attacks at low height, inflicting severe casualties amongst troops in landing craft, and set on fire at least six landing craft and three motor vehicles. Several later attacks against the same targets also produced good results.

551. The other landing in Western Java had occurred simultaneously with the foregoing one, but on the extreme western beaches on either side of Merak in the Sunda Straits. It was in greater strength. The remaining Hurricanes of No. 232 (F) Squadron made several sorties against it during the morning at the request of the Dutch Army: they successfully engaged enemy columns, including cavalry and M.T., advancing along the roads from the landing beaches towards Batavia.

552. After the British bombers had been overrun at Kalidjati the fighters continued their attacks against the landing at Eritanwetan. Shortly after midday they brought to a standstill a cyclist column proceeding westwards towards Batavia. In addition three Japanese flying boats were destroyed on the water.

553. All No. 232 (F) Squadron aircraft suffered damage in varying degree from A.A. fire during these operations, which were all carried out at low level.

554. On 2nd March Tjililitan aerodrome was under constant attack by the enemy, and the squadron was in action all day defending it and carrying out road reconnaissances in western Java for the Dutch Army. The aerodrome was also becoming somewhat exposed to overland attack by Japanese forces which had disembarked at Eritanwetan; these were, by the afternoon, reported to be approaching Poerwokerto and the river crossings thirty miles or so to the north-east of the aerodrome. Withdrawal along the road which passes through those places was already out of the question. Moreover, these places were held by Dutch troops on similar lines to Soebang and the river crossings protecting Kalidjati aerodrome; a repetition of the Kalidjati debacle, involving the only remaining British fighter squadron, was distinctly possible during the night or following morning. The A.O.C. therefore, when visiting the aerodrome on this day, ordered No. 232 (F) Squadron, now 10 Hurricanes, to move back to Andir near Bandoeng, the move of the ground parties and aerodrome defence troops to be completed along the Buitenzorg road by the following day. Group Captain Noble was appointed Station Commander at Andir.

555. In the early morning of 3rd March the squadron returned to Tjililitan from Andir under orders issued by General van Oyen. It was airborne throughout the morning repelling Japanese air attacks. At noon it was finally withdrawn to Andir, en route to which it made a successful attack on Kalidjati aerodrome destroying several enemy aircraft. A running fight took place with Japanese fighters from Kalidjati to Bandoeng.

Withdrawal from Batavia.

556. As the Dutch announced on 3rd March their intention of declaring Batavia an "open" town, the operations and filter rooms, together

with the radar stations in the vicinity, were destroyed, and their staffs were ordered to Bandoeng on the 3rd March.

OPERATIONS BY No. 205 (F.B.) SQUADRON—
1ST FEBRUARY TO 3RD MARCH.

557. No. 205 (F.B.) Squadron during the whole of its stay in Java operated as a unit of the Allied Reconnaissance Group which was responsible for all seaward reconnaissance throughout the S.W. Pacific Command. This Group, under Dutch Command, took its orders first from Abdair and then, after Abdair left Java, from General van Oyen, the Dutch A.O.C. Britain was responsible for administration only of 205 (F.B.) Squadron.

558. Based on Batavia and Oesthaven, 205 (B) Squadron carried out reconnaissances between Borneo and Sumatra, and also undertook anti-submarine patrols in the Sunda Straits.

559. When the Japanese descended upon the Batavia area on 1st March it was ordered to transfer its base to Tjilitjap, an unserviceable flying boat having to be destroyed when it left. The Squadron operated from Tjilitjap on anti-submarine patrols until 3rd March, by which time it could no longer be usefully employed. The squadron was then ordered out of the island, two boats going to Ceylon and one, with a damaged air-screw, to Australia.

FINAL AIR OPERATIONS—4TH MARCH TO
8TH MARCH 1942.

560. The position on the morning of 4th March was:—

(a) H.Q. Britain—Bandoeng.

(b) No. 1 (GR) Squadron, R.A.A.F., 7 Hudsons (3 serviceable)—Andir.

(c) No. 232 (F) Squadron, 10 Hurricanes (all in dubious condition)—Andir.

(d) No. 36 (T.B.) Squadron, 5 Vildebeestes (4 just serviceable)—Tjikamber.

(e) About 450 armed R.A.F. personnel under Wing Commander Alexander operating as infantry with "Blackforce" in the Buitenzorg area.

(f) About 1,900 unarmed personnel awaiting evacuation near the port of Tjilitjap, and a further 600 at Djojacarta; many other personnel now surplus to squadron requirements were under orders to move to the area as accommodation became available near the port.

561. The Army situation on 4th March was:—

Eastern Java: The enemy had made a successful landing on 1st March west of Sourabaya and was pressing the Dutch forces in two directions—those originally in the Sourabaya district towards the S.E. extremity of the island, and those in central Java westwards towards Poerwokerto.

Western Java: The enemy after landing at Eritanwetan had captured Kalidjati aerodrome, on which strong Japanese fighter forces were by now well established. The enemy had repulsed Dutch attempts on 2nd March to recapture Soebang (from the direction of which the enemy was by now pressing towards Bandoeng) and on 3rd March to recapture Kalidjati aerodrome.

The enemy force, which had landed in the Sunda Straits, had forced the evacuation of Batavia, and the Dutch garrison of extreme western Java was in the Buitenzorg-Soekaboemi vicinity, falling back on the final Bandoeng "stronghold."

562. No. 36 (T.B.) Squadron based at Tjikamber attacked Kalidjati aerodrome, now full of enemy aircraft, on the nights of 2nd-3rd and 3rd-4th March. On 4th March it was moved to Tasik Malaja because of reports (subsequently proved to be false) of landings in S.W. Java which threatened the aerodrome, and because the rapid advance, authentic, of the enemy towards Soekaboemi threatened to cut the only road available for withdrawal from it.

563. From Tasik Malaja the squadron continued attacks on Kalidjati during the nights of 4th-5th and 5th-6th March, doing two sorties per aircraft on the former night. Large fires were caused and considerable damage was done.

564. On 6th March, by which date an early capitulation had been forecast by General ter Poorten (See para. 577), two aircraft only remained serviceable, and orders were given for these to be flown north in an endeavour to reach Burma. They left on the 7th March but unfortunately both crashed in Sumatra and the crews were either killed or captured.

565. No. 1 (G.R.) Squadron, R.A.A.F., was ordered to fly its three remaining flyable Hudsons to Australia carrying operational records and as many spare aircrews as possible. The first left on the night 4th-5th, the others on the nights of 5th-6th and 6th-7th—all reaching Australia.

566. No. 232 (F) Squadron, now at Andir, was given the role of carrying out periodic offensive sweeps against Kalidjati aerodrome. It was instructed also to take advantage of any particularly favourable targets presented by the Japanese Army attacking Bandoeng from the north. For the latter purpose the squadron established a liaison officer at the Dutch H.Q. responsible for defences on that front.

567. By this time no warning of impending attack could be obtained, and the aerodrome was subjected to almost continuous attack throughout each day. The squadron was repeatedly in action and considerable success was achieved.

568. By the 7th March the squadron was reduced to 5 aircraft. On this day it was transferred to Tasik Malaja, and by the evening only two aircraft remained. These two carried out a tactical road reconnaissance on the morning of the 8th March, and on completion of this they were destroyed under orders from Britain.

Operations of No. 266 (F) Wing.

569. Whilst No. 266 (F) Wing was in action in Sumatra and Java it is believed to have inflicted the following losses on the enemy:—

In Sumatra, 2nd-16th February.

About 8 enemy aircraft were shot down. In co-operation with the bombers of No. 225 (B) Group, very heavy casualties were inflicted on troops in boats and barges moving up the Palembang river on 15th February.

In Java, 17th February-8th March

About 32 enemy aircraft were shot down (8 by No. 605 Squadron and 24 by 232 Squadron) of which about 15 were destroyed during the closing days in Java, 2nd to 8th March. Heavy casualties were also inflicted on enemy troops which landed on Java at Eritanwetan and Merak, particularly the former.

During the combined periods about 60 Hurricanes were lost, chiefly on the ground, by enemy attacks on our inadequately defended aerodromes.

PROGRESS OF EVACUATION.

570. Throughout the period under review, evacuation of surplus R.A.F. personnel proceeded as fast as shipping permitted. Units were concentrated for evacuation as they became surplus to requirements. They were kept together as units as far as possible, and as shipping accommodation allowed. Towards the end, when accommodation became extremely limited, priority was given to aircrews and technical personnel whose value in other theatres of war was greatest.

571. On the 23rd February, owing to enemy action, Batavia was closed as a port and the R.A.F. Base, Batavia, with its ancillary transit camps, was progressively transferred to Poerwokerto, adjacent to Tjilitjap in South Java, the sole port still open. Tjilitjap was also subjected to air bombardment, and ships leaving it to attack by Japanese light naval forces. On the 27th February, S.S. "City of Manchester" was torpedoed off Tjilitjap whilst approaching the port to assist in the evacuation.

572. From the 1st March onwards, little movement from the port took place. It was finally closed on the 5th March leaving on the island about 2,500 R.A.F. personnel whom it had been intended to evacuate, but for whom no shipping was made available.

573. On 5th and 6th March about 8 seats were allotted to the R.A.F. in Dutch Lodestars; the Dutch had been using these aircraft to evacuate personnel to Australia. The Lodestar service ceased on the 6th March, thus closing the last evacuation channel from Java.

574. A handicap experienced throughout the evacuation of surplus R.A.F. personnel was the difficulty which many of the Dutch had in understanding the necessity for sending out of the island, at a time when it was about to be invaded, personnel who appeared to them to be soldiers: they could not realise that our airmen were untrained as such and were of great value in their real role as airmen for prosecution of the war elsewhere. Informed Dutch authorities appreciated the matter, but many failed to grasp its truth. This is said in no critical spirit; the Dutch outlook is easily understood. But it must be stated in part explanation of the loss in Java of a number of surplus airmen.

575. During the period 18th February onwards, nearly 7,000 R.A.F. personnel were evacuated, leaving a total of about 5,000 in Java.

EVENTS LEADING UP TO SURRENDER OF
JAVA.

576. *Conference at Dutch Headquarters.* At 1800 hours on the 5th March, the Dutch Commander-in-Chief, Lieut.-Gen. ter Poorten, convened a conference at his H.Q., A.H.K. in Bandoeng. The Air Officer Commanding, Britain, and the General Officer Commanding British Military Forces in Java, Major-General H. D. W. Sitwell, and representatives of their staffs, were summoned to this conference. It was also attended by senior officers of the Dutch C.-in-C's. staff.

