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R.A.F. NARRATIVE

(Second Draft)

THE MIDDLE EAST CAMPAIGNS

VOLUME III

OPERATIONS IN LIBYA AND THE WESTERN DESERT  
(INCLUDING MALTA)

21 JANUARY 1942 - 30 JUNE 1942

AIR HISTORICAL BRANCH (1)

AIR MINISTRY

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THE MIDDLE EAST CAMPAIGNS

VOLUME III  
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PART I

21st JANUARY, 1942 TO 24th FEBRUARY, 1942

SECTION I

THE WITHDRAWAL TO GAZALA  
(21st January to 14th February)

In the narrative "Middle East Campaigns: Libya (mid-June, 1941 to late January, 1942)" an account is given of the "Crusader" offensive which the Eighth Army launched from the Egyptian frontier on 18th November, 1941. The primary aim of this operation was to wrest Cyrenaica from the enemy. When this was accomplished, the intention was to continue the advance to the Tunisian border (Operation "Acrobat") in time to turn our main forces and resist the threat to the Middle East's northern flank which was expected to materialize in the Spring of 1942.

Preceding  
Narrative  
Part Five

Some of the benefits which could be expected from the Army advance, as set forth in previous strategic appreciations, were:- the removal of the threat to our base in Egypt from the west: the raising of the siege of Tobruk, which had absorbed much of our naval and air effort: the facilitation of the passage of our shipping in the Mediterranean by the capture of ports and air bases along the Libyan coast: the establishment of forward sea and air bases allowing interference with Axis plans in Italy, Sicily, Greece and Crete: the deterrence of pro-Axis propaganda in Tunisia: and the general raising of British prestige which had suffered from our defeats in Greece and Crete.

Idem

It had been anticipated in the "Crusader" plans that the period of battle between the opposing armoured forces would last for about five days, that Tobruk would then be relieved and the enemy forces put to flight. In the event, the main battle (including the enemy's stand at Gazala) lasted until 16th December, (nearly a month) and Tobruk was fully relieved only some six days before that date. Subsequently the enemy delayed the Eighth Army's advance past Agedabia until 7th January, 1942 prior to a further delaying action east of El Agheila.

C-in-C's  
Despatch P 66

The enemy's defence line in mid-January ran from east of El Agheila southwards to Maaten Giofer and Marada. "The country round El Agheila", the Commander-in-Chief, Middle East (General Auchinleck) wrote, "offers one of the most easily defensible positions in Libya. A broad belt of salt pans, sand dunes and innumerable small cliffs stretches southwards for 50 miles, its southern flank resting in the Libya sand sea, a vast expanse of shifting sand. Apart from the main road from Benghazi to Tripoli only a few tracks cross this inhospitable country, so that the 35,000 enemy left sufficed to hold it."

The area was, indeed, a vital one to secure. Apart from the need of our forces to traverse it in order to invade Tripolitania (the projected operation "Acrobat"), the C-in-C, Middle East, considered it essential to control this region in order to retain Cyrenaica.

Disposition of Forward Ground Forces

Idem  
Page 67

In mid-January, 1942 the disposition of the enemy ground forces was considered by Military Intelligence to be as follows:- El Agheila itself and the area to the east were apparently held by three weak Italian divisions

of the 21st Corps, Pavia, Sabrata and Brescia. The Trieste, Ariete and Trento divisions were believed to be in the Maaten Giofer area (approximately 20 miles to the south), guarding the gap between Wadi El Faregh and the marshes to the west, through which runs the Agheila - Marada track. Marada itself was apparently held by part of the German 90th Light Division, the Burckhardt battle group and additional Italian troops. The bulk of the 90th Light Division was believed to be in the vulnerable coastal sector immediately south of Marsa El Brega. The two Panzer divisions (15th and 21st) were believed to be between the minefields which covered the 90th Light Division's positions and the south bank of Wadi El Faregh; elements of the 90th Light Division were also believed to be watching the coast west of El Agheila towards Ras El Aali.

The disposition of the enemy's forward forces on 20th January, (the eve of his counter-attack) were not definitely known, due largely to the bad weather which had seriously curtailed air reconnaissance. In particular, the operations of No. 208 Squadron's flight at Antelat (which carried out tactical reconnaissance on behalf of the 13th Corps) were almost brought to a standstill from 15th - 20th January by adverse conditions, including the water-logging of the landing ground. The reconnaissances of the Strategic Reconnaissance Unit, the Survey Flight (No. 60 Squadron, S.A.A.F. detachment) and No. 2 Photographic Reconnaissance Unit Hurricanes (operating from Antelat) at times provided useful information, but these, also, were limited by bad weather conditions. At no time did air reconnaissance reveal sufficient concentration to justify the assumption of an imminent enemy attack.

Previous  
Narrative  
Part Seven

The enemy's strength was estimated to have been whittled down in the "Crusader" operations from an original 100,000 to some 35,000 troops - 17,000 Germans and 18,000 Italians. Total tank strength was put at 70 medium tanks, of which 25 were German. It was believed that another 20 German medium tanks could be made available at short notice.

C-in-C's  
Despatch P.67

Forward troops of the Eighth Army (G.O.C. Lt. General Ritchie) were under the immediate control of the Commander of the 1st Armoured Division (Major General Messervy). On the right was the 201st Guards Motor Brigade, organised in four columns, holding a front of some fifteen miles stretching southwards from the coast near Marsa Brega; the third battalion of the brigade was in reserve at Agedabia. To the south, responsible for a front to Maaten Burreui, some 25-30 miles, was the support Group of the 1st Armoured Division, also organised in four mobile columns and a reserve. In reserve, twelve miles north of Saunnu, was the 2nd Armoured Brigade, whose training was still incomplete. The remnants of the Oasis Force (1) (one battalion and one field battery) were located in the rear, some 40 miles east of Agedabia, and were due to return to Egypt to refit.

- 
- (1) The Oasis Force had operated in Southern Cyrenaica capturing Gialo on 24th November. Its primary task had been to protect the associated air forces (No. 33 Squadron - long range Hurricanes - and No. 113 Squadron - Blenheim fighters) and to harass advancing and retreating enemy columns. (See previous Narrative Parts Five and Six).

C.-in-C.'s  
Despatch, P.67

Our advanced formations were, accordingly weak and widely dispersed. This was due largely to the unsatisfactory supply situation (considered later) and the policy of keeping forces for the projected Acrobat operations down to the lowest possible strength. The 1st Armoured Division Supply Group had only just relieved that of the 7th Armoured Division and was inexperienced in desert operations. Moreover, many of its vehicles were not 'desert-worthy'; in particular, there was a lack of spare parts and tyres were often unsuitable and liable to burst. These shortcomings were serious as the terrain in the southern sector was particularly difficult to traverse.

Sanction had been given for the 4th Indian Division to come forward in order to consolidate a position about Agedabia and El Haseiat and for the 2nd Armoured Brigade to be moved near to Gidf El Matar, where it would be more conveniently located to support the forward units. These movements could not be made owing to difficulties of supply caused by the shortage of transport vehicles.

General Supply Situation in Forward Area

A.H.B.Narrative,  
Middle East  
Campaigns,  
Vol.II, Pt.VII.

The opening of Derna as a port on 6 January assured the supply of forces in the eastern part of the Gebel Akhdar, but our supply situation in Western Cyrenaica was far from satisfactory. The first convoy arrived in Benghazi harbour on 7 January (Benghazi had been captured on Christmas Eve), but bad weather and the lack of lighters made unloading a slow process. Rough seas subsequently prevented lighters sailing round the coast and Benghazi could not be brought into full use. The Eighth Army, therefore, was obliged to rely on land transport during the whole time it was in Western Cyrenaica. Transport resources were stretched to the limit to meet current maintenance needs, (1) and no substantial enemy stores were found to atone for our deficiencies.

The amelioration of our supply situation in the forward area depended primarily on shipping running to schedule from Benghazi. The enemy's counter-attack, begun on 21 January, prevented this.

A.H.B.  
II J1/63

The enemy's supply situation in Libya, which had been critical, was vastly improved by the intervention of the G.A.F. in the Central Mediterranean which aimed at the neutralisation of Malta as an offensive base. In the words of Vice-Admiral Weichold (Liaison Admiral between the German and Italian Naval Headquarters in Rome and later German C-in-C, Mediterranean): 'As during the summer of 1941, the

- 
- (1) Towards the end of 1941 it was reported that the British forces in Cyrenaica required a minimum of 1,400 tons of supplies per day; 800 - 1,000 tons per day were then provided through Tobruk with onward transportation by M.T. and the remainder from railhead with a longer M.T. haul. All available M.T. working at maximum capacity was required to meet commitments up to Benghazi; beyond Benghazi it was appreciated that the supply system would be over-strained with the increased turn round time of vehicles.  
(A.A.H.Q. WD/Air/14 Encl. 4A)

Admiral  
Weichold's Essay  
of 26 Nov. 1945  
Folder X. 175  
A.H.B.6

withdrawal from Sicily to Greece of the German Air Force led to the enemy submarine and air offensive in the Central Mediterranean and the subsequent cutting off of supplies for the armoured forces, (1) so this new intervention of the German Air Force over Sicily in December, 1941 had the reverse effect by regaining in one blow the mastery in this area and securing transports to Africa. (2) The following January showed clearly the results of this mastery of the air in the Central Mediterranean ... not a single ship and not one ton of material on its way to the Armoured Corps in Africa was lost. (3)

- 
- (1) During the period 1 May-30 November 1941, the total tonnage of identified merchant ships sunk on adjudged African convoy routes was:- 308,811 tons. Of this total 160,608 tons was sunk by sea action (122,494 by submarines), 133,482 by air action and 14,721 'other causes'. (Enemy records P.1/4203 and E.S.L.A.C. list of Identified Merchant Ships at the disposal of Italy).
  - (2) Admiral Weichold had revised this opinion by May 1951, when he wrote a study 'Axis Policy and Operations in the Mediterranean' for the U.S. Naval Department. In this he stated that the German U-boat and minelaying successes and the Italian Naval successes at the end of 1941 robbed the British of the command of the Mediterranean Sea and quoted a report of the German Naval Staff which stated that this radical change in the Mediterranean had directly relieved the tension in the Mediterranean and made possible the resumption of convoys to Tripoli. He then stated this was followed up by support from the German Fliegerkorps II operating from Sicily, and that at first most of the aircraft were employed in affording air cover for the Italian convoys.

'As these operations coincided with the first effects of the change in the balance of power at sea, the Luftwaffe claimed that the improvement was a result of the air cover it provided. This gave rise to an exaggerated estimate of the effects of aircraft at sea, a bigoted view which was later to have an adverse influence on operational decisions. Looking at the matter objectively it is clear that the change in the Mediterranean situation in favour of the Axis had been brought about even before the first aircraft of the Kesselring Air Force went into action on 21 December 1941'.

- (3) This statement must be accepted with reserve. It is definitely known that reinforcements for Libya were lost, but it is not known if these were specifically for the Armoured Corps. During January 1942, the total tonnage of identified merchant ships sunk on adjudged African convoy routes was:- 23,059 tons (3,553 by submarine and 19,506 by air action. In particular, the troopship Victoria (13,098 tons) was sunk by air action, when sailing from Taranto to Tripoli. The effect of the neutralisation of Malta as an offensive air base became more evident during the next four months. In February and March 1942, only 10,567 tons of merchant shipping were sunk by air action on adjudged African convoy routes and in the following two months not a single merchant ship was sunk by air action in the entire Mediterranean.

Furthermore, in spite of bad weather, (1) large quantities of stores were moved from Tripoli to .... harbours near the front; this could only have been because of the weakness of the enemy's counter-defences. This was particularly important at a time when 50 per cent of the transport belonging to the Armoured Corps was in need of repair following on the retreat from Cyrenaica. It was for this reason that it became possible by the end of January to reform the Armoured Corps in good fighting order along the eastern side of the Gulf of Sidra - an astonishing fact considering the difficult retreat for four weeks and the considerable losses in both men and material.'

Although it was known that the enemy had received considerable reinforcements during early January - on the 5th, in particular, Malta-based reconnaissance aircraft sighted nine escorted merchant vessels entering Tripoli - it was not considered possible for him to transport adequate supplies forward to launch an attack before mid-February, when it was hoped that our own supply situation would improve sufficiently to enable our forces to embark on operation 'Acrobat' (the invasion of Tripolitania).

C-in-C.'s  
Despatch P.66  
& AOC/11 Part  
II  
Enc. 66A

Comparative Air Strengths

(a) Air Strengths in the Middle East - Mediterranean Theatre as a whole

Before comparing the opposing air strengths which were immediately available to play a direct part in the desert conflict, it is necessary to consider the comparative air strengths in the Middle East - Mediterranean theatre as a whole, as to some degree aircraft outside Libya were potential reserves, or could play an indirect part both by operations affecting the general situation or by containing opposing air forces outside the immediate operational theatre.

Enemy  
Documents  
A.H.B.6.

Enemy records reveal that the German operational units (Luftflotte 2) at the outset of the enemy's counter-attack(2) had a strength of 657 aircraft (3) (including 178 single engine fighters, 232 long range bombers and 71 dive-bombers), with 332 aircraft immediately available/serviceable (including 99 single engine fighters, 108 long range bombers and 48 dive-bombers). Although the establishments and strengths had been further increased since the reinforcing of the

- 
- (1) As far as air reconnaissance and air strikes were concerned the bad weather favoured enemy reinforcing.
  - (2) Actually as at 24 January - three days after the enemy's initial thrust. The disposition of the German Air Force in the Mediterranean is given at Appendix No. 1.
  - (3) Middle East Intelligence assessed the German Air Force I.E. at the end of January (1942) as 726 aircraft (M.E.W.I.S. No. 85).

German Air Force in the Mediterranean in the previous month (December 1941) the number of aircraft immediately available/serviceable was less. (1) There were 121 transport aircraft, with only 67 serviceable.

The air forces in Greece/Crete included at least 129 long range bombers (48 serviceable) and those in Sicily included some 97 single-engined fighters (67 serviceable), some 103 long range bombers (60 serviceable) and 65 twin-engined fighters, including night fighters (27 serviceable). The composition of the German Air Force in Libya is considered in the following sub-section(b).

The former use (during the first five weeks or so of the 'Crusader' offensive) of He. 111's and F.W. 200's from operational long range bomber units for transport duties was discontinued. About 25 He. 111's, however, drawn from R.T.U.s of long range bomber units engaged in Russia were still drawn on for transport purposes in the Mediterranean. (2)

#### A.I. Assessment

Italian Air Force records in respect of operational units in the Middle East - Mediterranean Theatre are not held, but an A.I.3(b) report put the operational strength of the I.A.F. on 19 January 1942 as 720 aircraft, located as follows:-

Libya:	340 aircraft	(details of types given in following sub. sect.)
Sicily:	180 "	(including 50 long range bombers and 85 single engine fighters)
Sardinia:	100 "	(including 45 long range bombers and 40 single engine fighters)
Aegeans:	100 "	(including 45 long range bombers and 40 single engine fighters)

Serviceability was estimated at 55 per cent - i.e. a total of approximately 396 aircraft.

Thus the total operational strength of the Axis Air Forces in the Middle East - Mediterranean at the outset of the enemy's counter-attack was, so far as can be determined, 1377 aircraft with 628 serviceable.

It should be noted, in particular, that the air forces concentrated in Sicily (estimated combined operational strength 528 aircraft, with 253 estimated immediately available/serviceable) were pre-occupied with the task of neutralising Malta as an offensive base.

#### A.H.B. VB/9/1 and Appendix IV

Full, detailed, accepted figures of R.A.F. (and Dominion Air Forces) aircraft strength and serviceability in the Middle East Command are not available for the outset of the enemy's counter-attack (21 January 1942), but a full statement is available for the situation as at 1 February. See Appendix IV for full details.

- 
- (1) Figures for the G.A.F. in the Mediterranean - Middle East theatre on 15th November, 1941 (on the eve of our 'Crusader' offensive) were:- Establishment 464 aircraft: Strength 400 aircraft: immediately available-serviceable 206 aircraft: and on 13th December (when the G.A.F. reinforcing in the Mediterranean theatre had begun:- Establishment 798 aircraft: Strength 637 aircraft: immediately available/serviceable 339 aircraft. (Figures from German records - see Appendix 'R' of A.H.B. Narrative, The Middle East Campaigns, Volume II.
  - (2) This employment, incidentally, reduced the depth behind the operational strength of the long range bomber units in Russia.

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The strength of established operational squadrons (1) in the Middle East (Egypt, Cyrenaica, the Sudan, the Levant, Iraq and Aden) was as follows:-

Fighter Squadrons

Thirteen Hurricane I and II Squadrons, seven Tomahawk/Kittyhawk Squadrons, three Beaufighter Squadrons. Total Strength (including aircraft recommended for 'write-off'):- (2) 536 aircraft (Total serviceable or serviceable within three days:- 361 aircraft).

Army Co-operation Squadrons

Five Hurricane I Squadrons. Total strength:- 65 aircraft (Total serviceable or serviceable within three days:- 47 aircraft).

Bomber and Bomber Reconnaissance Squadrons

Idem and  
Weekly State  
30.1.42  
(W.O.7)

Ten light bomber type squadrons, (3) Survey Flight (No. 60, Squadron S.A.A.F.) and Strategic Reconnaissance Unit. (Blenheim IV's, Bostons, Marylands and Beauforts). Total strength:- 246 aircraft (Total serviceable or serviceable within three days:- 154 aircraft). Six medium bomber squadrons (Wellingtons Ic and II). Total Strength 105 aircraft (Total serviceable or serviceable within three days:- 79 aircraft).

Heavy Bomber strength:- Three Fortresses and four Liberators (two Fortresses and four Liberators serviceable or serviceable within three days).

Miscellaneous

No. 2 P.R.U. (long range Hurricanes and Beaufighters) Total Strength eleven aircraft (Total serviceable or serviceable within three days:- ten aircraft).

Sunderlands:- Total strength three (all serviceable or serviceable within three days).

Three Fleet Air Arm squadrons (Swordfish, Albacores and Walruses) for which figures are not available.

Total strength of Operational Squadrons:- 973 aircraft, of which 660 were serviceable or serviceable within three days, (excluding the three F.A.A. squadrons).

Appendix V

The strength and serviceability of R.A.F. operational squadrons under Air Headquarters, Mediterranean (Malta) as at 1 February, 1942, was as follows:-

- (1) Establishments (1E + 1R) at this time were:- Fighter squadrons 16 aircraft: Army Co-operation squadrons 12 aircraft: Blenheim squadrons 16 aircraft: Maryland and Boston squadrons 20 aircraft: Wellington squadrons 21 aircraft: Beaufort squadrons 12 aircraft.
- (2) 'Total strength' in this paragraph includes aircraft recommended for 'write-off'.
- (3) Excludes No. 223 Squadron, engaged on operational training duties.

Hurricanes: Total Strength (1) 65 aircraft  
(33 serviceable)  
 Beaufighters: Total Strength 2 aircraft  
(1 serviceable)  
 Blenheims: Total Strength 31 aircraft  
(18 serviceable)  
 Marylands: Total Strength 10 aircraft  
(2 serviceable)  
 Wellingtons: Total strength 31 aircraft  
(12 serviceable)

Total strength:- 139 aircraft, of which 66 were serviceable.  
 In addition, there were two Fleet Air Arm squadrons (Swordfish)  
 for which figures are not available.

The total strength of R.A.F. and Dominion operational squadrons in the Middle East Command (including Malta) shortly after the enemy's counter-attack (late January, 1942) was accordingly 1,112 aircraft, of which 706 were serviceable or serviceable within three days. (2) As already stated, figures are not available for the five Fleet Air Arm Squadrons.

In addition, transport aircraft in flying units totalled 40, of which 27 were serviceable or serviceable within three days. (3) Help was afforded, also, by British Overseas Airways Corporation.

(b) Comparative Air Strengths for Libyan Operations

According to German documents the German Air Force in Libya during the third week in January comprised the following:-

<u>Type</u>	<u>Strength</u>	<u>Immediately Available/ Serviceable</u>
Single Engine Fighters	74	28
Dive Bombers	71	48
Twin Engine Fighters	9	3
Long Range Bombers	-	-
Reconnaissance	21	7
Total	<u>175 (4)</u>	<u>86</u>

- (1) In this paragraph 'total strength' excludes a/c recommended for 'write-off'.
- (2) State of operational aircraft in the entire Middle East Command (including Malta but excluding East Africa and obsolete aircraft in Iraq and Aden), including aircraft in M.U.s, R.S.U.s, O.T.U.s etc. as at 1 February 1942 was as follows, the figures in brackets being numbers serviceable or serviceable within three days:- Beaufighters 63 (29), Hurricanes I's and II's 727 (368), Kittyhawks 137 (103), Tomahawks 311 (130), Wellingtons 206 (109), Heavy Bombers 7 (4), Baltimores 13 (4), Beauforts 16 (12), Blenheim IV's 464 (234), Bostons 99 (55), Marylands 98 (27), Sunderlands 3 (3).  
 Grand Total:- 2,144 aircraft (1,078).  
 (A.H.B. VB/9/1, VB/9/4 and Weekly State 30/1/42, W.O.7).
- (3) Total R.A.F. transport aircraft in the Command 58 (31)  
 (A.H.B. VB/9/1).
- (4) M.E. Intelligence assessed total German aircraft (I.E.) at end of January 1942, as 207. (M.E.W.I.S. No. 85).

Enemy  
 Documents  
 A.H.B.6

SECRET

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A.H.B.  
II J1/63

Records of the strength of the Italian Air Force in Libya are not available. It was estimated by A.I.3(b) as follows:-

<u>Type</u>	<u>Strength</u>	<u>Serviceability</u>
Single Engine Fighters	220	was believed
Dive Bombers	5	to have been
Long Range Bombers	45	maintained at
Reconnaissance	50	55% of strength
Coastal	20	
Total	<u>340 (1)</u>	

The combined Axis air strength can be assessed as approximately 515 aircraft, of which approximately 270 were immediately available/serviceable.

Idem and  
M.E.W.I.S.

As previously, the whole of the German force was operating in the forward area, mainly from landing grounds in the Merduma - Arae Philaenorum area, together with some 110 Italian fighters. The remainder of the Italian force was engaged on defensive patrols and shipping protection duties off Tripolitania.

Idem and Enemy  
Documents  
(A.H.B.6)

The enemy's supply situation in the forward area was still a limiting factor. At the beginning of 1942 German Air Force fuel stocks in the whole of North Africa were believed not to have exceeded 350 tons. The position was greatly improved by the arrival of the large convoy at Tripoli on 5 January 1942, which brought, inter alia, 2,000 tons of aircraft fuel. The difficulty still remained, however, of transporting supplies to the forward area. Air transport, M.T., and coastal vessels had all been pressed into service, and even the torpedo bomber force was used for transporting fuel; nevertheless, there were only comparatively small stocks of aircraft fuel and bombs immediately available in the forward area and on 17th, four days before the enemy's counter-attack opened, Fliegerfuhrer Afrika made an urgent request to Kesselring for supplies of bombs, as there were only sufficient 50 kg. bombs in the operational area for three operations. German records suggest that the shortage of fuel was not without benefit to the Fliegerfuhrer Afrika as it enabled him to rest his crews and improve the serviceability of his squadrons.

A.O.C.-in-C's  
Correspondence  
with C.A.S.  
etc. Part 3  
Encl. 297A

For our part the A.O.C.-in-C, Middle East (Air Marshal Tedder) had 'been somewhat concerned at the relative weakness of W.D. force during past few weeks and investigated on the spot.' He reported to the Chief of Air Staff (Air Chief Marshal Sir Charles Portal) on 23 January as follows:- 'There have been four main factors reducing our effective strength forward.

'Firstly supply. Difficulty of getting supplies, especially fuel, forward from railhead and Tobruk has drastically limited ability to operate light bombers forward and prevented operation of mediums from forward landing grounds. There have been times when even the reduced fighter force in forward area has been limited in its effort by fuel shortage .....

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(1) M.E. Intelligence assessed total Italian aircraft at end of January 1942, as 390. (M.E.W.I.S. No. 85).

'Secondly. Boggling of aerodromes by heavy rainstorms, not only at Derna, Barce and Benghazi but even in southern area, e.g. Magrun and Antelat .....

'Thirdly. Despatch of reinforcements to Far East. (1) Diversion of Hurricanes to Far East and Burma has made it impossible to replace wastage in squadrons in the line since both intake and repair output has been fully mortgaged ..... Serviceable strength of fighter squadrons (2) has for time being been seriously reduced. Light bomber strength has been reduced, not only by withdrawal of four of the six British Blenheim squadrons supporting the land operations, (3) but also to bring these four squadrons up to full strength of twenty-four aircraft ..... (4)

'Fourthly. Technical trouble with Bostons and delay in availability of Baltimores, both types needed to re-equip squadrons which had Marylands. (5)

.....Consider it urgently necessary to build up numerical strength in Cyrenaica again quickly as possible.'

The offensive fighter force had advanced landing grounds at Antelat, defensive fighter squadrons were located at Tobruk, El Adem, Derna and Benina; the Army Co-operation squadron (No. 208) at Tmimi satellite, with a detached flight at Antelat; and the two light bomber squadrons at Bu Amud and Gambut, respectively. (6) The strength of the

- (1) Details of these diversions are given in Part Seven of the previous Narrative (Middle East Campaigns; Libya. Mid-June 1941 - Late Jan. 1942).
- (2) Serviceability figures in respect of the 12 single engined fighter squadrons under A.H.Q., Western Desert as at 16 January 1942, was reported by the A.O.C. as follows:-

<u>Total</u>		<u>Per Squadron</u>	
<u>A</u>	<u>B</u>	<u>A</u>	<u>B</u>
97	25	8	2

A - Serviceable. B - Serviceable within 48 hours  
(AOC/11 Pt 2 Encls. 75A)

- (3) Nos. 45 and 84 Squadrons were withdrawn in order to be sent to the Far East. No. 113 Squadron was withdrawn for re-fitting and was later sent to the Far East. The Lorraine Squadron was withdrawn, with the intention that it should reform in Syria later. The Blenheim squadrons remaining for land operations were Nos. 11 and 14 Squadrons
- (4) It had been agreed that Blenheim squadrons transferred to the Far East should have an I.E. of 24 aircraft in order to save overheads, M.T. etc. (A.O.C.-in-C.'s correspondence with C.A.S. etc. Part 3 Encls. 288A and 289A).
- (5) No. 24 Squadron (S.A.A.F.) (Bostons) was withdrawn from operations on 24th December, 1941, owing to difficulty with the Wright Cyclone engines. Owing to the cessation of supply of Marylands and lack of spares, No. 12 Squadron S.A.A.F. was withdrawn the same day for re-equipping with Bostons. No. 21 Squadron S.A.A.F. continued to operate the few Marylands available until mid-January, when the Squadron was withdrawn in preparation for re-equipping with Baltimores. (S.A.A.F. Squadron War Diaries and S.A.A.F. Narrative).
- (6) The location of the units under A.H.Q. Western Desert, a few days before the enemy's counter-attack is given at Appendix VI.

SECRET

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operational squadrons under Air Headquarters Western Desert as at 1 February was:-

Single Engine Fighters:	Total Strength 359 (Serviceable or serviceable within 3 days - 218)
Blenheims:	Total Strength 44 (Serviceable or serviceable within 3 days - 34)
Army Co-op.	Total Strength 28
Hurricanes:	(Serviceable or serviceable within 3 days - 19)
S.R.U. and Survey Flight Marylands:	Total Strength 14 (Serviceable or serviceable within 3 days - 10)
Total Strength (including aircraft recommended for 'write-off') of squadrons under A.H.Q., Western Desert:-	
445 aircraft	(Serviceable or serviceable within 3 days - 281).

In addition, the following operational units were under A.H.Q. Western Desert's operational control:- a detachment of No. 272 Squadron Beaufighters - there were, however, only five aircraft serviceable or serviceable within five days in the whole squadron - and No. 826 Squadron, F.A.A. (Albacores), for which strength and serviceability figures are not available.

No. 234  
Wing O.R.B.

Responsibility for the fighter protection of convoys and defence of rear communications in the Western Desert was vested in No. 234 Wing (at Maaten Bagush). Squadrons directly under the Wing at this stage comprised No. 30 Squadron (Hurricanes), No. 805 Squadron, F.A.A. (Martlets) and R.N. Fulmar Flight. No. 30 Squadron as at 1st February had a total strength of 23 aircraft (18 serviceable or serviceable within three days); figures for the Fleet Air Arm fighters are not available.

Idem

The total strength of No. 205 Group's medium/heavy bomber squadrons which were available, potentially, for Libyan operations, amounted to 104 Wellingtons (79 serviceable or serviceable within three days) and four Liberators (two serviceable or serviceable within three days). As already mentioned, however, fuel shortages prevented the operation of a large medium bomber force from advanced landing grounds in Cyrenaica and there remained, also, the need to bomb enemy bases in Greece and Crete.

No. 201 Group  
O.R.B.

Ship striking and G.R. squadrons under No. 235 Wing (No. 201 Group) concerned with the air/sea war off Libya comprised at this stage No. 39 Squadron (Beauforts), No. 55 and 203 Squadrons (Blenheims), a few Walruses and Swordfish operated by Nos. 700 and 815 Squadrons, F.A.A., respectively, and a few Dorniers and Ansons operated by No. 2 R.Y.S.A.F. and the 13th Hellenic Squadron, respectively. The R.A.F. squadrons, in particular, had a total strength of fifteen Beauforts (twelve serviceable or serviceable with three days) and three Sunderlands (all serviceable).

The total strength (including aircraft recommended for "write-off") of all aircraft available for Libyan land and sea operations as at 1st February, making estimates for Fleet Air Arm and other units for which complete figures are not available, may be taken as approximately 711 aircraft (approximately 473 serviceable or serviceable within three days). This was considerably less than the force available at the outset of the "Crusader" offensive in mid-November, 1941. (1) To this total must be added 31 Blenheims (18 serviceable) and 31 Wellingtons (12 serviceable) and two Fleet Air Arm Squadrons of Swordfish and Albacores (strength and serviceability figures not available), based on Malta, (2) which were available for offensive operations connected with the Libyan campaign.

- 
- (1) Strength of aircraft under the operational control of A.H.Q. Western Desert at that time was 657 aircraft (554 serviceable or serviceable within three days), plus No. 826 Squadron, F.A.A., No. 60 Squadron S.A.A.F. (Survey Flight); the Lorraine (Free French) Blenheim Squadron and detachments of ship-striking and G.R. squadrons for which full figures were not available. (See Part Five of previous Narrative).
  - (2) Compared with 36 Blenheims (32 serviceable or serviceable within three days), 38 Wellingtons (34 serviceable or serviceable within three days) and two F.A.A. Squadrons (strength figures not available), in mid-November, 1941. (See Part Five of previous Narrative).

It is clear, therefore, that we still held numerical superiority in aircraft in the immediate operational theatre - approximately 773 aircraft, with approximately 503 serviceable or serviceable within 3 days (including bombers based on Malta) compared with approximately 742 Axis aircraft, with approximately 366 serviceable/immediately available (including bombers in Greece and the Aegean).

In view of the considerable Axis air forces elsewhere in the Mediterranean, particulars of which have already been given, and the great advantage held by the enemy in having far shorter reinforcing routes, the potential strength of the enemy's air forces was greater. As already mentioned, however, the enemy's supply situation at the outset of his counter-attack precluded the operation of an increased force in the forward area.

M.E.F. Operational Instruction No. 110

G.H.Q.  
M.E.F.  
Operation  
Instruction  
No. 110

Although, as already mentioned, it was appreciated that the enemy would not be able to forestall the continuation of our advance in mid-February by one of his own, instructions were issued to provide against this contingency. In particular, on 19th January, General Auchinleck issued an operation instruction to the Commanders of the Eighth Army and British Troops in Egypt, stating that although it was still intended to press on to Tripoli "in view ... of the fluidity of the general strategic situation we must face the prospect of being unable to continue the Libyan offensive and of having to pass to the defensive on the Western Front". If this came to pass, it was intended to stand on the line Agheila - Marada, and prevent the enemy advancing east of it. If this line could not be held, our forces were to withdraw north-eastwards and eastwards to the line Sollum - Giarabub at which the enemy had to be stopped. If a withdrawal was necessary every effort was to be made to delay the enemy and thereby to retain the use of forward landing grounds as long as possible (1). In the event of a withdrawal, it was not intended to hold permanently Tobruk or any other locality west of the frontier.

AOC/11. Part 2

Instructions were issued by the Eighth Army and 13th Corps to prepare for the eventuality and the A.O.C., Western Desert (Air Vice Marshal Coningham) was advised to keep rear airfields stocked.

~~The Initial Attack (21st January)~~

C.in C's  
Despatch  
P.66

~~"On the 21st January", General Auchinleck wrote, "the improbable occurred, and without warning the enemy began to advance."~~

- (1). The necessity of falling back to the Sollum area in the event of an enemy counter-attack had been previously expressed in a Middle East Defence Committee appreciation (D.C.(41)11 dated 27th December, 1941. The Chiefs of Staff were most perturbed at the loss of the air bases Tobruk - El Adem involved, as it appeared doubtful to them in that case if enemy sea communications to North Africa could be effectively controlled by air or naval forces, and Malta would be jeopardised due to difficulties of sea supply. (AOC/11 Part 2, Encls. 66C and D).

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Dissension Among the Axis Commanders

'On 21 January', wrote General Auchinleck, 'the improbable occurred, and without warning the enemy began to advance.' Rommel had made one of his characteristic sudden decisions, taking the German General Staff by surprise no less than the British. The latter had estimated that the Axis army would not be able to launch an offensive before mid-February, and by normal logistical calculations this view was justified. On 16 January the German General Staff had already stated:-

A.H.B.(6) Trans.  
No. VII/15

'The recent developments on the eastern front, and the English success in Libya, will together make it easier for the British to hold their Middle East positions in 1942. England will probably not need to fear a threat from the Caucasus and Turkey, nor a renewed attack on Cyrenaica.'

App.609 to  
Panzerarmee  
Diary Jan. 1942

Mussolini's plans were more explicit. His main theme, as usual, was the supply situation. He reiterated the dependence of Tripolitanian strategy on the situation in the Mediterranean, and stated that because of the shortage of fuel, convoy traffic would be slowed or even interrupted from mid-February. He anticipated however, that the intensified operations against Malta would ease the movement of single ships along the western sea route, making it possible to ensure the normal supplies for the colony, but impossible to bring over fresh troops or equipment. His plan was that the Axis army should get through this period of crisis with the maximum economy, and ordered that until further notice the defensive line should remain at Mersa Brega - Marada, as the situation did not permit a move forward. While the infantry held this line, the mobile forces were to carry out restricted offensive operations when necessary and practicable. The intention was to give the defensive tactics the appearance of intensive activity and to harass any enemy preparations for an attack.

Enemy Documents  
Cabinet Office  
Ref. A.L. 866

A.H.B.(6) Trans.  
VII/104  
Kesselring;  
The War in the  
Mediterranean

Rommel's leanings were directly opposed to such a cautious policy. His plan was to take a risk, gambling on the slight advantage he held, in order to improve his position and worsen the enemy's. He reasoned that at that time the British were only equal to the Axis in strength, if not inferior, but that they could reinforce more quickly. Thus there was a fleeting opportunity of defeating the British and preventing the establishment of a line at Agheila. If this opportunity was not seized it would be gone for many months to come. He was supported by Kesselring, who emphasised the importance of securing Benghazi, describing it as 'absolutely essential for speeding-up and safe-guarding our supplies.' He considered that the offensive involved no special risks as long as it stopped at the right time; presumably by this he meant not before the capture of Benghazi. This emphasis on Benghazi would tend to show that the British idea that the enemy's original plan went no further than to carry out a reconnaissance in strength to test the British dispositions and generally to impede preparations for an advance, was an under-estimate. However, the only possible pointer to an Axis advance, apart from the general unpredictability of Rommel, was the improvement in the supply situation, and even this, while making an offensive possible, did not make it likely.

The Initial Attack

After the preparatory shelling of our forward positions, in the early morning of 21 January the enemy advanced in three columns. The most northerly column, including some 30 German tanks, advanced up the main road, the middle column moved south of the road, and the southern column, including about 35 German tanks, approached along the north bank of the Wadi Faregh.

No. 208  
Squadron  
O.R.B.

Two tactical reconnaissances and one photographic reconnaissance were carried out during the morning of the 21st, on behalf of the XIII Corps, by No. 208 (A.C.) Squadron's detached Flight at Antelat. The photographic reconnaissance aircraft, accompanied by a 'weaver', took off at 0930 hours to complete an important trip necessary for an overprint of the enemy's defences before the Flight had received any information of the enemy's advance. The coast fifteen miles on either side of Marsa Brega was photographed and showed the enemy's most northerly advancing column; the reconnaissance might have been of greater value if some inkling of the enemy's action had been given beforehand. Later in the morning two tactical reconnaissances were carried out to cover the forward areas of the enemy's advance. Reports were made on two main columns, one consisting of some 200 vehicles, including many A.F.V.s advancing along the main road at Marsa Brega, the other of 2000 M.T. and A.F.V.s advancing north-east from the Bir Suera - Bir el Ginn area. The Strategic Reconnaissance Unit and the Survey Flight (No. 60 Squadron, S.A.A.F.) meanwhile, were engaged on reconnaissance commitments (1) well behind the enemy's points of advance.

No. 223  
Squadron  
RSU. Appendix  
and S.A.A.F.  
Narrative

C. in C's  
Despatch  
P.68

At first our forces seemed to have the situation under control, but later in the day the Support Group in the south was impeded by sand dunes and some of the infantry and artillery were overtaken by enemy light units. The Guards Brigade in the north was not in difficulty. Major General Messervy, Commander of our forward forces, instructed his two subordinate commanders to continue their delaying tactics (2).

The Enemy's Air Support (21 January)

The enemy's initial attack was accompanied by intensive supporting air action. It was estimated that the combined German and Italian Air Forces flew approximately 260 sorties. Of these sorties about half were single engine fighter sorties - almost half of which were Italian aircraft with,

A.I.3(b)  
Report  
A.H.B./IIJ1/63

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- (1) Successful morning and afternoon reconnaissances were made by S.R.U. of Misurata Marina, Misurata L.G. Dufin and Buerat El Hsun, and No. 60 Squadron, S.A.A.F. (detacht) covered an area 20 miles west of Ras Lanuf, north of Marble Arch.
  - (2) General Messervy had first intended that in the event of an enemy attack our forward troops should withdraw if necessary, fighting a delaying action, to the line Agedabia - El Haseiat which was to be held to the last. The 2nd Armoured Brigade was to be brought forward to counter-attack the enemy's right flank and rear. Orders to hold the above-mentioned line to the last had to be cancelled, as the reserves of supplies which this line was intended to cover had not yet been placed in position. (C.-in-C.'s Despatch P. 68).

C.-in-C's  
Despatch P. 68  
and M.E.W.I.S.  
No. 84

Enemy Documents  
A.H.B.6. 01096

in addition, up to 20 C.R.42's employed as fighter-bombers for low-level ground attacks; German dive-bombers, with German and Italian fighter escort flew 70 - 80 sorties against our forward troops and positions; and the remainder of the effort was made up for the most part of reconnaissance flights. Attacks, which were reported as heavy and persistent, were made on our forces in the forward area and targets at Antelat, Cirene, Appolonia, Tmimi and Agedabia. German documents record that the Luftwaffe effectively supported the advance of the motorised units throughout the day, flying over 300 sorties on 21 and 22 January.

#### Antelat Landing Grounds Unserviceable

A.H.B.  
Narrative  
Middle East  
Campaigns,  
Vol. II, Pt. V

O.R.B.s  
of Squadrons  
under A.H.Q.  
W.D.

At the outset of the 'Crusader' offensive (18 November 1941) our forces were favoured by the fact that adverse weather conditions grounded the enemy's advanced air forces in Cyrenaica, but were not sufficiently bad farther to the east to restrict our own air operations. This time the situations were reversed. The enemy's forward landing grounds in Eastern Tripolitania remained serviceable, but severe sandstorms alternating with torrential rain over Western Cyrenaica had ruled out offensive operations from our advanced base at Antelat from 15 January onwards and rendered the airfield unserviceable. No effective fighter opposition to the enemy's air attacks on the 21st was, accordingly, possible. No. 94 Squadron contrived to 'scramble' six Hurricanes in an attempt to intercept reported raiders, but no enemy aircraft were encountered.

Conditions at Antelat had reached such a pitch, in fact, that prior to the enemy's attack the decision had been made to withdraw some of the advanced fighter squadrons temporarily to Msus. On 20 January several squadrons and/or flights were ordered to withdraw or be at readiness for withdrawal the following day. Thus on the 21st, before the Antelat landing grounds were seriously threatened by the enemy, the following were withdrawn:- No. 250 Squadron, No. 112 Squadron (less No. 1 Party), No. 33 Squadron (less two aircraft and main ground party), the aircraft of No. 274 Squadron and 'B' Flight ('A' Flight remained as a refuelling party), three aircraft of

No. 229 Squadron (eight aircraft had returned to base at Gazala the previous day) and No. 2 Servicing Party, and No. 1 Servicing Party of No. 3 Squadron, R.A.A.F. (1).

Situation Deteriorates, 22nd January

C. in C's  
Despatch  
P. 68

On 22nd January, the 2nd Armoured Brigade was ordered to move forward in support of our left flank. Meanwhile, however, the Guards Brigade failed to hold the enemy (2). The enemy's northerly column passed through the Brigade and advanced swiftly up the main road to Agedabia. The Guards Brigade was then ordered to block the main road north-west of Agedabia and the track leading to Antelat. Our columns were held up by the rough terrain of the main road and were easily outstripped by the enemy. The 13th Corps then instructed the 1st Armoured Division to bar the way to Msus and the 4th Indian Division (which had been reinforced by a battalion of heavy tanks) to oppose any attempted advance on Benghazi.

It was now clear that what was at first apparently a reconnaissance in force was now developing into a major attack.

No. 208 Squadron  
O.R.B.

MAATEN  
BELCLEBAT

During the day No. 208 Squadron's detached flight at Antelat operated continuously on behalf of the 13th Corps, carrying out six reconnaissances - five of the general El Agheila - Agedabia - El Hasehat areas and one medium Tac/R covering the forward area and rear area as far back as Ras El Aali (3). Three morning reconnaissances provided details of the enemy's columns moving eastwards in the B. El Ginn and B. El Cleibat areas. During the afternoon the flight was ordered by Corps to withdraw to Msus, where they were at four hours notice to withdraw to Thimi where Squadron Headquarters and the other fighters were based. The main party left Antelat at 1600 hours, when shelling was observed only one mile west of the airfield.

- (1) Several of the Squadron diarists mention the instructions from No. 258 Wing (No. 258 Wing ORB. was destroyed). No. 33 Squadron ORB, for example, states for 21st January, 1942:- "Owing to the bogged surface of the runways, Wing decided to move all the squadrons at Antelat to Msus. A special strip on the runway was prepared and the aircraft were pushed into position for take off". The diarist of No. 3 S.A. Wing reported on 21st January, 1942:- "The Tac R reports indicated that the enemy was advancing in small parties; 258 Wing are withdrawing to Msus". The diarist of No. 4 Squadron S.A.A.F. reported on the same day that during the "evacuation of Antelat" two aircraft, operating from Benina, carried out defensive patrols over the airfield (S.A.A.F. Narrative).
- (2) Air Vice Marshal Coningham in a signal to Air Marshal Tedder on 23rd January reported: "Enemy advance to Agedabia and Antelat quite unopposed and due to serious blunder of Guards Brigade which opened road" (AOC/II Part 2, Encls. 79a).
- (3) For several weeks Ras El Aali had been used as a forward off-loading point by small craft and part of the bombing effort had been directed against the jetty, barges and other craft in the vicinity and M.T. waiting to make the final haul to the front (See Previous Narrative Part Seven). On this occasion two barges were observed. Meanwhile the Strategic Reconnaissance Unit covered rear reinforcement points at Buerat, Tamet, Sirte and Nofilia with "complete success". (No. 223 Squadron O.R.B.).

The three afternoon reconnaissances were all impeded by ME. 109 attacks, although no casualties were incurred; reports were made on columns moving up towards Antelat from Agedabia and further south it was established that the enemy had advanced at least as far as El Haseiat.

No. 3 Squadron  
R.A.A.F. O.R.B.

Further information was given by pilots returning from fighter operations - particularly by those of No. 3 Squadron, R.A.A.F.

#### Evacuation of Antelat Airfield Completed

A.H.B.  
ILJ/1/12  
P. 42

AOC/11 Part 2  
Encls. 81A

It was imputed at the time that the enemy's advance on Antelat on 22nd January above caused the hurried evacuation of the forward fighter force. This imputation appears to be based mainly on the evidence of the signal quoted below and similar reports which were intended simply to give short vivid accounts of the final evacuation. In a report to the A.O. C-in-C. on 23rd January, Air Vice Marshal Coningham stated: "First warning (of enemy's advance) received 258 Wing Antelat was at 1300 yesterday 22nd January, from Corps and was merely "move back at once enemy coming." Place was being shelled as last aircraft taking off. Pure good fortune that most fighter force not lost owing state of ground and if attacked one day earlier none could have left. Departure necessitated man-handling each aircraft by twelve men under wings to a strip 30 feet wide and 500 yards long. All got off except four Kittyhawks and two Hurricanes which required aircrews and small repair." These aircraft, incidentally, were either destroyed by Squadron personnel or our ground troops before leaving.

As already mentioned, however, an appreciable part of the forward fighter force had already withdrawn to Msus, on the previous day owing to the continued unserviceable state of the airfield. The rapid deterioration of the military situation on the 22nd necessitated the withdrawal of the remainder of the fighter force, the circumstances of the latter stage of the withdrawal being those indicated in Air Vice Marshal Coningham's signal.

A.H.B. ILJ1/12  
P. 42

AOC-in-C's  
Correspondence  
with C.A.S.  
Part 3 Encl. 300A  
AOC/11 Part 2  
Encl. 78A

Report by W/C  
Tester, C.R.O.  
H.Q.R.A.F/M.E.  
appended to W/C  
Finlayson's  
Report on  
"Crusador"

The R.A.F. was, most naturally, dismayed by what seemed after the previous successful offensive, to be an inexplicable retreat but morale remained high. The spirit of the squadrons was best illustrated by one pilot who flew off and landed safely a Kittyhawk which was Category 2 through undercarriage trouble. R.A.F. armoured cars which helped to cover the withdrawal suffered casualties.

Two of the most disquieting features of the abandonment of the forward landing grounds were the facts that by that time the fuel situation had greatly improved (100,000 gallons of petrol were left hidden near the airfield), and arrangements had been completed for the installation of No. 510 A.M.E.S. (C.O.L.) at a forward landing ground at Belandeh with the intention of operating formations of up to eighteen fighters on controlled interception over the enemy's lines.

#### Air Action on 22nd January

A.I. 3(b)  
Report A.H.B.  
ILJ1/63

During the second day of the enemy's attack the enemy air force again carried out intensive operations, flying approximately 230 sorties - only about 30 less than on the opening day. The effort was entirely directed against our

forces in the battle area; in particular some 70 - 80 Stuka sorties were made, escorted by both German and Italian fighters.

M.E.W.O.S.  
No. 13  
and  
Sqn. O.R.B.s

For the first time for a week our fighter aircraft were able to put up an appreciable effort over the forward area (1) although handicapped in range by the necessity of operating from Msus. Sorties carried out were:- Offensive Sweeps 22; Ground Attacks 12; Bomber Escort 20. Defensive fighter commitments in Cyrenaica comprised a further 47 sorties (13 on shipping protection and 34 on local defence). Thus the fighter effort only just exceeded the 100 sorties - or little more than a third of the effort at peak periods during the 'Crusader' offensive when weather conditions were favourable.

No. 3 Sqn.  
R.A.A.F. O.R.B.

An offensive sweep carried out by 10 Hurricanes of No. 274 Squadron in the morning encountered no enemy aircraft, but twelve Tomahawks of No. 3 Squadron, R.A.A.F., covering the Agedabia - El Gtafia - Bettafal - Haseiat area in the early afternoon encountered a force of 30 Ju.87's, escorted by a mixed force of enemy fighters. As a result of the ensuing combat, No. 3 Squadron claimed one JU.87 and two Me. 200's destroyed and two G.50's and one Me. 110 damaged; on the return journey the formation was attacked by two Me. 109F's and one of these was claimed damaged (2). No. 3 Squadron lost two aircraft in the encounters, but one of the pilots subsequently returned to his unit.

Sqn. O.R.B.s  
and M.E.F.P.S.  
No. 13

After a considerable lull in our direct support bomber operations due not only to bad weather but the need to 'pull out' the two available Blenheim Squadrons (Nos. 11 and 14) in an attempt to improve serviceability, a small scale bomber effort was again practicable. No. 11 Squadron, which had been standing by at Msus was briefed to attack enemy M.T. columns, previously located by Tac/R., north of Wadi Faregh, some 28 miles S.S.E. of Agheila. Ten Tomahawks of No. 112 Squadron provided fighter escort. The target was attacked shortly after noon and well covered with bomb bursts; at least three direct hits were observed, including one on a petrol bowser which burst into flames, numerous near misses were scored, and a second fire started. Considering the small scale of the attack damage was heavy and a congratulatory message was later sent to the Squadron from O.C. No. 3 (S.A.) Wing. No fighter opposition was encountered, but approximately 21 enemy aircraft were seen dive-bombing our forces near Haseiat. Two of our bombers collided on breakaway and were damaged. An attack on 500 - 700 vehicles congested on the Agheila - Agedabia road, south-west of Agedabia, delivered a little later in the afternoon by nine Blenheims of No. 14 Squadron (which had proceeded to Msus from Gambut for briefing, bombing-up and provision of fighter escort) was far less successful and only 'fragmentation damage' could be claimed. The

- (1) No offensive sweeps could be carried out 18 - 21 January inclusive, and only 33 offensive sorties on 16 and 17 January.
- (2) German records for 22 January 1942 show no Ju.87 losses but give one S/R reconnaissance, one day fighter and one bomber lost and three day fighters damaged (Verluste Afrika ADIK.103/64). As mentioned in the previous Narrative accepted Italian figures for aircraft casualties are not available.

escort of ten Tomahawks of No. 250 Squadron prevented a small number of German fighters from diving on the Blenheims and claimed one Me. 110 destroyed and one Me. 109 badly damaged. The Blenheim attack was followed by a ground strafing operation by six long range Hurricanes of No. 33 Squadron which shot up and damaged a number of vehicles advancing on Agedabia.

No. 205 Group  
and No. 70  
Sqn. O.R.B.

During the night (22nd/23rd January) No. 70 Squadron Wellingtons (No. 205 Group), operating from L.G. 75, Sidi Barrani, were called upon to hinder enemy reinforcing in the rear, nine aircraft dropping six (short) tons of 250 lb. bombs on the jetty and stores at Buerat El Hsun, and another dropped its load of bombs among M.T. two miles west of Sirte.

For the first two days of the enemy's attack, due to more favourable landing ground conditions, the enemy air force was able to operate far more intensively in support of the land operation than our own squadrons. (1) This attempt on the part of the enemy to establish local air superiority was extremely short-lived. Within the next few days, as indicated in the following pages, the burst of Axis air activity had all but spent itself and our air forces regained the initiative.

Failure to Check Enemy Advance and Loss of Antelat and Saunnu (23 January)

During 23 January, the enemy's advance continued practically unchecked. Attempts were made by the 2nd Armoured Brigade to clear the area around Antelat and Saunnu while on their way northwards to cover Msus. In the ensuing engagements with the enemy's armour, two of the regiments of the Brigade suffered heavy casualties; when the whole Brigade was finally assembled later in the day it could muster only 80 tanks. By the evening enemy columns were in undisputed possession of Antelat and Saunnu.

No. 208 Squadron's detached flight at Msus carried out five tactical reconnaissance and one 'medium reconnaissance' (as far back as Ras El Aali) during the day. The early morning reconnaissance relieved Army minds of the fear that Msus might already be threatened, but it was not possible to ascertain the position of the enemy's advancing columns until noon, owing to ground haze. The opportunity was taken, however, of reconnoitring the area well to the south of the battle to make sure that the enemy had no columns carrying out vast out-flanking movements. Subsequent reconnaissances reported the situation in the Antelat and Saunnau area and the position of the supporting M.T. which was moving up from the Agedabia area.

Owing to the seriousness of the situation and the need for as complete a picture of the enemy forces as possible the normal tactical reconnaissance effort from 23 January onwards was supplemented by reconnaissance information reported by Nos. 33, 94, 112, 229 and 250 fighter squadrons. Meanwhile the Strategic Reconnaissance Unit continued to

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(1) Enemy documents state that the Luftwaffe attacked in waves throughout these two days against British Columns and met with great success. (Diary of Panzer-Armee Afrika)

No. 223  
Squadron O.R.B.  
S.A.A.F.  
Narrative

cover with 'complete success' enemy reinforcing points and air bases west of El Agheila (Muftah, Es Sultan, Nofilia, Auegia and Marble Arch) while the Survey Flight (No. 60 Squadron S.A.A.F. detachment) despite defensive fighters in the vicinity, photographed a strip 110 miles long in the Marble Arch area, reporting the presence of eighteen large enemy aircraft and six small machines on the Marble Arch aerodrome' and 'a steady stream of traffic ... moving eastwards along the coast'.

#### R.A.F. Regains Local Air Superiority (23 January)

Sqdn. O.R.B.s  
and M.E.F.O.S.  
No. 13

During this critical stage of the enemy's advance our advanced fighter force, operating from Msus, regained air superiority over the forward area. Throughout the day (23 January) Nos. 3 R.A.A.F., 112, 250 and 274 Squadrons carried out seven offensive sweeps, comprising 75 sorties, over the general Agedabia - Antelat - El Haseiat area. Although the enemy were reported to have made a few bombing attacks on our forces in the Msus area during the day, the only aircraft sighted by our offensive fighters were four Me. 109's which were all reported as probably destroyed. (1) As already mentioned these fighter operations also provided useful reconnaissance information. After a vigorous start the Luftwaffe began to decline early and by the 25th there was a marked decrease in air operations.

No. 33 Sqdn.  
O.R.B.

Owing to the need for the light bomber force to operate against an Italian convoy bound for Tripolitania (considered in the following sub-section) the enemy's columns were almost unhampered by air attacks. The only attack carried out was a small ground-strafting operation by six Hurricanes of No. 33 Squadron against M.T. interspersed with tanks, on the road between Agedabia and Antelat, which had been previously reported by a Tac/R carried out by aircraft of the same squadron. One petrol bowser and two lorries were reported to have been set on fire and 25 lorries damaged. One of the Hurricanes concerned was shot down by A.A. fire.

M.E.F.O.S.  
No. 13

Other fighter operations, concerned with defensive commitments in Cyrenaica, involved the flying of 47 sorties (24 sorties on shipping protection and 23 on local defence). The day's fighter effort of 126 sorties (excluding sorties specifically on reconnaissance), although less than a half of that expended during peak periods during the 'Crusader' offensive, showed a gross increase of 25 sorties over the previous day's effort and a marked increase in offensive sweeps.

#### Enemy Halts Before Renewing his Advance (24 January)

AOC/11 Part 2  
Encl. 81B

Shortly after midnight 23/24 January the Commander XIII Corps (Lt. Gen. Godwin-Austin) sent the following signal to General Ritchie at Advanced Eighth Army Headquarters which clearly showed the seriousness of the ground situation: 'Loath to seem pessimistic but seems clear that we have not repeat not inflicted serious damage on enemy to whom we cannot offer serious resistance on coastal road; (he) is still undefeated at Antelat and has some 50 tanks in area Saunnu which was temporarily held at 17.00 hours. Guards Brigade last reported dangerously far

(1) German records, however, show no losses or damage to fighters on this day (ADIK 103/64).

south.... My personal impression is that one Armd. Div. has not repeat not deprived enemy of power to continue advance nor have they sufficient strength both to hold him across track Antelat - Msus and protect their own left flank. Would therefore ask you to allow me to use my own discretion in ordering further withdrawal by Desert on Mechili. Have already warned whole R.A.F. less one A.C. Flight to evacuate to Mechili first light. They will leave nothing valuable behind. I think we may have underestimated enemy potential armoured range against our slender resources. As agreed between us today withdrawal Gebel troops must be carefully co-ordinated with and not lag behind Desert withdrawal. Courageous decision must therefore be made re Benghazi as Gebel force there might be nipped and feel you must lay upon me responsibility for ordering co-ordinated withdrawing as I think fit, remembering I fully realize importance attached by sister services and political and publicity value ....'

No. 208 Sqdn.  
O.R.B.

The situation on the 24th flattered to deceive. The diarist of No. 208 (A.C.) Squadron wrote:- 'The enemy's advance had stopped and it seemed our forces were holding all along the line. The general line of the front was from a point slightly south of Magrun to Beda Fomm, Antelat - Saunnu and Grara.' Two of the reconnaissances of the detached flight at Msus were interrupted by Me. 109 attacks and one of the aircraft engaged in a first-light reconnaissance failed to return.

Arrangements for the Withdrawal of R.A.F. Units  
(24 January)

AOC/11 Part 2  
Encl. 81A

Air Vice-Marshal Coningham sent back to Air Marshal Tedder a copy of General Godwin-Austin's signal and explained the general background to the signal. ('The impression I have is that our forces do not appear to have the fighting capacity to overcome any tactical mistakes that may be made. There is somehow, no dash and drive') and indicated the general plan for the inevitable withdrawal of the Western Desert units.

'I hope you will agree,' he wrote, 'in my taking the worst case as a basis for action. The penalty of over-insurance is far less in the circumstances than optimism and under-insurance because retirement based on one long road could, in the latter case, lead to disaster which early movement avoids. I have, therefore, ordered the retirement of all maintenance and heavy units, including the A.M.E.S., back to the Egyptian side of the wire and am allotting them their former bases. All unit base parties are likewise on the move back, leaving the remainder of our force free for operations. The Army intention, if the enemy pressure continues, is to fight successive delaying actions on the axis Msus - Mechili - Gazala - Tobruk - Omar, with the main stand at Gazala. This plan may, of course, be altered if it is decided in Cairo to try and hold Tobruk. The stand at Mechili would be long enough to enable the Gebel to be emptied. The fighter force is being kept wholly mobile and is to fight a rearguard action with the object of covering the withdrawal of the vast quantity of M.T. that abounds everywhere. The main force has now moved to Mechili with Msus as an advanced ground and it will fall back successively to Gazala and Gambut. A secondary force

consisting of the two squadrons at Benghazi (1) gives immediate protection to the traffic in the Gebel and falls back joining two more squadrons at Martuba. (2) The four squadrons will move back successively to El Adem and an aerodrome near the wire, the work of both forces being co-ordinated by this Headquarters. The medium bombers (3) will be based in the Tobruk area first of all but their parties are going back to L.G's 75 and 76 and eventually to the Bagush area. To ensure full use of the day bombers I have asked the Army to try and group their forces together so that we can select hostile targets; the mix-up at the present time prevents this being done. The heavy (4) bombers and Albacores should, I think, operate against Agedabia, Mechili and the Buerat area, particularly Agedabia which is a 'bottle-neck'. You may, of course, wish them to attack Crete should enemy action from the island assume worrying proportions. I am afraid the loss of Benghazi will prevent effective action against Tripoli, but we can keep going up to the last minute at El Adem if you so desire.

I have ordered the destruction of all enemy air force material as a primary task and have instructed Wing Commanders to ensure that fuel that cannot be carried and broken-down M.T. which cannot be towed are destroyed. The foregoing may sound very depressing but it is the worst case, and I can at any time about turn any essential services that may be moving. R.S.U.s and A.S.P.s, however, are very bulky units to get out of the way and they must have ample warning. El Adem has been made the control both for air and road traffic.'

Air Vice-Marshal Coningham's withdrawal arrangements, in view of the subsequent course of events (including the enemy's capture of Benghazi on 29 January) proved to be far-sighted.

#### Continued Opposition to Rommel's Offensive

Weichhold Axis  
Policy and  
Operations  
in the  
Mediterranean

In spite of his initial success, Rommel still faced considerable opposition. According to Admiral Weichhold, then German Admiral in Rome, the German and Italian military authorities had received the first intimation of the attack on the eve of 'D'-Day, and Kesselring states that Rommel's decision was made without the knowledge of, and therefore in opposition to the Commander-in-Chief Tripolitania, Marshal Bastico.(5) Consequently, when, in spite of being taken by surprise, the British managed to avoid encirclement,

- (1) Nos. 260 and 4 Squadron, S.A.A.F. were operating from Benina.
- (2) Nos. 1 and 2 Squadrons, S.A.A.F.
- (3) Actually Blenheims, Bostons, Marylands etc. had already been reclassified as light bombers.
- (4) Actually Wellingtons had already been reclassified as medium bombers, due to the introduction of Liberators which was then slowly taking place.
- (5) According to Kesselring, Rommel had made a habit of keeping operations a secret from the Italians because he believed the secrecy of his plans was not sufficiently preserved .... Kessselring's view was that although justified, such conduct was certain to make 'allied operational command' difficult, and could indeed wreck it.

A.H.B.(6)  
Trans. VII/104

and to withdraw, Comando Supremo opposed the idea of any further advance, fearing that it would tax its own small forces too far. General Cavallero therefore gave orders not to advance to Benghazi, and deprived Rommel of the services of the rearward Italian infantry division, which the German commander wanted to bring forward. However, according to Kesselring, he and Cavallero intervened, and on his and Rommel's advice Bastico agreed to an attack with a limited objective, 'which' Kesselring states, 'he deluded himself merely included the capture and holding of Benghazi...' but it was clear to me that Rommel would only halt a victorious offensive if enemy resistance made it necessary.'

#### Restricted Air Action (24 January)

Sqdn. O.R.B.  
and A.H.B./IIJ1/  
12 P.43

The scale of effort of the offensive fighter force was greatly restricted by the succession of moves by parties and aircraft during the day to Mechili. The effort on five offensive sweeps (by No. 3 Squadron, R.A.A.F. and Nos. 112, 250 and 274 Squadrons) over the Antelat - Saunnu - Msus area thus comprised only 36 sorties. In some cases squadrons carried out early morning sweeps from Msus and landed at Mechili and in other cases sweeps were carried out from Mechili with Msus used as an advanced landing ground. Only one of the squadrons concerned - No. 274 - sighted any enemy aircraft - an indication of the diminution of enemy air activity over the forward area which was already marked. The six No. 274 Squadron Hurricanes on their way to refuel at Msus ran into an enemy force of some 30 aircraft, consisting of Ju. 57's, Cr. 42's, Me. 200's and Me. 109's engaged in dive-bombing troops 15 miles east of Msus. The bombers jettisoned their bombs, and in the ensuing combats the squadron claimed:- Four Ju.87's (1) including one previously claimed as damaged, but later reported by the Army to have crashed) two Cr.42's and one Me.200; probably destroyed:- three Ju.87's; and damaged: one Me.200. No. 274 Squadron lost no pilots but two aircraft were damaged.

No. 33 Sqdn.  
O.R.B. and  
M.E.F.O.S.  
No. 13

Due largely to the difficulty of identifying targets the day bomber force was not called upon to operate, but an effective, although small-scale, strafing attack was carried out by No. 33 Squadron. (2) An action had been fought in the El Grara area during the morning and some of our forces were cut off in the Antelat - Saunnu - El Grara triangle owing to the superior weight of the enemy. At 15.30 hours five long range Hurricanes of No. 33 Squadron strafed some 200 vehicles and 20 tanks refuelling at Maaten El Grara; in spite of intense A.A. opposition (two aircraft were hit but returned safely) three Hurricanes made attacks setting on fire one bowser and causing three fires among other vehicles. It was believed that this successful attack helped our hemmed-in troops to break through to the north, where they were pursued as far as Msus.

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- (1) German records show three Ju.87's destroyed on 24 January (ADIK 103/64.)
  - (2) The Squadron had moved back to Mechili from Msus but six Hurricanes returned to Msus for briefing etc. While the aircraft were there M.T. was dive-bombed by Stukas and Cr.42s (No. 33 Sqdn. O.R.B.).

SECRET

22a

No. 272 Sqdn.  
O.R.B. and  
M.E.F.O.S.  
No. 13

Meanwhile the enemy's transport vehicles in the rear - the 'vulnerable tail' as Air Marshal Tedder had called them during the 'Crusader' offensive - were attacked by No. 272 Squadron Beaufighters which claimed seven vehicles destroyed on the road between Nofilia and the Marble Arch landing ground as well as damage to a possible mobile W/T station near Mersa Aucgia.

M.E.I.S.  
No. 260 Sqdn.  
O.R.B. and  
No. 4 Sqdn.  
S.A.A.F. War  
Diary  
No. 2 Sqdn.  
S.A.A.F. War  
Diary

In addition to the dive-bombing of our forces in the Msus area the enemy also attacked the airfield at Benina. Nos. 4 S.A.A.F. and 260 Squadrons carried out patrols during the morning and later 'scrambled' single aircraft at need; very few enemy aircraft were sighted and no claims were made. At the eastern end of the Gebel, No. 2 Squadron, S.A.A.F. operating from Martuba, carried out four patrols during the day. The only enemy aircraft encountered was a Ju.88, whose two engines were seen to be on fire when lost sight of. (1)

Middle East Staff still loath to admit seriousness of the Situation (24 January)

AOC/11  
Part 2  
Encl. 82A

The Middle East Commanders were still loath to admit the seriousness of the situation. Late in the morning of 24 January General Auchinleck sent a signal to General Ritchie which included the following statement: 'Our Intelligence agreed with your picture that enemy cannot (R) not maintain any considerable force forward'. Later in the day Air Marshal Tedder in a signal to Air Vice-Marshal Coningham prefixed details of air reinforcements

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(1) German records show that one Ju.88 was lost in Cyrenaica on the 24th (in addition to another lost in operations against Malta). A.D.I.K. 103/64 and 6th Abteilung daily returns).

he intended to send up to the desert (1) with the words:  
 "To help stop this nonsense ..."

Plans for a Counter-Attack (25th and 26th January)

C-in-C's  
 Despatch P. 69  
 and A.O.C.-  
 in-C's Corres-  
 pondence with  
 C.A.S. Part 3  
 Encl. 300A

When the enemy's initial attack began General Auchinleck was at Haifa where he was engaged in converting plans for the defence of the Northern Front. He returned to G.H.Q., Cairo, on 23rd January and flew with Air Marshal Tedder to Eighth Army Headquarters on the 25th.

The C-in-C Middle East and the Commander of the Eighth Army agreed that General Rommel had almost certainly intended at the outset to make only a limited advance and was then characteristically exploiting an entirely unexpected success. It was believed there was time even then to arrest the enemy's advance and repel him. General Ritchie, accordingly, took the 4th Indian Division under his direct command and countermanded the orders of the 13th Corps for a general withdrawal in the early hours of 26th January. Plans evolved for taking the offensive included the converging on Msus by the 7th Indian Infantry Brigade from the west and the 1st Armoured Division with the 11th Indian Infantry Brigade from the north. It was found that the 2nd Armoured Brigade could not be ready to undertake the operation until late on the 28th at the earliest; until then, accordingly, the 7th Indian Infantry Brigade was instructed to delay the enemy's advance with mobile columns. In the meantime precautionary measures were taken for holding the Derna - Mechili line. The Polish Brigade Group moved south from Derna and occupied Mechili, where it was reinforced subsequently by the Free French Brigade Group and the 150th Infantry Brigade Group was ordered to secure Bir Tengeder.

Air Marshal Tedder reported to the Chief of Air Staff: "As result of action taken last night (25th January) I hope some offensive counter action on land may now be taken. Only way of stopping this nonsense is to hit back. Our fighters under Cross (Group Captain Cross, C.O. No. 252 Wing) are in angry mood.... They appear to be at present the vital stabilising force. Coningham's team working well, angry but keeping their heads."

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- (1) The projected reinforcements to increase the air striking power in the desert were (a) 12 Blenheim cannon-fighters (originally intended for Lorraine Sqdn.) with crews provided by No. 45 Sqdn. and approx. 20 maintenance personnel sent up by air transport on 25th January and (b) It was hoped that No. 12 Sqdn. S.A.A.F. with 16 Bostons with long-range tanks could be sent on 27th January. In the event, No. 24 Sqdn. took over aircraft from No. 12 Sqdn., were given extra crews and provided with transport, and started to move up on 27th January. Owing to the deterioration in the ground situation and other causes the Bostons could not be brought quickly back into the first line as expected and played no active part during the period of the retreat to Gazala.  
 (AOC/11 Part 2, Encs. 83A and S.A.A.F. Narrative).

No. 208 Sqn.  
O.R.B.

Ground Situation (25th and 26th January)

On the 25th the enemy made rapid advances, columns moving up from Antelat and Saunnu on Msus, which was reported to be in enemy hands by noon. Later an enemy column was reported to have reached a point 15 miles north of Msus on the Charruba track and Sceledeima, west of Msus, was also captured.

No. 208 Squadron detached flight carried out four reconnaissances in the morning and early afternoon which covered the area of the enemy's advance and also the rear area as far back as Marsa Brega. When day broke the flight had no definite information of an imminent withdrawal, although 13th Corps Headquarters had moved 10 miles east to Bir Hellez (S) T.1822. In order to effect a better liaison, the attached flight moved at 10.30 hours to a salt pan near Bir El Melezz (designated L.G. 4711). (1) The last two reconnaissances were carried out from that landing ground but aircraft returned to Tnimi as the salt pan was then threatened by enemy guns. Meanwhile 13th Corps had again moved and the associated flight lost contact with it. The following day (26th January) as the whereabouts of 13th Corps were still unknown the flight operated from Tnimi under Eighth Army orders. Two reconnaissances were carried out embracing the area between the Trig El Abd., north to Msus and Charruba and the track Charruba to Mechili. No movement was seen in the southern area but the pilot of the northern reconnaissance failed to return. (2) Meanwhile, three aircraft were sent to Benina to carry out reconnaissances for the 4th Indian Division, which, as already mentioned, had been taken away from the 13th Corps and placed under Eighth Army Control. Further tactical reconnaissances were carried out by fighter squadrons, particularly by No. 112 and 250 Squadrons.

No. 223 Sqn.  
S.R.U. Appendix

Further in the rear during the two days (25th and 26th January); the Strategic Reconnaissance Unit covered Auegia, Marada, Haseiat, Marsa Brega, Agedabia, and Antelat as well as the forward area at Soluch. These reconnaissances achieved only partial success owing to cloud and, also, on the 25th the presence of enemy fighter patrols.

Sqn. O.R.B's

Meanwhile fighters on offensive sweeps, (particularly Nos. 3 R.A.A.F. and 229 Squadrons) continued to report on enemy movement round Antelat and Msus.

Increased Air Support (25th and 26th January)

Sqn. O.R.B's  
and M.E.F.O.S.  
No. 13

Our Cyrenaican-based fighter squadrons on 25th January stepped-up their effort to a total of 150 sorties. Just over one-third of the effort was expended on shipping protection (see following sub-section) and the remaining 97 sorties were divided among the following commitments:- Offensive sweeps 44 sorties; bomber escort 20 sorties; ground attacks 17 sorties; local defence 15 sorties; reconnaissance escort one sortie.

- (1) The move was made on the initiative of the F/Lt. Commanding the flight: the C.O. (W/Cdr. Burnand) had then taken up his duties as Air Adviser with 13th Corps, living at Corps H.Q. and visiting the squadron as necessary. (No. 208 Sqn. O.R.B.)
- (2) The pilot made his way back to Mechili the next day.

Nos 3 R.A.A.F., 112, 229, 250 and 274 Squadrons operating from Mechili carried out seven offensive sweeps over Agedabia - Antelat - Msus area during the day, the only enemy aircraft engaged during the sweeps being a Me.110 claimed destroyed (1) by No. 3 Sqn., R.A.A.F. over Agedabia in the afternoon. In the course of the same sweep the squadron ground-strafted M.T. on the road between Agedabia and Antelat with good effect (four vehicles and a petrol tanker were set on fire and other vehicles were claimed damaged). Other ground attacks carried out during the day included one made by No. 33 Squadron long range Hurricanes. Six aircraft set out to ground-straft M.T. columns south of Antelat; three returned owing to gun-stoppages, one was shot down by A.A. fire, but the remaining two inflicted damage on some of the vehicles. Further in the rear, meanwhile, No. 272 Squadron Beaufighters (which were again released for a time from commitments under No. 201 Group) made a few attacks on road traffic in the Gulf of Sirte area. The material damage achieved was small, but from the morale aspect it was obviously disconcerting to the enemy that we were able to exert even slight pressure from the air in areas which could be assumed immune from air action.

On the 25th No. 94 Squadron which stood by at Mechili for airfield defence - and incidentally claimed a reconnaissance Ju.88 shot down (2) handed over all serviceable aircraft to No. 274 Squadron preparatory to return to base in order to be re-equipped with Kittyhawks.

Sqn. O.R.Bs

The two day bomber squadrons (Nos. 11 and 14) having completed their commitments in connection with the attack on the enemy convoy to Tripolitania already considered, were again available for direct support operations. Seven Blenheims of No. 14 Squadron left Gambut at first light on 25th January for Mechili where they were briefed to bomb "anything south of Antelat", escort being provided by eleven Tomahawks of No. 250 Squadron. A group of some 40 vehicles on the Antelat - Agedabia road (seven miles S.W. of Saunnu) were bombed with good results in the early afternoon, many of the vehicles being seen to overturn. After this operation, orders were given for the Squadron to split - the base party to remain at Gambut and the operational party to move up to Bu Amud, where No. 11 Squadron was located. An hour or so after this attack, seven Blenheims of No. 11 Squadron, escorted by nine Kittyhawks of No. 112 Squadron with five more as top cover, bombed about 100 vehicles in the same general area; the target was well dispersed, visibility was poor, and no direct hits or fires were reported. One of the bombers crash-landed on return owing to engine failure caused by enemy action. On the return journey, also, the escorting Tomahawks of No. 112 Squadron claimed one Me.109 destroyed (3) out of five which made attacks.

- (1) Confirmed destroyed in German records (ADIK 103/64).
- (2) German records show that two bombers were lost and one damaged on the 25th, these included, however, losses in attempts to hit a convoy en route to Malta (page 57 refers). (ADIK 103/64 and 6th Abteilung Returns)
- (3) German records show one Me.109 damaged (ADIK 103/64).

No. 205 Group  
and Nos. 37, 70  
and 148 Squadrons  
O.R.B's

In view of the lightness of the day bomber force it was clear that really appreciable damage could be inflicted only by the Wellington force (No. 205 Group). Accordingly, 40 aircraft of Nos. 37, 70 and 148 Squadrons, operating from advanced landing grounds, were detailed to attack M.T. concentrations, immediately behind the enemy's advanced columns, between El Agheila and Agedabia. In accordance with Air Vice Marshal Coningham's suggestion (page 21 refers), the emphasis of the attacks was on the Agedabia bottle-neck. Thirty-six Wellingtons carried out effective sorties without incurring any casualties, and many fires, explosions and bursts among M.T. concentrations were observed.

Sqdn. O.R.B's  
and M.E.F.O.S.  
No. 13

The following day (26th January) sand-storms prevented the day bombers operating, but in spite of the adverse conditions the offensive fighter force, in addition to the tactical reconnaissance commitments already mentioned, kept up continuous low-flying attacks to delay the enemy's advance along tracks between Antelat, Saunnu and Msus. At least 120 M.T. vehicles were reported destroyed or damaged and some 200 personnel killed or wounded. Enemy movement between Antelat and Msus which had been considerable in the morning had come to a standstill by the afternoon. In some cases vehicles were reported to have been abandoned by their crews. The enemy's air force made no attempt to intervene and during the day only one Me.110 and one Me.200 were sighted over the forward area, the machine being claimed destroyed by a Tomahawk of No. 260 Squadron ten miles east of Msus. A Tomahawk of No. 3 Squadron, R.A.A.F., forced-landed in enemy territory, but the pilot was picked up by another member of the Squadron.

No. 205 Group  
O.R.B.

The enemy's movements at night on the road between El Agheila - Agedabia, preparatory to the continuance of the advance on the following day, were again hindered by Wellington operations. Thirteen aircraft of the squadrons which had not operated on the previous night (Nos. 38 and 108 Squadrons) were detailed, but only six carried out attacks - one Wellington became unserviceable and five more jettisoned their bombs for various reasons, including engine troubles and petrol shortage. Results in general were obscured by cloud, but several hits were claimed on a M.T. convoy moving north, nine miles south of Agedabia.

Ground Situation Leading to the Loss of Benghazi  
(28th January)

C-in-C's  
Despatch Ps. 69  
and 70

After his brief halt on 26th January, the enemy resumed his advance on the following day, cleverly masking his intention to attack Benghazi by a feint attack towards Mechili to give the impression that the main threat was a direct attack at our rear.

No. 208 Sqdn.  
O.R.B.

The accurate appraisal of the enemy's intentions was hindered by the virtual cessation of tactical air reconnaissance after noon on the 27th owing to severe sandstorms. No. 208 Squadron's morning reconnaissances threw little light on the changing situation. The detached flight operating from Mechili was concerned mainly with watching the Msus area, where the enemy's main armour was believed to be. Although several M.T. concentrations were located, the photographic and tactical reconnaissances carried out over the area revealed no startling developments; to the south and east it was confirmed that there was no movement along the Trigh el Abd. The adverse weather

No. 229 Sqdn.  
O.R.B.