577. At this conference the Dutch Commander-in-Chief stated:—

(a) That the situation was grave: the enemy had practically overcome the northern defences of Bandoeng and was also rapidly closing in from the west.

(b) That morale was at a low ebb and that it was possible Bandoeng might fall very soon. When the enemy penetrated the outer defences, the C.-in-C. did not propose to defend that town, which would be declared an open city. It was full of refugees and could not in any case hold out for long.

(c) That no guerilla warfare was possible or would be attempted by the Dutch. There was great hostility amongst the native population towards the whites, and without the help of the natives guerilla warfare could not possibly be successful. All his staff were emphatically agreed that such warfare was out of the question.

(d) That owing to difficulties of communication, Dutch G.H.Q. could operate only from Bandoeng. They could not exercise control from elsewhere and so would not move from Bandoeng.

(e) That resistance was to be carried on elsewhere under the direction of local commanders if possible and in accordance with an order issued by Queen Wilhelmina of Holland that there should be no surrender to the Japanese. He then added an unexpected rider—that he had instructed his troops to disregard any order that he might subsequently issue to them to cease fighting: they were to disobey it and to go on fighting.

578. In subsequent discussion the Commander-in-Chief was informed by General Sitwell that the British would certainly continue to fight on as long as any of the Dutch did so. When Dutch resistance ceased, then he must reserve to himself the right to decide his actions in accordance with the circumstances at the time. The Commander-in-Chief also informed the A.O.C. that A.H.Q. and Andir aerodrome in Bandoeng must not be defended in the event of the Japanese entering the town. The Commander-in-Chief was then asked to allot an area in the hills in which the British Forces could concentrate and continue resistance. After some discussion he allotted an area near Santoso to the southward of Bandoeng. Its choice appeared to be influenced more as a means of escape to the south coast than as a stronghold; emphasis had to be laid on the fact that it was wanted for the latter purpose.

British move into the Hills.

579. In consequence the G.O.C. and the A.O.C. British Forces went to Santosa at first

fight on the 6th March to reconnoitre. The remainder of A.H.Q. and other Army and R.A.F. personnel in the area of Bandoeng, except the ground party at Andir, were moved to Tasik Malaja the same day.

580. The distribution of Air Force personnel on the 6th March (p.m.) was:—

(a) Tasik Malaja, preparing for defence, with Army Units also ordered there	900
(b) Contingent with "Blackforce"	450
(c) Andir area, aerodrome staff and units	850
(d) Poerwokerto area awaiting evacuation, under Air Commodore Silly's orders	2,500
(e) Detached from units, stragglers, escape parties, etc., in south central Java	400
Total	5,100

581. The orders issued to the various contingents on the 6th March were:—

(a) The Andir contingent was to surrender because Bandoeng was being declared an "open" town, and on that day there was no transport to move them.

(b) The Poerwokerto contingent was to place itself under the orders of the local Dutch Commander, stand fast and surrender. There was no alternative as the men were unarmed and had very slender rations and other resources. They would have been an embarrassment to a final stand in the hills, yet would have had to share its hardships and any retribution which might be meted out. They were therefore less likely to come to harm if they were not associated with further resistance.

(c) The Tasik Malaja contingent was to defend to the last the aerodrome area, where the G.O.C. and A.O.C. would rejoin them if a better place for continuing the fight was not found.

582. Reconnaissance of the Santosa area on 6th March drew a blank. Not only was the terrain unsuited for defence by a small force, but the local Dutch had no defence plan, obviously did not want fighting to occur there, and were only too ready to assist the British to the coast.

583. As the result of a suggestion from General Schilling, who was most helpful to the British in their wish to continue resistance, the area south of Tjikadjang was reconnoitred on 7th March. It was found more suitable for protracted defence. It was therefore decided to concentrate all army units and all armed R.A.F. personnel in the defence of that area.

584. In conformity with this decision orders were issued to the following to move to the area on 8th March:—

- (a) The Andir contingent, for whom transport was now available; and
- (b) the Tasik Malaja contingent.

Both of these contingents were armed. In addition, "Blackforce" and all other British Army Units in Java were also ordered to the area. The total combined force was about 8,000 strong.

585. At the same time it was confirmed that the remainder of the personnel, who were unarmed, were to stand fast and surrender. The Dutch G.O.C. of the Poerwokerto area, under whose direction Air Commodore Silly had placed the Poerwokerto contingent in accordance with his instructions, ordered them to move further west because unarmed forces would be an embarrassment in a locality where he intended to resist the Japanese advance. This was done under his arrangements and the contingent arrived at Tasik Malaja on 8th March (p.m.). It had suffered severe casualties owing to its rail convoy having been ambushed en route.

586. On 7th March (p.m.) A H K declared Bandoeng, Tasik Malaja and Garoet "open" towns. This action had been anticipated for Bandoeng but in respect of the other two it came as a complete surprise, and it did not assist the concentration of the British Forces in the hills, which was by now in progress.

587. Early on 8th March moves to the concentration area in the hills began. A combined Army/Air H Q. was established at Tjikadjang with W/T station alongside to communicate with the Air Ministry, etc.

Order to Surrender received from Dutch H.Q.

588. At about 0900 hours 8th March, a rough translation of a broadcast by the Dutch C.-in-C. was received at British H.Q. at Tjikadjang. It had been promulgated in the name of all the Allied Forces in Java as well as in that of the Dutch. At about 1030 hours it was telephoned through in English by, it is believed, Colonel Gulik the Dutch Air Staff Officer at A.H.K., who had come for the purpose to Garoet at the foot of the hills. It was to the effect that "all organised resistance" in Java had ceased and that troops were to offer no further resistance to the Japanese. Colonel Gulik said that the Dutch C.-in-C. had cancelled his instructions about disregarding surrender orders and that he intended this order to be obeyed. The last was quite unexpected.

589. The A.O.C. received this message and, in the absence of the G.O.C., who was reconnoitring the area and allocating defence positions, he first sent a despatch rider to inform the G.O.C., and then, feeling that further clarification was desirable, went himself to Garoet to make further enquiries.

590. At Garoet the Dutch Resident, Heer Koffman (the District Civil Administrator) who had on the previous day, 7th March, strongly emphasised the difficulties of local supplies and accommodation, and had been apprehensive about the prospects of a "massacre of whites" if guerilla warfare was attempted particularly amongst the difficult natives of the Garoet district, now on 8th March re-emphasised his belief in the dangers of a native rising if fighting in the hills was attempted. He called in other authorities to support his opinion—amongst them the District Regent (Native District Administrator).

591. The A.O.C. rang up A.H.K. and spoke (it is believed) to Colonel Gulik who confirmed that the Dutch C.-in-C. had cancelled his order, and that he intended his latest instruction, namely for fighting to stop, to be obeyed. He said that all Dutch troops were complying. The A.O.C. then telephoned to several other Dutch centres and found this to be so in each instance.

592. Whilst he was so engaged, A.H.K. again rang him up at the Resident's House. The Staff Officer doing so specifically enquired whether the British were going to fight, whether General Sitwell had full control of "Blackforce", and whether the last could be persuaded to stop fighting. To these questions he was given non-committal answers except an assurance that "Blackforce" would definitely obey any orders General Sitwell might issue. The A.O.C. was given a further urgent message from the Dutch C.-in-C., which it is understood was telephoned through from Kalidjati, where at that time the Dutch C.-in-C. was negotiating terms with the Japanese C.-in-C. The message pressed for action to be taken to stop "Blackforce" blowing up any more bridges to cover their withdrawal to the hills, as this action was handicapping the negotiations. It is not known how the information about blowing the bridges south-east of Bandoeng reached the Japanese at Kalidjati many miles to the north. This information made it clear that the Japanese already knew our intention and whither we were withdrawing into the hills.

593. The A.O.C. then returned to Tjikadjang where he met the G.O.C. and Brigadier Blackburn at 1330 hours, when the situation was as follows:—

(a) Troops were arriving in the concentration area, the last being due during the night. They possessed small arms and ammunition and a few Bofors guns, but as had been expected, no mortars, aircraft or artillery. Although personnel were tired and many were poorly clad and kitted, particularly R.A.F. personnel evacuated from Singapore, morale appeared on the whole good.

(b) Administrative arrangements were, however, grave. Only 3½ days' rations had so far accompanied the force. Army convoys had experienced considerable obstruction when collecting stores, and the dump in Bandoeng was reputed to be destroyed (news later to prove false). There might be time to collect some more, but this was not certain. Petrol was limited to what vehicles had in their tanks. The combined British/Australian Field Hospital in Bandoeng could not be moved to the hills because it was already overloaded with patients. Hospitalisation was therefore totally impracticable, and medical supplies limited to those carried by units, which were few and of a first aid nature only. Water was everywhere polluted by reason of native habits, water carts were few and effective sterilization was impracticable. Stomach troubles were already in evidence.

594. Given local co-operation and time these handicaps could have been overcome, but there appeared to be prospect of neither. The Dutch had ceased fighting everywhere and, to say the least, were not being helpful. The natives might, or might not, turn against the whites: warning about them had been received, and in any case they were unlikely to assist. And time had suddenly become unexpectedly short now that the Japanese knew about the movement. Much had still to be done in reorganising, in preparing positions for defence and in solving administrative difficulties. Time was now particularly short for training the R.A.F. contingent, which comprised about one-third of the

force, in its new and future role, namely in infantry fighting about which it knew nothing, particularly of jungle fighting. Indeed, many A.A. gunners recently rearmed as infantry were in little better case.

595. Yet something might have been done but for the quandary in which the British had now been placed by reason of the Dutch C.-in-C's broadcast (para. 588). This had been promulgated on behalf of the British forces, as well as on that of the Dutch, but without consultation with the A.O.C. or G.O.C. and although the British intention to continue resistance was well known to the Dutch C.-in-C. The broadcast contained the phrase "All organised resistance having now ceased." This phrase had an important bearing. It was believed to have the effect in international law of placing those who continued to resist outside the protection of belligerent rights and subject to summary execution if captured. The Japanese were likely to exercise their rights in the matter. The problem which now faced the A.O.C. and G.O.C. was how to sort out the force, now in a state of movement over a wide area, into those who were willing to face such consequences and those who were not. The latter could not be given legal orders to continue fighting under such conditions as bandits against their will. The next problem was to reorganise the former into a fighting force well clear of the latter and of the 2,900 unarmed R.A.F. contingent which had by now moved unpleasantly close, although still in the plains. (para. 585). One alternative was to send the "bouches inutiles" down to the plains to surrender and for the former to fight where they were. But Japanese revenge on those who submitted themselves under such circumstances was already too well known to permit adoption of such a course. The other alternative was for the volunteer contingent to move to, and reorganise in, a new defence area. But this was impracticable. The Japanese already occupied Bandoeng, through which led all roads to the hill country in the S.W. extremity of Java, where lay the only other remote spots which might be suitable for guerrilla resistance: the country elsewhere was too highly developed and too well served by numerous roads. The Japanese quite clearly knew where the British had withdrawn and their intention, and were free to follow up quickly, as was their habit. It was thus impracticable by now to reorganise anything effective.

596. In these circumstances the A.O.C. and G.O.C., regretfully decided that they must comply with the order to surrender. The order as received from A.H.K. was accordingly issued to units about 1430 hours.

Orders were also issued:—

(a) To destroy arms and warlike stores likely to be of value to the enemy, except a limited amount of transport.

(b) For all ranks to observe absolute reticence if questioned for military information by the enemy.

A signal was sent to the R.A.F. H.Q. Signal Section for transmission to the Air Ministry to the effect that the orders to surrender were being complied with. The reasons why this signal did not get through are contained in paras. 610-613.

Escape Organisation.

597. Col. van der Post, a British officer believed to be of South African Dutch descent, had remained in Java in order to organise a means of escape after the foreseen occupation of the island by the Japanese. He initiated plans for assembly points in the mountains to the southward of Batavia and tried to organise shipping and boats for surreptitious evacuation from the mountainous S.W. coast. Lack of time prevented his plans maturing. Great credit is due to this officer for his activities, attended as they were by considerable personal risk at the hands of the enemy, a fact of which he was well aware. In anticipation of Col. van der Post's plans succeeding, authority was given by the A.O.C. for the issue from public funds of 2,000 guilders to each of twenty individuals to finance the attempt; action was to be taken by Air Commodore Staton to select them.

598. Despite the necessity for abandoning the organised escape scheme, many still wished to make an attempt to leave Java. The hazards involved by the doubtful attitude of the natives and the malarial nature of the country were pointed out; if nevertheless they wished to persevere in their attempts they were assisted by advice and the advance of money from the funds already drawn for the organised escape scheme.

POST-CAPITULATION PERIOD, 8TH—30TH MARCH, 1942.

8th—10th March.

599. By 2200 hours 8th March the concentration in the hills, as ordered, was complete. Distribution of Royal Air Force personnel was:—

In Tjikadjang area, in the hills, armed	2,200 (approx.)
Tasik Malaja and other areas, in the plains, unarmed	2,500 (")
Stragglers, detached and in hospital in Bandoeng ...	400 (")
	<hr/>
	5,100 (")

600. On 9th March a second order was received from A.H.K., containing instructions to collect arms, to display white flags and to make surrender arrangements with the nearest Japanese General. The A.O.C. accordingly went to Bandoeng on 9th March and on 10th March contacted Lieut General Maruyama, the Japanese Commander in the Bandoeng district. From him were received instructions about collecting arms and troops and handing them over to Japanese representatives. Accommodation and promises to help with supplies were also obtained. He forbade communication with outside countries, but implied when pressed, without committing himself fully, that prisoners would be treated in accordance with the Geneva Convention of 1929.

11th—12th March.

601. On 11th March the four Senior Officers (British A.O.C. and G.O.C.: Australian—Brigadier Blackburn: American—Col. Searle) were summoned to Garoet. They were conducted during the night from there to Bandoeng. The true reason was not told them. After being

kept waiting all night they were assembled at 0730 hours 12th March for the formal signing of the surrender terms before General Maruyama.

602. In front of a number of Japanese witnesses General Maruyama undertook that prisoners would be treated in accordance with the terms of the Geneva Convention of 1929, an undertaking which was recorded in writing.

603. An undertaking that the British and American troops would obey all orders of the Japanese was also included. An attempt to introduce the word "lawful" before the word "orders" was refused by General Maruyama who stated that it was unnecessary since he was giving P.O.W's. the protection of the Geneva Convention, under which no unlawful orders by the Japanese Army would be possible. It was evident that further insistence on the inclusion of the word "lawful" might lose the grant of the terms of the Geneva Convention. It was, therefore, erased from the original Instrument of Surrender, which was retained by General Maruyama.

13th—20th March.

604. Arms and equipment were subsequently surrendered at Garoet, all equipment and weapons in possession of the R.A.F. except some M.T., a number of rifles and bayonets, some field glasses and minor equipment, having been destroyed. Some difficulty arose about this, but an explanation that it was a point of honour with the British not to let arms fall undamaged into the enemy's hands was accepted.

605. On 17th March all senior officers were summoned to Garoet for the first cross-examination by the Japanese Intelligence Staff: a few other officers who happened to be nearby also became involved. So far as the G.O.C. and A.O.C. were concerned, it was conducted entirely correctly. Refusals to answer questions, based on the Geneva Convention of 1929, were generally accepted.

606. Brigadier S. R. Pearson was, however, faced by a firing party but, on still refusing to speak, was pardoned. Pilot Officer R. L. Cicurel was threatened with mutilation but, still refusing, was also pardoned.

607. On 20th March occurred a further deliberate and flagrant violation of the Geneva Convention. General H. D. W. Sitwell, Air Commodore W. E. Staton, Brigadier S. R. Pearson, Group Captain A. G. Bishop and Colonel A. E. Searle, U.S. Army, went to Bandoeng ostensibly to attend a conference. They were, instead, subjected to interrogation for military information by Major Saitu, an Intelligence Staff Officer. The first four were subjected to a month's rigorous imprisonment, which in Japanese hands is truly rigorous, for refusing to answer questions, after which they were released. Whether or not representations made by the Dutch Representative of the International Red Cross in Bandoeng and by Col. E. E. Dunlop, C.O. of the Australian Hospital in Bandoeng, to General Maruyama's H.Q. had any effect in bringing about their release will never be known; but there is reason to believe that this may have been the case, because these events coincided in time.

608. The Japanese subsequently endeavoured to extract information from aircrews of Nos. 232 (F) Squadron and No. 1 (G.R.) Squadron,

R.A.A.F., and from other individual officers and airmen, with almost complete lack of success, in spite of protracted brutal treatment in many cases. They then gave up all attempts to obtain it. More than once, their Intelligence Officers afterwards stated that the British had proved obstinate and stupid about the matter and had suffered accordingly. Credit is due to the above named individuals, who were the first to set an example of compliance with orders to observe complete reticence in spite of brutal treatment, as it is due to those who subsequently followed their lead.

609. The later treatment of P.O.W.'s, with little regard to the terms of the Geneva Convention of 1929 which had been accorded to them on surrendering, is too well known to need further elaboration in this report.

Breakdown of Signals Communication with Air Ministry.

610. The original site chosen on 7th March (p.m.) for the Signals Station near Tjukadjang proved unsuitable for communication with outside countries, screened as it was by the surrounding mountains. It was, therefore, moved about noon 8th March towards the coast, in an attempt to find a suitable position.

611. A technical breakdown, caused by contamination of the Diesel fuel of the T. 1087 high power transmitter, followed by a road accident which damaged the transmitter itself, prevented this set being used again.

612. Attempts were made that evening to come into action with another, a low power, set were at first forbidden by the Commander of the Dutch troops into whose area the station had by now moved, and who by this time, was strictly obeying the terms of surrender. These orders forbade further communication with the outside world. Despite them a T. 1082/R. 1083 Vanette set was brought into action but it failed to establish communication with Melbourne, Ambala or Air Ministry. Several signals were broadcast by this means for three hours on the morning of 9th March in the hope that they would be picked up. Amongst them was the signal which informed the Air Ministry that the orders to surrender were being complied with (para. 596).

It subsequently transpired that these signals were not picked up although at the time the operator believed that they had been.

613. Subsequent attempts by the Signal Station to contact H.Q. and reciprocal attempts by H.Q. to find the new position of the station, failed to establish touch before the staff of this station had to destroy their equipment because:—

(a) It was believed that the last signals for despatch had been sent:

(b) Current reports of the imminent arrival of Japanese troops (subsequently proved to be false) made it necessary to destroy compromising documents and the set itself, to avoid capture in accordance with strict instructions which the A.O.C. had issued a few days previously on the subject of preventing the capture of cyphers and secret equipment.

These were the circumstances in which the report of the final surrender of the British troops in Java was not received by their respective Governments.

REFLECTIONS ON THE FAR EAST CAMPAIGN, DECEMBER, 1941, TO MARCH, 1942.

SCOPE OF REPORT.

614. This paper reports on only one aspect of the campaign of 1941/42 in the Far East—the air aspect. Weaknesses are admitted where they are believed to have existed.

The air aspect was, however, only one of several. An account which discloses its weaknesses, but not those of the other aspects, is liable to leave an impression that the air was primarily responsible for the downfall of Malaya. This was not the case.

615. In order to counteract this tendency it is necessary, therefore, to refer to weaknesses elsewhere which played their part. This is done hereunder in no carping spirit, but in recognition of their causes and of the efforts made by those who endeavoured to overcome them. It is done for one reason only—to counterbalance a one-sided examination and to throw the whole into perspective. Weaknesses lay in many places. Failure in Malaya was a combined failure brought about firstly by the unpreparedness of the Empire as a whole for war, and then, when war came, by the needs of far more vital theatres of war on the other side of the world and in the seas which served them.

WEAKNESSES IN THE FIGHTING SERVICES.

616. In Malaya, the old policy of restricting the defence of Singapore to the immediate vicinity of the Island had been replaced by one of defending the whole of Malaya. In conformity with this policy the Chiefs of Staff had authorised large army and air force increases. In the absence of the Fleet, defence of the Far East was to depend primarily on a mobile air defence. Pending provision of the increased air strength, the army needed additional interim strength, over and above its ultimate total, to ensure security in the meantime.

617. The Japanese attacked whilst this policy was being implemented. The air force and the army had by then received only a part of the modern equipment and reinforcements which had been estimated to be necessary. The vital and pressing needs of the war in Europe and the Middle East, which had passed through a long and very critical period, had proved of overriding importance. The result was that the forces in the Far East were attacked in positions which could only have been defended if the full strength planned by the Chiefs of Staff had been available.

Mutual Naval and R.A.F. Support.

618. The Air Force in Malaya was not yet in a position to deny the waters off Malaya to a seaborne invasion. It possessed neither the necessary aircraft nor secure aerodromes, and the enemy proved altogether too strong in the air once he had obtained a footing in South Siam and North Malaya.