No. 250 Sqdn.  
O.R.B.

C. in C's  
Despatch  
Ps. 69 and 70

No. 208 Sqdn.  
O.R.B.

AOC/11 Part 2  
Encls. 86a

prevented an adequate check on the enemy's ominous movements south-east of Benghazi. One of No. 208 Squadron's Hurricanes operating on behalf of the 4th Indian Division carried out an early morning tactical reconnaissance of the area Benghazi - El Abiar - Msus - Antelat; but subsequent operations were impracticable. Meanwhile, several of the fighter squadrons helped with tactical reconnaissance commitments. In particular, four Hurricanes of No. 229 Squadron covered the area Mechili - Charruba in the early morning and two Hurricanes of No. 250 Squadron in the evening (taking off from Mechili and landing at Tmimi shortly before dusk) reported on the enemy's thrust north-eastwards from Msus, which was still believed to be his main line of advance.

On the 28th it at last became clear that the enemy's next objective was Benghazi. With the 1st Armoured Division committed away to the east in order to meet the threat to Mechili, the 7th Indian Infantry Brigade found itself unable to counter the enemy columns converging on El Abiar and Solluch. Benghazi had, accordingly, to be evacuated. (1)

During the day No. 208 Squadron's flight at Mechili carried out five tactical reconnaissances. Two were flown over the Mechili - Charruba - Msus and west area, the most significant movement being those of small columns advancing N.N.W. of Msus towards Benghazi. The three other sorties confirmed that there was still no movement on the southern flank along the Trigh El Abd. During the morning information was again provided for the 4th Indian Division on the enemy's threat to Benghazi by the No. 208 Squadron's detachment at Benina, which flew three sorties covering the Benina, Sceledeima and El Abiar areas.

Owing to the deterioration in the situation and the likelihood of the 13th Corps leaving Mechili, No. 208 Squadron's aircraft there were flown to Tmimi before nightfall; the flight ground party left later in the evening, when Corps intimated that it was leaving, arriving at Tmimi early on the morning of the 29th January. The detached flight at Benina moved to Berka that day, but on arrival there the 4th Indian Division instructed the detachment to proceed to Martuba.

In a personal signal to the Prime Minister on 28th January, General Auchinleck stated: "Must be admitted that enemy has exceeded beyond his expectation and mine and that his tactics have been skilful and bold. Much will depend now on extent to which he may have to thin out his Panzer units round Msus to maintain large force used to attack Benghazi... Losses of the 1st Armoured Division in tanks and guns are heavy and fighting value of this key formation may be temporarily impaired...."

- (1) Administrative and other troops left Benghazi without undue difficulty, but the later withdrawal of the 7th Indian Brigade was blocked by enemy armoured cars and motorised units across the road at Coefia. The Brigade broke out to the south, and after passing through enemy occupied territory between Antelat and Msus, the greater part with much of its artillery rejoined the Eighth Army at Mechili and Tengeder.

Air Support Continued "Despite Atrocious Weather"  
(27th and 28th January)

AOC-in-C's  
 Correspondence  
 with C.A.S. etc.  
 Part 3  
 Encls. 302A

Air Marshal Tedder reporting on the situation to the C.A.S. on 29th January stated: "Despite atrocious weather, fighters have maintained effort against enemy columns. One feels that at present the sole stabilising factors are Auchinleck and our squadrons under Coningham. I have confidence in both but wish latter were stronger numerically."

Sqdn.  
 ORBS

On the 27th the fighter squadrons under No. 258 Wing at Mechili carried out ground strafes and reconnaissances of the enemy's columns in the morning until sandstorms made further flying impossible. The main effort, carried out without opposition from the enemy's air force, was directed against the "vulnerable tail" behind the attacking columns. In particular, ten Tomahawks of No. 250 strafed traffic on the Msus - Antelat road; six Kittyhawks of No. 112 Squadron shot up 30-35 vehicles between Antelat and Saunnu; two long range Hurricanes of No. 33 Squadron successfully machine-gunned an M.T. convoy south of Msus; and four Kittyhawks of No. 3 Squadron, R.A.A.F., attacked selected targets on the Msus - Antelat road and the enemy column on the Msus - Sceledeima road, which initiated the threat to Benghazi. This column (reported by our aircraft to be 10 - 15 miles long) was also attacked by No. 260 Squadron Hurricanes from Benina. No. 272 Squadron Beaufighters, meanwhile, resumed their pressure on rear traffic on the coastal road claiming at least twelve vehicles destroyed.

Sqdn.  
 O.R.Bs

The day bomber force at this stage was further reduced by the withdrawal of No. 11 Squadron to Maaten Bagush in preparation for its withdrawal to the Delta and transfer to the Far East. Although a flight was retained at Ben Amud operations were not resumed until early February, and then only spasmodically pending the squadron's withdrawal to Helwan (which occurred on 19th and 20th February) for refitting. Thus for a time No. 14 Squadron Blenheims only were available for day bombing operations. Six of the squadron's aircraft left Gambut for Mechili at dawn for briefing and provision of fighter escort (provided by No. 274 Squadron), but the mission was abortive as M.T. targets in the Msus area could not be located owing to poor visibility.

No. 205 Wings  
 No. 37 and  
 148 Squadrons

During the night (27/28th January), No. 205 Squadron was again called upon to add weight to the bombing and maintain pressure. Fifteen Wellingtons of No. 37 Squadron and nine of No. 148 were detailed to attack the rear supply columns between El Agheila and Agedabia from their advanced base (IG 09). Adverse weather conditions including 9-10/10th cloud, whittled down the effective effort, but in two attacks over 26 (short) tons of H.E. were dropped as well as incendiaries. In the second attack (22.50 hours - 00.10 hours) a direct hit was observed on a petrol lorry, many vehicles were claimed as destroyed and a number of fires started.

A.O.C/11  
 Part 2  
 Encl. 96A

"During the day of the 28th January", Air Marshal Tedder's Liaison Officer reported, "our fighters and bombers again employed maximum strength against enemy columns advancing on Benghazi. Our fighters, including Beaufighters, carried out 99 sorties during the day.

This effort was particularly noteworthy in view of the very bad weather conditions existing over the battle area where poor visibility and sandstorms lasted all day.'

Sqdn. O.R.B.s

Nos. 3 R.A.A.F., 229, 274 and 250 Squadrons, operating from Mechili, flew morning and afternoon missions. After the latter sorties the aircraft landed at Gazala as instructions had been received from H.Q. XIII Corps to evacuate the Mechili landing grounds (see following sub-section). In the morning a stationary convoy of bombs and M.T. was attacked at a point 50 miles S.S.W. of Mechili, North of the Trigh el Abd; vehicles were strafed in the Msus area and farther east; and a number of vehicles were destroyed east of Msus, near Fort Sceledeima. In the afternoon small batches of fighters operated over the forward area, paying particular attention to a column proceeding north-east from Msus and vehicles on the Mechili - Charruba road.

A.O.C./11  
Part 2  
Encl. 96A and  
Sqdn. O.R.B.

No. 14 Squadron's Blenheims (now based at Bu Amud) waited at Mechili for targets and the provision of fighter escort and were called on to bomb direct support targets in the Benghazi area, reported by ground observation. Twenty-one escorted Blenheims were despatched to attack these targets, but on the first two raids no suitable targets could be found in the area given and the bombers returned with their bombs. On the third raid approximately 20 M.T. were found hidden in a wadi west of Msus landing ground, but no results of the attack were observed.

No. 260 Sqdn.  
O.R.B. and  
AOC/11 Part 2  
Encl. 96A

Meanwhile, Nos. 4 S.A.A.F. and 260 Squadrons, operating from Benina, attacked columns moving on Benghazi. In the morning No. 260 Squadron Hurricanes, with S.A.A.F. Tomahawks as top cover reported the destruction of at least 50 vehicles, including ammunition lorries, and the killing of at least 50 Germans. Five S.A.A.F. Tomahawks later continued the strafing alone. After this latter operation, as the enemy were then only 18 miles from Benina, the Tomahawks refuelled at Berca satellite, with No. 260 Squadron Hurricanes providing top cover over the airfield, and then provided cover for these aircraft while they refuelled. Both squadrons withdrew to Martuba during the afternoon. (1) Air Marshal Tedder's Operations Liaison Officer reporting on the operations carried out on 28 January stated: 'An interesting point of the day's operations was the conspicuous absence of the Axis air forces'. Actually, there was one exception to this general rule. No. 4 Squadron, S.A.A.F. reported that sixteen Stukas and ten Me. 109's supported the advance on Benghazi on the 28th, but no combats ensued.

AOC/11 Part 2  
Encl. 96A

No. 4 Sqdn.  
S.A.A.F.  
War Diary

No. 205 Group  
and No. 108  
Sqdn. O.R.B.

Projected operations by No. 205 Group (including two Liberators of No. 108 Squadron) during the night, 28/29 January, had to be cancelled after the Wellingtons had left for their advanced landing ground at El Adem, owing to bad weather.

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- (1) Air Marshal Tedder in a signal to the C.A.S. on 29 January reported: 'Today the squadrons at Benina left on their last sortie as enemy approached. They left nothing behind and are now operating from Martuba'. The squadron records show that this occurred on 28 January. (A.O.C.-in-C.'s Correspondence with C.A.S. etc. Part 3).

Premature Evacuation of Fighter Force from Mechili  
(28 January)

No. 208 Sqn.  
O.R.B.

No. 258 Wing's  
Sqn. O.R.B.s

A.O.C./II  
Part 2 Encl. 87A

Idem 89A

Owing to the deterioration of the situation on the 28 January H.Q. XIII Corps decided to withdraw from Mechili to Tmimi and instructed No. 258 Fighter Wing (and as already mentioned No. 208 Squadron's detached flight) to withdraw. The Wing's aircraft accordingly returned to the Gazala landing grounds on the completion of their afternoon sweeps and the ground parties followed later in the evening, arriving during the night or next morning.

On hearing of No. 258 Wing's withdrawal, Air Marshal Tedder immediately signalled General Auchinleck as follows: 'Very concerned to hear XIII Corps have ordered Fighter Wing to withdraw from Mechili. Know you fully appreciate how much such a backward movement will ham-string our air effort in the forward area and sincerely hope it will be possible to re-establish the force there'. General Auchinleck replying from Advanced Eighth Army Headquarters on the 30th signalled: 'I was infuriated to hear of this avoidable mistake. Blame rests entirely with XIII Corps Staff which ordered the move because they were rightly moving themselves but apparently did not ascertain conditions under which fighters were working. They were much influenced by what happened at Antelat and feared a recurrence but I can see no excuse for what was a blunder. Mary (A.V.M. Coningham) is getting them back to Mechili as quick as he can but am afraid much valuable time has been lost.'

For a short time the fighter squadrons used Mechili for refuelling purposes, but it was not practicable to re-establish the Fighter Force there as the military situation deteriorated still more. The hasty evacuation of Mechili prevented continuous full scale air action over the forward area, which the Western Desert Air Force endeavoured to maintain equally in withdrawal as in advance. This lull in air activity, brief as it was, was in striking contrast to the uninterrupted air action maintained during the retreat from Gazala during the following summer.

Eighth Army's Retreat through the Gebel Akhdar  
(29 January - 4 February)

Weichold: Axis  
Naval Policy &  
Operations in  
the  
Mediterranean

According to enemy documents, on the night before the capture of Benghazi, Rommel received a message from Mussolini granting him permission to enter the town only if the British were to evacuate it of their own accord, but that the majority of the Italian troops were to remain in the Agedabia area. In spite of this order to conserve his principal forces, Rommel pressed on eastwards after the fall of Benghazi, with the object of once more driving the enemy out of Cyrenaica. He was supported in this by Goering who was in Rome from 28 January to 4 February, and succeeded in persuading Mussolini to this view.

C.-in-C's  
Despatch P 70

After the fall of Benghazi the Commander of the Eighth Army, General Ritchie, hoped to stabilise the position on a line running from Iamluda (a few miles west of Derna) through Mechili to Bir Tengeder. While this line was being prepared the 4th Indian Division was instructed to pull back slowly, occupying two intermediate delaying positions - first, to the line Barce - Charruba, (until mid-day on 30 January), and then D'Annunzio - Maraua. The latter line could not be held for any considerable time,

however, as it was found that the 1st Armoured Division was too weak to hold the southern flank of this line at Hagfet Gelfaf. The 4th Indian Division, accordingly, withdrew to Gaf Tartaga and Slonta during the night of 31 January and reverted to the command of the XIII Corps.

No. 208 Sqdn.  
O.R.B.

No. 228 Sqdn.  
O.R.B., S.R.U.  
appendix

During the last three days of January No. 208 (A.C.) Squadron operated intensively from Tmimi, carrying out 24 tactical reconnaissances. The greater part of the Gebel Akhdar was covered and a watch was continued on the southern flank, where there was still no movement. The Strategical Reconnaissance Unit, as formerly, reconnoitred the enemy's immediate rear - El Agheila, Marsa Brega, Agedabia, Antelat, Gidf El Matar and Saunnu; a reconnaissance of El Agheila on the 29th was prevented by enemy fighters, but the other two reconnaissances flown were recorded as 'complete successes'. As the unit was still not completely mobile it was decided that it should withdraw to Sidi Azeiz in good time, the move taking place on 28 and 29 January.

C.-in-C.'s  
Despatch P. 70

On 1 February the enemy's columns engaged units of the 4th Indian Division at Slonta and later when the division withdrew to a line Cyrene - El Faidia, at El Faidia. During the night the division completed its withdrawal to the Derna line.

Idem  
P. 70 and 71  
and No. 208  
Sqdn. O.R.B.

Tactical air reconnaissance confirmed that the enemy intended to pursue our withdrawing forces through the Gebel in force. A fresh appraisal of the enemy's supply situation revealed that it was far more favourable than expected; in particular, it was judged that he would now be able to send an armoured division to attack us at Mechili. It was clear that with our sorely depleted armour a full-scale assault on the Lamluda-Mechili-Bir Tengeder line could not be withstood. The decision was taken, therefore, to evacuate Derna and make a further deliberate withdrawal to the Gazala-Bir Hakim line, which was shorter and easier to defend.

Idem

On 2 February the enemy passed along both roads through the Gebel. No. 208 Squadron's reconnaissances in the morning reported that the enemy on the more northerly road had reached Cyrene, but further reconnaissances, apart from 'one last moment sortie to discover the possible short cuts the enemy could use', were prevented by dust storms. During the day, as H.Q. XIII Corps had decided to withdraw to Acroma, No. 208 Squadron also moved back there. The enemy, meanwhile, had overrun Indian troops at Carmusa and were penetrating between the 4th Indian Division and our forces around Mechili. The Commander of XIII Corps therefore gave permission for the division to withdraw on Tmimi and El Ezzeiat at his discretion, while the Free French mobile columns attacked enemy forces moving south from Carmusa. The enemy's pressure on the 4th Indian Division increased, however. No. 208 Squadron's flight at Acroma carried out seven reconnaissances during the day, mainly in the northern Gebel area, and confirmed the enemy's movements towards Tmimi. The Commander of XIII Corps, accordingly, gave orders for the withdrawal to be accelerated. During the night 3/4 February the 4th Indian Division, having fought a number of rearguard actions reached Acroma. Apart from the action of forward patrols, the enemy did not press the last stage of our retreat and made no move across the desert from Msus, for which No. 208 Squadron Tac/R kept a close watch.

Idem

The main cause of our retreat was (apparently) the inferior performance of our tanks. During the withdrawal the 1st Armoured Division lost over 100 tanks out of 150; the enemy's losses on the other hand were assessed as 30 probably destroyed. It was believed that the enemy did not use more than 100 tanks in these operations including light tanks. In the later stages, beyond Msus and Benghazi, considerably few tanks were used owing, no doubt to difficulties of supply.

German Army Outstrips its Supporting Air Force

A.H.B./II/63  
A.D. I.K.  
Reports A.H.B./  
II J1/12 P. 45  
A.O.C/11 Part 2  
Encl. 98A.

In order to advance rapidly through the Gebel Akhdar, the enemy sacrificed weight for speed. In addition to leaving his main armour grounded at Benina and Msus and continuing mainly with motorised infantry, he dispensed with fighter and Stuka support for nearly a week that is, during the last few days of January and the opening days of February.<sup>(1)</sup> The bringing into use of the new forward operational bases (first at Benina, Barce and Berka and then at Derna, Martuba and Tmimi) was handicapped by difficulties of transport, shortage of fuel and the water-logged state of much of the country, as sandstorms alternating with heavy rain still persisted. Although Kesselring claimed in his post-war essay that the Axis air forces were superior to the British, from documents it is clear that he was not satisfied with the situation at the time, and on 4 February he ordered Fliegerfuhrer to ensure air superiority by carrying out attacks on British airfields which were heavily occupied, an order which was repeated four days later, with the addition of an order to Fliegerkorps X (Greece and Crete) to attack airfields east of the Egyptian border.

British documents record that Greek-based German long range bombers, and some believed to be operating from advanced bases in North Africa made spasmodic small scale attacks on our lines of communications, ports and airfields as far east as Fuka and in the second week of February made many raids on our forward landing grounds at El Adem and Gambut.

Air Support for Eighth Army 29 January - 10 February

In contrast to the pause in the enemy's air support operations the fighter and, to a lesser extent, the light bomber squadrons kept up a continuous, although necessarily restricted, effort.

A.O.C/11 Part 2  
Encl. 97A  
Squadron O.R.B.s  
and S.D. 225  
(Feb. 1942)

The three factors limiting the scale of effort were:-

- (a) Bad weather at the beginning of February, when alternate rain and dust storms were common over the battle area.

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(1) Air Marshal Tedder's Operations Liaison Officer reported on 10 February 1942:- 'An interesting point in the German advance has been the fact that for the first time he has allowed his army to outstrip the air forces. For nearly a week his forward troops were without army air support and as a consequence received a very hard beating from our ground strafing fighters and also from the light bomber squadrons'.

(A.O.C/11 Part 2 Encl. 98A).

SECRET

32a

- (b) The enemy's advance enforced the withdrawal of the Western Desert air force which inevitably caused some disruption of effort. Advanced Air Headquarters Western Desert moved to I.G. 121 (east of Sidi Barrani) together with Advanced Headquarters Eighth Army at the beginning of February. The Fighter Squadrons withdrew to operational landing grounds in the El Adem and Gambut areas with bases at Sidi Heneish and Maaten Bagush. No. 262 Wing, then controlling offensive fighters, was located at El Adem and No. 258 Wing, controlling defensive Fighters, at

S. Ops (Overseas)  
5/401/0 Ops  
"Wings as at  
5/2/42

Gambut. (1) No. 3 S.A. Wing, controlling the reduced light bomber force, withdrew from Bu Amud, first to L.G. 76 (south of Sidi Barrani) and later to Maaten Bagush, with operational staff and maintenance personnel at Gambut. The Blenheim squadron had bases as follows:-

No. 11 at L.G. 116 and No. 14 first at L.G. 76 and later at L.G. 116; but operational detachments were located at Gambut in order to operate in co-operation with the fighters.

A.O.C./11  
Part 2  
Encl. 95A

- (c) Moreover at this stage the Fighter Force was weakened by the necessity for the withdrawal of seven fighter squadrons owing to lack of aircraft and in some cases for re-equipping. As pointed out in the previous narrative ("Middle East Campaigns: Libya, June, 1941 to January, 1942), the Tomahawk supply had ceased and former Tomahawk squadrons, together with some of the Hurricane squadrons were being equipped with Kittyhawks. On 8th February the A.O.C., Western Desert, signalled the A.O.A., H.Q. R.A.F. M.E. (A.V.M. Pierce) as follows:- "Order priority re-equipping Kittyhawks 94, 260, 33 and 229 Squadrons. Present position. Personnel. Squadrons operationally fit and competent to fly type. Aircraft. Position very serious; No. 94 Squadron has eight Kittyhawks, other three squadrons are now without aircraft and waiting in Bagush area. Action required by C.M.S.O. (A.V.M. Dawson) and 206 Group:- (a) Make 94 Squadron up to strength of eighteen aircraft, preferably twenty-one. (b) Give Nos. 260, 33 and 229 Squadrons four aircraft each in that order. (c) Complete to strength in order given."

Nos. 250 and 83  
Sqdns. O.R.Bs  
and No. 2 Sqdn.  
S.A.A.F. War  
Diary

Nos. 73 and 450  
R.A.A.F. Sqdns.  
O.R.Bs

In addition to the withdrawal of squadrons for re-equipping No. 250 Squadron was withdrawn to help with the defence of the Suez Canal zone; No. 2 Squadron, S.A.A.F. was withdrawn to L.G. 110 owing to lack of aircraft; and No. 80 Squadron was still engaged in training on Hurricane II Cs and had continued trouble with the cannons installed. On the credit side, No. 73 Squadron (Hurricanes) (2) had moved up from the Delta to strengthen

- (1) The composition of the Wings as at 5th February, 1942 (although some of the squadrons mentioned were ineffective) was:- No. 262 Wing Nos. 3 R.A.A.F., 94, 229, 260, 1 and 4 S.A.A.F. Squadrons. No. 258 Wing:- Nos. 33, 73, 80, 112, 238 and 2 S.A.A.F. (D ops (Overseas) 5/401/0 Ops. "Wings as at 5th February, 1942).
- (2) A trained and experienced flight of No. 73 Squadron had previously operated with the Western Desert force, being particularly successful in dealing with enemy Tac/R and small numbers of enemy ground strafers during the "Crusader" offensive (G/C Cross's report attached to W/Cdr G. Finlayson's Report on "Crusader"). The flight returned to Port Said during the week ending 12th January, 1942, (D/A.O.C. 13 Encl. 27A).

the Fighter Force (1) and No. 450 Squadron, R.A.A.F., whose training in Kittyhawks had been protracted through supply difficulties was, at last, almost ready to begin operations under No. 258 Wing.

In view of the depletion of the Fighter Force and the disruption caused by the withdrawal, the air support given to the Army in its final withdrawal to the Gazala - Bir Hakim line and the initial period of consolidation was most creditable. It was proved that the methods evolved to ensure the mobility and uninterrupted control of the Western Desert air force during the "Crusader" advance (see previous narrative Part Five for details) worked equally well in reverse.

A.H.B.  
IIJI/12 P. 46

At times the targets afforded our attacking aircraft were extremely few as the hilly nature of the Gebel forced M.T. to keep to the roads. Limiting factors, however, were the disruption of communications during moves, the difficulty at times of fixing a bomb-line and, the lack of identification on our vehicles. The last named had been a cause of constant complaint from the R.A.F. in the past; although the Army had recently agreed in principle to use identification this had not then been effected (See previous narrative Part Seven for details).

Idem and  
Sqn. O.R.Bs  
A.O.C/11 Part 2  
Operations  
Liaison Officer's  
Reports and  
A.H.B.IIJI/12  
P.46

From 29th January - 10th February our forward fighter squadrons flew 355 sorties on offensive sweeps and ground strafing attacks. The most successful attacks occurred on 5th February when over 100 enemy vehicles travelling between Carmusa and Martuba and Giovanni Berta and Tmimi were claimed destroyed or damaged. The attacks of No. 272 Squadron Beaufighters on the rear columns on the more westerly roads in the Gebel and later on traffic as far back as the Gulf of Sirte (when coastal shipping could not be found) were especially effective. Aircraft from Malta also operated against this rear supporting traffic. From the time that the Fighter Force was directed to delay the enemy's advance by ground strafing attacks (22nd January) until 7th February, reports show that 150 vehicles and five petrol tanks were claimed destroyed and more than 400 vehicles damaged, with commensurate loss in enemy troops. To this must be added the incalculable factors of disorganisation, delays and morale effect.

No. 11 and 14  
Sqn. O.R.Bs

The light bomber squadrons - Nos. 11 and 14 - inevitably took longer to establish themselves at their new operational bases than the fighter squadrons and their effort was, accordingly more disrupted. In their last operations from Bu Amud on 3rd February the light bomber squadrons carried out four very successful raids, comprising 24 sorties, against enemy vehicles on roads mainly in the Derna area. During the following week, apart from a small-scale attack on M.T. west of Martuba, the restricted light bomber effort was directed towards hindering the German Air Force's use of the forward bases at Derna and Martuba.

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- (1) No. 450 Squadron R.A.A.F. was established at Gambut on 15th and 16th February, making its first operational sortie on 19th December, 1942. (No. 450 Sqn. O.R.B.).

No. 24 Sqn.  
S.A.A.F. O.R.B.

The attempt to increase the hitting power of the day bomber force by bringing back into the line No. 24 Squadron, S.A.A.F. Bostons (which, as indicated in the previous narrative, had been withdrawn towards the end of December, 1941, owing to engine trouble) failed as the engine trouble persisted.

No. 205 Group  
Nos. 37, 38,  
70, 108 and  
148 Sqdns.  
O.R.Bs

During the period of the enemy's final advance, therefore, the only really appreciable bombing of the enemy's forces necessarily devolved on the night bomber force. On the three nights 29/30th January to 31/1st February, Squadrons of No. 205 Group intensified their effort against the enemy's supporting transport in the El Agheila-Agedabia area flying a total of 63 Wellington and four Liberator effective sorties in these attacks and dropping over 109 (short) tons of bombs (mostly 500 lb. bombs but including on several occasions 1,000 lb. and 4,000 lb. bombs). Bursts among M.T., followed by fires and explosions were reported after most of the raids and it was evident that considerable material damage and interference were achieved.

During the next few nights bad weather greatly reduced No. 205 Group's tactical effort and only slight pressure could be exerted by small-scale Wellington and Liberator attacks on transport on the roads north of Agedabia and, in the more immediate rear of the battle area, on the Benghazi - Benina - Barce road.

By the second week of February the further dispersal of M.T. ruled out the profitable tactical employment of the night bomber force. Once another lull occurred in the Desert conflict, the over-riding need, as previously in such circumstances, was to effect the greatest disruption possible of the enemy's supply system while at the same time safeguarding our own.

As success in the battle for supplies presupposed an adequate degree of air superiority, a secondary commitment of the night bomber force was the bombing of enemy airfields. By the second week of February the outstripped enemy air force had begun to occupy our vacated landing grounds in the Gebel. The forces then available to us for counter air operations were inadequate to achieve much in the way of neutralisation - the weak fighter strength ruled out ground attacks, the day bomber force needed to be strengthened by the return of Bostons and the addition of Baltimores, and the night bomber force was mainly committed against supply targets. No. 205 Group Wellingtons carried out a few sorties against Berca airfield in early February and seven aircraft, aided by flare-droppers of No. 826 Squadron F.A.A., followed up Blenheim attacks on Martuba west on the night 9/10th February, but the limiting factors already mentioned, included with bad weather during the next fortnight, precluded for a while any serious effort to neutralise the enemy's air bases.

#### Renewal of the Air Offensive Against Benghazi

Previous  
Narrative  
Parts 3 and 4  
and 6

A feature of our bomber operations during the summer and autumn of 1941, prior to the opening of the "Crusader" offensive, had been the air offensive against the enemy's port of off-landing at Benghazi. Once the offensive started almost the entire bomber effort was directed against tactical targets, and only spasmodic attention could be paid to ports by the Cyrenaican - based bombers. The last Wellington raid

A.O.C. in C's  
Correspondence  
with C.A.S.  
Part 3 Encl. 332A

on Benghazi was carried out on the night 19/20th December, 1941 and our troops entered the evacuated town on Christmas Eve. Thus Benghazi was in our hands for little more than a month (until 28th January, 1942). The need to prevent the enemy's free use of the port was now more vital than in the earlier period. In particular, owing to the Luftwaffe's virtual neutralisation of Malta as an offensive base (see Part One, Section Three) and the fact that enemy convoys were routed just outside the range of the air striking force in Eastern Cyrenaica, the successful interference by our air forces of sea-borne supplies to Libya achieved in the summer and autumn of 1941 could not be maintained. The more westerly supply port of Tripoli, moreover, was less vulnerable than formerly, owing to the curtailment of Wellington operations from Malta; and Liberator reinforcements were needed before any effective effort against the port could be made from Cyrenaica - unless air bases in Western Cyrenaica could be re-captured.

A.H.B./~~12~~  
II J1/12  
Appendix A

The enemy quickly re-opened the port of Benghazi although, in the absence of confirmatory evidence from enemy sources, doubt exists as to the day his shipping first entered the harbour. Wellingtons of No. 205 Group returning from operations in the El Agheila - Agedabia area on the night 30/31st January reported seeing nine ships on a northerly course some 60 miles off Benghazi. Next morning a Strat/R aircraft reported four merchant ships in the harbour. On 1st February, however, only one ship was reported there and the first photographic reconnaissance of the port on the 6th revealed no shipping or sign of activity. It is possible that the objects reported as a result of visual reconnaissance were troopships which made quick turn-rounds or wrecks reported in error.

H.Q. 205 Group  
O.R.B.  
Appendices  
February, 1942  
(Operational  
Orders Forms B)  
Sqn. O.R.Bs and  
M.E.F.A.S. No. 14

It was clear, however, that the enemy would use Benghazi to the fullest extent as soon as possible in order to avoid the long M.T. haul from Tripoli; thus at the outset of the renewed air offensive against Benghazi our aim was to hinder the reopening of the port. The general plan of the early attacks, therefore, was for the mining of the approaches to the harbour under cover of diversionary bombing. The latter was essential as mine-laying aircraft operated at low level (40-200 feet) and accuracy called for freedom from evasive tactics. The Wellingtons concerned were to use L.G. 09 as their operational base. The first of these operations was planned for the night 4/5th February, twelve aircraft of No. 37 Squadron, ten of No. 148 and eight of No. 38 (including five to plant "cucumbers" (mines) in specified areas) being detailed for the attack. Actually certain of the squadrons were not fully ready to operate from the advanced landing ground on that night and in any case there was thick cloud over the Gebel - so the attack was carried out on the following night 5/6th February. Eight mines were laid at the entrance to the harbour by four Wellingtons of No. 38 Squadron (one aircraft was found to be unserviceable at L.G. 09 and one failed to locate the target) and diversionary bombing of defence points, harbour installations, the town, and Berka airfield was carried out by fourteen aircraft of No. 37 Squadron (two aircraft became unserviceable at L.G. 09) and seven of No. 148 Squadron. Visibility was good and anti-aircraft opposition not formidable; there were no casualties.

The operation was repeated two nights later when eight of No. 38 Squadron's Wellingtons planted sixteen mines in the allotted area and three of No. 37 Squadron (two became unserviceable at L.G. 09 and one jettisoned its bombs owing to engine failure). Conditions were again favourable, although one of No. 37 Squadron's Wellingtons crash-landed at L.G. 09 on the return journey owing to hydraulic failure. Three further operations against Benghazi were carried out by No. 205 Group before the end of the phase (24th February) - on the nights 14/15th, 16/17th and 24/25th February. These attacks were the prelude to a sustained air offensive against Benghazi, (1).

G.H.Q. M.E.F. Operation Instruction No. 111 (11th February)

G.H.Q. M.E.F.  
Op. Instructions  
No. 111

On the 11th February General Auchinleck issued instructions to the Commander, Eighth Army (Lt. General Ritchie) outlining the tactical policy adopted. The ultimate intention remained the same - the occupation of Cyrenaica and the subsequent invasion of Tripoli. It was necessary to retain Tobruk as a supply base for our future offensive; this implied holding the positions on the Gazala - Bir Hakim line and making them stronger. Should the enemy become sufficiently strong to invest Tobruk effectively, it was to be evacuated and thorough demolitions carried out. In that eventuality the enemy's advance was to be stopped in the general line Sollum - Maddalene - Giarabub (as laid down in Operation Instruction No. 110).

It was most desirable to re-occupy the landing ground in the area Derna - Martuba for the following reasons:-

- (a) To enable our air reconnaissance and air striking forces to join up with those of Malta in order to cover the whole sea area.
- (b) To enable our air forces to maintain a more effective air offensive against Benghazi.
- (c) To reduce the degree of air support which the enemy could give to his forward troops. The re-occupation of Derna would also allow the use of motor torpedo boats against enemy shipping using Benghazi. The capture and retention of the area Derna - Tmimi - Gazala entailed, however, holding firmly up to, and inclusive of, the great line Lamluda - Mechili - Tengeder. This operation was not to be attempted, however, until it was certain that it would not endanger the safety of Tobruk or prejudice the chances of our launching a major offensive. In the meantime offensive columns were to be used where possible to hinder or prevent the enemy's use of the landing grounds in the Derna - Martuba - Mechili area.

- 
- (1) During the four months 25th February to 25th May (the day before the enemy re-opened his offensive) medium and light bomber effective sorties (the latter were few in number) against the port of Benghazi totalled 712 (including 79 on minelaying). Wellington squadrons, in particular, carried out 71 raids on 94 nights. (IIJI/12 and M.E. Tables of Operations).

It was emphasised that the Royal Navy and R.A.F. were making every effort to deny to the enemy the use of the ports of Benghazi and Derna.

Changes in R.A.F. Employment After the Stabilisation at Gazala

The stabilisation of the ground situation and the lull in close fighting on a major scale called for a change in the employment of air forces in Cyrenaica.

- (1) On 8th February Air Vice Marshal Coningham had informed Air Marshal Tedder that owing to the serious fighter aircraft situation operations were then being controlled in order to save wastage and help re-equipment. In particular low flying attacks by fighters which had been laid on to stem the enemy's advance were now discontinued as these were profitable only during periods of fluid movement. Moreover as the enemy air forces took over landing grounds in the Gebel their scale of effort was considerably increased, being directed mainly against our forward air bases and Tobruk. For a time therefore the fighter force was thrown on the defensive. This was rendered necessary owing to:-

- (a) The greatly reduced fighter strength which averaged four weak squadrons for day operations, excluding squadrons wholly committed to fixed protective commitments.
- (b) The ineffective anti-aircraft defence of our airfields.
- (c) The great tactical superiority of the M.E.109F, which was out of all proportion to the numbers involved.
- (d) The need to use the period of static warfare to build up strength for the next phase.

- (2) The light bomber effort was further reduced owing to the lack of suitable targets. On several days light bombers stood by at call for close support targets but none was found.
- (3) As already mentioned the effort of the night bomber force (No. 205 Group) was now mainly directed against Benghazi.
- (4) The need to divert a proportion of the bomber effort against the enemy's newly won landing grounds in the Gebel, particularly at Martuba, has also been indicated.

A.A. HQ.  
WD/32/Air  
Part I Encl. 37A  
AHB IILJ1/12 P. 47  
AHB IILJ1/63  
ADIK Reports

A.O.C./11 Part 1  
Ops. Liaison  
Officer's Reports  
A.O.C. in C's  
Correspondence  
with CAS Part 3  
Encl. 335A

II J1/12  
A.H.B. ~~II J1/12~~  
P. 47 and Sqdn.  
O.R.Bs and Ops.  
Liaison Officer's  
Reports

Increased Enemy Air Effort and our Fighter Effort on  
Defensive Commitments (14th - 24th February)

/II J1/12  
A.H.B. ~~III/12~~  
P. 48  
A.O.C. in C's  
Correspondence  
with C.A.S.  
Part 3  
Encl. 335A

/II J1/12  
A.H.B. ~~III/12~~  
P. 48 and  
M.E.W.I.S.  
No. 88 and 89

Between 14th and 24th February our fighter squadrons flew 589 sorties on what A.V.M. Coningham called "offensive-defensive" commitments. In particular 229 sorties of this total were flown in the defence of Tobruk and on the protection of shipping plying between Alexandria and Tobruk.

Bad weather, including rain, low cloud and dust storms greatly hampered air activity on the three days 18th - 20th ~~January~~ <sup>February</sup>, but following this enemy air attacks were intensive. German Stukas and fighter-bombers, normally in formations escorted by both German and Italian fighters, ground-strafed our forward troops, landing grounds and road and rail communications. Tobruk sustained a number of attacks without, however, suffering serious damage.

Verluste  
Afrika and  
Separate record  
of loss over  
Malta  
(A.H.B.6)

German records show that these operations were not particularly expensive for the German units involved. During the period 14th to 24th February inclusive German air force operational losses over Cyrenaica (including casualties not due to our action) amounted to four Stukas, three bombers, three fighters, three reconnaissance aircraft and one M.E.110 destroyed and five fighters damaged. Our claims against Italian aircraft, particularly on 14th February, were, however, considerable, but confirmatory evidence from Italian records is not available.

Conditions Again Suitable for Employment of R.D.F.

Report on use of  
R.D.F.  
November, 1941 -  
February, 1942  
by G/C Cross  
Appendix to  
W/Cdr. G.  
Finlayson's  
"Crusader"  
Report

During the "Crusader" offensive conditions had not favoured the continuous effective employment of radar. At the outset of our advance in November, 1941, information from No. 235 A.M.E.S. at Tobruk was of little use as the enemy's base at Gazala was nearer the battle area south of Tobruk than ours at Maddalena and our fighters arrived too late to effect interceptions as a result of the A.M.E.S. information. A little later, as indicated in the preceding narrative some improvements were made including:- the broadcasting of information by two controllers from Tobruk to our patrolling fighters: the landing and refuelling of a flying wing (No. 274 and No. 1 S.A.A.F. Squadron) at El Gubbi and its taking off on interceptions on instructions from No. 235 A.M.E.S.; and the use of information given by the same A.M.E.S. by a flight of No. 73 Squadron which was established at a forward landing ground (L.G. 134). An attempt to use two mobile R.D.F. sets mounted on lorries failed as the modified A.S.U. sets proved unreliable mechanically and their range of 15 - 20 miles was quite inadequate. After the relief of Tobruk, when the fighter force was established for a short time at Gazala, No. 510 A.M.E.S. (C.O.L.) was attached to No. 258 Wing and was used primarily to give warning of the approach of enemy aircraft to the fighter landing grounds. From that time until the Fighter Wing reached Antelat on 14th January, 1942, R.D.F. could not be used owing to the rapidity of our advance. The C.R.O., H.Q. R.A.F. M.E. (W/Cdr. Tester) then joined the wing with No. 510 A.M.E.S. (C.O.L.). The C.O.L. was established at a forward landing ground at Belandeh, with the intention of operating fighter formation on controlled interceptions over the enemy's lines. The enemy's advance during the third week of January prevented this scheme being put into operation.

From that time until the line was consolidated at Gazala, no opportunity occurred for the use of R.D.F. in Cyrenaica. With the stabilisation of the ground situation R.D.F. could be used with good effect. The C.O.L., was then established only twelve miles behind the line which normally detected enemy aircraft assembling at Martuba. This information was immediately passed to No. 262 Wing at El Adem, which despatched a suitable force from "stand by" fighters to Gazala, where it was controlled by an advanced operations room of No. 258 Wing. If it seemed clear that the target was not our forward troops but a target in the rear the fighter formation was vectored to intercept; if the formation tended to get out of R.T. range control was handed over to No. 262 Wing. Meanwhile, as the enemy usually sent a high-flying patrol over El Adem during his operations elsewhere No. 258 Wing at Gambut sent a patrol over to El Adem which was also controlled by No. 262 Wing. Thus our fighters could be controlled over an area 40 miles west of Gazala to Bardia by three Wing Operations Rooms connected by landline and having R.D.F. information for their respective areas.

As a result of the procedure outlined above, the depleted fighter force achieved considerable successes for an economical effort. Figures to substantiate this submitted by Group Captain Cross, Commanding No. 258 Wing were as follows:-

Interceptions with C.O.L. 8th to 16th February, 1942

<u>No. of Sorties</u>	<u>No. of Interceptions</u>	<u>Enemy Casualties</u> (claims)
193	8	48 (including 26 destroyed)

Interceptions by Fighter Sweeps from Maddalena during a typical nine day period in the early stages of the "Crusader" offensive

<u>No. of Sorties</u>	<u>No. of Interceptions</u>	<u>Enemy Casualties</u> (Claims)
898	9	100 (including 36 Destroyed)

Details of Main Combats during Third and Fourth week of February

Our fighter squadrons opposing the enemy's increased air attacks seemed to have most success during the third week in February. Details of the main combats are as follows:-

12th February

Ops. Liaison  
Officer Reports  
AOC/11 Part 2  
A.H.B.IIJ/12  
Ps. 48-49  
Sqdn. O.R.Bs

At 12.50 hours on 12th February enemy aircraft were reported out to sea, flying west towards Tobruk. Hurricanes of No. 174 Squadron with No. 73 Squadron as top cover were ordered off from El Adem to intercept, while six Kittyhawks of No. 112 Squadron were despatched from Gambut to El Adem. At 13.15 hours Nos. 73 and 274 Squadrons sighted some thirty JU. 87s escorted by ME 109s and MC. 200s over Tobruk. Some of the aircraft had already bombed and others were about to do so. The A.A. fire was so intense, however, that the O.C. decided after one

attempt, not to intercept over Tobruk but to wait for the enemy out to sea. On sighting our fighters, the enemy jettisoned the remainder of his bombs, all of which fell on the north shore of the harbour, causing negligible damage. As a result of the combats, three JU. 87s and one MC. 200 were claimed destroyed, one JU. 87 and one ME. 109 were claimed probably destroyed, and two JU. 87s damaged; one of the latter was reported later to have crashed in the sea near Gazala. (1) Two Hurricanes were shot down by the enemy, one pilot successfully baling out. One Hurricane was hit by our A.A. and forced-landed, the pilot being safe, and another was shot down by A.A. although the pilot baled out safely. He had a somewhat anxious descent, however, as he was fired on by rifles and machine-guns from the Tobruk defences before he reached the earth. The indiscriminate firing of the Tobruk defences led to an investigation.

The Kittyhawks of No. 112 Squadron on patrol over El Adem were also vectored towards Tobruk, but became split up in cloud. At 17,000 feet two pilots saw two ME. 109s at 15,000 feet and jumped them, but both Kittyhawks had gun stoppages.

A diversionary attack was made by a single JU. 87 escorted by ME. 109s in the El Adem area near the landing ground, but no damage resulted.

#### 13th February

Idem

During the morning of 13th February fourteen Hurricanes of Nos. 73, 274 and 1 S.A.A.F. Squadrons intercepted a formation of enemy bombers with a strong escort over Tobruk. The claims arising from the combat were one ME. 109F destroyed, one ME. 109E, one JU. 88 and one HE. 111 probably destroyed, and one ME. 109, one JU. 88 and one HE. 111 damaged. (2) Four of our aircraft were lost, but two pilots were saved.

On the same day Hurricanes of No. 234 Wing which were carrying out patrols over a convoy intercepted a JU. 88 which had bombed our shipping and claimed it as damaged. Two Hurricanes, however, failed to return from the patrols.

#### 14th February

Idem

At midday on 14th February eight Kittyhawks of No. 3 Squadron R.A.A.F. and ten Kittyhawks of No. 112 Squadron achieved a model interception of a large formation of enemy fighters and five-bombers some ten to fifteen miles South-West of Acroma. No. 112 Squadron Tomahawks were leading, flying at the base of cloud (which was at the

- (1) German records show that casualties on operational flights over Cyrenaica on 12th February were two JU. 87s destroyed only. (Verluste Afrika and 6th Abteiling returns)
- (2) German records show that casualties on operational flights over Cyrenaica on 13th February were one fighter and one bomber destroyed. (Verluste Afrika and 6th Abteiling returns).

ideal height for Kittyhawks - 9,000 feet), with No. 3 Squadron 1,000 feet below and behind, when they saw ten to twelve MC. 200s below to their left and warned No. 3 to that effect. The Macchis attempted to climb for cloud, but before they could do so No. 112 Squadron dived on them, each pilot selecting an individual target. The entire formation was claimed as destroyed. Meanwhile, No. 3 Squadron sighted the formation of enemy bombers with a close cover escort at less than 2,000 feet. As No. 3 Squadron was about to attack, six ME. 109s - which had evidently been providing top cover in cloud - dived on it. The leader of No. 3, however, saw them in time to prevent his Squadron being jumped, and in the dog-fight which ensued three ME. 109s were claimed destroyed and two damaged. No. 3 Squadron then attacked the bombers and close cover escort, the combat ending at nought feet with no enemy aircraft in sight. Of the whole enemy force, put at 30 plus aircraft, 20 were claimed as destroyed, (fourteen ME. 200s, five ME. 109s and one BR. 65), one ME. 202 and one ME. 200 probably destroyed and ten aircraft damaged. (1) No. 112 Squadron claimed eleven and a half aircraft destroyed and No. 3 Squadron, R.A.A.F. eight and a half. Our aircraft incurred no losses. The enemy was reported to have been taken completely by surprise, affording the Kittyhawks an opportunity of showing their superiority at the right height under favourable conditions. Our pilots reported that the Italian pilots' evasive tactics resulted in their losing height every time they were attacked, so that ultimately they were forced down to ground level.

AOC in C's  
Correspondence  
with CAS.  
Part 3  
Encl. 341

Although our "offensive-defensive" operations met with considerable success it must be emphasised that due to the weakness of the fighter force consequent on battle wastage, diversions to the Far East and "teething troubles" with Kittyhawks and other limiting factors already mentioned, air superiority was lost for a time and signs of regaining it were not clearly apparent until mid-March.

Successful Action by ME. 109 Fighter-bombers restricts our use of El Adem Airfield

AOC/11  
Part 2  
Encl. 100A  
and AHB ILJ1/12  
P. 47

During the third week of February the use of our advanced fighter base at El Adem (No. 262 Wing) was greatly restricted by the enemy's use of ME.109s in a fighter-bomber role. Nuisance raids were made on the airfield, the Messerschmitts using their superior speed to avoid combats. These attacks met with a certain amount of success, the H.Q. R.A.F. M.E., Operations Liaison Officer reported on 18th February that seven of our aircraft had been damaged on the ground. On the 17th February, therefore, it was decided to withdraw our aircraft, ground parties and maintenance personnel at El Adem to the Gambut - Gasr El Arid area. El Adem was then retained as an advanced landing ground and refuelling base only.

- (1) Italian records of operational aircraft casualties are not available, but German records show that only one JU. 88 was lost on operational flights over Cyrenaica on 14th February. (Verluste Afrika and 6th Abteiling returns).

Attacks on Friendly Aircraft by our A.A.

Idem  
No. 208 (A.C.)  
Sqdn. O.R.B.  
and A.A.H.Q.  
WD/37/Air  
A.A. Co-operation Encls. 1A,  
2A, 3A and 3B

The enemy's increased air effort over the forward area and Tobruk resulted in a jumpiness among the crews of our A.A. defences who became prone to fire on any aircraft which came within range. During one particularly bad spell in mid-February (13th and 14th) six aircraft were shot down by our own A.A. (with five pilots killed), including casualties incurred by No. 208 Army Co-operation Squadron. On 14th September the G.O.C. in C., Eighth Army issued instructions to 13 and 30 Corps, 4 and 12 A.A. Bde., 88 Sub Area and Matruh fortress that "fire will not be opened on any aircraft at all except in case of A.A. working under higher direction unless (a) the markings on the aircraft are clearly visible as German or Italian and (b) the aircraft has or is committing a hostile act by firing on ground troops or bombing them. On 14th February, also, a meeting was held at Admiralty House, Tobruk to draw up instructions for the Tobruk A.A. defences. The meeting was attended by W/Cdr. Rosier, the Area Commander, Naval Officer i/c., Commander 4th A.A. Bde., A.A. Defence Commander and B.A.A. It was agreed that:-

- (1) If a successful interception was obtained by the R.A.F. and our fighters were engaging, the R.A.F. Operations Room was to pass the signal "Tallyho" to the G.O.R. On receipt of this:
  - (a) If fire had not been opened a rocket or three Verey lights were to be fired from the west end of the Harbour. (1) On this signal no A.A. fire, including L.M.G. and rifle fire, was to be opened except in the case of (3) below.
  - (b) If H.A.A. fire had been opened, G.O.R. was to order the Heavy A.A. to cease by telephone. The cessation of the Heavy A.A. was to be the signal for all types of A.A. fire to cease, except in the case of (3) below.
- (2) The R.A.F. undertook to cancel "Tallyho" by telephone to G.O.R., who was to pass the message on to Heavy A.A. gun sites.
- (3) Ships in the harbour and A.A. gun sites, when subjected to direct dive-bombing attacks were allowed to fire in self-defence.

Diversion of Aircraft to Far East Continued

A.O.C. in C's  
Correspondence  
with CAS etc.  
Encls. 299A,  
301B and 303A

During the period of the withdrawal to the Gazala line and the subsequent consolidation there, R.A.F. Middle East again received urgent calls from the C.A.S. to despatch aircraft reinforcements to the Far East.

In particular, towards the end of January the C.A.S. informed the A.O.C. in C., Middle East that 50 more

- (1) By 16th February it was decided to use parachute flares instead of Verey lights. (A.A.H.Q./37/Air Encls. 2A).

Idem Encls.  
325A and 326A

Hurricanes were to be shipped to the Far East on the aircraft carrier Indomitable, which was expected back at Port Sudan about 10th February. A warning was given that two complete Hurricane Squadrons (Nos. 30 and 261 Squadrons) were also to be despatched to Burma, the 36 aircraft and pilots to fly by the air route to India and the ground echelons to go by sea to Karachi. Owing to the deterioration of the situation in the Far East in mid - February the original arrangement was altered on 17th February as follows:- the Indomitable was detailed to go from Port Sudan to Ceylon carrying the 36 aircraft and pilots of Nos. 30 and 261 Squadrons, as many of the 50 Hurricanes reinforcement as would fill the ship, and "as much as possible of ground echelons of Nos. 30 and 261 squadrons as could be got in". The remainder of the 50 Hurricanes originally intended to go in the Indomitable flew by the air route to India. Instructions were also given by the C.A.S. on 17th February for the despatch of a Blenheim squadron (No. 11) the first eight aircraft and crews were to be sent to Ceylon as early as possible with the minimum servicing party by air transport and the remaining aircraft were to go by air and the rest of the unit by sea.

Idem 346A

The foregoing were the most striking diversions during the phase under review, but it should be noted that during the two months ending 15th March the Middle East Command sent to the Far East 139 Blenheims and 300 fighters. Air Marshal Tedder pointed out both to A.O.C. in C. India (Air Marshal Pierse) and the C.A.S. that these diversions were achieved "by draining all resources and allowing squadrons to get progressively weaker."

Danger of Ill-informed Press Comment Leading to Strained Relations Between Army and R.A.F.

A.O.C. in C's  
Correspondence  
with C.A.S.  
Part 3  
Encls. 320A

The facile theory that the failures in Greece and Crete in April and May, 1941, could be ascribed to the failure of the R.A.F. - which sprang from ignorance of the conditions necessary for the exploitation of air power - was still held by various ill-informed sections at Home. This was particularly evident at critical stages of the "Crusader" offensive and during the withdrawal in early 1942, and Air Marshal Drummond concluded a signal to the Secretary of State giving details for his Estimates speech:-

"Para. 11 I hope that you will be able to administer a sharp rebuke to newspaper leader writers and retired-officer contributors who attempt to pin every failure of the Army or Navy to lack of air support and advocate an Army Air Force. I strongly urge this course because both Auchinleck and I are gravely concerned at the dangerous effect this loose and ill-informed talk, if not stopped, may have on the morale of the R.A.F. air crews in the Desert at present critical time.

"You should know that the R.A.F. in the Desert realise that they have saved the army, both in the recent advance and in the withdrawal, and naturally resent any suggestion that the army should control them.

"The R.A.F. have, on this occasion, given the Army, at great sacrifice, all the air support and protection they required. The German Air Force has interfered little with Army operations. Yet Army continues to withdraw therefore the R.A.F. crews are perplexed and feel their efforts have been wasted.

"During the withdrawal some R.A.F. armoured car crews drove back nine serviceable tanks which had been abandoned by the Army. This, and similar stories, have naturally circulated and now, rightly or wrongly, the R.A.F. in the Desert feel that the Army do not know how to use their weapons and are not willing fighters. This has been further strengthened by the aggressive action of R.A.F. armoured cars, who took on some German tanks.

As a result, the R.A.F. spirit in the Desert is 'Give us some tanks and we will stop this retreating if the Army do not wish to fight'. There is therefore real danger that incessant Press correspondence on failure to exploit air superiority etc. may lead to strained relations between Army and R.A.F. personnel."

A.X.883 16/2  
A.O.C/22 323A

A.X.883 16/2  
A.O.C/22  
323A

The Secretary of State replied that he was much impressed by the A.O.C.-in-C's paragraph 11 and asked him if he would suggest to the C.-in-C. that he should signal in the same sense to his Secretary of State as this would greatly increase the effects of anything he had to say. He continued:-

"It would be most useful if he could stress the value of Army Air Co-operation so far and emphasise the grave danger of prejudicing it in the future if these newspaper views are not discountenanced by the War Office."

To which the A.O.C. was able to reply on February 17th (A.553 17/2)

A.553 17/2  
A.O.C/22  
324A

"Auchinleck is signalling Secretary of State for War in sense required".

On March 19th the Secretary of State wrote to thank the A.O.C.-in-C. for "the very full brief which you signalled for my speech on the Air Estimates ..... it was not an easy debate..... but it turned out unexpectedly well, and on the issue of the dismemberment of the Royal Air Force, the House very clearly supported our position..... I had hoped to be able to say that Auchinleck had signalled to the Secretary of State for War deploring the Press Campaign in favour of the Army Air Arm, but was unable to extract any information from the War Office that such a signal had been received."



SECTION 2TRENDS OF AIR OPERATIONS IN THE CENTRAL AND EASTERN MEDITERRANEAN 21st January to 24th February

The air operations in the Eastern and Central Mediterranean are considered in detail in a separate Air Historical Branch Narrative. It is considered useful here, however, to indicate the main air operations in connection with the Mediterranean Air/Sea War, as emphasis on the air participation in the land campaign fails to bring out the flexibility of the Middle East air forces. It must be stressed that the strategic - tactical - "coastal" organisation (1), which achieved such outstanding success in later Mediterranean campaigns was in process of development.

Main Factors Limiting Effectiveness of our Air Operations in the Central and Eastern Mediterranean

- (i) The use of Malta as an offensive air base for attacks on enemy shipping and supply ports was greatly restricted through:-
  - (a) The intensification of the Luftwaffe's offensive from Sicily, and
  - (b) Unusually bad weather, including gales and flooding

Some detail of (a) and (b) are given in the next section.

- (ii) The loss of air bases in the western part of the Gebel Akhdar as a result of the enemy's advance in Cyrenaica.

This loss:-

- (a) ham-strung the effort of the Cyrenaican air striking force against enemy sea-borne supplies, as these could be routed outside the range of air forces operating from Eastern Cyrenaica,
- (b) limited the fighter protection which could be given to convoys plying to Malta,
- (c) and ruled out No. 205 Group's offensive against Tripoli.

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(1) During the phase under review units controlled by No. 205 Group - A.H.Q. Western Desert - No. 201 (N.C.) Group and A.H.Q. Egypt.

Air Forces AvailableG.R. and Bomber Squadrons

The following squadrons were available at various times during the phase for reconnaissance and strikes on enemy shipping.

No. 201 Group  
O.R.B.,  
AHB/II/J1/12  
Appendix "A"  
No. 205 Grp.  
O.R.B.  
Appendices

(a) Operating under the direction of No. 201 (Naval Co-operation) Group, from Egypt and Cyrenaica:-

Nos. 18 and 55 Squadrons (Blenheims), No. 203 Squadron (Blenheims and Marylands) No. 39 Squadron (Marylands and Beauforts), No. 211 Squadron (A.S.V. Wellingtons), No. 230 Squadron (Sunderlands), No. 459 Squadron (Hudsons), Nos. 815 and 826 Squadrons, Fleet Air Arm (Albacores and Swordfish) and No. 700 Squadron Fleet Air Arm (Walruses and Swordfish), No. 2 Squadron R.Y.S.A.F. (Dorniers) and No. 13 Hellenic Squadron. At various times, when the ship-striking force needed, strengthening some or all of the following were made available:- Nos. 11 and 14 Squadrons (Blenheims) from Air Headquarters, Western Desert, and Nos. 38, 104, 108, 148 Squadrons (Wellingtons) and the few Fortresses and Liberators then available from No. 205 Group.

(b) From Malta

No. 156 Squadron (A.S.V. Wellingtons) Nos. 18, 21 and 107 Squadrons (Blenheims), No. 69 Squadron (Marylands), No. 40 Squadron detachment (Wellingtons), No. 828 Squadron Fleet Air Arm (Swordfish and Albacores), No. 830 Squadron (Swordfish), and detachments of No. 205 Group Squadrons (Wellingtons).

For shipping protection fighter squadrons of A.H.Q. Western Desert and A.H.Q. Egypt operated at need in the protection of shipping off the Cyrenaican coast and defence of ports (1) and the Malta fighter squadrons undertook similar commitments within their own sphere of activity.

AHB. IIJ1/12  
Appendix "A"

Reconnaissance Effort

The general reconnaissance effort was maintained at as high a level as the forces available and restricting factors (i)(a) and (b) and (ii)(a) mentioned on page 47 allowed.

The main aims, as formerly, consisted in (a) keeping a check on Italian Fleet dispositions, (b) discovering the movements and location of enemy shipping in order to provide targets for our ship-striking forces. This included the cover of the chief enemy ports by P/R. aircraft.

- (1) During the period of 28th January to 24th February, 1942 fighter squadrons based in Cyrenaica and Egypt flew 427 sorties on shipping protection and 934 on local defence (the latter included, however, defence of airfields as well as ports and bases) A.H.B. IIJ1/12 Appendix "E".

(c) ensuring that shipping lanes were free from enemy submarines and surface craft. Special searches were laid on when convoys were being run.

#### From Egypt and Cyrenaica

Idem

By the end of 'Crusader' offensive, aircraft on routine shipping patrols in the Central Mediterranean usually took off from either Derna or Berka and operated as far as the south-west of Greece. For a brief period, after Advanced No. 235 Wing was established in the Benghazi area, reconnaissance was more thorough than ever before, and our convoys enjoyed a greater measure of security. After our withdrawal from Western Cyrenaica, however, tracks were flown from the Tobruk area. Shipping protection became difficult again, as the enemy obtained Tmimi, Martuba and Derna landing grounds, which gave him comparative freedom of movement from the north-west of Cyrenaica. Special attention was paid to anti-submarine searches, some 260 sorties being flown. Towards the end of January the area of anti-submarine search was altered. Patrols on the coastal shipping route to Tobruk, where the majority of submarines had been sighted in the past, were approximately doubled; less attention was paid to the approaches to Alexandria where sightings were now uncommon.

#### From Malta

Idem

The chief point of interest as far as the reconnaissance effort from Malta was concerned was the increased use of A.S.V. Wellingtons. The A.O.C. Mediterranean (Malta) wished to maintain A.S.V. searches east and west of the island every night, but this was made impossible by the shortage of trained crews. By 12 February only four such crews were available for duty. Nevertheless throughout the period the average was roughly one completed search every two days. Strikes often followed A.S.V. sightings, although as it turned out without a commensurate amount of damage being done to enemy shipping. Of the ten sightings made by A.S.V. Wellingtons in the first fortnight, five were followed by strikes. In the next fortnight, of the seven strikes made by Malta-based aircraft, six were the result of A.S.V. Wellington contacts.

On the night of 7/8 February an A.S.V. sighting was followed up by submarine action instead of by bombers or torpedo-bombers.

#### Result of Attacks on Enemy Shipping

##### (a) Air Effort and Claims

A.H.B. ILJ1/12  
Appendix 'A' and  
A.H.B./ILJ1/29

One hundred and thirty-eight sightings of enemy vessels were made by aircraft operating from Egypt/Cyrenaica and Malta during the phase - 42 from the former bases and 96 from the latter.

Aircraft based in Egypt/Cyrenaica carried out two heavy, eight medium and eight light bomber effective sorties against shipping in transit or harbour. No claims were made against merchant shipping but three U-boats were claimed sunk by bombs, two claimed probably sunk by depth-charges and six claimed damaged by bombs, depth-charges and machine-gun fire.

Malta-based bombers and torpedo-bombers flew seventeen medium and thirty-four light bomber sorties against shipping. No ships were claimed as sunk by air action only, but six merchant vessels, two tankers, two carriers and destroyers were claimed damaged at sea and hits were claimed on a naval vessel and other shipping in Tripoli harbour. As shown below, so far as merchant shipping was concerned enemy records show that Malta-based aircraft sunk two ships, although the larger of these had previously been damaged by R.N. action.

(b) Confirmed Sinkings of Enemy Merchant Shipping by Air and Sea Action During the Phase

According to Lloyds, 44,363 tons of enemy merchant shipping were sunk in the Mediterranean between 21 January and 24 February, seven ships (26,280 tons) (1) by naval action, two ships (16,169 tons) (2) by air action, and one ship (1,334 tons) by mine. Of these all but two ships (7,293 tons) sunk by the Navy, were sunk in the area of the supply routes to North Africa.

When it is recalled that during September and October 1951 identified enemy merchant shipping sunk in the Mediterranean by air action totalled 40,193 tons and 42,440 tons respectively, (3) the Luftwaffe's successes in the first two months of 1942 in neutralising Malta as an air base stands out clearly. (4) Only one ship (5,628 tons) was damaged besides the Victoria; the damage was caused by air action.

- 
- (1) One ship (6,142 tons), was 'shared' by the Navy and Air Force; in estimating the total tonnage sunk by each the tonnage of this ship has been divided equally between them.
  - (2) Includes the motor vessel Victoria (13,098 tons) which had previously been damaged by naval action.
  - (3) All but 2,415 tons on convoy routes to North Africa.
  - (4) This neutralisation continued for the next three months. In March only one ship was sunk in transit (1,774 tons), and in the next two months none.

P1/4203 (Enemy Records) and E.S.L.A.C. List of Identified Shipping Sunk.

~~damaged by air action in September, 1941 were 73,200 tons Cat.II and 49,000 tons Cat.III, the Luftwaffe's success in the first two months of 1942 in neutralising Malta as an offensive air base stands out clearly.~~

Monthly totals of confirmed enemy merchant shipping losses in the Mediterranean are given at Appendix VIII.

#### Special Attacks on Enemy Convoys

A.H.B. ILJ1/12  
Appendix A

Special attacks were laid on against two important convoys during the phase:-

- (i): Between 22nd and 24th January - convoy of a (believed) troopship of 13,000 tons and four merchant vessels, heavily escorted.
- (ii) Between 21st and 23rd February - convoy of eight merchant vessels with a strong escort.

As accounts of the air attacks on these convoys indicate the difficulties which prevented the results expected being achieved - and success would have had a considerable effect on the enemy's supply situation in Libya - they are given in some detail.

#### Air Attacks on Italian Convoy (23rd - 24th January)

AOC/II Part 2  
Encs. 55A

At the time of our advance to Benghazi in the previous December (captured 24th December), it had been appreciated that "Shipping into Tripoli (was) key to future situation" and the Malta air force, in particular, was instructed to continue and if possible intensify its operations to prevent enemy reinforcing. In the event as shown in the previous Narrative, increased enemy air action and bad weather greatly restricted the air effort which could be directed against the enemy's main stream of reinforcing shipping. In view of the enemy's advance and need for increased supplies to sustain intensive operations, interference with convoys plying to Libya remained a major air commitment.

AHB.ILJ1/12  
Appx. A.MEFOS  
No.13 Appendix C  
AHQ. MALTA,  
No.201 Grp.  
No.205 Grp.  
No.235 Wing and  
Sqdn. O.R.Bs

On the afternoon of 22nd January an enemy convoy of a 13,000 ton (believed) troopship and four merchant vessels, strongly escorted, was sighted leaving Taranto Bay by one of our submarines. It was routed through a point some 240 miles east of Malta and thence kept southwards, well outside a radius of 200 miles from Benghazi, where adequate sea reconnaissance and striking forces were being built up under No. 235 Wing (which took over from Advanced No. 201 Group on 20th January).

News of the convoy reached H.Q. No. 201 (N.C.) Group at 21.00 hours the same day. During the night a Malta-based A.S.V. Wellington searched the Ionian Sea and reported a southbound convoy of at least three ships, with naval escort, some 175 miles north-east of Syracuse. No. 201 Group, accordingly, organised reconnaissance and striking forces for operations on the following day in conjunction with A.H.Q. Malta.

### Forces Assembled for the attacks

The following forces were assembled in Cyrenaica:-

#### Reconnaissance

Nine Blenheims (No.203 Squadron) at Berka main.  
One Maryland (No.39 Squadron) at Berka main.  
Two A.S.V. Wellingtons at Berka satellite.

#### Striking Force

Two Fortresses (No.205 Group) at Fuka satellite.  
Eighteen Wellingtons (No.205 Group) at El Adem.  
Nine Blenheims (No.55 Squadron) at Berka satellite.  
Eight Torpedo Albacores (No.826 Squadron) (F.A.A.)  
at Berka satellite.  
Three Torpedo-Beauforts (No.39 Squadron) at Berka  
satellite.  
Thirteen Blenheims (Nos. 11 and 14 Sqdns.) at Benina.

#### Fighter Cover

Five Beaufighters (No.272 Squadron) at Berka  
satellite.

Further reconnaissance and striking forces were available on Malta (No.69 Squadron (Marylands), No.40 Squadron (Wellingtons) Nos. 18, 21 and 107 Squadrons (Blenheims) and Nos. 828 and 830 Squadrons, F.A.A. (Swordfish and Albacores), but it was anticipated correctly, that enemy air attacks would be delivered against the Malta airfields in order to pin down at least part of the air force there.

### Causes of Comparative failure of attack by Cyrenaica based aircraft

In view of the forces available there were good grounds for hoping that the convoy would be destroyed. In the event, although some success was achieved (details of which are given later) the results of the operations were disappointing. The causes of the comparative failure of the effort from Cyrenaica, apart from engine trouble which prevented fighter aircraft from taking off or completing operations were:-

- (i) Defective fuelling arrangements. In particular, No.55 Squadron Blenheims could not take off on the 23rd owing to lack of petrol bowers and hand pumps and later operations by Blenheims and Albacores were delayed.
- (ii) W/T failures. In particular, a Blenheim reported at 0930 hours and 1025 hours the position of units of the Italian fleet screening the convoy, but although these reports were received by HQ.201 Group, they were not received by the controlling Wing (No.235) at Benghazi. Thus the Wing received the information only after the aircraft landed at 1140 hours and the two Fortresses despatched to attack were not airborne until after noon. Three other sighting reports were not received owing to W/T. failures and the results of the sightings were not known by the controlling formations until after the aircraft had landed. W/T. failure also prevented

the re-directing of some of the striking force of Blenheims and Albacores airborne in the afternoon against the convoy; in the event, this was fortunate as the new sighting, reported by a Malta-based aircraft was inaccurate, and the aircraft relying on previous sightings located the merchant vessels and delivered attacks.

- (iii) Inaccurate reports of enemy positions and lull in sightings. Sightings were made by two Blenheims in the morning of a battleship which could not be reconciled unless two battleships moving in opposite directions were involved. No further reports of sightings were received at Benghazi between 12.50 hours and 16.50 hours. Later, as already mentioned, a Malta-based aircraft reported the enemy force some 50 miles too far to the west.

Four attacks were made by Cyrenaican-based aircraft during daylight on the 23rd January:-

- (a) Between 16.15 and 16.25 one Fortress scored near misses on the battleship and another large vessel; the other Fortress failed to locate any vessels.
- (b) Three Blenheims (of No.11 Squadron) bombed the convoy at 16.38 hours without observing results.
- (c) Three Beauforts attacked with torpedoes at 17.30 hours and saw smoke coming from one of the ships.
- (d) Three Albacores, attacking at 18.38 hours, stopped the 13,000 ton troopship with a torpedo and caused an explosion in a destroyer; another Albacore returned with engine trouble and the fifth failed to return.

The attacks were continued in the hours of darkness. At 1600 hours an A.S.V. Wellington operated from Berka to search an area based on the inaccurate Malta sighting and did not locate the convoy until around mid-night. Meanwhile fourteen Wellingtons operated from El Adem following a sighting reported by a No.203 Squadron Blenheim. Owing to engine trouble and other causes only seven aircraft located the target some 160 miles west of Tripoli and attacked between 21.30 and 23.40 hours, claiming two near misses on two large ships. Attacks in the meantime were delivered from Malta. Nine Albacores and Swordfish operating from the island failed to locate the convoy and one Albacore failed to return. At 20.46 hours a Malta A.S.V. Wellington located the convoy and shadowed it until 01.15 hours on the 24th January. Between 21.19 and 23.00 hours on the 23rd January seven Malta-based Wellingtons bombed the convoy and the shadowing Wellingtons observed two explosions on the largest vessel followed by clouds of smoke; probable hits were also scored on two other merchant vessels and a (believed) cruiser. At 01.35, 24th January, four Malta-based Swordfish (two others turned back through engine trouble) scored two further hits with torpedoes on the 13,000 tons troopship.

During the morning of the 24th January in bad weather, G/R aircraft both from Malta and Cyrenaica (No.235 Group) searched for the convoy and escorting units, but without

success. A Fortress, also unavailingly, searched the area of the previous night's operations with the object of sinking any crippled vessels found. A Strategic Reconnaissance Unit aircraft, however, caught sight of seven destroyers north of Misurata and a Malta-based P/R. Beau-fighter sighted four merchant vessels and seven destroyers off the coast near Tripoli.

In all, the striking force of 53 aircraft in Cyrenaica carried out a total of seventeen effective and 24 non-effective sorties and the Malta-based striking force made eleven effective and 14 non-effective sorties. The 13,000 ton ship was the only vessel claimed as sunk (1) and this was partly due to naval action; but probable hits were claimed on two merchant vessels and a cruiser with bombs and on a destroyer with a torpedo, as well as a number of near misses.

The operations served to emphasize the importance of water-tight arrangements for the quick receipt and co-ordination of up-to-the-minute information and immediate despatch of ship-striking forces: had such an organisation then been evolved it is certain that far more damage would have been inflicted on the convoy and the units of the Italian Fleet, which would have prevented an improvement in the enemy's general supply situation at a critical period.

#### Air Attacks on Enemy Convoy (21st - 23rd February)

A.H.B.IIJ1/12  
Appendix A  
AHQ. Malta  
O.R.B.

By 20th February intelligence reports confirmed that a large Italian convoy was preparing to sail for Tripoli. Arrangements for interception, accordingly, were co-ordinated with Malta by No.201 (N.C.) Group.

#### Air Forces Available

No.205 Group  
No. 235 Wing  
and Sqdn.  
O.R.Bs

Operational control of the striking force in Cyrenaica was exercised by No. 235 Wing, and the following aircraft were mustered in position:-

12 Blenheims	(Nos. 18 and 55 Squadrons)	- Bu Amud
7 Blenheims	(No. 14 Squadron)	- Gambut
3 Torpedo-Wellingtons	(No.38 Squadron)	- Gambut
1 A.S.V. Wellington	(No. 221 Squadron)	- Gambut
6 Beauforts	(No. 39 Squadron)	- L.G. 05
2 Fortresses	(No. 220 Squadron)	- L.G. 05
4 Marylands		
1 Blenheim	(No. 203 Squadron)	- L.G. 09
25 Wellingtons	(No. 205 Group)	- L.G. 09
1 Liberator	(No. 108 Squadron)	- L.G. 09

The Malta force was strengthened by the despatch of 6 Wellingtons (No. 37 Squadron).

#### First Sightings of the Enemy

At 22.30 and 00.40 hours on the night of 21/22nd February an A.S.V. Wellington operating from Malta, sighted the enemy force in two groups about 85 miles apart. Their positions were approximately 175 and 250 nautical miles respectively from Malta and well over 350 from Bu Amud.

(1)

Records show that the motor vessel, "Victoria" (13,098 tons) was sunk 23rd January, 1942, in position 33°30 N. 24°24'E. (Pl/4203). The E.S.L.A.C. List of Identified Vessels sunk in the Mediterranean describes the vessel as a troopship.

The Liberator, detailed to shadow throughout the day, crashed on taking off and was destroyed.

At 07.25 hours on the 22nd February, a No. 203 Squadron Maryland on reconnaissance contacted the enemy forces, which had formed up and was reported to consist of:-

Eight merchant vessels, two battleships, five cruisers, fifteen destroyers and fighter escort of ME.109s.

The convoy and escort, which were still some 220 miles from Malta and 330 from Bu Amud, were shadowed for most of the day by a Blenheim and two Marylands. The persistence and accuracy of their reporting, in the face of enemy fighter escort, was the outstanding feature of the operation.

#### Failure of the Air Effort

On receipt of the first report by the A.S.V. Wellington, five Malta Albacores took off, but had to be recalled owing to an error of 100 miles in the Wellington's reckoning.

The two Fortresses left L.G.05 at 07.00 hours to attack and shadow. Owing to an error in navigation one aircraft failed to find the enemy; the other reported the convoy to be in four formations totalling:-

Six merchant vessels (8-12,000 tons), One battleship (Littorio class), two cruisers (8 inch), four cruisers (6 inch) and eighteen destroyers.

The Fortress dropped 7 x 500 lb. S.A.P. bombs, but could not observe results owing to intense A.A. fire and an attack by two ME.109s. Although unable to continue shadowing, the Fortress returned safely to base.

Five Beauforts left L.G. 05 twenty minutes after the Fortresses, intending to attack simultaneously. Because they did not refuel, as intended, at Bu Amud, they reached the limit of their range without making any sightings; in fact they were airborne one hour above the normal margin of safety.

Blenheims of Nos. 18 and 55 Squadrons were then briefed to attack in two formations from Bu Amud. The first four aircraft (a fifth failed to start) left at 12.20 hours. One returned early with engine trouble, and the remainder failed to locate, the leader cutting the search short when he considered the limit of endurance had been reached. One aircraft forced-landed in the sea. The second formation of six Blenheims was airborne at 13.35 hours. The leader returned almost immediately with engine trouble and after twenty-five minutes the deputy leader's W/T failed and he led the formation back to base. Seven more Blenheims of No. 14 Squadron were despatched from Gambut at 14.20 hours. Four turned back with engine trouble, but the remaining three reached the estimated enemy position. They saw nothing, however, and after a brief square search set course for home.

Thus from the time of the first sighting on the night of the 21st/22nd February until dusk on the 22nd February only one aircraft attacked the convoy out of twenty-nine despatched.

Misfortunes continued during the night of 22nd/23rd February. The A.S.V. Wellington at Gambut became unserviceable shortly before operations were due to begin and only one of the three at Malta survived bombing attacks during the day. This aircraft took off to rendezvous with the No. 205 Group Wellington striking force over the convoy at 22.00 hours, but had to return to base through engine trouble. Consequently, without guidance or illumination, the whole striking force except one aircraft failed to locate. This Wellington, late in taking off, found and bombed the enemy without, however, observing results.

Malta's A.S.V. Wellington was again airborne at 22.35 hours. Three hours later it contacted the convoy about 77 miles East of Homs. Owing to the wind, however, the distance from Malta and the time of sighting, a strike by Albacores and Swordfish was cancelled, and no further action could be taken.

It was clear that our air action could now do little to stem the enemy's sea-borne supplies to Libya; in particular, his shipping was being routed beyond the effective range of our ship-striking force operating from Eastern Cyrenaica and Malta had been largely neutralised as an offensive air base.

#### Convoy Movements Between Egypt and Malta

A.H.B. ILJ1/12  
Appendix A

During the phase there were two exchanges of shipping between Egypt and Malta as follows:-

- (i) Two-way movement between Alexandria and Malta (24th - 27th January).
- (ii) Two-way movement between Alexandria and Malta (12th - 15th February).

The first movement was undertaken during the early stage of the enemy's counter-attack in Cyrenaica before the air situation had changed to our detriment, and may be considered as one of the previous series of movements carried out in favourable conditions during the previous month. The second movement was attempted under conditions far less satisfactory.

#### Two-Way Convoy Movement (24th - 27th January)

AHB. ILJ1/12  
Appendix A  
No. 235 Wing and  
Sqn. O.R.B.s

While the enemy's attack in Western Cyrenaica was gaining momentum, the value of holding Cyrenaican landing grounds was again illustrated, in facilitating a two-way convoy movement between Alexandria and Malta (1). This

- (1) Gen. Auchinleck on 24th January was perturbed at the news that Air Vice Marshal Coningham was "evacuating all aerodromes in Benghazi and Jebel areas.. as it means that all hope of striking at enemy convoys at sea and at Tripoli except from Malta must be set aside for the present. Moreover Malta convoy now at sea would get reduced air support". Actually in accordance with the withdrawal programme the two fighter squadrons at Benghazi did not withdraw until 29th January and operations continued from Martuba until 1st February (AOC/II Part 2, Encs. 82A and 88A and Sqn. O.R.B.s.).

was the fifth convoy movement (including one previous two-way movement) since mid-December, 1941, when our advance in Cyrenaica made the sea passage between Egypt and Malta again practicable.

H.M.S. Breconshire convoyed by C.S.15 left Alexandria on 24th January. On the 25th January, air protection was afforded the convoy off the Cyrenaican coast by squadrons operating under No.235 Wing. Blenheims of No.203 Squadron carried out sea reconnaissances to the north-west and No. 238 Squadron, the R.N.(F) Squadron and No.2 Squadron, S.A.A.F. afforded fighter protection. During the late morning the R.N. Hurricanes sighted a single HE.III flying at 2000 ft. and as a result of their attacks claimed the aircraft damaged (1). In the afternoon Hurricanes of No.238 Squadron patrolling over the convoy encountered four or five JU.88s and claimed one destroyed and two damaged; a little later another JU.88 caught attacking the convoy was engaged by a Hurricane of the same squadron and blown to bits (1). The convoy escaped damage. The convoy reached Malta safely on the 27th January.