619. The "Prince of Wales" and "Repulse" were lost in a gallant attempt to help the army and air force in their predicament in North Malaya. The attempt was made in the face of a strong shore-based Japanese Air Force but without the corresponding air support, either carrier-borne or shore-based. Thereafter it was progressively impracticable for the

Navy, other than the lightest units, to remain in Malayan waters, particularly in the absence of such support.

620. The freedom of the seas which the enemy gained by his use of air power both at Pearl Harbour and off the coast of Malaya, was such that he was virtually free thereafter to hit when and where he liked. The consequences to the army and air force dispositions and operations in Malaya were profound. No criticism is levelled, the war against Germany and Italy had stretched our resources as never before. The small forces which were available in the Far East were faced with overwhelming circumstances and were too weak to overcome the advantages which the enemy gained in the first and most vital days of the campaign. In short, neither the Air Force nor the Navy was in a position to support the other.

Mutual Army/Air Support.

621. The enemy army proved to be more effective than had been expected: our army had a number of shortcomings. It is not for this paper to say what they were or to expand upon them: it is appropriate only to say that they existed and that the army, in consequence, was unable to play its part adequately in the provision of secure air bases for our air forces. The root cause was the same, namely the overriding calls of the war in Europe and the Middle East.

622. When war came, the construction of aerodromes in Malaya had outstripped the provision of air forces to occupy them. But the aerodromes had had to be defended—a factor, amongst others considerably more important, which led to the army adopting a forward policy. The army had insufficient troops for the purpose, particularly in the absence of the additional interim strength it required pending full Air Force expansion. It became widely scattered in trying to meet all its commitments, and was defeated in detail.

623. The R.A.F., although inadequate for the task, had to occupy these forward and ineffectively defended aerodromes. There it suffered severe losses which could not be replaced, and it was driven out.

624. Thereafter the army had to fight in northern and central Malaya without any air support, and to face an enemy whose air support was constant and strong. It was not until the Japanese advance brought the land battle within effective range of aerodromes on Singapore island, that our army could be supported from the air. Even then this support fell far short of the scale demanded by the situation, although it was the maximum available. The enemy's air support remained undiminished. Neither service was in a position to support the other or to fulfil its commitments: both suffered severely in attempting to do both.

Mutual Support between Japanese Forces.

625. The Japanese, on the other hand, had sufficient forces to support one another. Their naval and air forces were adequate to cover the initial landings of their army, and to give its subsequent expeditions virtual freedom of action to strike where and when they liked. Their army was strong enough to hold the countryside as it was overrun, and in particular to defend the aerodromes it captured. Their air

forces were able to fill those aerodromes with aircraft, maintain them there at full strength, and from them gain and fully exploit the advantages of air superiority in the land, sea and air battles.

They possessed what we had not—balanced harmony by land, sea and air, their forces in which elements were strong enough to play their respective parts and to support one another fully.

Joint Navy/Army/Air Co-operation.

626. Two lessons emerge from the foregoing factors:—

Firstly, that only by full co-ordination of the fighting services—in strength, organisation and methods of operating—can success be achieved.

Secondly, that the issue of a modern war largely depends on the struggle for secure air bases, which all three fighting services have a joint responsibility for obtaining, defending and maintaining.

That side which is successful, and which denies its opponent the advantage of secure air bases, dominates the whole theatre of war within air striking range. It has then every prospect of success, while its opponent has but little.

THE CIVIL COMMUNITY.

Shortages of Labour and Material.

627. Civil interests and the fighting services competed keenly for labour, M.T., constructional material and equipment, all of which were in short supply (see paras 21 and 24). Before war came it was difficult to obtain access to land for the construction of aerodromes and other installations (see para. 19), particularly if its acquisition affected the production of rubber or tin, which were Malaya's most important contribution to the war in Europe and which her administrators had been enjoined to raise to a maximum.

628. The complicated administrative machinery in Malaya, which comprised numerous states with varying constitutions, was slow to produce results. Speed was further handicapped by the multiplicity of nationalities—Chinese, Malay, Indian and European—who populated Malaya and whose interests and outlook varied widely.

Native Labour.

629. Experience confirmed the unreliability of unenlisted natives employed as domestics, as M.T. drivers and for construction and repairing damage to aerodromes. They disappeared en bloc, as did many native employees of the railways, whenever bombing started or the siren sounded. At critical moments dislocation occurred to the domestic life of R.A.F. stations, and to road and rail movements.

630. It is imperative in these days of air warfare to enlist all native personnel on whom dependence is to be placed in war. If enlisted, and officered by trained leaders, the natives in the Far East proved to be most reliable. This was demonstrated by the R.A.F. Special Technical Corps of enlisted Chinese, Malays and Indians, whose service in Malaya and Java during the war was exemplary.

Outlook in Malaya Towards War.

631. A word on this subject is necessary because it had its effect upon preparation for war in the Far East.

Considerable criticism, much of it unjust, has been levelled against the civil population of Malaya, although, unfortunately, there was justification for much of it. But it must be remembered that Malaya had been enjoined to spare no effort to raise business output to a maximum in support of the war in Europe, particularly of rubber, tin and of dollars for financing foreign exchange. It was thus natural that many in Malaya should have felt that Malaya's best contribution to the war in general lay in this direction—and no one will deny that the response they gave was a great contribution to the war in Europe.

Nevertheless their efforts in this direction had its effect on Malaya's preparations for her own defence, because the calls of the latter could only be met by diverting effort from the former. It must have been most difficult at times for those in responsible positions, in administrative and business circles alike, to hold the correct balance between these diametrically opposed interests.

In short, the calls of the war in Europe had its effect upon the civilian side of preparation for war in Malaya as it had on the fighting services.

632. Despite these difficulties much was done on the civil side towards preparing for war. Yet much remained to be done when war came. Shortages of equipment and, still more important, lack of thorough training resulted in voluntary organisations not being ready, some more some less, when war broke out. Credit is due to those who volunteered to play their part and who, when war overtook them, played it despite many a handicap. But it is unfortunate to have to state that there were appreciable sections of the community, particularly amongst its Asiatic element, which might have been more interested and might have done more towards putting Malaya's defences on a sound footing.

In this respect a belief was widely held that Singapore defences were in reasonably good order, and that war was not imminent in any case. More than one official pronouncement on the subject had the unintentional effect of fostering a false sense of security and of supporting the view that business output came first, despite other official pronouncements which were made with the express object of combating complacency. Again that statement is made in no critical spirit. The former pronouncements were made for very good reasons. But they must be mentioned because of their effect on civilian and service personnel alike. The general atmosphere inevitably affected the latter, who had to live in it from day to day. Only the more informed and imaginative of both communities could be expected to foresee the future with accuracy and to remain unaffected. Nevertheless there were many, amongst the civil community as well as in the services, who foresaw the danger and who strove to accelerate readiness for war. To them the greatest credit is due. But despite their efforts the general atmosphere militated against the progress of which they aimed and had a grave effect upon preparations for war.

633. Two lessons were learned:—

Firstly, the most drastic and comprehensive measures are necessary to shake up a community which has long lived in peace into a realisation of the dangers of war and of the need to take timely action to prepare for it. This is particularly true if a community is of such a complex political and economic structure as that which existed in Malaya.

Secondly, the success of the fighting services is largely dependent upon the wholehearted, thoroughly organised and, where necessary, trained support of the civil community.

UNITY OF COMMAND.

634. In the Far East the Higher Direction of War, and of preparation for it, was not unified until the formation, in January, 1942, more than a month after war had broken out, of H.Q. Supreme Command, S.W. Pacific, under General Sir Archibald Wavell.

635. Before this date many and complicated channels of control had existed between Ministries and the Chiefs of Staff in the United Kingdom on the one hand, and, on the other, the Civil Government and Service Commanders in Malaya. They varied in degree. G.H.Q. had operational but not administrative responsibility for the army and the air forces; while in the case of the navy its responsibility was limited to co-operation with the naval C.-in-C. in the Far East. G.H.Q. had no administrative staff, which handicapped its operational staff in appreciating in full detail the true state of affairs in the subordinate commands (para. 103). The situation was further involved by additional channels of communication with the Australian and Dutch Governments, and by varying control of the forces which they contributed to the defence of Malaya.

636. Such complicated machinery is unlikely to work efficiently during times of emergency when speed in preparing for war is paramount. It has even less chance of success in war itself.

637. From this emerges the lesson that responsibility for the defence of any region which is exposed to attack is better centralised in a Higher Command, both during the preparatory period before war and during war itself. This Higher Command should have full operational and administrative authority over the three fighting services, and also strong representation in all matters affecting the civil population.

638. In short, control should be comprehensive, and, in particular, administrative responsibility should not be divorced from operational responsibility. The outcome of war is likely to be in proportion to the observance of this lesson. Unity of Command enhances the prospect of success: lack of it invites failure.

POLITICAL CONSIDERATIONS BEFORE OUTBREAK OF WAR.

Handicap imposed on Air Striking Force.

639. At the outbreak of war, political circumstances, which made it imperative for us to avoid any action that might precipitate war, or that might make us appear to be the aggressors, were partly responsible (but only partly—see paras. 641 and 671) for preventing the small air striking force that was available in Malaya being used in the role for which it had

been primarily trained—to hit the enemy convoys at sea, as far away and as often as possible. The consequence was that the enemy was able to establish himself firmly ashore in a neutral country before action could be taken against his convoys.

Operation Matador.

640. The political factor was also partly responsible for preventing the initiation of the planned British advance into Siam. The consequences were far-reaching: those affecting the Air Force were immediate. The enemy was able to establish his squadrons in strength in Siam within easy striking distance of our virtually defenceless aerodromes in northern Malaya. Many of our aircraft were thus destroyed with little accomplished, and our squadrons were driven out. Thereafter they were unable to give air support to the army in its battles in northern and central Malaya.

641. In passing, it is legitimate to reflect that had the reconnaissance into the Gulf of Siam been greater on 6th December after the Japanese convoys had been sighted, and on 7th December (paras. 150-169 and 671), and had the object of the Japanese expedition been disclosed thereby, it might well have had an influence on the decision to initiate operation "Matador", or brought about its cancellation earlier than was the case.

Japanese Action.

642. The Japanese, on the other hand, chose the moment for attack that was most opportune for themselves. In doing so they brushed aside political hindrances—as indeed they had done whenever it suited them during their successive encroachments into the South-Western Pacific.

Lesson.

643. The lesson which emerges is that when the initiative lies in the hands of a prospective enemy, as it did in the Far East, it is highly dangerous to depend upon a plan of defence which may be frustrated by political considerations.