Meanwhile S.S. Glengyle and Rowallen Castle, escorted by naval vessels had left Malta for Alexandria, the initial stage of the voyage being covered by aircraft operating under A.H.Q. Mediterranean (Malta). On the 26th January, the convoy survived attacks by enemy torpedo-bombers, at a time when sand storms prevented practically all our protective fighters from operating. The following day, as it was considered the serviceability of aircraft of No.238 and R.N.(F) Squadrons might be low, No. 2 Squadron S.A.A.F., at Martuba, were instructed to co-operate. In particular two S.A.A.F. Tomahawks helped with the protection commitments in the morning and four more were flown to El Gubbi to operate from there; owing to the likelihood of sand rising during the day four Hurricanes of the R.N.(F) Squadron were sent to Gambut to operate from there. There were no incidents and the convoy proceeded safely to Alexandria.

#### Two-way Convoy Movement (12th - 15th February)

A.H.B.II/12  
Appendix A

The grave handicap involved in the loss of our air bases in the western part of the Gebel Akhdar and the Luftwaffe's increased success in neutralising the Malta air force were apparent in the disasters which overtook the exchange of shipping between Malta and Alexandria during 12th - 15th February.

At 16.00 hours on the 12th February, the first part of the Westbound convoy, M.W.9A, (the merchant vessels Clan Chattan and Clan Campbell escorted by the cruiser Carlisle and four destroyers) left Alexandria. The second part M.W.9B, (the merchant vessel Rowallan Castle escorted by four destroyers) followed on a slightly different course an hour later. At 05.00 hours next day 15th February, Cruiser Squadron with eight destroyers left with the intention of overtaking the convoy at a point 100 miles North of Cape Aamer. On the afternoon of the

(1) Total German bomber losses on 25th as shown in German records were two destroyed and one damaged (See footnote 2 page 25).

13th convoy M.E.10 (the merchant vessels Clan Ferguson, City of Calcutta, Ajax and Breconshire, escorted by the cruiser Penelope and six destroyers) left Malta.

The East and West convoys planned to meet and exchange escorts on the afternoon of the 14th February.

#### Air Support for the Movement

Idem

To counter possible enemy air, surface or submarine attack, the R.A.F. support was provided on the following lines:-

- (a) Increased anti-submarine patrols over the approaches to Alexandria and the coastal waters to Tobruk; continuous close patrols ahead of the convoys; special A/S patrols from Malta when ships were leaving or approaching.
- (b) Continuous fighter cover during daylight while convoys were within range of single engine aircraft; fighter cover for the Naval units following up the West-bound convoy; Beaufighter patrols from either Malta or Gambut when single engine fighters were out of range.
- (c) Considerable reconnaissance effort from Malta and Egypt, including A.S.V. Wellington searches and photographic and visual reconnaissance of Taranto.
- (d) As large a striking force as possible held ready at Malta during the 14th and 15th February, and six Blenheims and six Beauforts standing by at El Adem, two Fortresses at Fuka Satellite, and six Blenheims at Fuka Main landing grounds.
- (e) Bombing of air bases in Crete and the submarine base at Salamis in Greece by No.205 Group Wellingtons and attacks on Sicilian airfields by Malta-based bombers.

#### Enemy Attacks on our Air Bases

Idem

Our air effort was hampered by the fact that between 11/12th and 15/16th February the enemy made some 400 bomber sorties against Malta, attacking the dockyards and Hal Far, Takali and Luqa landing grounds. On the 15th February, when 144 enemy aircraft were reported to have crossed the coast, the Luqa runways were badly cratered; two Wellingtons under repair were destroyed, two Blenheims were damaged, and three Beaufighters, about to return to Egypt, slightly so.

On the same day in Cyrenaica, ME.109s made two high-level bombing attacks on El Adem and Gambut, but caused no damage or casualties. Two Kittyhawks which took off to intercept were, however, shot down.

#### Enemy Air Action against the Convoys on 13th and 14th February

Idem

During their passage the convoys were attacked by seventy-nine bombers and torpedo-bombers, the forces apparently varying in strength from single aircraft to fourteen JU.88s and seven Heinkels.

During the 13th February, the Eastbound convoy was unmolested, but all three Westbound units were attacked in Libyan coastal waters. In the morning the enemy was beaten off by the fighter escort, but during the afternoon M.W.9A was heavily bombed, Clan Campbell badly damaged, was detached, escorted by two destroyers to Tobruk, and eventually returned to Alexandria. In the evening 15th February, Cruiser Squadron successfully withstood a low-flying flare-illuminated attack by nine JU.88s.

The following morning (14th February) the two sections of M.W.9 joined according to plan with 15th Cruiser Squadron North of Tobruk. The manoeuvre was sighted and the force shadowed by enemy aircraft, although no attack developed until after noon, when the convoy was approximately 150 miles North of Benghazi. Strong forces of JU.88s and Heinkels made high-level and dive-bombing attacks. Clan Chattan was so badly damaged that personnel were transferred, and the vessel sunk by our own forces.

Meanwhile, convoy ME.10 from Malta continued on its course unharmed by attacks from two S.79s.

At 14.40 hours the convoys, both attended by hostile aircraft, met as arranged. The change of escort was safely completed under cover of fire from all the warships and aided by Malta Beaufighters which shot down a Cant.Z.506.

The convoys, resuming their respective journeys, were both attacked from 15.00 hours onwards. H.M.S. Carlisle was stopped by damage to a steam pipe, but, after a quick repair, carried on. At 15.15 hours, however, Rowallan Castle - the last of the merchant vessels bound for Malta - was hit. She was taken in tow, but the reduction of the convoy's speed to less than ten knots exposed the escort to a risk from surface or submarine attack which could not be accepted. Personnel were, therefore, removed, and at 19.56 hours Rowallan Castle was sunk by gunfire.

Fighters covered the Eastbound convoy when it came within range, north of Tobruk. In particular, Beaufighters damaged one S.79 and forced eleven others to jettison their loads and Hurricanes later destroyed two more S.79s.

Idem

#### Protection Provided on the 16th

During the night of the 15/16th continuous patrols were provided for the Eastbound convoy by a Sunderland and three Albacores. On the 16th, in addition to three routine anti-submarine patrols of the Alexandria approaches, two Dorniers made special patrols to the west; two Ansons searched from Alexandria to Ras El Kanayis; and seven Albacores covered other coastal areas.

As the convoy neared Alexandria, pairs of fighters gave protection until all ships were safely berthed.

#### Action against Enemy Surface Vessels

Idem

Meanwhile on the 15th February, a Malta Maryland had sighted an enemy naval force consisting of three cruisers and nine destroyers on a South-Westerly course 83 miles

South-East of Kalafrana. This aircraft was shot down, however, by ME.109s so instead of being informed by W/T., when the striking force could have been employed, Malta did not receive the news until 16.00 hours when the crew of the Maryland had been rescued from the sea. The striking force had by that time been released from standing-by, and the opportunity was missed.

At 00.32 hours on the 16th February, however, a Malta A.S.V. Wellington re-located the force 157 miles South-East of Cape Passero on a northerly course. Five Albacores were despatched and, beginning at 03.25 hours, claimed torpedo hits on two cruisers and a destroyer, and a probable hit on a second destroyer. When the aircraft left, four ships were reported on fire, one cruiser blazing fiercely at the stern.

No further sightings were made by aircraft, but at 13.15 hours a submarine discovered two cruisers and six destroyers on a course North-North-East, half-way between Catania and Cape Spartivento. The submarine reported hitting one of the cruisers twice with torpedoes.

#### Seriousness of Malta's Supply Situation

On 21st February the Commanders-in-Chief signalled the Chiefs of Staff that "Of the seven ships forming the January and February convoys three have arrived in Malta."

The Governor of Malta (Lt. General Dobbie) had previously reported on 18th February to the War Office that "the non-arrival of the recent incoming convoy has accentuated a supply situation which was already unsatisfactory". The position was that supplies generally would last until the end of June with the following exceptions: (a) Kerosene would last only until mid-June and coal early June. (b) M.T. petrol would last until end of April or early May, excluding the Fortress reserve which had to be kept in case of attack. (c) Submarine Diesel oil was down to two months supply and Furnace oil (for H.M. Ships and Civil Generating Station) was down to 5,900 tons.

The stock of bombs at the present consumption would last three months. Stocks of cement, timber and small arms ammunition was inadequate.

All Service and Civil expenditure of petrol had been "cut down to the bone". The training of Army units was almost at a standstill. Drastic cuts had been made in the use of coal, fodder, kerosene, and important works had been curtailed.

Similarly military losses of guns, tanks and vehicles needed to be made good and increased and further troop reinforcements were necessary.

The Commanders-in-Chief advised the C.O.S. that "It appears useless to try to pass in a convoy until the air situation in Malta has been restored and the military situation in Cyrenaica improved. Recommend policy of reinforcement of Malta be considered."

D/A.O.C.1  
Encls. 37A

Idem  
Encls. 35A

Idem  
Encls. 37A

Enemy Attack on Tobruk Convoy (22nd February)

Mention has been made in the previous section to the fact that the enemy's air attacks on Tobruk during the phase caused little damage.

A.H.B.IIJI/12  
Appendix A

He achieved a success, however, against a convoy sailing to Tobruk on 22nd February.

This particular convoy to Tobruk, the "Onset" consisted of three merchant vessels escorted by three destroyers. The sequence of events was as follows:-

No.234 Wing, responsible for the provision of fighter protection, was informed at 20.00 hours on the 21st February that "Onset" had sailed from Alexandria eleven hours late. Its position, was, therefore, calculated to be somewhere between Mersa Matruh and Sidi Barrani. During darkness, however, "Onset" increased speed to seven knots and made up on schedule. On the 22nd February the first fighter patrol - two Fulmars - found and covered the convoy from 05.00 to 06.30 hours. As they were not allowed to break W/T. silence they could not report the difference in the convoy's position until they landed at base. The second patrol - two Beaufighters - should have relieved the Fulmars at 06.30 hours, but on proceeding to the estimated position they failed to locate and began a square search Eastward before returning to base. Observation of wireless silence left No.234 Wing in ignorance of the fact that the convoy was unprotected.

While it was without fighter cover, "Onset" was attacked by a reconnaissance JU. 88. The S.S. Bintang received direct hits and sank at 07.45 hours. (1) The third fighter patrol, acting on the sighting reported by the first patrol on its return to base, found the convoy at 08.45 hours. Thereafter, it was covered throughout the day by sections of two fighters.

Shortly after noon, when a Fulmar patrol was being relieved by Hurricanes the convoy was attacked by six JU.88s. One of them was damaged by a Hurricane and all their bombs missed. The same Hurricane then claimed one destroyed and another probably destroyed out of a further formation of JU.88s that attacked the convoy. The other Hurricane and the Fulmars drove off the remainder of the enemy, but the second formation had then sunk the S.S. Hanne.

The surviving merchant vessel with its escort reached Tobruk safely.

The disaster to the "Onset" convoy showed that the risks and strain to our sea and air forces in the supply of our forward forces through Tobruk, although not so great as those in the previous year when the fortress was under siege, were still, on occasion, formidable.

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(1) A "Y" intercept of the enemy sighting of the convoy was passed by No.2 Field Unit to No.201 Group and No.252 Wing at 08.30 hours. By the time No.234 Wing received the news in this roundabout way, however, Bintang had been sunk nearly an hour.

Improvement in Enemy's Supply Situation

It cannot be over-emphasised that the struggle in North Africa was to a large extent a war of supplies. It was clear in late January and February, 1942 that the enemy's supply situation in Libya had greatly improved. In particular, as already pointed out, his shipping there was becoming largely immune from air attack and he was preventing our supply of Malta. The main limiting factor was No. 205 Group's air offensive on the supply port of Benghazi; but valuable as these attacks were they could not expect to atone for the inability to sink shipping in transit.

SECTION 3AIR OPERATIONS BY MALTA-BASED AIRCRAFT  
(21st January - 24th February, 1942)

A.H.Q.  
Mediterranean  
O.R.B. Jan. and  
Feb. 1942

There was no change in the aim of the subordinate Command at Malta (Air Headquarters, Mediterranean - A.O.C., Air Vice Marshal H.P. Lloyd) during the period of our retreat in Cyrenaica and consolidation on the Gazala - Bir Hakim line - this remained the interruption of sea-borne supplies to Libya. The means to achieve this were, as formerly, primarily strikes on enemy shipping in transit and secondly attacks on enemy ports. Counter air force operations were inevitably necessary in an attempt to limit enemy air action within Malta's sphere of action. Some intervention in the land battle to the extent of harassing the enemy's rear transport and installations in Tripolitania was effected when Blenheims on searches off the North African coast were unable to locate shipping or when Wellingtons operating against Tripoli attacked secondary targets.

Limiting Factors to Successful Exploitation of Malta

There were now several serious limiting factors which ruled out Malta being exploited with the success achieved during the summer and autumn of 1941 (1).

A.H.B.6  
Translation  
No.VII/II  
(8th Abteilung  
Study)

A.H.B.III/12  
Appendix B  
A.H.Q. Med.  
O.R.B. Feb.1942

- (a) The reinforcement of the Luftwaffe in the Central Mediterranean theatre at the end of 1941 and the formation of the Southern Command under Field Marshal Kesselring, who was also Head of Luftlotte 2, resulted in an increased success in the task of neutralising Malta as a sea and air base (2). During the month under review it was estimated that the enemy flew 1,960 sorties against the island. There was a steady increase, in particular, during February in the weight of the bombing attack, most attention being paid to airfields - against those at Luqa (bomber and G.R. landing grounds), Ta Kali (fighter base), Hal Far (fighter and Fleet Air Arm Swordfish base) and the Krendi strip (fighter landing ground)(3).

- 
- (1) See previous narrative for details and present narrative page 4. Footnote (1) for a general statement on losses inflicted on enemy merchant shipping.
- (2) It was appreciated by the German High Command that "the primary conditions for holding the Axis position in North Africa was supremacy in the air and on the seas which was to be achieved by the Luftwaffe.... the first task was to smash the enemy air forces and their ground organisation and at the same time to stop the flow of fighter reinforcements. Enemy war and merchant ships in and around Malta had to be destroyed, the ports paralysed and thereby all supplies cut off." (A.H.B.6 Translation No. VII/II).
- (3) During the whole month of February there were 222 attacks by single and formations of bombers against airfields as follows:- Luqa (55); Luqa dispersal area on Safi strip (87); Ta Kali (37); Hal Far (23) and Krendi Strip "Q" site (20). (A.H.Q. Med. O.R.B. February, 1942).

The attacks were particularly heavy during the movements of enemy and our own convoys in order to ground Malta's aircraft (See following section "Operation in the Eastern and Centre Mediterranean (21st January - 24th February, 1942)).

Idem

- (b) In addition to the bomber attacks, sorties of two to six ME.109s daily patrolled the approaches to the island in order to intercept our reconnaissance and transit aircraft.
- (c) Movements of our aircraft were passed to enemy patrolling fighters by the installation of efficient R.D.F. in Sicily (1).
- (d) Weather conditions were abnormally bad. The February rainfall was  $5\frac{1}{4}$  inches compared with a normal  $2\frac{3}{4}$  inches. The airfields at Hal Far and Ta Kali were waterlogged for days at a time in February and the dispersal areas at these airfields and Luqa were turned into quagmires. In addition, gales were prevalent in the middle of the month.
- (e) The steady decrease in our fighter serviceability owing to enemy action, bad weather, shortage of spares and lack of maintenance facilities rendered it impossible to counter the enemy's offensive. The small fighter force (three squadrons and one flight of Hurricanes) was inadequate for the task of intercepting enemy raiders, (2) protecting aircraft leaving and approaching the island from enemy fighter patrols, and escorting the Air Sea Rescue high speed launch and Swordfish. In the meantime, Middle East were unable to send additional fighter squadrons to Malta owing to the need to direct fighters to the Far East, the heavy commitments of the inadequate fighter force in Cyrenaica and the unsatisfactory fighter aircraft position in the Command. It was hoped to send in to Malta a complete experienced fighter squadron armed with Hurricane IIC's by mid-March, but the idea of reinforcing with a Kittyhawk squadron had to be abandoned owing to problems of spares and reduced deliveries. Arrangements were also in hand for the despatch of Spitfire reinforcements from the United Kingdom.

A.O.C.-in-C.  
Correspondence  
with C.A.S.  
Part 3  
Encls. 332A

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- (1) On one occasion three Blenheims returning from operations were shot down into the sea within sight of Malta. (A.H.Q. Med. O.R.B. Feb. 1942).
  - (2) During the month 24th January to 24th February, inclusive, German records show that 8 Bombers, 5 fighters, 1 Stuka and 1 L/R reconnaissance aircraft were lost and 3 other aircraft were seriously damaged in operations against MALTA as a result of enemy (that is our) action. The total of additional casualties on operational flights against MALTA but not credited to our action was 6 Bombers and 9 Fighters (including one T.E.F.) destroyed and 5 other aircraft seriously damaged. (6th Abteilung Daily Returns Supplied by A.H.B.6).

Idem  
Encl. 33A  
Idem  
Encl. 311A

Malta's fighter pilots were also growing stale through inadequate reliefs. Thirty experienced pilots were sent from the United Kingdom to help to remedy this and relief (but not experienced) pilots were sent from Middle East.

A.H.B./ILJ1/  
12  
Appendix 'B'

(f) Another handicap on the offensive side was a shortage of trained A.S.V. crews which limited the effort against shipping.

A.H.Q. Med.  
O.R.B. Jan.  
and Feb. 1942

(g) Work on runways, dispersal areas, and hard-core standings, in addition to being greatly hindered by the heavy rainfall and constant air raids, was handicapped by an acute shortage of civilian labour. The number of working hours lost during alerts made progress very slow. This was off-set to some degree by assistance from the Army; in January more than 2,500 soldiers were provided to work on the airfields.

Squadrons Controlled by A.H.Q. Mediterranean

A.H.B./  
ILJ1/12  
Appendix 'B'

Details of aircraft strength and serviceability as at 1st February 1942, have been given on page 8. It may be emphasised that serviceable operational aircraft totalled 66 plus two F.A.A. Swordfish Squadrons for which figures are not available.

The following Squadrons were employed from Malta during the phases - Nos. 37 and 40 Squadrons (detachments from No. 205 Group) - Wellingtons; Nos. 21 and 107 Squadrons - Blenheims; No. 69 Squadron - Marylands; No. 828 Squadron F.A.A. - Swordfish/Albacores; No. 830 Squadron F.A.A. - Swordfish; Nos. 126, 185 and 249 Squadrons - Hurricanes; No. 1435 Flight - Hurricanes.

In addition, Beaufighters were despatched from Egypt for convoy duties between 12 and 15 February and a Wellington detachment for employment as a striking force against an enemy convoy on 22 February.

The success of the enemy's air offensive necessitated a considerable reduction in Malta's striking force towards the end of the phase (See page 68).

Scale of Bomber Effort

Idem

During the period 21 January to 24 February Malta-based bombers carried out 190 effective sorties against enemy targets all directly or indirectly connected with the battle of supplies. Thus, as Malta flew 685 sorties during the two months of the 'Crusader' offensive, the island's bomber effort had declined by 45 per cent. The scale of effort remained fairly constant at 40 - 50 sorties per week.

The direction of the effort was as follows:-

Ports and Bases 79 sorties: Shipping at sea 47 sorties: M.T. and installations in Libya 33 sorties: Airfields 30 sorties.

Attacks on Shipping in Transit

Idem

These attacks are considered in more detail in the previous section. The enemy's success in neutralising Malta as an offensive base was reflected in the confirmed sinkings of enemy vessels. By February this neutralisation was about complete and Malta-based aircraft sunk only one enemy merchant vessel (6,142 G.R.) and this was shared with the Navy; in the following month only one small merchant vessel (1,774 tons) was sunk; (1) in the following two months none.

Attacks on Ports and Bases

A.O.C.-in-C's  
Correspondence  
with C.A.S.  
Part 3  
Encl. 332A

With the loss of Western Cyrenaica not only was the capacity of the air striking force on the mainland to interrupt enemy sea-borne supplies seriously restricted, but the off-loading port of Tripoli had also gone out of range of No. 205 Group Wellingtons, and heavy bombers (Liberators) were needed in force to bridge the gap. In the meantime, such pressure as could be applied to Tripoli from the air had perforce to come from Malta.

A.H.B./ILJ1/12  
Appendix 'B'

Thus of the 79 sorties flown by Malta-based bombers in attacks on ports and bases during the phase, 60 were flown against Tripoli. The effort that could be exerted by the small Wellington force in the face of the difficulties already enumerated was, however, little more than of a harassing nature. The largest number of aircraft operating on any one night, in fact, was eight - on the nights 22/23 and 24/25 January and 5/6 February.

An air offensive on Naples - the enemy's main departure port - would also have yielded high dividends, but was obviously impracticable at that time. It had been attacked fairly consistently by Malta-based bombers during the air operations in preparation for the 'Crusader' offensive and during the early part of that campaign, but subsequently could be paid scant attention. One attack was made on Naples during the phase by five Wellingtons. Some bomb bursts were seen on the harbour, marshalling yards and repair base, but further details were unobserved owing to 9/10ths cloud and an effective smoke screen.

The remainder of the small effort against enemy ports was directed against near-at-hand targets in Sicily - particularly shipping and harbour facilities at Palermo(1) and Augusta. An attack on the former port by six Blenheims of No. 21 Squadron on 4 February ended in disaster. Owing to an error in navigation the formation made landfall off the northern Sicilian coast. The leader turned sharply, put a wing into the sea and sank. The remainder carried on and bombed a goods train near Carini. Another navigational error on the return journey brought the flight to a cloud-covered hill; two pilots who were experienced climbed through the cloud, but the three others crashed into the hillside. No. 21 Squadron's very limited operations during the first three weeks of February - before this remaining Blenheim squadron was transferred to the Middle East - resulted in the loss of eight aircraft. In addition to the disaster of 4 February three Blenheims returning from operations on 6 February, were shot down into the sea within sight of the island.

Lloyd's

(1) However in March three ships (totalling 13,104 tons) were sunk in Palermo harbour.

Attacks on Sicilian Airfields

Idem

The only appreciable attacks on the Sicilian airfields, where the enemy's air force menacing Malta was located, occurred during the second week in February in order to limit to some extent the enemy's air opposition during the Malta convoy movement mentioned in the previous section. During the period of the night 21st/22nd to 26/27th January there were two very small scale Wellington attacks on Catania airfield - one of which was ineffective owing to bad weather, and an attack by three Wellingtons on Comiso airfield.

Between 27/28th January and 11th February, Malta-based bombers made no attacks on airfields, but, as mentioned later, the Malta Night Fighter Unit (Hurricanes) carried out intruder patrols over Sicilian air bases.

In connection with the Malta convoy movement, the airfields at Catania, Comiso and Gherbini were attacked in the four nights 11th - 14th February. Catania was bombed twice by single Wellingtons and twice by formations of five; Comiso was bombed on one night by five Wellingtons, and Gherbini was attacked on two successive nights by one and two Wellingtons respectively. Other aircraft briefed for these attacks failed to locate their targets and bombed Syracuse and Augusta instead. The seventeen tons of H.E. and 1,080 incendiaries dropped on Catania caused fires among dispersed aircraft and airfield buildings; the three-and-a-half tons of H.E. and 610 incendiaries dropped on Gherbini caused fires among dispersed aircraft, and fires were started at various points at Comiso.

Attacks on Military Targets in Tripolitania

Idem

The 33 sorties flown against military targets in Tripolitania comprised the following:-

Three attacks by five, seven and eight Wellingtons on the nights 29/30th January, 31st January/1st February and 4/5th February, and four day attacks by a total of 13 Blenheims.

A Wellington attack on M.T. traffic between Tripoli and Buerat El Hsun on the night 29/30th January resulted in at least sixteen lorries claimed destroyed and damage to barracks; the two Wellington attacks on military targets in the Tripoli area resulted in direct hits on an M.T. depot and a violent explosion caused by a 4,000 lb. bomb near the Spanish Port. The Blenheim attacks caused a number of casualties to vehicles on the coastal road, particularly to the west of Buerat.

Idem

Hurricane Intruder Sorties

Defence of the island against the enemy's air offensive inevitably absorbed most of Malta's fighter effort. This defence is, however, outside the scope of the present narrative. It may be noted that the inadequate fighter force could do little to stem the enemy's onslaught; claims against enemy aircraft in fact, totalled only ten destroyed, six probably destroyed and 38 damaged. It became clear during the period that the Luftwaffe had for a time largely succeeded in neutralising Malta as an offensive base.

An important protective commitment during the phase was the provision of fighter cover to the two convoy movements (See previous Section).

Nevertheless the Malta fighter force was not entirely on the defensive. Although offensive sweeps over Sicily by day fighters were clearly beyond its capacity a valiant effort was made by the Night Fighter Unit in intrusions over the main Sicilian airfields. These Hurricanes, in groups of from two to seven aircraft, operated on seven occasions. Their claims were as follows:- on the night 24/25th January a JU.88 taking off from Comiso airfield was claimed shot down and another damaged (1); on the night 27/28th January a JU.88 taking off from Comiso and a twin-engined aircraft over Augusta were claimed destroyed (2); and on 2nd/3rd February a float plane (Cant. 506) was claimed destroyed.

#### Malta "An Expensive Liability"

A.O.C.-in-C's  
Correspondence  
with C.A.S.  
Part 3  
Enclos. 332A  
(and Encs. 341A)

On 26th February Air Marshal Drummond, Deputy A.O.C.-in-C. Middle East (and acting as A.O.C.-in-C. while Air Marshal Tedder recovered from an attack of influenza) signalled the C.A.S.:-

"Malta is now an expensive liability. In last three weeks enemy action has destroyed 16 aircraft in the air and also 16 on the ground and damaged a further 28. These figures do not include 12 missing from delivery flights, of which several destroyed by enemy action. Damaged aircraft must all be regarded as serious owing to long time taken to repair them with constant air raids in progress. Though dispersion has been abnormally difficult owing to wet ground, enemy's success cannot be attributed to lack of dispersion."

Air Marshal Drummond went on to say that Malta's Wellington strength had been reduced to 14 aircraft of which two were torpedo carriers. All the Blenheims remaining on the island were also in process of being withdrawn: in addition to the crews being operationally tired the aircraft were needed to meet Blenheim commitments to the Far East. It was intended to continue the G.R. squadron and three to four A.S.V. Wellingtons in conjunction with the Albacore and Swordfish squadrons so long as they had any aircraft left. It was also intended to keep the Middle East detachment of 12 Wellingtons there for mining and bombing Tripoli harbour and torpedo work.

- 
- (1) 6th Abteilung daily figures giving G.A.F. losses in operations from Sicily show one bomber damaged by enemy action on 24th January. (Information provided by A.H.B.6).
  - (2) 6th Abteilung returns for 27th January show one long range reconnaissance aircraft and one bomber destroyed by enemy action. (Information provided by A.H.B.6).

Air Marshal Drummond pointed to the enemy's successful passage of the important convoy to Tripoli during the early part of the fourth week in February (see previous section), to illustrate the neutralisation of Malta's striking force. "We cannot therefore now count on Malta as a practicable base for operations of an Air Striking Force of any size.... the Army is faced with the fact that we cannot hope to achieve our past successes in interrupting supplies to Tripolitania until we are again able to operate from Western Cyrenaica." The diversions to the Far East and fighter commitment in Cyrenaica precluded sending additional fighter squadrons to Malta until the aircraft position materially improved. The arrangements made for the reinforcing of Malta with a squadron of Hurricane II Cs from the Middle East and Spitfires from the United Kingdom have already been mentioned on pages 64 and 65.



PART II25th FEBRUARY, 1942 TO 25th MAY, 1942SECTION IAIR OPERATIONS - 25th FEBRUARY, 1942 TO 25th MAY, 1942The Situation at the Beginning of the Period

AHB/ILJ1/12

The stabilisation of the front at Gazala introduced a new period of reduced activity on both sides, and from 25th February the scale of fighter and light bomber operations fell away noticeably. The long strain and exhaustion of the previous months operations were being felt both by our own air force and by the enemy, and now the opportunity for rest, reorganisation and reinforcement was welcomed.

The role of the R.A.F. during these months under review was therefore governed by the need of the opposing forces to:-

- (a) Recover from four months arduous activity.
- (b) Hold their present positions.
- (c) Build up for further offensive action at the earliest moment.

The vital question of supplies was still the chief problem, and it was essential that the enemy's supply lines should be attacked and disorganised as much as possible. The medium bombers therefore, increased the intensity of their attack. The Axis supply position was far stronger than it had been owing to the fact that Malta was now being subjected to intensive bombing. After the first fortnight of the period, during which 57 sorties were flown by Malta based bombers against enemy ports and bases, the bomber effort from the island had been brought almost to a standstill, and Axis convoys were able to keep up the flow of supplies with far greater freedom than before.

## Appendix IX

Bomber Attacks Against Enemy Ports and Bases

H.Q. R.A.F.M.E.  
Operational  
Summary  
Appendix "A"

During the period 24/25th February to 25th May medium and light bombers based in Egypt and Cyrenaica made 763 effective sorties against enemy ports and bases, of these rather more than 3% were carried out by the light bombers, and all the rest by medium bombers. Aircraft employed were Wellingtons from Nos. 37, 38, 70, 104, 108, 148, 162 Squadrons, Bostons of No. 12 Squadron, Baltimores of No. 223 Squadron, Albacores of No. 826 Squadron and Swordfish of No. 815 Squadron. The main target for attack was Benghazi which between 24th February and 25th May was raided 66 nights out of 90, a total of 704 effective sorties being made against the port. (683 by medium bombers and 21 by light bombers).

Benghazi was the main Axis supply port, used in preference to Tripoli owing to its closer proximity to the forward area. Opposition from searchlights and concentrated light and heavy A/A was considerable, and on many occasions ground haze or heavy cloud added to the difficulties experienced by our aircraft, affecting both the location of targets and assessment of results. The alternative target, Berka aerodrome, was frequently bombed, and the attacks on

IIJ1/12 P. 57

Benghazi caused the enemy considerable loss and disorganisation to his supplies. Three daylight attacks were made during May on shipping in Benghazi harbour as in order to avoid the heavy night bombing, the enemy had adopted the ruse of remaining outside the harbour during darkness and slipping in at dawn to unload. On the 9th May, nine Bostons escorted as far as Tengeder on the outward journey by Tomahawks, and from there to the target by long range Kittyhawks, attacked shipping in the harbour from 14,000 ft., but no hits were obtained. The second and third daylight attacks were made by Baltimores of No. 223 Squadron on the 17th and 19th May. In both cases six aircraft bombed shipping in the harbour, but on the first occasion the bombs over-shot and on the second, although all bombs fell within the harbour area, heavy cloud prevented assessment of the damage. Heavy dust storms blew up on the return journey and one Baltimore crash landed near Maddalena while four others force landed near Capuzzo.

The execution of Operation "Fullsize" - the passage of a large convoy from Alexandria to Malta between the 20th and 24th March (1) - necessitated strategical bombing attacks against Piraeus one of the enemy's chief naval bases, and the submarine base at Salamis. Leros, Piraeus and Rhodes were all attacked by Wellingtons of Nos. 37 and 70 Squadrons on the 8/9th March, the aircraft attacking Rhodes being diverted from its original target of Piraeus by bad weather. Five effective sorties by Wellingtons of Nos. 37 and 108 Squadrons were made against Piraeus-Tymbaki on 12/13th March, and on the night of the 23/24th Perama, Piraeus and Salamis were all attacked by Nos. 37, 38, 104 and 108 Squadron Wellingtons. Results of these raids were disappointing as unfortunately bad weather with icing conditions prevented the full employment of attacking aircraft from reaching their objective.

#### Bomber Attacks against Enemy Aerodromes and Landing Grounds

Apart from the normal routine of desert tasks the bomber force during this period, carried out 219 sorties against targets in Greece, Crete and the Dodecanese strategically connected with special operations. A total of 457 bomber sorties were made during the period, 269 by medium bombers - Wellingtons of Nos. 37, 70, 104, 108, 148, 162 Squadrons, and 187 by the light bombers - Blenheims of Nos. 14 and 459 Squadrons, Bostons of Nos. 12 and 24 (S.A.A.F.) Squadrons, and Albacores of No. 826 Squadron.

The main attack on enemy held aerodromes in Cyrenaica was directed against Martuba, with Derna, Berka, Benina, Barce and Tmimi in that order of importance as the other targets. Medium bombers, chiefly Wellingtons made 113 attacks on the Martubas and there were 104 effective, light bomber sorties, chiefly made by Bostons. These owed a considerable part of their success to their fighter escorts which on many occasions saved them from attacks by Me.109s.

Twelve Bostons were employed against Martuba on the 14th, 15th, 18th, 19th, 20th and 23rd March, and each time the fighter escorts were engaged in battle with the enemy.

(1) See Narrative on "R.A.F. and Maritime Operations in the Mediterranean and Red Sea".

Appendices  
to Operational  
Summary  
App. "A" and "B"

Idem. and  
A.H.B. IIJ1/12

It was only on the 23rd however that a Boston was lost, one being shot down in flames over the target area. One Me.109 was claimed destroyed.

On the 21st March the Bostons were unlucky. 3 aircraft of No. 24 Squadron, (S.A.A.F.) (unescorted as the target was out of ordinary fighter range) attacked aircraft on the landing ground at Barce. One near miss was claimed and all bombs fell in the target area. On the return journey however, the flight was attacked by two Me.109s south of Bir Hacheim, and two Bostons were shot down.

Our aircraft had a more successful day on 6th April when nine aircraft of No. 12 Squadron (S.A.A.F.) and three aircraft of No. 24 Squadron (S.A.A.F.) escorted by Tomahawks of No. 4 Squadron (S.A.A.F.) and Kittyhawks of Nos. 260 and 94 Squadrons, attacked the main landing ground and dispersed aircraft at Derna. Twenty-four 500 pound bombs and twenty-four 250 pound bombs were dropped from 13/15,000 feet on the western boundary of the landing ground. Two large aircraft were claimed as hit and direct hits were claimed on hangars and buildings. Four fires were started; though opposition Heavy and Light A/A was intense and accurate. On the return flight the escorting aircraft were harassed by enemy fighters all the way. No. 94 Squadron lost one aircraft over Gazala - the pilot was believed to have been shot down and killed - and claimed one Me.109E badly damaged. No. 260 Squadron claimed one Me.202 probably destroyed, one of their own aircraft being slightly damaged; and the Tomahawks of No. 4 Squadron (S.A.A.F.) led by Wing Commander Beresford D.S.O., D.F.C., O.C. No. 233 Wing, encountered 10 Me.109Fs and the Wing Commander shot one down. Three of their aircraft made forced landings due to engine trouble, but reported back to base later in the day.

During the next four weeks our bombers continued their attacks against the enemy's aerodromes, helped in their task by Hurricanes of No. 73 Squadron, who attacked with bombs and machine gun fire on their night reconnaissances. Later on in the period the Wellingtons and Baltimores were turned on to implement the Boston's effort, Martuba and Derna remaining the main targets.

#### Bomber attacks against Enemy Camps, Positions and Lines of Communication

The scale of bomber effort against ground positions during this time was comparatively low. The medium bombers were in great demand for the more urgent task of attacking the enemy's supply lines, and there was a shortage of light bombers. Of a total of just over a hundred sorties about 44% were carried out by the medium bombers and the remainder by light bombers. Fighter bombers were also used to ground strafe M.T. and troops; Hurri-bombers of Nos. 73 and 274 Squadrons, and Kitty-bombers of Nos. 112 and 3 R.A.A.F. Squadrons were employed. No. 73 Squadron Hurri-bombers first operated on the night 27/28th March, and No. 112 Squadron Kitty-bombers on 16th May.

No. 73 Squadron, who had undergone a course in night ground strafing during March, took over a large share in harassing enemy land forces. They carried out free-lance night patrols, frequently operating singly or in pairs, and acting as intruders over enemy aerodromes to intercept returning aircraft. They also operated by day, carrying

Appendices  
to Operational  
Summaries

Idem

O.R.B's 260,  
94, 4(S.A.A.F.)  
Squadrons

A.H.B.IIJ1/12

Appendices  
to Operational  
Summaries  
IIJ1/31/1  
and IIJ1/12

out offensive sweeps and ground attacks in co-operation with aircraft of other squadrons. Typical examples of their diverse activities can be quoted. On the night 1/2nd May 3 Hurricanes of No. 73 Squadron made a ground strafing attack on aircraft and tents at Barce at approximately 01.30 hours. A large unidentified aircraft which was coming in to land was attacked by the Hurricanes and crashed in a wood near the Landing Ground, starting a large fire. One Hurricane was damaged. On the night of 28/29th April 4 Hurricanes strafed about 30 vehicles 15 miles N.N.E. Tengeder and another four strafed a medium sized camp about 10 miles W. of Martuba. Tents were seen to collapse. The flarepath at Derna was also machine-gunned by one Hurricane, but results were not seen. On another occasion, the 25th April, 6 Hurricanes of No. 73 Squadron intercepted two J.U.88s which had bombed Tobruk in the morning. Both enemy aircraft were claimed as damaged shells being seen to explode on the wings of one, and on the nose of the other.

H.Q. R.A.F.M.E.  
Operational  
Summaries  
Appendix D

Other fighter squadrons operating against enemy land forces were Nos. 252 and 272 (Beaufighter) Squadrons, No. 33 Squadron (Hurricanes), No. 260 Squadron (Kittyhawks), Nos. 2, 4 and 5 (S.A.A.F.) Squadrons (Tomahawks), No. 250 Squadron (Kittyhawks). No. 112 Squadron (Kittybombers), No. 3 (R.A.A.F.) Squadron (Kittybombers) and No. 450 (R.A.A.F.) Squadron (Kittyhawks).

#### Air Activity in the Eastern Mediterranean

H.Q. R.A.F.M.E.  
Operational  
Summaries

Operations in the Eastern Mediterranean were chiefly confined to attacks on enemy shipping, minelaying and protection of our shipping. The extent of the enemy's success in neutralising Malta is revealed by the fact that over the same period aircraft based on Malta and operating in the Eastern Mediterranean flew only 160 sorties. Squadrons employed for reconnaissance, and against shipping and submarines were as follows:-

H.Q. R.A.F.M.E.  
Operational  
Summaries

No. 39 Squadron - Beauforts  
No. 47 Squadron - Wellesleys  
No. 203 Squadron - Blenheims and Marylands  
No. 221 Squadron - Wellingtons  
No. 230 Squadron - Sunderlands  
No. 700 Squadron - Walrus  
No. 815 Squadron - Swordfish and Albacores  
Nos. 821 and 826 Squadrons - Albacores  
No. 13 Hellenic Squadron - Blenheims.

The following Squadrons were also employed ~~some~~ at the beginning of the period:-

No. 14 Squadron - Blenheims  
No. 38 Squadron - Wellingtons  
No. 55 Squadron - Blenheims  
No. 108 Squadron - Liberators and Wellingtons  
No. 148 Squadron - ~~Liberators and~~ Wellingtons  
No. 459 Squadron - Blenheims and Hudsons.

Idem

Fighter aircraft employed included Hurricanes of Nos. 73, 238, 274, 335, 1 S.A.A.F. Squadrons and the Free French Alsace Squadron; Beaufighters of Nos. 252 and 272 Squadrons, Fleet Air Arm Martlets and Fulmars from Nos. 805 and 889 Squadrons, and Tomahawks of Nos. 5 S.A.A.F. and 250 Squadrons. These squadrons carried out anti-shipping patrols and acted as top cover to attacking

Idem

bombers and as shipping protection. In the latter role they carried out over 2,400 sorties during the period.

On the 11th March, six Tomahawks of No. 5 (S.A.A.F.) Squadron carried out a patrol over shipping and encountered a mixed force of enemy bombers. They shot down one J.U., and claimed one Me.111 probably destroyed, one J.U.88 severely damaged and one J.U.88 hit. Our aircraft were undamaged and suffered no casualties.

On 2nd April, 8 Hurricanes of No. 80 Squadron, 10 Kittyhawks of No. 260 Squadron and 8 Tomahawks of No. 2 (S.A.A.F.) Squadron intercepted a mixed force of 20 J.U.87s, 15 Me.202s and 4 Me.109s off the Cyrenaican coast. They claimed one J.U.87 and two Me.202s (or Me.109s), (1) destroyed, one Me.109 probably destroyed, two J.U.87s, two Me.202s and two Me.109s damaged. One Kittyhawk of No. 260 Squadron and two Hurricanes of No. 80 Squadron failed to return.

Attacks on submarines and enemy shipping were also almost daily occurrences in the Eastern Mediterranean area. On the 3rd May, a Tomahawk of No. 5 (S.A.A.F.) Squadron attacked a submarine with machine gun fire 35 miles north of Sidi Barrani. The submarine was definitely hit before it dived and disappeared. On 23rd May, two Beaufighters of No. 272 Squadron made a low level attack on a 2,500 ton M.V. and two flack barges 12 miles West of Tolmetta. The M.V. was left stationary with steam escaping. (2) One of our aircraft was damaged.

Despite this effort, however, neither the R.A.F. nor the Navy succeeded in preventing materials from reaching Libya in sufficient quantities for the launching of the Axis offensive at the end of May.

#### Enemy Air Attacks on Malta

A.H.B./ILJ1/12

The three months of this phase were for Malta, the most critical of the war. The enemy, determined to transport adequate supplies for his proposed offensive, made an all-out effort to subdue the island and thus prevent any substantial interference with his supply route.

To a considerable extent he was successful and Malta was submitted to a series of heavy bombing attacks which made operations from the island almost impossible. The enemy, however, found that the defence was not subdued, and his losses were so severe that, partly for this reason and partly because he needed his bomber force in the Western desert for softening-up operations prior to the new offensive in May, the bombing attacks slackened off towards the end of April.

Enemy attack and the measures taken to combat it - formed the predominant feature of the period. There was only one convoy movement - Operation "Fullsize" in March. (3)

- (1) Fire from the enemy aircraft was observed to be coming from the wings only forcing our fighters to the conclusion that the enemy fighters were Me.202s and not Me.109s, although the black German crosses were plainly visible.
- (2) See narrative on "R.A.F. and Maritime Operations in the Mediterranean and Red Sea."

(3) No damage to shipping is recorded by Lloyd's for this date.

Aircraft Operating from Malta

H.Q. R.A.F.M.E.  
Operational  
Summaries  
Appendix "A"  
and "D"

Bombers and fighters operating from Malta during this period were provided by the following squadrons:-

Nos. 37 and 221 Squadrons (Detachments) - Wellingtons  
No. 69 Squadron - Marylands  
No. 21 Squadron - Blenheims  
Nos. 126 and 249 Squadrons - Hurricanes-rearmed  
Spitfires  
Nos. 185 and 229 Squadrons - Hurricanes  
No. 1435 Flight - Hurricanes and Beaufighters  
No. 828 Squadron - Swordfish and Albacores  
No. 830 Squadron - Swordfish.

Operations from Malta during this period were not intensive as has been already stated. The scale of enemy attack are described on pp. 87 and 88.

Bomber Effort by Maltese Based Aircraft

During this phase bombers from Malta made 101 sorties. Of these fifty-seven against ports and bases were flown before 8th March, after which the bomber effort dwindled to practically nothing. Direction of effort was as follows:-

H.Q. R.A.F.M.E.  
Operational  
Summaries  
Appendices

Ports and Bases - 59 sorties  
Aerodromes and Landing Grounds - 20 sorties  
Camps and Positions - 2 sorties  
Shipping at Sea - 22 sorties.

(a) Ports and Bases

Idem

Of the fifty-nine sorties made against these targets forty-two were made against Tripoli, sixteen against Palermo, and one against Augusta. Wellingtons of No. 37 Squadron Detachment visited Tripoli on four successive nights from 24/25th February to the 27/28th February, and again on the 1/2nd March, and nightly from the 4th/5th to the 7th/8th March.

On the first night three Wellingtons attacked Harbour Installations at Tripoli and bursts were observed on the Spanish quay, and the base of the Karamanti mole. The following night (25th/26th February) the mole was hit again when 6 Wellingtons bombed the same targets from 7000 feet, bombs also being seen on the civil seaplane station, the Spanish Quay and near the W/T station. The night of 26th/27th brought seven Wellingtons which dropped over 9 tons of bombs on the Harbour and shipping. Again bursts were seen on the Spanish and Karamanti moles, and a ship was set on fire and blew up half an hour later with a violent explosion followed by smaller ones.

Idem

Similar attacks followed on the other nights, incendiary bombs also being dropped on the 1st/2nd, 5th/6th, 6th/7th, and 7th/8th March. Some of these attacks were diversions for aircraft laying mines.

Idem

The attacks on Palermo took place on the night of 2nd/3rd March, when sixteen Wellingtons attacked merchant shipping. A convoy was assembling consisting of many large M.V's with deck cargo believed to be M.T. Between twenty-four and twenty-five tons of G.P. bombs and nearly

two tons of incendiary bombs were dropped from 8,000 feet. One ship of 9,000 tons with M.T. cargo was hit, and was still burning 6 hours later. This attack caused explosions and large fires which could be seen forty miles away. A later report gave information to the effect that warehouses and buildings on the Northern Mole were burnt out and completely destroyed, a large dry dock was partially destroyed, the dockside railway was hit and workshops on the North Harbour damaged. Subsequently, photographs showed two 6,000 ton ships, and one 2,000 ton ship sunk in the harbour.<sup>(1)</sup>

The final attack of the period on Ports and Bases took place on 21/22 April, when one Wellington bombed Augusta, without observing results: a second aircraft failed to locate the target.

H.Q. R.A.F.M.E.  
Operational  
Summaries  
Appendix 'B'

(b) Aerodromes and Landing Grounds

Twenty sorties were made in all against aerodromes and landing grounds during the period. Two against Catania and eighteen against Gomiso. Bombs were dropped by a single Wellington on Catania on the nights of 30/31 March and 31 March/1 April. Results were observed among dispersed aircraft.

Gomiso aerodrome was attacked by four Wellingtons on 21/22 April, and by seven each on 22/23 and 23/24 April. Bursts were seen on dispersals and hangars. A/A fire was intense on the last night, and two Wellingtons did not return.

(c) Enemy Camps, Positions and Lines of Communication

The only attack in this category occurred on the night 16/17 March, when two Wellingtons, prevented by bad weather from bombing Catania aerodrome attacked A/A positions in the vicinity with incendiaries, without definite results.

(d) Shipping at Sea

Malta-based aircraft made twenty-two sorties on this duty. Only one enemy ship the Achaia (6,778 tons) was sunk in transit by Swordfish, but three were damaged. Bombs were used slightly more often than torpedoes.

Activity and Re-inforcement of Fighter Aircraft in Malta

During the period fighter aircraft in Malta were very hard pressed by the constant attacks by German bombers, and the most important feature of the period was the arrival of Spitfires on the island in March followed by a larger reinforcement in May. There is no doubt that these aircraft turned the scales in our favour and saved Malta. The first reinforcement arrived in time to begin operations on 10 March, and on that day they destroyed one Me. 109, probably destroyed two more, and damaged another, as well as two Ju. 88's. One Spitfire was shot down and another damaged.

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(1) In addition according to Lloyd's List of Enemy Shipping Sunk, three ships were sunk in Palermo harbour in this period. They were the Cuma (6,652 tons), the Securitas (5,366 tons) and the Letre Maria (1,086 tons).

A.O.C./47/3  
'Malta'  
(A.O.C.'s  
personal file)

Before their arrival Malta had been undergoing a period of crisis. Daylight attacks on aerodromes were serious and very little work was being done owing to continuous alerts, and it was not until 9 May, when a reinforcement of 60 Spitfire VB's was flown in from the aircraft carriers Wasp and Eagle that the extreme pressure of enemy attack could be moderated. On the eve of their arrival Air Vice-Marshall H.P. Lloyd in a speech to aircrew said, 'I am not overstating the case when I say that the security and holding of Malta depends on these sixty Spitfires.'

#### Attempts to Destroy Spitfire Reinforcement

A.O.C/47/3

The arrival and immediate employment of these Spitfires makes a remarkable story. It was fully appreciated that the enemy would do everything in his power to knock them out before they could become operationally effective, and every detail of the operation was therefore planned beforehand in order to get the aircraft serviced, armed and airborne without delay.

A.H.B.IIK/24/120  
Operational  
Folder  
'Operations  
'OFPIDAN' and  
'BOWERY'

This perfect planning resulted in 60 out of the 62 Spitfires arriving safely, and the raiding bombers were met with 74 Spitfire sorties in which 7 enemy aircraft were destroyed, eight probably destroyed and thirteen damaged. Three Spitfires were shot down and three damaged. Next day there were 110 Spitfire and 14 Hurricane sorties. Between them they destroyed nine Ju. 87's, two Ju. 88's, two Me. 109's, one Cant 1007 and one Me. 202. A/A fire destroyed five Ju. 87's, two Ju. 88's and one Me. 109 - a total of twenty-three for the day. Fighters also claimed nineteen probables and twenty-four damaged. Three Spitfires were lost, but two of the pilots were safe.

Special repair gangs drawn partly from Army personnel worked all night on unserviceable aircraft. Craters on the runways were filled in even before the attacks were over.

Another welcome arrival was H.M.S. Welshman on 10 May with 82,000 rounds of much-needed Bofors ammunition, which was unloaded within five hours under the protection of fighters, a heavy barrage and a smoke screen. One stick of bombs fell within ten yards but caused only slight damage.

#### Re-Arming of Fighter Squadrons in Malta

A.H.B./IILJ1/12

The following fighter squadrons were re-armed during the period:-

- No. 249 Squadron re-armed with Spitfires by 17 March.
- No. 126 Squadron re-armed with Spitfires by second week in April.
- No. 185 Squadron re-armed with Hurricane II's by 24 March.

Idem

A Hurricane night fighter flight was formed at the end of March on the instigation of A.O.C. Malta. This unit became No. 1435 Flight and Beaufighters were later added to its strength. One squadron arrived early in April to augment Malta's defence - No. 229 Squadron equipped with Hurricane II's.

SECTION 2REINFORCING

(January - May, 1942)

Policy

M.E. Weekly  
Aircraft State  
Returns.  
January, 1942

The composition of the air forces in Middle East Command at the conclusion of Crusader operation is given in detail in the Middle East weekly aircraft state returns(1). These set out the number of squadrons formed, forming and to form, giving on January 31st, 1942, a total of 63 for Egypt (including the Levant area and the Sudan), Aden and Iraq, and  $7\frac{1}{2}$  for Malta. These totals were made up as follows:

<u>Egypt</u>	29 Fighter Squadrons
	12 Light Bomber Squadrons
	2 Heavy Bomber Squadrons
	8 Medium Bomber Squadrons
	5 Army Co-operation Squadrons
	1 G.R. (Flying Boat) Squadron
	2 G.R. (Land Plane) Squadrons
<u>Aden</u>	1 Light Bomber Squadron
<u>Iraq</u>	1 Fighter Squadron
	2 Light Bomber Squadrons
<u>Malta</u>	$3\frac{1}{2}$ Fighter Squadrons
	1 G.R. (Land Plane) Squadron
	2 Light Bomber Squadrons
	1 Medium Bomber Squadron
<u>Total</u>	<u><math>70\frac{1}{2}</math></u>

The Middle East Command Re-arming programme issued on the same date gives a planned programme of 74 squadrons plus 10 miscellaneous units - transport, communication, P.S.U., P.R.U. etc., and  $6\frac{1}{2}$  squadrons in Malta.

It was clear, however, that even when this force was fully established, it would not be sufficient to meet all possible commitments in the Middle East theatre. The situation had already been under discussion at Air Ministry for some weeks, and in December, 1941 the Defence Committee's requirements had been given as  $85\frac{1}{2}$  squadrons to cover the whole area. This force was divided. 43 Squadrons were suggested for the defence of the Northern front and  $42\frac{1}{2}$  Squadrons for the defence of the Middle East (2).

Defence  
Committee Papers  
D.C.(41) 11  
27th December,  
1941

- (1) The actual composition and strength of Squadrons fully operational has already been discussed on page 7.
- (2) M.E. re-arming programme had only asked for 5 A.C. Squadrons at 12 I.E. to be raised when possible to 18 I.E.

M.E./17  
Expansion  
Policy M.E.

At the beginning of March, 1942, the Director of War Organisation (A/Cdre. Whitham) assessed the Middle East requirements as 88 Squadrons, an increase of  $\frac{1}{2}$  G.R. Squadron, one medium bomber Squadron, and one heavy bomber Squadron on the Defence Committee's original requests. This 88 Squadron programme, to be implemented by 1st August, 1942, was composed as follows - 35 short range fighters, 7 long range fighters, 3 Heavy, 7 Medium and 19 Light Bombers, 1 Flying boat, 2 A.S.V. Wellington, 4 G.R. (I/P), 4 T.B., and 6 A.C. Squadrons (1). In order to maintain the 35 single seater fighter squadron target, 15 of which were to be Spitfire Squadrons, the C.A.S. had recommended that the rate of despatch of Spitfires was to be raised from the 70 a month planned for April, to 100 a month as soon as practicable. It was considered most probable that a further two fighter squadrons would have to be diverted to the Far East.

Idem

CS.13690  
Pt. I

By March, Air Ministry had another problem to deal with in the question of initial establishment of light bomber squadrons. Middle East were anxious to organise these on a 24 I.E. basis, and had in fact issued a local administrative instruction that 3 of their squadrons, Nos. 11, 14 and 223 were to work to this establishment. In many ways this was a beneficial arrangement, as if 24 I.E. aircraft could efficiently be handled by one unit under Middle East conditions it would involve considerable saving in Squadron overheads and in the number of Wing Headquarters, Air Stores Parks and Repair and Servicing Units in the control and support of the Squadrons.

Idem

On the other hand the development of the Middle East target force was closely bound up with those of other theatres, and it was essential that units should be interchangeable with and organised similarly to those in India and Burma. The 88 squadron target programme included 19 light bomber squadrons which, it had been assumed, would be at an I.E. of 16 aircraft. This would have involved an initial equipment of 304 light bombers and a monthly wastage of about 76 aircraft. If all the M.E. Light bomber squadrons went to an I.E. basis of 24 the initial equipment required would be increased from 304 to 456 and the monthly wastage from 76 to 114. The D.W.O. recommended that this difficulty should be overcome by allowing the Middle East to raise their light bomber establishment to 24 aircraft, but to modify the number of light bomber squadrons in the target programme proportionately i.e. by one-third.

Idem

CS.13690, Part I  
Signal OX.5592  
28/3/42

As a result of this the target programme for the Middle East was then reduced (28th March, 1942) to 82 Squadrons, with 13 Light Bomber Squadrons at 24 I.E. instead of 19 at 16 I.E. the target date still being 1st August, 1942. Air Ministry pointed out to H.Q.M.E. that they realised it was futile to expand the first line strength without at the same time expanding the ancilliary units and controlling organisation behind. But the numbers that could be sent out were severely limited by lack of shipping space, and Middle East were to be asked for their outstanding requirements, in order of priority, of H.Q. and ancilliary units so that personnel and material could be shipped in the most appropriate order.

Idem

- (1) In March D.W.O. assessed the present strength of operational Squadrons fell short of this target by 19 Squadrons.

CS.13690  
Reinforcement  
of M.E.  
Operational  
Estimates

On 25th March, an estimate of operational strength of the Middle East up to 31st July, was drawn up for the C.A.S., quoting existing allocations of aircraft, personnel, equipment etc., together with an estimate of the deficiency on the 88 squadron programme on 31st July. These deficiencies were as follows:-

	<u>31st</u> <u>March</u>	<u>30th</u> <u>June</u>	<u>31st</u> <u>July</u>	<u>Total</u> <u>Require-</u> <u>ments</u>	<u>Deficiency</u> <u>31st July</u>
Short Range Fighter	21	27	28	25	7
Long Range Fighter	3	5	5	7	2
Light Bomber (at 16 I.E.)	5	9	10	19	9 (6 at 24 I.E.)
Medium Bomber includ- ing 2 A.S.V. Squadrons)	6	9	9	9	
Heavy Bombers	-	-	1	3	2
G.R. Land plane	1	2	2	4	2
G.R. Flying Boat	1	1	1	1	-
Torpedo Bomber	1	3	3	4	1
Army Co-op.	4	6	6	6	-
	42	62	65	88	23 (20 with L.Bs at 24 I.E.)

CS.13690  
Reinforcement  
of M.E.

As only 73 Squadrons had been authorised as specific units in the Middle East, including the 4 Spitfire squadrons leaving in convoy W.S.18, it would be necessary to provide an additional 15 squadrons from this country to make good the total deficiency of 23 squadrons.

The following additional Squadrons would therefore be necessary:-

CS.13690, Pt.I

Short Range fighter	-	4
Long Range fighter	-	2
Heavy Bomber	-	1
Light Bomber	-	6 (or 4 at 24 I.E.)
G.R. Landplane	-	1
Torpedo Bomber	-	1
		<u>15 (13 with L.Bs at 24 I.E.)</u>

The limitation for despatch of the ground echelons of these Squadrons and ancillary units was shipping space, particularly for personnel, of which some 15,000 would be required. Added to this, corresponding increases in the despatch of aircraft before 1st August to provide the Squadrons with their initial equipment and to meet wastage would be necessary to a total of 384 (1) aircraft - an increase on the monthly flow from April to July by about 100 aircraft a month.

(1) Consisting of:	S.R. Fighters	104	L.R. Fighters	52
	Heavy Bombers	24	Light Bombers	156
	G.R. Landplane	24	Torpedo Bomber	24
			Total	<u>384</u>

Although it was considered possible to despatch these additional aircraft, provided that the air route was not interrupted by enemy action and that priority was given to aircraft shipping requirements, there were several limiting factors. In particular, the tropicalisation of Spitfires had to be speeded up, and priority had to be given to the Middle East over the M.A.F. both by the withdrawal of and in the provision of, ground echelons and aircraft.

Idem

Consideration had also to be given to the fact that the capacity of the Middle East to absorb and maintain new aircraft and units was limited. Already congestion was bad, with about 1,000 Category "C" aircraft in the Command, some 250 of which were probably new aircraft under preparation, and, if additional aircraft were sent in before these had been absorbed, the bottle-neck would become increasingly worse.

Much of this congestion was due to the lack of vital spares, Spitfires in particular being affected, and C.A.S. was advised that probably the most important measure which could be taken to overcome this congestion of Category "C" aircraft would be to increase the production of spares for all types even at the cost of new aircraft.

A.O.C./136/1  
M.E. Command  
Re-arming  
Programme  
6/5/42  
Appendix X

CS.13690  
Pt. I

In early May the Middle East Re-arming programme (amended) was reduced to 80 squadrons formed, forming and to form, the Army co-operation programme having now been altered to 4 Squadrons at 18 I.E. instead of 6 Squadrons at 12 I.E. Added to these were the 10 P.S.U., P.R.U., Flying boat, Signals, Transport and Communication Squadrons not included in the target. Later in the month, however, Group Captain Pelly (Air Plans) sent a D.O. letter to Group Captain Long (D.D.P.O.) stating that the estimated requirements of the Middle East Command, passed by the Deputy A.O.C.-in-C., was now 95 Squadrons - 48 Squadrons for the Western Desert, Egypt, Levant, Persian Gulf, Aden and Malta, 41 Squadrons for the Northern front and 6 for East Africa. This estimate was not treated as an official request from Middle East, but merely as an indication of the lines on which they were thinking. It was considered necessary by reason of the threatened attack on the Northern front, which in the event, never materialised, and a defensive policy in the Western Desert.

Idem

It is interesting to note that a 95 Squadron target was in fact agreed on later in July when as a result of the Arnold/Towers/Portal Agreement the United States proposed to operate 24 Squadrons in the Middle East by November, and the R.A.F. target was reduced to 71 (1).

M.E. Weekly  
Aircraft  
State 22/5/42  
Appendix XI

By the conclusion of the period under review there were 69 British Operational Squadrons formed and forming in the Middle East (excluding Fleet Air Arm Squadrons) including four in Malta, one in Aden and three in Iraq.

#### Supply Routes and Monthly Quotas of Aircraft Sent to M.E.

The main supply routes to Middle East Command were the air route via Gibraltar and Malta, the West African Reinforcement Route via Takoradi and Lagos, and the route, chiefly used by the United States, across the South Atlantic.

(1) This figure was later reduced again to 65 Squadrons, making a total with the Americans of 89 Squadrons (AX.216. 11/8).

and round the Cape to Port Sudan (1). In December, 1941, when the decision had been made further to reinforce the Middle East Command, the monthly quotas of aircraft to be despatched were increased. For the first time 20 Spitfires appear on the programme, and substantial additions are in many cases made to other types. On the other hand the Hurricane IIB quota is decreased from 100 to 50 per month in order to provide 50 aircraft per month for despatch to India. In all, the quota target was now 93 aircraft to be despatched by air and 210 by sea per month.

Unfortunately however the air programme could not be adhered to - by the beginning of February the route was becoming badly congested owing to unserviceability, bad weather conditions, and the enemy's activity over Malta - and each month some aircraft were carried forward from the previous quotas causing still greater arrears. The primary reason for this was given by the D.W.O. in a joint minute with D.O.O. to the Vice Chief of Air Staff on 17th February, 1942. "The programme" he wrote, "is quite beyond the capacity of the route" and recommended that to relieve congestion despatches by the air route which were not essential should be discontinued, the number of Blenheims sent by air should be reduced from 30 to 10 per month; Wellingtons, fitted with long range tanks should be flown direct to Mersa Matruh to relieve Malta, and, by the end of February, all Beaufighters should be sent via Takoradi (2). As for American aircraft it was essential that they should be shipped or flown across the S. Atlantic direct to overseas Commands, and bringing them to the U.K. for modifications was to be avoided.

Monthly quotas  
of aircraft for  
Despatch to  
Overseas  
Commands,  
IM.1037/D of O.  
20th April, 1942  
(File ME/1)

By April, 1942, various adjustments had been made to the quota programme. The Beaufighter quota had been considerably increased, and both coastal and fighter types were now to be despatched by the sea route to Takoradi. The total number of aircraft to be despatched by air had fallen to 81 per month, and that by sea had risen to 338. The Spitfire commitment had risen from 20 Spitfire VBs to 150 VBs and VCs; Hurricane IIBs disappeared from the programme altogether IICs were reduced to 50, while 12 IIDs were included in the April quota to build up a Squadron for "tank-busting" (No. 6 Squadron). There was a marked increase in Wellington VIIIs which were gradually replacing the IC.

OX.261  
30/4/42  
(File ME/1)

The Middle East Spitfire quota was to be despatched by sea via Takoradi, if the route was considered suitable by M.E. (which turned out to be the case). The monthly quota of 150 Spitfires included aircraft to be sent direct to Malta.

M.S. 30  
(ILJ/79  
American  
Aircraft  
Production and  
Allocation

On 6th March, 1942, the Air Assignments Sub-Committee (UK) held its first meeting to allocate American and Canadian-produced aircraft to various theatres of war. The figures they gave were for deliveries ex-factories in U.S.A. and Canada. Marauders, Baltimores, some Hudsons, Kittyhawks and transport aircraft were despatched direct to

- (1) In general, aircraft from USA were shipped to Port Sudan, and aircraft from U.K. to Takoradi or Lagos.
- (2) 12 Beaufighters were already being sent every month via Takoradi. The monthly flow was increased from 6 to 12 aircraft to build up two Beaufighter (fighter) Squadrons, and to meet wastage.

Middle East but Liberators were to be sent to U.K. for modifications until deliveries for the three Squadrons planned for Middle East could be met by direct delivery to M.E. from U.S.A. In all, the first programme issued allocated to Middle East Command 157 aircraft for March, 198 for April and 195 for May, including transport aircraft, but excluding the Kittyhawk allocation which was still under discussion with the U.S. authorities.

Idem

On April 24th, another schedule was issued. This gave the Kittyhawk allocations as 12 for April, 96 for May and 171 for June. No allocations were made for transport aircraft in view of the consideration being given in Washington to the general position of this type. The allocations were made firm for two months viz. April and May, and there was a noticeable increase in the Marauder allocations for April in order to re-equip and expand to 5 Squadrons by the end of 1942. No Mustangs appeared on the second schedule for the Middle East, all being sent to U.K. to re-equip Army Co-operation Command. Other types showed some variations and in several cases the original figure had been reduced (1).

C.S.B.1

Aircraft Arrivals (February - May, 1942)

The following numbers of aircraft arrived in the Middle East during the period (2)

February	From U.K.	247 (including 126 Hurricanes and 35 Beaufighters)
	" U.S.A.	81 (including 30 Baltimores and 42 Kittyhawks)
	Total	328
March	From U.K.	291 (including 110 Hurricanes and 69 Wellingtons)
	" U.S.A.	154 (including 108 Kittyhawks and 46 Baltimores)
	Total	445
April	From U.K.	352 (including 111 Hurricanes)
	" U.S.A.	61 ( " 60 Wellingtons and 50 Baltimores)
	Total	413
May	From U.K.	248 (including 60 Wellingtons)
	" U.S.A.	98 ( " 56 Kittyhawks, and 42 Baltimores)
	Total	299

A considerable number of the aircraft delivered from U.S.A. were transported by aircraft carrier. Larger numbers of aircraft were actually sent to the Middle East than shown above, but there were many diversions, or onward delivery to India, of aircraft assembled at Takoradi.

*[Signature]*  
Aircrew Reinforcement

~~It had been hoped that by the Spring of 1942 the Middle East C.T.U.'s (Nos. 70, 71, 72 and 73 C.T.U.'s) would have increased their output and certain aircrew~~

- (1) The original allocation of Baltimores for April was 60. This is reduced to 40. Marauders for May are reduced from 44 to 30, and Hudsons for April and May from 12 to 8.
- (2) Full details of arrivals according to types will be found in Appendix XII.

SECRET

84a

Introduction of Heavy Bomber Units to the Middle East

C.O.S.  
Papers (42)  
No. 323

No. 108 Sqdn.  
O.R.B.

The question of the employment of heavy bombers in the Middle East first came up for consideration as early as 1941, but, owing to a variety of difficulties, no policy for the provision of these aircraft was initiated at that time. A practical step towards it was taken, however, at the end of that year, when a single Liberator aircraft was sent out to Egypt to undergo performance trials. This aircraft was attached to No. 108 (Wellington) Squadron, at Fayid, and it was intended, if the type proved suitable, to re-equip the Squadron as more aircraft became available. The trials proved satisfactory, and by the spring of 1942 a nucleus of three or four aircraft was operating on such missions as supply and pamphlet dropping in Greece, Crete, and Yugoslavia, and reconnaissance in the Mediterranean. No offensive operations were undertaken, for, although operational training had commenced, there was as yet no sign of a larger force being provided.

D. AOC/1/115A

lbid  
128A

In April 1942, however, events called for further developments. The gravity of the situation in the Mediterranean caused by the severe air attacks on Malta, compelled the Commanders-in-Chief to renew their request for heavy bombers. These aircraft were now urgently needed, not only to operate against Sicilian airfields to reduce the air threat to Malta, but also to attack the enemy lines of communication to North Africa in place of Malta's effort which had been neutralised. The Chiefs of Staff had, in fact, already initiated a plan for the provision of one squadron of Liberators in May, and a second in June, but this had recently been put into abeyance owing to the growing need for heavy bombers in the Far East. It had been arranged, however, that equipment for two Halifax squadrons should be sent out to Egypt immediately in the hope that Halifax aircraft would be fit for operations outside the United Kingdom in two or three months and no further steps were taken at this time.

A.O.C.-in-C.  
Corres. with  
P.M., C.A.S.,  
S. of S. etc.

A.O.C./11  
233A

In May, however, a detachment of American Liberators (B.24's) arrived in the Middle East to operate against the Roumanian Ploesti oilfields before moving on to the Far East, and when, during preparations for the urgently needed convoys to Malta, Harpoon and Vigorous, renewed requests were made for heavy bombers to operate against the Italian Fleet, the United States authorities agreed to lend their bombers for this task. In addition two more R.A.F. Liberators were lent by Coastal Command and were used for operations against the Italian Fleet bases. Subsequently the grave deterioration in the situation caused by the fall of Tobruk, resulted in the retention of the American detachment in the Middle East, and in addition arrangements were made for the diversion of further American aircraft bound for India, and for the dispatch from the United Kingdom of sufficient Halifax aircraft for two squadrons.

Policy for the Employment of Heavy Bombers

A.O.C./138  
11A

The inclusion of the United States Liberators in the Middle East Command was granted on the understanding that these aircraft should not be employed in local operations, nor in a manner unsuited to their characteristics and recognised tactical use, and the Chief of Air Staff in London advocated the cultivation of a similar policy for the Halifaxes. He had obtained the release of these aircraft from Bomber Command and from the task of bombing Germany

(15341)39

SECRET

with some difficulty, as the majority of opinion was that Europe held more important targets than the Mediterranean. Consequently he could only permit the dispatch of the force as part of a first experiment in strategic mobility, and not as a permanent transfer. In this experiment the plan was to switch heavy bomber units from one theatre of war to another in accordance with the more pressing needs of the moment, and he therefore reserved the right to withdraw the squadrons if he thought fit. The A.O.C.-in-C. assured him that the policy would be to operate the bombers against the enemy's sea supply routes to Tripoli and Cyrenaica by attacks on ports and ships. The R.A.F. Liberators, however, were used, in the withdrawal to Alamein against desert targets in the battle area when these were suitable.

#### Maintenance of the Heavy Bomber Units

C.O.S. (42)  
323

The flow of United States Liberators to Middle East for the upkeep of units was provided for in the Portal-Arnold-Towers agreement, in which the Americans undertook to dispatch a complete group of thirty-five aircraft from America, as well as ten aircraft from India. At the same time the Air Ministry undertook to provide a total of sixteen Liberators, some of which were already in Middle East, as well as thirty-two Halifax aircraft.

#### Aircrew Reinforcement

It had been hoped that by the Spring of 1942 the Middle East O.T.U.s (Nos. 70, 71, 72 and 73) would have increased their output and certain aircrew

/reinforcements

CS.9746 Enc. 92A

reinforcements from the United Kingdom could be decreased. By March however, the situation, instead of improving, had deteriorated and an acute shortage of aircraft - primarily due to diversions to the Far East and India, thwarted the attempt to increase the output of the M.E. light bomber and fighter O.T.U's.

The plan was to build the O.T.U's up again in August, depending on the aircraft situation. Meanwhile, however, there was an acute shortage of trained pilots and aircrews, though Middle East had in, or en route to, the Command, a considerable number of pilots and crews awaiting operational training - a total of 270 single engined pilots, 224 twin-engined pilots, 307 observers, 450 W/T Air Gunners and 117 air gunners in all. They therefore did not require any more personnel for operational training for some months, and were even in difficulties deciding how to dispose of the numbers already in hand. Steps were taken to employ some of these aircrews pending their operational training on various duties - in particular, the possibility of using some on ferrying duties was considered.

#### Fighter Pilots

CS.9746 (A.647  
6/3/42)

Idem

The output of single-seater fighter pilots from March to July was to be 35 per month, which, together with the 600 promised from the U.K. for January to April sailings would meet requirements until the end of June, and would permit a reinforcement of 40 to 50 pilots per month to India and the Far East until June if such were required. Even so this figure fell far short of the total designed monthly output of 121 single engine fighter pilots, and the large assignment from U.K., after the number which had already been sent for the "Crusader" operation, drew considerable criticism from Fighter Command.

D.107 dated  
24/3/42

Air Marshal Douglas, A.O.C.-in-C. Fighter Command signalled Air Marshal Tedder that he was sending him 200 fighter pilots per month during March and April. While he was most anxious to help in every possible way he wanted an assurance that such large numbers were really required in M.E. Command as he had heard rumours of fighter pilots kicking their heels for months at a time with no aircraft.

AOC 592 25/3  
V.C.A.S.  
Correspondence  
Encl. 179a

Air Marshal Tedder replied saying that thanks to help from Fighter Command he had had for the past three months a reserve of fighter pilots, but that it was essential to hold this reserve in view of the small output from M.E. O.T.U's, the uncertainty of arrival of pilots being shipped from U.K., and the long time taken to get reinforcements from U.K. to meet an emergency. He also had to be prepared to meet unforeseen commitments such as reinforcements to India, and to allow time for refresher training and conversion to American types on arrival.

Idem

He was willing to accept the commitment spread over three months instead of two, and even to cancel the final shipment if by the end of April no further external demands had arisen. He begged the A.O.C., Fighter Command to ignore the "poison tongues" apparently active at home, spreading rumours of surplus crews "kicking their heels."

Light Bomber Crews

CS. 9746  
Encl. 88a

The normal commitments of bomber crews from home apart from emergencies, were confined to medium bomber crews and crews for aircraft flying out to the Middle East. The Command was dependent on the output from the two light bomber O.T.U's in the Middle East, Nos. 70 and 72, for the supply of light bomber crews, supplemented by the crews of reinforcement aircraft flown out from the U.K. In March however, reductions had to be made in these programmes and, as in the case of the Fighter O.T.U's, considerable reductions became necessary. Again the primary cause was shortage of aircraft due to diversions to the Far East and as a result the number of light bomber units in the Command had had to be decreased. Although the cut in the Light Bomber O.T.U. output could be accepted for a time owing to the necessary cut in light bomber squadrons in the Command, it was thought that it might be necessary to call on United Kingdom crews to make up small deficiencies until the O.T.U's could be built up again in August.

CS. 9746  
Encl. 92a  
A.647 6/3

The M.E. Light Bomber O.T.U. output from March to July was to be 36 light bomber crews each month together with the normal flow of 30 Blenheim crews (1) by air via Malta plus special reinforcements of 32 Blenheim crews via Takoradi each month. This would meet Command requirements and permit monthly reinforcements of 30 crews to India. The total designed monthly output of the two light bomber O.T.U's was 86 light bomber crews. The output for February was actually 55 crews.

CS. 9746  
Encl. 93a  
Ax 970.11/3

On March 11th D.C.A.S. signalled Air Vice Marshal Drummond (Deputy A.O.C.-in-C., M.E.) stating that Bomber O.T.U. resources at home were strained to the limit to meet expanding commitments, and asking for details of the Bomber O.T.U. output in the Middle East and the return of operationally tired light and medium bomber crews to assist the supply of O.T.U. instructors at Home. Air Marshal Drummond replied that he had recently despatched by sea all operationally tired light bomber crews from 107 and 18 Squadrons. If shipping was available more would be sent but as there were only 3 light bomber squadrons in the Middle East at this time the output of operationally tired crews from this small number of squadrons could hardly do more than provide for the requirements of the O.T.U.s there. The other light bomber squadrons were South African, and their operationally tired crews returned to the Union.

CS. 9746 Encl. 96a  
A. 596 17/3

In reply to a further questionnaire from C.A.S. Air Marshal Tedder stated that there were, at that time (23rd March, 1942) 263 Blenheim captains on the strength of the Command of which 96 were in squadrons, 11 awaiting despatch to India, 81 in O.T.U's, 13 test pilots, 28 ferrying and 34 on ground duties. (2) He felt that either Bomber Command had not realised that Bomber Squadrons had been increased or that there was a basic miscalculation in Air Ministry which had led to exaggerated expectations of numbers of bomber crews to be returned from M.E. to U.K.

Idem.  
Ax 458 17/3  
(Encl. 91a)

AOC. 582 22/3  
(Encl. 98a)

- (1) The quota of Blenheims by air had actually been altered from 30 to 10 per month. See page 80.
- (2) Blenheim Captains on ferrying or ground duties were all non-operational for medical or other reasons.

Medium and Heavy Bombers

Previous  
Narrative  
Part Three

V.C.A.S.  
Correspondence  
Encl. 174a

All pilots for medium and heavy bombers had to be sent out from the United Kingdom as there were no O.T.U's for these types in the Middle East. Air Marshal Harris, A.O.C.-in-C. Bomber Command, looked on the Middle East as a continual drain on his resources - a bottomless pit from which nothing ever returned. He signalled Air Marshal Tedder in March that he believed many trained bomber crews who had been sent to the Middle East were either misemployed in ground jobs or "kicking their heels in units". He appealed to the A.O.C.-in-C., Middle East, to return "at least a reasonable proportion" of the "vast numbers of crews" which had been trained and sent out, claiming that during the previous 12 months the best part of 1,000 crews had been sent and approximately "30 crews and a few dribblets of individuals" had been returned in spite of continued appeals and orders. Air Marshal Harris stated that the situation at Home was so serious as a result of this shortage of trained aircrew that "we either alter this hopeless state of affairs and at once, or we perish." Already Bomber Command had had to go over to one pilot policy on all aircraft.

Idem  
Encl. 176a

AOC.593  
25/3/42  
Correspondence  
with V.C.A.S.  
Encl. 180a

This strongly-worded signal drew a reply from Air Marshal Tedder stating that Air Marshal Harris' information was "fantastically incorrect". The situation had been under constant review and a further comb out was in process of being carried out, but the limiting factors of time and distance, delays in transport, Middle East expansion, and the fact that the Far East was still living on them must be taken into account. He appealed to C.A.S. to put a stop to the "poison tongues.. active at home, spreading half-baked stories", since both Air Marshal Harris and Air Marshal Douglas had accused him of retaining trained aircrew in his command in non-operational employment. He emphasised the importance of mutual confidence between A.O.C.'s-in-C. and said "There is a grave risk that the loose talk now evidently going about at home may sap that confidence. It would be a great service to all concerned if it could be scotched." V.C.A.S. replied "Action taken", and for a time the subject was dropped. (1)

- (1) Air Marshal Harris raised the question again in August (B.C/S.27371/Air dated 30th August, 1942) and in September asserted that some 2,300 O.T.U. trained bomber pilots had been despatched to the Middle East to date, and only about 300 returned to this country. He maintained that there was a large number of misemployed aircrew in Middle East (B.C/S.27371/Ops.1(D)/C-in-C dated 14th September, 1942). As a result of his allegations the Air Council appointed an investigating officer G/C Pearce, Deputy Director of Postings (1) to go to the Middle East and report on the situation. As a result, the Middle East was vindicated, and Bomber Command's statistics were shown to be false. Pilots were not being wasted (CS.14187).

CS.9746  
Encl. 98a  
AOC.582 aa/3

Meanwhile Air Marshal Tedder had given the following information on his Wellington crews. On March 22nd, he had 269 Wellington Captains on his strength, excluding 34 seconded to BOAC pending formation of M.E. transport squadrons, and 60 recently despatched to U.K. for Liberator training and delivery. 163 were employed against flying posts in operational squadrons and 32 in other flying posts. During the 12 months ending February, 1942 M.E. received approximately 280 Wellington crews, and during the same period they had lost the equivalent of 77 complete crews through casualties, returned the equivalent of 34 operationally tired crews to U.K., returned 30 complete crews to U.K. to form a Liberator squadron, seconded 17 crews to BOAC pending formation of transport squadrons. 20 crews were awaiting passage to U.K., and 20 were about to proceed to India - only 82 crews therefore had been absorbed in the Middle East in the course of a year's expansion of the force to its current established strength. From March onwards Wellington crews could be returned to U.K. at the rate at which they were despatched to Middle East less

Idem

- (a) Losses en route
- (b) Diversions to India
- (c) Operational and other casualties
- (d) Numbers as required to complete full establishment of nine squadrons.

#### The one Pilot Policy

Idem

Encl. 97a

Bomber Command had had to go over to the one pilot policy on all aircraft by the middle of March, and on the 23rd a postagram was sent by them to A.D.O. (Ferrying) stating that in future no O.T.U. trained second pilots were to proceed to the Middle East with reinforcing Wellingtons. The first single pilot crews were due to appear in Ferry Training Units in 8 or 10 weeks time, and in spite of the undoubted advantage that as a result the first pilot would get 15 to 20 hours more flying in during his O.T.U. course, the A.D.O. (Ferrying) considered a second pilot essential for the flight from Gibraltar to Egypt either direct or through Malta.

He therefore suggested that pilots should be found from experienced personnel in the Middle East for this part of the flight and considered that approximately 25 would be sufficient to handle the entire monthly Wellington commitment provided air transport was available to fly them from Egypt to Gibraltar direct. This should, he thought, be available in the form of Liberators by the time the reduced crews began arriving in Egypt, provided Gibraltar's forecast for the completion of the extensions to the new runway was fulfilled.

Idem

Idem  
Encl. 101a

Middle East however, did not like the plan. It was not acceptable owing to long sorties averaging 9 to 10 hours at the end of which time the solo pilot would not be sufficiently alert, mentally or physically, to effect a good landing in anything but perfect conditions, causing a further rise in the already high wastage of Wellingtons. But their protests were unavailing. The Air Council had made a definite decision and did not consider conditions in Middle East so much harder as to make a single pilot unacceptable.

Idem  
Encl. 104a

Idem  
Encl. 108a

The policy had not been implemented by the end of the period under review owing to a shortage of automatic pilots, but experimental flights were made successfully in April with one experienced pilot and a second pilot straight from S.F.T.S.

In sum, the Middle East Command in the months prior to the enemy's offensive in May, 1942, was still compelled in the matter of aircrews to draw largely on United Kingdom resources.

The build-up achieved by the end of May, at the time of the enemy's offensive against our Gazala line and the commencement of the 1942 "Battle for Egypt" is indicated in Part Four of the Narrative "Middle East Campaigns, North Africa".



SECTION 3REORGANISATION IN THE MIDDLE EAST COMMANDFebruary to May 1942

Auchinleck's  
Despatch P.17  
(and APP.17)

The "Crusader" campaign over, the immediate aim of the Commander-in-Chief Middle East Forces (General Auchinleck) was to stabilise a front as far west as possible, behind which he could build up a striking force and accumulate reserves. Both antagonists were exhausted by the long and arduous fighting, and it was obvious that neither side would resume the struggle until their forces were rested and reinforced and their supplies built up.

Idem

By 26th February, a strong defensive position had been prepared and organised in depth over an area thirty-six miles square. A minefield, extending from the west at Gazala to Bir Hacheim in the South, blocked the coastal road and all the important tracks from East to West. Within the minefield, strong defensive localities had been developed from Gazala to Sidi Muftah and at Bir Hacheim. The fortress of Tobruk gave depth to the defence, and positions were being developed at Acroma, El Adem and Bir El Gubi. To the South defensive positions were to be prepared as an insurance on the line Sollum - Maddalena, and Giarabub was occupied in a line covering Tobruk to secure the Southern flank.

The enemy had halted and deployed in a defensive position on the line Tnimi-Mechili and the Eighth Army was able to carry out the consolidation of the Gazala position practically undisturbed.

Report on  
Land Operations  
During the  
Retreat from  
Cyrenaica  
(P.2)

Behind this defensive system both the Army and the R.A.F. set about building up their strength for the time when they could renew the struggle. Active patrolling of forward areas continued, combined with harassing of lines of communication by small columns of the Long Range Desert Group.

Fighter Squadrons

The air forces were temporarily weakened by the effort expended during the advance and retreat. There had been high wastage in the fighter aircraft and local resources could not replace losses. Squadrons were therefore at reduced strength; the Hurricane I squadrons were outclassed; the Tomahawk supply was drying up; the Hurricane II supply was poor and Kittyhawks were no more than dribbling in. The loss of fighter pilots in casualties and through genuine fatigue was heavy, and only poorly trained replacements were available.

Bomber Squadrons

A similar state of affairs obtained among the bombers. The supply of Marylands was at an end and two squadrons had been withdrawn while the Blenheims were showing the effect of continued dust conditions on their engines, and serviceability was extremely low for a high maintenance effort.

Operations were, nevertheless, still being carried on, though on a reduced scale. Enemy lines of communications were being harried, our ports and bases defended and a heavy

scale of attack maintained by night throughout the whole of the preparatory period on the main enemy supply port of Benghazi. (1)

At the same time a fighting force was being built up and reorganised in preparation for the coming offensive.

Centre  
Heading

→ REORGANISATION OF THE WESTERN DESERT COMMAND

Much had to be done to prepare the Desert Air Force for waging war over Libya. Many reforms had already been initiated, but weakness and limitations had been revealed by practical experience, during the Crusader campaign.

These had to be corrected and with the lessons that had been learnt in mind the R.A.F. in the Middle East set out to amplify and reorganise the arrangements made during the previous Autumn. Again the potential threat to the Northern Front had to be kept in mind, and the influence of events in the Far East could have far reaching effect on plans made for Libya.

capitals ← A. Reorganisation of the Fighter Force

Report on  
Operations  
during the  
withdrawal  
from Cyrenaica  
P.4

On the return to the Gazala line the Fighter Force was organised for a mobile role in two Fighter Wings, one of which was of skeleton strength and operated as advanced control to assist leap frogging during movement. Now that static conditions prevailed it was obvious that a closer control of training, tactics and administration was essential.

Consequently the Fighter Force was organised into Fighter Wings of four to six squadrons controlled by a Fighter Group. With this purpose in view No. 211 Group was reformed under G/C K.B.B. Cross D.S.O., D.F.C. A directive to the O.C. No. 211 (Fighter) Group states as follows:-

*dated 4 April,*

Idem  
Appendix 'C'

"To provide you with fighter squadrons at a high standard of operational efficiency the fighter squadrons in the field under A.H.Q.W.D. will be organised into three Fighter Wings each having under command four to six fighter squadrons. Two of these wings are now forming and the third wing will shortly be established. By this decentralisation of command close supervision of the operational readiness of squadrons will be achieved. The Officers Commanding Fighter Wings are to be responsible under your direction for the operational efficiency of the squadrons forming their separate wings. The allocation of squadrons to Wings will be made by this H.Q. after consultation with you."

H.Q. 211 GP  
O.R.B.

The main object was to divorce operational from administrative and maintenance control in order that the officer i/c Operations could devote all his time to operations unhampered by administrative duties.

Report on  
Operations  
during the  
withdrawal  
from Cyrenaica"  
App 'C'

Orders for the day to day employment of the Fighter Force were to be issued by A.H.Q.W.D., and would be based on a preconceived plan. This however was unlikely to be sufficiently comprehensive to anticipate all enemy intentions and the Officer Commanding 211 Group was to act on his own initiative and employ fighter forces to counter enemy air activity "in circumstances when time

is not available for confirmation to be received from advance A.H.Q."

At that time and under conditions imposed by the lull in operations the main tasks of the Fighter Force, in order of priority, were as follows:-

- (i) The attainment of local air superiority; this task to include offensive air fighting and employment of the fighter force in escort for bombers against selected objectives.
- (ii) Protection of land forces with particular reference to forward areas.
- (iii) Defence of Tobruk.

The priority given to this task was to be dependent on the amount of shipping held in the harbour. Close liaison was therefore to be maintained with the local naval authorities at Tobruk, and arrangements to be made for them to pass information to H.Q. 211 Group concerning the shipping in the harbour.

- (iv) Protection of Operational Aerodromes in the Forward Area

Fighter Wings were to be detailed in rotation to provide aircraft at readiness for the defence of operational aerodromes. Aircraft retained in this capacity were to be controlled by the parent wing on information passed from the Operations Room and by visual observation. Assessment was to be made of the number of aircraft held at readiness with the varying circumstances prevailing. Should the scale of enemy air attack on aerodromes increase it might be necessary to modify this arrangement.

#### Disposition and Control of the Fighter Force

"Report on  
withdrawal  
from Cyrenaica"  
Appendix "C"

Control of the Fighter Force in the air was to be exercised through one main operations room with a subsidiary operations room located in a forward position as circumstances demanded. To begin with the Fighter Group was located at El Adem with a forward operations room at Gazala but on 20th April, 1942, the group moved back to Gambut, partly because the use of Gazala was restricted by enemy attacks, partly because prevalent dust at El Adem made daily operations doubtful and also on account of frequent enemy fighter-bomber attacks.

The advantages of having the force concentrated were manifold. The scale of A/A defence was increased, the establishment of the telephone system (and indeed of all communications) was simplified, and an increased "help one another" spirit became manifest. There was also closer co-operation and more understanding as a result of the association of control and pilots, and the bomber force was only 12 miles away at Baheira.

Functions of No.211 Group

No.211 O.R.B. Headquarters No.211 Group was to:-  
 April, 1942  
 Appendix "B"

- (a) Exercise full operational control of all offensive fighter wings in the Western Desert.
- (b) Exercise actual control of operations in the air of such Single Engine fighter squadrons as might be allotted to the wings.
- (c) Exercise operational control of such W.O.U's and C.O.L's as were available.
- (d) Make recommendations for honours and awards, and promotions of senior officers.

The Group was to have at its disposal one centralised and one forward operations room, both of which were to be fully mobile and identical as regards staff and equipment. In static warfare one operations room was to control aircraft operating with the forward troops and the other was in the operational landing ground area. In mobile warfare it was considered that one operations room could "leap-frog" the other.

Originally intended to form on 12th March, the Group was not in fact established until 2nd April, when No.239 Wing reformed at Gambut taking over the duties of No.243 Wing whose C.O. G/C. K.B.B. Cross D.S.O., D.F.C., was then free to move to El Adem and take over the new Group.

Formation of the three Fighter Wings

(i) The three fighter wings were to be responsible direct to A.H.Q. for the administrative control of the squadrons under them. This would leave Group free to concentrate on the operational side, and leave them unhampered by administrative detail. They were also to be offensive and fully mobile, and to be responsible for the operational efficiency (not in the air) of from four to six single-engine fighter squadrons.

There were already three fighter wings in existence - Nos. 243, 239 and 234. No.234 Wing however, was engaged in the protection of shipping and lines of communication between Alexandria and Sollum, and its task was primarily defensive. It was therefore excluded under the new policy, and a new Wing, No.233, was to be formed.

(ii) Functions

On 4th April, a directive was issued to Officers Commanding Nos. 233, 239 and 243 Wings describing the functions of the Wings in detail. These were to provide "closer supervision of the aspects of squadron life which lead to greater operational efficiency", and were to be allocated as follows:-

	(No.2 (S.A.A.F.) Squadron
No. 233 Wing	(No.4 " "
	(No.94 " "
	(No.260 " "

A.A.H.Q.W.D/15/  
 Air Encl. 45a

No.239 Wing

(No.3 (R.A.A.F.) Squadron  
 (No.112                   "  
 (No.250                   "  
 (No.450 (R.A.A.F.)   "

No.243 Wing

(No.33 Squadron  
 (No.73                   "  
 (No.80                   "  
 (No.274                 "

Reinforcing squadrons were to be allocated to wings by the A.O.C. in consultation with the O.C. No.211 Group.

(iii) Employment

AAHQWD/15/Air  
 Employment  
 of the Fighter  
 Force - Policy  
 Encl.44A

O.C. No.211 Group was on receipt of orders from the A.O.C., to order his requirements for fighter squadrons to meet commitments through the Officers Commanding Fighter Wings. The Fighter Wing Commander was then to select the squadrons to meet the demands from Group, and was to consult Group if there was any doubt as to the employment of squadrons.

As far as practicable the fighter force allocated for small commitments was to be drawn from one wing only; the principle being to employ one wing in preference to a mixed force of equivalent strength drawn from more than one wing.

(iv) Operational Efficiency of Squadrons

Idem

The primary task of Wing Commanders Commanding Fighter Wings was to ensure the provision of Squadrons in a high state of operational efficiency, and the directive of squadron effort to achieve this standard was to be their specific responsibility. No.211 Group was to be informed of the needs of individual squadrons for training, and in this way would be kept fully aware of the operational value of the Fighter Force as a whole.

All base parties of squadrons forming wings were to be concentrated at one base aerodrome, the organisation of which was to be undertaken by an officer nominated by the Wing. This organisation could vary with the individual wishes of the Fighter Wing Commanders so long as the base aerodrome provided a stable, well organised base in the rear areas to provide the maximum assistance to the operational work and welfare of the Squadron personnel in the forward area.

TRAINING

AAHQWD/4/Air  
 Encl.14A

Air Firing

One of the main shortcomings in the efficiency of the Fighter Force at this time was in air firing, and in April A.V.M. Coningham circulated a letter saying that he wished to improve the standard of marksmanship. One or two enemy pilots who had been shot down during the previous few months had praised our aircraft and flying but had said that with few exceptions our shooting had not been good or many more of their aircraft would have been shot down.

Idem

He strongly advocated shadow firing as excellent practice for deflection shooting. A number of pilots who were otherwise operationally fit were found to have no idea

Idem  
Encl. 15A  
paras. 4 and 6

of this, and training by means of a drogue was not considered satisfactory, as it was not possible to see immediately where the shots were going. Immediate visual confirmation of shooting was considered worth a lot more than results announced later, and the psychological effect on the pilots under training at the Air Firing school practising drogue shooting had been very deleterious. The lack of results, to an inexperienced operational pilot, had a marked effect on his outlook regarding operational fighting, and to an experienced pilot tended to convince him that astern and quarter were the only effective attacks, and "hose-piping" the only effective method of hitting an objective. Shadow firing has the additional advantage that an instructor can sit over the pupil, observe his approach, manoeuvring for position, final delivery of attacks and bullet strikes, and assess his shooting and point out where he was wrong.

Shadow firing therefore became a definite feature in the training circulation and all pilots were given continuous firing practice during the lull, with special emphasis on this method.

Apart from firing practice pilots were given constant training in navigation, escort duties and ground strafing and attacks. A system of air readiness was introduced which enabled pilots to utilise the period at readiness for training without interfering with operations. If required, training could be interrupted and aircraft immediately vectored on to approaching enemy aircraft. This practice was particularly appreciated by the Kittyhawk squadrons as it was clear that new pilots should have as much time as possible on the new type. It was also arranged for Fighter Wings to have a part day in every three for training.

### B. THE BOMBER FORCE

The Bomber Force meanwhile was concentrated at Baheira main and Satellites, approximately twelve miles from the fighter aerodromes. It was thus most convenient for operations and sufficiently near to promote a frequent interchange of visits among fighter and bomber pilots, and to allow conferences following operations to be organised without inconvenience.

A considerable amount of training was required on the new Boston, and to assist this the greater part of the force was held at base so that full bombing and night flying training could continue. Only six aircraft were held at the forward aerodromes against emergency calls for support. For premeditated raids the Bostons were brought up specially (usually over night) and released again when the task was completed. Their training consisted mainly of bombing practice from 8 - 10,000 ft. interspersed with high-level from 15,000 ft. and experimental bombing at a slight angle of dive.

### C. GROUND ORGANISATION

Particular attention was given to ground organisation during this period and squadron commanders benefitted greatly in later operations from schemes laid down for rapid rearming, refuelling, and other aspects of preparative intensive operations.

Beamish Report  
P.6

**D. COORDINATION AND SUPERVISION**

Idem

The A.O.C. held weekly conferences with Wing Commanders from Advanced Air Headquarters throughout the preparatory period. At these conferences all subjects bearing on the efficiency of the Force were fully reviewed. In addition all Commanders were kept in touch with developments of the A.O.C.'s policy, and the whole force benefitted as a result of the co-ordination of effort.

This close supervision of operations, tactics, training and administration provided by the new organisation had an immediate success and was an important factor in the increased efficiency of the Force. In particular of inestimable value was the development of Wing training at base landing grounds, by means of which were formed a small pool of operationally trained pilots, used to desert conditions and trained to a standard to allow them to take their places in squadrons immediately when required.

**E. NEW TACTICS**

AHB/ILJ1/12

P.51

R.A.F. Operations  
in the Western  
Desert and E.  
Mediterranean

New tactics were developed to deal with the practice of Flying 'Me. 109F's in small patrols, which continually nagged at our aircraft, exploiting the superior performance of the enemy fighters and which frequently broke up our formations. The old system, carried out by Hurricanes and Tomahawks, was to employ fighter aircraft in two squadrons strength to counter the jumping - from - the - sun tactics of the Me. 109F, and certainly reduced our casualties. This was now thought to be an uneconomical employment of aircraft with R.D.F. available in forward areas and offensive patrols were reduced to fluid 'fours' or 'sixes' thereby developing greater self reliance and vigilance among pilots. It was, however, some time before the change was established as it did not meet with unanimous approval.

Changes were also made in the tactics of fighter escorts for light bombers. These were necessitated by two things, the increased scale of enemy defence under static conditions, and the introduction of the Boston with new personnel and a speed much greater than that of the Marylands and Blenheims previously employed.

The main features developed were:-

- (a) The development of R/T communications between the two types of aircraft.
- (b) The fighter leader placed in command of the bomber formation as well as of his fighters.
- (c) The specialisation of one Fighter Wing for bomber escort, although it was periodically diverted back to air fighting.
- (d) The bombers to make at least two orbits of the landing ground and not set course till five minutes after the last fighter had taken off.
- (e) Climbing speed of bombers - 170 m.p.h.  
Level speed of bombers - 200 m.p.h.
- (f) Complete R/T service when course was set.
- (g) Return speed of bombers 210 m.p.h., always keeping the sun at 15 degrees to the fighters.

- (h) The bombers to fly in close formation except during the bombing run, and then to reform as quickly as possible.
- (i) Fighters to fly in independent fours correctly spaced. Each four to be line abreast, each aircraft 250 yards apart. Fours to be stepped up and slightly back at 500 ft. distance in the morning and 250 feet in the afternoon, with each four ready to fight independently without relying on help from the four either above or below. The four around the bombers and immediately over the top not to leave the bombers,

#### F. DEVELOPMENT OF THE FIGHTER BOMBER

As the time for the offensive drew nearer, to compensate in some degree for the shortage of light-bombers the A.O.C.-in-C. laid down a policy that all his fighters should be equipped to carry one or more bombs. Shortage of materials precluded the full implementation of this policy, but by the end of May two Kittyhawk squadrons were equipped with bomb racks, and Hurricane and further Kittyhawk squadrons were equipped as fighter-bombers during the summer.

During March experiments were made in fitting Kittyhawks with bomb racks. This had been successful with Hurricanes and during the 'Crusader' offensive they carried eight 40 lb. bombs. These however, were not heavy enough to penetrate armoured vehicles, and could only be used successfully for ground strafing enemy personnel and soft skinned transport. One Hurricane squadron was therefore equipped to carry two 250 lb. bombs with extension rods, and the first Kittyhawk locally fitted to carry one 250 lb. bomb. Later issues of Kittyhawks arrived fully equipped to carry one 500 lb. American bomb without rod adaptors.

The fighter-bombers had the great advantage of being able to provide close support at a much reduced time interval compared with bombers.

Kitty-bombers were first used on 16 May, when six belonging to No. 112 Squadron attacked an enemy camp East of the main road near Bomba.

#### G. ARMY CO-OPERATION

Measures were also taken to improve army co-operation. The most outstanding improvements were the setting up of a Combined Headquarters which enabled requests from forward tentacles to be presented direct to Army and Air Headquarters, and the establishment of land marks by means of which our aircraft could fix their positions. These consisted, by day, of alphabetical letters 20 yards long, and by night of a 'V' sign each arm being one hundred yards long and constructed of lighted petrol tins 25 yards apart. These signs were established by the ground units and the map references supplied to the Air Force through Air Support Control.

The vexed question of the bomb line was again reviewed. In the Western Desert our ground forces had no satisfactory method of identifying themselves to friendly aircraft. A White St Andrew's Cross on a black ground was painted on the majority of vehicles, but was not entirely satisfactory as it was not visible to high flying aircraft. As medium bombers operated at minimum height of 6,000 ft. on account of flak opposition no such sign could be seen by them unless it was 15 feet or more in length. Eventually on

A.H.B./ILJ6/8  
and  
W.D. Report

A.H.B./ILJ1/12  
Report on R.A.F.  
Operations in  
the Western  
Desert

Close Support  
Policy I  
Encl. 3C

SECRET

98a

A.H.B./  
ILJ1/12  
Beamish Report

12 May, it was suggested that the R.A.F. roundel should be adopted for all vehicles both army and air force. This idea had much to recommend it, but unfortunately there does not appear to have been time before the Axis offensive began to change the sign on all vehicles, and recourse was again made to the unsatisfactory system of the bomb-line. This was

SECRET

CONFIDENTIAL

TOP SECRET

1. The purpose of this document is to provide information regarding the activities of the [redacted] organization. This information is being provided to you for your information only and is not to be distributed outside of your organization.

2. The [redacted] organization is a [redacted] organization that is engaged in [redacted] activities. The organization is currently engaged in [redacted] activities and is planning to engage in [redacted] activities in the future.

3. The [redacted] organization is currently engaged in [redacted] activities and is planning to engage in [redacted] activities in the future. The organization is currently engaged in [redacted] activities and is planning to engage in [redacted] activities in the future.

CONFIDENTIAL

determined by the local commander and varied with his individual appreciation of bombing accuracy. This often resulted in targets close to our forward lines being ignored when too great a margin of bombing error was allowed. In an attempt to overcome this difficulty it was determined that the line of our forward troops forecast two hours ahead should be supplied hourly to the R.A.F. through Air Support Control. This predicted position represented the new version of the bomb line.

#### Fighter Escort for Tac Recce Aircraft

Beamish Report

II/12/69A  
msk

In the static conditions obtaining during the lull in the desert enemy opposition to our Tac/Recce sorties increased. As it was vital that the information should be collected, and since Tac/Recce aircraft flying at nought feet could only obtain limited information owing to the featureless nature of the area, it was decided that they should fly with a fighter escort at a reasonable height. This plan proved successful though ~~frequent~~ <sup>frequently</sup> opposition from enemy fighters was encountered.

AAHQWD/15/AIR  
Employment of  
the Fighter  
Force - Policy  
Encl. 71A and  
59B

#### Improvements in R.D.F. Organisation

An essential feature of the war in the Western Desert was its mobility, and this imposed definite limitations on the types of R.D.F. equipment that could be used. During the lull however, better equipment was installed and a system of an almost permanent nature was located at Tobruk, the main forward base. At Gambut and Gazala were fully mobile C.O.L. sets, the latter with a range of sixty miles, and *capable of picking up low-flying aircraft.*

Employment of  
the Fighter  
Force - Policy  
Encl. 59B

Supplying supplementary information was a system of wireless observer unit posts. These, approximately thirty in number, were located in a ring covering the approaches to El Adem, and were in W/T contact with the Group Operations Room. They were fully mobile and spaced so that there were no gaps in the system. All reports were made on visual sightings and they closely corresponded to the Observer Corps in England. No continuous tracks could, however, be obtained from them as their disposition lacked depth, and thus merely formed a screen, the only information available being the course and height at the time the aircraft was under observation.

#### Use of A.M.E.S. information by Tac/Recce aircraft

Report on  
Operations during  
the Retreat  
from Cyrenaica  
P.9

As our A.M.E.S. information over the forward area improved Tac/Recce aircraft operating independently on mission sorties were advised by Fighter Control when the air was free of enemy aircraft. A close liaison was thus maintained and the plan was further developed very successfully at a later stage in operations.

#### Photographic Reconnaissance

Idem P.10

Requirements for Photo/Recce during the period were too heavy to be met by the Squadrons, and P.R.U. aircraft had to be employed in the tactical area.

#### Deficiencies in co-operation with the Army

Forces were supplied by the army for the protection of landing grounds, but the arrangement was not satisfactory in that there was no permanency of allotment, and as was

later experienced, the forces were moved to meet any changing situation in the land forces.

Idem P.10

Another difficulty was the shortage of A/A guns allocated for the protection of aerodromes. There were no re-inforcements and there was a marked tendency to regard the guns that were allocated as a reserve pool which could be drawn on at need. Conditions however improved later, and the A/A defence of aerodromes under the 12th A/A Brigade was excellent.

#### F. CONCLUSION

There is little doubt that the hard work put in during the three months of the lull in the desert was a major factor in the ultimate success of the campaign in Libya. Although preparations were made with an offensive in view, the organisation was so flexible that even while being driven back the Desert Air Force retained its superiority and was able to cover a beaten army in the "incomparable retreat" of the Summer of 1942.

## SECTION 4

TRENDS OF ENEMY AIR ACTIVITY DURING THE LULL -  
Mid. February 1942 - 25 May 1942

North Africa: Combined Axis Forces

D.D.1. 3 Axis  
Air Operations  
N. Africa and  
Mediterranean  
Intelligence  
Reports  
(A.H.B./IIJ1/63)

Enemy Documents  
A.H.B.(6)

According to British Intelligence throughout the whole period there were apparently few important or outstanding developments with regard to Axis air forces in air operations in N. Africa. There seemed to be no perceptible change either in the composition or strength of the Axis forces from the middle of January until nearly the end of March, when 25 Italian single engine fighters (half of them M.C.202's) moved to Africa and 10 Italian long range bombers were withdrawn for refitting. By the end of March the Italian single engine fighter force had been restored to the strength with which it began the campaign. Actually, however, early in March the German air forces in North Africa were considerably reduced by the transfer of Stuka and bomber Gruppen to Sicily for the forthcoming attack on Malta.

During April, alterations affecting the composition of Axis air forces appeared to be limited, in the case of the G.A.F., to the withdrawal to Italy for re-equipment of a Dive Bomber Gruppe early in the month, together with small reductions in the fighter force due to the move of a few aircraft to Crete and the remainder to Germany. The Second Army Co-operation Staffel became operational in Africa during the month, and a few twin-engine night fighters were transferred from Sicily to Cyrenaica. No new Italian air force units were believed to have been moved to Africa during the month, though there was a slight increase in the single engine fighter strength, and the remnants of a small dive bomber formation was withdrawn to Italy. The combined forces were virtually unchanged in number of aircraft at their disposal since mid-January, though the German dive-bomber force had been reduced by half from that date. The I.E. strength of the G.A.F. in North Africa had apparently fallen slightly below that which it possessed at the beginning of the British offensive in November 1941, and the combined Axis fighter force, in particular, was less than the peak figure of some 460 aircraft reached by 18 December. The Italian Air Force was divided between Tripolitania and Cyrenaica, rather more than half being in the forward area. The combined Axis Strength in Cyrenaica itself was then approximately 400 aircraft.

Idem

In May there was no change in the G.A.F. order of Battle in N. Africa until shortly before the opening of the offensive, when 40 Dive Bombers, 30 single engine fighters and 15 twin engine fighters were transferred to N. Africa from Sicily, thus increasing the force available to some 260 I.E. aircraft - considerably more than were employed during the initial stages of our offensive in November 1941. The main effect of this was to provide a considerably greater fighter force and to raise the dive bomber force to the same strength as in November. Increases in the Italian Air Force in preparation for the offensive were mainly in respect of single engine fighters. These were increased from approximately 260 aircraft at the beginning of May to approximately 325 aircraft by 25 May - of these 265 were believed located in Cyrenaica and the rest in Tripolitania. The single engine fighter force in Cyrenaica included some 110 Macchi 202's, a 57% increase on the number of that type based in Cyrenaica in December 1941.

Idem Towards the end of May therefore, the combined Axis forces in the forward area ready to support the offensive stood at some 600 aircraft as compared with 500 to 540 in November 1941.

Remainder of Mediterranean Area

(a) German Air Force

Idem Between the middle of February and the end of March a number of changes in the dispositions of the G.A.F. in the remainder of the Mediterranean area took place. G.A.F. units based in Greece were reduced as the result of the transfer of long range bombers to the Russian front and the temporary move of 30 Ju.88's to Sicily for operations against Malta: the Sicilian force was further strengthened by bringing the long range bomber units already based there more fully up to strength, and by the return to operations of a Dive Bomber Gruppe after a period of rest in Italy following its withdrawal from Africa in December. The strength of single engine fighter units in Sicily may also have been increased towards the end of March, the general build-up of all types being associated with the heavy and sustained scale of attack maintained against Malta since 21 March. The total forces estimated to be operating was 535 aircraft 110 from Greece and Crete and 425 from Sicily<sup>(1)</sup>.

During April the greater part of the German Air Force remained concentrated in Sicily for the heavy and sustained attack on Malta. At the end of the month, however, 30 Me.109's were withdrawn from Sicily to Germany prior to further operations against Russia, and a detachment of Me.110's was transferred to Greece; the Long Range bomber force engaged against Malta was slightly reduced. The force in Greece and Crete remained virtually unchanged and the total force estimated to be operating from Greece, Crete and Sicily on 30 April, was considered to be 495 aircraft - 110 in Greece and Crete and 385 in Sicily<sup>(2)</sup>.

(1) These forces were estimated to be made up as follows:-

	Greece and Crete	Sicily	Total
Long Range Bombers	50	190	240
Bomber Rec.	15	40	55
Dive Bombers	-	30	30
Single Engine fighters	10	115	125
Twin Engine fighters	-	50	50
Coastal	35	-	35
	110	425	535

(2) These figures were made up as follows:-

Long Range Bombers	55	180	235
Bomber Rec.	10	40	50
Dive Bombers	-	30	30
Single Engine Fighters	5	95	100
Twin Engine Fighters	5	40	45
Coastal	35	-	35
	110	385	495

May brought considerable changes to the G.A.F. operating in the Mediterranean areas other than N. Africa - these were due to two reasons -

D.D.I.3 Axis  
Air Operations  
Intelligence  
Reports (ILJ1/  
63)

- (i) The withdrawal from Sicily of long range bomber units to the western front, and of single engine fighters to Russia.
- (ii) The transfer of dive bomber and fighter forces from Sicily to N. Africa.

But the force in the Eastern Mediterranean was strengthened by the further transfer from Sicily to Crete of 60 JU.88s, long range Bombers, and 20 JU.88 night fighters; in addition one of the units already in Greece was brought up to full strength. As a result the force remaining in Sicily was reduced to less than 1/3rd of that maintained during April whilst that in the Eastern Mediterranean was nearly doubled. The forces based in these respective areas on 25th May showed a net reduction of 170 aircraft during May, and are estimated at 325 I.E. aircraft (210 in Greece and Crete and 115 in Sicily). (1)

(b) Italian Air Force

Apart from a slight increase of single engine fighters in the Aegeans there were no changes either of strength or disposition of I.A.F. in the Mediterranean before the end of March. In April there was a slight reduction in the long range bomber force operating in the Aegean and in May a slight increase of 20 long range bombers to the force operating from Sicily, but otherwise no important changes. The small Italian Dive Bomber Force had ceased to be operational since the beginning of May.

Employment of Air Forces - Mid-February - 25th May

Idem

Strength and Serviceability

(a) North Africa

During the period under review the G.A.F. in N. Africa showed an increase in strength beginning with the raising of the single engine fighter

- (1) The forces based in these respective areas on 25th May showed a net reduction of 170 a/c during May and are estimated at 325 I.E. a/c disposed as follows:-

	<u>Greece and Crete</u>	<u>Sicily</u>	<u>Total</u>
Long Range Bombers	130	55	185
Bomber Reg.	20	20	40
Dive Bombers	-	-	-
Single Engine Fighters	5	30	35
Twin Engine Fighters	20	10	30
Coastal	35	-	35
	210	115	325

units nearly up to full establishment by the end of March, while by the end of April the strength of the whole force amounted to approximately 200 aircraft against an establishment of 177. The Dive Bomber force was considerably in excess of establishment and at virtually the same strength as at the end of March despite the withdrawal of a Gruppe during April. Average serviceability was estimated at 45% until the end of April compared with an average of 50% during the 3rd month of the campaign, due largely to a considerable drop in the serviceability of dive bombers (believed to be due to a large number of dive bombers undergoing extensive overhaul). These at the end of March did not exceed 40% of strength as against 65/70% during the third month, but increased by the end of April to 55% of strength. By the end of the period, however, (25th May), the strength of the G.A.F. in N. Africa was roughly equal to I.E. with an average serviceability of 60%, this figure probably having fallen slightly from about 65% as a result of operations on an increasing scale during the week prior to the opening of the offensive.

The strength of the Italian Air Force in N. Africa did not increase apart from the single engine fighters in April and the serviceability was apparently well maintained at 65 - 70% of strength during April, and 60 - 65% during May.

(b) Remainder of the Mediterranean

Idem

From mid-February to the end of March the Axis force in Greece showed a slight drop in strength due to the transfer of units to Sicily and Russia but was nevertheless maintained approximately up to I.E. with serviceability at approximately 60% of strength. During April, however, the strength showed a slight increase in relation to establishment mainly accounted for by an improvement in the strength of long range bomber and bomber reconnaissance units, while in May G.A.F. units in Greece and Crete were considered to be up to I.E. on strength with the exception of coastal units which are estimated at 40% in excess of I.E. Average serviceability was then reckoned at 60%, and similar figures were thought to apply to units remaining in Sicily where the strength had been maintained at full I.E. establishment notwithstanding losses sustained against Malta.

Scale of Effort

DDI.3 Intelligence Reports  
Axis air operations in N. Africa and Mediterranean  
(AHB.IIJ1/63)

In March and April operations in Africa were on a relatively low scale due mainly to the static ground situation, the extensive overhaul and refitting of dive bombers and single engine fighters, and, in April, to sand storms and other unfavourable conditions. Added to this was the established policy of the Germans to conserve and economise in the use of their air force. The average daily effort was 50 sorties. With the reduction of the force in Greece, operations from this area decreased progressively, mostly confined to reconnaissance.

The Italian force in N. Africa is estimated to have maintained an average of 30 - 35 single engine fighter sorties per day with a further 5 - 10 long range Bomber, reconnaissance and coastal combined.

During May there was an almost complete absence of offensive sorties by African based dive bombers. Those which did operate flew the majority of sorties on escort duty for shipping convoys off the Cyrenaican coast. Fighter bomber sorties also, seem to have been almost entirely suspended during May, though Me.109's showed a steady increase in the number of sorties throughout the period leading up to the offensive. The average number of sorties were from 25 a day during the first week in May to 45 during the third week - more than half on escort duties and the rest on defensive patrols over Axis aerodromes. Fighter bomber operations which were frequent in April, appear to have been almost entirely suspended during the first three weeks of May.

By the end of April it appeared that the Germans might open an offensive in North Africa with the object of capturing Tobruk and possibly advancing to the Egyptian frontier. In this event the improvement in serviceability and the supply position should enable adequate air support to be available in Africa and it was thought probable that further support would be available at relatively short range from long range bomber units based in Crete, as during the month the G.A.F. Operational Command in the Eastern Mediterranean had been transferred from Greece to Crete, and part of the long range bomber force was believed to be operating from there. May brought further confirmation of the signs evident at the end of April suggesting the German intention of opening an offensive with the object of capturing Tobruk, and shortly before the offensive began Field Marshal Kesselring, A.O.C.-in-C., Mediterranean, moved his H.Q. from Sicily to N. Africa.

#### Operations of Axis Air Forces (24th February - 26th May)

Throughout the period the main target for attack by the G.A.F. was Malta. On 10 February, Fliegerfuhrer Afrika, reporting changes in his order of battle, had explained that the new dispositions had been made necessary by Rommel's advance, which had put most of the air units out of range of the battle area. However when the air forces had completed their move, their main task, as ordered by Kesselring on 22 February, was not to give direct support to the Army but 'to attack the enemy's air force and his supplies by land and sea'. Fairly constant bomber operations were carried out against Tobruk, particularly in the earlier months, and against rail communications, Fuka and Gambut aerodromes, and objectives in the forward area. Fighters were active, ground strafing and also operating as fighter-bombers, and the Me.109 was used on fighter, fighter-bomber and recce. operations. The scale of operations varied considerably according to the weather, particularly in mid-March, though considerable fighter and reconnaissance activity was observed at the time of our ground reconnaissance in force towards Martuba. Attacks on forward aerodromes, railway rolling stock and communications were maintained on a fairly considerable scale, but towards the middle of April there was a marked decrease in dive bomber operations and by the end of the month it appeared that the Germans had not more than the equivalent of one Gruppe of Ju.87's in operation in Libya. The Italian Air Force was still being used almost entirely in a

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defensive role, and on occasion a number of Macchi 202's were reported as forming part of the escort with Me.109's in a dive bomber attack on Tobruk.

Meanwhile German air transport was active, particularly between Crete and Cyrenaica, and continued to be so when towards the end of the period there was a marked increase in fighter sweeps and in reconnaissance activity over the forward area, but an almost complete lull in bomber operations.

During the final week before the opening of the offensive on 26 May, there was a gradual building up of enemy air effort against our communications and aerodromes in the Western Desert culminating in a series of heavy attacks on forward aerodromes in the Gambut area on the night of 26/27 May. In Cyrenaica the G.A.F. maintained daily reconnaissance of our forward areas and aerodromes and there was some increase in fighter activity though sandstorms hampered operations for 3 days during the week. The Italian Air Force was building up its strength in Cyrenaica: some of its reinforcements may have come from Tripolitania, but it is probable that most of them arrived from Italy.

G.A.F. aircraft operating from Greece and Crete were mainly employed on offensive sea reconnaissances, land reconnaissances and some attacks against land targets in Libya. The outstanding feature of the first week of the period 24 February - 3 March) was the recommencement of attacks on the Suez Canal area after a lapse of nearly 4 months. This revival, however, was shortlived and it seemed possible that by the end of March some bombers had been temporarily switched to Sicily to swell the attack on Malta. By mid-April operations were still further reduced though attacks were made on Alexandria on the night of the 7/8 April by 16 to 18 Ju.88's and He.111's.

From the 21 April, activity of G.A.F. aircraft based in Greece and Crete showed a distinct increase, reinforced by the arrival of further bomber units. Attacks were made against Alexandria, railway centres in the Western Desert and shipping in the Mediterranean, but these attacks represented only part of the force available and full scale operations only developed on 10/11 May in a series of air attacks against British destroyers South of Crete. The air transport link between Crete and Derna was also very active, but our efforts to intercept these flights were finally successful on 12 May, when a number of Ju.52's were shot down over the sea N.N.E. of Derna, and fighter protection was subsequently provided.

#### Scale of Effort Against Malta

Throughout March and all but the last two days in April, intensive operations were carried out against Malta to try to eliminate the island either by reducing its operational efficiency as an air base, or by capturing it outright to ease the supply position in Africa and to facilitate preparations for a further offensive. By the middle of March an average of 75 sorties per 24 hours was made against the island, and on 21 March over 300 sorties were made from Sicily. It is possible that on this day most Ju.88's made at least two sorties and Me.109's three. During the few days ending 21 March, one single Gruppe of 30 Ju.88's is believed to have made over 400 sorties.

This effort was achieved, and a daily average of 150 sorties maintained, during the following week by the following means:-

- (i) The transfer to Sicily of a Ju.88 Gruppe (30 a/c) from Greece and the assembly of a "scratch" He.111 Staffel, the aircraft of which had previously been employed on mixed transport duties in the Mediterranean.
- (ii) The transfer to Sicily of a Gruppe of dive bombers.
- (iii) The use of landing grounds in Africa by four of the Long Range bombers and Twin Engine fighter units operating. Thus crowding of aerodromes in Sicily and risk of damage to aircraft by our own intruder raids was minimised.

D.D.I.3.  
Reports  
(ILJ1/63)

During the last few days of March, partly due to bad weather, the scale of attack was very much reduced. Operations in April, however, were on the heaviest scale that the G.A.F. had yet brought to bear against any single objective for so long a period. The attacking force consisted of 180 I.E. long range bombers, and 30 I.E. dive bombers, out of a total of 385 I.E. aircraft based in Sicily during the month. These 210 aircraft are estimated to have maintained an average daily effort of 130 sorties throughout the month, reaching a peak figure of 325 sorties on 20 April, and over 200 sorties on seven occasions. Both aircraft and crews must frequently have made three sorties each per day; in addition very strong fighter protection was consistently provided so that the average daily total effort over Malta is believed to have been about 200 aircraft per 24 hours. The enemy effort fell away very markedly on 29/30 April and it was noticeable that towards the end of the month Italian bombers, which had already put up spasmodic appearances, were beginning to operate rather more regularly, though still in small numbers. Our defences at Malta claimed to have destroyed 162 enemy aircraft during April, and 76 German and 31 Italian aircraft during May, when the Island's defences were reinforced by Spitfires, which acted as a deterrent against continued attacks on a heavy scale.

During the first 3 weeks in May the German long range bomber effort amounted to not more than 10 - 15 sorties by day, and after this operations seemed to have ceased altogether except on 25 May. The dive bomber effort dropped even more noticeably and ceased completely after 10 May, when 40 sorties were made.

Idem

The Germans could no longer afford the casualties they were incurring, or the continued employment of units urgently needed for operations elsewhere - i.e. Russia and possibly the eastern Mediterranean. Their offensive had undoubtedly facilitated the reinforcement of the German forces in Africa, by the neutralisation of the island as an offensive base for operations against the enemy convoy route, Tripoli and Naples. At the same time it may be an

open question whether the heavy scale of air attack wholly succeeded in fulfilling German intentions which may have aimed at bringing about the surrender of the island<sup>(1)</sup>.

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- (1) In a study prepared by the German Air Historical Branch (8th Abteilung) dated 30 October 1944, it is stated 'That Malta was not occupied was primarily due to the fact that the war was being waged in conjunction with the Italians. The Italian fleet, however, was not ready to join in the fight, and the Italian parachute troops were not up to strength. Through an air offensive alone, as was the case in Crete, the conquest of Malta would have entailed very heavy German losses and the Fuehrer therefore decided against it.' (AHB.6 Translation No. VII/II).

NOTE: Since this narrative was written, more research has shown that the Germans and Italians agreed in the early months of 1942 to prepare a plan for the Invasion of Malta. The operation was scheduled to take place in the early summer, but it was not carried out at this time because it was postponed until after Rommel's summer offensive in North Africa, after which the opportunity did not arise again. The air offensive against Malta was an interim measure designed to neutralise the island in order to safeguard the Axis Supply route to North Africa, but as far as is known, with no declared intention of inducing surrender. The very success of this offensive was largely responsible for the postponement of the invasion operation in favour of Rommel's offensive.

SECTION 5MALTAGeneral Situation

During the first four months of 1942 Malta underwent many changes of fortune. Her value to the Allied Cause was also variously assessed. In January she was described as "a thorn in the Axis side", in February, by the D/A.O.C.-in-C., M.E., as "an expensive liability" and at the beginning of March, by the Prime Minister, as "the dominant factor in the Mediterranean". In March, too, Malta was placed under the Command of Middle East, a change which probably should have been made earlier.

At the beginning of May Lord Gort replaced General Dobbie as Governor and Commander-in-Chief.

The civilian population, despite their magnificent natural air-raid shelters, underwent considerable hardship, chiefly due to the shortage of food and other amenities, and for a long time the threat of invasion hovered over the Island.

Serviceman and civilian alike eagerly awaited the arrival of the next convoy which would bring them so much of what they needed - aircraft, guns, ammunition, fuel, flour - and the mills wherewith to grind it.

But January passed without relief and the convoy promised for February failed to arrive, two of the ships being destroyed and the third disabled by air attack. It was not until the end of March that substantial supplies reached the harbours of the Island when three merchant ships limped into the Grand Harbour "to the cheers of the populace" (1) after a hazardous voyage from Alexandria. However, these three ships, the Breconshire, the Pampas and the Talabot were sunk within a few days of arrival with virtually all their cargo on board, the two former by bombing attacks, and the latter, carrying ammunition, having to be scuttled lest her cargo should explode. Out of the 26,000 tons carried in the convoy no more than 5,000 were safely landed.

The first four months of the year saw also the battle for air supremacy over the Island, the rise of enemy air attacks to their highest peak and the subsequent turn of the tide.

Probable Type of Attack on Malta

C.O.S. Pt.III  
4A

In a signal dated 6th January the Joint Intelligence Committee reported on the likelihood, scale and method of an Axis attack on Malta.

The Island had long been a thorn in the Axis side. It interfered with the Axis effort to remedy the situation in Libya; it was a Naval and Air Base from which successful raids on Italy, Sicily, Libya and Sea Communications were made; it was an important link in our Air reinforcement route to the Middle East. Its neutralisation must therefore be an urgent necessity for the enemy.

(1) Report by H.M.S. Havock.

The Joint Intelligence Committee did not consider there would be any attempt to capture Malta, at any rate until the enemy was convinced that neutralisation by air attack was not likely to be successful. Their opinion was strengthened by the fact that there was no evidence of the presence of German troops in Southern Italy or Sicily, that the operation would be far more formidable than the capture of Crete, and that in spite of the heavy toll of Axis shipping taken throughout 1941 by our Malta - based Naval and Air Forces no previous attempt at capture had been made.

They assumed that the scale of air attack would increase considerably with the arrival of reinforcements in Sicily and Southern Italy and they estimated the present and future strengths of German Air Forces there as:-

1st January	140	all types (1)
15th January	285	all types
1st February	550	all types

On 1st January the number of Italian aircraft available was assessed at 320 (2) but it was felt that these would continue in their present role for reconnaissance, torpedo-bombing and affording fighter cover for German bombers.

Although it would be possible for the enemy to collect from Germany 200 J.U. 52s (and an additional 100 if by that date Libyan operations were quiescent) there was no indication of parachute troops in the Mediterranean area. In the same way, 200 gliders capable of carrying 10 men each could be assembled in the area by 1st February, but here again there was no indication of any such movement.

Finally there was no evidence of the accumulation of any assault landing craft by the Axis anywhere in the Mediterranean, though by the time such a fleet could be assembled the Germans would be able (subject to events in Russia) to mount a force of 1 Parachute Division, 1 Airborne or Infantry Division and at least 2 Infantry Divisions. Italian forces, on the other hand, could be made available immediately.

The Joint Intelligence Committee concluded therefore from the evidence held that Combined operations on Malta were improbable, at least for the time, but that the scale of Air Attack would be progressively intensified and might reach a peak by 1st February.

(1)	1st Jan.	15th Jan.	1st Feb.
Long Range Bombers	30	90	210
Bomber Recce.	Nil	15	50
Dive Bombers	Nil	30	60
Single Engine Fighters	50	80	140
Twin Engine Fighters	60	60	60
Coastal	Nil	10	30
	<u>140</u>	<u>285</u>	<u>550</u>
(2)			
Long Range Bombers	110		
Dive Bombers	5		
Single Engine Fighter	85		
Recce	30		
Coastal	90		

62497(M.O.5)  
6/1/42  
C.O.S. Pt.III  
5A

However, the Chiefs of Staff telegraphed to the Governor, 'It looks to us as if you are next on the list. You have probably taken to heart the lessons learnt in Crete but we are asking General Auchinleck to place at your disposal officers who took part in the Defence of the Island.<sup>(1)</sup> We are examining the possibility of sending you via Egypt the supplies of which you are in urgent need including small arms, ammunition and a few 2 pdr anti-tank guns, also officers to bring your battalions up to strength.'

On 12 January the Chiefs of Staff signalled to the C.-in-C. M.E.F.:-

No. 62721  
C.O.S. Pt.III  
8A

'You should send to Malta in Convoy now loading A.A. Regt. one Squadron Valentine Tanks and two British Battalions in above order of priority.'

German Plans

AHB (6) Trans  
VII/104 Study by  
Kesselring:  
The War in the  
Mediterranean, &  
Admiralty Ref.  
G.H.S/5  
Weichold: Axis  
Naval Policy &  
Ops. in the  
Mediterranean

The Joint Intelligence Committee was correct in assuming in January 1942, that there would be no Axis attempt to invade Malta in the immediate future, but, largely owing to Field Marshal Kesselring, it was in the early months of this year that the Germans consented to consider plans for a combined landing operation on the island. In November 1941, Kesselring had become Commander-in-Chief South, in command of Luftflotte II, with the task of supporting Rommel's army, and, more particularly, to reorganise the supply services which were in a bad state 'owing to British sea and air supremacy in the Mediterranean'. He saw at once that the most effective means of achieving this was to occupy Malta, but his first proposals, based on theoretical considerations, were rejected. He therefore concentrated his forces on the neutralisation of Malta by air attack, with considerable success, but meanwhile practical experience caused him to renew his proposal and in fact to present it as a minimum requirement. He converted Comando Supremo to his views, and, by the end of February, had obtained permission for the consideration of plans for a joint Italo-German operation, for which a combined staff was set up at Comando Supremo.

There was still considerable opposition in the German High Command, partly because the project was compared with the invasion of Crete, where severe losses were sustained, and partly because of a strong dislike of committing more than the minimum number of German troops to the Italian theatre of war which was considered of secondary importance. However, planning had been initiated, and it was even agreed that the invasion of Malta should take precedence over Rommel's offensive in North Africa, which was scheduled to take place in the summer. It will be seen in a later chapter how the British efforts to outpace the German reinforcing operations in the Western Desert, together with Kesselring's successful air offensive against Malta, combined to upset these plans and led eventually to the abandoning of the project.

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(1) This offer was declined as two New Zealand officers ex-Crete were already in Malta. AQA 0078 10/1/42 AOC/65 (46) 3A.

Naval Personnel for R.A.F. Squadrons

C.C. C.O.S.  
Pt. III  
12A

In order to meet the necessity for a General Reconnaissance and Striking force Squadron for controlling sea communications the Admiralty agreed (telegram No. 59 25 January 1942) to lend twenty trained Naval observers to the Royal Air Force.

The A.O.C.-in-C., would thus be enabled to expand the half general reconnaissance Squadron at present in Malta to a full squadron and to convert one existing light bomber squadron to general reconnaissance using trained Naval observers and Baltimore aircraft as soon as available.

By this means three General reconnaissance Squadrons would be available until such time as the squadron formed in the United Kingdom should arrive.

Meanwhile the Middle East Defence Committee and the Governor of Malta continued to press the Chiefs of Staff for reinforcements and supplies.

Alleged Staleness of Fighter Pilots

A.O.C./22  
311A

As the result of a signal to C.A.S. from A.O.C. Malta, stating that his fighter pilots were growing stale through inadequate reliefs, the C.A.S. sent a telegram (A.X.45 6 February) to the A.O.C.-in-C. asking that A.H.Q. Middle East should make a supreme effort 'to keep Malta fresh, anticipate their wants and press us (Air Ministry) to provide them.'

A.O.C./22  
312A

To which the A.O.C.-in-C., replied (telegram A.660 6 February) that he was enquiring from the A.O.C. Malta the circumstances which led him to send his signal. That the D/A.O.C.-in-C. had made a special point of enquiring into the state of Malta fighter pilots on his way through a month ago and the A.O.C. Malta had then considered the position satisfactory. The A.O.C.-in-C. went on to say that he thought the time had come for the R.A.F. in Malta to be placed under H.Q. M.E. for all administration. Although he had already insisted that the A.O.C. Malta should send him certain administrative returns and reports it was difficult to keep fully in the picture unless all administration was done from H.Q. M.E.

A.O.C./22  
328A

With this the C.A.S. agreed in a telegram AX.132 dated 19 February, and said that an official decision would be communicated later.<sup>(1)</sup>

Urgency of Need for Air Reinforcements

A.Q.A. 0762  
18/2  
C.O.S. Pt.III  
35A

On 18th February the Governor signalled that the non-arrival of a recent convoy had accentuated an already unsatisfactory supply situation. Stocks generally would last till the end of June, but Kerosene, Coal, M.T. petrol, submarine Diesel and Furnace oil would not last so long. On 19 February the Defence Committee had before them a memorandum by the Commander-in-Chief Mediterranean drawing attention to the seriousness of the situation in Malta and

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(1) The official decision was communicated to the A.O.C. Malta in a signal inideast O/70408 which placed R.A.F. Malta under full control of H.Q. R.A.F. M.E. w.e.f. 001 hours, 11 March, 1942.

SECRET

112a

Ibid  
68A

a memorandum (1) by the Deputy A.O.C.-in-Chief giving a short history of the problem and an outline of the arrangements which were in hand to improve the air situation.

The Committee were impressed with the gravity of the immediate situation and in particular with the same for increasing the Fighter strength in the island at the earliest possible moment.

Air Marshal Drummond said that it was proposed eventually to build up the Fighter Force to strength of six fighter squadrons, but for the present and only as a palliative, it was hoped to fly in from carriers some fifteen or sixteen Spitfires. It was impracticable at the moment to reinforce Malta with Hurricanes from elsewhere in the Mediterranean Command, owing to recent diversions to the Far East. In any case, the basing of further fighter squadrons in Malta would mean the reduction of the Air Striking Force in the Island.

The C.-in-C., Mediterranean, suggested that the Chiefs of Staff might be prepared to repeat the Carrier operation if they were asked to do so. As a result of this meeting the Defence Committee telegraphed to the Chiefs of Staff on the same day:-

CS/745 19/2/42  
C.O.S. Pt.III  
30A

- (i) 'We are seriously concerned at Air situation in Malta. We realise you have this very much in mind but should be grateful for any measures you can possibly take to augment and accelerate arrival of reinforcements of fighter aircraft.'
- (ii) 'Would it be possible to repeat operations "QUARTER" and "SPOTTER" if first attempt is successful.' The C.I.G.S. also sent a signal to the C.-in-C.:-

7192(M.O.5)  
20/2  
C.O.S. Ot. III  
36A

'Will you ensure that the Defence Committee when considering effect on the Middle East situation of the newly ordered moves of formations takes into account the effect on Malta and on the possibilities of sending Convoys there with supplies and reinforcements.'

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(1) See Appendix XIV.

Problem of Interrupting Axis Supplies to N. AfricaA.570  
26/2A.O.C./22  
332A

Meanwhile, enemy air attacks in Malta had done considerable damage particularly to aerodromes and aircraft on the ground, and on 26th February the D/A.O.C.-in-C. was prompted to telegraph to the C.A.S. that we could no longer count on Malta as a practicable base for the operation of an air striking force of any size. He had therefore reduced Malta's Wellington strength to 14 and was withdrawing all the Blenheims. He remarked that the C-in-C. Mediterranean was also considering whether he could continue to use Malta as a base for striking forces, while the army was faced with the fact that we could not hope to continue to interrupt supplies to Tripolitania until we were again able to operate from Western Cyrenaica. Recent diversions, and fighter commitments in the Western Desert precluded the possibility of sending further fighter squadrons to Malta until the fighter aircraft position improved materially.

Ibid

The D/A.O.C.-in-C. hoped that this would be in about one month's time. He would continue to operate the G.R. Squadron, the three or four A.S.V. Wellingtons, and our 12 Wellingtons for mining and bombing Tripoli Harbour and torpedo work as long as there were any aircraft left.

Ibid  
26/2

As things stood the only other way we could contribute towards interrupting supplies into Tripoli would be by long-range bomber and for this we needed Liberators urgently. The D/A.O.C.-in-C. requested that everything should be done to accelerate the supply of these. He would also like U.S.A. Liberator squadrons as well and would be able to service two squadrons pending the arrival of U.S.A. Maintenance personnel.

To this the C.A.S. replied (W.X.886 dated 27th February) that he fully agreed as to the necessity of limiting our striking forces in Malta and suggested that Malta's requirements should be met by flying in Hurricanes from Tobruk. Experiments were being carried out with fitting extra tanks to Wellington I.Cs which would give them a total of 1,215 Gallons of fuel, thus enabling them to fly direct to Mersa Matruh.

He regretted that no Liberators were likely to be ready for despatch before April and the despatch of the 26 earmarked for the Middle East was unlikely to be completed before June.

With regard to the American Squadrons asked for by the D/A.O.C.-in-C. the C.A.S. said that efforts were being made to reach agreement with Washington as to broad allocations of air escort between ourselves and the Americans in all theatres, but he could hold out little hope of any American Liberator squadrons being sent to the Middle East in the near future as India and Burma would probably have the first claim.

Importance of Relieving MaltaO/64347 21/2.  
C.O.S. Pt.III  
37A

On 21st February the Commanders-in-Chief telegraphed details of the personnel and equipment which reached Malta in the three ships which survived out of the seven forming the January and February convoys. They concluded:- "It appears useless to try to pass in a convoy until the air situation in Malta has been restored and the military situation in Cyrenaica improved. Recommend policy of reinforcement of Malta to be reconsidered."

No. 72810  
(M.P.5)  
C.Ops. Pt.III  
39A

The Chiefs of Staff, referring to the Governor of Malta's signal of 18th February, replied:- "Our ability to sustain Malta during coming months largely depends on regaining use of aerodromes in North West Cyrenaica. Problem is being examined here and full appreciation will follow shortly."

C.O.S. Pt.III  
44A

The views of the Chiefs of Staff were set out in a telegram to Middle East and Malta (73286 dated 27th February, 1942). They considered that the most drastic steps were justifiable to sustain Malta. Apart from its value as an air staging point and as a base for impeding the enemy's supply route to North Africa it was at worst of great importance to the war effort as a whole for containing enemy air forces during critical months. They expressed their agreement with the Defence Committee's Signal C.S. 747 dated 20th February, but were convinced that we must aim to be so placed in Cyrenaica by the April dark period as to be able to pass a substantial convoy to Malta. In the meantime every effort must be made to keep stocks at least at their present level.

They recommended a further attempt to pass a convoy in the March dark period; the assembling of a substantial convoy for despatch at the first favourable opportunity and running a cruiser with supplies on a regular fast service to Malta.

Certain unorthodox methods were meanwhile being considered by the Admiralty.

C.O.S. Pt.III  
45A

The C.-in-C. Med. felt that the Commanders-in-Chief should send a short telegram in reply to the Chiefs of Staff agreeing with them that to sustain Malta much depended on our ability to regain the use of the Western Cyrenaican aerodromes, but at the same time pointing out that it was essential that Malta should be able to protect and receive incoming convoys. He felt that Malta should be able to operate reconnaissance and striking forces and to provide fighter cover over the last fifty miles into the island.

It was agreed, however, that the sense of the C.-in-C. Mediterranean's suggestion should be incorporated in the C.-in-C. M.E.F.'s reply to the Chiefs of Staff's signal which was then being worked out by the Joint Planning Staff.

CJP/68635  
C.O.S. Pt.III  
54A

In the reply, sent to the Chiefs of Staff on 4th March, the Commander-in-Chief considered that a limited offensive to recapture Derna would give slight assistance to convoy protection, but would not meet the Chiefs of Staff's requirement "to be so placed in Cyrenaica that we can pass substantial convoy to Malta". The problem of the possible timing of a major offensive to recapture Benghazi was being urgently re-examined.

They pointed out, however, that the re-occupation of Cyrenaica was not a complete answer to the problem of supply to Malta. Fighter protection during the reception and unloading of convoys was needed and other aircraft must be able to operate against enemy surface forces.

On the other hand, the scale of air attack which the enemy could produce from Sicily might make it extremely difficult, if not impossible, for Malta to play its part, however much the defences of the island were strengthened.

A convoy was being prepared to sail during the March dark period and it was probable that this and the convoy during the April dark period would have to sail under the present conditions of risk. The lack of fast merchant ships was a serious handicap, since the difference in the prospects of success with a 17 knot as opposed to a 14 knot ship was out of all proportion to their difference in speed.

The possibility of using a cruiser on a regular run was being examined but there were many serious drawbacks, the chief being that the amount a cruiser could carry was so small as to "make the game hardly worth the candle." It was estimated that one trip by the Breconshire was the equivalent of at least ten by H.M.S. Aurora.

C.S. 773  
27/2  
C.O.S. Pt.III  
49A

Meanwhile, on 27th February, in a somewhat gloomy six-page review of the situation to the Prime Minister, the Commander-in-Chief M.E.F. had dismissed Malta in three and a half lines:-

"Critical nature Malta maintenance situation thoroughly understood here. I fully realise need for recovering landing grounds in Cyrenaica as soon as possible irrespective of desirability resumption offensive on wider grounds."

73968 M.O.I.  
3/3/42  
C.O.S. Pt.III  
50A

The Prime Minister expressed himself as "greatly disturbed" by the C.-in-C's view of the situation. The dominant factor, he said, in the Mediterranean and Middle East situation at the present was Malta. If we did not succeed in running in a substantial convoy by May the situation would be critical. He pointed out that the loss of Malta or even its effective neutralisation would mean that the Axis would be able to reinforce Libya almost without hindrance, while supplies of aircraft to the Middle East would also be seriously affected. He considered that an attempt to drive the Germans out of Cyrenaica in the next few weeks was imperative for the survival of Malta apart from other considerations. He requested the C.-in-C. to reconsider the matter urgently and telegraph his views.

GJP/69101 5/3  
C.O.S. Pt.III  
60A

The Commanders-in-Chief replied on the 5th March that they considered that the point at issue was wider than that developed in the Prime Minister's telegram. It was not confined to the question of whether or not we could retain Malta but whether or not in the effort to save the island by a premature offensive we might jeopardise our whole position in the Middle East.

The Commanders-in-Chief proposed, therefore, that for the present and until we could regain Western Cyrenaica, we should continue running convoys in the hope of getting a proportion of ships through, and employ all possible shifts and devices to pass in supplies.

HE/167  
dated 21/3/42  
A.O.C./65  
27A

Meanwhile steps were being taken by the Governor to conscript civilian labour for repair work on airfields. (1)

#### Reply to Prime Minister's Questionnaire

The first point raised in the Prime Minister's questionnaire which was brought to the Middle East towards the end of March by the V.C.I.S. concerned Malta.

(1) See Appendix XV

D.C. Pt.II  
72A

He asked what constructive measures were proposed for maintaining Malta if an early offensive in the Western Desert were not to take place.

Ibid  
73 A  
CS/849  
22/3/42

The V.C.I.G.S. after discussion with the Commanders-in-Chief replied that, apart from possible offensive operations, a convoy was sailing during the present dark period.<sup>(1)</sup> This would carry two months' maintenance stocks for both the civil and military populations (with the exception of oil fuel). A further convoy would be sailed during the dark period in April.<sup>(2)</sup>

He was of the opinion that sending stores in convoys was the only possible method of passing in large quantities. The amount a cruiser could carry, even if fuel and ammunition in Malta were available, was negligible. Lack of fast ships was a great handicap but all risks were being accepted in attempts to pass the convoys through.

#### Malta's Urgent Requirements

78984 28/3  
C.O.S. Pt.III  
88A

On 28th March the Chiefs of Staff requested the Governor of Malta to send details of the present position in the light of what they had been able to salvage from the last convoy.

C.O.S. Pt.III  
93A  
HE/340 31/3

This the Governor did in a signal dated 31st March, following it up with a further signal on 1st April:-

C.O.S. Pt.III  
94A 1/4/42

"From our recent experience two things emerge:-

Firstly the need of a really strong fighter force here without which we can have little hope of protecting ships in our Harbours. This is a paramount necessity and needs to be met without delay. We must control the skies over Malta.

Secondly, although our monthly requirements are so great as to need heavy surface ships to carry them yet these must be supplemented by other possible means. Cannot large numbers of transport aircraft be detailed for the purpose. The cumulative result would be considerable."

No. File 564  
4/4/42  
C.O.S. Pt.III  
101A

Three days later (4th April) the Admiralty was signalling the C.-in-C. Mediterranean:- "It will not be possible to run a further convoy into Malta either from East or West until Malta has been heavily reinforced by Spitfires. Steps are now being prepared to reinforce Malta with Spitfires about third week in April."

#### Further Request for Heavy Bombers

C.O.S. Pt.III  
115A  
C.C./21 15/4/42

On 15th April in a telegram to the Chiefs of Staff the Commander-in-Chief pressed urgently for the early despatch of a strong heavy bomber force to the Middle East:-

"Malta is only able to survive enemy air attacks with difficulty and is ineffective as an offensive base. This bomber force could attack the Sicilian aerodromes and thus supplement the island defences which by themselves are unlikely to be able to save Malta. In addition heavy

- (1) Operation M.G.I. (see page 109)
- (2) In the event, no convoy sailed in April

bomber attacks on the enemy's North African and Southern Italian ports may enable us to keep his North African reinforcements within reasonable limits. These are the two primary tasks as far as the Mediterranean situation is concerned."

No. OZ.35  
17/4/42  
C.O.S. Pt.III  
128A

The Chiefs of Staff replied that the need in the Middle East for a heavy bomber striking force was only too well realised by them and that every means of accelerating its formation had been carefully considered. They had hoped to send one Liberator Squadron in May and another in July but these would now have to be diverted to India in view of the critical situation there. The formation of the first Liberator Squadron for the Middle East would have to be delayed until late in the year.

They hoped however that certain mechanical faults in Halifaxes would soon be overcome and that they would be fit for operation outside the United Kingdom in two or three months.

#### Difficulties against Running an Early Convoy

OZ.4118/4/42  
C.O.S. Pt.III  
138A  
C.O.S. UP 1828  
20/4/42

The decision not to attempt to run a convoy to Malta from Gibraltar in May owing to the risk of damage to capital ships prompted the Governor to restate the grave situation in the island.

C.O.S. Pt. III  
141A

He urged that if one accepted the Navy's estimate of 50% of ships in convoy it was vitally necessary to run a convoy from the West as well as the one expected from the East.

He pointed out, moreover, that not only was it necessary for the ships to reach the vicinity of Malta, they had to enter the harbour and be unloaded and their cargoes had then to be safely dispersed.

He continued:-

"We must secure and retain local air superiority. Our needs are more Spitfires in addition to those already arranged for. Whatever plans are made will fail unless we are adequately reinforced with modern Fighters. The primary need is Spitfires and more Spitfires. They must not arrive in dribblets but in really big quantities without long intervals between consignments. At all costs, we must avoid the danger of our Fighter Force being worn down before the convoys arrive so that it will not be strong enough to protect it on arrival."

The Chiefs of Staff's reply to the Governor (telegram C.O.S. (M.E.) 260 dated 23rd April) contained but cold comfort:-

C.O.S. Pt.IV  
153A

"Having regard to general world situation and our immediate Naval commitments in other theatres, the passage of a convoy to Malta in May whether from the West or East presents insurmountable difficulties."

"All that we can do in the immediate future is:-

- (a) To fly in a further big batch of Spitfires from WASP during the early part of May.

- (b) To send in A.A. ammunition by fast minesweeper and possibly submarine from the West.

You must hold out with the above slight relief until mid-June."

C.O.S. Pt. IV  
157A

This decision was elaborated in a further telegram (C.O.S.M.E.) 261 dated 26th April, addressed to the Commander-in-Chief, Middle East.

#### Further Requests for Assistance

H.E. 901  
30/4  
C.O.S. Pt. IV  
172

The heavy air attacks on Malta continued, and aerial photographs revealed work going on near Gerbini and Catania aerodromes in Sicily which were interpreted as possible glider strips. (1)

H.E. 900  
C.O.S. Pt. IV  
173

The Governor of Malta in a telegram to the Chiefs of Staff dated 30th April pressed for sustained and heavy bomber attacks on the aerodromes in Sicily:-

"The continued and unabated air attacks against Malta make it clear that something more is needed than the arrival of Spitfires. In order that they may operate successfully when here and Welshman be protected on arrival, the ground must be prepared for them by reducing the enemy's offensive powers."

H.E. 900  
30/4/42  
C.O.S. Pt. IV  
173

He considered that the urgency of the matter called for the most drastic action and urged, that since long-range bombers suitable for the task were not available in the Middle East, the commitment should be undertaken by Air Forces from England.

C.C./39  
6/5/42  
C.O.S. Pt. IV  
194

This was not, however, acceptable to the Chiefs of Staff and the Middle East Defence Committee telegraphed that they appreciated the difficulties attendant on such an operation but asked that the possibilities of some American Heavy Bombers being sent direct might be studied.

HE/919  
1/5/42

On 1st May, the Governor again telegraphed to the Chiefs of Staff that there were indications that the enemy were preparing for some really big effort in the near future. There had been a short comparative lull which suggested that the Germans were resting their crews and carrying out an intensive reconditioning of their aircraft possibly with a view to an airborne invasion.

C.O.S. Pt. IV 175

This strengthened the Governor's conviction that heavy bombing of the Sicilian aerodromes was extremely urgent.

C.O.S. (ME) 262  
2/5/42  
C.O.S. Pt. IV 180

The Chiefs of Staff replied that there was as yet no evidence pointing to either a sea or airborne invasion of the island. On the contrary they had reliable information that one enemy Bomber Group and one Fighter Group were being withdrawn from Sicily.

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- (1) Air Ministry did not agree with this view and signalled the Governor of Malta on 1st May. "Thought unlikely that strips near Gerbini and Catania would be gliders. We have no evidence of likelihood of airborne invasion of Malta in near future."

C.O.S. Pt. IV  
182

On the following day in a further signal (C.O.S.(M.E.) 263) the Chiefs of Staff told the Governor in the sense of their signal (1) to the Commanders-in-Chief that they regretted that the use of four-engined bombers to attack Sicilian aerodromes was impracticable.

Unnumbered  
1/5/42  
C.O.S. Pt.IV  
183

The Vice Admiral, Malta, agreed with the Governor's views in an urgently worded signal to the Commander-in-Chief, Mediterranean.

He called for "a greater effort and greater foresight in the future."

"The lesson of the past is that our present parlous condition here both at sea and in the air has largely arisen from Air Reinforcements being sent too late, at too long intervals, and in too few numbers.

"Invasion possibly at not very distant date threatens us, our resources go on being destroyed day by day. If it is still accepted that Malta is the key to Central Mediterranean cannot something really big be done quickly not just to check temporarily its further deterioration as a Base but to restore and then keep its Operational power. The help must come from Home and Gov. Malta's HE/900 of 30th indicated how immediate aid might initially be given."

No.1252c"2  
C.O.S. Pt.IV  
185

To which the Commander-in-Chief Mediterranean replied that he concurred with V.A.M's views and that he had never ceased to stress the importance of Malta and the obvious need of reinforcements from home.

HE/1200 15/5/42  
C.O.S. Pt.IV 208

Once more the Governor of Malta (now Lord Gort) appealed for more Spitfires, particularly for a large number of them to arrive at least 24 hours before the arrival of the next convoy, which might need fighter cover for as long as 14 days during the process of unloading. He considered also that success was bound up with striking hard at Sicilian aerodromes and at enemy Naval Forces likely to attack the convoy on passage.

The Chiefs of Staff replied that they hoped to send 60 Spitfires and a number of Hurricanes before 9th June.

#### Convoy Planning Continues

CC/37  
6/5/42  
C.O.S. Pt.IV  
encl. 191

Planning for a further convoy was continued during the early part of May and the Middle East Defence Committee strongly urged that in order to divide the enemy's strength simultaneous attempts should be made to run convoys from each end of the Mediterranean.

Their views on the running of one or more convoys were expressed in a detailed telegram to the Chiefs of Staff.

In the event, no convoys were able to be run in April or May, and except for a few special cargoes which arrived in Malta in submarines and the minelayer Welshman, the fortress had to wait until the middle of June and Operation "Harpoon" for the next attempt to supply it on a large scale.

(1) No.235 dated 17th April, 1942.



SECTION 6THE NORTHERN FRONTThe Problem of Aid to Turkey

The threat to our Northern Front, although in the event it did not materialize, was a very real one, and it reached its most critical point during the period under review when, in the latter half of May, the enemy launched almost simultaneous offensives in Cyrenaica and Russia.

Turkey's attitude in the event of a German invasion being unknown, the problem of how best to give her aid had been periodically under consideration, and at the end of November, 1941 the Middle East Defence Committee came to the conclusion that the poverty and vulnerability of Turkish communications militated against the possibility of assisting her with land forces of any considerable size.

With this in mind, and in view of the fact that considerable progress had been made in the construction of aerodromes, the Middle East Defence Committee recommended in a telegram to the Prime Minister that in dealing with the Turks, we should stress the effort we proposed to exert in the air rather than make promises, perhaps impossible of fulfilment, of supplying substantial assistance by land.

Early Planning

- At the end of December, G.H.Q., M.E.F. Operation Instruction No. 107 laid down the policy governing our action in the event of a German attack through Turkey.

In the event of Turkey resisting such an attack we were to send an air striking force (twenty four squadrons and ancillary Units) (1) protected by a land force, into Anatolia, simultaneously reconnoitring, and if possible starting work on, defensive positions on the general line Arghana - Maden - Malatya - Marash - The Taurus.

Should, however, Turkey submit, the general plan was to meet the enemy in the vicinity of the Syro - Turkish frontier on ground of our own choosing and if compelled by markedly superior forces to do so, to fight a defensive - offensive battle on positions then being prepared in Southern Syria, Palestine and Transjordan.

Furthermore, the possibility of a Russian collapse and an enemy attack through the Caucasus into Northern Persia had to be kept constantly in mind; defensive plans had also to be prepared against a possible simultaneous two-prong attack through Anatolia and the Caucasus.

Later in the period plans were made to deal with the situation in the less likely contingency of Turkey throwing in her lot with the Axis.

At the end of December, 1941, the Middle East Defence Committee in a telegram to the Minister of Defence and Chiefs of Staff had estimated their minimum security requirements in the Middle East (including Iraq and Iran) as at the 1st April, 1942.

Auchinleck  
Despatch  
Appendix 7  
Dated  
30th Nov. 41.

A.O.C/73

DC. Pt.I  
encl. 34A

(1) A further two squadrons were later added at the request of the Turks. (53319 pt. II 5A).

It was estimated that the Air Forces, taking into account their permanent commitments in Egypt, Libya, Malta, Aden, Palestine and Syria would be 20 Squadrons short for the Northern Front. (1)

DC. Pt. II  
encl. 63A.

However, possible unforeseen diversions could not be estimated, and the situation was again reviewed in this light in a telegram dated 30th January.

This telegram pointed out that the original plan had been to fight forward on the general line Hamadan - Mosul - Syro Turkish frontier, advancing into Anatolia if circumstances permitted. Previous diversions to the Far East, however, made it quite clear that forces to carry out that plan would not be available if the Germans attacked at the beginning of April, and furthermore, that unless current forecasts of land and air reinforcements were substantially improved we should not be in a position to do so even if the attack were delayed until mid May.

Tbid

In those circumstances, if the attack should materialize, our only course would be to fall back on our defences in the rear in Persia, Central Iraq and South Syria, and to fight a defensive battle.

The implication of this would be:-

- (a) That all air bases and landing grounds north of that line would have to be abandoned, thus exposing our bases in Egypt and the Persian Gulf to a serious scale of attack.
- (b) That unless necessary reinforcements were made immediately available from home we might have to abandon all idea of supporting the Turks owing to a deficiency in Air Forces and A.A. defences. The essential minimum for the Air Forces was the 26 Squadrons of various types which were laid down in the current plan.

It was further felt that even if the threat to the N. Front diminished or was greatly deferred some of these reinforcements would still be needed if the invasion of Tunisia was to be undertaken in conjunction with the Americans.