WEAKNESS OF ALLIED INTELLIGENCE.

Under-estimation of Japanese Strength.

644. Put bluntly, the enemy's true value was much under-estimated. Although he was known to possess some good military (the word is used in its widest sense) qualities, conspicuous amongst which was a fanatical valour, it was believed that he would display weaknesses, hitherto undisclosed, when he came face to face with the modern forces of the British Empire and the U.S.A.

645. There is reason to believe, from the experience of those who underwent military interrogation as prisoners-of-war in Japanese hands, that the enemy took deliberate steps in peace-time to mislead her potential enemies into under-estimating her fighting forces. They themselves on the other hand were not deluded about our true value: they were too well informed by a long-established organisation of agents.

Japanese Air Forces.

646. The qualities of the Japanese Air Force came as a complete surprise,—in numbers, performance and quality of equipment, training and experience of its personnel, and in its

mobility. Its fighters displayed unexpected all-round qualities. They and the Japanese medium bombers had ranges of 1,500 to 1,600 miles which enabled them to operate from bases out of our reach. Their normal operational height was 20,000-24,000 feet where they were immune from any of our A.A. gun defences. Japanese torpedo-bombers proved to be unexpectedly effective.

647. It is difficult to assess the precise air strength the enemy deployed against Malaya. At the time, it was thought that he had 700 first line aircraft based in South-Indo-China, with adequate immediate reserves, as against our 158 obsolete and obsolescent types with practically no reserves.

Japanese Army and Naval Forces.

648. It is not for this paper to explain the extent to which these were under-estimated, except to say that his army proved to be more effective than it was believed to be, and that the Japanese ability to strike so strongly and simultaneously in several directions in the Pacific had not been anticipated.

Need for an Intelligence Corps.

649. It is therefore appropriate to suggest here that our mistakes can only be attributed to lack of an adequate Intelligence organisation. True, a combined services intelligence organisation was in existence for obtaining naval, military and air information throughout the Far East (F.E.C.B.—see para 67) but it was inadequate for the purpose. In the East an Intelligence system of any real value takes years to build up and requires considerable funds at its disposal. That it should be a combined organisation to serve the needs of all the defence Services goes without saying. It is suggested that a specialised Intelligence Corps will be essential in the future: that only by this means can continuity of knowledge, experience and contact be maintained: and that the appointment of individuals, as an incident of their service careers, can no longer be relied upon to fulfil requirements.

WEAKNESS OF JOINT ARMY/AIR FORCE INTEREST.

Army/Air Force relations.

650. There has been much exaggerated talk about the poor relations which existed between the Army and R.A.F. in Malaya. That there was foundation for it in limited quarters is unfortunately true during the time immediately before the arrival of the late Air Vice-Marshal Pulford and Lieut.-General A. E. Percival, who quickly took steps to put matters right. Unfortunately, honestly held differences of opinion about defence matters between their predecessors had led to weaknesses which had not been fully rectified by the time war came. The two chief matters are hereunder (paras. 651 and 652).

Army/Air Support.

651. Organisation of, and training in, air support for the army was in a primitive state of development in both services. There was a marked lack of specialised equipment for the purpose, and there were but few persons in both services who had had appreciable experience in co-operation between air and ground forces; particularly modern experience. The result was

that neither party in Malaya knew much about the technique of co-operating with the other when war came.

Siting of Aerodromes in N. Malaya.

652. Unfortunately the selection of several aerodrome sites in Malaya had been made with insufficient regard to the needs of their tactical defence. Until the middle of 1941, sites had been chosen without sufficient consultation between the army and air force authorities concerned. Sited as they were, in positions tactically difficult to defend, these aerodromes imposed an unnecessary strain on the army in the ultimate event. It is only fair to point out, however, that they were strategically necessary if the R.A.F. was to fulfil its allotted role in the defence of Malaya.

Insecurity of Aerodromes.

653. Our aerodromes, particularly in N. Malaya, were far from being the secure air bases which could properly be occupied in the face of a strong enemy. There were neither the fighter aircraft, nor sufficient A.A. defences, nor an effective warning system to ensure reasonable defence against air attack. The enemy could, and did, destroy our aircraft on the ground in N. Malaya almost at will, and our squadrons were driven out of the aerodromes there within a matter of days.

654. These same aerodromes were invaluable to the enemy. He had the necessary air forces to occupy them as they were captured, and he had the means of defending them from all forms of attack.

655. From this emerges the lesson that aerodromes may be a liability rather than an asset unless there are sufficient forces, both air and ground, available to prevent the enemy capturing and using them. In other words—provision of defences must go hand in hand with aerodrome construction.

WEAKNESSES IN AIR FORCE MATTERS.

Over-centralisation in A.H.Q.

656. A.H.Q. had to deal directly with eight superior and collateral authorities. The area it controlled stretched from Durban to Hong Kong. The majority of its units were located in Malaya. (See Appendices A and C).

657. When war came in 1941 the formations in Burma and the Indian Ocean were transferred to another Command. Nevertheless, A.H.Q. still had to handle a large number of units with many different functions, and to do so simultaneously in a land battle, in seaward operations and in air defence. It had to administer direct the operational units engaged in them as well as a large number of administrative units, many of which were unexpectedly involved in mobile operations for which they were not fully prepared. It had no intervening bomber, coastal or administrative groups to which to decentralise in Malaya.

658. Even if the staff had contained an adequate number of experienced staff officers, such a high degree of centralisation would have been difficult to exercise efficiently. But most of the staff were inexperienced, although they were willing and many were able men. The load had consequently to be carried by a few able and experienced officers whose numbers were quite inadequate to cope with the situation—either before war broke out or after. Here

again the war in Europe had its effect: its urgent needs absorbed all but a few experienced officers.

659. These faults demonstrated the weakness of an over-centralised organisation and of a Command which lacks a sufficient percentage of trained staff officers. A Headquarters which suffers from either fault cannot withstand the strain of war.

Allied Air Forces.

660. The British air striking force which was available in the Far East was in numbers far below that which the Chiefs of Staff considered necessary to ensure a reasonable degree of security, even against the calculated Japanese strength which, as already shown, was underestimated.

661. In quality our aircraft were obsolescent or obsolete. Squadrons had not been modernised. Their signals and navigational aids were primitive or out of date. Radar warning was limited to the immediate vicinity of Singapore. Their armament was in some respects poor.

662. Several fighter squadrons had formed shortly before the war broke out and were not adequately trained. Others had recently re-armed and were still unfamiliar with their aircraft. A high proportion of fighter pilots had joined their squadrons straight from F.T.S.'s without O.T.U. training.

All were troubles which would have been put right but for the war in Europe.

Change of Personnel.

663. A sweeping change of personnel by posting and drafting occurred during the summer and autumn of 1941. Those who were relieved had been over-long in the Far East and it was time they went. A high proportion of those who replaced them came straight from training establishments without having had unit experience. No criticism of those responsible is intended: it was assumed that there would be time for them to settle down before war broke out. When war unexpectedly came the Command contained a high percentage of personnel who had much to learn about the application of what they had been taught or about their new duties in service units. Many were new to the tropics. Much credit is due to them for the manner in which they strove to play their part. It is unfortunate that circumstances in Europe had prevented the change being spread over a longer period by being started sooner.

Inadequate Training.

664. Personnel were willing, but the means for training them were inadequate because the demands elsewhere had drained resources. Many courses of instruction were improvised locally, during the summer and autumn preceding the war, to make good short-comings in training of aircrews, administrative and other personnel of all ranks, but they were too late to produce the results required.

665. In particular there were weaknesses in the training of fighter squadrons which had been based on the assumption that the enemy was of poor quality.

666. The imperative necessity for personnel to be fully trained in their duties before they have to face a trained enemy needs no further emphasis.

Reserves.

667. Reserves of aircrews and aircraft were inadequate; even the first casualties could not be fully replaced. Spare parts, for engines, airframes, armament, and M.T. in particular were short. Squadron strengths consequently became abnormally low at the outset and remained so.

The need for adequate reserves in a theatre of war cannot be over-emphasised. Unfortunately it had been impossible to build up reserves in Malaya because supplies had been absorbed in supplying critical theatres in Europe, particularly in the Middle East and Russia.

Morale.

668. As perhaps is liable to happen when a force is confronted by an unexpectedly superior enemy, there was a loss of morale by a small section of the Command in the early days of the war. Trials had been severe, and had come before those concerned had had time to adjust themselves to their unpleasant and unforeseen circumstances. Lack of sufficient experienced officers undoubtedly contributed to the trouble, many of whom were newly commissioned and were not versed in their responsibilities.

Such incidents were few, and should not be exaggerated. But they serve to emphasise the need for giving all ranks that vital training which alone enables inexperienced troops to withstand their first novel shock of war. Such incidents also serve to enhance the credit of those who did maintain their morale, and who did their duty as was expected of them, and they comprised the great bulk of the force.

Mobility.

669. Few units were properly organised for mobile warfare. M.T. was very scarce and there were no transport aircraft. Each move involved appreciable interruption in operations, caused loss of valuable equipment and subsequent reduction of efficiency. The lack of transport aircraft was particularly felt when squadrons had to be transferred from Malaya to Sumatra, and thence later to Java: they suffered considerable loss and disorganisation during the enforced sea passage in the face of the enemy and without naval cover, the provision of which was quite impossible at the time.

670. The lesson was demonstrated that ability to take part in mobile operations, without loss of operational efficiency, is dependent on correct organisation and provision of suitable transport. A liberal scale of air transport is essential in those cases where long distances, sea crossings or other natural obstacles are involved.

INCIDENTS DURING THE CAMPAIGN.

Air Reconnaissance of approaching Japanese Convoy, 7th/8th December.

671. Contact with the Japanese expedition at sea was lost on 6th December and was not regained, except for a few ships sighted on the afternoon of 7th December. Admittedly weather conditions were bad in the Gulf of Siam during this vital period. Nevertheless only a small air reconnaissance effort was made for re-establishing contact. No. 8 (R.A.A.F.)

Squadron at Kuantan had to be directed to continue its initial rôle of searching in an area far to the south and eastward of the probable position of the lost Japanese expedition for fear of a still more dangerous but possible attack, namely one directed against southern Malaya where a successful landing, particularly on the Endau/Mersing beaches, would have been very dangerous indeed. It is impossible to resist the inference that reconnaissance dispositions were strongly influenced by a conclusion at the time that the lost Japanese expedition might be proceeding against the Bangkok area of Siam. It is easy to be wise after the event, but the reconnaissance effort which was directed into the Gulf of Siam appears to have been small, bearing in mind its great area and the possible courses open to the Japanese convoys which were known to be in it.