#### The Commander-in-Chief's Meeting in Haifa

The main factors affecting the Defence of the Northern Front were recapitulated by the Commander-in-Chief to the general officer commanding the 9th and 10th Armies (General Sir H.M. Wilson and Lieutenant General E.P. Quinan) at a meeting in Haifa on 22nd and 23rd January, 1942:

- (a) Our object was to protect our bases in the Suez Canal Area and the Persian Gulf and the oil installations in Southern Persia.
- (b) That the main enemy threat to these areas would be by air from aerodromes in Northern Syria and Iraq.
- (c) That our action would depend upon the attitude of Turkey, and therefore plans must be prepared without delay to meet the various situations which might arise.

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(1) Details of the estimated deficiency will be found at Appendix XVI.

The C-in-C concluded that in the event of Turkish submission, we should be compelled in the Spring and Summer, owing to lack of resources, to fight a defensive battle in the defended areas in Southern Syria, Iraq and South Western Persia. There could be no expectation of an offensive battle until the Autumn although the possibility of opposing the enemy on the Northern frontiers of Syria and Iraq at a later date must not be lost sight of.

The Commander-in-Chief instructed Tenth Army to carry out a reconnaissance of the Kasvin Area with a view to determining whether, with increased resources, it would be possible to hold the aerodrome area South East of Kasvin for a period of two or three months.

The G.O.C. Ninth Army stated that aerodromes and satellites were being prepared in the Sabin Biyar area to enable fighter aircraft to support forces operating from Palmyra.

#### Effect of Proposed Diversions

D.C. Pt.II

On 19th February the Commander-in-Chief informed the Defence Committee that he had received a warning from the Chief of the Imperial General Staff that three and possibly four of the divisions in the Middle East would shortly be required for service elsewhere.

He explained that we now had to face the fact that the defence of the Middle East for the next six months would have to be based on a total of eight infantry divisions. This reduction altered the whole strategic conception of defence in the command.

After an adjournment the Committee approved the draft of a telegram to be sent to the Prime Minister which stated what, in their opinion were the possibilities of the defence of the Middle East.

They considered, (and the Chiefs of Staff had agreed) that to give a reasonable chance of fighting the enemy on the general line Kazvin - Hamadan - Mardin - Aleppo - Cyprus - Libyan Frontier, apart from armoured divisions, seventeen infantry divisions would be required. For more passive defence in rearward areas with reduced forces holding the general line Perso-Iranian Frontier - Lesser Zab River - Ana - Abu Kemal - Damascus - Baalbeck - Tripoli - Cyprus - Libyan Frontier - twelve infantry divisions, apart from armoured formations, would be necessary. These figures were the minimum. In addition 5 brigade groups were required for internal security and other purposes.

When the three or four infantry divisions referred to in the C.I.G.Ss telegrams were withdrawn it would leave the Middle East (apart from armoured formations) with eight divisions and five Brigade Groups.

Ibid

They stressed the fact that Iraq, Syria, Palestine, Egypt and the Sudan could in no way be regarded as stable and they pointed out that the effect on Turkey of these withdrawals could not fail to be grave.

They were forced to conclude, therefore, that although they hoped to be able to hold their positions in North Africa and possibly even to gain ground, they would be unable to do more than cause some delay to any enemy advance through Iraq and Syria on the Persian Gulf and the Suez Canal.

Since the army would be compelled to withdraw to rearward positions the enemy would be enabled to establish aerodromes near our bases and sea communications. This would greatly increase the scale of attack and would entail a corresponding and cumulative increase in our own air commitment. If, therefore, on account of diversion to the Far East our air forces had not been built up to the necessary minimum strength by the time the emergency arose, our situation in the Middle East would be further jeopardised.

Unless air bases in Western Cyrenaica could be regained we could hardly hope to interfere effectively with the passage of enemy reinforcements to Libya, particularly since constant air attack had so much weakened the power of Malta. Indeed, the fate of Malta might depend on our regaining such bases.

Ibid

Finally the Defence Committee urged that every measure should be taken to assemble the necessary shipping for the departure to the Middle East of at least four infantry divisions without interfering with the arrangements already made for the despatch of air forces.

DC. Pt.II

At the following meeting on 21st February the G.O.C. circulated a draft of a telegram which suggested that if the shortage of shipping ruled out the despatch to the M.E. of large land forces, a possible solution might be to send large air forces, which, in the particular conditions of terrain obtaining in the Northern Front, might succeed in bringing an enemy advance to a complete standstill or at least reduce it to negligible dimensions. He explained that this was a tentative suggestion which had been put forward by the General Staff.

The D.A.O.C.-in-C. agreed to consider this suggestion and it was decided to discuss the matter further at their next meeting.

DC. Pt.II

The A.O.C.-in-C. at the next meeting on 25th February pointed out that the proposed scheme would not really effect any material economy in shipping. The number of ships required to bring out an Air Force of the strength contemplated would be very little different from the number required for four infantry divisions. Quite apart from this however, he thought it was a mistake to suppose that air forces could hold ground, even in the ideal conditions of the Northern Front.

On the other hand, there was much to be said for a general strengthening of M.E. Air Forces as a measure of compensation for the recent drastic reduction in land forces, and he felt that the question was well worth further examination on these lines.

#### Plans "SPRAWL" and "OCTAVIUS"

H.Q. R.A.F.  
M.E. O.R.B.  
(Appendices)

During the period under review two plans were made for the concentration of a British Force in Turkey. Both plans had as their intention the provision of an Air Striking Force with protective land forces to aid the Turks in Anatolia.

Plan "Sprawl" of February, 1942, allowed for 26 Squadrons with an Initial Establishment of 300 aircraft, with 96 aircraft as Immediate Reserve as follows:-

<u>No. and Type of Squadron</u>	<u>Initial Establishment</u>	<u>Immediate Reserve</u>
12 Short Range Fighter Squadrons	192 Aircraft	60 Aircraft
1 Long Range Fighter Squadron	16 "	5 "
6 Light Bomber Squadrons	96 "	30 "
2 Medium Bomber Squadrons	32 "	10 "
3 Army Co-operation Squadrons	36 "	12 "
1 General Reconnaissance (Landplane) Squadron	16 "	5 "
1 Torpedo-Bomber Squadron	12 "	4 "
Total 26 Squadrons	<u>300 Aircraft</u>	<u>96 Aircraft</u>

The protective land forces were laid down as:-

H.Q. one Infantry Division.

Four Infantry Brigade Groups.

Seventeen H.A.A. Batteries (136 guns)

Nineteen L.A.A. Batteries (228 guns)

Force troops.

Ibid

The role of the Air Striking Force was to gain and maintain air superiority; to assist in the Defence of Thrace and Western Anatolia, to support Turkish forces resisting an enemy advance in Eastern Anatolia or repelling enemy seaborne attacks; to assist in the Defence of Ankara; to attack strategical objectives in S.E. Europe and to protect the ports of Iskanderun and Mersin.

The role of the Army component of the force was to provide A.A. protection for our aerodromes, to provide protection against airborne attack on our aerodromes and installations and, if necessary to cover the withdrawal of our air forces by holding the defiles leading to the Anatolian plateau from the west.

Owing to diversions and the thinness of our holding forces in the Western Desert this plan had to be modified considerably and in May was superseded by plan "Octavius".

This plan provided an Air Striking Force of only 10 Squadrons:-

- 4 Single Engine Fighter Squadrons
- 1 Twin Engine Fighter Squadron
- 1 Light Bomber Squadron
- 2 Medium Bomber Squadrons
- 2 Army Co-operation Squadrons

with a total of 180 aircraft Initial Establishment and 43 aircraft Immediate Reserve.

The army component was reduced by one Infantry Brigade Group, 14 H.A.A. Batteries, and 10 L.A.A. Batteries.

With such reduced resources the role of the Air Striking Force had also to be modified to assisting the Turkish forces in the defence of Thrace and Western Anatolia; providing support for Turkish forces resisting an enemy advance in Eastern Anatolia or repelling an enemy seaborne attack, and attacking strategical objectives in S.E. Europe.

Both plans laid down that the combined forces were to be commanded by an Air Marshal.

In the event, due chiefly to the stiffness of the Russian resistance, our forces were not called upon to defend the Northern Front. However, the threat became increasingly serious throughout the period and its influence affected all immediate and future planning for the Middle East Theatre of Operations.

## PART III

THE AXIS OFFENSIVE AT GAZALA AND THE BRITISH  
RETREAT TO ALAMEIN - 26 MAY TO 30 JUNE 1942PLANNING THE SPRING OFFENSIVEConflict of Strategic and Tactical Considerations

Since the establishment of British and Axis defensive positions in the Gazala area in February, both armies were occupied in rebuilding their strength for a renewal of offensive activity. The battle of supplies was the main preoccupation of the period, and the operations carried out by the Air Force to hinder the reinforcement of the enemy have already been described.

Wider strategic considerations, however, complicated the race for tactical superiority on the desert battle field. The key to the whole situation in the Mediterranean was Malta. The island fortress, lying on the flank of the Axis sea supply lines to North Africa, constituted a permanent threat to the security of Rommel's Panzer Army in the Desert. Yet, if the air and naval forces based on Malta were to maintain their operations against the Axis lines of communication, they too had to be supplied, and Malta's isolated position made this a difficult task. By April 1942, the situation on the island was in fact very serious. After a four-months' onslaught from the air, and after the loss either at sea or in harbour of the bulk of the supplies carried by the March convoy, not only was the island neutralised as an offensive base but its very survival was imperilled; unless rearmed and revictualled it could not be expected to hold out much longer. But with enemy air forces based on Sicily and Sardinia, it was not possible to pass a convoy from the west, and with the transfer, in February, of the air bases in Cyrenaica from British to Axis hands, it was no more possible to pass one from the east. It seemed, in fact, that the fate of Malta depended on the recapture of Cyrenaica.

It was this situation which led the Prime Minister and the Chiefs of Staff in London to press for an early offensive in the Desert; there were, on the other hand, sound tactical reasons for delay. As the Middle East Defence Committee pointed out, an offensive which failed might cause irretrievable damage, and while from a naval and air point of view an early advance might be possible, the reinforcement of the Army with armour was taking place very slowly, so much so that it was even possible that Rommel might take the initiative before the British were ready. This argument was accepted by the Chiefs of Staff, and some other solution to the problem of relieving Malta had to be found. It was eventually decided to attempt to supply the island by sailing two convoys simultaneously through the Mediterranean, one from the east and one from the west. By this means it was hoped to diminish the risk to both convoys by dividing the attention of the enemy between them.

The Allied Plan of Campaign

The permanent and overriding object of the Allied forces in North Africa was to secure the bases in Egypt and Palestine from attack. It was accepted that the best way to achieve this object was to destroy the enemy in situ and

not to permit him to withdraw into Tripolitania where his position would become stronger as he fell back further towards his major supply bases. However both armies had prepared strong positions; the enemy's depended chiefly on consolidated defensive areas around Derna, Tmimi, Temrad and Mechili, while the Allies had constructed wide ramifications of minefields and defended posts on a line Gazala - Hacheim. In these circumstances the Commander-in-Chief decided that the most likely method for inflicting a final defeat on the enemy was to induce him to attack the Allies on their own ground rather than to assault his prepared positions. With this in view it was decided to advance on Benghazi, the most important and vulnerable link in the Axis line of communications, but to keep well to the south of the prepared positions so as to force the enemy to fight at a distance from his forward reserves. The advance was to be carried out by stages, strong-points being established at each stage to form pivots of manoeuvre for the armour. South of this line of strong points and out of reach of the opposing armour, forward maintenance centres were to be formed. This process was to continue until the enemy attacked, or the Allies were in a position to cut his communications.

Meanwhile the possibility of the enemy anticipating this offensive with his own was never forgotten, and defensive positions were developed and strengthened. In the event of an enemy attack, the Army plan was to hold the Gazala-Hacheim line and if possible to defeat Rommel there. If the Axis army overcame the resistance on this forward position and the Allies were forced to withdraw as a last resort, the enemy's further progress was to be resisted by all the available air forces. It was decided not to continue to hold Tobruk should the enemy be in a position to invest it effectively, but to evacuate it after the maximum amount of demolition had been carried out. The Axis advance was then to be stopped at the line Sollum - Maddalena - Giarabub.

In these circumstances the main areas of land fighting were expected to cover:

- (a) The forward defence positions from Gazala to Hacheim.
- (b) A temporary line defending Tobruk.
- (c) A temporary line defending Gambut.
- (d) The defensive positions on the Egypt-Cyrenaica frontier.

#### Role of the Air Force in the Event of a Withdrawal

It was the intention of the Air Officer Commanding to dispose the air units so as to provide the maximum protection and support for the army, whilst at the same time maintaining the air offensive, and a detailed withdrawal plan was formed covering the four likely phases of the battle. It will be shown how, in pursuance of this policy, the withdrawal of the forward air units from airfields in the path of the enemy's advance was frequently delayed until the last moment before the approach of Axis forces, but that in this, owing to inadequate arrangements by the Army for the protection of airfields, on several occasions air units were in jeopardy all night on airfields within easy marching distance of the enemy.

H.Q. R.A.F. WD  
Report  
A.H.B./ILJ6/8  
App 'W'

Ibid

The plan for the disposition of the air force in the four phases of the battle was roughly as follows:-

Phase One (Alpha)	Forward Control -	Gazala
	Fighters -	Gambut
	Light Bombers -	Baheira
	Strat/Recce -	L.G. 121
Phase Two (Beta)	Forward Control -	Gambut
	Fighters -	Sidi Azeiz & L.G. 75
	Light Bombers -	L.G. 07
	Strat/Recce -	L.G. 17
Phase Three (Gamma)	Forward Control -	Sidi Azeiz
	Fighters -	Sidi Azeiz & L.G. 75
	Light Bombers -	L.G. 07
	Strat/Recce -	L.G. 17
Phase Four (Omega)	Forward Control -	L.G. 05
	Fighters -	L.G.s 75 & 76
	Light Bombers -	L.G. 07
	Strat/Recce -	L.G. 17

It was expected that if certain circumstances arose, the time interval between the Beta and Gamma stages might be very short, in which case it might be necessary to eliminate, where applicable, movement for the Gamma stage and complete movement direct from the Beta to the Omega stage. An important innovation was the organisation of the squadrons at the operational landing-grounds into 'A' and 'B' parties, each of which could operate for a day or two without the other. In the event of a withdrawal the plan was that 'A' party should move back in advance of the rest of the squadron which would continue to operate with 'B' party at the old landing-ground. It would wait to move back until 'A' party had arrived at the new landing-ground and was ready to operate the squadron. In this way it was hoped to maintain the operational effort of all the squadrons throughout a retreat, the organisation was equally suitable for an advance. From an administrative point of view, since units would be withdrawing to established bases, there would be ample supplies of aviation fuel, oil and ammunition available.

#### Enemy Intentions

#### Strategic Considerations

In the same way that the survival of Malta as an offensive operational base, and final victory in North Africa, were the complementary elements of British strategy in the Mediterranean, on the converse side the permanent neutralisation of Malta was the sine qua non of an Axis victory in the Desert. It is not within the scope of this narrative to describe in detail the enemy's realisation of the necessity of subduing Malta or the plans evolved to bring it about,<sup>(1)</sup> but it is useful to indicate the policy which influenced or was influenced by events in the Western Desert before and during Rommel's advance at Gazala.

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(1) For details see A.H.B. Narrative, The Middle East Campaigns, Volume XI - Malta.

The German High Command had resumed interest in the war in the Mediterranean late in 1941, when the British autumn offensive, Crusader, coupled with the continued British sea and air supremacy in the Mediterranean, seemed to threaten disaster to the Axis forces in that theatre. To relieve the deteriorating situation in November 1941, Field Marshal Kesselring was sent to Italy as C.-in-C. South, in command of Luftflotte 2. He was charged with two main tasks:-

- (a) To support Rommel's Army.
- (b) To reorganise the supply services to North Africa which were in a bad state owing to the British sea and air supremacy.

The position centred round the breakdown of the supply services to Africa, the effects of which were becoming increasingly serious; Malta had become a focal point both as naval and air base, and Kesselring's task of safeguarding the supply routes by smashing these bases had top priority.

Kesselring quickly saw the need for finally crushing Malta, but his early proposal for the occupation of the island received no support and he concentrated on the task of neutralising it by air attack. An offensive was built up in the early months of 1942, but the main attack began on 2 April, and by 10 May he considered his task to be completed. Meanwhile the question of invading Malta had again arisen, and as early as February, the Fuehrer, agreeing that the island must be captured, gave Kesselring permission to draw up plans for an operation in co-operation with the Italian High Command. In view of Rommel's forthcoming offensive in the Desert, the question arose as to which should be undertaken first, and it was understood, with Rommel's cognisance, that the Malta project should precede the North African, as the latter would not be ready to take place until the end of the summer. Fearing that considerable German air forces would be withdrawn from the Mediterranean in the near future, Kesselring and the German General in Rome, von Rintelen, were in favour of an early attack on Malta. The Italians however, and the German Navy considered that careful preparations for a large-scale landing could not be complete before the end of July. It was not until mid-April that Mussolini agreed to the German plan. It would appear that once he had made his decision the Duce acted quickly, for on 21 April Malta's air reconnaissance patrols reported the construction of new airstrips, suitable for gliders, close to the railway in the Vale of Catania in Sicily. This seemed to preface a threat of air invasion, but although careful watch was kept from Malta no further developments were discovered.

Preparations for the North African offensive were effected more quickly than had been anticipated, and towards the end of April the possibility of commencing the advance as early as May was considered. The points in favour were:-

- (a) The enemy was still weak, whereas Axis units would probably be at full strength by late May.
- (b) By the autumn the enemy would probably have brought up American tanks and possibly even troops.

Kesselring:  
the War in the  
Mediterranean  
A.H.B.(6)  
Trans. VII/104  
& Weichold:  
Axis Naval  
Policy & Ops  
in the  
Mediterranean  
R.242 Ref:  
G.H.S./5

- (c) There was no guarantee that by the autumn Luftflotte II would still be available.

High Level  
Reports and  
Directives  
A.H.B.(6) Trans.  
VII/80

By the end of April it was understood that Rommel's offensive would begin as soon as possible after the capture of Malta, but that if the invasion operations were to extend beyond 1 June it might be necessary for Rommel to attack without waiting for the capture of the island; if the British attacked first, the attack on Malta was to be postponed. Soon after this it became apparent to Rommel that the British were well advanced in their preparations and that there was a danger that they might forestall his offensive. He therefore proposed that he should launch his attack before the operations against Malta were attempted. His case was supported by a statement issued by Kesselring, that as a result of the intense air offensive against Malta the island was neutralised and the supply routed to Africa open to Axis traffic. These arguments led to the decision early in May, that Rommel should make a limited advance during that month, which was to be followed by the capture of Malta before the end of June. Kesselring later expressed regret for supporting this reversal of policy:

Kesselring: The  
War in the  
Mediterranean  
A.H.B.(6) Trans.  
VII/104

'If in the end I and Comando Supremo gave way to a sudden proposal of Rommel to launch an offensive in Africa before the attack on Malta, this was due more to personal reasons and to too much consideration for Rommel's reasons which were tactically correct. This was a mistake by myself and Comando Supremo. I ought to have known that a tactical success can only be exploited and sustained if the supply services are functioning faultlessly. I ought furthermore to have known that Rommel never stops when he has a success, or indeed a major success in his hands.'

High Level  
Reports and  
Directives.  
A.H.B.(6) Trans.  
VII/80

In the revised plan, two limitations, geographical and chronological, were imposed on Rommel's proposed offensive, with a view to the projected attack on Malta:

The capture of Tobruk is an essential condition for a further advance. Once Tobruk has been taken an advance will be made to the line Sidi Omar - Halfaya - Sollum, which may not be crossed by the bulk of the Panzerarmee.

The operation must not continue beyond 20 June, as air and naval reinforcements and also some of the air forces at present based in Cyrenaica will have to be withdrawn for operations elsewhere. It has been decided to resume the offensive in the autumn.

#### The Plan for Rommel's Offensive

The direct aim of the Axis offensive in North Africa was to defeat the British forces at Gazala, in order to prevent a repetition of Crusader in the autumn of 1942. It was also agreed that should the opportunity of capturing Tobruk arise, it should be taken, as long as it did not entail involving the Panzerarmee in a very long siege and suffering great casualties. On 5 May the instructions for the offensive issued by Comando Supremo were issued:-

- (a) The intention is to destroy the mobile enemy forces based west of Tobruk. If this is successful Tobruk will be captured in a series of short attacks.

- (b) The capture of Tobruk is an essential condition for further advance. Once Tobruk has been taken an advance will be made to the line Sidi Omar - Halfaya - Sollum, which may not be crossed by the bulk of the Panzerarmee. If it cannot be taken the positions on the Aine-el-Gazala line or further west are to be occupied.

At the end of the instructions 20 June was named as the time limit for the operation. The date for the opening of the offensive was given as 26 May. On 6 May a conference was held at the Panzerarmee Battle Headquarters, attended by the Axis commanders and senior staff officers. Amongst the decisions made was the following:-

To reinforce Fliegerfuehrer Afrika for the offensive the following will be transferred from Italy:

- 1 dive-bomber Gruppe
- 1 single-engined fighter Gruppe
- 1 twin-engined fighter Gruppe (Me.110).

The following formations will be sent to reinforce V Squadra Area:-

- 1 single-engined fighter Stormo (Macchi 202)
- 1 mixed single-engined fighter Stormo

The allocation of a third Stormo, (dive-bomber and single-engined Cr 42, is still open to question.

There were two courses open to Rommel for his initial attack on the Gazala position. Either he could make a straightforward frontal attack through the minefields and other defences, or he could advance from the south round the Bir Hakeim fortification which marked the extreme limit of the British front, and drive northwards to attack the position from the rear. He chose the second course, and the conduct of operations was planned as follows:

Extensive attack of the bulk of the motorised formations to the south and north of Segnali on both sides of Bir Hakeim in the direction of Acroma. Units of the motorised formations must push on ahead in the direction of Belhamed - El Adem to prevent the enemy falling back from the Tobruk area, and also to prevent reinforcements being brought up from the Bardia area. The non-motorised formations of the Army will be sent in for a frontal attack in an easterly direction between Segnali Nord and the coast.

An attempt will be made to destroy the British Army in the field in the area of Tobruk by the evening of the second day of the offensive, and also to take the fortress of Tobruk in a surprise attack. If it is not possible to execute this plan, the fortress will be taken in a series of attacks from the south and south-east. A further two days will be necessary for this, so that after regrouping and replenishment of supplies the bulk of the motorised troops will be ready to push on towards the east in the direction of Collum - Bardia, on about the sixth day of the offensive.

Later additions to this plan were a landing operation which was to be made in the rear of the British position, and the allocation to the Trieste (Armoured) Division of the task

of cutting a path through the minefield where it crossed the Trigh Capuzzo north of Bir Hakeim. This would ensure the passage of supplies to the units east of the minefield, should Bir Hakeim not fall immediately.

Contrasts in British and Axis Planning

It is interesting to note the contrasting attitude of the two opposing commanders towards the initial impact of the two armies. With his tactical skill and flair for seizing opportunity in the face of considerable risks, Rommel showed great anxiety to secure the initiative from the outset, and to surprise and out-manceuvre the enemy. General Ritchie preferred to meet the enemy attack on his own ground, with the backing of fixed defences from which he could exhaust the enemy before taking the offensive himself. In the event Rommel's tactics were to win the day, but it was a close struggle, and the issue hung in the balance for a far longer time than the Axis plans had allotted for the initial attack.

The Date of the British Offensive

The race for reinforcements had continued throughout the late spring, and it was not until mid-May that it became obvious to the British that the enemy had won it. The whole question of the date on which the British advance should begin, and, indeed, whether it could be carried out at all, rested on the relative strength of armour. The British tanks, apart from a few "General Grants" which had arrived from the United States, were generally out-paced and out-gunned by the enemy's, and the Commander-in-Chief estimated that a superiority of three to two was needed to counter this. Tank reinforcements were arriving from the United Kingdom, the United States and the repair shops in the Delta, and great improvements had been made in the organisation for the recovery and repair of tanks, but the enemy was receiving reinforcements at a rate which had exceeded British calculations.

The original date for the completion of preparations was 15 May, but this was postponed to 1 June to allow for the opening of a new railhead which was being constructed at Belhamed, although the general administrative arrangements to sustain the Allied offensive or to meet an enemy attack were completed on 15 May. By this time, however, it had become apparent that the enemy would in all probability anticipate our offensive, and, although the Commander-in-Chief regarded not unfavourably an opportunity of meeting the enemy, in the first encounter, on ground of British choosing, the arrangements for a withdrawal to the frontier were put in hand as a precautionary measure. The Belhamed base was opened for the delivery of tanks on 26 May, and on the same day the Axis advance began.

Anticipation of the Axis Offensive by the Air Forces

As soon as it became apparent that Rommel would attack in the moon-period at the end of May, the Air Force opened the battle for air superiority. The air effort was switched from strategic targets and concentrated in a tactical offensive against the enemy airfields in the forward area. The air policy was to disorganise the Axis air force from the start, thus giving the British the advantage in the air during the battle and countering to some extent the enemy's superiority in aircraft performance and strength. To this

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and the greater part of the Wellington effort of No. 205 Group was directed against airfield targets, and this was augmented by both light bomber and fighter-bomber attacks. From 21 May, up to and including the night of 26/27 May, the Wellingtons flew one hundred and eight sorties against the airfields and dropped over one hundred and thirty tons of High Explosive, while light bombers flew forty sorties, including fourteen night sorties, and dropped twenty-six tons of High Explosive. In addition night-flying Hurricanes of No. 73 Squadron, sometimes carrying bombs, made frequent intruder visits to these targets and on 26 May Kittybombers joined in the attacks by day. It was considered that the enemy's light scale of air activity against British positions and airfields during the week before his advance measured to some extent the effectiveness of this offensive.

In this pre-battle period the policy was to pay particular attention to the Axis fighter bases, namely Martuba and Tnimi, but Derna, the base for dive-bombers and twin-engined fighters was also attacked. The total bomber effort in this airfield offensive was:

<u>Airfield</u>	<u>Sorties</u>		<u>Bomb Tonnage</u>
	<u>Medium</u>	<u>Light</u>	
Derna	-	22	13
Martuba	108	13	147
Tnimi	-	6	4

In attacks by Wellingtons and Bostons on 21, 22 and 23 May against Martuba landing-ground No. 5, where over sixty Italian fighters were reported, at least four aircraft were claimed destroyed by fire, and a direct hit was claimed on an A.A. battery. At No. 1 landing-ground which was attacked by night on the same dates by a total of thirty-two Wellingtons, fires among dispersed aircraft, columns of black smoke, and flying debris indicated the effectiveness of the bombing. Bostons and Baltimores raiding Derna and a new landing-ground to the south of it known as El Chreiba which was being used as a Stuka base, scored near misses among motor transport at Derna and direct hits on three aircraft and on vehicles at El Chreiba.

No. 223  
Squadron O.R.B.

The Baltimores of No. 223 Squadron were equipped for high-flying, and therefore operated normally without a fighter escort, but on 23 May disaster befell them. They had in fact been provided with an escort on this occasion, but they missed the fighters at the rendezvous and on the way home were intercepted by Me.109's. The rear guns of all the aircraft jammed, enabling the enemy to close in, unopposed, to within seventy to fifty yards, with the result that two Baltimores were shot down, and a third belly-landed with considerable damage. The fourth aircraft, which had been lagging behind, evaded the fighters soon after interception, and landed safely with minor damage. An enquiry was instituted into the cause of the rear gun stoppage, and after one further raid on 28 May the squadron was withdrawn from operations until 7 June, while new guns were fitted.

In this period subsidiary attacks were made on motor transport, gun-posts and troops in the forward area, in which the fighter force played a major role. An important feature of the fighter operations was the first appearance of the Kittyhawk bomber, which made very successful sorties against both airfield and army targets.

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An important development in night operations at this time was the regular employment of Albacores as 'Pathfinders' for the Wellingtons. A system of illuminated night raids had been tried and proved early in the Crusader campaign on a small scale, and this was now introduced as a regular procedure. The object was to employ the maximum night bomber effort, although at this stage the targets for these operations were confined to airfields. The Albacores would arrive over the target fifteen minutes ahead of the Wellingtons and search for the dispersal areas, later illuminating them at the time arranged for the arrival of the Wellingtons. With their slow speed, large flare-carrying capacity, and the unobstructed range of vision from the cockpit, the Albacores were most suitable for this task, and their work was greatly appreciated by the Wellington crews. The pilots were carefully briefed with details of the local area and with the latest results of the daily photographic reconnaissance, and soon came to know the country intimately. This was most important, as the Martuba airfields in particular were very difficult to find at night. In this technique lay the seeds of a new element in tactical air war, the 'round the clock' bombing of the enemy ground forces in battle, which began towards the end of the British withdrawal to El Alamein, and which its development in subsequent battles was to have a profound significance on the course of the land fighting.

#### The Order of Battle of the Opposing Forces

##### (i) The Eighth Army

The final dispositions of the Eighth Army under the command of General Ritchie, before the Axis offensive, were as follows:-

XIII CORPS	Lieutenant-General Gott
50th Division	
1st South African Division	
2nd South African Division	
1st Army Tank Brigade	
9th Indian Infantry Brigade	

The 1st South African Division was holding the front from the coast west of the Gazala inlet to Alem Hamza astride the Via Balbia and the approaches to Tobruk south of the coastal escarpment. The 151st and 69th Infantry Brigade of the 50th Division were prolonging the line eastward from the Alem Hamza salient to the point where it again turned southward. The 150th Infantry Brigade was holding the detached strongpoint of Sidi Muftah. The 1st Army Tank Brigade (heavy tanks) was divided between these two infantry brigades in a supporting task. The 2nd South African Division occupied the western part of the Tobruk defences and small strongpoints below the escarpment towards Gazala. The 9th Indian Infantry Brigade held the eastern half of the Tobruk perimeter.

XXX CORPS	Lieutenant-General Norrie
1st Armoured Division	
2nd Armoured Brigade	
22nd Armoured Brigade	
201st Guards (Motor) Brigade	
7th Armoured Division	
4th Armoured Brigade	
7th Motor Brigade	
3rd Indian Motor Brigade Group	
29th Indian Infantry Brigade Group	
1st Free French Brigade Group	

The Free French Brigade Group was holding the detached strongpoint at Bir Hacheim. The 3rd Indian Motor Brigade arrived just before 26 May and was set to prepare a defensive locality a few miles east of Bir Hacheim. The 29th Indian Infantry Brigade of the 5th Indian Division had moved to a defensive area at Bir el Gobi a few days before the battle began. The 1st Armoured Division was disposed round Knightsbridge and the 7th Armoured Division lay to the south of it with the 7th Motor Brigade holding a defensive locality between the 3rd Indian Motor Brigade and Bir el Gobi. Advanced headquarters of the Eighth Army, with the headquarters of the Air Officer Commanding Western Desert, Air Vice-Marshal Coningham, were near Gambut, guarded by the 10th Infantry Brigade of the 5th Indian Division.

(ii) The Western Desert Air Force

The location of the air units under Air Vice-Marshall Coningham was as follows:--(1)

<u>No. 211 Group (Fighter)</u>	El Adem
<u>No. 233 Wing</u>	Gambut
No. 2 S.A.A.F. Sqdn.	"
No. 4 S.A.A.F. Sqdn.	"
No. 5 S.A.A.F. Sqdn.	"
No. 260 Sqdn.	"
<u>No. 239 Wing</u>	Gambut
No. 3 R.A.A.F. Sqdn.	"
No. 450 R.A.A.F. Sqdn.	"
No. 112 Sqdn.	"
No. 250 Sqdn.	"
<u>No. 243 Wing</u>	Gambut
No. 33 Sqdn.	"
No. 73 Sqdn.	"
No. 80 Sqdn.	El Adem
No. 145 Sqdn.	Gambut
No. 274 Sqdn.	"
<u>No. 3 S.A. Wing (Bomber)</u>	Baheira
No. 12 S.A.A.F. Sqdn.	"
No. 24 S.A.A.F. Sqdn.	"
No. 223 Sqdn.	"

Units detached to Western Desert

No. 208 Sqdn.	(Army Co-operation)	El Adem
No. 40 S.A.A.F. Sqdn.	(Army Co-operation)	El Adem
No. 1437 Flight (Strat/Recce)		Maktila (I.G.121)
No. 2 PRU detachment		Gambut

The allotment of a specialist photographic unit to Air Headquarters Western Desert, in the shape of a flight of four Spitfires of No. 2 P.R.U., was a new venture and one which was to prove its value. By 26 May regular sorties were already being flown over the Derna and Martuba airfields, and in addition, immediately before the Axis advance, photographs were being taken of tracks in the area east and south-east of Tmimi to ascertain the movement and possible intentions of the enemy. When the battle started the regular sorties were supplemented, and the Mechili area, the Tmimi-Gazala area and its roads, tracks and airfields, as well as

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(1) The locations given are those of the operational landing-grounds and Headquarters of units, not of base landing-grounds or rear headquarters.

areas around Rotonda Segnali and Rotonda Frag, were frequently covered, while on several occasions flights were made over Agheila and Agedabia.

During the battle, as before it, the enemy rear areas were kept under close vigilance by No. 1437 Strategical Reconnaissance Flight, but the stresses of battle did not add much to its routine.

A.H.Q. W.D.  
Report A.H.B./  
ILJ6/8 App 'I'  
& H.Q., R.A.F.,  
M.E. Ops Records  
Report A.H.B./  
ILJ1/159/20.

The tactical reconnaissance units were under the operational control of the Army. Until 26 May, the whole of the Eighth Army front was covered by one squadron, No. 40 S.A.A.F., operating under XIII Corps, and demands from XXX Corps were passed to the squadron through XIII Corps. As a result of the work of this squadron Rommel achieved neither tactical nor strategic surprise. On the eve of the battle No. 208 Squadron was allocated to XXX Corps, and when the battle started a suitable corps boundary was established for the operations of the Tactical Reconnaissance squadrons.

Ibid

Units under the control of other formations of Middle East Command also took part in the battle, notably the eight Wellington squadrons of No. 205 Group and the Beau-fighters and Albacores of No. 201 Group. Although taking little part in the battle itself, the fourteen fighter and three bomber squadrons of Air Headquarters Egypt formed a solid defence behind the air forces fighting in the forward area, while the anti-shipping units of Air Headquarters Malta and of No. 201 Group maintained the offensive against the enemy's sea supply routes. (1)

At an average strength of 16 I.E. for the bomber squadrons, and 21 for the fighters, the strength of the field force, that is, light bombers and fighters was approximately as follows:-

Light Bombers	48	3 Squadrons
Fighters - Kittyhawks & Tomahawks	168	8 Squadrons
Hurricanes	84	4 Squadrons
	<u>252</u>	
Tactical Reconnaissance (fighter)	21	

In addition the Wellington squadrons of No. 205 Group which played a large part in the battle, had an establishment of 16 aircraft per squadron or 128 aircraft.

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Desert Corres-  
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These figures however, were subject to qualifications and should not be taken as a true estimate of strength. The fighter squadrons were being kept up to strength, but the Kittyhawk serviceability although greatly improved was still too low and wastage too high. This was particularly regrettable, since although the Hurricane squadrons were well up to strength, the performance of their aircraft was quite out-classed in speed and climb by the enemy fighters, so that the fighter battle depended almost entirely on the Kittyhawks. Arrangements were made to have the immediate reserve of Kittyhawks readily available, and although this was not on a scale comparable with the reserve used in the

(1) A comprehensive Order of Battle including all these units is given at Appendix XVII.

previous battle, it was foreseen that it would have to be used if there was a heavy wastage in the first fortnight of fighting since the output of repaired Kittyhawks was not yet equal to such a demand owing to the shortage of spares, particularly engines. The two Boston light bomber squadrons were up to strength, but the Baltimore squadron was suffering from teething trouble and in fact had to be withdrawn from operations on the second day of the battle for over a week. On the credit side, the Hurricane wing included one squadron of Hurribombers such aircraft carrying two 250 lb. bombs while one Kittyhawk squadron was fitted to carry two 250 lb. British bombs and two to carry one American 500 lb. bomb. In addition four of the Wellington squadrons were moved to desert landing-grounds from the Delta area, thus improving serviceability and efficiency.

#### The Axis Army

Although the Allies were aware of the general positions of the enemy, the precise location of the various units were not always known, and for the sake of clarity details of the enemy plan of attack which was captured early in the battle are included here:

The Afrika Korps and the 90th Light Division Battle Group were to concentrate north of Segnali on the evening of 26 May. On 27 May, after a night advance, the Ariete Armoured Division was to capture Bir Hacheim, while the Trieste Motorised Division was to make a gap in the mine-field south of the Sidi Muftah strongpoint, where it was crossed by the Trigh el Abd. Simultaneously the Afrika Korps was to form up south of Bir Hacheim with 21st Panzer Division (less one battalion of tanks) on the left, 15th Panzer Division in the centre and the 90th Light Division on the right. These formations were then to advance northwards, and, after destroying our armoured forces were to reach Acroma and El Adem before nightfall. Motorised columns were to seize Sidi Rezegh and El Duda. On 28 May, the three armoured divisions were to attack our positions between Gazala and Alem Hamza from the east, while four Italian infantry divisions, the Sabratha, Trento, Brescia and Pavia, stiffened by two regiments of the 90th Light Division and one tank battalion of the 21st Panzer Division, were to attack the same position from the west. Tobruk was to be captured during the two subsequent days.

#### The Axis Air Forces

On 20 May, the German and Italian air forces in North Africa were as follows:-

##### German

	<u>Establishment</u>	<u>Strength</u>	<u>Serviceability</u>
Close Recce	9	21	10
Long Range Recce	12	13	11
S.E. Fighters	164	135	95
Night Fighters	-	-	-
T.E. Fighters	52	56	32
Bombers	11	16	7
Dive-bombers	90	71	54
Coastal	-	-	-
	<u>338</u>	<u>312</u>	<u>209</u>

Italian

5th Squadra Area		
Fighters	331	245
Bombers (1)	61	41
	<u>392</u>	<u>286</u>

The main airfields used in the forward area were those of the Derna, Martuba and Tmimi groups. In addition to the forces based in North Africa the Axis employed Crete-based aircraft in the battle, and these used Cyrenaican airfields as operational landing-grounds. The units based in Crete were as follows:-

German

	<u>Establishment</u>	<u>Strength</u>	<u>Serviceability</u>
Close Recce	-	-	-
Long Range Recce	12	9	5
S.E. Fighters	-	10	5
Night Fighters	39	35	18
T.E. Fighters	-	-	-
Bombers	152	118	68
Dive Bombers	-	-	-
Coastal	36	49	32
	<u>239</u>	<u>221</u>	<u>128</u>

Italian (Aegean Air Force)

Fighters	46	44
Bombers (2)	40	20
	<u>86</u>	<u>64</u>

H.Q., R.A.F.,  
M.E. Report  
A.H.B./ILJ1/  
159/20 App. 'C'

The British estimated that there were totals of two hundred and seventy German aircraft in Libya, and four hundred and sixty Italian, and in Crete and the Dodecanese ninety German and one hundred and fifty Italian aircraft.

Axis serviceability was estimated at between 50 per cent and 60 per cent but that of the British was higher, being about 60 per cent British reserves, had suffered from the demands of other theatres of war, and were very low. In this respect with a long reinforcing route to Middle East, the British were at a grave disadvantage compared with the enemy, who, it might be said, had the whole of the Italian Air Force to draw upon in time of crisis, a strength on paper of some 2,500 aircraft with an average serviceability of about 67 per cent. The fact that the British also had air forces under auxiliary commands in the Middle East area, could weigh very little against this factor.

- 
- (1) Includes 32 Torpedo Bombers with a strength of 22.  
(2) Includes 16 Torpedo Bombers with a strength of 11.

[illegible]

On 12/12/70, the following information was received from the Bureau of the Federal Bureau of Investigation, Washington, D.C.:

[illegible][illegible]

1998, 1999, 2000, 2001, 2002, 2003, 2004, 2005, 2006, 2007, 2008, 2009, 2010, 2011, 2012, 2013, 2014, 2015, 2016, 2017, 2018, 2019, 2020, 2021, 2022, 2023, 2024, 2025, 2026, 2027, 2028, 2029, 2030, 2031, 2032, 2033, 2034, 2035, 2036, 2037, 2038, 2039, 2040, 2041, 2042, 2043, 2044, 2045, 2046, 2047, 2048, 2049, 2050, 2051, 2052, 2053, 2054, 2055, 2056, 2057, 2058, 2059, 2060, 2061, 2062, 2063, 2064, 2065, 2066, 2067, 2068, 2069, 2070, 2071, 2072, 2073, 2074, 2075, 2076, 2077, 2078, 2079, 2080, 2081, 2082, 2083, 2084, 2085, 2086, 2087, 2088, 2089, 2090, 2091, 2092, 2093, 2094, 2095, 2096, 2097, 2098, 2099, 2100, 2101, 2102, 2103, 2104, 2105, 2106, 2107, 2108, 2109, 2110, 2111, 2112, 2113, 2114, 2115, 2116, 2117, 2118, 2119, 2120, 2121, 2122, 2123, 2124, 2125, 2126, 2127, 2128, 2129, 2130, 2131, 2132, 2133, 2134, 2135, 2136, 2137, 2138, 2139, 2140, 2141, 2142, 2143, 2144, 2145, 2146, 2147, 2148, 2149, 2150, 2151, 2152, 2153, 2154, 2155, 2156, 2157, 2158, 2159, 2160, 2161, 2162, 2163, 2164, 2165, 2166, 2167, 2168, 2169, 2170, 2171, 2172, 2173, 2174, 2175, 2176, 2177, 2178, 2179, 2180, 2181, 2182, 2183, 2184, 2185, 2186, 2187, 2188, 2189, 2190, 2191, 2192, 2193, 2194, 2195, 2196, 2197, 2198, 2199, 2200, 2201, 2202, 2203, 2204, 2205, 2206, 2207, 2208, 2209, 2210, 2211, 2212, 2213, 2214, 2215, 2216, 2217, 2218, 2219, 2220, 2221, 2222, 2223, 2224, 2225, 2226, 2227, 2228, 2229, 2230, 2231, 2232, 2233, 2234, 2235, 2236, 2237, 2238, 2239, 2240, 2241, 2242, 2243, 2244, 2245, 2246, 2247, 2248, 2249, 2250, 2251, 2252, 2253, 2254, 2255, 2256, 2257, 2258, 2259, 2260, 2261, 2262, 2263, 2264, 2265, 2266, 2267, 2268, 2269, 2270, 2271, 2272, 2273, 2274, 2275, 2276, 2277, 2278, 2279, 2280, 2281, 2282, 2283, 2284, 2285, 2286, 2287, 2288, 2289, 2290, 2291, 2292, 2293, 2294, 2295, 2296, 2297, 2298, 2299, 2300, 2301, 2302, 2303, 2304, 2305, 2306, 2307, 2308, 2309, 2310, 2311, 2312, 2313, 2314, 2315, 2316, 2317, 2318, 2319, 2320, 2321, 2322, 2323, 2324, 2325, 2326, 2327, 2328, 2329, 2330, 2331, 2332, 2333, 2334, 2335, 2336, 2337, 2338, 2339, 2340, 2341, 2342, 2343, 2344, 2345, 2346, 2347, 2348, 2349, 2350, 2351, 2352, 2353, 2354, 2355, 2356, 2357, 2358, 2359, 2360, 2361, 2362, 2363, 2364, 2365, 2366, 2367, 2368, 2369, 2370, 2371, 2372, 2373, 2374, 2375, 2376, 2377, 2378, 2379, 2380, 2381, 2382, 2383, 2384, 2385, 2386, 2387, 2388, 2389, 2390, 2391, 2392, 2393, 2394, 2395, 2396, 2397, 2398, 2399, 2400, 2401, 2402, 2403, 2404, 2405, 2406, 2407, 2408, 2409, 2410, 2411, 2412, 2413, 2414, 2415, 2416, 2417, 2418, 2419, 2420, 2421, 2422, 2423, 2424, 2425, 2426, 2427, 2428, 2429, 2430, 2431, 2432, 2433, 2434, 2435, 2436, 2437, 2438, 2439, 2440, 2441, 2442, 2443, 2444, 2445, 2446, 2447, 2448, 2449, 2450, 2451, 2452, 2453, 2454, 2455, 2456, 2457, 2458, 2459, 2460, 2461, 2462, 2463, 2464, 2465, 2466, 2467, 2468, 2469, 2470, 2471, 2472, 2473, 2474, 2475, 2476, 2477, 2478, 2479, 2480, 2481, 2482, 2483, 2484, 2485, 2486, 2487, 2488, 2489, 2490, 2491, 2492, 2493, 2494, 2495, 2496, 2497, 2498, 2499, 2500, 2501, 2502, 2503, 2504, 2505, 2506, 2507, 2508, 2509, 2510, 2511, 2512, 2513, 2514, 2515, 2516, 2517, 2518, 2519, 2520, 2521, 2522, 2523, 2524, 2525, 2526, 2527, 2528, 2529, 2530, 2531, 2532, 2533, 2534, 2535, 2536, 2537, 2538, 2539, 2540, 2541, 2542, 2543, 2544, 2545, 2546, 2547, 2548, 2549, 2550, 2551, 2552, 2553, 2554, 2555, 2556, 2557, 2558, 2559, 2560, 2561, 2562, 2563, 2564, 2565, 2566, 2567, 2568, 2569, 2570, 2571, 2572, 2573, 2574, 2575, 2576, 2577, 2578, 2579, 2580, 2581, 2582, 2583, 2584, 2585, 2586, 2587, 2588, 2589, 2590, 2591, 2592, 2593, 2594, 2595, 2596, 2597, 2598, 2599, 2600, 2601, 2602, 2603, 2604, 2605, 2606, 2607, 2608, 2609, 2610, 2611, 2612, 2613, 2614, 2615, 2616, 2617, 2618, 2619, 2620, 2621, 2622, 2623, 2624, 2625, 2626, 2627, 2628, 2629, 2630, 2631, 2632, 2633, 2634, 2635, 2636, 2637, 2638, 2639, 2640, 2641, 2642, 2643, 2644, 2645, 2646, 2647, 2648, 2649, 2650, 2651, 2652, 2653, 2654, 2655, 2656, 2657, 2658, 2659, 2660, 2661, 2662, 2663, 2664, 2665, 2666, 2667, 2668, 2669, 2670, 2671, 2672, 2673, 2674, 2675, 2676, 2677, 2678, 2679, 26

the 1990s, the number of people in the United States who are 65 years of age or older is projected to increase from 20 million to 35 million, and the number of people 75 years of age or older is projected to increase from 10 million to 15 million (U.S. Census Bureau, 1997).

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1. The first step in the process of identifying a problem is to define the problem. This involves identifying the symptoms of the problem and determining the scope of the problem. Once the problem has been defined, the next step is to identify the causes of the problem. This involves identifying the factors that are contributing to the problem and determining the underlying causes of the problem. Once the causes of the problem have been identified, the next step is to develop a plan to address the problem. This involves identifying the actions that need to be taken to address the problem and determining the resources that will be needed to implement the plan. Once a plan has been developed, the next step is to implement the plan. This involves carrying out the actions that have been identified in the plan and monitoring the progress of the plan. Finally, the last step in the process is to evaluate the results of the plan. This involves determining whether the plan has been successful in addressing the problem and identifying any lessons learned from the process.

1. The following is a list of the names of the persons who have been identified as having been in contact with the subject of this investigation, [redacted], during the period from [redacted] to [redacted].

1. *For the purpose of this study, the term "cognitive" refers to the mental processes of perception, learning, memory, and reasoning.*

SECRET

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PHASE I. THE BATTLE OF THE CAULDRON 26 - 31 MAY 1942

The First Assault

Auchinleck's  
Dispatch

A.H.B./IIJ6/8  
A.H.Q., W.D.  
Report  
App. 'K'  
Air Support  
Control Diary.

The enemy's approach march began on the afternoon of 26 May with a general movement eastward from Segnali towards Rotunda Mteifel, and night leaguers were set up some fifteen miles south of Bir Hacheim. The columns included the 15th and 21st Panzer Divisions and elements of the 90th Light Division besides Italian formations, including the Ariete Division. The movement was first seen from the air by a pilot of No. 2 S.A.A.F. Squadron, between 1700 and 1830 hours, who reported a very large body of troops south of Bir Hacheim and moving north eastwards. At 2130 hours the Air Liaison Officer, No. 211 Group telephoned a report from a Tac/R aircraft: 'Much activity Segnali. Column twenty miles long on a broad front moving northeast.' Eastward movements were also observed towards the main British positions between Gazala and El Hamza, but activity in this area, as had been anticipated, proved to be a feint attack only. On hearing of the enemy's move the 7th Armoured Brigade retired to its defensive positions between Bir Hacheim and Bir el Gobi.

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The advance was resumed round the south of Bir Hacheim at sunrise on 27th, and by 0930 hours about 250 German tanks were being engaged by the 1st and 7th British Armoured Divisions, between Bir Hacheim and Bir el Gobi. Meanwhile the Ariete Division commenced an attack on Bir Hacheim without success. The German armour overcame the British resistance in the Hacheim-Gobi area, and pressed strongly forward in two columns, the two Panzer Divisions moving north immediately east of the British minefields, towards Acroma, and the 90th Light Division battle group proceeding north-east towards El Adem. By the evening these columns were in areas 17 miles west of El Adem and 15 miles south of it respectively. Small bodies of both columns penetrated past El Adem to the west and east of it, and advanced on Acroma and El Duda-Sidi Resegh, but were repulsed and driven back to the main bodies. Of the main thrusts the easterly appeared at first to be the most dangerous, and General Ritchie, concerned for the safety of Tobruk and the forward bases, ordered the occupation of the ridge south of Sidi Resegh. At the same time six of the fighter squadrons based on Gambut were withdrawn for the night. These returned on the next morning however, when the 4th Armoured Brigade drove the 90th Light Division well away to the south of El Adem.

Air Activity 27 May

The plan for air support agreed between the G.O.C. and A.O.C. for the first day of the battle, was governed by the complex ground situation. The Kittyhawks of No. 239 Wing, both fighters and fighter-bombers, were to make continuous attacks in formations of four or five aircraft, in the Bir Hacheim area, where the targets were mostly supply columns and separated from the main battle. The light bombers were to be kept in reserve until targets offered, when they were to attack under fighter protection.

Throughout the day light bomber activity was restricted owing to the constant changes in the ground situation. In the morning, in an attempt to use the bombers without waiting for a bomb-line to be agreed, Bostons were ordered to search for a possible target between Bir El Gobi and Bir Hacheim, but owing to the difficulty of identifying the ground units

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bombing could not be risked. In the afternoon however, a bomblane was given south-east of Bir el Gobi, and twelve aircraft of No. 12 Squadron attacked two hundred to three hundred vehicles in the Bir El Gobi area.

Enemy formations provided better targets for the fighters and fighter-bombers, which, by making low-flying attacks could pick them out, even in confused ground conditions. The majority of the attacks which were maintained continuously from 1100 to 1800 hours, and which amounted to some forty fighter-bomber and forty fighter sorties, were directed against the enemy in the Bir Hacheim - Bir El Gobi area. At about 1830 hours sixteen fighter-bombers and fighters attacked light and heavy tanks and other targets in the Sidi Resegh - El Adem area. No accurate estimate of the results of these operations could be made, but Army units confirmed that the effect was substantial. In addition, a captured report of 27 May stated: 'The enemy was very active today; all requests from ground reconnaissance troops were carried out.' and on the same day a German Signals Officer wrote in his diary: 'Low-level machine-gunning. R.H.Q. dispersed. Some M.T. abandoned and lost. Chaos. Panic.' Further commentators were two British Army officers who were captured early in the battle and later escaped. These commended the fighters for the daring and accuracy of their attacks on enemy columns, and confirmed that, for their size, the raids were very effective.

H.Q. R.A.F. M.E.  
Report  
A.H.B./IIJ1/  
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In support of his land operations the enemy increased his fighter patrols in both strength and frequency, over the battle area and as far east as the British landing-grounds. Heavily escorted Stuka raids at small strength also took place frequently in the battle area, while reconnaissance by fighter aircraft was persistent. According to the Panzerarmee Diary, however, the Stuka raids had little effect. From the opening of the battle the Air Force was determined to counter Stuka activity, and initially the fighter force was given this as its primary task, with instructions to use every artifice to get at the bombers through the fighter screen, although this policy was temporarily deferred on the very next day. Including sorties flown at night and in the early morning, by No. 73 Squadron, more than fifty interception sorties were flown on 27th. Eight Axis aircraft were claimed destroyed for the loss of three fighters, but according to German Air Force records three twin-engined fighters, one single-engined fighter and one night fighter were destroyed.<sup>(1)</sup> The main night air activity of both the British and the Axis was confined to attacks on forward airfields immediately behind the battle area.

#### Ground Situation - 28 May

The following day saw the beginning of the turn of the tide in the first phase of the battle. It had been the enemy's intention to make attacks on Acroma with the intention of clearing the way for a major assault on the rear of the British position at Gazala, and thus to open up the coastal road for the attack on Tobruk. However, British ground and air attacks on the extended line of communications round the south of Bir Hacheim had begun to take effect, and,

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(1) Italian losses are not available.

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Crusader 3 Final  
(144)  
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with movement hampered by a shortage of fuel, the attack on Acroma was ineffective, and the enemy armour split into small parties. In addition the Ariete Division, advancing immediately east of the minefields to join the German Panzer Divisions was attacked by British tanks and held in check. Meanwhile to relieve the supply situation, the XX Italian Corps which had reached the Trigh Capuzzo on the east of the minefield, was ordered to attack westward against the minefield positions to contact X Corps which was attacking them from the west. In this way it was hoped to open up a short supply route to the battle area. However although breaches were made in the defences, passage for vehicles was not gained until the morning of the 30th, just in time to save the situation for Rommel's armour.

Panzerarmee  
Diary and  
Appendices

In the El Adem area, the 90th Light Division which was threatening the garrison there, was driven away well to the south by British armour during the morning<sup>(1)</sup> and was subsequently prevented for some time from joining the D.A.K. south of Acroma. Eventually, by withdrawing farther south towards Bir el Gobi, the division was able to advance northwards immediately east of the minefields where it was twice attacked from the air by light bombers.

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Air policy for 28 May, as originally laid down was to provide fighter cover over the area Acroma - El Adem - Knightsbridge, where it was expected that an armoured battle would develop. The fighter-bombers were to continue to operate against enemy transport columns in the Bir Hacheim area, while the Bostons were to await reports of suitable targets. After consultation with the Army these orders were cancelled and replaced. The position was that owing to the numerical strength and superior performance of the enemy fighters, such air superiority as the R.A.F. had obtained was moral and physical: fighter resources, particularly in Kittyhawks, were gravely limited. Nevertheless, when the armoured battle developed on 27 and 28 May, the Air officer Commanding decided to ignore the struggle for air superiority. On 28 May, with the agreement of the Army the decision was made to employ the fighters as fully as possible in the land battle by concentrating their efforts on low-flying attacks against Axis columns, for which flying was limited to below 6,000 feet. Such a policy was bound to involve heavy losses as it provided for no high cover, but it was considered that the situation justified it.

Ibid

On 28 May, fighter-bombers flew some sixty sorties and many fighter machine-gun attacks were carried out, in the El Adem - Bir Hacheim - Acroma area, but as on the previous day, the majority of targets attacked were round Bir Hacheim. Contemporary estimates gave the total number of tanks and vehicles destroyed as two hundred and fifty but there is no confirmation of this available in enemy documents. Despite the considerable fighter effort, the losses sustained on offensive operations on this particular day were only two fighters; this low casualty rate was not to last, however.

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Hist. Series  
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(1) This contradicts the British account which states that the 90th Light Division approached El Adem during the afternoon when it was attacked by light bombers, and that it then formed up to assault the strongpoint but was driven back by the 4th Armoured Brigade. Later reports however noted a movement towards Acroma.

Enemy offensive air operations were on a small scale, and only a few Stuka attacks were made on the Army. However, defensive activity was greater, a standing patrol of three to four fighters being maintained over the main Axis column from 1600 to 1940 hours. British fighters made five interceptions and claimed two fighters and one Stuka destroyed for the loss of a further three aircraft. German records confirm this claim.

Light bomber activity comprised three attacks with fighter escort. At noon a large concentration of tanks and transport ten miles south of Acroma was bombed by twelve Bostons and later in the day two attacks were made by a total of twenty-two Bostons on a large concentration of tanks and motor transport believed to be the 90th Light Division, five miles west of Bir El Harmat. Owing to poor visibility the attack was directed against Free French Troops.

In this phase, reports of targets were plentiful. The Army made ten requests for air attacks on specific targets and aircraft returning from raids provided twenty-nine reports on enemy concentrations; against these thirty-five operations were flown involving two hundred and fifty sorties. The air support control system was working well, and frequently attacks were carried out in thirty to forty minutes after a direct request had been received from a tentacle, while the average time was sixty minutes. This was a remarkable improvement on the Crusader operations when the average time had been three hours.

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Diary

#### The Enemy takes up a Defensive Attitude

On 29 May, having failed to reach the rear of the British position at Gazala, and having little hope of opening the coastal road to his supply column, the enemy force southwest of Acroma turned southward to meet the relief column pressing forward from the Bir Hacheim area. British armour persistently attacked this force while the R.A.F. concentrated its effort against the supply column. A fierce armoured battle developed in the Knightsbridge area until the evening when a sand storm brought it to an inconclusive end. The enemy ultimately obtained the advantage, however, for during this battle the XX Corps and Trieste Division, although engaged from the south by the Free French, had succeeded in making considerable headway through the mine-field between the road junctions of the Trigh el Abd and the Trigh Capuzzo with the Trigh Hacheim.

British light bomber activity in the forward area on 29 May comprised two operations. A very successful attack was made at about 1815 by nine Bostons of No. 12 Squadron on an enemy strong point west of Acroma, called 'Commonwealth'. This attack, which was planned in co-operation with the Army, but not through the air support control, was timed to serve as a preliminary to a British counter attack. Bombing was accurate and the timing perfect in this, the first operation in which Bostons were employed to bomb a pin point. British infantry took the enemy position immediately after the bombing. An attack by 12 Bostons of No. 24 Squadron at about 1730 hours in the same area had resulted in fires among M.T. and tanks, direct hits and near misses being observed.

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Wing and  
Squadron  
O.R.B.'s and  
M.E.F.O.S.

Fighter and fighter bomber attacks were again made chiefly in the Bir Hacheim area, but also in the area south of Acroma near Rotunda Harmat where the main armoured battle was developing. Kittybombers and Kittyhawks of Nos. 112 and 3 R.A.A.F. Squadrons twice attacked an enemy concentration

near Rotunda Harmat, and on the second occasion saw twenty to thirty enemy motor transport abandoned and unserviceable. No. 3 R.A.A.F. Squadron also bombed enemy tanks and vehicles in the Bir Hacheim area on two occasions. The total number of fighter bomber sorties made throughout the day was between 40 and 50. At 1500 hours the 90th Light Division reported small attacks by day bombers against strongpoints including the Divisional Battle Headquarters.

Enemy air activity was on a reduced scale. Five Me. 110's made an early morning bombing attack on Gambut from high level, five Cr.42's bombed in the battle area, and eleven attempts were made by Stukas in formations of six to nine aircraft with small fighter escorts to attack British forces in the battle area. At least three of these last were abortive. Fighters in sections of three to nine aircraft patrolled the battle area, particularly over the main enemy supply columns. There were three combats between the enemy and our fighters in which four of our aircraft were shot down and four of the enemy claimed destroyed. Total British losses were 11 aircraft destroyed and total claims were five German and one Italian aircraft destroyed. German records, however, show only three aircraft destroyed, two of which were Stukas. Italian figures are not available.

With the outstanding exception of the Boston raid on the 'Commonwealth' strongpoint, almost all the day's attacks were laid on through the air support control, all of whose communications still operated, with the exception of the tentacle with the 8th Royal Tank Regiment. It was later discovered that this had been put to other essential uses such as providing other signals communications and charging facilities for the columns.

#### Establishment of a Defended Axis Position in the Minefield

Panzerarmee  
Diary

The morning of 30 May saw the battle of the cauldron still raging. By noon the enemy had at last forced two gaps through the minefields for the relief of his armoured units in the Knightsbridge area. The northerly gap was at the Trigh Capuzzo near Knightsbridge, while the other was at the Rotonda Ualeb, at the junction of the Trigh el Adb and the Trigh Bir Hacheim, and between them lay a British fortified 'Box', held by the 150th Brigade. In the afternoon, despite desperate efforts by the British to close the gaps, Rommel began to withdraw his armour through them to the westward, covering his retirement, in characteristic fashion, with a powerful anti-tank screen which the British could neither penetrate nor outflank. This screen was established towards evening in a wide arc on the high ground astride the Trigh Capuzzo, with its southern flank resting on the eastern arm of the minefield, so that the armoured brigades which had been operating round Bir el Harmat would have to fetch a very wide compass to the north to outflank it. Although the British armour was thus powerless to close the gaps, the multitude of vehicles traversing the minefields was subjected to heavy artillery fire and intense air attacks. Nevertheless many succeeded in getting through.

This withdrawal was continued throughout the following day, but there were still considerable armoured forces east of the minefield at last light on 31st. In the afternoon of that day Rommel commenced an attack on the 150th Brigade in the defended area between the gaps, and this was maintained persistently until the brigade was overwhelmed on 1 June. Meanwhile the British completed the clearance of isolated Axis units in the area east of Bir Hacheim.

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Report  
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App. 'K'  
A.S.C. Diary

Air activity on these two days was switched from the Bir Hacheim area to the text book target of tanks and motor transport concentrated in the minefield gaps. Here, flak was very heavy, and, in addition, strong fighter cover was necessary against enemy fighter patrols.

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Wing  
O.R.B..

During the morning of the 30th the ground situation was too confused for effective bombing, but in the afternoon enemy forces began massing in large formations at the eastern end of the gaps, awaiting their turn to go through. A maximum effort was asked for against these formations, and No. 211 Group placed the whole of No. 233 Wing's Kittyhawk and Tomahawk squadrons at the disposal of the bombers for escort duties. In the afternoon both the Boston squadrons, attacking the enemy concentrations with nine aircraft each, reported fires, direct hits, and near misses in the target area. Within an hour of their return both squadrons were bombed-up, rearmed and ready to take off again, but such had been the wastage in the fighter force in the previous day's air fighting and ground attacks, that No. 233 Wing, whose squadrons had been allocated to bomber escort duty on this day, could provide sufficient fighters to escort only one squadron again that evening. The attack was most successful. The target, a large concentration of transport moving hurriedly westward, had already been harassed by British artillery and appeared to be in a state of chaos, its vehicles taking violent evasive action from the shelling, and frequently colliding with one another. The explosion of ammunition lorries ignited by the bombs from the Bostons added to the confusion, and many fires were seen. On the morning of 31st the light-bomber landing-grounds at Baheira were dust-bound, and in the afternoon only one operation was carried out when six aircraft bombed vehicles retreating towards Signali. Targets were not so favourable for light bombing on this day as only small groups of transport were found.

Sqdn. O.R.B.s  
M.E.F.O.S., and  
A.H.B./ILJ6/8 -  
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Report

Fighters and fighter-bombers attacked the minefield gaps continuously during 30 May, the latter making approximately thirty sorties while the fighters made over one hundred and seventy sorties in offensive sweeps, ground attacks and escort sorties. During the latter half of the day the fighter-bombers concentrated their attacks on the more northerly gap at Knightsbridge, since it was through this that the bulk of the enemy was trying to escape. The enemy greatly increased his fighter effort during the morning in an attempt to intercept the British air attacks, and during the course of the day, in combat and in ground attack, the British fighter force suffered the loss of twelve fighters for one German aircraft damaged. German records mention repeated attacks on 15th and 21st Armoured Divisions during the morning by fighters and fighter-bombers, and claim four British aircraft shot down. In the afternoon of 30th enemy fighter activity decreased, but Stukas attacked British army units. On one occasion Stukas jettisoned their bombs on sighting British fighters.

On the next day, the fighters maintained a high scale of activity in spite of dust storms, and some thirty fighter-bomber and one hundred and forty low-attack sorties were flown. Losses were heavier than ever on this day, sixteen aircraft being destroyed, chiefly in combat. Seven fighters were missing after a late evening bombing and strafing mission, when the formations heavily engaged by Me. 109's. Another six aircraft were lost in combat after intercepting escorted Stuka attacks. According to German records the Luftwaffe lost only three fighters and two dive-bombers.

The Collapse of 150th Brigade Box

At about midday on 1 June, as a result of heavy and prolonged attacks from the north and north east, the 150th Brigade holding the Ualeb Box was eventually overrun. The liquidation of the last pocket of resistance in the minefield area held by the enemy was effected and Rommel's bridgehead entirely secured and consolidated. How close-fought the battle had been up to this stage is indicated by a statement made after the war by General Bayerlein.

'It all turned on the 150th Brigade Box at Got-el-Ualeb. We never knew that it was there. Our first attacks on it failed. If we had not taken it on 1 June, you would have captured the whole of the Afrika Korps. By the evening of the third day we were surrounded and almost out of petrol. As it was, it was a miracle that we managed to get our supplies through the minefield in time.'

Panzerarmee  
Diary

The enemy air force was very active on this day, and heavy bombing raids preceded the ground attacks on the Ualeb Box. Operations by the Royal Air Force, however, were seriously hampered by dust storms, and policy for 1 June was one of recuperation from the severe drop in strength and serviceability which had resulted from the intensive operations in the Cauldron.

Thus ended the first round of the battle. The enemy had been firmly checked, and his plans were already well behind schedule; however his position in the minefield might prove an advantageous sallying point for a further assault if his flank could be secured. All now depended on a successful and rapid British counter-attack, and the defence of Bir Hacheim.

Survey - The Battle of the Cauldron

A.H.B./IIJ6/8  
and App. 'K'  
A.S.C. Diary

The first five days of the battle were notable in the air for the heavy scale of effort maintained by the fighter force. At the end of the first day's fighting it had become apparent that every available weapon was needed to halt the enemy's advance and since, in the confused ground situation obtaining, bombing attacks at height were, generally speaking, out of the question, it was decided, in agreement with the Army to concentrate a great measure of the fighter effort on ground attack. For the efficient execution of this task, that proportion of the fighter force not retained for the protection of the Army from Stuka attack, was limited for three or four days to flying at not more than 6,000 feet, a condition which, in fact, implied the temporary relinquishment of the battle for air superiority. A situation where such a policy might be necessary had been foreseen before the battle, and both the A.O.C.-in-C. and the A.O.C. were prepared to accept for the limited period the losses which would inevitably follow such tactics.

A.H.B./IIJ1/  
183/146 (C)  
A.O.C./11 -  
Western Desert  
Operations

In this phase of the battle, air participation was aided by close liaison with the Army. Although the swiftly moving battle made it impossible to fix a bomb-line, specific calls for air support were not infrequent and generally information was forthcoming from Army units. In addition, XXX Corps was using its Tactical Reconnaissance fully, No. 208 Squadron flying an average of seven sorties per day; XIII Corps was employing No. 40 S.A.A.F. Squadron to a lesser extent. The reconnaissance reports augmented by

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App. 'L'.

those brought back by fighters and bombers, supplied a constant and up to date picture of the battle. In such circumstances it was possible to supply air support quickly and accurately. The Army Co-operation squadrons operated from as far forward as the landing-grounds at El Gobi and El Adem throughout this period.

With the exception of fighter-bomber attacks, which have generally been clearly defined, it is impossible to compile, under the heading of its various roles, a statistical assessment of this fighter effort, owing to the diversity of tasks undertaken by individual aircraft in the average operation. For example, after bombing had been completed, a fighter escort to either bombers or fighter-bombers frequently added to its primary defensive role that of offensive ground attack against the bombing target. Similarly, fighter bombers frequently followed up their bombing attacks with machine gunning, or fighters, which had found no enemy aircraft to engage on patrols, sweeps or reconnaissance, would expend their ammunition on ground targets before returning to base. With this plurality of tasks, total figures of daily sorties can only give a general indication of the effort involved, and should therefore be treated with reserve. As a general assessment, however, it may be said that over the period 27-31 May inclusive the Western Desert fighter force flew an average of two hundred sorties per day, including a daily average of forty fighter-bomber sorties. This effort was maintained by a force of twelve squadrons, with an approximate initial strength of two hundred and fifty aircraft. Of these, at this stage, only two squadrons were equipped to carry bombs and these seldom had more than eight aircraft serviceable at a time.

A.H.B., W.D.  
Report  
IIJ6/8 App. 'H'.

The fighters made their ground attacks sometimes from as low as nought feet, in the face of considerable enemy fighter patrols. Besides posting these over the battle area generally, the enemy also established extra patrols at first over the ground columns, and later over the gaps in the minefields. In addition, at below 6,000 feet, the fighters were subjected not only to light A.A. fire, but, at lesser heights to considerable small arms fire, and these, as well as the enemy patrols, took their toll. Thus, inevitably, the casualty rate of the fighter force was extremely high, both in proportion to its strength and to the number of sorties flown. In five days, out of an initial strength of some two hundred and fifty aircraft, fifty had been lost in the course of one thousand sorties, reducing the field fighter force by twenty per cent, at a rate of one aircraft every twenty sorties. An illustration of the rate of wastage in the fighter squadrons was given on 30 May when targets suitable for bomber attack, which had hitherto been rare, were provided by large concentrations of the enemy which were massing at the gap in the minefields awaiting their turn to go through. The whole of No. 233 Wing was put to the task of escorting the bombers during the afternoon, but even so the bombing programme had to be considerably modified owing to the shortage of fighter escorts.

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Intsums and  
Opsums in H.Q.,  
R.A.F., M.E.  
Air Staff Apps.  
to O.R.B.

As a result of the fighter offensive effort which was augmented by some eighty light-bomber sorties which expended fifty-two tons of high explosive the Western Desert Air Force claimed to have taken a considerable toll of enemy motor transport in the battle area, and to have severely hindered the arrival of supply columns moving up to replenish the operational units. A daily average of one hundred and fifty vehicles was claimed destroyed or damaged, but no accurate assessment could be made, although the Army

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confirmed that the effect of the air attacks was very great. The fighter force appeared to cause the greatest havoc in the early stages of the offensive where columns were spread out and consequently had but poor A.A. protection; in this period burning motor transport was a general feature, although unfortunately .5 incendiary ammunition was extremely scarce and reduced the effectiveness of the attacks. Incidental to the value of the fighter-bomber attacks was the amount of information brought back by this force. The reports were so accurate that during this battle, while other sources of information were scarce, the R.A.F. used them exclusively for planning operations.

No figures of the damage inflicted by air attacks are available in enemy documents, although some individual reports by British ex-prisoners of war were collected. However, the following statement by General Bayerlein<sup>(1)</sup> illustrated how nearly the combined British ground and air attacks defeated Rommel at the Cauldron.

'Rommel' by (2)  
Desmond Young

'When we had failed to capture Bir Hacheim and failed to get a passage through the minefield, both of us (Generals Bayerlein and Nehring) begged Rommel to break off the battle, but he wouldn't hear of it..... We were in a really desperate position, our backs against the minefield, no food, no water, no petrol, very little ammunition, no way through the mines for our convoys, Bir Hacheim still holding out and preventing our getting supplies from the south. We were being attacked all the time from the air. In another twenty four hours we should have had to surrender.'

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- (1) At this time Bayerlein was Chief of Staff to Rommel and Nehring Chief of Staff to the Afrika Korps.
  - (2) Primary source not yet available.

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PHASE II. THE SIEGE OF BIR HACHEIM & THE BRITISH COUNTER ATTACK  
AT KNIGHTSBRIDGE. 2 - 10 JUNE

Recuperation of the Fighter Force

With the annihilation of the 150th Brigade on 1 June, the stage was set for new developments in the battle. Rommel was now established in a firm bridge-head in the middle of the British positions, behind an effective barrier of anti-tank guns and minefields. However, while his position formed a valuable rallying point for a further offensive, he had so far failed to reduce the stronghold at Bir Hacheim, and it would have been a hazard of some magnitude to commit the Panzer Army to a further advance while this threat to its flank still existed. In addition, although the British armour had failed to drive the enemy back to his former positions, it had successfully frustrated his initial advance, was undefeated in the field and numerically it still equalled the Axis armour. Although the enemy position in the minefield was too strong to give way before anything less than a full scale counter-attack, such an attack had a good chance of success as long as Bir Hacheim was in British hands.

Unfortunately the British armoured formations were not sufficiently recovered to make an immediate counter-attack and so they were granted until 4 June to make their preparations and to receive reinforcements. This gave Rommel valuable respite for the further fortification of his bridgehead position and for bringing up reinforcements. At the same time he was able to recommence operations against the Free French garrison at Bir Hacheim.

With the temporary subsidence of the battle, and the withdrawal of the main enemy force into an area large enough for dispersal and adequately provided with A.A. guns, a halt was called to the British low-flying air attacks, a timely decision in view of the expensive nature of this close support. Approximately fifty fighters had been shot down between 27 and 31 May (inclusive), representing approximately twenty per cent of the field fighter force, and, to make replacement more difficult, the Middle East reserve of Kittyhawks was very low. On 31 May the A.O.C. reported that in spite of careful conservation in the weeks before the battle, the two Kittyhawk wings showed a deficiency of thirty-two Kittyhawks and eleven Tomahawks. Of a total of twenty-one aircraft per squadron, excluding forty-seven under repair requiring three days or more, this reduced the average daily serviceability of the squadrons to 7.5 aircraft.

A.H.B./IIJ1/  
 183/146 A.O.C./  
 11 Western  
 Desert Ops.  
 Encl. 161  
 Signal  
 A.O.C. 684

A.H.Q. W.D.  
 Report A.H.B./  
 IIJ6/8 & Sqdn  
 O.R.B.s.

In early June several changes were made in the composition of the Western Desert Air Force. On the credit side reinforcements included two 'surprise' weapons, a flight of Spitfires, and some Hurricane IID tank-busting aircraft which were as yet untried in operations. These belonged to Nos. 145 and 6 Squadrons respectively, and commenced operations on 1 and 6 June. A further addition was No. 213 Hurricane Squadron, while No. 223 Baltimore Squadron returned from refitting of the rear guns and recommenced operations on 7th. No. 80 Squadron, which had suffered severe casualties was replaced by No. 238 Squadron, but the latter, which had previously been employed on shipping patrols in the Sidi Barrani area, lacked training

A.H.B./ILJ1/  
183/146 A.O.C./  
11 Western  
Desert Ops Encls  
158a & 159a  
Signals A 834 &  
A 650

and experience in air fighting and had to be 'nursed' considerably before it could be employed on operations. In addition, the A.O.C. asked for a detachment of Beaufighters from the coastal squadrons under No. 201 Group, to operate regularly against communications in the rear of the enemy's main forces, but this could not be spared; in fact No. 201 Group itself was deprived of the Beaufighter squadrons at this time as they had to be withdrawn from operations to build up their serviceability in preparation for escorting the west-bound convoy to Malta which was due to sail on 11 June. Furthermore, to increase the fighter cover for the convoy, No. 250 Kittyhawk Squadron was also withdrawn from the battle, on 10 June, and was fitted with long-range tanks.

The arrival of the Spitfires was rather a token of improvements to come than a radical improvement in the existing fighter force. As the aircraft were in the nature of a surprise weapon their employment was at first deliberately restricted. Their task was to maintain patrols at height, often as top cover to Hurricanes, to jump the enemy fighters, deliver their attack and then make off quickly without staying to fight. Although they were few in numbers, employed in these tactics they were a valuable support to the Hurricanes in air fighting; their mere presence in the battle meant that for the first time the enemy fighter pilot had to look over his shoulder.

A.H.Q. W.D.  
Report A.H.B./  
ILJ6/8

#### Revival of Anti-shipping Strikes

It was at this stage in the battle that another important factor, this time in the strategic sphere, began to make itself felt once again. On the night of 30/31 May the Italian merchant vessel, the S.S. Allegri, was sunk in the Gulf of Sirte, and four nights later a second vessel, the S.S. Giuliani, was sunk north of Benghazi. These events marked the beginning of a gradual but very effective revival in the air offensive against Rommel's sea supply lines. It was made possible largely owing to the rapid re-establishment of Malta as an offensive base only two months after the peak of the Axis blitzkrieg against the island, and in the face of acute supply difficulties.

A.H.Q. Malta,  
No. 201 Group &  
Sqdn O.R.B.s.  
& enemy  
documents A.H.B.  
(6)

Of these two sinkings, that of 30/31 May was achieved by a Wellington of No. 221 Squadron<sup>(1)</sup> operating from Malta, which dropped five bombs on a merchant vessel about one hundred and eighty miles west of Benghazi. The aircraft claimed near misses only, but enemy documents record that the S.S. Allegri (6836 G.R.T.) was sunk in that locality on 31 May "By aircraft torpedo." The vessel was bound for Benghazi, carrying motor transport and wireless equipment. The S.S. Giuliani (683 G.R.T.), carrying five hundred tons of fuel oil was sunk over some hundred miles north of Benghazi on the night of 3/4 June, after two attacks, both from Egypt, the first by two torpedo Wellingtons and the second by a Beaufort. A hit was claimed in each attack. In the middle of the month, Beaufort torpedo-carrying aircraft, with Beaufighters for escort duties were based on Malta in support of convoy operations for the supply of the

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(1) The Wellingtons of this squadron were specially equipped for shipping searches with A.S.V. apparatus. For technical details see A.H.B. Monograph, Signals, Volume VI.