Initial Action at Kota Bahru.

672. Only those who have given insufficient thought to the matter could venture to criticise the station commander at Kota Bahru for not having launched his aircraft to the attack on receipt of the news, at 0030 hours on 8th December, 1941, that ships were lying off the coast. It is equally easy to criticise the A.O.C. for ordering away only a reconnaissance to clear up the situation. But that both were correct in doing as they did, in the circumstances which existed at that particular moment, is beyond doubt. War had not broken out: Pearl Harbour had not been attacked and the U.S.A. was still neutral: there was grave risk that the Japanese might stage a bait in order to induce us to strike the first blow, and by doing so reinforce that section of the American Public which was then strongly opposed to America entering the war, a danger against which all in Malaya had been warned emphatically by G.H.Q. Admittedly 45 minutes were lost before the first air action was taken, but it is merely academic to conjecture what might have happened if it had been taken at once.

Main Japanese Landing at Singora not attacked.

673. It may fairly be asked why the initial Japanese landing at Singora was not attacked on 8th December, as this was the best target for our air striking force. The answer is that it was not realised, until too late, that it was in fact the enemy's main effort, although Singora had long been recognised as the area in which a Japanese expedition against Malaya was likely to be landed. The enemy, moreover, achieved a tactical surprise because our air reconnaissance failed to maintain contact with the main Japanese convoy, which was not found again until landings at Singora were well under way. By the time that the situation was fully realised, all our available aircraft had been launched against the Kota Bahru subsidiary attack. Before their objective could be changed to Singora, our own aerodromes in Northern Malaya were undergoing so heavy a scale of air attack that another effective force for opposing the Singora landing could not be launched from them.

Attempt to Neutralise Enemy Air Bases.

674. As soon as our Squadrons had been driven out of the aerodromes in Northern Malaya, our army was in turn subjected to

heavy air attack. Its A.A. protection was quite inadequate and it had no fighter cover. Our own aircraft were therefore employed in the early stages of the campaign against enemy aerodromes, in an effort to give immediate relief to our troops. This was not successful. The enemy's reserves were sufficient to replace at once the small casualties which our attenuated squadrons could inflict. Moreover, he had the means to repair rapidly the damage our squadrons inflicted on his aerodromes.

675. The lesson was again learnt that little relief can be obtained by attacking the aerodromes of an enemy who has the means for replacing or repairing damage, particularly if such attacks are of little weight.

Reinforcements.

676. The reinforcements which the R.A.F. received arrived too late to save the situation. By the middle of January, when the first few came on the scene, the aerodromes which they had to use in Singapore were already under constant and heavy bombing. Reinforcements which came later had to use aerodromes in Sumatra which were little more than clearances in the jungle, for by this time, namely late January and early February, the enemy was in possession of the whole of the mainland of Malaya, and three out of the four aerodromes on the Island of Singapore were under observed artillery fire.

677. Hurricane reinforcements arrived in batches at intervals, and had to be thrown into the battle against greatly superior numbers and at tactical disadvantage caused by the lack of effective warning or efficient R/T control. The great majority of their pilots had never been in action before, and some had been at sea for as long as three months.

678. About half the bomber reinforcements that were despatched reached Malaya. They arrived in dribbles of two and three aircraft at a time—the result of circumstances along a lengthy and insufficiently developed air reinforcement route. They had to be used piecemeal, without their own ground crews, and not as complete units. No time could be allowed for acclimatising and training them in local conditions. Extremes of weather caused navigational difficulties to which crews were strange. Adequate ground and radio aids, to which many were accustomed, were lacking.

679. The very important lessons were demonstrated that reinforcements must, in order to be effective, arrive as complete units, with aircraft, aircrews, specialised equipment, servicing crews and sufficient stocks and reserves. They are merely frittered rapidly away if they arrive piecemeal. They must have adequate bases from which to work, and they gain much if they are given time to obtain experience of local conditions before being engaged in battle. In short, the more orderly and methodical their arrival and their preparation for battle, the greater their chances of success—and, vice versa.

POSTSCRIPT.

The Army in Malaya.

680. I wish to pay a tribute to the help which the R.A.F. received from the army in Malaya. Despite its own acute needs and shortages it

gave ungrudging help—in defence of aerodromes at cost to its vulnerable points; in working parties and native labour to repair aerodromes at cost to the construction of military defences; in maintaining signals communications and in many other ways. In particular, thanks are due to Lieutenant-General A. E. Percival for all that he did, in conjunction with the late Air Vice-Marshal Pulford, during the months immediately before war broke out, to re-establish good relations between the two services. Had the latter officer survived I know how strongly he would have expressed these views.

The Royal Navy in Malaya.

681. The R.A.F. owes much to the Royal Navy also. Nothing that was requested was refused if it was available; frequently it was given at cost to itself—working parties for aerodrome repair, for replacing stevedores and labour which had deserted the docks under bombing: facilities in the dockyard workshops, and in many other ways. Thanks are particularly due to the late Rear Admiral Spooner, R.N., who lost his life in attempting to escape with the late Air Vice-Marshal Pulford, and whom the latter would wish to commend to your notice for all that he and his subordinates did for the R.A.F. in Malaya.

The Merchant Navy.

682. Much credit is due to the Merchant Navy. It rendered the R.A.F. devoted service in bringing into Singapore reinforcements and supplies at a critical time, in transferring units to the N.E.I., and in evacuating several thousands of personnel from Singapore and later from the N.E.I. This work was done at great hazard in waters exposed to surface, submarine and air attack. A number of ships and seamen were lost in the doing of it. I wish to record our deep appreciation to the masters and crews who did so much for us at such cost to themselves.

Civilians in Malaya.

683. A tribute is also due to the civilians, men and women, who put themselves and their means at the disposal of the R.A.F. Of them there were many—nurses, business men, clerical staffs, tradesmen, welfare workers, contributors of material and money, and others. Their assistance and good-will were invaluable at a most difficult time. To them the R.A.F. owes a real debt of gratitude.

The Dutch in the Far East.

684. It must be remembered that the Dutch pinned their faith to collective Allied resistance in the Far East, and that they lost part of their Air Force and of their Navy to the common cause before the Japanese reached Java at all. When their hopes of successful resistance disappeared, and only a small British force remained to replace the forces the Dutch themselves had sacrificed, their isolated position came home forcibly to them.

685. Moreover, everything that the Dutch community possessed was in the N.E.I. Towards the end it was obvious to them that the whole of it, including their families, must inevitably fall into the hands of the Japanese. They had already experienced incidents of

Japanese savagery in Borneo. They were consequently reluctant to continue guerilla resistance in Java in the circumstances in which they finally found themselves. It was only then, when the British wanted to go on fighting after the general capitulation in Java, that differences arose as to the best line to pursue.

686. Nevertheless, I want to express my thanks to the Dutch. Their wish to help was unbounded. They fulfilled their planned undertakings to the full. Special recognition is due to those of them who, as a result lost their lives in Malaya's defence. When arrangements had to be made to transfer the R.A.F. to the N.E.I., their Army, Air Force and Civil Administration placed everything at our disposal. As a community the Dutch refused the British nothing—labour, materials, money and help of every kind were ungrudgingly given—frequently at considerable sacrifice. The devotion of their doctors and nurses to our sick and wounded was outstanding. The Royal Air Force owes a debt of gratitude to these people.

Recommendations for meritorious service.

687. I have already reported to the appropriate branch of the Air Ministry the names of those whose services were particularly meritorious, and whom I recommend for honours, awards and mention in despatches. But I want to bring to your notice here the units mentioned hereunder, and also to name a few individuals who rendered particularly meritorious service but who, I regret to report, are no longer alive.

Air Vice-Marshal C. W. Pulford, C.B., O.B.E., A.F.C.

688. This officer, despite ill health, worked unceasingly and uncomplainingly to overcome the many difficulties with which he was faced when preparing his Command for war and after hostilities had broken out. He never flinched from meeting an overwhelming situation with very inadequate means. No man could have striven more wholeheartedly to carry a burden which was far beyond one man's capacity. All his decisions were reached with complete disregard for self and entirely in the interests of what he felt to be his duty according to the situation and to his instructions.

689. He refused to leave Singapore himself until all his men had been evacuated. He lost his life in a last-minute attempt to follow his Command to the N.E.I. (see para. 394). His selfless devotion to duty and his loyalty to all those around him, both senior and junior, were an inspiration to all.

Personnel of the R.A.F. Far East Command.

690. I am confident that the late Air Vice-Marshal Pulford would wish me to place on record the praiseworthy manner in which the personnel, of all ranks, under his Command carried out their duties. I know how deeply he appreciated the loyal support they gave him.

Aircrews.

691. The aircrews of our squadrons, of the Royal Air Force, Royal Australian Air Force and Royal New Zealand Air Force alike, consistently met the calls that were made upon them despite the enemy's great superiority in numbers and equipment, especially in the

matter of fighters. Their own aircraft, on the other hand, were many of them obsolete and old, and were difficult to maintain owing to technical shortages and poor facilities for overhaul work. Their aerodromes possessed little protection against air attack, sometimes none at all. They flew long distances by night over jungle-clad country in the face of violent tropical thunderstorms with the help of only rudimentary navigational aids; towards the end with none at all. It is difficult to overstate the cumulative effect of the hazards which they faced. They deserve the very greatest praise for the way in which they consistently carried out their missions despite these hazards and despite casualties.

692. At the risk of selecting examples which may prove invidious to other units, against whom no reflection is intended, I would particularly mention the following:—

Fighter Defences of Singapore.

693. Credit is due to the spirited leadership of the late Group Captain E. B. Rice, Fighter Defence Commander of Singapore, and of the late Wing Commander R. A. Chignell, his Chief Air Staff Officer. Both were outstanding in their selfless devotion to duty. They were primarily responsible for the good morale which the small fighter force at Kallang maintained throughout the campaign in the face of a numerous and better armed enemy. The steadiness of the ground personnel of this fighter station is also worthy of mention.

No. 4 Photographic Reconnaissance Unit.

694. This flight, flying unarmed and unarmoured Buffaloes, unflinchingly carried out their photographic missions deep into enemy territory dominated by a very superior enemy fighter force. Its service throughout the Malayan campaign was most valuable.

No. 232 (F) Squadron.