Ibid.

island. These aircraft remained at Malta for shipping strikes, and on 21 June, nine Beauforts with Beaufighter escort attacked a convoy of two merchant vessels and escort south of Cape Bon. In their first attempt the aircraft failed to find the ships, but in the second, despite fierce fighter opposition, two hits were scored on the motor vessel Reichenfels, which sank immediately. According to enemy documents the fighter escort consisted of two Italian fighters and one Ju 88 which was shot down during the action. The convoy was bound for Tripoli but the cargo of the Reichenfels is not known.

H.Q., R.A.F.  
Malta O.R.B.

The re-employment of the Beauforts at Malta was an important feature in the offensive against Rommel's supply lines, for these aircraft, with the Beaufighters, operating by day were to take a heavy toll of enemy supply ships to North Africa in the summer months. Significant too was the introduction of a new anti-shipping aircraft, the torpedo Wellington, which, operating from both Malta and Egypt was to be equally successful in night attacks. The new Wellingtons had been converted to torpedo carrying as a result of experiments carried out since January 1942, when it had been decided to provide locally for the need for a long-range torpedo aircraft. When experiments proved satisfactory, a torpedo training school had been started, and No. 38 Squadron was equipped with Wellingtons capable of carrying two torpedoes. By the end of May there were eleven Wellingtons and fourteen crews operational.

While comparing favourably with the single sinking at sea during the whole of the period 27 February-26 May, the successes in the battle period were not in themselves adequate to produce an immediate effect on the Axis operations in the desert. Nevertheless, enemy documents show that they were regarded with anxiety by the more strategically-minded of the Axis commanders, and that, had events in the desert in June proved less favourable to Rommel, they might well have been the cause of a more cautious policy in North Africa at this stage, and a correspondingly active policy against Malta; the full-scale invasion envisaged in the plan for Operation Hercules might well have resulted in the capture of the island.

#### The Re-opening of the Assault on Bir Hacheim

In the afternoon of 2 June, the comparative lull of the past thirty-six hours was ended, when, after calling in vain upon the Free French Garrison to surrender, the Italians resumed their attacks on Bir Hacheim. For the next two days the fighter effort was expended solely on reducing the scale of effort against this strongpoint.

Kittyhawks were operating early on 3 June, and a total of forty-five fighter-bomber and fighter machine-gun sorties were flown against enemy forces in response to calls for air support. In addition frequent fighter sweeps were maintained over the battle area. On the morning of the next day, when no good targets were available for either fighters or bombers, the fighters were employed in intercepting enemy bombing attacks on the garrison. Over the two days the effort of the Luftwaffe against the strongpoint was considerable, and included twelve heavy Stuka attacks. At least four of these were intercepted although they were nearly all provided with a fighter screen which patrolled over the Acroma - El Adem area while the raid was in progress. British claims for 3 and 4 June were

patrolled over the Acroma - El Adem area while the raid was in progress. British claims for 3 and 4 June were fourteen Ju. 87, one Ju. 88 and three fighters.

At midday on 4 June, Army Intercepts reported that the enemy planned to carry out a ground attack supported by Stukas at 1300 hours.<sup>(1)</sup> There were no Boston targets so Kitty-bombers were employed in ground attack operations, Nos. 112 and 3 R.A.A.F. Squadrons together completing thirty-two bombing sorties against enemy columns attacking Bir Hacheim. At the end of the day a tribute was paid to the fighter effort by the Free French Commander, General Koenig, who signalled, 'Bravo! Merci pour la R.A.F.'

The German Panzerarmee diarist commented as follows on the day's fighting:-

'90th Light Division, after strong artillery preparation, attacked the fortress of Hacheim at 0600 hours. From the fortress-like prepared strong points, the enemy once more offered such fierce resistance that the attack had to be discontinued.'

Throughout the whole of the attacks against Bir Hacheim, between 2 and 10 June, the area round the fortress was constantly watched by No. 208 Tactical Reconnaissance Squadron which flew an average of seven sorties per day, and an accurate picture of the enemy's penetration of the minefields and his approach to encircle Bir Hacheim was supplied to XXX Corps through visual and photographic reconnaissance. Between 7 and 10 June, encounters with enemy fighter patrols in the Hacheim area became a regular occurrence and resulted in damage to the reconnaissance aircraft, but escorts were provided by other aircraft of the squadron, and provided an effective defence.

#### The British Attack at Knightsbridge

After the unfortunate but apparently unavoidable delay of three days, the British counter-attacks against the enemy bridgehead in the minefields was launched on the night of 4/5 June. The assault was planned to take place in a pincer movement formed by two thrusts, one from the north against Sghifet es Sidra, and the other, the main thrust, from the east against the Aslagh Ridge. The aim of the main thrust was to seize ground around Got el Scarab and to open a corridor through which the armoured brigades could pass behind the enemy and close the minefield gaps, supported from the north by flanking fire from the forces making the secondary thrust.

The northern thrust was a straightforward operation, and had it taken place on 1 June, as General Ritchie had originally intended, it might have succeeded. As it was, by the night of 4 June the enemy had had time to fortify the ridge strongly and could afford to support his garrison with tanks. On being attacked by enemy armour, the British tanks ran on to an uncharted minefield, 50 out of 70 were lost, and the force was thus unable to support the infantry when, in turn, it was attacked by enemy tanks. As a result the infantry was pinned down short of its objective.

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(1) This is not supported by the Panzerarmee or D.A.K. Diaries.

The eastern thrust, whose initial attack was preceded by light bombing was at first successful. The Aslagh Ridge was captured and artillery moved up to support the tanks as they passed through. After advancing, however, the tanks failed to support the infantry when it was attacked and pushed back, and then suffered heavy casualties themselves when engaged by enemy armour. Rommel's reaction to the attack was, in fact, very vigorous, and after desultory fighting which lasted all day, a strong detachment of the enemy worked round the southern flank of the position on the ridge. On the following day enemy columns made a strong counter-attack in which the British positions on the ridge were overrun with heavy losses, and a fierce armoured battle developed in the Knightsbridge area. Both the Panzer divisions, and all three British armoured brigades took part, but neither side gained the advantage. The tank fighting died down, and although on 7th the enemy appeared to be concentrating for a further thrust, this did not develop.

#### Air Activity in Support of the Counter-attack

No. 3 S.A.A.F.  
Wing O.R.B.

The early morning Boston attack on 5 June, preceding the main British assault, had been planned in detail between No. 3 S.A.A.F. Wing and the Army, in the evening before the battle. The target, an enemy strongpoint south of the Aslagh Ridge, was attacked by 6 Bostons operating individually; they were assisted in locating the target by nine white petrol flares laid out by the Army in the shape of a V pointing towards the enemy's dug-in positions, and at a distance of about four miles. The Bostons were over the target for fifteen minutes, the last aircraft finishing its attack one minute before 0530 hours, zero hour for the ground attack. The bombing in this well-timed operation was successful, and the strongpoint was quickly taken by the Army.

A.H.Q. W.D.  
Report A.H.B./  
ILJ6/8 App 'K'  
A.S.C. Diary

Generally speaking, in the cauldron area during this phase of the battle, targets were acceptable only if suitable for bombing attacks. During the fighting following the British counter-attack however, very few bomber targets were forthcoming, owing, as usual, to the rapidly changing positions of the opposing forces, which made it impossible to give a bomb-line. One raid per day constituted the bomber effort, although the Bostons were kept at readiness in the expectation of support calls. Air policy was in any case conservative, as it was necessary to husband resources until a definite enemy threat developed, and this applied particularly to the fighter-bombers. Thus in the first day of the attack fifteen requests for air support were turned down, while the fighter force limited its activity to offensive sweeps and patrols between Bir Hacheim and Knightsbridge. Even these bore little fruit, although Axis fighters patrolled in sections during the morning, and one Stuka attack on Acroma, and two bomber attacks on Knightsbridge were made in the afternoon. On 6 June however, targets suitable for fighter-bomber attack were provided by enemy supply columns moving east in the rear of the Axis forces in the main battle area. Low cloud assisted the Allied fighters, and about one hundred and fifty sorties were flown by the Kittyhawks, of which nearly half were bombing sorties, and of these all but eighteen were directed against the cauldron area. The additional eighteen sorties were flown against enemy troops in the Bir Hacheim sector, where the Free French repulsed three enemy assaults. The day's flying was estimated to have cost the Axis some seventy vehicles destroyed or damaged.

A.H.Q., W.D.  
Report A.H.B./  
ILJ6/8

The main air activity on 7 June was again directed against the cauldron area where the enemy armour was still active, and in fact, giving every indication that a major attack was imminent. In the early morning, targets came in so slowly through the normal ground channels, that a fighter sweep with tactical reconnaissance was made. As a result, good targets were established by 1000 hours, and the Kittyhawks were then put on to them with instructions to bomb but not to strafe. Over sixty fighter-bomber sorties were flown against motor transport and motorised infantry, including two raids by Hurricane bombers, and it was estimated that a hundred vehicles were destroyed in the day's attacks.

Nevertheless despite the pressure of land and air attacks, the enemy remained firmly established with his armour round Knightsbridge, constituting a threat to Tobruk which at no time could be disregarded. The consequences of the British counter-attack were very different from what had been hoped.

The enemy air force again maintained fighter patrols of about four to six aircraft in the Acroma-El Adem - Hacheim areas, and escorted Stuka attacks against Acroma were reported at 1100, 1200, and 1330 hours.

#### The Fall of Bir Hacheim

The failure of the Eighth Army's counter-attack on 5 and 6 June was probably the turning point of the battle. Until then the chances of destroying Rommel's army had seemed good. The enemy's firm parry, followed up by a strong thrust towards Knightsbridge where his army directly threatened Tobruk gravely altered the situation. Even so it did not at once become necessary to evacuate the Gazala line or to abandon all hope of eventually making a counter-offensive. The British tank force was believed to be as yet equal in numbers to that of the enemy, and its prospect of obtaining reinforcements as good if not better than his; but time was needed for reorganisation, and the Axis powers of recuperation seemed greater than ours. For, while for the time being General Ritchie had to be content with small-scale offensive activity against the enemy's lines of communication, removing the 7th Motor Brigade from the defence of Bir Hacheim for the purpose, Rommel was able to strengthen his assaults on Hacheim while still maintaining his newly won position in the Knightsbridge area.

During the course of the armoured battles on 5 and 6 June, the Free French had repulsed several attacks against the strongpoint at Bir Hacheim, although the enemy gained some ground, and even on the 7th, when greater pressure was exerted with the support of a few tanks, the enemy had made no appreciable improvement in this position. Moreover, the garrison enjoyed a welcome respite from air attacks on 5 and 6 June, except for one visit by a few Me. 109's on the 7th. On the following day however, the last onslaught began.

The massed Axis armour in the Knightsbridge area which hourly was expected to attack, made no move on 8th, but instead, a major assault was launched on Bir Hacheim. In the morning an attack supported by thirty-seven tanks was made from the north, and in the afternoon the enemy shelled the northern defences. Meanwhile there was a general movement southward from the Knightsbridge area, and at

1900 hours a further attack, assisted by thirty-seven tanks, was launched against the northern flank of the defences. During these attacks the enemy inflicted heavy casualties on the defending gun crews, and by late evening the situation was regarded as serious.

#### Air Support at Bir Hacheim

A.H.B./ILJ1/  
183/146 A.O.C./  
11 W.D. OPS  
Encl 188a Report  
by Ops Liaison  
Officer

Sqdn. O.R.B.s &  
M.E.F.O.S. &  
A.H.Q. W.D.  
Report A.H.B./  
ILJ6/8

On 8 June, early morning reconnaissance was made for targets and gun positions in both the Cauldron and Bir Hacheim areas, but although a Boston attack was directed against the Cauldron during the morning, the main force was kept in hand while the Army decided which area was to receive priority. Upon the enemy's attack, the decision was made in favour of Hacheim in the middle of the morning, and two operations were carried out by mixed formations of Kittybombers and Hurricane IId tank-busting aircraft. This was the first attack ever to be made by these Hurricanes, so the sortie was of particular interest. The results were mixed; while in their two attacks the tank-busters claimed two tanks destroyed and two others probably destroyed, they themselves lost two aircraft, one to anti-aircraft fire.<sup>(1)</sup> A Kittybomber also claimed one tank destroyed with a direct hit by a bomb. Altogether seventy-two sorties were flown by fighter-bombers, all in the Bir Hacheim area, five aircraft being lost.

Throughout the day the Free French were subjected to increasingly severe air attacks, including two attacks by approximately twenty-five Ju. 88's, and one Stuka attack, while enemy fighters maintained continuous patrols over Bir Hacheim and between Acroma and Carmuset. British fighters did not succeed in intercepting any of the bombing raids but in encounters with enemy fighters they claimed three Me. 109's and one M.C. 202 destroyed for the loss of three aircraft. Enemy records show one bomber destroyed but also two fighters 'not through enemy action'. The British fighter effort of three hundred and fifty-seven sorties reached the highest day's total up to this date in the Desert.

On the following day, 9th, the enemy maintained his pressure on Bir Hacheim, but in the evening units in the northern sector withdrew after a successful French counter-attack. British units operating against enemy supply columns east of the minefield also enjoyed some success. The Axis air effort against Bir Hacheim was again very heavy, and included three Stuka attacks, none of which was intercepted.

British air policy on this day was to restrict operations in order to build up serviceability which had fallen sharply as a result of the intensive activity of the previous day. Fighter-bombers made some twenty-five sorties, but this was the only air activity against ground forces. In engagements with Axis fighters on patrol or escorting bombers, the fighters claimed five Me. 109's destroyed for the loss of two aircraft. Enemy records show three fighters and one bomber destroyed.

(1) An account of the operational value of the Hurricane IId in this campaign is given at page 217.

On 10 June General Ritchie decided to evacuate Hacheim. Enemy pressure was persisting in the south despite the efforts of the armour to relieve it, and the resistance of the garrison was being worn down. From the north, shelling was maintained throughout the morning, and at 1300 hours a very heavy air attack was made on the fortress by twenty Ju. 88's and forty Ju. 87's, with about fifty Me. 109's and Me. 110's. Shortly afterwards a fresh ground attack developed against the northern face of the defences, but although Axis units succeeded in penetrating a short way, by 1600 hours the situation was reported to be in hand.

The R.A.F. made forty-six fighter-bomber sorties and several interception sweeps, all in the Bir Hacheim area, the latter resulting in the destruction of two Junkers 87 for the loss of three fighters. All the Junkers were claimed shot down during a single attack, the other two attacks escaping interception altogether. Actual German losses however were one single-engined fighter, one Stuka and one reconnaissance aircraft. Enemy fighters continued to patrol the battle area during the day. When night fell the evacuation of the garrison was commenced, and by the morning two thousand men had been safely withdrawn, and others were still making their way out.

#### Survey: The Defence of Bir Hacheim

The enemy re-commenced his attack on Bir Hacheim on 2 June, and the fortress was evacuated by the Free French garrison on the night of the 10th, after nine days of generally persistent pressure from both ground and air. For the three days of 5, 6 and 7 June, the garrison enjoyed a respite from the otherwise constant air attacks, during the British counter-attack at Knightsbridge and the subsequent armoured battles developing from it, when the air effort of both sides was diverted to that sector of the front. For the remaining six days it was the task of the fighter force to defend the strongpoint from air attack, and to harass the enemy columns executing the ground assault. The statement of a contemporary report that the fighters 'adopted' Bir Hacheim gives a fair indication of the absorption of the fighter force in these tasks to the exclusion of all others.

On 2 June, dust conditions placed a general restriction on flying, but on the next day the Luftwaffe began the air offensive against Bir Hacheim with a series of small scale Stuka attacks of about twelve to fifteen aircraft, carried out at frequent intervals during the day. This method was continued on the following day, but from 8th to 10th, while becoming less frequent, the raids greatly increased in size, until, on 10 June, in addition to two attacks of not less than thirty Stukas each, a formation of over one hundred aircraft including forty Ju. 87's and twenty Ju. 88's was mustered over the target at one time. Throughout the whole period of air attack, the bombing raids were heavily protected by fighters which usually came over ahead of the Stukas and formed a protective screen over the El Adem area to intercept British fighters approaching from Gambut. In addition standing patrols were frequently posted in the Bir Hacheim area.

Against this heavy Axis air effort, over the five days the British fighters flew some six hundred sorties on offensive sweeps, an average of one hundred and twenty per day, besides keeping aircraft at readiness at Gambut to intercept

A.H.Q. W.D.  
Report A.H.B./  
IIJ6/8

Ibid. & Sqdn.  
O.R.B.s,  
M.E.F.O.S. &c.

Enemy  
Documents  
A.H.B.6.

raids picked up by radar. Many actions developed with enemy fighter patrols, which were maintained on a high scale, but bombing raids were intercepted to a lesser extent. Over the period the air force claimed fifteen Ju. 87's, eleven Me. 109's, and four Italian fighters destroyed for the loss of some twenty fighters, a few of which were shot down on offensive ground attack operations. According to German Air Ministry returns, actual German losses, <sup>(1)</sup> were nine dive-bombers, four bombers and seven fighters, with two dive-bombers, two bombers and one fighter damaged; unit returns show little deterioration in serviceability. From high level German documents it would appear that the Fliegerfuhrer Afrika took these losses seriously. On 4 June, after the loss of nine Stukas during this and the previous day, he described them as heavy. This term may however have been used to impress the Panzerarmee, for on this day both Waldau and Kesselring complained that although the bombing of Bir Hacheim had been successful, its value was small as it was not being followed up by effective ground action. On the 10th, Waldau refused to provide bomber attacks in waves with fighter protection, <sup>(2)</sup> because this form of attack inevitably led to heavy losses.

Nevertheless, whatever the reaction of the Fliegerfuhrer Afrika to the losses, and they represented 17 per cent of his Stuka serviceability and 11 per cent of his fighter serviceability, from the British point of view the interception of the attacks on Bir Hacheim was generally speaking unsatisfactory, in marked contrast to the successes of the previous weeks. The Germans flew well over one thousand sorties against the strongpoint, yet only some thirty aircraft were claimed shot down. The bulk of the claims of Ju. 87's destroyed were made as the result of only two interceptions, on 3 and 4 June, when the German attacks were small and frequent. Seven and six Stukas respectively were claimed destroyed on these two days; a further two Stukas were claimed in a single interception on 10 June. Thus, while actual air fighting was on occasion satisfactory, interception was too infrequent to provide adequate air defence. In all, only six out of at least twenty-four raids on the strongpoint appear to have been intercepted, although fighters were kept at readiness at Tobruk, and frequent fighter sweeps were flown over the Bir Hacheim area. The defensive tactic of maintaining standing fighter patrols over the fortress was not practicable because, excluding the fighter bombers and their escorts, the strength of the fighter force was insufficient for the purpose, especially in view of the heavy fighter escorts and patrols provided for the protection of the enemy bombers, against which patrols of less than two squadrons would have been ineffective.

A.A.H.Q. W.D.  
Report A.H.B./  
IIJ1/122/81  
No. 211 Group  
War Diary

Probably the most potent factor which contributed to the failure of the fighter force to intercept the enemy raids was the withdrawal of the forward radar C.O.L. unit at Gazala. This unit, with its sixty-mile range and low 'vision' capable of detecting low-flying aircraft, was at that time the only one of its kind in the Desert, and had contributed towards a large number of recent fighter interceptions, particularly during the period preceding the

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- (1) Italian Loss Figures are not available.  
(2) This presumably means that the bombers had sometimes relied solely on local fighter patrols for their protection, but in any case it contradicts the A.H.Q., W.D.

No. 510 A.M.E.S.,  
O.R.B. &  
information  
obtained from  
Group Captain  
Tester

No. 211 Group  
Apps to O.R.B. &  
A.H.B./IIJ1/105/  
33 9th U.S.A.F.  
Report on  
Controlled  
Interception

A.H.Q., W.D.  
Report A.H.B./  
IIJ6/8 App 'K'  
A.S.C. Diary

enemy's offensive. Its specialised equipment made necessary very thorough precautions for its safety, and following the deterioration of the situation caused by the failure of our counter-attack, it was withdrawn from Gazala on 7 June. It returned to Gazala on the 13th only to be withdrawn again, this time finally, on the following day. Thus, during the early days of the assault on Tobruk, when interceptions were fairly frequent, and enemy casualties appreciable, this unit was operating, but during the critical period of the last few days when raids grew steadily bigger, it had been withdrawn from operations, and by approaching their target at a low height, enemy aircraft could and did escape detection by the remaining C.O.L.s at Gambut and Tobruk. A further difficulty was the frequent breakdown of the telephone system between No. 211 Group and its fighter wings, caused by enemy air attacks which cut the overhead wires, and by the passage of British vehicles over ground cables. The substitution of the telephone system by W/T involved delays in the transmission of messages so that the fighter wings frequently had to act on their own initiative without the full and co-ordinated information available at Group. Finally, the strong enemy fighter patrols maintained over the battle area frequently diverted the British fighter sweeps from the Stuka formations.

Because of the importance of intercepting the Stuka raids, ground attacks by fighters against the enemy columns attacking Bir Hacheim constituted a minor commitment. Throughout the five days of the enemy's main attacks on Bir Hacheim, however, requests for air support in the Cauldron area were continually refused in favour of concentration of the effort in support of the garrison. In addition, particularly towards the end of the period, on several occasions, fighter bomber attacks were directed against enemy gun positions bombarding the fortress, although these were not considered a fair target. It was considered that their moral effect on the garrison justified the risk to the fighters in this particular case, and, incidentally, the attacks also appeared to cause a certain amount of material damage.

Generally speaking, the policy was carried out of answering, as a minimum effort, specific calls for air support from the Free French whenever possible. In addition, the fighter-bomber effort<sup>(1)</sup> was stepped up from approximately thirty sorties on 3 and 4 June to about ninety sorties on 8 June, when it appeared that the investing forces were receiving reinforcements from the north, and to fifty sorties on 10th, when every effort was required to sustain the morale of the garrison pending the withdrawal.<sup>(2)</sup> On the 9th fighter activity was cut down to a minimum in order to raise serviceability which had fallen as a result of the previous day's operations, but even so, over the five day period, the fighter effort expended on ground attacks, including escorts to fighter-bombers, was over three hundred and fifty sorties, or an average of over seventy per day.

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- (1) No. 274 Squadron recommenced operating Hurribombers early in June. These aircraft at this stage carried two 250 lb. bombs.
  - (2) Figures for fighter ground attack sorties are not available.

The fighter offensive effort, with the fighter sweeps, amounted to a total of 950 sorties, an average of approximately two hundred per day, which was maintained by a force which had recently suffered heavy losses of up to twenty per cent of its original strength. The casualty figure of twenty aircraft lost in these operations was however a welcome improvement on the casualties sustained over the previous period of intensive ground attacks.

H.Q., R.A.F.,  
M.E. Report  
A.H.B./IIJ1/  
159/20

Panzerarmee  
Diary &  
Appendices

Enemy Documents  
A.H.B.(6)

Despite the considerable weight of air attack on Bir Hacheim, the garrison eventually withdrew as a consequence, not so much of dive-bombing, as of over-whelming and accurate artillery fire, which resulted in the capture of one after another of the French positions. Hacheim was not in fact a target particularly suitable for dive-bombing, for the garrison carried out their defensive activities from numerous slit trenches and well-fortified positions against which anything less than a direct hit had little effect. In any case, artillery and infantry attack supported perhaps by carefully timed air attack, should have been adequate for the task, and it was a measure of Rommel's poor understanding of the role of a tactical air force that the Luftwaffe was employed to such a large extent against what was, in fact, an Army target. Kesselring and Waldau both appear to have been aware of the inadequate co-operation of the Army in backing-up the air attacks with ground sorties, and twice they complained of it to Rommel, asking specifically for armoured assaults. Rommel's reply that the use of the armour was out of the question owing to the extensive mine-fields may have been justified, but it implied that his policy remained unaltered, that as he had declared on 5 June, he intended to compel Bir Hacheim to surrender by bombing attacks and artillery fire, a method bound to impose an unduly heavy burden on the Luftwaffe. Thus, against this target the Luftwaffe expended over one thousand sorties in six days, and although losses were relatively low, and serviceability remained stable, the operations evidently placed a considerable strain on the air units, and stretched them to the utmost.

Although the fall of Bir Hacheim was a serious development for the British, it was more costly a victory than Rommel had bargained for. In his original plan the Axis commander had hoped to destroy the British forces west of Tobruk by the evening of the second day of the battle, but the garrison had frustrated the first attempts on 27 May, and when the attack had been renewed on 2 June, the fortress had held out for a further nine days. A German document states:

A.H.B.(6) Trans  
VII/II Study by  
8th Abteilung  
Oct. 1944

'This fortress held out for nine whole days against an attack of nearly three Divisions and three Reconnaissance Battalions, supported by about 1,500 aircraft. This meant a nine days gain for the enemy and for our army and air force nine days of losses in material, personnel, aircraft and petrol. Those nine days were irrecoverable'.

Although the enemy continued to press his offensive without pause until after the capture of Tobruk, it is reasonable to suppose that in the long run these nine days sapped the strength of the Panzerarmee, and diminished the speed of its advance particularly before and during the withdrawal of the British from the frontier, while there is direct evidence to show that the concentrated operations of the Axis air forces against Bir Hacheim, together with those against Tobruk, led to the collapse of Axis air activity during the British withdrawal.

PHASE III - THE ENCIRCLEMENT OF TOBRUK 11-19 JuneThe Deafeat of the British Armour

With Bir Hacheim behind him, Rommel lost no time in resuming his main thrust towards Tobruk from his central position in the Knightsbridge area. On 11 June the greater part of his armour made a general movement eastwards towards El Adem, and tank clashes occurred as the British resisted the advance. By midnight the 90th Light Division was disposed in an area some nine miles south of El Adem with the 15th Panzer Division to the left of it, and the Trieste echelon in the rear, guarding the left flank. British infantry held a defended locality on the ridge south of El Adem, and the 2nd and 4th Armoured Brigades lay immediately to the west with orders to destroy the enemy armour; columns of the 7th Motor Brigade and the 11th Indian Infantry Brigade under the 7th Armoured Division were in the south ready to attack the enemy's south and east flanks, and at Knightsbridge the 22nd Armoured Brigade watched the 21st Panzer and Ariete Divisions which had not yet moved from their positions west of Bir Harmat.

On the following day the 90th Light Brigade attacked the British infantry on the Batruna ridge south of El Adem without success, but captured the airfield to the north of the position. The 15th Panzer Division then swung northwest to meet the two British armoured brigades, and, in a battle lasting until nightfall, the British armour was forced back some four miles north of the ridge. The 90th Light Division took advantage of the situation to establish a series of defended posts along the ridge.

On 13 June, after a quiet morning, the 15th Panzer Division returned to the attack, engaging the British armoured brigades in the area Maabus es Rigel and Hagiag el Raml. Soon the 21st Panzer Division was thrown in from the west, and the 22nd British Armoured Brigade also joined in the battle. When evening came the enemy had gained possession of both these ridges, and was consolidating the extended line of posts he had secured on the Batruna Ridge.

This battle was the culmination of the armoured fighting which had been going on intermittently since 27 May. At its conclusion the British armour in the Acroma area was reduced to thirty cruiser and twenty infantry tanks, while the enemy was believed to possess at least twice that number. Moreover the Eighth Army had lost the inestimable advantage of being able to recover its damaged tanks from the battle area.

Air Activity 11-13 June

During two of the three days of this vital armoured battle, air support was considerably limited by unfavourable ground dispositions and by the weather, and only on 12th did operations reach a high level. On the morning of 11 June no targets for ground attack were given until midday, and the first bombing raid of the day was made in the afternoon. The target, a concentration of motor transport in the Knightsbridge area was so successfully bombed despite heavy A.A., that a second attack was made later, when part of the Kittyhawk escort also bombed. Fires and a large explosion were reported but two fighters were lost. Four other requests for support were not answered. The Panzerarmee diarist recorded that the bombing and low-flying attacks,

No. 3 Wing  
S.A.A.F.,  
O.R.B.

some of which were directed against Army Battle Headquarters, caused some losses in dead and wounded.

Fighter activity was chiefly concerned in the morning with the protection of the forces evacuating Bir Hacheim, but there heavy cloud and no enemy aircraft were sighted before 0900 hours, by which time a great part of the garrison had safely withdrawn. Meanwhile No. 233 Wing was at stand-by for a call to bomb enemy airfields, in case of a massed air attack such as that at Bir Hacheimon the previous day. The enemy air force was active, though chiefly in the northern sector, where fighters maintained patrols of from four to eight aircraft, with occasional sweeps to Bir Hacheim or El Adem. Two Stuka attacks were made in the Knightsbridge area and another on the Tobruk perimeter, while high level attacks were made at Acroma. In addition, Me. 110's bombed and strafed west of El Adem.

A.H.Q., W.D.  
Report  
A.H.B./ILJ6/8

On 12 June, the day on which the enemy armour commenced the attack on the British positions on the Batruna Ridge, there were suitable targets for both bomber and fighter operations and air activity achieved a new high scale of intensity, both bombers and fighters being heavily employed on offensive operations on the same day. This was a new experience in this battle, and a forerunner of a three-day period of even greater operational activity which was to commence on 15th. Afternoon and evening reconnaissance on 11 June had reported that the 15th Panzer Division had moved towards El Adem and that the 90th Light Division had reached a position twelve miles to the south-west of it, and plans were made for every available aircraft to attack the latter division at maximum strength on the 12th. When morning came, early reconnaissance confirmed the positions of the enemy columns, which presented excellent targets, and although no information, even for the day's bomb-line, was available from the Army, no change had to be made in the overnight plan.

Ibid. App 'K'  
A.S.C. Diary

Except for a short break in the morning when a heavy enemy air attack was expected, and a stand-down from 1400 to 1600 for maintenance, the light bombers, fighter-bombers and fighters concentrated their effort against enemy columns from 0630 hours until nightfall, the greater effort being made in the morning.

No. 3 S.A.A.F.  
Wing O.R.B.

The bomber task for the day was to carry out the greatest possible number of sorties against the 90th Light Division, and the Bostons were ordered to fly out to attack even if raids were abortive and bombs had to be brought back; information of ground movements was to be regarded as of the utmost importance and was to be passed immediately to Air Headquarters. During the day fifty-six sorties were flown in nine raids against transport of the 90th Light Division. Fourteen fires were counted but damage was difficult to assess among well camouflaged vehicles, from the height at which bombing was carried out. On two occasions the Boston formations were intercepted by enemy fighters, but the escorts successfully warded off all attacks, and the Bostons suffered no losses. The Kittyhawk escorts which lost two aircraft were less fortunate.

Kittyhawk and Hurricane bombers were also fully occupied all day operating against the enemy columns south of El Adem. Together they flew ninety-six sorties of which the Hurricanes contributed twelve, and in addition Hurricane IID's of No. 6 Squadron flew ten anti-tank sorties, and Kittyhawks of No. 450 R.A.A.F. Squadron six machine-gunning sorties. Other fighters were employed continuously on offensive sweeps and patrols over the battle area, and towards the end of the morning, when it was reported that the enemy had occupied El Adem, patrols were maintained in that area to ensure that the airfield was not put into operational use.

A.H.Q., W.D.  
Report  
A.H.B./ILJ6/8

A.H.B.(6) Trans.  
Panzerarmee  
Diary

The Panzerarmee Diary reported very heavy air activity in the morning and afternoon against the 15th and 21st Panzer Divisions, and admitted that Axis fighter protection was insufficient against the low-flying and fighter-bombing attacks. The 90th Light Division reported only slight damage to its columns although it received nineteen raids during the day.

A.H.Q., W.D.  
Report  
A.H.B./IIJ6/8

Enemy air operations again reached a high scale on this day. Fighters patrolled the Knightsbridge-Acroma area in sections of from six to ten aircraft, and five bombing attacks were made in the Knightsbridge area by mixed formations of Me. 109's and 110's, and Ju.87's and 88's. Only one of these was intercepted by British fighters. Between 1400 and 1600 hours a heavy enemy raid was expected on the Baheira landing grounds, and the bombers were ordered to stand down to enable the fighters employed in escort duty to assist in defence. This raid did not materialise, but at about 2000 hours the day's events rose to a climax when a report came in that a formation of over a hundred aircraft was bombing El Adem. Six fighter squadrons intercepted the raid and the biggest air engagement of the battle took place in the Knightsbridge area. The enemy formation was broken up, and six Ju.87's, one Ju.88 and four Me. 109's were claimed destroyed for the loss of five fighters. German documents however record only one Stuka and one fighter lost, and Italian losses are not available. British losses for the whole day were eleven fighters, the highest since the fighter force had abandoned its low-flying attacks on 1 June.

On the following day, 13 June, bad weather put a stop to the high scale of air effort, and one fighter-bomber attack south of El Adem was the only offensive operation of the day, although fighting was still at its height. In the morning in response to a request from XIII Corps, four fighter squadrons were kept at stand-by to counter possible air attacks on the coastal road between Gazala and Tobruk, but from midmorning to dusk, dust rendered the Gambut landing grounds unserviceable.

Enemy air operations were also restricted. There were two Stuka attacks in the morning, neither of which was intercepted by the British fighter sweeps, but in the evening Kittyhawks en route to a motor transport target encountered a formation of Ju.88's with heavy fighter escort and lost four aircraft without loss to the enemy. However, other Kittyhawks flying at a greater height, sighted and attacked the fighter screen of the enemy formation below them, and claimed two Me.109's and two M.C. 202's destroyed, without loss to themselves. Enemy records show one aircraft lost on this day.

Meanwhile the day's fighting had again ended in favour of the enemy, with a grave weakening of British armoured units as well as the loss of valuable tactical positions, and the situation was now seriously altered.

The Malta Convoys - Harpoon and Vigorous 14-17 June

At this point in the land battle, when the reverses suffered by the Eighth Army made desirable the fullest employment of the Air Force in support of it, it became necessary to divert part of the air effort away from the

A.H.B./ILJ/183/  
160 A.O.C.-in-C,  
Corres. with  
Malta. Encl.  
354 &c.

land fighting to assist in the protection of a convoy sailing from Egypt to Malta. When earlier in the year it had become apparent that the relief of Malta could not wait upon the recapture of Cyrenaica, it had been decided to attempt to transport supplies to the island by running two convoys through the Mediterranean simultaneously, one from the east, Vigorous, and the other from the west, Harpoon. These convoys were scheduled to sail from Egypt and Gibraltar respectively in mid-June. A full account of the passage of the convoys is available elsewhere, <sup>(1)</sup> and it is sufficient in this narrative to indicate briefly how the air operations undertaken in support of them affected the air units taking part in the Desert battle.

Attack on both convoys from the air was certain; interception of one or both by the Italian Fleet was possible and even probable. The air task was therefore two-fold; to give the maximum fighter protection to the convoys, and to attack the Axis air forces at their bases and the Italian Fleet in its harbours and, if necessary, at sea.

A.H.Q., Malta,  
No. 201 Group  
& Sqdn. O.R.B.s  
& A.H.Q., W.D.  
Report A.H.B./  
ILJ6/8

The Western Desert Air Force and the bombers of No. 205 Group together, contributed to both tasks in support of the convoy. Attacks on Axis sea and air bases commenced in the last week of May, when a detachment of No. 104 Squadron's Wellingtons, based temporarily at Malta for the purpose, operated against Italian and Sicilian ports, especially the main Fleet base at Taranto, and against Sicilian and Sardinian airfields. Liberators of the R.A.F. and U.S.A.A.F., operating temporarily from Egypt, <sup>(2)</sup> also attacked Taranto. In addition Wellingtons and Blenheims operating from North African bases attacked the Axis airfields in Crete in the second week of June, and a special attack was made by Wellingtons and Bostons against the Axis bomber bases of Derna and Siret el Chreiba on the night of 13/14 June immediately before the convoy was due to pass through 'Bomb Alley' between Crete and Cyrenaica. During the passage of the convoy eight Liberators, as well as Beauforts from Malta, attacked units of the Italian Fleet which had put to sea to intercept the ships. The total effort of the bomber force in support of the convoys was:-

	<u>Sicilian</u> <u>Bases, Airfields</u>		<u>Taranto &amp; Italian</u>	
	<u>Sorties</u>	<u>Tons of</u> <u>H.E.</u>	<u>Sorties</u>	<u>Tons of</u> <u>H.E.</u>
Liberators	-	-	16	36
Wellingtons	37	56	23	37
Blenheims	-	-	-	-
Bostons	-	-	-	-
	<u>37</u>	<u>56</u>	<u>39</u>	<u>73</u>

(1) A.H.B. Narrative: The R.A.F. in Maritime War. Volume VI.

(2) The R.A.F. Liberators were in the Middle East for experimental purposes; those of the U.S.A.A.F. were passing through Egypt en route to the Far East.

SECRET

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	<u>Crete</u>		<u>N. African Airfields</u>	
	<u>Sorties</u>	<u>Tons of H.E.</u>	<u>Sorties</u>	<u>Tons of H.E.</u>
Liberators	-	-	-	-
Wellingtons	79	87	23	29
Blenheims	19	4	-	-
Bostons	-	-	9	6
	<u>98</u>	<u>91</u>	<u>32</u>	<u>35</u>

The provision of fighter cover by land-based aircraft from the Desert for the east-bound convoy was geographically out of the question, and only during the last few hours of the voyage would the ships be within range of Beaufighters and Spitfires operating from Malta. Its escort therefore included an aircraft carrier as well as a battleship, cruisers and destroyers. Extensive provision was made for the protection of both convoys when within range of Malta-based aircraft.

There still remained the problem of protecting the west-bound convoy, Vigorous, on the earlier stages of its journey from the Eastern Mediterranean through 'Bomb Alley'. To provide aircraft carriers was impracticable; they were far too valuable to be hazarded in the narrow waters of the Eastern Mediterranean. Land based fighter cover was therefore the only means of protecting the convoy, and since, at the time of planning, the situation in the Desert and the availability of forward landing-grounds could not be foretold, provision had to be made to meet any contingency.

A.O.C.-in-C.  
Folder  
C.O.S. Papers  
(Telegrams)  
Pt V Encl. 230

H.Q., R.A.F.  
17E Report  
A.H.B./ILJ1/  
159/32

At the date of sailing, 13 June, although the military situation had deteriorated, fighter protection was actually provided for this convoy throughout its passage, with the exception of a short hiatus during the afternoon of 14 June, caused by fighter losses and unserviceability. The responsibility for providing fighter cover was divided between Air Headquarters Levant, (1) Egypt, Western Desert (No. 211 Group) and Malta, as follows:

- (a) A.H.Q. Levant. 1500 to 2030 hrs 12th
- (b) A.H.Q. Egypt. 0630 to 2100 hrs 13th  
0600 to 0800 hrs 14th
- (c) A.H.Q. Western Desert 0745 to 2100 hrs 14th  
0700 to 1200 hrs 15th
- (d) A.H.Q. Malta 1200 to 2130 hrs 15th

In the event, because of a threat of interception by units of the Italian Fleet, the convoy turned back in the early hours of 15 June, and the fighter patrols of A.H.Q. Western Desert were extended until nightfall on that day.

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- (1) Fighters under A.H.Q. Levant were to protect a small section of the convoy sailing from Haifa which was to join the main convoy at Alexandria.

The distances to be covered by the fighters of No. 211 Group demanded the employment of twin-engined aircraft. As it was necessary to conserve the limited number of these for the convoy operations, Nos. 252 and 272 Squadrons, with some aircraft of No. 227 Squadron on attachment, were withdrawn from active participation in air operations on 1 and 3 June. These squadrons had been operating at high pressure, not only in their coastal role under No. 201 Group, but also in the battle itself, in ground attack and interception, and to that extent their withdrawal meant a weakening of the air effort. One Kittyhawk squadron, No. 250, was also withdrawn from the battle, on 10 June, and was fitted with long-range tanks for patrols over the convoy. This squadron had flown over one hundred and fifty sorties in the previous seven day's operations, on bomber escort duty, sweeps and interceptions. Aircraft for bomber escort were already well below the number required, and the withdrawal of this squadron placed a still heavier burden on the remainder.

#### Passage of the West-Bound Convoy - Vigorous

The component parts of the Vigorous convoy met at a rendezvous outside Alexandria on the afternoon of 13 June. One merchant ship had already been damaged, when four of the ships, which had been sent on ahead to Tobruk in order to mislead the enemy, had been discovered by dive-bombers on the evening of the 12th, just as they were about to turn east to rendezvous with the main body. This ship had been ordered to proceed to Tobruk. No serious air attack was made on the main convoy until the afternoon of the 14th, when it was well inside 'Bomb Alley', but in the morning a heavy attack was made on the merchant vessel proceeding to Tobruk, and her escort. The merchant vessel was sunk during the attack, which was made by some forty dive-bombers about twelve miles from Tobruk, and an escorting corvette was damaged. However, before the enemy formation could establish contact with the main convoy, it was intercepted and dispersed by twenty-three Kittyhawks and Tomahawks of No. 211 Group, which had been sent up specially to intercept them, despite the heavy demands of the current battle in the desert. The fighters claimed one Ju. 87 destroyed for the loss of two Tomahawks, the pilots of which were both saved. Enemy attacks on the main convoy, comprising formations of twelve or more aircraft, commenced at 1630 hours and continued until nightfall, and during this time one merchant vessel was sunk and another damaged. The fighter escorts to the convoy claimed six enemy aircraft destroyed during the day, but four Beaufighters and two Kittyhawks were lost.

During the night air reconnaissance reported that some units of the Italian Fleet had left Taranto, and while night searching aircraft were sent out, the convoy turned back on its course in order to leave clear the sea area to the west of it for air operations against the enemy. On the following day, the 15th, while still continuing eastwards, the convoy was attacked three times from the air with the result that one destroyer had to be sunk, and other naval craft were damaged. In the final attack at 1702 hours several ships had narrow escapes, when the enemy employed all known forms of attack, evidently trying to synchronise high-level and shallow dive-bombing with torpedo attack. Nine Savoias were intercepted by the two Kittyhawks constituting the protective patrol, two being shot down, while four more were forced to jettison their torpedoes. Long after his

Sqdn.  
O.R.Bs

Admiralty Battle  
Summary A.H.B./  
IIK/18/25

Ibid.

ammunition was exhausted, one of the Kittyhawk pilots remained over the convoy, making dummy attacks to hold off the Savoias. A further three Beaufighters were lost on patrol on this day.

No definite reports of the results of the air attacks on the Italian Fleet, by Wellingtons and Beaufighters from Malta, and Liberators from Egypt, were received until 1605 hours on the 15th, when reconnaissance reported that the enemy had turned back and was making for Taranto. This move seemed to provide a good opportunity for running the convoy through to Malta, but the naval escort had expended a large proportion of its ammunition against air attacks during the day, and after the final attack at 1720 hours, the commander of the convoy decided that he had insufficient rounds left for the passage. The enterprise was therefore abandoned. During the return journey to Alexandria, a cruiser was sunk by torpedo, and a second destroyer, which had been damaged in the air attacks, had to be sunk by her consorts. The losses of the convoy and escort were two merchant vessels, one cruiser and three destroyers. The operations against the Italian Fleet resulted in the sinking of one cruiser by submarine and damage to a battleship which was twice hit by aircraft and put out of action for several months.

#### Passage of the convoy Harpoon

The convoy from the west met with greater success, although its losses were heavier. From Gibraltar it was escorted as far as the Sicilian Narrows by two aircraft carriers; the air escort was then taken over (at 2100 hours on 14 June) by fighters operating from Malta. As it passed south of Sardinia on 14 June, and through the Narrows between Sicily and Sardinia on the 15th, it was repeatedly attacked by enemy bombers, and, in addition, a force of two cruisers and five destroyers engaged the naval escort on the 15th. In spite of the loss by air attack of four of the six merchant vessels as well as a cruiser and two destroyers, the convoy kept to its course, and on 16 June the two surviving merchant vessels entered the Grand Harbour. During the operation seven Fleet fighters and six Spitfires were shot down.

Thus at a cost of six merchant vessels, two cruisers and five destroyers, and with the expenditure of enormous efforts by naval and air forces, two merchant vessels reached Malta. Yet this could not be termed a Pyrrhic Victory. The supplies brought to the island at so high a cost ensured its survival for the time being, until a further convoy could be sent through from the west, as was done in August (Operation Pedestal). In addition they made possible the recommencement of offensive air activity from Malta, and although this remained on a small scale until the arrival of the Pedestal convoy, it began immediately to contribute to the offensive against Rommel's sea supply lines. An incidental contribution of the convoy operations to the Desert campaign was that it forced the Italian Fleet to incur a heavy expenditure of fuel at a time when this was already scarce. During the operations Italian naval units burned 15,000 tons of fuel, and according to Admiral Weichold, this and other factors contributed to a decline in the delivery of supplies to North Africa during June. Only 1,850 tons of fuel oil were supplied to the German Army and Air Force, while other supplies were limited because of the shortage of fuel for escorts to the convoys.

Axis Naval  
Policy and  
Operations in  
Mediterranean  
Weichold

For the Eighth Army and the Western Desert Air Force, the immediate importance of the convoy operations lay in the fact that they drew off a large proportion of the enemy air effort from the battle. Enemy documents record that on 14 June few air operations were possible in North Africa because of preparations for attacks on the convoys, and that on the 13th, 14th and 15th, Crete-based bombers were using Derna as an advanced landing-ground for operations against the convoy from Alexandria. Furthermore, on 15 June JU.87's operated against the east-bound convoy, and since no dive-bombers were normally based on Sicily or Sardinia at this time, it must be assumed that these were aircraft of Fliegerfuehrer Afrika which had been sent to Sicily for these operations. It will be seen that this preoccupation of the Luftwaffe with targets other than those connected with the land battle, came at a favourable moment for the Eighth Army, and that they more than offset the effects of the diversion of part of the British fighter effort from the Battle for the convoy operations.

Enemy  
Documents

#### The Withdrawal from Gazala and the Battle for Tobruk

As a result of the tank battles of 12 and 13 June, when so great a part of the British armour was lost, it was necessary to effect a complete revision of Army plans. The security of the twenty-four mile southern flank of the British position extending from Gazala to Tobruk had depended on a strong armoured backing which no longer existed: at any moment the enemy might cut the supply lines of the forward positions, and the British armoured strength could not possibly be restored in time to forestall this move. Therefore, with great reluctance, General Ritchie ordered XIII Corps to withdraw the 1st South African and the 50th Division from the Gazala Line on 14 June. The garrison defending Knightsbridge had already been withdrawn to Acroma on the previous evening. At the same time Army Headquarters began to withdraw from Gambut to Maktila.

In view of the serious situation the Air Force began to prepare to carry out the first phase of the withdrawal as arranged in the preliminary plan. The light bomber wing was ordered to move back to Landing-ground 07 at Matruh, leaving behind only six aircraft with sufficient staff to operate them, and the fighter squadrons at Gambut also began to withdraw their main parties, but retained all their aircraft at the forward landing-ground for the time being.

No. 3 S.A.A.F.  
Wing O.R.B.

#### The Decision to Hold Tobruk

It was at this stage in the battle that those responsible for the conduct of the campaign in the desert, with the approval of the War Cabinet, began to change their attitude regarding the defence of Tobruk, with the result that there was a reversal of the original plan to evacuate the port if the enemy should achieve a position from which he could effectively invest it.

With the dissolution of the Gazala Line, General Ritchie's immediate task was to hold a line at and including Tobruk, while General Auchinleck built up a mobile reserve in the frontier area with a view to launching a counter-attack at the earliest possible moment. His orders were:-

- (a) To deny the enemy a general line Acroma-El Adem-El Gobi.

- (b) Not to allow his forces to be invested in Tobruk.
- (c) To attack and harass the enemy whenever the occasion offered.

Telegrams  
1733 Susan 15/6  
OZ 494 15/6  
IZ 590 16/6  
to be found in  
War Cabinet  
Hist (B)  
(Crusader)  
3 (Final)  
Encl. (232),  
(234) & (239)

In submitting these plans to the Prime Minister, the Commander-in-Chief added, 'Although I do not intend that the Eighth Army should be besieged in Tobruk, I have no intention whatever of giving up Tobruk'. In his reply, dated 15 June, the Prime Minister approved the Commander-in-Chief's policy, and stated that the instruction at (b) had been interpreted by the War Cabinet to mean that if the need should arise, General Ritchie would leave as many troops in Tobruk as were necessary to hold the place for certain. This policy was approved by the Middle East Defence Committee and General Auchinleck informed the Government that the Commander, Eighth Army was putting into Tobruk 'an adequate force to hold it even should it become temporarily isolated by the enemy'. The Defence Committee's reasons for their change of policy were that the position was quite different from last year's as the British and not the enemy held the fortified positions at the frontier, and could operate fighter aircraft over Tobruk even if the Gambut airfields had to be evacuated; that to besiege Tobruk and to mask the forces in the frontier area the enemy would need more troops than their information showed him to have; and that this being so the British should be able to prevent the area between Tobruk and the frontier from passing under enemy control. Thus, from the outset of the fighting along the line masking Tobruk, it was understood that if the line should break, the garrison would remain in the fortress, prepared for a short investment, while the mobile forces reorganised for a counter-attack to relieve it.

This phase of the battle commenced on 14 June, with a determined effort by the Axis, to break through the line of defended posts stretching south-eastward from Acroma to Sidi Resegh, in order to reach the coast road and cut off the South Africans. This was attempted first at Acroma, the most westerly strongpoint, but, when the garrison had resisted fiercely throughout the whole of the 14th, and the withdrawal was well under way, the enemy turned his attention to the central point of the line, El Adem. Here, too, the resistance was so determined that the enemy achieved no break-through until the greater part of the troops from Gazala had reached Tobruk. Round the strong point at El Adem and those at Sidi Resegh and Belhamed to the east of it, the fighting then developed however into a battle for Tobruk, the enemy striving to isolate it, and the British resolved to keep the area from the port to the frontier open. This lasted until the evening of 17 June, when, in a final engagement with enemy tanks, in the Sidi Resegh area, the 4th Armoured Brigade now reduced to twenty tanks, was driven back to Gambut.

#### The Course of the Fighting

Throughout the 14 June, when the 1st South African Division was retreating from Gazala, a fierce struggle raged while the Army fought to prevent enemy units breaking through to the coastal road. In the face of strong Axis thrusts to the north, the withdrawal of the British along the road was made possible by the stubborn resistance of the garrison of Acroma and its satellite strongpoints, vigorously supported by what remained of the armour. The enemy began to drive northward about midday, and in the course of seven hours of hard fighting the British repulsed

tanks three times as numerous as their own with the loss of only one position. Thus the South Africans reached the frontier almost intact. The 50th Division however, which helped to cover their withdrawal, was less fortunate, as it was obliged to journey south-east across the desert through country occupied by the enemy. Nevertheless, by midnight on the 15th, a large proportion of this division which had lost the whole of the 150th Brigade and a regiment of artillery a fortnight earlier, had reached the frontier.

On 15 June, the enemy left Acroma for the time being, and turned his attention towards El Adem, and for three more days the battle continued along the line masking Tobruk. The 90th Light Division attacked El Adem three times on 15th, but infantry, aided by mobile forces and a full scale air effort, repulsed all the attacks. In the evening however, strong patrols penetrated northward towards Belhamed and Sidi Rezegh, threatening the security of the Gambut landing-grounds.

On 16 June, the enemy split his armour; the 15th Panzer Division revived the attack on Acroma until last light without success, while a strong detachment of the 21st Panzer Division slipped past El Adem and formed up to attack the strong point at Sidi Resegh. The attack was dispersed by bombing and artillery fire, but subsequently the main body of the division passed down the valley to Sidi Resegh under cover of a feint attack on El Adem by the 90th Light Division. Columns from Tobruk and from 4th Armoured Brigade engaged them as they passed but these were not powerful enough to arrest the advance, and a fresh assault was made on the strongpoint that evening. Once again the garrison resisted the Panzer attack, but on the following morning the position was lost. On 16 June following the deterioration of the situation implicit in the enemy's advance to Sidi Resegh, the Commander-in-Chief ordered General Ritchie to reinforce El Adem, the central bastion of the line, and the chief insurance against the isolation of Tobruk. However, reinforcement became impossible and when, after further fighting, the garrison was forced to withdraw on the night of the 16th, the whole position in front of Tobruk was dangerously weakened.

On 17 June, the enemy was reported to be in strength along the line El Adem-El Duda-Sidi Resegh, and was being harassed by the 7th Motor Brigade from the south and by the 4th Armoured Brigade from the south and east of Sidi Resegh. Tobruk was thus being gradually surrounded, but the Army still held the high ground at Belhamed and Gambut, and while that situation lasted, the road from Tobruk to Bardia was secure. In the afternoon however, the Eighth Army suffered a reverse which ended all hope of preventing the encirclement of Tobruk. After an engagement south of Sidi Resegh with an Axis force of nearly one hundred and twenty tanks, the 4th Armoured Brigade was driven back almost to Gambut. This left the garrison of Belhamed in danger of isolation and it had to be withdrawn to Tobruk. With the fall of this strongpoint the Bardia road was left undefended, and Tobruk was isolated. The garrison at Acroma, with a route available for a speedy withdrawal to Tobruk if necessary, held out until the 19th, but its retreat was inevitable once the port had been cut off to the east.

Air Operations 14-17 June

The initial air plan on 14 June was early reconnaissance followed by bombing and strafing in every sector of the battlefield. At 0900 hours however, the news came through that the Gazala line was being evacuated, and that Advanced Army Headquarters was withdrawing to Maktila. This decision was greeted with dismay, for there had been a general impression that enemy morale was low, and that one final push would end his offensive. However, to deal with the new situation the air programme was immediately altered to provide the maximum cover for the withdrawing forces, especially those travelling along the coastal road, while second priority was given to delaying action against the Axis units striving to get within range of the road. In the evening, fighter cover was also given to the 50th Division moving eastwards to the south of the main battle area.

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App. 'K' to  
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Report A.H.B./  
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On 14 June, as on the previous day, air activity was severely restricted by dust storms, at a moment when support was badly needed by the Army. Throughout the morning and afternoon, the Bostons, grounded at Baheira, were powerless to intervene against the enemy columns launching a continuous series of attacks against the British strongpoints. However, in the evening when news came through of a fresh Axis attack on Acroma, seven Bostons took off in defiance of weather conditions, and bombed motor transport and tanks south of the strongpoint. Owing to the fierce resistance of the garrison, supported by the bombing, this, the final thrust of the day was repulsed, and the road to Tobruk safeguarded for a few more vital hours. Fighter activity was also restricted by the dust, and there were no offensive operations against ground targets, but a patrol was maintained south and east of Gazala in the morning, to cover the South Africans' retreat, and was only abandoned in the afternoon when dust stopped flying. The enemy made frequent air attacks on the South Africans, but these do not appear to have been heavy as according to Army sources the withdrawal proceeded smoothly, and XIII Corps Diary recorded only fifteen damaged by 1900 hours. Yet the South African vehicles, packed nose-to-tail along the road, must have presented an ideal target. There was however an explanation besides that dust-storm for the enemy's neglect of this chance to play havoc with a large section of the Eighth Army. It was on this day that the convoy Vigorous, bound for Malta, began to pass through the narrow stretch of water between Crete and Cyrenaica, and came within range of the enemy air units on either hand. During the early part of the day the German air units in Cyrenaica were preparing for the attacks on the convoy which they made in late afternoon. Thus the attacks on the coastal road were made chiefly by the Italians with a marked lack of success. Thus, in spite of its ultimate failure, the convoy Vigorous indirectly made a valuable contribution to the safe withdrawal of the Eighth army from the Gazala position.

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Report A.H.B./  
IIJ6/8 & No. 3  
SAAF Wing O.R.B.

With the enemy still checked at Acroma after a persistent and day-long struggle, it was felt that the situation was sufficiently stable to enable the fighters and bombers to continue operation from their advanced landing-grounds. The greater part of the bomber wing had already moved back to L.G. 07, but seven aircraft from each squadron were retained at Baheira overnight and it was arranged that the squadrons should send up extra aircraft from the base landing-ground each day as necessary: a

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small ground party was kept at Baheira. The fighter squadrons had retained their aircraft and skeleton maintenance parties at Gambut.

From 15 to 17 June, the enemy was intent on the reduction of the strongpoint at El Adem, at first by direct assault, and when that failed, by outflanking movements to the east, towards Sidi Resegh and Belhamed. During these three days, when the Axis army was concentrated in the El Adem area, targets were particularly suitable for light bombers, and in spite of the difficulties involved in operating continuously from advanced landing-grounds, the Bostons achieved a high scale of operations. In all, one hundred and fifty sorties were flown over the three days of the battle, and ground reports confirmed the success of the attacks against armoured vehicles and motor transport. Even so the bombers did not operate to their full capacity. Although the proximity of landing-ground to target in this phase, a distance of about fifty miles only, coupled with the unflagging efforts of the ground crews, made it possible for each Boston to fly an average of ten sorties per day, the fighter force with its heavy offensive and defensive commitments could not provide sufficient escorts for so large a programme. Unescorted daylight raids were out of the question with the enemy air force maintaining what was virtually a standing patrol over El Adem.

The task of the Bostons on 15 June was to attack the Axis columns which, swinging round from Acroma, were preparing to assault El Adem from the west, north-west and south-west. This role they carried out with such good effect that in the early part of the day two columns were successfully prevented from making their attack and were repulsed. Again, in the evening aircraft we route for the final raid of the day observed a column of the 15th Panzer Division approaching from the south-west to make a further attack. The Bostons bombed the spearhead of the column, which consisted of tanks and armoured cars, and prevented this third and last big assault from developing. The total number of sorties flown was fifty, and the weight of bombs dropped was 35 tons.

The first task of the fighters was to provide further patrols over the road to Tobruk to cover the last units withdrawing from Gazala, but while at first all fighters and fighter bombers were concentrated in this role, it was possible to abandon it by 1100 hours, owing to the rapid progress of the retreat. Once again, there was no appreciable enemy interference with this movement, although the long columns of troops and vehicles again offered a rewarding target. On this day however, judging by the heavy air effort directed against the convoys, Vigorous and Harpoon it would appear that the greater part of the available enemy air force was diverted from the land battle for that purpose; evidence in enemy documents confirms this. Until the evening enemy air activity over the whole of the forward area was confined to small and spasmodic fighter patrols between El Adem and Acroma. Between 1800 and 2000 hours however, two sections of some twenty aircraft bombed targets in the Acroma area without being intercepted, and four Me. 109's dive-bombed Gambut airfield.

After the morning patrols over the coastal road, the second task of the fighter force was to assist the bombers in attacking the enemy forces surrounding El Adem, and despite the heavy demand for bomber escorts and for defensive patrols, the fighters contributed sixty Kittybomber and

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Ibid, Sqd.  
O.R.B.s and  
M.E.F.O.S.

twelve Hurricane IID anti-tank sorties to the day's air offensive, as well as maintaining patrols and sweeps over the battle area. On this day No. 260 Squadron was armed with bombs for the first time, and while forming part of the Boston escort, joined in their raids on the ground targets. This practice became a regular feature of the Boston raids, the fighters taking their cue for bombing from the leaders of the bomber formations. Hurricane IID's had a very successful day, claiming twelve enemy tanks destroyed in attacks carried out in conjunction with Kittybombers. Some idea of the ground-level nature of these anti-tank attacks is indicated by the fact that a Hurricane, when breaking away from its attack hit the top of an enemy tank, losing the tail wheel and half the rudder. The aircraft gained its base successfully. Throughout the 15th, the success of the air attacks was attributed mainly to the excellent liaison maintained between Air Support Control and the two Army brigades at El Adem, 29th Brigade within the box and 7th Motor Brigade harrying the flank of the attackers.

In the evening, strong enemy patrols penetrated towards Sidi Resegh and Belhamed, in a movement which was soon to develop into a systematic manoeuvre to out-flank El Adem. The immediate significance of this thrust however was that it greatly increased the threat to the forward fighter airfields by placing the enemy within some twenty miles of Gambut, where there was no adequate ground force immediately available to counter a raid by enemy armoured forces. Yet it was necessary to provide full air support to the El Adem Box and to the withdrawing forces, and this could not be done if the fighter force was moved from Gambut. The nearest airfield available in the rear was Sidi Azeiz, some thirty miles farther back, which would have meant a flight of fifty miles to the battle area instead of twenty. Thus, while Tactical Army Headquarters moved back to Sollum on the 16th, the Air Officer Commanding decided to remain at the advanced airfields with Advanced Air Headquarters. The price of this decision might have been the fighter force, but it enabled the provision of a full measure of air support on 16 and 17 June, when the conditions, although dangerous, were from most aspects operationally ideal. The force was concentrated, the control close at hand, and the targets only twenty miles away. The re-arming, refuelling and maintenance parties proved only too anxious to take on the extra load, and their untiring energy enabled the intensive operations to continue.

The following is an extract from a signal sent by Air Vice-Marshal Coningham to Air Marshal Tedder on 16 June:

'Have thinned out all units, the guiding principle being that all wings must be able to work full pressure. We are all at one hour's notice to move, and owing to proved value of Force, Army has given one brigade for close defence, which helps my judgement of night security. I have prepared landing grounds all the way back to the frontier and plan is steady withdrawal of squadrons keeping about twenty miles away from enemy. See our bombs bursting is rough dead-line. As units move the R.S.U. clean up.'

The provision of an Army brigade for close defence of airfields in the forward area, as mentioned in Coningham's signal, in fact apparently contributed little to the security of the air force. After the withdrawal to El Adem it was stated by Air Commodore Beamish, S.A.S.O. to Coningham, in reply to a questionnaire put to him by

Ibid

A.O.C/11  
Western Desert  
Operations  
A.H.B./IIJ1/183/  
146c  
Encl. 209B

Cabinet Office  
Reference  
'G'. Ops 5 Box  
497 DA 491 24/10

a Court of Inquiry investigating the operations of this period, that from June, no security for the Gambut group of airfields against enemy armoured forces could be given by the Eighth Army. This statement was accepted by the Court, as were other statements concerning similar situations which occurred later during the withdrawal to the Alamein line. It was adjudged, and accepted by the Army, that the system of air-field protection was entirely inadequate at this period: the result had been a grave risk to the air force, and a denial of opportunities for close support for the benefit of the forces as a whole.

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Coy. O.R.B.  
& App. Zb to  
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In the absence of adequate protection by the Army, the Air Force provided what precautions it could against an enemy thrust, by means of its armoured cars which were sent out to form a protective and warning screen round the forward airfields. In this capacity, No. 2 Armoured Car Company, attached to No. 211 Group, which, during the battle for the Tobruk line was frequently in contact with enemy columns, was of great value to the force throughout the withdrawal. On 14 June a patrol sighted an Axis tank column moving east in the vicinity of Sidi Rezegh landing-ground, and shadowed it for three days, and was thus able to supply No. 211 Group with targets which were attacked with good results. The patrol came under shell-fire from the enemy column, but on the 16th retaliated by destroying a light reconnaissance vehicle with anti-tank rifle fire. When the fighter force withdrew from Gambut on 17 June, it did so on information provided by an armoured car patrol, while a second patrol remained behind to observe the enemy's entry into Gambut. This patrol then took up a position astride the Trigh Capuzzo at Gasr el Arid some twenty miles west of Sidi Aziez landing-ground to which the fighters had been moved, and remained there until the fighters withdrew again, to landing-ground 75.

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On 16 June, when the detachment from the 21st Panzer Division slipped past El Adem and began to form up to attack Sidi Resegh, this column was given first priority as a target for air operations. The decision to retain the Air Force at its forward bases for the time being was particularly fortunate on this occasion as a heavy ground mist covered the rear landing-ground of the bombers until 0900 hours.

Seven light bomber raids, totalling sixty sorties were made during the day, and it was believed to be partly as a result of this intensive effort that the enemy columns were pushed back, the 90th Light Division taking particularly heavy punishment. The early attacks were especially successful, and with artillery fire, dispersed the Axis spearhead. Subsequently however, when reinforcements in the shape of the main body of the Panzer Division arrived from the El Adem area, it was no longer possible to withstand the pressure of the enemy.

In the afternoon increased Axis air activity gave an indication that the Boston attacks were obtaining results. Fighters, which had patrolled in small numbers during the morning, operated in relays during the afternoon, and the Boston formations were not only attacked, but were followed back to Baheira by Me. 109's. Only on one occasion however did an enemy fighter break through the Kittyhawk screen, and then its attack was unsuccessful. It was a noteworthy achievement on the part of No. 233 Wing, which provided the escorts that, in the course of a day of heavy operations and in the face of fierce enemy opposition, no Boston was

damaged by enemy fighters. Unfortunately the escorts did not themselves come through unscathed, their losses being two aircraft, with no claims against the enemy.

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Sqdn. O.R.B.s

Once again the fighter force filled a variety of roles and maintained a very heavy scale of activity, and its offensive operations were considerably increased on this day. Twenty-one separate attacks were mounted against forces in the Sidi Rezegh-El Adem area, comprising one hundred and thirty-six fighter-bomber sorties, forty-two fighter machine-gun sorties and six Hurricane IID anti-tank sorties. Six of the fighter-bomber operations were carried out by 260 Squadron forming part of the escort to Boston raids, as was done on the previous day. Fighters of No. 239 Wing claimed a further twelve tanks destroyed during the day. Altogether the fighter force flew over four hundred sorties.

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A.H.B. 6 Enemy  
Documents.  
Panzerarmee  
Diary

In favourable operational conditions close support operations were able to achieve a high degree of efficiency. Requests for support were promptly answered, and targets reported by the Army or by air reconnaissance were readily attacked. The close contact maintained between the Army and Air Force was well illustrated on this day, when, after an attack on an enemy position in the battle area by fighters and fighter-bombers, the 20th Brigade signalled that the bombing was dangerously close to its own troops. The bomb-line was immediately altered and subsequent sorties proved highly successful and received the congratulations of the brigade. The air attacks on this day were estimated to be the most successful air support operations carried out to date in this battle. They succeeded in delaying the Axis spearhead to such an extent that Sidi Rezegh was never seriously attacked throughout the whole of the day. The Panzerarmee Diary, records that the 21st Panzer Division suffered considerable losses in men and material from bombing and low-flying attacks lasting the whole day. In a signal to Panzer A.O.K. on this day the Panzer Division reported 'Continual attacks at quarter hour intervals by bomber and low-flying aircraft' and urgently requested fighter protection.

At 0300 hours on 17 June, the Army garrison withdrew from El Adem. With the collapse of the key point of the defensive line before Tobruk, the port was in imminent danger of being surrounded and the defence of the road to Bardia depended entirely on the two defended localities at Sidi Rezegh and Belhamed. During the morning however the Axis captured Sidi Resegh, and for the remainder of the day, the 4th Armoured Brigade fought to contain the enemy in this area. Its failure, and subsequent retreat almost to Gambut, ended all hope of preventing the total isolation of Tobruk.

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A.S.C. Diary &  
S.A.A.F. Wing  
O.R.B.

The extraordinary feature of the air operations was that both fighters and bombers were operating from airfields only thirty miles from the battlefield, the fighter squadrons hanging on at Gambut until enemy tanks were only twelve miles away. The reason for this audacious procedure was that until 1500 hours, Air Headquarters was entirely ignorant of the fall of El Adem, which, removed the last serious threat to the enemy's flank and rear, and greatly strengthened his eastward movement. The situation in the early morning of the 17th was that the Army Headquarters, which themselves believed that the El Adem garrison was still holding out, gave a possible Axis attack on this strongpoint as first priority for air activity, and a threat to Belhamed as second. However, as no requests came through from 29th

Brigade at El Adem, at 0915 hours Air Support Control asked the brigade to give immediate warning of any ground or air attacks and meanwhile began answering requests in the Belhamed area. From this time until the evening, in default of requests from El Adem, the air effort was wholly concentrated against the Sidi Resegh - Belhamed area. Nothing was heard of the 29th Brigade until the afternoon, when their tentacle gave their location as El Gobi. This information was entirely unexpected, but enquiries were immediately made at Air Headquarters and the evacuation of El Adem confirmed. It was also reported that two fresh enemy columns, probably released from the El Adem area were moving eastward to the south of Sidi Resegh. With this deterioration in the situation the risk of retaining the fighter force at Gambut could no longer be accepted and the evacuation was immediately put in hand. Before the fighter squadrons had completed the clearance from Gambut, the situation deteriorated still further, when the 4th Armoured Brigade was severely defeated by Axis armour and driven back towards Gambut.

Thus, owing to ignorance of the developments in the ground situation, for the greater part of the day the air force was operating in circumstances which would normally be regarded as unjustifiable. On 15 and 16 June the proximity of the fighter and bomber airfields to the battle area had been unusual enough, but the risks taken then could not be compared with those unwittingly accepted by the air force on 17 June. The following extract from No. 3 S.A.A.F. Wing O.R.B. gives a vivid impression of the operational situation on this day:

'At 0300 hours El Adem was evacuated by our forces, but it was not until 1500 hours that any R.A.F. authority was informed. Accordingly between 0932 and 1648, the Bostons were pounding away steadily at enemy transport in the Sidi Resegh area only thirty miles away, and so close it was possible to hear the bombs bursting in our own raids. The armourers at least had the satisfaction of hearing the results of their labours (and) were able to feel that they were participating more closely now in the battle.'

In all, the Bostons made five raids totalling forty-three sorties, in the Sidi Resegh area, and observed several fires and one large explosion. Kittybombers of No. 260 Squadron joined in some of the attacks, but offensive fighter activity in the battle area was on a much smaller scale on this day, owing to the heavy losses already suffered. The main feature of the operations was a raid on Gazala airfield, which incidentally provided a noteworthy example of the promptness with which, through Air Support Control, targets reported by the Army or by aircraft were attacked, in this phase of the battle. The increased activity of enemy fighters in the previous few days had indicated that the fighter force had been moved nearer to the battle area, and this was proved on the morning of 17 June, when Kittyhawks of No. 250 Sqdn, on reconnaissance reported thirty Me. 109's together with other aircraft on Gazala No. 2 landing-ground. This report came in at about midday, and two hours later a full-scale attack was made by all four squadrons of No. 239 Wing, totalling twenty-seven sorties. A contemporary report states that the enemy was 'thoroughly

Wing and  
Squadron  
O.R.B.s

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destroyed', and although this is not borne out by German records, which show only four fighters destroyed and five damaged on this day, the sharp decline in enemy air activity which followed this surprise raid suggests that it at least caused no little disorganisation.

Thus ended the mobile battles in the Gazala-Tobruk area, with a considerable victory for the Axis forces. Having suffered severe losses, particularly in armour, the Eighth Army could not hope to check a further Axis advance except on a prepared defensive line, where it could also build up a new striking-force. The enemy's chief opportunity for final victory lay in encircling and destroying the Eighth Army in unequal battle before it could reach such a line, but at this first stage of the withdrawal the British had an advantage in that, although surrounded, Tobruk was still theirs. It was appreciated that the enemy would not make a serious attempt to invade Egypt so long as the fortress held out, and that he would be forced to employ at least some of his armour against Tobruk. In this way it was hoped to delay the enemy's further advance while the Eighth Army recuperated. In these circumstances General Ritchie's plan was to attack and harass the enemy in the area between Tobruk and the frontier, and also his columns to the west of Tobruk, while he built up a striking force in the frontier area.

#### Survey of Air Operations 15-17 June

The last three days before the withdrawal, 15-17 June, was for the Western Desert Air Force as a whole the most intensive period of operations yet experienced in the battle. Hitherto, the nature of the land fighting had usually demanded a specific type of air support, as at Bir Hachiem and in the Cauldron, where targets were most suitable for low-flying fighter attacks, and opportunities for light-bombing occurred only occasionally. Along the Acroma - El Adem line however, while the main targets were highly suitable for light-bombers, on the fringes of the enemy concentrations at El Adem there was considerable scope for fighter-bombing, and even, to a lesser extent, for fighter machine-gun attacks. At the same time, defensive fighter patrols were in demand, first for the Army units withdrawing along the coastal road, and later over the battle area, where enemy fighter activity increased in an attempt to interfere with the continuous stream of Bostons and Kittybombers passing over to El Adem.

Fortunately, at this time liaison between the Army units and Air Support Control was still good except in the instance of the El Adem garrison, but already XXX Corps was finding difficulty in keeping in touch with No. 208 Squadron. After the fall of Hacheim the Squadron had had to withdraw to Sidi Aziz and then to L.G. 79 near Sidi Barrani yet it maintained patrols, as far forward as El Adem, and on 17 June, the locating of 50th Division was a special task. No. 40 S.A.A.F. Squadron had withdrawn inside the Tobruk perimeter to El Gubbi, following the withdrawal of XIII Corps from the Gazala position.

In this battle at El Adem, the light-bombers came into their own, and achieved a new operational record averaging fifty sorties per day. Even so, owing to the shortage of fighter escorts, they were not operating at their full capacity, despite the proximity of the targets. In nearly one hundred and sixty sorties, the total weight of bombs dropped was over one hundred tons, and according to the G.O.C. XXX Corps, the Bostons destroyed between four

hundred and eight hundred vehicles, and held up the enemy for three days, thus enabling XXX Corps to withdraw to prepared positions. Particularly successful were the attacks on the 16th, when Army formations watching from high ground reported the devastating effect of the air attack on the 21st Panzer Division advancing from El Adem to Belhamed. It was noticeable that as the Axis concentrations increased, so did the A.A. defences, and the Bostons invariably suffered damage from flak. Nevertheless, in spite of a shortage of ground crews serviceability was maintained at a high level. There is no doubt however, that the Bostons owed much to the fighter escorts, which prevented the loss of a single Boston during these operations.

In a situation in which every section of the Air Force was keyed up to a high level of operational activity, the main burden fell inevitably on the fighter force with its many and various commitments, and at this critical juncture of the battle the strain on it was very severe. The safe passage of the 1st South African Division through the Tobruk area was only one example of the influence of the fighter force, the activities of which covered a wide range of intensive operations for three decisive days. Operating with only skeleton ground staff, the squadrons were continuously at one hour's notice to withdraw from their landing-grounds as these became more and more closely threatened by advancing enemy columns. Air fighting, to gain freedom of action for the bombers and to reduce the strain on their escorts, while affording protection for the Army was a primary task. Other commitments including bomber escort duty and fighter-bombing, were also of great importance to the battle and consumed a considerable proportion of the fighter effort.

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Under these conditions the daily sortie rate was very high, reaching an average of three hundred per day. Nearly three hundred were flown on the 15th, over four hundred on the 16th, and on the 17th the total number reached two hundred, despite the reduction in offensive sorties made necessary by low serviceability, and by the suspension of operations in the evening when the order was given to withdraw. Offensive fighter-bomber and anti-tank sorties totalled some seventy on the 15th, one hundred and forty on the 16th, and forty on the 17th the attacks on the 16th being further augmented by forty machine-gunning sorties. The rest of the effort was expended on escort duty, patrols and offensive sweeps and reconnaissance. Losses were considerable, for although only one aircraft was lost on the 15th, ten were destroyed on the 16th and eleven on the 17th, following the intensification of Axis fighter patrols and A.A. fire. The total figure of twenty-two meant that aircraft were being lost at a rate of two and a half per hundred sorties, or reckoning on an average daily strength of thirteen aircraft per squadron for thirteen squadrons,<sup>(1)</sup> an optimistic assessment for this period,<sup>(2)</sup> losses consumed thirteen per cent of the fighter strength.

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- (1) Nos. 6 and 165 Sqdns which had reinforced the original twelve squadrons were at half strength only.
  - (2) For the week 16-22 June in which only two days were fully operational the average strength was 13 per squadron.

Sqdn.  
O.R.B.s

In sustaining a high scale of operational sorties and casualties, the chief problem of the fighter squadrons was the maintenance of serviceability, a task which was additionally complicated by the withdrawal of all but emergency ground crews from the forward airfields. The Kittyhawk and Tomahawk squadrons were the chief sufferers; the Hurricane squadrons, with greater reserves of aircraft to draw upon, could usually muster some twelve aircraft each day. Serviceability figures for the three days are not available, but Squadron Operation Record Books indicate the difficulties encountered. On 14 June No. 450 Squadron had only four aircraft serviceable, and although by 16th the number had risen to six, the limited number of crews at the operational landing-ground had to work from 0415 to 2045 hours to keep the aircraft in the air; the Commanding Officer eventually arranged for extra crews to be flown up from the base airfield to relieve the situation. On 15 June 5 S.A.A.F. Squadron reported that the shortage of aircraft was being felt and that the strain of keeping up serviceability was beginning to tell on the ground crews, and on the 17th this squadron had only one aircraft serviceable for the greater part of the day. On the 17th No. 4 S.A.A.F. Squadron also reported that serviceability was low owing to dust and overwork.