695. This unit, under the leadership of the late Squadron Leader R. E. P. Brooker D.S.O., D.F.C., who volunteered to take command at a critical moment, was in constant action from the time it arrived in Singapore in mid-January 1942 until fighting ceased in Java. It inflicted severe casualties on the enemy in the air, in landing craft and on the ground. It volunteered to remain in Java as the last fighter squadron. Great credit is due to all ranks of a magnificent squadron, drawn as they were from the ranks of several different fighter units.

Nos. 36 and 100 (TB) Squadrons.

696. These two squadrons attacked the enemy landing at Endau on 26th January, 1942, covered as it was by numerous Zero fighters, whereas their own fighter escort was unavoidably small. They pressed home their attacks on their obsolete Vildebeeste torpedo-bombers regardless of casualties, amongst whom I regret to report were lost the Commanding Officers of both squadrons, the late Squadron Leaders R. F. C. Markham and I. T. B. Rowland. After being reorganised into a composite squadron in Java, and after having patched up their old aircraft, they again pressed home attacks against the enemy convoys which were invading that island, this time at night, again suffering casualties and the loss of their squadron commander, the late Squadron Leader J. T. Wilkins. Such gallant conduct speaks for itself.

No. 84 (B) Squadron.

697. This unit arrived as a reinforcement much strung out after a long flight from the Middle East. Its crews set a fine example of throwing themselves into the fight at once under many handicaps. Particular credit is due to the Commanding Officer, the late Wing Commander J. R. Jeudwine D.S.O., O.B.E., D.F.C., whose leadership and courage were a great inspiration to others. He led a small party which escaped from Java in an open boat across the 1000 mile crossing of the Timor Sea to Australia, a typical example of his spirit.

M.V.A.F.

698. At a critical time of the fighting in Southern Malaya, a number of successful reconnaissances were carried out by this unit to locate bodies of our troops who had been cut off by the enemy, and to locate the enemy's infiltrating forces. These reconnaissances were performed in unarmed Moth aircraft (originally the property of Malaya's flying clubs) at tree top height over a battle field dominated by Japanese Zero fighters. Their value was great to the Army, then closely engaged with the enemy. Pre-eminent in this work was the late Flight Lieutenant Henry Dane, M.V.A.F., whose qualities as a leader and a man were a byword amongst those who knew him. His example was largely responsible for the excellent work done throughout by the M.V.A.F.

Technical Personnel.

699. A word of recognition is due to the Technical Personnel of the Command.

700. Before war broke out they handled great quantities of stores and equipment which arrived in Malaya greatly in excess of the new stations' power, and that of the Command's backward maintenance organisation, to absorb them. Many aircraft were erected and rapidly passed into commission and many others were overhauled during the period of the Command's expansion.

701. During the war itself, technical personnel worked untiringly in most difficult circumstances. Aircraft and equipment had to be dispersed as a protection against bombing, mostly to improvised dispersal points in rubber plantations or scrub. There they were erected, overhauled and serviced with little or no protection against tropical downpours.

702. An example of such work was the erection of the first 50 Hurricanes which arrived in Singapore in mid January 1942; it was a particularly fine feat. Within a few days all were ready to take the air, the first in under 48 hours: during that time they had been unloaded in crates at the docks, conveyed many miles by road to scattered hide-outs in rubber plantations, and there rapidly erected despite tropical rain, blackout conditions at night and a great shortage of specialised tools.

703. It would be invidious to select any particular unit for special mention. Suffice it to say that most meritorious technical work of all kinds was performed by units throughout the command at all stages of the operations in Malaya and the N.E.I. under very severe conditions. Not least of these handicaps was an almost complete breakdown of the backward

maintenance organisation of the command which was brought about by circumstances that first overloaded and then disrupted it.

704. I will mention only one name, that of the late Wing Commander E. B. Steedman, whose unflagging efforts did much to inspire others to overcome their difficulties. He subsequently lost his life as a prisoner of war for refusing, it is believed, to divulge technical information about Spitfires. His spirit remained unbroken to the end.

Personnel in the N.E.I.

705. Those who landed in unavoidable disorganisation in the N.E.I. were required to reorganise into a fighting force within a few days with very limited resources indeed. I wish to express my gratitude to them for the very loyal manner in which they gave their best services, in particular to our squadrons who had to face a well organised enemy in overwhelming numbers. Their behaviour is particularly creditable, coming as it did after many reverses, and was in the best tradition of the Service.

Finally, I am indebted to all those who, at the end, were willing, despite shortage of arms, lack of training, and lack of most essentials, to fight in the hills in a form of warfare about which they knew nothing, namely in infantry warfare and in the jungle at that, and to do so against an enemy whom they knew to be well-equipped and highly trained in this form of fighting. That they were unable to put their willingness to the test was no fault of theirs. I wish to place on record my gratitude for the loyal response they gave to the call made upon them. Their conduct deserves the highest praise.

SUMMARY.

706. One can summarise in a few words the reason for the initial reverses in the Far East.

707. We lost the first round there because we, as an Empire, were not prepared for war on the scale necessary for the purpose. When war broke out in Europe it absorbed the Empire's resources to such an extent that only a fraction of the strength could be deployed which had been calculated to be necessary for withstanding Japanese aggression in Malaya—navy, army, air force and civil organisation alike being much below the required mark. When Japan attacked she proved to be even more formidable than had been expected, the result being that she swamped our underdeveloped defences before they could be supported.

708. Mistakes undoubtedly occurred, as they always do in war when the unexpected happens on the scale that it did in the Far East. But credit should be given to those on the spot who did their best to take the first brunt of the enemy's overwhelming strength with inadequate means, and who gained thereby the necessary time for other forces to be collected to prevent his further advance towards Australia and India.

P. C. MALTBY,
Air Vice-Marshal.

London,
26th July, 1947.

APPENDIX "A".

To Report on R A F Operations in Malaya and N.E.I., 1941-2.
SITUATION AT R A F. STATIONS IN MALAYA—8TH DECEMBER, 1941.

Location	(a) Peace Scale of Accommodation (b) Concentration Scale of Accommodation	Runways	State of Accommodation	Defences (a) Aircraft shelters (b) A.A. Guns (c) Troops	Bombs (Approx. weight)
NORTH-WEST MALAYA					
<i>Ator Star</i>	(a) 1 B Squadron	Hard 1—1,400 yds	1 Squadron	(a) Yes (b) 4—3" guns. (c) 1 Coy. Infantry (Bahawalpur)	250 tons.
<i>Butterworth</i>	(a) 1 GR Squadron	Hard 1—1,600 yds, being extended to 2,000 yds. 2nd in hand	Hutted 2 Squadrons. Occupied.	(a) Yes Incomplete. (b) None until 10 12 41 Then 8 Bofors. (c) Bahawalput Inf. Btn (less 2 Coys)	250 tons.
<i>Jabi</i>	(b) 1 B Squadron	Hard 1,400 yds Graded but not surfaced	1 Squadron only, just commenced	(a) — (b) — (c) —	Nil
<i>Kuala Ketil</i>	Satellite for <i>Sungei Patani</i> .	Tarmac 1,400 yds	Guard Room; Petrol, oil and bomb stores	(a) Nil (b) Nil (c) 1 Coy. Bahawalpur Inf.	Nil.
<i>Lubok Krab</i>	(a) 1 B Squadron	Hard 1—1,600 yds 1—1,200 yds partly graded	Hutted—2 Squadrons nearing completion Partly occupied	(a) — (b) Nil (c) Nil	Nil.
<i>Malakoff</i>	Satellite for <i>Lubok Krab</i> .	1,600 yds Grading not complete	No buildings completed	Nil	Nil.
<i>Panang</i>	Civil Airfield	Limited grass airfield	Nil.	Nil.	Nil.
<i>Sungei Bahap</i>	Satellite for <i>Butterworth</i>	2,000 yds (1,400 yds soled but not surfaced).	No buildings completed	Nil	Nil.
<i>Sungei Patani</i>	(a) 2 F Squadrons	Grass 1—1,400 yds 1—1,200 yds	Hutted: 2 Squadrons Partly occupied	(a) Not quite finished. (b) 7—3.7" guns (c) Btn HQ and 1 Coy. Indian State Troops.	250 tons.
NORTH-EAST MALAYA					
<i>Gong Kedah</i>	(b) 1 B Squadron	Hard 1—2,000 yds	Hutted: 1 Squadron Ready and partly occupied	(a) Yes nearly 100% (b) 2—3" (c) 1. Pltn Mysore Inf.	250 tons.
<i>Kota Bahru</i>	(a) 1 B Squadron	Grass 1—1,600 yds Being extended	Hutted: 2 Squadrons. Being extended.	(a) Yes: nearly 100% (b) 4—3" guns (c) 1 Btn Inf (less 1 Coy)	250 tons.
<i>Machang</i>	(b) 1 F Squadron	Hard 1—1,600 yds 1—1,200 yds in hand.	Hutted 2 Squadrons partly completed	(a) Just started (b) Nil (c) 2 Coys Mysore Inf	50 tons.
EAST MALAYA					
<i>Kuantan</i>	(b) 1 B Squadron, 1 GR Squadron	Grass 1—1,500 yds. 1—1,200 yds.	Hutted 2 Squadrons Complete.	(a) In hand (b) Nil (c) 3 Coys 5th Sikhs	100 tons.
CENTRAL MALAYA					
<i>Ipoh</i>	(b) 2 B Squadrons	Grass plus tarmac 1—1,400 yds	Hutted: 2 Squadrons Nearly completed Partly occupied	(a) Nil (b) Nil (c) 1 Coy. Indian State Troops. 1 MG Platoon	Nil.
<i>Sitawan</i>	Civil Airfield	Grass: 1—1,000 yds. 1—800 yds	Guard Room only	(a) Nil (b) Nil (c) 1 Coy (less 1 Pltn) Indian State Troops	Nil.
<i>Tarpong</i>	Satellite for <i>Ipoh</i>	Grass plus tarmac 1—1,400 yds	Requisitioned cottages Hutments in hand	(a) Yes (b) Nil (c) 1 Coy and 1 MG Pltn Indian State Troops	Nil.
SOUTH MALAYA					
<i>Batu Pahat</i>	Civil Airfield Satellite for <i>Kluang</i>	Grass 1—1,400 yds	Petrol and oil stores only.	(a) Nil (b) Nil (c) 1 Pltn A I F Inf.	50 tons.
<i>Bekoh (Labris)</i>	(a) 1 Squadron	2,000 yds 1,400 yds surveyed only	Nil	Nil	Nil
<i>Kuala Lumpur</i>	Civil Airfield	Grass 1,315 yds	Completed Occupied by 153 M U.	(a) Nil (b) Nil (c) 1 Coy Indian State Troops 1 MG Pltn	50 tons.
<i>Kluang</i>	(a) 2 F Squadrons, 1 F Squadron (Dutch).	Grass: 1—1,200 yds 1—1,600 yds. Hard runway commenced.	Hutted 2 Squadrons. Nearing completion Mostly occupied	(a) In hand (b) Nil (c) 1 Btn (less 1 Coy and 1 Pltn) and Johore Military Forces Details.	50 tons.

Location	(a) Peace Scale of Accommodation (b) Concentration Scale of Accommodation	Runways	State of Accommodation	Defences (a) Aircraft Pens (b) A A. Guns (c) Troops	Bombs (approx. weight)
SOUTH MALAYA—cont					
<i>Kahang</i>	(b) 1 GR Squadron.	Grass 1—1,400 yds. 1—1,300 yds	Hutted: 2 Squadrons In hand.	(a) In Hand (b) Nil (c) 1 Coy A I F. and Johore Military Forces Details	50 tons
<i>Port Swettenham</i>	Civil Airfield	Grass (tarmac in centre). 1—1,000 yds.	Nil	(a) Nil (b) Nil (c) 1 Coy and 1 MG Pltn Indian State Troops.	10 tons.
<i>Tebrau</i>		Hard 1—1,200 yds. 1—2,000 yds. in hand.	1 Squadron only. 2nd Squadron in hand	(a) In hand (b) Nil (c) A I F Infantry in vicinity	Nil.
SINGAPORE ISLAND					
<i>Kallang</i>	(a) 1 B Squadron	Complete (Civil Airfield) Grass 1,400 yds	2 Squadrons	(a) Yes (b) Under cover of A A defences Singapore Town. (c) 1 Coy Jind Inf	10 tons (plus ammunition).
<i>Seletar</i>	(a) 2 TB Squadrons 1 FB Squadron	Complete. Grass 1,400 yds	3 Squadrons and M U Dispersed hutted accommodation partly completed	(a) Yes (b) 8 Bofors. Within defended zone of Naval Base A A cover (c) 1 Btn. (less 1 Coy) Kapurtala Inf	500 tons.
<i>Sembawang</i>	(a) 2 B Squadrons	Grass 1,380 yds Construction of 2 hard runways deferred	2 Squadrons F A A. adjacent	(a) Yes (b) Nil Within defended zone of Naval Base A A cover. (c) 1 Coy Kapurtala Inf	1,000 tons.
<i>Tengah</i>	(a) 3 B Squadrons 2 GR Squadrons (for Borneo).	Grass L G 1—1,400 yds Concrete runway.	2 Squadrons.	(a) Partly finished. (b) Nil Under extended A A cover of Island defences (c) 1 Btn Jind Inf	750 tons.

NOTE 1. Aerodrome Operational Equipment—serious shortages existed at Stations in North and Central Malaya, other than Alor Star and Kota Bharu, despite local manufacture and purchase
2 Adequate stocks of P O L were in position at the Stations where required

RADAR UNITS—FAR EAST COMMAND—8TH DECEMBER, 1941

Location (1)	Unit No. (2)	Type (3)	Degree of Completion on 8th December, 1941 (4)
MALAYA EAST COAST.			
<i>Kota Bharu</i>		C O L.	Not technically complete
<i>Kota Bharu ...</i>		T R U.	Some construction done
<i>Kuantan ...</i>			Under construction
<i>Endau</i>			Under construction
<i>Mersing ...</i>	243	M R U	Operational.
<i>Bukit Chunanang</i>	511	C O L	Operational.
<i>Ayer Besar ...</i>		T.R.U	Under construction.
MALAYA: WEST COAST			
<i>Penang</i>			Three stations One partly complete
<i>Batu Phat ...</i>		C.O.L.	Partly completed.
<i>Tanjong Kupang</i>	512	C.O.L	Operational
MALAYA: JOHORE			
<i>Kota Tinggi</i>	518	C O L	Operational late December, 1941.
<i>Bukit Dinding ...</i>			Crews on site. Not quite complete } Did not function.
<i>Sungei Kahang</i>			Work nearing completion } Over-run by enemy.
SINGAPORE ISLAND			
<i>Seletar</i>		R I M.U	Operational.
<i>Tuas</i>	243	T.R.U.	Operational 15 1 42.
<i>Tanah Merah Besar</i>	250	M.R.U	Operational
<i>Serangoon</i>	308	T.R.U.	Operational December, 1941.
<i>Changi Jail</i>		LD/CHL	Operational December, 1941.
JAVA. WEST			
<i>Batavia (East)</i>		T.R.U.	Operational February, 1942
<i>Batavia (West)</i>		T R U	Operational February, 1942
<i>Angelor</i>		Army G.L.	Operational February, 1942.
<i>Lebuan</i>		Army G L	Operational February, 1942.
<i>Tanara</i>		Army G L	Operational February, 1942
JAVA EAST			
<i>Modong</i>		American G L	Operational 22 2 42.
<i>Parmahassen</i>		American G L.	Operational 24 2 42
<i>Sitoebondo</i>		American G L	Operational 24 2 42

APPENDIX "C"

to Report on R.A.F. Operations in Malaya and N.E I 1941-2

R A F. ORDER OF BATTLE IN MALAYA

22nd November, 1941

AIR HEADQUARTERS, SINGAPORE

A OPERATIONAL UNITS

SINGAPORE ISLAND

1. *Seletar* Station Commander—Group Captain H. M. K. Brown.
 - (a) No. 36(TB) Squadron—Commander—Wing Commander R. N. McKern.—12 Vildebeestes
 - (b) No. 100(TB) Squadron—Commander—Wing Commander A. W. D. Miller.—15 Vildebeestes.
 - (c) No. 205(GR) Squadron—Commander—Wing Commander L. W. Burgess—3 Catalinas
 - (d) P R Flight—Commander—Squadron Leader C. G. R. Lewis—2 Buffaloes.
2. *Sembawang* Station Commander—Group Captain J. P. J. McCauley (R A A F)
 - (a) No. 8(GR) Squadron, R A A F—Commander—Wing Commander F. N. Wright—8 Hudson II.
 - (b) No. 21(F) Squadron, R A A F.—Commander—Squadron Leader W. F. Alshorn.—10 Buffaloes.
 - (c) No. 453(F) Squadron—Commander—Squadron Leader W. J. Harper—12 Buffaloes
3. *Tengah* Station Commander—Group Captain F. E. Watts
 - (a) No. 34(B) Squadron—Commander—Wing Commander G. P. Longfield—17 Blenheim IV.
 - (b) No. 4 A A C U—Commander—Squadron Leader N. W. Wright—5 Sharks, 5 Swordfish, 2 Blenheim I.
4. *Kallang* Station Commander—Wing Commander R. A. Chignell.
 - (a) No. 243(F) Squadron—Commander—Wing Commander G. B. M. Bell—12 Buffaloes.
 - (b) No. 488(F) Squadron—Commander—Squadron Leader W. G. Clouston—9 Buffaloes.
5. *Fighter Control* in Singapore—Group Captain E. B. Rice

MAINLAND OF MALAYA

6. *Kota Bahru* Station Commander—Wing Commander C. H. Noble.
 - No. 1(GR) Squadron, R A A F.—Commander—Wing Commander R. H. Davis—7 Hudson II.
7. *Kuantan* Station Commander—Wing Commander R. B. Councill
 - No. 60(B) Squadron—Commander—Wing Commander R. L. Vivian. (From Rangoon for training at Armament Practice Camp)—7 Blenheim I
8. *Alor Star* Station Commander—Wing Commander R. G. Forbes
 - No. 62(B) Squadron—Commander—Wing Commander J. Duncan—10 Blenheim I.
9. *Sungei Patani* Station Commander—Squadron Leader F. R. C. Fowle
 - No. 27(NF) Squadron—Commander—Squadron Leader F. R. C. Fowle—10 Blenheim I
10. *Butterworth*—Care and Maintenance—1/c—Flight Lieutenant R. D. I. Scott
11. *Kluang* Station Commander—Wing Commander W. R. Wills-Sandford—Improvvised O.T.U.
12. *Kuala Lumpur* Norgroup H.Qs—Wing Commander R. G. Forbes

NOTES

- (a) Aircraft shown are those serviceable as at 22nd November, 1941.
- (b) A further 40 Buffaloes were repairable within 14 days
- (c) For other Squadrons, there was an average of 2 or 3 aircraft per Squadron repairable within 14 days.

B MAINTENANCE UNITS.

- | | | |
|------------------------------|---|---------------------------------|
| 13. No. 151 M U. | <i>Seletar</i> | Group Captain C. T. Walkington. |
| 14. No. 152 M U. | <i>Bukit Panjang, Singapore</i> | Squadron Leader S. G. Aylwin. |
| 15. No. 153 M U. | <i>Kuala Lumpur</i> | Group Captain M. W. C. Ridgway. |
| 16. No. 81 R. & S U. | <i>Kluang</i> | Wing Commander H. Stanton. |
| 17. " Z " M U. | <i>Batak Quarry, Singapore</i> | Flight Lieutenant J. H. Cocks. |
| 18. R I M U. | <i>Seletar</i> | Squadron Leader T. C. Carter. |

C. MISCELLANEOUS UNITS

- | | |
|--|---------------------------------|
| 19. Radar Units (Four operational) | Wing Commander N. Cave. |
| 20. R.N.Z.A.F. Aerodrome Construction Unit | Squadron Leader Smart. |
| 21. Transit Camp, Singapore | Squadron Leader O. G. Gregson. |
| 22. S.S. " Tung Song " | Pilot Officer G. T. Broadhurst. |
| • S.S. " Shenking " | Pilot Officer C. E. Jackson. |

LONDON

PRINTED AND PUBLISHED BY HIS MAJESTY'S STATIONERY OFFICE

To be purchased directly from H.M. Stationery Office at the following addresses:

York House, Kingsway, London, W.C.2; 13a Castle Street, Edinburgh, 2;

39-41 King Street, Manchester, 2; 1 St. Andrew's Crescent, Cardiff;

Tower Lane, Bristol, 1; 80 Chichester Street, Belfast

OR THROUGH ANY BOOKSELLER

1948

Price 3s. 0d net

S O Code No 65-38216

THE UNIVERSITY OF CHICAGO
PHYSICS DEPARTMENT
530 SOUTH EAST ASIAN AVENUE
CHICAGO, ILLINOIS 60607

PHYSICS 354
LECTURE 10
MAY 19, 1997