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In this period the majority of fighter casualties were incurred in combat with the enemy, but A.A. fire, which was frequently intense, accounted for a considerable proportion of aircraft lost and damaged, particularly among the Kittybombers and Hurricane anti-tank aircraft. Comprehensive figures are not obtainable, but A.A. fire accounted for one Hurricane IID destroyed and two badly damaged on the 15th, five fighters on the 16th and three on the 17th, while also on the 17th, the intensity of the flak forced the Bostons to increase their bombing height to 8,000 feet, with a consequent loss in accuracy. In straight combat with the enemy, the fighters held their own, claiming three German and three Italian fighters, and one Ju.88 destroyed in the three day period. German documents show a loss of three single-engined fighters, two bombers and one dive-bomber, (1) but Italian records of losses are not available. Particularly vulnerable to the enemy's fighter patrols however, were the fighters flying as top cover escort to the Boston formations. Nos. 2 and 5 S.A.A.F. Squadrons, which were most frequently employed on this task, endured a considerable strain, for the demand for escorts was heavy, and enemy opposition increasingly persistent, and on 15 June the Kittyhawks of No. 260 Squadron which had shared in top cover escorts began the co-ordinated bombing attacks with the Bostons, and consequently flew as close cover. On one occasion pilots of No. 2 S.A.A.F. Squadron acting as close cover, remarked how the Me. 109's could make an attack and then climb right out of range of the escorting fighters. No. 5 S.A.A.F. Squadron suffered particularly from enemy fighters when on escort duty, losing two aircraft destroyed on the 16th and 17th, with others damaged. The task of the escorts was further complicated by instructions to watch the ground and report on bombing.

Sqdn.  
O.R.B.s

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(1) The German losses include Africa-based aircraft shot down over the convoy Vigorous, the British claims are for air fighting over the battle area only.

Thus ended the third period of intensive air participation in the battle. The operational though not numerical superiority of the Western Desert Air Force had made possible an uninterrupted programme of air support at a critical moment for the Army, despite considerable opposition, while, by contrast the Axis air effort against the Eighth Army had remained on a low scale, and the attitude of the Axis air force had been mainly defensive. As a result, the enemy thrust had been delayed, the Eighth Army was able to make an orderly withdrawal to the frontier, and the garrison at Tobruk had a longer period in which to prepare for the unexpected task of opposing a possible major assault. Although the Army had suffered a severe reverse, the Air Force, although operating under difficult conditions and at an intensive rate, was far from exhausted. Moreover it was able to fall back on to bases well-supplied with fuel and ammunition, closer to the main repair and maintenance centres and stocks of replacement aircraft. The vitality of the Air Force at this time, and the application of its strength to delaying the advance of the enemy, especially when contrasted to the backwardness of the Axis air forces, was in fact to be of the greatest significance during the retreat to El Alamein and the first repulse of the enemy on the Alamein Line.

PHASE IV - THE FALL OF TOBRUKThe Withdrawal of the Air Force

On 18 and 19 June, there was a lull in the battle. The enemy was engrossed in digging himself in at the recently captured strongpoints, and although on the 19th a large column was reported moving first east along the Trigh Capuzzo, then north and west along the Bardia - Tobruk road, the British mobile columns operating west of the frontier made little contact with Axis forces.

On these two days British air activity was almost entirely defensive, and operations were in any case reduced by the series of withdrawals which were made necessary by the steadily deteriorating ground situation. In accordance with the prearranged plan for the withdrawal of the air force, the first phase, 'Alpha', during which the fighter force was located at Gambut and the bombers at Baheira, gave way to phase 'Beta' on the evening of 17 June. On that day, as has been mentioned, the fighter squadrons moved back to Sidi Azeiz. The bombers however retained their 'Alpha' location until the following day when they moved to Landing-ground 07. A deviation from the plan was the move back of No. 211 Group Forward Control simultaneously with the fighter squadrons. It had originally been intended that Forward Control should remain at Gambut after the withdrawal of the fighters, but the fighters themselves had remained in the forward area until the last moment consistent with security, and after the 17th, it had become necessary to evacuate the Gambut area completely.

At the time when the plan was made it had been realised that the interval between the 'Beta' and 'Gamma' stages might be very short, and that in the worst case, the withdrawal would have to be effected directly from the 'Beta' to the 'Omega' stage. This in fact was what occurred. On 18 June Advanced Air Headquarters alongside Tactical Army Headquarters at Sollum was informed that no security could be given against fast-moving enemy columns reported that morning in the Baheira area. This meant that the landing-ground at Sidi Azeiz was no longer safe, and there was no alternative but to move the fighter squadrons back to their 'Omega' bases, Landing-ground 75 and 76 south of Sidi Barrani, while Advanced Air Headquarters also moved to the same area. This did not affect the bombers, whose location was the same for the 'Beta', 'Gamma' and 'Omega' phases.

From the point of view of the Tobruk garrison this further withdrawal of the Air Force was a serious development. The first move, from Gambut, had been grave enough, as the longer flight from Sidi Azeiz to the fortress reduced the flying-time of patrols; the withdrawal to the Sidi Barrani area meant that Tobruk was now outside the range of the whole fighter force with the exception of No. 250 Squadron, the only fighter squadron fitted with long-range tanks.

On 18 June, two of the fighter Wings operated from Sidi Azeiz, covering the retreat of Army units from Sidi Resegh along the Trigh Capuzzo and the coastal road. By the 19th however they had withdrawn to the Barrani area, and on that day operated to the limit of their effective range in protection of the frontier positions. Fortunately on both days enemy activity was negligible, and the

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squadrons took advantage of this period of quiet to prepare for the next round. No.233 Wing and squadrons were withdrawn to the Maaten Bagush area on 19 June, and personnel were sent on leave to recover from their intense operations. Judging by the Axis air operations on 20 June, it would appear that the enemy also spent these two days in building up strength. Offensive operations by the Air Force were confined to an attack on 18th by six Baltimores of No.223 Squadron on Gazala No.2. Landing-ground, and after dark on 19 June, attacks by individual aircraft of the same squadron on Tmimi airfield. At the former target bombs were seen to burst on the edge of the target area but no results were observed, while at Tmimi the last aircraft to leave reported fires. Here, on the arrival of the first aircraft the flare-path was conveniently laid out, but later aircraft were greeted with heavy A.A. fire.

#### The Airfield Offensive in the Battle

M.E.F.O.S.  
Nos.205 Group,  
3 S.A.A.F. Wing  
and Sqdn  
O.R.B.s

Wellingtons of No.205 Group had maintained a high scale of activity against the enemy's forward airfields since the beginning of the battle. Operating at an average rate of over one hundred sorties per week, they had persistently attacked Axis fighter and Stuka bases at Derna, Martuba and Tmimi. In this task they were assisted to a small extent by light-bombers, but owing to the heavy commitments for support bombing, the Bostons could only be employed on this task when the nature of the ground fighting precluded their use, as in the Cauldron phase of the battle. An additional limitation was that these aircraft could operate by night in moon periods only. The Baltimores however, which were equipped for high flying, were employed more frequently on high level daylight attacks on airfields than on any other task during the battle, as the fighter strength was generally insufficient to provide escort for more than two light bomber squadrons over the battle area.

Until the fall of Tobruk on 21 June, the Derna, Martuba and Tmimi airfields remained the chief targets, but on 17 June, when reconnaissance disclosed that the enemy was using Gazala as a forward fighter base, Kittyhawks were immediately dispatched to make a daylight attack in force. The fighters flew both bombing and machine-gunning sorties, and, for some time after the raid, which appeared to come as a complete surprise to the enemy, it was noticeable that the number of Axis aircraft patrolling over R.A.F. bases was considerably diminished. After the capture of Tobruk, Gazala received further attention, as did a few other recently captured airfields, Gambut, Baheira and Sidi Azeiz. Up to 25 June the total bombing effort against airfields was:

<u>Aircraft</u>	<u>Sorties</u>	<u>Tons of H.E.</u>
Wellingtons	464	499
Baltimores } Bostons	124	75

From 25 June, the Wellingtons were given new targets, enemy concentrations in the battle area; the airfield offensive had given way to the 'round the clock' air offensive against Rommel's army as it pressed forward towards the Delta.

M.E.W.I.S.

Ibid., and  
No.205 Group  
O.R.B.

Owing to unfavourable weather, results of the Wellington raids on airfields could not always be observed, particularly during the first week of the battle. In the third week however, Wellingtons and Bostons attacking Derna and Siret el Chreiba on 13 June(1) caused a big explosion followed by one large and several smaller fires north of Chreiba; hits were also scored on badly dispersed aircraft. Against Gazala, the Kittybomber daylight raid on 17 June achieved excellent results according to the fighter escort, nine aircraft being claimed severely damaged by bombs, and others damaged by machine-gun fire. Baltimores attacked this target on the following day, and when, on 21 June, photographs revealed over seventy fighters on Gazala, Wellingtons were dispatched that night to make an attack. Many fires were started on No.1 landing-ground, and at No.2, a stick burst across twelve aircraft, while bursts and explosions were observed on other parts of the airfield and on landing-ground No.3. This raid was considered particularly successful. During this fourth week of the offensive, operations were confined to Gazala and Tmimi - both fighter bases. The retreating Eighth Army was very vulnerable to air attack at this time, and reduction of the enemy fighter effort was considered to be the best way of preventing enemy air attacks, particularly because the enemy air effort was largely confined to daylight raids and was therefore specially dependent on the fighter force to provide escorts for the bombers. At Tmimi, which was visited by a total of some ninety Wellingtons which dropped well over one hundred tons of high explosive, many fires and several very violent explosions were observed. Night operations by No.73 Hurricane Squadron, included ground strafing and intruder sorties, as well as patrols over British airfields.

Enemy aircraft based on Greece and Crete, mostly Ju. 88's and He. 111's, attacked British advanced and rear airfields nightly from the commencement of the offensive. As the battle developed however, their effort against airfields decreased in favour of operations against troops and motor transport in the battle area. Bomber sorties from Greece and Crete varied between ten and forty per night, representing only a moderate scale of effort for the forces available, so that it would appear that the Germans had been unable to build up their full strength for the battle. In all enemy operations the Italian Air Force was, generally speaking, conspicuous for its absence.

#### The Attack on Tobruk

The attack on Tobruk opened at about 0600 hours on 20 June with a heavy artillery bombardment, and dive-bombing attacks on the centre of the 11th Indian Infantry Brigade on the south-eastern sector of the perimeter. Within an hour the posts on that sector had been overrun. An immediate counter-attack was made by carriers of the Mahratta Light Infantry, but this was brought to a standstill by anti-tank gunfire, and the enemy, covered by smoke screens, began to make gaps in the minefields and to advance deliberately, on a narrow front, towards Sidi Mahmud where the coastal road,

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(1) These raids formed part of the operations for the support of the Vigorous convoy. See page 166.

running from the town meets the road from El Adem. Subsequent British counter-attacks were ill-co-ordinated and generally abortive, and by two o'clock the position at the cross roads had been taken. The German thrust then divided: one portion continued along the escarpment while the other proceeded down the road to the town. The harbour came under fire at 1700 hours and was cut off from the rest of the fortress by 1800 hours.

It was not until mid-day that news of the attack was received at Headquarters Eighth Army and General Ritchie at once ordered XXX Corps to use 7th Armoured Division to advance on Tobruk. The division reached Sidi Rezegh just before dark, but an hour later on reporting the situation to General Ritchie, General Kloppe asked to be allowed to fight his way out. This was agreed to, and 7th Armoured Division was ordered to endeavour to hold open a gap between El Adem and Knightsbridge. However, before a break-out could be attempted the greater part of the garrison's transport was captured in the harbour area, leaving the troops on the perimeter without means of escape. All water and petrol was reported to have been demolished by the early hours of 21 June, and an order was issued to all units in the garrison that a capitulation had taken place and that all vehicles, equipment and arms were to be destroyed; the source of this order is not known. Certain detachments which were in possession of transport then elected to break out independently, and some succeeded in rejoining the Eighth Army. Other British, Indian and South African units continued to fight on throughout the 21 June.

#### Air Participation

Since the Desert Air Force had been obliged to withdraw to the Sidi Barrani group of landing grounds, Tobruk was outside normal fighter range and therefore air support could not be expected. Nevertheless a fighter squadron (No.250), the only one of its kind available, had been fitted with long range tanks with the intention of employing these aircraft on long range fighter activity over Tobruk. Even these aircraft, however, carried insufficient fuel to enable them to remain over Tobruk for more than two minutes. For attacks on ground forces the light bombers had sufficient range for the flight to Tobruk but unescorted daylight raids were out of the question with the enemy in possession of the landing grounds from Gazala to Gambut.

Indeed geographically the enemy air situation was highly favourable, in great contrast to the British, and this feature was made use of to the utmost in the heaviest-scale employment of aircraft in the battle. A German document recounts that the Panzer Army's attack began with a large scale attack of all the Luftwaffe bomber units in North Africa on the position to be breached in the south-east sector of the fortress. It states also that the air attack was extraordinarily effective, that it shattered strongly fortified positions, in particular the infantry wire obstacles and had a profound effect on the fighting morale of the 11th Indian Infantry Brigade in that sector.

Evidence supplied to the Court of Inquiry <sup>(1)</sup> confirmed the weight of attack. It stated that both Stukas and

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(1) See page 188.

Cabinet Office  
Reference  
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Junkers came over in relays without fighter escort, and plastered the perimeter and the whole of the positions in the rear; that after their attacks they flew to El Adem, reloaded and returned. It was also stated however that the British troops were in excellent spirits and employing small arms fire against the aircraft. The fact that the bombers had no fighter escort and that they used El Adem landing-ground for refuelling and reloading added to the tremendous advantage enjoyed by the Axis. The aircraft were operating from an airfield within a few seconds' flying distance of the target, without opposition, while the British were to all practical purposes out of the range.

A.H.B. (6)  
Enemy Documents  
including  
Trans No.VII/74

It is now known that some six hundred sorties were flown against Tobruk on 20 June by the Luftwaffe alone, and that Italian Cant Z's and C.R. 42's also took part, and that the bombers were protected, though not necessarily escorted, by German and Italian fighters. The Axis plan was that a large heavy bomber formation was to attack the group of small forts on the south-eastern sector immediately before the tank attack, while Italian bombers attacked the port and batteries in the rear zone. According to an Italian account, this type of close co-operation called for the most accurate synchronisation of operations which was ensured by a perfect communication system between aircraft and ground units ... The account continued:

'Choosing their objectives the bombers went into the attack and soon put three strong-points out of action, thus allowing the armoured units to pass over the bridged anti-tank ditch. The attack was carried out with such violence and the defenders were so shaken, that our forces got through the first line with practically no opposition. This success exploited and the leading troops were soon driving deep wedges into the enemy. Meanwhile the heavy air bombardment was being concentrated against the strong-points in the second line of defence and enemy reaction on the ground became progressively weaker.'

Finally the account stated without comment that the enemy air force which had been severely tried in the preceding twenty-four days, did not challenge the complete air supremacy of the Axis during the battle.

Of the six hundred Luftwaffe sorties, all but thirty were flown by Fliegerfuehrer Afrika, the remainder being flown by Crete-based bombers. Fliegerfuehrer Afrika dropped 302 tons of bombs and claimed direct hits on thirteen pill-boxes and on Forts Pilastrino and Solaro, and claimed five battery positions, three A.A. positions, ten tanks and four other vehicles destroyed. During the day the Luftwaffe lost only two dive-bombers; Italian losses are not available.

Although the long-range Kittyhawks were prepared for operations the Royal Air Force was virtually powerless to assist the garrison because no information was supplied from the air force sources of information at Tobruk. These were:

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- (a) An Air Support Tentacle with the 2nd South African Division in Tobruk, which was working satisfactorily until 1800 hours on 20 June. From this source seven messages were passed to Air Support Control at Advanced Air Headquarters during the day, two of these messages being in reply to requests for information. There was

no indication of any heavy enemy air attacks from this source, although specific instructions had been given requesting reports of enemy air activity.

- (b) By R/T from Advanced Control No. 211 Group.  
From this source, there was, again, no indication of a heavy scale of enemy air attack, but the R/T set was unserviceable for a period during the late morning and early afternoon.

In the absence of demands for protection from enemy air attack the fighters were employed as escort to a Boston attack on enemy ground forces. The first indication of the enemy assault on Tobruk was a signal received at 10.00 hours reporting that the enemy was attacking the south east of the perimeter after an aircraft attack and that a counter-attack was proceeding. This was treated as a target report and nine Bostons were dispatched and bombed with good results a concentration of motor transport outside the gap torn in the perimeter. As the afternoon wore on, and the situation became more serious, six Bostons were sent to make a last light attack without escort. In a further attempt to hinder enemy ground units six Bostons operated singly at twenty minute intervals during the night in the area of the gap. It is difficult to assess the effect of the light bomber raids on the enemy's assault on Tobruk, for although they appeared to have some success, there is no mention of them in the Panzerarmee of D.A.K. Diaries and in any case, against an operation of so considerable a scale it is unlikely that a small number of sorties could affect the course of the fighting.

#### Inquiry into the Defeat at Tobruk

The garrison of Tobruk capitulated after little more than twenty-four hours fighting. So unexpected and so costly in men and material was this defeat, that it received particular attention at the Court of Inquiry which was set up after the retreat to Alamein to investigate certain operations which took place between 27 May and 1 July. The causes of the collapse were then thoroughly investigated. The findings of the Court were as follows:

'The fact that Tobruk fell must undoubtedly be attributed to the eleventh hour reversal of policy leading to the decision to hold the fortress, regardless of the fact that the Eighth Army was then in full retreat in the face of an enemy which had been uniformly successful and whose morale must in consequence have been high. It was impossible in the time available to make adequate preparations for the completely new role imposed on the garrison, which up to then had only been concerned with the prevention of raids by air, land and sea.'

In the last resort, the defeat of the garrison was a purely Army matter, as the Air Force was to all practical purposes out of range and could not operate to any extent over the fortress. Nevertheless it is necessary to investigate whether this situation was the responsibility of the Air Force or not, particularly in view of the fact that as a member of the Middle East Defence Committee the A.O.C.-in-C. had supported Auchinleck's decision of 14 June to hold Tobruk.

A.S.C. Diary  
App. 'K'. to  
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Wing & Sqdn  
O.R.B.s  
M.E.F.O.S.

Report of the  
Court of  
Enquiry.  
Cabinet Office  
Reference  
G. Ops. 5.  
(Box 497)

Telegram  
IZ.590 16/6 in  
War Cabinet  
Hist. (B)  
(Crusader) 3  
Final. (239)

In the first place, Air Marshal Tedder had endorsed General Auchinleck's signal to the Prime Minister, which included the statement that fighter aircraft could operate over Tobruk even if the Gambut landing-grounds could not be used. In authorising this statement the A.O.C. was presumably relying on the existence of one or more out of three probable situations; that, although close to Gambut, the Sidi Azeiz landing-ground could be used even if Gambut were captured, that if Sidi Azeiz were captured it would be possible to use a landing-ground in the Sidi Omar (1) area which was being specially prepared for this emergency, or, that the single squadron of long-range Kittyhawks would be adequate for the air defence of the fortress.

Report of the  
Court of Enquiry.  
Cabinet Office  
Reference  
G. Ops 5

It is unlikely that the A.O.C.-in-C. set much store on availability of the long-range Kittyhawks for the defence of Tobruk, since they were severely limited in numbers, and, if based farther east than the frontier, would not be able to maintain more than brief patrols over the fortress. The remaining two situations depended on the Army's ability to defend the landing-ground areas, against enemy thrusts to the east. At the Court of Inquiry it was made clear, in the evidence of Air Commodore Beamish, then Senior Air Staff Officer to the Western Desert Air Force, that the Army accepted this responsibility. He was asked by the Court, whether, on 14 June, when the decision was made, there was any discussion between the Army Commander and the Air Officer Commanding as to what air assistance could be given to the garrison. In reply Air Commodore Beamish stated:

'The matter was fully discussed between the Army Commander and the A.O.C. The Army Commander was made aware of the necessity for securing airfields within range of Tobruk before air assistance could be given ..

The Army Commander informed the A.O.C. that he had made provision for the A.A. of Tobruk to meet the Air threat; his view was that Tobruk had held previously against air attacks and would do so again if the R.A.F. was forced out of range.'

It would appear, then, that before the decision to hold Tobruk was taken, it was understood that in certain favourable but also probable ground circumstances, the R.A.F. would be able to operate over Tobruk, even though the Gambut landing-grounds could not be used. At the same time the Army was also prepared to accept a situation in which Tobruk would have to be defended without air protection owing to the loss of those airfields within operational range. In the event the latter situation prevailed and no air support could be given except what was within the capabilities of the small number of long-range Kittyhawks available. When the time came even these

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- (1) Reference to this airfield was made in the evidence of Air Commodore Beamish who stated: To assist in increasing the range of our fighter force in the L.G. 75 area, refuelling facilities and A.A. defences had been established at Habata landing-ground (at approx. 31.10N, 25.30 E) but as this was not sufficiently far forward a landing-ground site had been reconnoitred in the Sidi Omar area. A suitable site was found on the Egyptian side of the wire and work was commenced, but the R.A.F. was again informed by the Army that no security could be given in this area and work was discontinued.

could not be used for fighter defence owing to a lack of information of enemy air attacks, and information was almost as scarce concerning ground targets for the light bombers for which the Kittyhawks provided escorts in default of opportunities for air defence.

The findings of the Court of Inquiry regarding the responsibility of the R.A.F. for the fall of Tobruk were as follows:

Ibid.

'From the 18 June, on the withdrawal of the R.A.F. fighter force from the Sidi Azeiz landing-grounds, owing to the Eighth Army being unable to guarantee their security against enemy mobile columns, the R.A.F. were not in a position to render close support to land operations in the Tobruk area.'

PHASE V. THE WITHDRAWAL TO ALAMEINThe Decision to Abandon the Frontier Line

When, on the night of 20 June it became apparent that Tobruk would fall, General Ritchie made representations to General Auchinleck in favour of retiring from the frontier positions to Matruh. He had been relying on Tobruk to contain some of the enemy's armour and to impose at least some delay on his advance, but the surrender of the garrison had set Rommel free to employ all his forces in the advance, while the stocks and transport which he had so unfortunately been allowed to capture could greatly simplify his supply problem. The frontier defences depended on the backing of an adequate armoured force, but this was no longer available, and the G.O.C. Eighth Army wished to retire to Matruh to gain time to build up his armour.

General Auchinleck was reluctant to abandon the frontier position, as on the whole, the defences there were better than those at Matruh, but in view of General Ritchie's anxiety that a respite should be secured for recuperation before meeting the enemy in a major engagement, the Commander-in-Chief agreed to the proposal. This decision to withdraw was subsequently endorsed by the Middle East Defence Committee, which instructed General Ritchie to prepare to fight a decisive action round Matruh and meanwhile to delay the enemy as far west as possible with a covering force. As an additional precaution measures were taken to complete the fortification of, and to occupy, the Alamein position a hundred and twenty miles farther east.

Under the new plan, XXX Corps was sent back to Matruh to prepare the line there, while XIII Corps was organised into two elements, a striking force under 8th Armoured Division consisting of armoured and motored brigade groups, and a holding force consisting of the 50th, 10th Indian and 1st South African Division. No. 208 Army Cooperation Squadron was put under the operational control of XIII Corps while No. 40 S.A.A.F. Squadron was withdrawn first to Bagush then to Fuka and put under X Corps. From this time until the establishment at Alamein this squadron received few calls to operate.

Strengthening of the Western Desert Air Force

It was clear from the first that the necessity for a prolonged withdrawal caused by the loss of Tobruk and of the majority of the trained armoured force would call for a maximum air effort, not only to delay at all cost the enemy's advance but also to cover the retiring ground forces. To this end, action was at once taken to increase by every possible means Air Vice-Marshal Coningham's force for the immediate battle, regardless of the future. At the instance of the A.O.C.-in-C., the Defence Committee asked Malta to send twenty Spitfires of No. 601 Squadron to the Desert and the already starved training units in the Delta area were robbed of aircraft in order to send forward to the battle area one Hurricane II Squadron (No. 1 S.A.A.F.) which was to have been withdrawn, and to complete another (No. 127). The defence of the Delta now relied solely upon night Beaufighters and one or two Spitfires awaiting modification. From No. 201 Group were taken the two Beaufighter squadrons (Nos. 252 and 272), normally used for anti-shipping escorts, and No. 234 Wing with its static Hurricane squadrons (the Alsace and Hellenic) normally used for shipping protection.

Signal A.O.C.  
PUNCH 726 in  
A.H.B./IIJ6/  
183/46 A.O.C./  
11 at Encl.  
225a and  
A.H.B./II  
J6/8 A.H.Q.  
W.D. Report

These were absorbed into the Western Desert Air Force to assist in the task of offensive operations against enemy ground troops and the protection of our own. The light bomber force was augmented by No. 14 (Blenheim) Squadron, which was employed only at night, while No. 223 (Baltimore) Squadron was at last brought up to full strength, and for the first time began to take part in the light bomber offensive against enemy concentrations in the battle area.

Despite these measures, there was still a great need for aircraft. The air force had been operating, almost without respite, for three weeks, and on a scale made possible only by the fighting spirit of the pilots and the exertions of the maintenance crews and the men of the repair and salvage units. Owing to their efforts twelve fighter squadrons had maintained an average serviceability of ten to twelve aircraft and had flown 4,882 sorties, and the two Boston squadrons with an average serviceability of fifteen aircraft each had flown 404 sorties. The feat of the maintenance personnel was that in spite of intensive operations and a steady fall in aircraft strength, the average serviceability figure was retained at a steady level, as is indicated by the following table:-

Period	Average		Percentage of Serviceability to Strength
	Daily Strength	Average Daily Serviceability	
26 May to 1 June	15.3	10.3	67
2 June to 8 June	13.6	10.3	75.7
9 June to 15 June	13.3	10.9	82
16 June to 22 June	13	10.4	80

However, although the daily serviceability remained stable, and the percentage of serviceability to strength actually rose, the decline in the strength figure itself could not be allowed to continue without severely affecting operational efficiency. On 21 June the position was that 250 fighters were due to arrive from repair during the month but that even with these it would be impossible to make up deficiencies and also arm, from scratch, two squadrons as planned. It was hoped that a special delivery of Kittyhawks to Takoradi would arrive in time to prevent an undesirable gap in replacements to the Desert. Here there was already a deficiency of thirty Kittyhawks and only twenty to hand for delivery in the next seven days. The Hurricane II wastage had been met to date and there were still thirty aircraft available for replacement. The main difficulty was that of maintaining supplies after the aircraft in reserve had been exhausted: the existing rate of delivery from overseas was quite inadequate to meet the wastage rate experienced in this battle.

The immediate action taken by the Chiefs of Staff was to divert to the Middle East twenty-one Hurricane II's originally assigned to India, and to give permission for the retention in the Middle East of some Blenheims also destined for India. They also had under consideration further diversions of up to 130 Hurricanes which were at sea. Under the same policy tanks were being diverted for the Army.

It was Air Vice-Marshal Coningham's intention to operate his squadrons on the same mobile basis as hitherto, keeping the purely operational parties in the Sidi Barrani area and the remainder in the Maaten Bagush area. He also hoped to

Signal A.O.C.  
720 in A.O.C./11  
A.H.B./IIJI/183/  
146(D) Encl.219a

A.H.B./IIJI/  
159/20 H.Q.,  
R.A.F., M.E.  
Report Air  
Staff (Ops  
Records) App  
'G'

A.H.B./IIJI/  
183/248 A.O.C.-  
in-C. Corres.  
with V.C.A.S.  
Encl. 210a

Signal O.Z.544  
22/6 War Cabinet  
Series Hist (B)  
(Crusader) 4  
Final. No.(6)

A.H.B./IIJ6/8  
A.H.Q., W.D.  
Report

organise additional refuelling landing-grounds in the intermediate area, and, in case a further withdrawal should become necessary, the Daba and Amriya - Wadi Natrun landing-grounds were made ready for operations.

The Axis Decision to Advance to Suez; Fatal Postponement of Hercules

Swift though the actual assault on Tobruk had been, the capture of the fortress lagged far behind the German schedule. The original quota of four days had stretched perforce to twenty-four, and the expenditure of both men and materials had far exceeded Rommel's original estimates. Nevertheless, when the occupation of Tobruk was at last a fait accompli, it was found that the British had failed to destroy considerable quantities of stores, especially petrol, which, it was at first thought, would greatly improve the Axis supply situation. Moreover, the rapid collapse of the garrison,<sup>(1)</sup> had had a profound effect on Axis morale, and the fighting spirit of the Panzer Army was high. So favourable did these circumstances appear that the Axis leaders, headed by Rommel, were tempted to make a radical, and as it proved, fatal alteration in the strategic plan, that is, the immediate continuation of the Axis advance, and the further postponement of the proposed invasion of Malta, Operation Hercules.

High Level  
Reports and  
Directives.  
A.H.B.6. Trans.  
VII/80

In the first stage of planning Rommel's offensive,<sup>(2)</sup> a geographical limit at a line Sidi Omar - Halfaya - Sollum, and a chronological limit dated 20 June, had been imposed on the advance to ensure that certain air and naval units supporting the fighting in North Africa would be available for Operation Hercules which was scheduled to take place at the end of June. Since then, the necessity for finally subduing the island had once more become obvious to the Axis, following its recovery from the spring air offensive and the resumption of offensive operations against the Axis supply lines to Africa. On 5 June Cavallero, wrote:

'The present battles in Africa prove once again the necessity of Operation Hercules. If it is not carried out, it must be expected that the British will be able to prepare superior forces in Africa by autumn, and that the situation on the Mediterranean will deteriorate again. This is proved by the noticeably increased use of Malta as an air base since the withdrawal of units of Luftflotte 2 and the temporary transfer of some Luftwaffe units from Sicily to North Africa. The first consequence of this was the torpedoing of the loaded vessels Allegri and Giuliana<sup>(3)</sup> on 31 May and 4 June respectively.'

The preparations for Hercules were then proceeding according to plan although the provision of fuel oil was causing difficulty. Nevertheless, on 10 June, owing to the prolongation of the desert battle, the operation had been postponed for three or four weeks.

When this decision was made, Bir Hacheim had not yet fallen although it was hoped to take it that day (10 June). After its capture it was calculated that five days would

- (1) Actually Wavell's successful assault on Tobruk in 1941 took a few hours less.
- (2) See page 131.
- (3) Although the Giuliana was sunk by Egypt-based aircraft.

Ibid.

be needed to complete the defeat of the British troops manning the Gazala positions, after which the British motorised and armoured units south of Tobruk were to be attacked. It was still considered that the capture of Tobruk was possible, as comparative strengths of infantry and artillery were favourable to the Axis, and there were still sufficient tanks for an assault; but the Italian Command was less optimistic than the German, and was anxious that not too much reliance should be placed on capturing the port. It was considered that the postponement of Hercules would have a favourable effect as there were still many preparations to be completed. There was thus already a tendency to allow the launching of the attack on Malta to wait upon the events in the Desert.

On 16 June, after the defeat of the British armour, the Italians had shown signs of anxiety lest the forthcoming assault on Tobruk should develop into a long siege. It was emphasised that Commando Supremo would approve an attack of short duration but that a battle of attrition must be avoided at all costs. Cavallero reminded von Rintelen, the German General at Commando Supremo, that at the end of June air force withdrawals would have to be begun in preparation for Operation Hercules, which 'he still considered absolutely essential'. Postponement, this time until August, was again considered unimportant as it would enable more thorough preparations to be made. On 21 June, immediately after the fall of Tobruk, the plan for a limited offensive followed by the invasion of Malta was still accepted. On this day the Duce had agreed that:

'the instructions of 5 May shall remain fully in force', and considered it essential that 'the Sollum-Halfaya position be occupied as quickly as possible. In addition the speedy transfer of air forces assigned to other operations must be ensured...'

At this juncture fresh emphasis of the importance of crushing Malta had been provided by the sinking of the important supply vessel Reichenfels. At Commando Supremo it was considered necessary to effect a quick transfer of air forces from Africa to Sicily in order to increase attacks on Malta again. In the meantime, all shipping movements to the west of Malta were suspended and the eastern route more extensively used.

On the very next day, Rommel made proposals to the German High Command which resulted in a complete change of Axis plans. In a message to OKW he wrote:

'The first objective of the Panzer Army to defeat the enemy in the field and to take Tobruk has been attained. Enemy units are still holding out at Sollum, Halfaya, and Side Omar. It is intended to destroy this enemy force also, and so to open the way into Egypt. The condition and morale of the troops, the present supply situation improved by booty, and the momentary weakness of the enemy will permit pursuit into the heart of Egypt. Request the Duce to effect the suspension of former limitations on freedom of movement, and to put units at present subordinate, to me at my disposal, so that the campaign may be continued.'

Ibid.

Hitler was only too pleased to postpone the Malta project which he had never greatly liked, in favour of what, admittedly, seemed a golden chance of siezing Suez, and the success of which would automatically result in the eventual collapse of Malta. Under pressure from Hitler, and allured by the idea of a victorious Italian Army marching into Alexandria and Cairo, Mussolini agreed that 'the historic moment had come to conquer Egypt and must be exploited,' and that the invasion of Malta must be put off until September. Constantly aware, however of the vulnerability of Rommel's supply lines, the Duce still insisted that the difficulties of the Panzer Army after the collapse of the Eighth Army lay less in the battle on the ground than in the transport situation at sea; that owing to Malta's active revival the supply of the Panzer Army had once more reached a critical stage, and that, since it was not possible at the moment to commence the invasion of Malta, it was absolutely essential to neutralise it.

By the time Rommel had reached Matruh on 26 June, a further attempt to neutralise Malta by air attack had been planned,<sup>(1)</sup> for which air formations were to be transferred from Germany. As this would take time Mussolini undertook to do everything possible in the interval to supply the Panzer Army by air and by submarine and by the eastern route to Tobruk and Benghazi. The weakness of this plan was that it apparently ignored the fact that, at the end of the spring offensive, after the arrival of Spitfire reinforcements at the island, II Fliegerkorps reported that day attacks were no longer possible because of the increased fighter strength at Malta, and that since then Malta's position had further improved.

Had Mussolini and Kesselring, the two chief supporters of Operation Hercules, held firmly to the conviction that Malta must be subjugated before victory in the desert could be achieved, and had they succeeded in carrying the German High Command with them, the history of the war in the Mediterranean might have ended differently. As it was, the risk was taken of advancing into Egypt with Malta still in a position to interfere seriously with the supply lines of the Panzer Army, with the result that the offensive ultimately failed. Paradoxically it might be said that the very extent of the Axis success at Tobruk led to the eventual failure in North Africa, that the supplies captured at Tobruk were the bait, laid unwittingly by the British, which led the Panzer Army on to take risks too great for its strength. For this tactical achievement led to the cancellation of the one strategic project, which if it had succeeded could have guaranteed the command of the Mediterranean for the Axis powers. In the words of Kesselring, 'The abandonment of this project was the first death blow to the whole undertaking in North Africa.'

#### The Nature of Air Operations during the British Withdrawal

From the Air point of view even more than the Army, the withdrawal from the frontier may be said to fall into two distinct phases. From 23 to 26 June the ground

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(1) This offensive took place in the first week of July but was unsuccessful.

See A.H.B. Narrative, The Middle East Campaigns, Volume XI, Malta.

situation was clear-cut, and targets for air attack were plentiful. Contact between the British rear-guard and the advanced enemy reconnaissance groups resulted in nothing more than minor clashes, which did not call for specific air support, while to the rear of the advanced units the main Axis force, advancing in three columns across the desert, presented an ideal target for bombing. In this four-day period, scarcely interrupted by the single eastward move of the fighters from the Sidi Barrani to the Matruh landing-grounds and the bombers from the Matruh to the Daba landing-grounds, the air force was able to maintain a constant and increasing effort to impede the enemy advance. The light bombers broke all their previous records; the daily sortie rate, of which the record figure of the past weeks had been sixty, reached a peak of well over one hundred. The fighters, while busy providing escorts for this heavy bomber programme, yet maintained a high scale of protective activity over the retreating units, besides maintaining all-important reconnaissance patrols to watch the Axis advance. No. 208 Army - Cooperation Squadron was able to keep in touch with Corps, and flew five or six sorties per day, keeping constant watch over the columns.

By contrast, in this period the Luftwaffe, slow to move forward to airfields within range of the fighting, and presumably exhausted after the intensive activity at Bir Hacheim and Tobruk, scarcely put in an appearance, either in protection of the Axis troops, or in an offensive role in operations against the retreating forces. The latter omission showed a remarkable lack of aptitude for siezing a favourable opportunity of wielding air power, especially compared with Rommel's opportunist tactics in the land fighting, for the Eighth Army, moving in a close-packed stream along the coast road and across the desert, presented an ideal target for air attack. A salvo of well directed raids might well have caused enough disorganisation to enable the Panzer Army to overtake the British with disastrous results for the latter.

From the evening of 26th however, when the airfields of the Sidi Haneish and Bagush groups were threatened by a swift enemy thrust through the minefield defences at Matruh, until the establishment of the Eighth Army on the Alamein Line, the ground situation was complex, and less favourable to air participation. The fighting round Matruh lasted from 27 to 29 June inclusive, and meanwhile advanced Axis units were pushing forward well to the eastward, and by the evening of the 29th had reached Sidi el Rhaman, only fifteen miles west of Alamein. The light bomber force was withdrawing on 27 and 28 June from the airfields at Sidi Haneish and Daba to the Amiriya group east of the Alamein Line, and from the evening of the 26th the fighters were moving back step by step from Sidi Haneish through Fuka and Daba until on the 29th they too were operating from the Amiriya area. In this period as it was constantly on the move XIII Corps could not control No. 208 Squadron adequately, so that there was delay in getting information to Army Headquarters. No. 208 Squadron therefore came under the control of Air Headquarters and Main Army on 28 June.

In this period, in addition to these withdrawals, two factors called a halt to the day bombing. The confused ground situation precluded operations against the main body of the enemy, while the reappearance of the Luftwaffe on 26 June called at once for larger fighter escorts for the bomber formations, and for more protective fighter patrols over the Army. Consequently, except for three attacks on

27 June, the light bombers did not operate by day until the 30th. By that time the greater part of the Eighth Army had withdrawn into the defences at the Alamein position, and the enemy was concentrating his forces in preparation for an attack on this line, while the Luftwaffe was temporarily outstripped by the Panzerarmee, and was scarcely in evidence.

Although some units of the Luftwaffe moved up to forward airfields during the fighting at Matruh, this did not bring about any intensive offensive activity against the Eighth Army, so that the main effect of the move was to keep the British fighter force on the defensive against possible attacks, and thus indirectly to protect the Axis Army from further bombing. The following extract from enemy documents explains the lapse of Axis air activity after the fall of Tobruk, although there is little sign of a decrease in either strength or serviceability in the German Luftwaffe strength returns:

Enemy Documents  
A.H.B.(6)

'This however, (the air attack on Tobruk) was the last time when the Luftwaffe had any decisive influence on ground operations in North Africa. the intensity of its efforts during May and June, had drained its resources and although losses had not been very high, serviceability was at a low level and crews were suffering from operational strain. The failure to send to the Mediterranean theatre adequate air forces to cover the many and varied duties involved had had its inevitable result.'

#### The Introduction of 'Round the Clock' Bombing

Ibid.

While the light bombing and offensive fighter operations were, on their own merits, of the greatest importance during the withdrawal, their value was enhanced in this phase of the campaign by the introduction of a new development in tactical bombing. On the night of 25 June, guided to the target by flare-dropping Albacores, a force of eighty Wellingtons attacked enemy concentrations in the battle area. The commencement of direct participation of night bombers in the land battle, a logical sequel to the illuminated night raids on airfields, brought into being a new factor in close support. Added to the light bombing by day, night bombing implied not merely a redoubled effort against battle area targets, but the establishment of a system of ceaseless air operations against the enemy Army. The intrinsic value of this system of 'round the clock' bombing was that it gave the enemy no respite by day or night, interfered with his sleep, and postulated dispersal even during the hours of darkness. An additional advantage of night bombing, at this stage was that unlike day operations it was not affected by the presence of the enemy fighter force in the forward area. A disadvantage however, was that the bomblines had necessarily to be more conservative at night than by day, but this did not detract from the value of its effect on the enemy's morale. Commencing on 25 June the Wellingtons made attacks on enemy concentrations in the battle area every night throughout the remainder of the withdrawal.

#### Revival of Strategic Bombing

From the week preceding Rommel's advance, the pre-occupation of the Wellingtons with airfield targets, had led to a marked reduction of operations against strategic

targets, notably the enemy's chief supply port, Benghazi, and the few raids which had been carried out had been designed chiefly as diversions to routine minelaying operations. Thus in the week before, and the first three weeks of the Gazala battle, the average number per week of bomber sorties flown against the port was only sixteen as compared with fifty-eight per week in the period 24 February - 19 May.

The seeming disaster at Tobruk, had at least resulted however, in a more ready recognition in London of the supply requirements of the Desert Forces, and, for the air force, in the permanent establishment in Egypt of a United States Liberator Heavy Bomber unit, as well as additional reinforcements in the shape of some long promised Halifaxes and some R.A.F. Liberators. Freed from the operational restrictions which were imposed in the early weeks of their tour, the American bombers were able to participate more fully in the Middle East war, and during the latter half of June a heavy scale of operations against Axis ports was recommenced in which Wellingtons and Liberators co-operated. Attacks on Benghazi totalled one hundred and thirty sorties, or an average of sixty-eight per week, and following the fall of Tobruk, further sorties were flown against this port during the retreat to El Alamein. The greater bomb load carried by the Liberators greatly increased the tonnage of bombs dropped per sortie, particularly at Tobruk, where the Liberators flew thirty-four sorties out of a total of forty-three. The effort expended on these two ports was:-

<u>Benghazi</u>		<u>Tobruk</u>	
<u>Sorties</u>	<u>Tons of H.E.</u>	<u>Sorties</u>	<u>Tons of H.E.</u>
27 May -		21-30 June	
17 June. 49	45	43	94
17-30 June 137	135		
<u>186</u>	<u>180</u>		

The effort against Benghazi included one exceptionally heavy raid on the night of 24/25 June. It was in the nature of a final blitz on the port, before the Wellingtons were forced to withdraw out of range. Some eighty Wellingtons and Liberators dropped seventy-six tons of high explosive on Benghazi, well over half the total tonnage dropped during the latter half of June. Considerable damage was believed to have been caused, during this and other raids of this period, many fires and explosions being observed on the Cathedral Mole and near railway sidings. At Tobruk, bursts were observed on the coast road and fires in the harbour area. Although a number of operations against both the ports were directed against shipping rather than port facilities, and all the attacks on Benghazi were timed to coincide with the unloading of ships, no enemy vessels were sunk in either port during this period, and from this aspect the results of the raids were disappointing.

#### The Withdrawal to Matruh

On 23 June, clear indications of an imminent enemy advance were given in the morning by a concentration of some three thousand motor transport in the area west of Sidi Omar, and in the evening fifteen hundred to two thousand vehicles were reported moving southwest towards the wire. The absence of any appreciable resistance during the approach to the wire, and the destruction of supply dumps convinced Rommel that the British did not intend to defend the frontier positions, and on 24 June he ordered

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183/271 A.O.C.-  
in-C. Corres.  
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a ruthless pursuit in the hope that at least some of the units evacuating the line might be cut off and destroyed. However, throughout the day, with the exception of the 90th Light Division which with the reconnaissance units pushed on ahead of the main force, the Afrika Korps was seriously hampered by lack of fuel, due to the non-arrival of the supply column. This was most fortunate for the Eighth Army, whose light mobile forces could not hope to do more than harass the Axis reconnaissance groups as they pressed rapidly forward. By the evening of 24th the British had reached the area south of Sidi Barrani and on the following day the Axis continued the pursuit towards Matruh without a pause. The vanguard was still well in advance of the main enemy force, sometimes by as much as twenty miles, but even so it could not catch up with the Eighth Army sufficiently to achieve more than minor engagements.

#### The Decision to Retreat to Alamein

#### Auchinleck's Dispatch

On the evening of 25 June, after considerable pressure from the authorities at home, General Auchinleck took over command of the Eighth Army from General Ritchie. His first act as Commander Eighth Army was to reverse the decision to make a final stand against the enemy at Matruh. His reasons, were similar to those of General Ritchie in relinquishing the frontier position: that although, with an adequate garrison and sufficient armoured forces the position was perfectly defensible, there were no longer enough troops to watch the whole length of the minefields, which in consequence would present little or no obstacle to the enemy. In addition, and of great importance, at Matruh as at Gazala and the Frontier the southern flank was open to encirclement, and, at the speed with which the enemy was pushing eastwards, it seemed hardly likely that the British units, which were in any case weak both in armour and artillery, would be reorganised in time to meet an attack.

General Auchinleck's plan was to keep the Eighth Army fully mobile for the time being, and to bring the enemy's advance to a halt between Matruh, El Alamein and the Qattara depression. Here, with the coast on the right flank and the impassable Qattara Depression running south-westward for some hundred and seventy miles on the left, a shorter defensive line, and one which could not be out-flanked, offered a much better chance of holding the enemy. To gain time to build up the defences and reorganise the force at Alamein, it was intended to hold Matruh for as long as possible without risking serious losses. There was to be no question of any part of the Eighth Army being shut up in the fortress even though this might mean abandoning the fortress entirely.

Under this new plan X and XIII Corps provided the mobile element of the Army and were ordered to take every opportunity of defeating the enemy without allowing themselves to be encircled or overwhelmed, while XXX Corps occupied the Alamein position. This plan had the additional and well-tried advantage of stretching the enemy's lines of communications as far as possible before bringing him to battle.

On 26 June the enemy continued his eastward movement more slowly. By the early afternoon the forward troops of 90th Light Division were reported by air reconnaissance

to be engaging the British west of the minefield defences at Matruh, but the main force was still some twenty miles in the rear moving along the railway and across the desert to the south of it. It seemed as though the enemy intended to penetrate the centre of the Matruh position, where a gap in the minefield had only recently been filled in, and this proved correct when enemy tanks passed through the minefield in the late evening, forcing back units of the 29th Indian Infantry Brigade which were too weak to stop them. This was the beginning of the fighting at Matruh, which was to continue for the following three days.

#### Air Operations during the Withdrawal to Matruh

Intensive air operations in support of the withdrawal began on 23 June, as soon as reports of the enemy concentration at Sidi Omar had been received through Tactical Reconnaissance. Throughout the day the fighter and reconnaissance squadrons joined in watching the enemy, the fighters making twelve separate patrols, and from their reports were chosen the targets for bombing attacks, first around Gabr el Saleh in what was evidently the assembly area, and later, as the enemy approached the wire, south-east towards Scherferzen. On this day, for the first time since their arrival in the desert, the Baltimores took part in the bombing of the enemy Army. Fortunately this placed no extra burden as yet on the fighter force as the bombers were equipped for high-flying, and it was considered that the risk of interception was slight enough to justify their operating without an escort. The Baltimores made two attacks on Axis concentrations and the Bostons three, making a total of forty-five sorties, and in addition Kittybombers escorting the Bostons, and independent formations of Kittyhawk and Hurricane bombers flew some thirty sorties. Particularly successful results were obtained by a formation of six Baltimores in the evening, when bombing caused large flames and much smoke among Motor Transport at Scherferzen, while earlier in the day the Afrika Korps reported that a heavy bombing attack on the Headquarters of the 15th Panzer Division had caused a delay in starting the move forward. Only slight A.A. was experienced on this day except at Sidi Omar where intense fire caused the loss of two out of four Hurricanes on reconnaissance, while a third had to make a forced landing. The enemy air force gave no trouble.

The enemy's move already constituted a threat to the more forward airfields, and it was considered that L.G.07, some twenty miles west of Matruh, was the most westerly airfield which could be guaranteed any degree of security for the next few days. Consequently a further stage of withdrawal was commenced during the evening, some of the light bombers moving to Daba to make room for the fighters moving to Matruh.

Air operations on 24 June again enjoyed the advantage of excellent targets. Reconnaissance patrols by fighters early discovered large concentrations of motor transport and tanks advancing eastward close to the railway, and in the absence of requests for support from the Army a steady bombing programme was maintained against these columns and also against an advance thrust to cut the coast road. Baltimores commenced the bombing an hour after midday, and five Boston and a further Baltimore attack followed during the afternoon and evening, bringing the total number of sorties flown to seventy-two. The fighter offensive effort on this day

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Wing O.R.B. &  
A.H.Q., W.D.  
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A.H.Q., W.D.  
Report A.H.B./  
ILJ6/8

comprised some thirty Kittybomber sorties, all carried out by fighters escorting the Bostons. On the whole results appeared to be good, and in one concentration twenty direct hits were observed. The Panzerarmee reported that the enemy air force was very active and that several attacks were experienced. There was little A.A. opposition to the bombing, but slight fighter activity was reported over the rear sections of the Axis columns, and it was observed that the enemy fighter force, moving forward very slowly, was occupying the Baheira and Gambut airfields. Except for a few reconnaissance sorties there was no sign of enemy activity in the forward area, and no attempt was made to make up for the slow advance of the armour by attacking the retreating forces from the air, although the packed traffic on the coastal road continued to provide excellent targets. On this day Beaufighters commenced machine-gunning operations against enemy road transport and other targets in the rear of the enemy force and in attacks on the Derna - Tmimi road destroyed three lorries and caused another, which was towing a gun, to overturn. They also shot up the seaplane base at Bomba.

On 25 June, the Eighth Army was racing back in an attempt to establish its units on the Matruh line before the Axis could reach it in sufficient strength to make an attack, and was thus particularly dependent on the air force to hold up the enemy while the dispositions were being completed. Air Headquarters therefore asked that light bomber raids should be conducted hourly against the thousands of motor transport moving eastward from Mischeifa. A programme of ten Boston attacks was carried out between 1030 and 1930 hours, and in addition Baltimores made three high-level attacks, bringing the total number of sorties to ninety-eight. On this day fighter reconnaissance reports were supplemented by information from ground units, not always with success, and the day's achievement was marred by the fact that the 69th Brigade was several times attacked by the bombers, when the location in which it was operating was given by Army Command as an enemy target. This error was the result of laying on a target without the knowledge of Air Support Control, which was in the best possible position for checking targets, as the tentacle organisation could cut across the usual information channels and was able to obtain the latest information regarding forward troops. The irony of this failure was intensified by the fact that excellent reports on the ground situation were available during the day from both fighters and bombers. To add more weight to the attempt to detain the enemy advance, fighter offensive activity was greatly increased on this day, over one hundred sorties being flown either with the Bostons or independently. Although it was reported that the bombing raids were most effective, by last light the foremost elements of the enemy had reached an area not much more than twenty miles from Matruh.

In addition to the bombing attacks the fighters flew some fifteen machine-gunning sorties, aircraft of No. 3 R.A.A.F. Squadron claiming seven lorries damaged and another set on fire, while No. 250 Squadron claimed nine vehicles and a petrol bowser destroyed. Beaufighters and Hurricanes were sent to attack Landing-grounds 121 and 05 in the Sidi Barrani area, where it was reported that Ju. 52's were bringing up supplies for the forward troops, but only one transport aircraft was seen and the fighters directed their attacks against vehicles on the crowded roads and on the airfields. A Beaufighter of No. 272 Squadron made a

No. 3 Wing  
S.A.A.F., O.R.B.

A.H.Q., W.D.  
Report A.H.B./  
ILJ6/8 incl.  
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App 'K'

Sqdn. O.R.B.s.

particularly successful attack when it emptied its cannons into twelve lorries which were refuelling from two bowzers; both the bowzers went up in flames and it was considered probable that all the lorries were damaged. On this day No. 233 Wing and squadrons were recalled from leave, and recommenced operations from the Maaten Bagush area on the following morning.

There was considerable reaction from Axis Army units to the heavy British air effort, and many messages to this effect were sent to the Panzer Commander in Chief during the day. The Afrika Korps twice reported heavy bombing attacks and remarked on the absence of fighter protection, 90th Light Division reported half-hourly attacks by one heavy and one fighter squadron, XX Corps' Divisions were repeatedly subjected to low-level and bombing attacks, while the Littorio Division was forced to halt by British air activity. A.A. fire was generally negligible, but during one bombing attack intense fire was encountered over the target and a Boston was shot down, the first day-light casualty for the Bostons in this battle. The same formation was scattered shortly after this by enemy fighters, but although, according to Axis documents approximately one hundred aircraft operated in support of the Panzer Army on this day, the enemy air effort again appeared to be on a small scale.

This was the day on which 'Round the Clock' bombing began. The units concerned spent all day and all night trying to arrange illuminated landmarks for the night bombers, a very difficult task, and their labours were rewarded when, two hours after the last Boston daylight raid had landed, eighty-two Wellingtons, led to their targets by the 'Pathfinder' Albacores, attacked enemy concentrations in the battle area. During these attacks which lasted from 2125 to 0230 hours 129 tons of high explosive were dropped, causing fires and explosions. A second sortie was then carried out by a further fifteen aircraft which added to the fires already started. Ten of the Albacores also attacked the targets, and nine Blenheims of No. 14 Squadron attacked similar targets in the Sidi Barrani area. From 2030 hours the divisions of XX Corps reported uninterrupted bombing attacks.

On 26 June the whole of the air effort was once again concentrated against the enemy columns on both sides of the railway. Air Headquarters again asked for hourly Boston attacks, and thirteen raids were carried out between 0730 and 1930 hours, making a total of one hundred and eleven sorties. To quote 3 S.A.A.F. Wing O.R.B.:

'This was the shuttle service par excellence, beside which all previous records became insignificant. Bostons in large formations were appearing over the enemy with the uncomfortable regularity of a tolerable suburban train service'.

In addition the Baltimores made three attacks comprising seventeen sorties and offensive fighter operations were also on a large scale. On most of the Boston raids part of the Kittyhawk escort took part in the bombing, while there were many independent fighter attacks. Altogether nearly two hundred fighter-bombing sorties were flown in the battle area, many aircraft doing seven sorties and the pilots up to five, such was the pressure of operations on the fighter force at this time. Generally speaking targets were good, the bomb-line being frequently amended by forward

Panzerarmee  
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Appendices

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formations, while a great deal of Intelligence was provided by fighter and bomber reports. Unfortunately however, there were once again occasions on which targets were laid too near British troops by order of a higher authority.

D.A.K. Diary  
Enemy Documents  
A.H.B.(6)

Both fighters and bombers reported satisfactory results in the attacks, and it was estimated that considerable damage was caused. This is confirmed in enemy records. The Afrika Korps reported that bombing attacks were made every hour and were causing losses, that a considerable number of casualties had been suffered in an attack on its General Headquarters, and that a fuel convoy of the 21st Panzer Division had been dispersed by bombers. The Afrika Korps also sent out requests for fighter protection during the day.

#### Reappearance of the Enemy Air Force

A.H.Q., W.D.  
Report A.H.B./  
IIJ6/8 & Wing &  
Sqn. O.R.B.s.

Although the German Army diaries for 26 June remarked on the absence of the Luftwaffe and the lack of fighter protection on this day, for the first time since the fall of Tobruk Axis aircraft made their presence felt. Fighters were active in the forward area, and six of the Boston raids were intercepted, some of the formation being followed to the target and back to base by the enemy patrols so that a progressive increase in the fighter escorts had to be made. Owing to the excellent escorts provided there was only one occasion on which the enemy broke through the fighter screen and attacked the bombers, when the only result achieved was damage to one Boston. On a day of intense bomber activity carried out in the face of considerable fighter opposition, it was a praiseworthy achievement on the part of the escorts that the bombers came through without loss. The fighters themselves were less fortunate however, one or two being shot down in nearly every escort, making a total loss of some six fighters on this task. The Baltimores also suffered from enemy interception on this day. When en route to the target of their third raid they were intercepted by fighters and forced to turn back, one of the bombers being shot down while two others were damaged. Owing to the vigilance of the enemy, fighter protection was provided for the Baltimores for the last attack of the day.

Enemy Documents  
A.H.B.(6)

The Luftwaffe was not active in the defensive sphere only. At dusk about twenty Ju. 87's, made a dive-bombing attack on a British position at El Bueib about thirty miles south of Matruh. This formation was twice intercepted between Matruh and Bagush by two separate formations of fighters which together claimed six Junkers 87 destroyed. This was a red-letter day for No. 213 Hurricane Squadron: one flight had already encountered eight Me.109's a few hours earlier and claimed five of them destroyed, and in the later engagement they added three Junker 87's to their score. The interceptions of both the Messerschmitts and the Junkers were achieved without loss to the fighters. Total losses for the day, were twelve fighters, including one Beaufighter, about one half of this number being lost by bomber escorts, while the remainder were lost in fighter bomber raids or in combat. The Spitfire squadron lost three aircraft on this day, one in combat and the other two on low level standing patrol over Sidi Barrani L.G. Enemy losses were four fighters, two bombers and one Stuka as against a total claim of six fighters and six Stukas.

No. 205 Group  
O.R.B. & Sqdn.  
O.R.B.s

On the night of 26/27, the Wellingtons continued their attacks in the battle area, flying nearly forty sorties against enemy concentrations. They claimed fires and explosions among vehicles. Nine Blenheims also operated, and observed eight fires in the Sidi Barrani - Matruh area.

H.Q., R.A.F.  
M.E. (Ops  
Records) Report  
A.H.B./ILJ1/  
159/20

The enemy's arrival in the Matruh area, and the commencement of the final phase of the withdrawal of the air force, necessitated a considerable reshuffle of units in the Delta area, in order to avoid congestion. Until 26 June, light bomber and fighter squadrons were dispersed around or west of Amiriya, Burg el Arab and Wadi Natrun, with advanced landing-grounds in the Maatan Bagush - Fuka area; medium bombers were in the Delta area, with Nos. 37 and 70 Squadrons as far forward as Daba and Qotifiya. By the beginning of July, the fighters were located just west of the Alexandria-Cairo road, with bases south of Wadi Natrun and advanced landing-grounds in the Amiriya area, the light bombers, based in the Delta area, also operated from landing-grounds in the Amiriya area, the medium bombers were located entirely in the Delta area, as far east as Abu Sueir, while the heavy bombers were moved as far east as Lydda.

A.H.B./ILJ1/  
183/271D A.O.C.-  
in-C. Corres.  
with P.M., S. of  
S., C.A.S. Encl.  
46a

It was an anxious night for the Western Desert Air Force. The enemy's penetration of the minefield defences at Matruh, only shortly before dark, had come too late for the squadrons to move from the forward landing-grounds, and this meant that the Sidi Haneish-Bagush airfields were still occupied by fighters and also by Nos. 14 and 223 bomber squadrons while enemy units were only twenty miles away. Some of the squadrons flew out a number of their aircraft when the news of the advance first came through, but some of these were damaged making night landings on airfields where no flare-path had been lit. For the defence of the remaining squadrons which formed the bulk of the fighter force, all the A.O.C. could do was to send out a screen of armoured cars to the westward to give warning if a further advance should be made; it was decided that if this should happen the fighters should be flown out and the risk of night landings be taken, in the hope of saving at least some of the aircraft. Advanced Headquarters was sent back at once, but in order to exercise operational control on the following morning, the A.O.C. stayed on overnight with the mobile operations room.

No. 3 S.A.A.F.  
Wing O.R.B.

A.H.B./ILJ1/  
183/271D A.O.C.-  
in-C., P.M.,  
Corres. with/  
C.A.S., S. of S.  
Encl. 466a

Fortunately the enemy did not press further forward during the night and at dawn the fighters were able to take off for the airfields prepared for them at Daba. The two light-bomber squadrons in the area were less fortunate. They were not informed of the threat to the landing-grounds until 0600 hours on 27th, and theirs was the last camp to strike on the left flank of the Army. When the Baltimores of No. 223 Squadron left L.G. 116 one by one, three of them were intercepted by Me.109's near Fuka; two were shot down and a third was damaged and forced-landed at Wadi Natrun, east of the Alamein Line. Losses due to the evacuation were not otherwise serious although some aircraft had to be abandoned owing to the scarcity of cranes and articulators.

#### Air Operations in the Evacuation of Matruh

On 27 June the battle at Matruh began in earnest when enemy tanks engaged the 1st Armoured and the New Zealand Divisions of XIII Corps. Throughout the day XIII Corps was fighting the enemy round Sidi Hamza to the south of Matruh, while X Corps was engaged with the force which,

having passed through the minefield were moving north-eastward in the direction of the coast road. Towards the evening the commander of XIII Corps, General Gott, found that Axis troops had succeeded in interposing themselves between his own and X Corps, and he ordered XIII Corps to withdraw. X Corps was instructed to conform, but on the morning of 28th, before they could get clear, the enemy cut the road about twenty miles east of Matruh. They were therefore ordered to break out during the night while XIII Corps moved north and north-west to attack the enemy surrounding force; meanwhile the 29th Indian Infantry Brigade was allotted the task of holding open the passes down the escarpment from Fuka.

At 1900 hours on 28 June, enemy tanks were reported moving along the railway in the Fuka area and threatening the forward airfields. Although the 29th Brigade had already been heavily engaged and was falling back, a column was sent out to intercept the enemy and the more westerly based squadrons were successfully evacuated. The 29th Brigade was subsequently overwhelmed just before dark, and the X Corps therefore completed its break-out on the following day to the southward, covered by the 7th Motor Brigade which attacked northward against the flank of the advancing enemy. While these operations were taking place at Matruh, the Axis forward columns, notably the 90th Light Division, pressed on eastward along the coast road, and although vigorously opposed by XIII Corps, reached Sidi Abd el Rhaman, only fifteen miles from El Alamein, early on 30 June, after marching all night.

The enemy's pursuit from Matruh had moved far more quickly than had been anticipated. On 30 June advanced columns were developing a thrust south-eastward from Sidi Abd el Rhaman towards the Alamein defences, the infantry advancing along the coast and the armour moving along the escarpment further south. Having kept their distance from the enemy, although with less time to spare than had been expected, the majority of units of the Eighth Army had taken up their positions on the Alamein Line at about midnight. The XIII Corps commanded the southern half of the Alamein-Qattara defences with what was left of the New Zealand and 5th Indian Divisions, while XXX Corps with the 1st South African and the 50th Divisions defended the northern sector and especially the Alamein fortifications.

During the morning a tank battle took place between the Axis armour and the 1st Armoured Division and the 7th Motorized Brigade Group, in which the British knocked out thirteen tanks. These British units remained between twenty and thirty miles west of the Alamein Line all day engaging enemy formations, but at nightfall they were withdrawn into reserve and concentrated in the rear of the position under XXX Corps. Here they were kept at readiness to counter-attack if the need should arise.

26 June was the last day of intensive air support operations before the arrival of the Eighth Army at the Alamein Line on the 30th. On 27 June the fighting was very confused east of the minefield and south of Matruh and it was impossible to co-ordinate the bomb-line given by the various Army formations, all of which were making small battle group attacks against the enemy concentrations from different directions. Consequently the only safe area for bombing was west of the minefields, and for most of the day fair to good targets were found here, although they thinned

A.H.Q./W.D.  
Report A.H.B./  
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A.G.O./11 Western  
Desert Corres.  
Encl. 247a  
A.H.B./ILJ1/183/  
146D

out towards the evening. Only three Boston attacks were made against these targets, as it was the policy to support the ground fighting by flying protective fighter sweeps at the expense of escorted bombing attacks. Even these were on a small scale however owing to the move of the fighter squadrons from the Bagush area. Of the three Boston attacks, two were directed against the previous day's targets, the supply columns approaching Matruh, and the third against Axis forces further south advancing in the direction of Sidi Hamza. The Baltimores did not operate on this day, owing to the hurried withdrawal, first to Daba and then to the Amriya group of airfields. Although emphasis was placed on the necessity of protecting the Army from air attack, enemy air activity was on a small scale on this day.

No. 205 Group  
No. 3 S.A.A.F.  
Wing & Squadron  
O.R.B.s

During the night Wellingtons were joined by R.A.F. Liberators in attacks on targets in the battle area, and nine of the 'Pathfinder' Albacores also attacked the targets. Direct hits were scored on an Axis Unit Headquarters and on an ammunition lorry, and many vehicles were set on fire. As it was a moon period, the Bostons also made night attacks to make up for the small effort made during the day, ten aircraft making individual attacks on L.G. 121 where motor vehicles as well as aircraft were concentrated.

A.H.B./IIJ6/8  
A.H.Q., W.D.  
Report App 'K'  
A.S.C. Diary &  
Sqn. O.R.B.s

On 28 June, in view of the enemy's thrust beyond Matruh the Boston squadrons were withdrawn to the landing-grounds in the Amriya area. It was expected that after the withdrawal of the Army from Matruh there might be two or three days respite in the land fighting while the enemy consolidated his newly won positions, and Air Headquarters instructed the light bombers that they would not be needed for close support operations for the next few days. The fighter squadrons however were retained in the Daba area; it was known that the enemy had brought up his Stukas and bombers to the forward area and it was assumed that he would use them for heavy attacks on the X Corps to prevent it from breaking out from Matruh. The policy was to concentrate the fighter force in the protection of the Army, and of the X Corps in particular. Two fighter-bomber attacks were made however in response to a request from X Corps. The target was a gun position near Sidi Haneish, and although it was a poor target for air attack and involved considerable risks for the fighters, it was accepted in view of the fact that the Corps needed all possible assistance in its attempt to break out from the Matruh area in the face of considerable opposition. The position was successfully attacked by Kittyhawks of Nos. 3 R.A.A.F., 112 and 250 Squadrons and Hurricanes of No. 274 Squadron. In both raids direct hits were obtained on guns, and the Army reported later that the guns were silenced for some time and that units had been able to alter their positions during the lull. Contrary to expectations there was no enemy air activity against the withdrawing forces.

No. 205 Group &  
Sqn. O.R.B.s, &  
M.E.F.O.S.

Once again the night bombing effort in the battle area was on a heavy scale, Wellingtons and Liberators flying seventy-one sorties, Albacores fourteen sorties and Blenheims five sorties. Fifteen Bostons also operated individually against L.G. 121. Much damage was believed to have been done to stores and motor transport at Charing Cross, where direct hits, fires and explosions were reported, but both the Blenheims and the Bostons were unable to observe any results of their attacks.

In the evening of 28 June, another sudden Axis advance once again made necessary the emergency evacuation of some

of the fighter force from forward airfields. Fortunately, profiting by his recent experience at Bagush the A.O.C. had sent out a screen of armoured cars as an insurance against this situation, and these reported the approach of the enemy columns. Late though it was the fighters on the most westerly airfield were safely flown off, thanks to the efforts of the 29th Brigade, which, as has been mentioned intercepted the enemy force only twelve miles from the airfield group at Daba.

Report of Court  
of Enquiry on  
Ops in W.D. May-  
July 1942  
Cab. Ref G. Ops 5  
Box 497 DA 491  
24/10

No. 205 Group  
and Sqdn. O.R.B.s

On 29 June, in spite of the proximity of the enemy, the remainder of the fighter force, eight squadrons, was retained in the Daba area for the specific purpose of covering X Corps as it completed its break-out from the Matruh area, and it was not until reports had been received that the units of the corps had reached open country that the fighters were withdrawn from Daba. Once again however, Axis air activity against the withdrawal of the Army was negligible, in spite of the presence of the Luftwaffe in the forward area. The British air effort against the Axis advance was still confined to night attacks, which however remained on a substantial scale. During the night of 29 June fifty-eight Wellingtons operated against L.G. 121 and motor transport concentrations in the vicinity, causing fires and explosions on the landing-ground and among vehicles, and scoring direct hits among trucks on the railway line, and on the road. Fifteen Bostons and two Blenheims also operated against enemy concentrations but observed no results.

#### Withdrawal Into the Alamein Line

A.H.B./IIJ6/8  
A.H.Q., W.D.  
Report App 'K'  
A.S.C. Diary

On 30 June, in view of the unexpectedly early arrival of the enemy opposite the Alamein Line, every possible weapon was required to disrupt his movements and thus secure for the Army a longer period to organise its units in preparation for the major assault. The Air Force therefore mobilised all its available aircraft for attacks on the forward area. There was no lack of targets for the Axis formations of mechanised transport were close-packed as they approached the British positions; evidently Rommel could not afford to disperse, an indication that this force had weakened under the strain of the pursuit. Nevertheless for the greater part of the day information from the Army was unobtainable; Tactical Headquarters was out in front of the Alamein Line and Main Headquarters was only represented in skeleton. When provided, the bomblines given by the individual formations usually contradicted one another and there were no requests for air support. The Air Force therefore relied on reports brought in first by reconnaissance, and later, by the attacking aircraft themselves. To provide air support it was necessary to engage the very large formations approaching the Alamein Line, without confirmation from the Army of its own positions. Despite the risks involved air support was then provided in large measure.

The plan for the bombing was that the Baltimores should make four high-level attacks unescorted, and the Bostons hourly raids escorted by No. 233 Wing. In the event, the Baltimores made three attacks while the Bostons, badly hindered by a break-down of the refuelling arrangements, made six attacks, bringing the total day's sorties to sixty-three. No. 12 Squadron did not take off for their first raid until 1225 hours, and on their third raid No. 24 Squadron were an hour late at the rendezvous. However, it was

the weather which provided the greatest obstacle to operations. In the morning dust frequently obscured the targets, and in the afternoon dust storms spreading to the landing-ground areas, prevented aircraft from landing at their proper bases, and caused the bomber force to become scattered over a wide area. The raids were divided between enemy columns advancing along the coast and those further south on the escarpment. During the Boston raids Kittyhawk bombers in the fighter escorts made twenty-seven bombing sorties. Two fighters were lost on escort duty, probably by A.A. fire, and a third was missing from patrol. Enemy air activity was again negligible. Night bombing was in the Fuka area and targets included in particular landing-grounds 17 and 18, and the main road. Thirty-seven Wellingtons operated and a direct hit on the railway and fires and explosions among motor transport and dispersed aircraft.

#### Survey. The Withdrawal from the Frontier to El Alamein

The outstanding feature of the last phase of the withdrawal to El Alamein was the steady maintenance of British air operations in contrast to the sharp decline in the activities of the Luftwaffe, which gave the Eighth Army, a clear road eastward, and the support of the air force in attacking the head of the enemy force. Yet the Royal Air Force was operating under the disadvantage of constant moves, often at short notice, which were made more complicated by the necessity of clearing from the abandoned airfields anything that might be of use to the enemy. This withdrawal was a triumph of organisation, particularly for the fighter squadrons, which had to move more frequently, and at shorter notice than the bombers, and which were constantly operating under the threat of a sudden enemy advance. The practice of thinning our wing and squadron personnel in advance of the move of the operational parties, and of maintaining the latter at two hours notice to withdraw, worked well, and the squadrons were usually able to operate soon after the arrival of the aircraft at a new airfield; in this the supply units did their part in ensuring that rear airfields were well stocked with fuel and other supplies in readiness for immediate operations.

The main contribution of the light bomber force in support of the withdrawal was made from 24 to 26 June inclusive, during which time they operated ceaselessly to impede the enemy's advance to Matruh. Daily operational sorties totalled seventy-two, ninety-eight and one hundred and ten respectively, an average of ninety-four per day, and the total weight of high explosive dropped was one hundred and thirty tons. In addition Bostons and Blenheims of No. 14 Squadron made individual unescorted raids on the fighter escorts the Bostons lost only one aircraft, but losses from enemy fighter attacks made it necessary to provide the Baltimores with escorts despite their special high-flying equipment.

Fighter activity during the withdrawal was continuous from 24 to 30 June inclusive, the most intensive period of operations being 25 to 26 June, when the fighter force joined the bombers in offensive operations to an extent only reached before in the battle of the Cauldron. On 26 June, when the fighter contribution in bombing and machine-gun attacks was some two-hundred sorties, an additional strain was introduced by the reappearance of the Luftwaffe and the need for larger escorts for the bombers.

As a result of considerable enemy fighter opposition on a day of heavy operational activity, the fighter losses, which had been negligible since the fall of Tobruk, rose on this day to some twelve aircraft destroyed, the majority of losses being incurred in engagements with the enemy and to fighters on escort duty to bombers or on independent offensive operations. After this one day of intensive activity however, enemy air operations again began to decline, and the strain on the fighter force was considerably reduced. Nevertheless, since units of the Luftwaffe were now established within range of the retreating Eighth Army, the fighter force had to remain constantly on the alert against a sudden large scale air offensive such as that experienced at Tobruk.

The contribution to the offensive of the Wellington night operations, which commenced on the night of 25/26 June, totalled three hundred and seventy sorties and nearly five hundred and fifty tons of bombs, a nightly average of sixty sorties and ninety tons of High Explosive, while on several occasions the bombers concluded their attacks by machine-gunning the targets. The weight of attack was on two occasions augmented by Liberators, and, in addition, the Albacore pathfinder aircraft carried bombs. Although target finding by night in the battle area was in an experimental stage at this time, it was considered from reports of flying debris, fires and explosions that the raids achieved considerable success, and that in any case the long duration of the attacks, which were planned to extend over as many hours of the night as possible, had resulted in loss of sleep to enemy troops, thereby impairing their efficiency and morale.

SURVEY: SOME ASPECTS OF AIR OPERATIONS IN THE BATTLE

Problems in Army/Air Co-operation

Although air participation in the land battle was maintained almost continuously throughout the Axis offensive and reached a high level of effort, the system of Army/Air Co-operation, showed at times some grave operational defects which made the task of providing air support extremely difficult.

Ideally, the centre of the air support organisation, the Control, was located at a combined Army/Air Headquarters, where army and air authorities could decide together the air action required, as reports on the situation were received. In the event of the Headquarters becoming divided, Air Support Control remained with Air Headquarters, where the Army was represented by a liaison officer. Information and requests for support from the Army were supplied to Air Support Control through the tentacles attached to Corps and Brigade headquarters; the operational air units were then given their instructions through the Air Force communications net-work. The efficiency of Air Support Control thus depended on reliable communications between army units in the field and Control on the one hand, and Control and air units on the other.

The defects in Army/Air Co-operation in this system rested with the Army rather than the Air Force. Despite the difficulties involved in the rapid retreat, the latter maintained a high scale of organisation throughout the force as a whole as well as within the individual units. This was achieved largely through the maintenance of a reliable communications system between Air Headquarters and No. 211 Group and No. 3 S.A.A.F. Wing, and between the latter two formations and their squadrons, and through careful co-ordination of operations and moves. Except when the Field Force was compelled to withdraw to landing-grounds out of range of the battle, there were few occasions when, owing to moves of squadrons, aircraft were not available to answer calls for air support.

As the battle continued, the speed with which the Air Force answered calls for support steadily increased, until the average time of delay between a request from Eighth Army Headquarters and aircraft being air borne was eventually reduced to thirty-five minutes; this was a great improvement on operations in the Crusader offensive, when the delay averaged over three hours. A good example of the efficiency of air communications was given on 29 May: No. 73 Squadron took off to answer a call for support, but when the squadron was airborne the Army reported that the target area had been captured by British troops; the squadron was then redirected onto another target within fourteen minutes.

Unfortunately the degree of co-operation by the Army was not so consistently high. There were phases in the battle when it was good, as at the Cauldron, when up to date information concerning the position of British and Axis units was plentiful, and requests for support were frequent. At other times, notably during the withdrawal from the frontier to El Alamein, such information, so essential to effective air participation, was seriously lacking. The crux of the matter was that the Army was compelled to depend largely on its communication system in the field, which often broke down in the course of the battle. At the Cauldron, and along the line masking Tobruk, although

H.Q., R.A.F.,  
M.E. Report  
A.H.B./IIJ1/  
159/20

the fighting was frequently confused, Army Headquarters was in touch with its subordinate headquarters, and was provided through them with a minute-to-minute picture of the situation. Thus it could not only provide an up-to-date bomb-line, but could also select the best targets for air attack, in consultation with air officers at Air Support Control. On the other hand, during the confusion of the withdrawal, the communications system of the Army broke down, Eighth Army Headquarters lost touch with many of its units and they with each other, and thus no information was available from Army sources on which to plan air action. Under these conditions the Army either gave no bomb-line at all, or else, acting on inadequate information, gave so conservative a line that air attacks could have little effect on the fighting. Information concerning specific targets was, of course, not available.

Faced with such circumstances at a time when air support was most vital the Air Force began for the first time to participate in the battle independently of the Army. From the beginning of the Axis offensive, it became the practice of fighters and bombers operating over the tactical area to bring back reports on the ground situation generally and on individual targets in particular, and through constant practice, these reports became highly reliable and informative. A further source of information was opened by the institution of early morning tactical reconnaissance by fighters, and of offensive fighter reconnaissance sorties during the day. Through these sources, the Air Officer Commanding was able not only to plan air support operations without undue risk to the safety of our own troops, but also, as occasion demanded, to modify the bomb-line, particularly when this tended to be conservative.

Following the stabilisation on the Alamein Line, a number of practical proposals were made for the improvement of air support. It was suggested that position reports given by subordinate Army units should be received direct at Air Support Control, instead of being sent through Corps or Brigade headquarters, and that coloured smoke should be used for the identification of British units from the air, a method used in the First World War. It was also affirmed that the establishment of artificial land-marks by day and night, by forward Army units, was of great value in assisting air navigation in comparatively featureless country. A criticism involving training was that new formations arriving in Western Desert needed coaching before they understood the air support procedure; it was considered that even at this time, when so much had already been done to improve Army/Air Co-operation for air support, little had been done to educate staffs of formations to a satisfactory standard of air knowledge.

Strong criticism of the Air Support organisation at headquarters level was voiced against the splitting of Combined Headquarters during the battle. It was considered that the separation of Tactical Army and Advanced Air Headquarters had been a major factor in causing the decline in close co-operation during the withdrawal. To work efficiently, the Officer Commanding at Air Support Control required to be kept fully informed of the Army plan, and to be told details of changes as they arose; more generally, it was obvious that the closer the liaison in planning, the better the results of operations concerning both Army and Air Force. In the planning of future operations the establishment of a Combined Battle Headquarters was recognised

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as a major requirement, and in subsequent battles, in spite of difficulties, Tactical Army and Advanced Air Headquarters remained united in a Battle Headquarters.

The Effect of Air Operations on the Battle

Although the Air Forces operated continuously, and often intensively, in support of the Army during the Axis offensive, positive evidence of the direct effects of air operations was not readily obtainable. As it was the enemy who advanced, there could be no discovery in the desert of immobilised and abandoned vehicles and equipment, bearing evidence of the scale of effective action, and there were few occasions on which the Army witnessed the direct results of air intervention against the enemy units engaged. Yet there were many occasions on which it was possible to assume that air operations had had marked effect. In the enemy's attack on El Adem at the outset of operations, despite continuous fighter and fighter-bomber attacks against his supply columns, the advance of the Panzerarmee was not perceptibly held up; yet, a few days later, just before the short supply route was cut through the minefields to the enemy units at Knightsbridge, those units were in a desperate plight through lack of supplies, and it is reasonable to suppose that the incessant air attacks against the supply columns proceeding from the south of Bir Hacheim contributed to this situation. A more obvious air success was the delaying of the advance on Sidi Resegh of the 21st Panzer Division on 16 June.

A.H.B./IIJ1/  
183/27 A.O.C.-  
in-C. Corres.  
with P.M.,  
C.A.S., S. of  
S. Encl.  
274a.

A certain amount of evidence concerning the results of air attacks was volunteered by prisoners of war. It was learnt that one Axis unit lost forty motor transport vehicles through air attack between 13 and 30 June, while another lost two or three trucks in every air attack during the advance following the capture of Tobruk. Fighter-bomber attacks were feared less than low-flying machine-gun attacks as they were easier to avoid, but German troops were amazed at the low level at which attacks were delivered. Bombing had an adverse effect on morale, especially low-level night bombing, which occurred when the troops were badly in need of rest after a day's fighting. Eighth Army men, who were captured early in the battle and escaped later, testified to the accuracy and intensity of the light bombing attacks which in their view had a greater impact than Stuka raids.

Light-bombing

During the period 26 May - 30 June, the two Boston squadrons and the Baltimore squadron together flew nearly one thousand sorties against the Axis Army, and from air and ground observation of their attacks it would appear that these were both accurate and effective. This achievement showed a distinct improvement in the calibre of all three squadrons. For some time before the battle the Bostons had suffered from a decline in operational efficiency and morale, owing chiefly to faulty aircraft. Modifications to the engines, devised in the Middle East had transformed them to some of the best aircraft in the Command, and this, coupled with changes in leadership had resulted in the achievement of a high level of efficiency and a great improvement in morale. The Baltimores had not enjoyed the same opportunity for operational activity, owing to trouble with their rear guns early in the battle, but by the end of June, they were participating regularly in attacks on battle area targets. They had not yet begun, however,

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to take part in escorted raids, owing to the inadequate number of fighters available for escort work.

Much of the success of the Boston squadrons was due to the efficiency of the fighter escorts; no Boston was lost through enemy fighter activity while on operations, and only on three occasions did Axis fighters break through the fighter escorts. This security for the bombers was achieved through close collaboration between the bomber and fighter pilots, based on full discussion before and after co-operation tasks, under the direction and guidance of the Officers Commanding the fighter or bomber formations, and Senior Officers from Air Headquarters. From two or three such conferences it was possible to evolve a firm procedure which could be checked at further conferences. It was found advisable to locate the bombers and escort fighters at neighbouring landing-grounds to ensure good and reliable telephone communications, for although escorted bomber raids were a routine affair, each sortie was in fact a planned and co-ordinated operation which might be upset through a misunderstanding.

#### Night Bombing in the Battle Area

Night bombing of enemy leaguers in the battle area appeared to have a great cumulative effect during the withdrawal, and fully justified the diversion of effort from strategic targets at a critical stage in the battle.

The night bombing, coupled with the attacks during the day meant that the enemy had no respite by day or night, probably one of the most potent factors in bringing his advance to a standstill at El Alamein. Certainly this type of bombing was to prove effective at the Battle of Alam el Halfa in September, when direct evidence of its results was available. For effective night bombing, illumination by Albatore type aircraft was a definite requirement, and artificial landmarks were also of great assistance.

#### The Offensive Against Forward Axis Air Bases

The contribution to the battle, of the offensive against forward enemy airfields was difficult to assess accurately, but it was generally considered that periodic heavy attacks by day and night were profitable in reducing the scale of the enemy's air effort, although the observation of so-called 'Results', and even the study of reconnaissance photographs could give no clear picture of the actual damage caused. On certain occasions, bombing attacks were known to have an effect on immediate Axis air operations, as on 18 June, when the enemy air effort against the retreating Eighth Army was reduced to negligible proportions because of his preoccupation with the fighter protection of his forward troops and landing-grounds. That the offensive contributed to the ineffectiveness of enemy air activity on other occasions, including the waste of opportunities such as occurred on 14 June, and between 23 and 26 June, could only be a matter for speculation in the absence of direct evidence from enemy sources. Yet it was important to assess the value of expending a large proportion of the available bomber effort in attacking such targets where the terrain made dispersal, and the construction of alternative landing-strips, a comparatively easy task.<sup>(1)</sup> Some assessment could be made

(1) The Djebel Akhdar area, however, where Martuba and Derna was sited lent itself less readily to airfield construction as the terrain was hilly.

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27, 274a.

A.O.C.-in-C.  
Corres with  
P.M. etc.  
A.H.B./IIJ1/  
183/27 Encl.  
438a & 448a.

by analysing the effect of enemy air attacks on British held airfields, although not only was the Axis effort much smaller than the British, and probably, relatively less effective, but also there was a marked tendency of the Axis air force to specialise in day operations. In such an assessment it was considered that the most telling effects were to be found not in the number of casualties received or of aircraft destroyed or damaged, but in the disorganisation produced by the necessity for wider dispersal, the consequent interruption and difficulties of servicing work, and the reduction in the number of serviceable aircraft for immediate operations. To these factors, must be added the effect of continuous raids on the morale of personnel, over a period of intensive operations.

M.E.W.I.S.

The dropping of spikes during bombing was a regular feature of the attacks on airfields, and in this case there was evidence to show that this practice achieved considerable effect in desert conditions. A prisoner of war stated that in spite of efforts to clear the landing-grounds after raids, a number of spikes frequently remained buried in the loose sand, with the result that tyres were punctured, and while the damage might not be noticed during take-off, it would become uncomfortably apparent on landing.

Offensive action against enemy airfields - an important factor in the fight for local air superiority - continued throughout the remainder of the war in the desert, but it became more and more confined to pre-battle preparatory operations. Broadly speaking, from this time, the pattern of medium bomber operations comprised strategic bombing in inter-battle periods, airfield bombing in pre-battle operations, and close support bombing in battle periods.

#### Fighter Operations

Throughout the period of the Axis advance, the fighter force maintained a high scale of operations from which there was rarely any respite. In its many and varied duties which included both offensive and defensive activity, it was not aided by the fact that, apart from the single flight of Spitfires, every aircraft of the fighter force, Kittyhawks, Tomahawks and Hurricanes, was outmatched in performance by the Me. 190, and it was seldom possible for Kittyhawks and Hurricanes to break through the heavy fighter screen which surrounded Stuka formations. Yet, by careful training and tactical skill the Air Force held its own throughout the battle despite heavy losses.

Ibid., and  
A.O.C.-in-C.,  
Corres. with  
P.M.  
A.H.B./IIJ1/  
183/27 Encl.  
274a

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A.H.B./IIJ6/8

It was desirable to employ squadrons where possible in a specific role, such as air fighting, fighter-bombing, fighter-reconnaissance or escort to bombers. As a background, however, all squadrons required continual practice in air fighting so that they were able to switch over to this task with full confidence at short notice. To this end it was the practice to return squadrons on special tasks to the role of air fighting at intervals.

It was found that a squadron specialising in night operations, in this case No. 73 Squadron, was a valuable asset to a field force, as was a long-range Beaufighter squadron to undertake operations in the rear of the enemy. With regard to the latter however, the need was felt for the permanent attachment of such a squadron to the field force, as the alternative method used in this period, of making a squadron available from another Group, was too slow to take advantage of a rapidly changing situation.

Long-range operations carried out by means of extra tanks fitted on to an ordinary fighter, imposed a heavy strain on pilots normally employed on short-range work.

#### Fighter Escorts for Bombers

Ideally the minimum number of fighters in an escort was eighteen for formations of less than twelve bombers, and twenty for formations up to twenty-four, so that it was more economical to escort large formations, particularly as results showed that these were no more vulnerable to attack than smaller ones. A feature of escort work during this period was that the fighters acting as close escort frequently joined in the bombing, but this was not considered advisable unless the close escort was experienced. Owing to the inadequate number of fighter aircraft available for escort duty, it was sometimes necessary to fly formations consisting of aircraft from several squadrons. This was considered undesirable, but practicable so long as each of the flights of four aircraft constituting the escort was composed of pilots from the same squadron. It was not good policy to fly a weak four as top cover as this was the position where a quick eye and an immediate reaction were of primary importance, but indifferent fours, or pilots under training were safely flown as close cover.

#### Fighter-bombing

The Kittyhawk bombers used for the first time in this battle were a great improvement on the Hurricane bomber which was brought into the field for Crusader. The latter had carried only one 40 lb. bomb per aircraft, whereas the Kittyhawk was modified, in the Middle East Command, to carry two 250 lb. bombs, with extension rods. Hurricanes were also adapted to carry this load, but owing to supply difficulties only one squadron, No. 274, was fitted. Later supplies of Kittyhawks arrived fully equipped to carry the American 500 lb. bomb.

The dual performance of the fighter-bomber was a great asset to a limited fighter force. It made available an additional offensive weapon without making heavy demands on maintenance facilities or on reserves of flying personnel, and at the same time it increased the versatility of the force. In air support operations it had two advantages over the light bomber: operating at low level it could be employed in situations where the fighting was too confused to permit light bombing; and, as fighter-bomber squadrons could be maintained at the same state of readiness as ordinary fighter squadrons, they were available to provide bombing support at shorter notice than normal bomber squadrons.

The most suitable targets for fighter-bombers were small concentrations of motor transport where dispersal was bad and A.A. fire light. Attacks on enemy leaguers, armour, and lorried infantry usually result in heavy casualties to aircraft owing to the greater firing power of these units, while the bombing of enemy gun-pits and guns was dangerous because aircraft had to fly at very low levels to find them. Large formations of fighter-bombers were not popular with pilots, and were considered unsuitable for several reasons: by their size they attracted A.A. fire, both en route to and over the target; they were also not easily manoeuvrable, a disadvantage when a target was found unexpectedly and the formation had to prepare very quickly to attack; flying low, as they had to for effective bombing, large formations

Ibid. App 'G'

A.H.Q., W.D.  
Report  
A.H.B./IIJ6/8

Ibid. App 'H'

presented a wide target area, with the result that there were often lucky hits on the aircraft; this was particularly noticeable in cloudy weather, when the A.A. gunner had clear silhouettes to fire at. (1)

Hurricane IID Operations

H.Q., R.A.F.,  
M.E.  
(Ops Records)  
Report  
A.H.B./IIJ1/  
159/20 & A.H.Q.  
W.D. Report  
A.H.B./IIJ6/8

During the period under review No.6 'Tank-Busting' Squadron flew some forty sorties against enemy tanks and vehicles and claimed thirty-one tanks of various types destroyed or immobilised and a further forty-two large vehicles, including troop-carriers, destroyed or badly damaged. With the intensive A.A. fire employed by the enemy in support of his armoured forces, attacks on tank targets in the battle area generally imposed too high a wastage of aircraft and could not be justified. Ideal targets were small groups of tanks away from the main armoured battle, and the squadron's activities were generally limited by the availability of such targets. As the aircraft flew on operations at a very low level, it was not always easy for them to locate the target, and assistance from Army units in the form of smoke shells fired in the direction of the target was of great value. To improve target finding it was suggested that a listening watch might be maintained by Air Support Control on the forward Divisional Control of Armoured Divisions, and information passed back to the squadron along a special rear link.

Tactical Reconnaissance

A.H.Q., W.D.  
Report  
A.H.B./IIJ6/8  
App 'L'

Throughout the Axis offensive a steady programme of Tactical Reconnaissance was carried out by the two squadrons allotted to Army control, No. 40 S.A.A.F. Squadron and No. 208 Squadron. The former was under the control of XIII Corps at the beginning of the battle, and was transferred to X Corps after the fall of Tobruk, and was therefore little concerned with the actual fighting. No. 208 Squadron however, was under the control of XXX Corps at the outset of the battle and was transferred to XIII Corps when it took over control of the fighting after the fall of Tobruk. The squadron was thus operating continuously in co-operation with the Army units actually participating in the battle and while No. 40 Squadron's operations averaged two sorties per day, for No. 208 Squadron the average was five sorties and, in periods of intense activity, seven sorties.

The work required skill in tactics as well as in reconnaissance, since the aircraft chiefly employed were Tomahawks and Hurricane I's, both of which were easily outmatched in performance by the Me.109. In periods of great activity, particularly during the first fortnight of the battle, interception was not infrequent, and the system was introduced of sending a 'weaver' aircraft out with the reconnaissance aircraft to keep a look out for enemy fighters. Only very occasionally were small fighter escorts provided, but on the other hand tactical reconnaissance aircraft took full advantage of any offensive sweep carried out by fighters and also worked in close collaboration with the Radar warning system which warned them of the presence of enemy fighters in a reconnaissance

(1) A report on fighter-bombing tactics is given at Appendix XXII.

area, and, on occasion, warned them of the approach of enemy fighters. By means of these measures, losses were kept relatively low for such obsolescent aircraft, only eight aircraft being destroyed.

It was found necessary to operate reconnaissance aircraft at a minimum height of 3,000 feet in order to obtain accurate pinpoints, but at that height recognition of vehicles and proper interpretation of swirling masses of dust required both technical skill and experience. Photographic work was sometimes undertaken, but this was limited by the inadequacy or non-availability on occasions, of aircraft fitted with photographic equipment. On photographic sorties the aircraft operated in theory at a height of 25,000 feet, but in practice the aircraft frequently failed to achieve a height above 17,000 feet. The main burden of photographic reconnaissance was borne by the Strategic and Photographic Reconnaissance units.

IBid Although Tactical Reconnaissance aircraft were extremely active throughout the battle and the subsequent withdrawal, their work frequently achieved poor results through faulty communications, a factor which it was outside the scope of the squadrons concerned to improve. While the squadrons were based on Advanced Landing-grounds in close proximity to the controlling Corps, telephone communications were adequate, but during extensive mobile operations, communications between Corps and Squadron was a difficult problem. The best solution from the air point of view appeared to be to locate the Corps Headquarters near the Advanced Landing-ground as a matter of course, and to make this arrangement a major consideration in planning moves. A serious criticism of the existing system was that Tactical Reconnaissance reports from aircraft were frequently held at Corps Headquarters and were not passed on to Divisions and Brigades until too late to be of any value.

To improve the diffusion of information obtained through Tactical Reconnaissance, the experiment was made of broadcasting reports from the aircraft operating, but this was not a success owing chiefly to the inadequacy of both air and ground sets. Furthermore, results were scarcely worth the effort involved because pilots could only broadcast when they were well away from enemy territory, by which time they were already near to the base, and because the information was of little use without interrogation of the pilot by the Air Liaison Officer; an exception to this was the reporting of bombing targets.

#### Photographic Reconnaissance

During the Axis offensive, a flight of Photographic Reconnaissance aircraft was for the first time placed under the control of Air Headquarters Western Desert. The experiment of using photographic aircraft on modified strategic and tactical targets was fully justified by results and clearly indicated the need for providing, either with the Tactical Squadrons or in a separate unit, aircraft capable of undertaking photographic work with a degree of security far greater than that permitted by the existing equipment of Tactical Reconnaissance squadrons. In fact operations during this period indicated that there was room for this type of aircraft both in Tactical Reconnaissance Squadrons and in a separate unit which would continue to operate independently and on missions divorced from the immediate tactical sphere.

A.H.B./IIJ6/8  
A.H.Q., W.D.  
Report  
App. 'L'

Although the aircraft of the unit were equipped for tasks of a strategic nature involving anything up to six hours flying, in this period they were used for work of a much shorter duration, the average lasting two and a half hours. On many occasions the tasks were of a purely tactical nature, which the Tactical Reconnaissance squadrons could not undertake owing to inadequate photographic equipment. Generally sorties were flown at 28,000 to 30,000 feet, but this height did not render the aircraft immune from interceptions, although these were rare. Throughout the battle no personnel or aircraft casualties were suffered by the detachment.

#### Strategical Reconnaissance

No. 1437 Strategical Reconnaissance Flight was operating under Advance Air Headquarters Western Desert throughout the period, but the battle did not necessitate an increase of work for this unit beyond the usual routine. An interesting feature of its operations at this time however was that Baltimore aircraft were used for the first time on strategical reconnaissance in the Western Desert. Conversion to this type of aircraft had only just been concluded by 26 May, and both the aircraft and its photographic equipment and armament were found to be satisfactory. One drawback however was that the engines proved to be safe for not more than a thousand miles, a fact which restricted the reconnaissance area.

#### Need for a Reconnaissance Wing

A Reconnaissance Wing to co-ordinate reconnaissance and photographic tasks for all squadrons employed in this role was a clear requirement.

#### Defence of Landing-grounds

A major defect in Army/Air Co-operation in the battle lay in the system for the defence of landing-grounds. In mobile operations it was essential that an adequate scale of protection to meet the probable threat of an enemy advance was provided by the Army at advanced landing-grounds. Without an Army force allocated specifically to this role, there was a constant risk to the security of air units in the forward area, the only alternative to which was the withdrawal of the units to more secure locations where their value to the battle would be seriously diminished. During the withdrawal, in its efforts to remain as long as possible on airfields in close proximity to the fighting, the Air Force had taken calculated risks, but these had several times been increased beyond the bounds of what was acceptable by the Army's failure either to provide troops for the protection of landing-grounds in the path of the enemy, or to give adequate warning that it could no longer guarantee the security of the area in which the landing-grounds were located. In these circumstances the Air Force had had to rely entirely on the patrols of its own Armoured Car unit, which was not adequate for protective purposes, but gave valuable warning of the approach of enemy units. Without armoured cars it would have been impossible to accept the risk of operating fighters from really advanced landing-grounds under the existing conditions, and their value to the Air Force in mobile war was obvious. Nevertheless, adequate protection was essential; it could not be expected that the Air Force could operate again under such grave risks.

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A.H.B./IIJ6/8

Anti-aircraft defence for the Air Force, which was provided by an Army Brigade (No. 12 A.A. Brigade), working in close co-operation with Advanced Headquarters Western Desert, No. 211 Group, and No. 3 S.A.A.F. Wing, was generally satisfactory throughout the period. However, the anti-aircraft defence of tactical reconnaissance squadrons was the responsibility of the controlling corps, and No. 208 Squadron reported a complete lack of defence at advanced landing-grounds, because Corps was never able to release guns for the purpose.

#### Maintenance and Repair

The work of the Maintenance and Repair and Salvage Units of Middle East Command was of the utmost importance to the Air Force during the Axis offensive, for it supplied as many aircraft from repair to the Air Force as were received in reinforcements. In fact, at the outset of the battle, reserves of aircraft were very low, and more than 50 per cent of the wastage was replaced by aircraft that had been recovered from the Desert, repaired and rebuilt after crashes. In the first three weeks of June, two hundred and thirty aircraft were delivered from repair alone, although even with these the Air Commander was unable to make up deficiencies. Weekly production of aircraft, from reinforcements and from repair units immediately before Rommel's attack was approximately sixty per week and it was anticipated that it might be possible to step up this figure to one hundred and twenty during an emergency. In fact, however, during the week 21 to 27 June, one hundred and seventy aircraft were turned out, and no less than two hundred and forty in the following week.

A notable achievement on the part of the maintenance units was actually to increase the percentage of serviceable single-engine fighter aircraft to strength during the battle. Average weekly figures for serviceability were as follows:-

H.Q., R.A.F.,	1st Week	67% of Strength
M.E. Report	2nd Week	75% of Strength
A.H.B./IIJ1/	3rd Week	82% of Strength
159/20 App.	4th Week	80% of Strength
'G'	5th Week	84% of Strength

The average daily strength in the fighter squadrons decreased steadily however. It was fifteen in the first week, thirteen in the second, third and fourth weeks, and ten in the fifth week.

Thus during June twelve Western Desert single-engined fighter squadrons had an average daily strength of fourteen aircraft per squadron with which they maintained an average daily serviceability of eleven, and carried out an average of fifteen sorties per squadron daily throughout the whole period.

The two Boston squadrons, with an average daily strength of nineteen aircraft, maintained an average daily serviceability of seventeen aircraft and carried out four hundred operational sorties. They lost twelve aircraft damaged to Categories II & III.

#### The Radar Warning System

The radar warning system consisted of a number of early warning stations, C.O.L.s and M.R.U.s., at Gazala, Tobruk, Gambut and Bardia, and a G.C.I. for night operations, at

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A.H.Q., W.D.  
Report  
A.H.B./IIJ16/8  
App. 'Za'

El Adem. Before the battle a two-fold experiment was made for the improvement of warning and interception. In the first place the mobility of one of the C.O.L.s was increased and the unit was placed as far forward as possible, at Gazala, to give extended forward cover. In the second place this unit was used for tactical control of aircraft, with the result that several successful interceptions were made by fighters under its direction. This was the first time that tactical control of aircraft by day was practised.<sup>(1)</sup>

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(1) Technical details regarding radar may be found in the A.H.B. Monographs, Signals, Volumes IV and V.

CONCLUSIONS

The outstanding feature of air activity in the fighting during the Axis advance from the Gazala to the Alamein Line, was the contrast between the consistent provision of air support for the Eighth Army by the Royal Air Force, not only throughout the battles of the first three weeks, but in the face of all the difficulties of a long and rapid withdrawal, and the collapse of Axis air activity after the fall of Tobruk. This contrast was caused in part by the conditions of advance and withdrawal; the British were retreating on to well-stocked and prepared bases and shortening their lines of communications, while the Axis forces had to carry their supplies with them, with their lines of communication steadily lengthening. There were however other important factors involved, concerning planning and organisation.

Kesselring:  
The War in the  
Mediterranean  
Pt. I A.H.B. 6  
Trans. VII/104,  
Weichold: Axis  
Naval Policy &  
Operations in  
the Mediter-  
ranean A.H.B. 6  
R242, High Level  
Reports & Direc-  
tives Dealing  
with the North  
African Cam-  
paign 1942  
A.H.B. 6 Trans.  
VII/80

Ibid

There were two main reasons for the collapse of Axis air activity after the capture of Tobruk; the air units were exhausted by their intensive efforts at Tobruk and Bir Hacheim, and they were short of supplies for the continuance of operations and of motor transport with which to move forward in support of the Panzerarmee. Both these factors were in turn largely due to Rommel's revision of his initial plan in his decision to continue his advance beyond the frontier and into Egypt. The Axis forces were not prepared or supplied for prolonged operations. At the beginning of Rommel's offensive, they were supplied with food for thirty days, and the air forces had fuel for twenty days' operations. Furthermore, although before the battle Rommel had made a request for the provision of more Italian trucks, this could not be met, and this meant that any lengthening of overland communications would create a serious problem<sup>(1)</sup>. However, Rommel had planned a swift and decisive battle with chronological and geographical limits, for which the supplies provided and the arrangements for replenishment of stocks were considered to be adequate.

Soon after the commencement of the battle it became apparent that things were not going strictly according to plan. The resistance of the Eighth Army, which, for some reason, Rommel had imagined could be swiftly overcome, was prolonged, and for some days the outcome of the battle hung in the balance. Consequently the first objective, Bir Hacheim, which it had been hoped would be reduced within the first three days of the fighting, did not fall into Axis hands for fifteen days, while Tobruk was not surrounded for another ten days, during which time fierce fighting continued along the line Acroma - Sidi Resegh - El Adem. Although the result of this was a victory for the German armour, heavy losses were sustained, and during the fighting the bulk of the Eighth Army units in the Gazala area was able to withdraw safely along the coast road through Tobruk and into the frontier area. This hard and prolonged fighting placed a great strain on Axis supplies without bringing about a decisive victory, and meanwhile the situation was further aggravated by the revival of Malta as an offensive base, and the recommencement of attacks on Axis sea

(1) The transport situation was subsequently aggravated during the battle by the reinforcement of the Panzerarmee with troops brought in by air and without their transport. This necessitated an emergency readjustment of transport in the Army and Air Force which decreased mobility.

supply lines. Sinkings of Axis supply ships rose from 5 per cent in May to 35 per cent in June, while the convoy programme for North Africa was already behind schedule owing to a serious oil shortage in the Italian Navy, aggravated by the expenditure of fuel oil against the British convoys in Malta.<sup>(1)</sup>

The rapid success of the assault on Tobruk, and the discovery in the port of apparently large quantities of supplies of all kinds, seemed to Rommel to change the situation completely. He was now eager to continue his advance into Egypt and to overtake and liquidate the remainder of the Eighth Army while conditions were favourable. He went forward this time, however, without the Luftwaffe. The ground organisation and fuel supply of the Axis air forces was not adequate to enable them to keep up with the Panzer army, and the Italian Air Force in particular was seriously short of fuel. Furthermore, through Rommel's determination to win a quick and decisive battle, air units had been employed intensively against what should really have been an artillery target at Bir Hacheim, and again, later, at Tobruk, they had acted as long-range artillery for the army. These operations, combined with the constant effort demanded of the air forces in the battle at the Cauldron and along the line masking Tobruk, had drained the resources of the Luftwaffe. Although losses had not been very heavy, serviceability was at a low level and crews were suffering from operational strain.

The disadvantages of subordinating the air force to the army, as practised by the Germans, were plainly displayed in this situation. The exhausted state of the Luftwaffe was largely caused by the demands made on it by the Army Commander in operations not necessarily well-suited to air activity, such as the bombing of Bir Hacheim. There was no joint responsibility for the battle, and consequently the Army Commander could decide matters of policy without discussion with the Air Commander in the Field; thus Rommel could decide to continue the advance without the Luftwaffe, without regard for the effect of this on the air battle.

Soon after the resumption of the Axis advance from the frontier, Rommel began to regret the absence of the Luftwaffe, for the British air forces were attacking the Panzerarmee ceaselessly, both day and night. He therefore ordered the Italian infantry divisions, with the exception of the artillery, to give up their motor transport and to proceed on foot, so that the German and Italian air forces could have transport at their disposal. The result of this order was a considerable increase of enemy air activity in the forward area on 26 June, but the pace of the Panzerarmee's advance continued unchecked, and the Axis air forces were soon out-stripped again, and did not catch up in bulk until the Alamein Line had been reached.

The result of Rommel's policy was that a great opportunity for the Axis air forces, and consequently for the Panzerarmee, was lost. There could have been no better target for air attack than the columns of the Eighth Army

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(1) This shortage of oil in the Italian Navy meant that only 54,500 tons gross of shipping sailed for North Africa in June, and of this only 36,000 tons reach North Africa. German stores arriving in North Africa amounted to a bare 5,000 tons, and this included only 1,850 tons of fuel for the German Army and Air Force.

Ibid

Weichold

retreating in haste, without time or opportunity for dispersal, along the main coastal road and across the desert. A number of well-placed air attacks might well have created sufficient disorganisation to delay the Eighth Army sufficiently to enable the Panzerarmee to overtake it, with perhaps momentous consequences. As it was the Axis air forces could not even provide protection for their own ground forces, and it was the pursuing Panzerarmee and not the Eighth Army that suffered from enemy air activity. Rommel's decision to continue his advance to the Delta was understandable in the circumstances, but it involved great risks, which, in the end proved fatal to his scheme.

The achievement of the Western Desert Air Force in providing constant air operations in support of the Eighth Army during the swift withdrawal over some two hundred and fifty miles of desert from the frontier to El Alamein, in spite of the previous period of intensive and exhausting operations, was made possible by a number of factors. Efficient operational organisation, careful planning of the movement of units, and the co-ordination of both to keep pace with the ever-changing situation, were chiefly responsible for the efficiency of air participation. They were supported by a highly efficient maintenance organisation in the units themselves and by a capacity for improvisation when events did not go according to expectations.

During the withdrawal air operations were arranged through the Control organisation between Air Headquarters and the operational units, but, in default of information from Army sources concerning targets for air attack, an improvised means of target finding, if so highly developed a system could be so described was successfully provided by the air force and made possible a constant air offensive against the Panzerarmee. In defensive activity, for the purpose of protecting the Eighth Army against hostile air activity, the fighter force delayed its withdrawals from forward airfields until the last possible moment before a serious threat developed from advancing enemy units. Here again, improvisation was necessary, for the Eighth Army's defence of airfields showed considerable deficiencies, and the air force had frequently to depend on its own armoured car unit to give warning of the approach of the enemy, in order to carry out this protective policy.

The efficient system devised for the withdrawal of the Air Force played a large part in the successful participation of the fighter and bomber units during the retreat. The plan had been drawn up as a precautionary measure before the battle began, and although in detail it did not provide for a retreat beyond the frontier position, its basic system could be employed to cover movement over great distances. Its employment was in fact entirely successful throughout the whole of the withdrawal from Gazala to Alamein. The division of squadron ground personnel into two operational parties, each of which was capable of working independently for a day or two, and the system of sending one of these ahead of the main squadron to prepare for operations at the new landing-ground while the other carried on at the old, made practicable an uninterrupted programme of operations despite constant movement of the force. A highly efficient maintenance organisation was another valuable asset, not only for maintaining serviceability and strength during intensive operations, but also for the part it played in making damaged aircraft flyable so that they could be evacuated from airfields that were being abandoned, and

subsequently made fit for further operations. For although the British had an advantage over the enemy in that they were retreating on to airfields well-stocked with fuel, ammunition and food, they could not afford to abandon serviceable equipment to the enemy.

While the Eighth Army was preoccupied, perforce, in retreating as rapidly as possible to its defences before the enemy could re-establish contact and bring it to battle, the achievement of the Western Desert Air Force was to retain the initiative throughout, and to provide a strong defensive weapon with which to attack the Panzerarmee and delay its advance. Thus the Eighth Army was able to take up its positions at the Alamein Line in time to face the enemy successfully in a final stand. The Air Force, still unflagging, continued its activity without respite, and participated fully in the fierce battles of early July, in which Rommel's army was at last decisively checked and forced to go over to the defensive.

APPENDICES

LUFTWAFFE ORDER OF BATTLE - MEDITERRANEAN AND AFRICA - 24 JANUARY 1942

	<u>UNIT</u>	<u>TYPE OF A/C</u>	<u>LOCATION</u>	<u>STRENGTH</u>	<u>SERVICE- ABLE</u>
CLOSE RECCE	2(H) 14	Me.109 Me.110 He.126	N. AFRICA	13	4
LONG RANGE RECCE	1(F) 121	Ju.88	N. AFRICA	8	0
	1(F) 122	Ju.88	SICILY	10	6
	2(F) 122	Ju.88	SICILY	13	11
	2(F) 123	Ju.88, Me.110	GREECE & CRETE	11	1
				42	18
S.E. FIGHTERS	$\frac{1}{3}$ of II/JG 3	Me.109	SICILY	12	11
	Stab JG 27	"	N. AFRICA	3	2
	I/JG 27	"	N. AFRICA	23	7
	II/JG 27	"	N. AFRICA	25	7
	III/JG 27	"	N. AFRICA	19	7
	Stab JG 53	"	SICILY	6	6
	I/JG 53	"	GREECE & CRETE	6	4
	I/JG 53 (less 1 St.)	"	SICILY	30	21
	II/JG 53	"	SICILY	36	22
	$\frac{1}{3}$ of III/JG 53	"	SICILY	13	7
	Jabo Staffel 53	"	N. AFRICA	5	5
				178	99
NIGHT FIGHTERS	I/NJG 2 (less 2 St.)	Ju.88	SICILY	11	8
	2/NJG 2	Ju.88,	GREECE & CRETE	4	2
	II/NJG 2	Ju.88, Me.110 Do.215	SICILY	35	11
				50	21
T.E. FIGHTERS	III/ZG 26 (less 7 St.)	Me.110	SICILY	19	8
	7/ZG 26	Me.110	N. AFRICA	9	3
				28	11

LUFTWAFFE ORDER OF BATTLE - MEDITERRANEAN AND AFRICA - 24 JANUARY 1942

<u>UNIT</u>	<u>TYPE OF A/C</u>	<u>LOCATION</u>	<u>STRENGTH</u>	<u>SERVICE- ABLE</u>
<b>BOMBERS</b>				
I/LG 1	Ju. 88	GREECE & CRETE	27	8
II/LG 1	Ju. 88	GREECE & CRETE	33	10
IV/LG 1	Ju. 88	GREECE & CRETE	33	20
K. Gr. 606	Ju. 88	SICILY	20	14
II/KG 26	He. 111	GREECE & CRETE	30	10
7/KG 26	He. 111	GREECE & CRETE	6	0
$\frac{1}{3}$ of I/KG 54	Ju. 88	SICILY	15	6
$\frac{1}{3}$ of K. Gr. 806	Ju. 88	SICILY	16	11
$\frac{2}{3}$ of II/KG 77	Ju. 88	SICILY	22	17
$\frac{2}{3}$ of III/KG 77	Ju. 88	SICILY	30	12
			<hr/> 232	<hr/> 108
<b>DIVE BOMBERS</b>				
Stab St.G. 3	Ju. 87, He. 111 Me. 110	N. AFRICA	5	3
I/St.G. 3	Ju. 87	N. AFRICA	24	21
II/St.G. 3	Ju. 87	N. AFRICA	30	20
Stuka G1 E Staffel	Ju. 87	N. AFRICA	12	4
			<hr/> 71	<hr/> 48
<b>COASTAL</b>				
2/125	Ar. 196	GREECE & CRETE	9	9
Gr. St. 126	He. 114	GREECE & CRETE	4	2
1/126	He. 60	GREECE & CRETE	13	3
2/126	He. 60	GREECE & CRETE	7	6
3/126	He. 60	GREECE & CRETE	10	3
			<hr/> 43	<hr/> 23
<b>TOTAL (ALL OPERATIONAL TYPES EXCL. TRANSPORT)</b>			<b>657</b>	<b>332</b>
<b>TRANSPORT</b>				
III/ZBW 1	Ju. 52		42	23
ZBV 400	Ju. 52		39	27
Transp. Gr. 111	He. 111		24	5
II KORPS Tr. St.	Ju. 52		16	12
			<hr/> 121	<hr/> 67

Note: The total for all operational types excluding transport on 17 January was: 585 307  
 The difference in strength took place chiefly in the bomber and long-range reconnaissance units which showed increases of 44 and 14 respectively.

AIR FORCES AT THE DISPOSAL OF THE AXISPOWERS BASED IN AFRICA AS AT19 JANUARY 1942(Authority A.D.1.(3) Air Ministry II J.1/63)

	<u>G.A.F. (I.E.)</u>	<u>I.A.F. (Strength)</u>
Long Range Bombers	9	45
Dive Bombers	60	5
Single Engined Fighters	96	220
Twin Engined Fighters	9	-
Army Co-operation and Bomber Reconnaissance	24	50
Coastal	-	20
	<u>198</u>	<u>340</u>

The estimated strength of the German Air Force amounted to approximately 160 aircraft or 80% of I.E.

As previously, the whole of the German Air Force was operating in the forward area together with some 110 Italian fighters. The remainder of the Italian force, mainly single engined fighters and reconnaissance aircraft, were engaged on defensive patrols and shipping protection duties off Tripolitania.

ORDER OF BATTLE IN THE MIDDLE EAST COMMAND  
AS AT 27TH JANUARY, 1942

Unit	Location	Aircraft	Remarks
<u>A.H.Q., WESTERN DESERT</u>			
826 Squadron	BU AMUD	Albacore	
33 do.	THALATHA L.G.109	Hurricane	
60 do. SAAF.	FUKA Sat. L.G.16	Maryland	
80 do.	EL ADEM	Maryland	
113 do.	HELWAN	Blenheim (Fighter)	
223 do. S.R.U.	SHANDUR	Swordfish/Albacore	
272 do.	EDCU	Beaufighters	Det. GERAWLA L.G.10
815 do.	DEKHEILA	Swordfish/Albacore	
1 Air Amb. Unit			
<u>3 S.A. WING</u>			
1 Squadron SAAF.	BU AMUD	Hurricane	
11 do.	BU AMUD	Blenheim	
12 do. SAAF.	AMIRIYA L.G.99	Maryland	
21 do. SAAF.	AMIRIYA L.G.99	Maryland	
24 do. SAAF.	SIDI BARRANI L.G.76	Boston	
60 do. SAAF.	AQIR/MOSUL	Maryland	
<u>253 Wing</u>			
208 Squadron	MECHILI	Hurricane	
208 do. Det.	ANTELAT	Hurricane	
237 do. RHOD.	EL GUBBI	Hurricane	
451 do. RAAF.	HELIOPOLIS	Hurricane	
<u>258 Wing</u>			
2 Squadron SAAF.	THALATHA L.G.110	Tomahawk	
3 do. RAAF.	GAZALA	Kittyhawk	
4 do. SAAF.	BENINA	Tomahawk	
112 do.	THALATHA L.G.110	Kittyhawk	
250 do.	THALATHA L.G.109	Tomahawk	
<u>262 Wing</u>			
94 Squadron	THALATHA L.G.110	Hurricane	
213 do.	EDCU	Hurricane	
229 Squadron	EDCU	Hurricane	
238 do.	EL GUBBI	Hurricane	
260 do.	THALATHA L.G.109	Hurricane	
274 do.	GAZALA No. 2	Hurricane	
<u>269 Wing</u>			
30 Squadron	MAKTILA L.G.121	Hurricane	
805 do.	MAATEN BAGUSH	Martlet	
<u>270 Wing</u>			
8 Squadron	BU AMUD	Blenheim	Det. with 55 Squadron
14 Squadron	BU AMUD	Blenheim	
45 do.	BU AMUD	Blenheim	
F.F. Lorraine	ABU SUEIR	Blenheim	
G.219858/EFE/1/49			

Unit	Location	Aircraft	Remarks
<u>205 GROUP (MEDIUM BOMBER)</u>			Under A.H.Q. W.D.
<u>231 Wing</u>			
37 Squadron	SIDI BARRANI L.G. 75	Wellington	
38 do.	SHALLUFA	Wellington	
70 do.	SIDI BARRANI L.G. 75	Wellington	
108 do.	KABRIT	1 Flt. Wellington	
148 do.	KABRIT	1 Flt. Liberator Wellington	
<u>201 GROUP (NAVAL CO-OPERATION)</u>			
2 Squadron Yugo-Slav.	ABOUKIR	Dornier	
13 Squadron Hellenic	Nr. MARIUT L.G. 86	Anson	
55 and 8 Det. Squadron	EL GUBBI	Blenheim	
<u>234 Wing</u>			
39 Squadron	MARIUT	Maryland/Beaufort	Det. EL GUBBI
203 do.	BURG EL ARAB L.G. 39	Blenheim	Det. EL GUBBI
230 do.	ABOUKIR	Sunderland	
R.N. Squadron (Ftr.)	TOBRUK	Hurricane	
R.N. Flight	MAATEN BAGUSH	Fulmar	
<u>MALTA</u>			
40 Squadron	LUQA	Wellington	
69 do.	LUQA	Maryland	
126 do.	TA KALI	Hurricane	
185 do.	HAL FAR	Hurricane	
249 do.	TA KALI	Hurricane	
828 do.	HAL FAR	Swordfish/Albacore	
830 do.	HAL FAR	Swordfish	
1435 Flight	TA KALI	Hurricane	
<u>A.H.Q. IRAQ</u>			
244 Squadron	SHARVAN	Vincent	
<u>A.H.Q. EGYPT</u>			
213 Flight	ISMAILIA	Hurricane	
73 Flight	MSUS	Hurricane	
1 G.R.U.	ISMAILIA	Wellington	
73 Squadron	PORT SAID	Hurricane	
<u>CYPRUS and PALESTINE</u>			
<u>259 Wing</u>			
213 Flight	KHANKA	Hurricane	
261 Flight	NICOSIA	Hurricane	
<u>SUDAN</u>			
47 Squadron	KASFAREET	Blenheim	
6 Squadron Det.	KILO 26 L.G. 224	Gladiator/Lysander	
<u>MISCELLANEOUS</u>			
Sea Rescue Flight	BURG EL ARAB L.G. 39	Wellington	
67 Squadron		Hurricane	
35 do.		Kittyhawk	

Note: Owing to the rapidity of movements of squadrons during this period the accuracy of locations is subject to correction

App. " " to F.540. JANUARY, 1942. H.Q.R.A.F.M.E. (Air Staff)

STATE OF AIRCRAFT - MIDDLE EAST COMMAND

Copy No. 14.

AT 1st FEBRUARY, 1942.

The following details of aircraft in Middle East Command as at 1st February, 1942, are given on the attached pages.

<u>Establishment</u> (those marked * are provisional establishments)	<u>Column No.</u>
1E.	1A
IR.	1B
Total	1C
<u>Type of Unit</u>	2
<u>Strength</u>	
Serviceable or Serviceable within 3 days.	3
Serviceable within 14 days - under repair or rebuild.	4
In store - new - unerected	5
Unserviceable, being reconditioned or repaired. Work in progress.	6
Unserviceable for reconditioning or repair. Work not commenced.	7
Recommended for "Write-off" or "Strike-off".	8
Total Strength.	9
<u>Aircraft awaiting spares.</u>	
Aircraft or airframes included under Cols. 4-7 inclusive that are awaiting spares before they can be made serviceable.	10
<u>January</u> - Receipts	11
" - Issues	12
" - S.O.C.	13
<u>Notes</u>	14

E.1.c.ZA.  
15th April, 1942.

(Sgd.) R.O. SAMPSON  
Squadron Leader  
for Wing Commander.  
E.1.

DISTRIBUTION:-

	<u>Copy No.</u>		<u>Copy No.</u>
A.M.S.O.	1	-D.D.E.2.	10
A.M.T.	2	D.D.E.XI	11
D.G.E.	3	Central Stat. Unit	12
D. of O.	4	Librarian	13 + 14
D.O.O.	5	E.4. Liaison	15
D.S.M.	6	(Wg.Cdr. Anderson)	
D. of E. (A)	7	E.1.	16
D. of E. (B)	8	Duplicate Box	17
D.D.E.1.	9	File S.B.1295	18 + 19

## MIDDLE EAST COMMAND

## STATE OF AIRCRAFT AT 1ST FEBRUARY, 1942.

(For key to columns see page 1)

Note:- Aircraft in Malta, Aden and Iraq are not included.  
See separate statements.

Establishment			Type and Unit	Strength						U/S for Spares	JANUARY, 1942			Notes	
IE	IR	Total									Receipts	Issues	S.O.C.		
1A	1B	1C	2	3	4	5	6	7	8	Total 9	10	11	12	13	14
FIGHTERS															
BEAUFIGHTER I															
16		16	89 Sqdn.	13	1		3			17		2 Ex U.K.		2	46 (N.F.) & 227(F) Sqdns. to form.
16		16	252 "	8			1	1	4	14	4				
16		16	272 "	5	4		7	1	4	21	1				
2		2 <sup>x</sup>	2 P.R.U.	2						2					
			107 M.U.				1			1					
			108 M.U.		1					1					
			Brit. Air Rep. Unit					3		3					
50		50	Beaufighter Totals	28	6		12	5	8	59	5	2	-	2	
HURRICANE															
16		16	1 S.A.A.F. Sqdn. II	10					14	24		6 Mk.I Ex Iraq	5 Mk.I to Aden	3 Mk.I 9 " II	127 & 3 R.A.A.F. Sqdns. to form.
			A.C. 6 Sqdn. I	1	1					2		1 Mk.I	3 Mk.I		
16		16	30 "	18				4	1	23		EX Tak	to		40 S.A.A.F. Sqdn. forming.
16		16	33 "	20				1	4	25		40 Mk.II Ex.Tak	R.E.A.F. 32 Mk.II To Far East		
			A.C. 40 S.A.A.F. Sqdn. I	1			1			1					
12		12	73 Sqdn. II	6			5			7					30, 33, 94, & 274 Sqdns. re-equipping.
16		16	80 "	16					1	21					
			" I	1						2					
16		16	" II		17					17					
			94 "	2				2		4					
12		12	A.C. 208 " I	19					9	28					Kittyhawk. 2 P.R.U. to re-equip Mosquito.
16		16	213 "	13	1		3	1		18	1				
			" II	4						4					
16		16	229 "	20				6		26					
12		12	A.C. 237 Rhod. Sqdn. I	9	1			3		13					
16		16	238 Sqdn. II	15	4			11	4	34					
16		16	260 "	16				4	1	21					
16		16	261 "	13	3					16	3				
16		16	274 "	24				4		28					
16		16	335 (Hel.) Sqdn. I	13	1		8	1		28					
12		12	A.C. 451 R.A.A.F. " I	12			1	2		15					
			Alsace Sqdn. I	3						3					
16		16	R.N. Sqdn. I	5	10		1	8	1	25					
			2 P.R.U. I	2						2					
6	3	9 <sup>x</sup>	" II	6				1		7					
			S.H.Q. Helwan I	4	3			13		20					
			" II					5		5					
			Hurghad I	1						1					
			Ismailia I	5	6					11					
			Khartoum I		2		2			4	4				
20	10	30	71 O.T.U. I	19	1				2	22					
11	5	16	74 " I	11	3			1		15					
1		1	1 Delivery Flt. I	1						1					
			103 M.U. I	4	12		6	8	1	31					
			" II	1	5		1	3		10					
			107 M.U. I	2			1			3	1				
			" II	2						2					
			108 M.U. I	2	2		4	3		11					
			" II					4		4					
			51 R.S.U. I					4		4					
			53 " I	12				2		14	2				
			" II	18	1			4		23					
			54 " I					1		1					
			" II	2						2					
			55 " I	2				3		5	3				
			" II					1		1	1				
			Brit. Air Rep. Unit. I		2			28		30					
			" II				5	11		16					
294	18	312	Hurricane Totals	335	75		38	139	38	625	15	47	40	12	

Establishment			Type and Unit	Strength						U/S for Spares	JANUARY, 1942			Notes
1E	IR	Total		3	4	5	6	7	8		Receipts	Issues	S.O.C.	
1A	1B	1C	2								11	12	13	14
			<u>KITTYHAWK</u>								23 Ex U.S.A.		2	5 S.A.A.F. Sqdn. to form.
16		16	3 R.A.A.F. Sqdn.	20				4	4	28				
			33 Sqdn.	2						2				
16		16	94 "	9			1	1	1	12				30, 33, 94 & 274 Sqdns. to re-arm ex. Hurricane.
16		16	112 "	21				2		23				
16		16	450 R.A.A.F. Sqdn.	12	7			1		20				
			107 M.U.	11			2			27	3			
			108 M.U.	6						6				
			53 R.S.U.	9						9				112 Sqdn. re- arming ex Tomahawk.
			54 "	9						9				
			B.A.R.U.	1						1				
64		64	Kittyhawk Totals	103	18		3	8	5	137	3	23	-	2
			<u>SPITFIRE</u>							NO DETAILS GIVEN				92 & 145 Sqdns. to form.
			<u>TOMAHAWK</u>								16 ex Port Sudan		8	112 Sqdn. re- equipping. Kittyhawk.
16		16	2 S.A.A.F. Sqdn.	15				8	4	27				
			3 R.A.A.F. "					5		5				
16		16	4 S.A.A.F. "	19				5		24	1 Ex. Tak.			
			112 Sqdn.	6				6		12				
16		16	250 R.A.A.F. Sqdn.	20				14		34				
			S.H.Q. Helwan	2	3			27	3	35				
			Hurghad	2						2				
			Ismailia		1			2		3				
			Khartoum					5		5	3			
30	15	45	71 O.T.U.	18					5	23				
			107 M.U.	3			6	61		70	66			
			108 "	15	10		3	3		31				
			53 R.S.U.	26	2		1	3	1	33				
			54 "	4			1			5				
			B.A.R.U.					2		2				
78	15	93	Tomahawk Totals	130	16		11	141	13	311	69	17	-	8
486	33	519	TOTAL FIGHTERS	596	115		64	293	64	1132	92	89	40	24
			<u>BOMBERS</u>											
			<u>FORTRESS</u>											
			90 Sqdn.	2					1	3	-	-	-	-
			<u>LIBERATOR</u>											159 & 160 Sqdns to form.
			108 Sqdn.	2			2			4	-	-	-	-
			<u>WELLINGTON</u>								13 Mk. I Ex. U.K. 13 Mk. II Ex. U.K.		1 Mk. I 2 " II	215 Sqdn. to form.  104 Sqdn. det. from Malta.  221 Sqdn. det. at Malta.
16	5	21	37 Sqdn. IC	19	4		1			24	1			
16	5	21	38 " IC	10	2		2	6		20				
16	5	21	70 " IC	16	2		2	1		21				
			104 " II	9						9				
16	5	21	108 " IC	6	1			1		8				
			148 " IC					1		1				
16	5	21	221 " II	19	2			1		22	1			
16	5	16	221 " IC	2			1			3				
3	2	5	1 G.R.U. IC	4	1				1	6				
2	1	3	Sea Rescue Flt. IC	4			1			5				
			S.H.Q. Kabrit IC	3			3			6				
			103 M.U. IC	1			1			2				
			108 M.U. IC	6	6					12				
			57 R.S.U. IC		5		4	12	2	23				
			B.A.R.U. II					1	1	1				
			B.A.R.U. IC				2	8	2	12				
101	28	129	Wellington Totals	97	25		17	30	6	175	2	26	-	3

Establishment			Type and Unit	Strength						U/S for Spares	JANUARY, 1942			Notes
IE	IR	Total		3	4	5	6	7	8		Receipts	Issues	S.O.C.	
1A	1B	1C	2								11	12	13	14
			<u>BALTIMORE</u>											
			223 Sqdn. 107 M.U.	3 1	1 8					4 9	2 Ex. U.S.A.		1	
			Baltimore Totals	4	9					13	-	2	-	1
12		12	<u>BEAUFORT</u> 39 Sqdn. B.A.R.U.	12	3			1		15 1	2		3	22 & 47 Sqdns. to form.
12		12	Beaufort Totals	12	3			1		16	2	-	-	3
16		16	<u>BLLENHEIM IV</u> 6 Sqdn.	2				1	1	4		33 Ex Tak. 12 Ex U.K.	9	45 Sqdn. to re- form in Burma.
16		16	11 "	13			5	2		20		45 to India.		
16		16	14 "	21				3		24		4 to Malta		
16		16	18 "	4						4				
16		16	45 "	16				5		21				203 Sqdn. to re-equip Hudson.
16		16	55 "	24					3	27				
16		16	60 S.A.A.F. Sqdn.	3						3				
16		16	203 Sqdn.	11	3		7	2	4	27	2			
16		16	F.F. Lorraine Sqdn.					18		18				
6		6	1 F.F. (Bomb) Ft.	2				1		3				
			Greek Flt.	3						3				
			S.H.Q. Hughad	2			1			3				
			Ismailia	1						1				
			Khartoum	4	11		2	4		21				
48	24	72	204 Group	3				2		5				
2		2	72 O.T.U.	8	9			4		21	2			
			1 Delivery Flt.	3						3				
			103 M.U.	3	6		13	5	1	28				
			108 "	23	19		41	13		96				
			Reserve Pool	33	11			7	6	57	2			
			51 R.S.U.	2	11			2		15	1			
			54 "					1		1				
			B.A.R.U.				3	27		30				
152	24	176	Blenheim IV Totals	181	70		72	97	15	435	7	45	49	9
20		20	<u>BOSTON</u> 12 S.A.A.F. Sqdn.	4				5		9		14 Ex Port Sudan	2	15 S.A.A.F. Sqdn. to form.
			24 " "	21					5	26				
			223 Sqdn.	5	2					7	2			
			72 O.T.U.	4						4				
			107 M.U.	21	20		12			53				
20		20	Boston Totals	55	22		12	5	5	99	2	14	-	2
20		20	<u>MARYLAND</u> 12 S.A.A.F. Sqdn.	1				1	3	5		1 Ex. U.S.A.	8 to Malta	1
20		20	21 " "	3	7			2	4	16				
			24 " "	1						1				
8	4	12	39 Sqdn.	3	3					6				
			60 S.A.A.F. Sqdn.	4						4				
20		20	203 Sqdn.	3						3				
			223 "	2	6					8	6			
			Strategical R.U.	6				4		10				
			S.H.Q. Helwan					2		2				
			107 M.U.	2	1		10	2	2	17	5			
			108 "				2			2				
			51 R.S.U.				1	5		6				
			54 "				8			8				
68	4	72	Maryland Totals	25	17		21	16	9	88	11	1	8	1
			<u>WELLESLEY</u> 2 P.R.U.	1						1				
			S.H.Q. Khartoum	3	4		1	2		10				3
			54 R.S.U.	1						1				
			B.A.R.U.					5		5				
			Wellesley Totals	5	4		1	7		17	-	-	-	3
353	56	409	TOTAL BOMBERS	383	150		125	156	36	850	24	88	57	22

Establishment			Type of Unit	Strength							U/S for Spares	JANUARY, 1942			Notes
IE 1A	IR 1B	Total 1C		3	4	5	6	7	8	Total 9		Receipts 11	Issues 12	S.O.C. 13	
			2												14
4	1	5	<u>SUNDERLAND</u> 230 Sqdn.	3						3	-	-	-	-	
16		16	<u>TRANSPORT</u> <u>BOMBAY</u> 216 Sqdn. S.H.Q. Khartoum B.A.R.U.	9 1	3 1 3			2 2	1	15 2 6		1 Ex. U.K.			
16		16	Bombay Totals	10	7		1	4	1	23	-	1	-	-	
			<u>D.H.86</u> 216 Sqdn. 55 R.S.U. B.A.R.U.	5				1 1	1	6 1 1	1				
			D.H.86 Totals	5				2	1	8	1	-	-	-	
6	3	9	<u>DOUGLAS D.C.2K</u> 31 Sqdn. 117 " (a) S.H.Q. Helwan 107 M.U.	1 4 2 1	2		2			3 6 2 1			2 To India.		31 Sqdn. det. from India.
6	3	9	Douglas D.C.2K Totals	8	2		2			12	-	-	2	-	
			<u>LOCKHEED 14</u> B.A.R.U.					1		1	1	-	-	-	
2	1	3	<u>LODESTAR</u> 267 Sqdn. B.A.R.U.	2				2		2		1 Ex Iraq			147 Sqdn. to form.
2	1	3	Lodestar Totals	2				2		4	-	1	-	-	
1 1 1		1 1 1	<u>VALENTIA</u> S.H.Q. Aboukir " Hurghad 204 Group 1 Delivery Flt.	1 1 1			1			1 1 1 1				1	
1		1	103 M.U. 107 " 108 " 105 A/C Assembly Unit 51 R.S.U.	1 1 1 1 1	1			1 1		1 1 2 1 1					
3		3	Valentia Totals	6	1		1	1	1	10	-	-	-	1	
27	4	31	TOTAL TRANSPORTS	31	10		4	10	3	58	2	2	2	1	
870	94	964	GRAND TOTAL OPERATIONAL TYPES	1013	275		193	459	103	2043	118	179	99	47	
			<u>NON-OPERATIONAL TYPES</u> <u>ANSON</u> Greek Flt. 204 Group	3	1			1		4 1					
			Anson Totals	3	1			1		5	-	-	-	-	
2 4	1 2	3 6	<u>AUDAX</u> 267 Sqdn. S.H.Q. Nairobi Ramelah 204 Group 55 R.S.U.	2 2 1 1			1	2 3 1		3 4 1 7 1					267 Sqdn. to re-equip Hudson
6	3	9	Audax Totals	6	2		2	6		16	-	-	-	-	

Establishment			Type of Unit	Strength						U/S for Spares	JANUARY, 1942			Notes
IE 1A	IR 1B	Total 1C		3	4	5	6	7	8		Receipts 11	Issues 12	S.O.C. 13	
			2							Total 9				14
			<u>BLENHEIM I</u>											
1		1	223 Sqdn.	1						1				267 Sqdn. to re-equip Wellington IC
			267 "	1						1				
			S.H.Q. Ismailia	1	1			1		3				
			Khartoum	1	2		2	1	1	7				
			Ramelah	1						1				
15	7	22	72 O.T.U.	10			6	1	1	18				
			252 Wing	1						1				
1		1	103 M.U.					1		1				
			108 "					2		2				
			Reserve Pool	6	1			3	1	11				
			B.A.R.U.				1			1				
17	7	24	Blenheim I Totals	22	4		9	9	3	47	-	-	-	
			<u>CAUDROM SIMOUN</u>								-	-	-	
			<u>DORNIER 17</u>											
			103 M.U.					1		1	-	-	-	
			<u>DORNIER 22</u>											
			Yugo Slav. Flight	2			3			5	-	-	-	
1		1	<u>FAIRCHILD AMPHIBIAN</u>											
			Sea Rescue Flt.	1						1	-	-	-	
			<u>FULMAR</u>											
			S.H.Q. Aboukir	2	1					3	-			
			Ismailia	3	1			1		5				
			B.A.R.U.					1		1				
			Fulmar Totals	5	2			2		9	-	-	-	
			<u>GAUNTLET</u>											
			Greek Flt.	6				1		7				
			55 R.S.U.				1			1				
			Gauntlet Totals	6			1	1		8	-	-	-	
			<u>GLADIATOR</u>											
12		12x	6 Sqdn. I	2				2	1	5				
4	2	6	267 Sqdn. II	5				2		7				
3	1	4	1411 (MET) Flt. I)	6			2			8				
3	1	4	1412 " " II)	1						1				
			S.H.Q. Khartoum I)	3	1		1	1		6				
3	1	4	1413 (MET) Flt. II)	1	1			3		5				
			Greek Flt. I	4			1			5				
			S.H.Q. Ismailia I	1						1				
6	3	9	72 O.T.U. II	2				1		3				
			201 Group I	1						1				
			204 " I	3			1	1		5				
			103 M.U. I	1			1			2				
			55 R.S.U. I					3		3	2			
			II				1			1				
31	8	39	Gladiator Totals	32	2		7	13	1	55	2	-	-	
			<u>GORDON</u>											
			108 Sqdn.	1						1				
			S.H.Q. Aboukir	2						2				
			Ismailia		1					1				
			103 M.U.	2						2				
			108 "	1				4		5				
			Gordon Totals	6	1			4		11	-	-	-	
1		1	<u>GRUMMAN</u>											
			Sea Rescue Flt.	1						1	-	-	-	

Establishment			Type and Unit	Strength						U/S for Spares	JANUARY, 1942			Notes	
IE	IR	Total		3	4	5	6	7	8		Total	Receipts	Issues		S.O.C.
1A	1B	1C	2	3	4	5	6	7	8	9	10	11	12	13	14
			<u>HARDY</u>												
			254 Wing	1	1					2					
			103 M.U.		1					1					
			105 A/C Ass. Unit	1						1					
			Hardy Totals	2	2					4	-	-	-	-	
			<u>HART</u>												
			38 Sqdn.		1					1					
			73 "	1			1			2					
			89 "				1			1					
			216 "	1						1					
			252 "	2						2					
1		1	1 Delivery Flt.				2			2					
			S.H.Q. Aboukir	1						1					
			Fayid	2						2					
			Helwan						1	1					
4	1	5	Nairobi	1				1		2					
			Ramelah	3	1					4					
			107 M.U.	1			1			2					
			55 R.S.U.					1		1					
			B.A.R.U.					5		5					
5	1	6	Hart Totals	12	2		5	7	1	27	-	-	-	-	
			<u>HARVARD</u>												
14	6	20	71 O.T.U.	9	2					11		17 Ex	4 to Aden		
			107 M.U.	11	5		2	1		19	2	U.S.A.			
			B.A.R.U.					1		1					
14	6	20	Harvard Totals	20	7		2	2		31	2	17	4	-	
			<u>HIND</u>											1	
			2 P.R.U.	1						1					
			S.H.Q. Aboukir	1	1					2					
			Nairobi	1						1					
			Ramelah	1						1					
1		1	253 Wing		1					1					
			55 R.S.U.					1		1					
			B.A.R.U.					1		1					
1		1	Hind Totals	4	2			2		8	-	-	-	1	
			<u>HUDSON</u>												
			B.A.R.U.					1		1	-	-	-	-	459 R.A.A.F. Sqdn. to form.
			<u>J.U. 87.</u>												
			39 Sqdn.	1						1	-	-	-	-	
			<u>LOCKHEED ELECTRA</u>												
2		2	267 Sqdn.				1			1	1				
			2 P.R.U.	1						1					
			B.A.R.U.					1		1					
2		2	Lockheed Electra Totals	1			1	1		3	1	-	-	-	
			<u>LYSANDER</u>												
2		2	6 Squadron	I	2					2				1 Mk. I	
				II	1					1				1 " II	
1		1	37 "	I	1					1					
1		1	70 "	I	1		1			2					
1		1	108 "	I	1					1					
2		2	208 "	II				2		2	1				
2		2	237 (Rhod) Sqdn.	I				3		3					
4	2	6	267 Squadron	I	1	2	1			4					
				II	3	2	2	1		8					
2		2	451 R.A.A.F. Sqdn.	II	1					1					
			S.H.Q. Aboukir	II	1					1					
			" Ramelah	I		1				1					
6	3	9	72 O.T.U.	I		1	1	1		3					
				II				1		1					

Establishment			Type of Unit	Strength						U/S for Spares	JANUARY, 1942			Notes
IE 1A	IR 1B	Total 1C		3	4	5	6	7	8	Total 9	Receipts 11	Issues 12	S.O.C. 13	
			<u>LYSANDER (Contd.)</u>											
			204 Group I	2			1			3				
			II	3	1		2		1	7				
			253 Wing I	1						1				
			II	1						1				
			103 M.U. I				1			1				
			II				2			2				
			51 R.S.U. I		1					1				
			53 " II					1		1				
			54 " I		1					1				
			Brit. Airways Rep. Unit. I				1	2		3				
			II				1	3		4				
21	5	26	Lysander Totals	19	9		13	14	1	56	1	-	-	2
			<u>MAGISTER</u>											
1		1	38 Sqdn.	1						1				
			39 "	1						1				
			203 "	1						1				
2	1	3	267 "	3						3				
1		1	252 Wing	2						2				
			S.H.Q. Khartoum	1						1				
1	1+1	3	S.H.Q. Ramelah	2						2				
3	1	4	74 O.T.U.	3	2		1			6				
			71 O.T.U.	1						1				
2		2	201 Group	1						1				
3		3	204 Group	1			1	1	1	4				
1		1	103 M.U.	1						1				
			107 M.U.	1						1				
			54 R.S.U.					1		1				
			55 R.S.U.	1						1				
14	4	18	Magister Totals	20	2		2	2	1	27	-	-	-	-
			<u>MARCEL BLOCH</u>											
1		1	Free French Comm. Flight					1		1	-	-	-	-
			<u>MESSERSCHMITT 110</u>											
			267 Sqdn.	1						1	-	-	-	-
			<u>MOHAWK</u>											
			71 O.T.U.	20				1	2	23				
			S.H.Q. Khartoum					1		1	1			
			55 R.S.U.		1					1				
			Mohawk Totals	20	1			2	2	25	1	-	-	-
			<u>MORANE FIGHTER</u>											
			107 M.U.					3		3	-	-	-	-
			<u>MOTH</u>											
			267 Squadron	1						1	-	-	-	-
			<u>OXFORD</u>											
1		1	223 Squadron					1		1				
			1 Delivery Flight	1						1				
			Reserve Pool	9	2					11	1			
			British Airways Rep. Unit.					2		2				
1		1	Oxford Totals	10	2			3		15	1	-	-	-
			<u>PERCIVAL Q.6.</u>											
2		2	267 Sqdn.	1						1				
			British Airways Rep. Unit.				1			1				
2		2	Percival Q.6. Totals	1			1			2	-	-	-	-
			<u>POTEZ 63/11</u>											
			107 M.U.					1		1	-	-	-	-

Establishment			Type and Unit	Strength						U/S for Spares	JANUARY, 1942			Notes	
IE	IR	Total		3	4	5	6	7	8		Receipts	Issues	S.O.C.		
1A	1B	1C	2	3	4	5	6	7	8	Total 9	10	11	12	13	14
			<u>PROCTOR</u>												
2	1	3	117 Squadron												
4	2	6	267 "	2			2	1		5					
			S.H.Q. Helwan						1	1					
			" Khartoum	2						2					
1		1	257 Wing	1						1					
			204 Group				1			1					
			British Airways Rep. Unit.					1		1					
7	3	10	Proctor Totals	5			3	2	1	11	-	-	-	-	
			<u>SAVOIA S.79</u>												
			2 P.R.U.	1				1		2	-	-	-	-	
			<u>SCION JUNIOR</u>												
			S.H.Q. Ramelah	1						1	-	-	-	-	
			<u>SCION MAJOR</u>												
			55 R.S.U.					1		1	-	-	-	-	
			<u>SIM.14 (SEAPLANE)</u>												
			Yugo Slav. Flight	1						1	-	-	-	-	
			<u>TUTOR</u>												
3	1	4	Greek Flight	1			2			3					
			S.H.Q. Nairobi					1	1	2					
3	1	4	Tutor Totals	1			2	1	1	5	-	-	-	-	
			<u>VEGA GULL</u>												
1		1	39 Squadron	1						1					
			267 "	1						1					
			British Airways Rep. Unit						1	1					
1		1	Vega Gull Totals	2					1	3	-	-	-	-	
			<u>VINCENT</u>												
3		3	204 Group	1				1		2					
			British Airways Rep. Unit					2		2					
3		3	Vincent Totals	1				3		4	-	-	-	-	
			<u>WALRUS</u>												
			102 M.U.						1	1	-	-	-	-	
131	38	169	GRAND TOTAL NON-OPERATIONAL TYPES	208	39		51	84	13	395	8	17	4	4	
1001	132	1133	GRAND TOTALS AIRCRAFT IN MIDDLE EAST COMMAND	1221	314		244	543	116	2438	126	196	103	51	

(a) 117 Squadron is also established with:-

1 + 0 Valentia  
2 + 0 Wellington  
6 + 3 Bombay

No aircraft are held against these establishments.

## M E D I T E R R A N E A N C O M M A N D

File SB.1300/E.1.c Z.A.

State of Aircraft held at 1st February, 1942, and Receipts, Issues  
and Strike-offs during January, 1942.

The detailed key to the letters used for the headings is as follows:-

A - Type of Aircraft	G - Unserviceable - Under Inspection	N - At M.U.'s - Total	X - Last Month - Receipts
B - Unit	H - " - Under Repair	O - " - Serviceable	Y - " - Issues
C - Establishment I.E.	J - " - Awaiting spares	P - " - " in 7 days	Z - " - S.O.C.
D - " I.R.	K - " - To be returned to M.U.	Q - " - " 7/14 "	
E - Total on Strength	L - Awaiting Strike off not included in "E"	R - " - " after 14 days	
F - Serviceable - complete with War Equipment.	M - Location of M.U.		

with War Equipment.																				
C & D		B	F	G	H	J	K	E	L	A		O	P	Q	R	N	X	Y	Z	
ESTABLISHMENT	UNIT	MK	STATE OF AIRCRAFT IN UNITS						STATE OF AIRCRAFT IN STORE AND REPAIR								January 1942 Receipts Issues S.O.C.			
Detachment ex M.E.	272 Sqdn. Luga		1		1			2	BEAUFIGHTER									2 Ex U.K.	1 to M.E.	
		1		2				2	Totals							Nil	2	1	-	
See Maryland 16 + 8	69 Sqdn. 126 "	IIA			2			2	HURRICANE									2Mk. IIA Ex. M.E.	1 Mk. I To M.E.	6Mk. I 6 " I 2 " I
		IIA	3		3			6	1	Kalafrana I		1				2				
16 + 8	185 "	IIB	1		1	1		3		" IIA			6	11	17					
		IIB	1	1	1		2	3		" IIB			5	10	15					
To re-form India 16 + 8	242 " 249 "	IIC	1		2		1	1		" IIC				3	3					
		IIB	6		2			8	1											
To re-form India 9 + 0	605 " 1435(N.F.) Flt. Luga	IIA			3		2	5												
		IIB	7	1				10												
		IIB	6		1		3	10												
		IIC			1			1												
57 + 24		IIB	3					3												
57 + 24		I	5		1	1		7	1											
			33	2	18	4	8	65	4	Totals		1	11	25	37		2	1	14	
			34	2	21	4	8	69	4	TOTAL-FIGHTERS	-	1	11	25	37		4	2	14	
Forming ex U.K. 16 + 0.	18 Sqdn. 21 "			1	1			2	BLENHEIM								26 Ex U.K.	27 to M.E.	8	
			15	1				16	1											
Detachment ex U.K. " " M.E.	107 "				2			2												
			1		3			4												
	Luga		2		4			6	6											
	Takali				1			1	1											
16 + 0			18	2	11			31	8	Totals					Nil		26	27	8	
7 + 5	69 Sqdn.		2	1	7			10	2	MARYLAND							5 Ex U.K.		5	
See Maryland	69 Sqdn. Luga				1			1	MOSQUITO								2 Ex U.K.			
					1			1	1	Totals					Nil		2	-	-	
To re-form M.E. 16 + 0	40 Sqdn. 104 "	II		1	1			2	WELLINGTON								10Mk. IC Ex U.K.	1Mk. IC To M.E.	12Mk. IC 4Mk. II	
		IC	9	1	5			15	6								1Mk. II Ex U.K.	8Mk. II To M.E.	2Mk. VIII	
Detachment ex M.E.	221 " Luga	II		1	1			2									5Mk. VIII To M.E.	1Mk. VIII To M.E.		
		VIII	3		2			5												
16 + 0		IC			3			3												
		II	12	3	16			4	8							Nil	16	10	18	
	Luga								1	WHITLEY							2 Ex U.K.		1	
39 + 5			32	6	35			73		20 TOTAL-BOMBERS							44	37	27	
	Luga Takali				1			1	MAGISTER											
					1	1		2		Totals					Nil		-	-	-	
	Luga								1	WELLESLEY							1 Ex U.K.			
96 + 29			66	8	57	5	8	144		25 GRAND TOTALS		1	11	25	37		49	39	41	

S E C R E T

APPENDIX V

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MEDITERRANEAN COMMAND

The State of Aircraft held at 1st. February 1942 by Units in Mediterranean Command together with particulars of aircraft received, issued and struck off charge by the Command, are given in the enclosed statement.

A.J. HOWELL.

Wing Commander,  
E.1.

23rd March, 1942.

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## APPENDIX VI

LOCATION OF UNITS A.H.Q.W.D. AS AT 16. 1. 42.

(with notes to show their positions at 20. 1. 42)

	<u>Adv.</u>	<u>Rear</u>	<u>Base</u>
No. 1 Squadron S.A.A.F.	Derna	Derna	Derna
No. 2 Squadron S.A.A.F. (withdrawn to Martuba 17.1.42)	Antelat	Msus	El Adem
No. 3 Squadron R.A.A.F.	Antelat	Gazala 2	Gazala
No. 4 Squadron S.A.A.F.	Benina	Benina	El Adem
No. 11 Squadron	Bu Amud	Bu Amud	Bu Amud
No. 12 Squadron S.A.A.F. X	1 Flight Detached 201 Group		
No. 14 Squadron	L.G. 21	L.G. 21	L.G. 21
No. 21 Squadron X	Gambut	Gambut	Gambut
No. 33 Squadron	Bu Amud	Bu Amud	L.G. 21
No. 60 Squadron S.A.A.F.	Antelat	Antelat	Antelat
No. 80 Squadron	Tmimi	Tmimi	Tmimi
No. 94 Squadron	El Adem	El Adem	El Adem
No. 112 Squadron	Antelat	Antelat	Gazala 2
No. 272 Squadron	Antelat	Msus	El Adem
Free French Squadron X X	L.G. 10	-	Edku
No. 208 Squadron	Gambut	Gambut	Gambut
No. 229 Squadron	Tmimi Sat.	Tmimi Sat.	Tmimi Sat.
No. 237 Squadron X	Antelat	Antelat	Gazala 3
No. 238 Squadron	Tmimi	Tmimi	Tmimi
No. 250 Squadron	Antelat	Antelat	Gazala 3
No. 260 Squadron	Antelat	Antelat	El Adem
No. 274 Squadron	Antelat	Antelat	Gazala 2
No. 451 Squadron +	Antelat	Antelat	Gazala 2
No. 826 Squadron F.A.A.	Sidi Azeiz	Sidi Azeiz	Sidi Azeiz
R.N. (F) Squadron	Bu Amud	Bu Amud	Bu Amud
	Tobruk M.	Tobruk M.	Tobruk M.
Strat/R. Unit	Martlets at Base - L.G. 10		
No. 1 Air Ambulance Unit	Tmimi	Tmimi	Tmimi
No. 253 Wing	El Adem	-	-
No. 258 Wing	Tmimi	-	-
No. 3 (SA) Wing	Antelat	-	-
No. 262 Wing	Bu Amud	-	-
No. 270 Wing O	Antelat	-	-
Advanced R.S.U.	Gambut	-	-
Advanced 31 A.S.P.	Bu Amud	-	-
No. 21 M.R.S.	Antelat	-	El Adem
No. 121 M.U.	Ed Duda	-	-
	Benghasi	-	Tobruk
	Msus	-	-
Advanced Air H.Q. W.D.	Tmimi	-	-
Rear A.H.Q. W.D.	El Adem	-	-
No. 3 F.S.D.	Tobruk	-	-
No. 510 A.M.E.S.	Benghasi	-	-
No. 53 R.S.U.	El Adem E.	-	-
M.T. L.R.U.	Gambut	-	-
Air Transport Wing	Tmimi	-	-
No. 22 M.R.S.	Agedabia	-	-
No. 31 A.S.P.	Gambut	-	-
No. 6 S. and T. Column	Benghasi	(3 Section - Msus)	-
No. 5 S. and T. Column	Tobruk	-	-
No. 520 A.M.E.S.	Tobruk	-	-
L.R.I.	Msus	-	-
No. 522 A.M.E.S.	Derna	-	-
No. 220 A.M.E.S.	Benghasi	-	-
No. 51 R.S.U.	Gambut	-	-

	<u>Adv.</u>	<u>Rear</u>	<u>Base</u>
No.235 A.M.E.S.	Tobruk	-	-
No. 4 Heavy Medium Mobile W/T Unit	El Adem	-	-
No.216 Squadron	El Adem	-	-
No.208 Squadron Detachment	Antelat	-	-
No.216 Squadron Detachment	El Adem	-	-

Notes:

- \* Had ceased operating owing to lack of MARYLANDS - withdrawn in order to be re-equipped with BOSTONS and BALTIMORES.
- + Transferred to Syria.
- O Disbanded w.e.f. 15. 1. 42.
- \* \* Transferred to Syria with the intention of being re-formed there.
- \*. Transferred to Iraq.

SECRET

APPENDIX VII

ROYAL AIR FORCE MIDDLE EAST COMMAND  
LOCATION OF UNITS

PART ONE. DETAILED SUMMARY OF UNITS IN THE MIDDLE EAST.

<u>Unit.</u>	<u>Location</u>	<u>Control</u>	
		<u>Admin.</u>	<u>Operational</u>
<u>Command &amp; Formation Headquarters</u>			
HQ RAF ME. A.O.C.:- A/M Sir A.W. Tedder, C.B.	Cairo	AM K.	AM W.
AHQ Western Desert A.O.C.:- A/V/M A. Coningham, C.B., D.S.O., M.C., D.F.C., A.F.C.	Maaten Bagush.	HQ ME.	HQ ME.
AHQ Iraq. A.O.C.:- A/V/M J.H. D'Albiac, C.B., D.S.O.	Habbaniya.	HQ ME.	HQ ME.
AHQ Aden. A.O.C.:- A/V/M F.G.D. Hards, C.B.E., D.S.C., D.F.C.	Steamer Point.	AM K.	HQ ME.
AHQ Levant A.O.C.:- A/A/C L.O. Brown, D.S.C., A.F.C., C.B.E.	Jerusalem	HQ ME.	HQ ME.
HQ Mediterranean A.O.C.:- A/V/M H.P. Lloyd, C.B.E., M.C., D.F.C., A.F.C.	Valletta	AM K.	HQ ME.
AHQ Egypt A.O.C.:- A/C T. Elmhirst, A.F.C.	Cairo	HQ ME.	HQ ME.
<u>Group Headquarters</u>			
No. 201 Group A.O.C.:- A/C L.A. Slatter, C.B., O.B.E., D.S.C., D.F.C.	Alexandria	HQ ME.	HQ ME.
No. 203 Group A.O.C.:- A/A/C C.B.S. Spackman, D.F.C.	Khartoum	HQ ME.	HQ ME.
No. 205 Group A.O.C.:- A/A/C L.L. McLean, M.C.	Shallufa	HQ ME.	HQ ME.
No. 206 Group A.O.C.:- A/A/C C.B. Cooke, C.B.E.	Heliopolis	HQ ME.	HQ ME.

<u>Unit</u>	<u>Location</u>	<u>Control.</u>	
		<u>Admin.</u>	<u>Operational</u>
<u>Group Headquarters (Contd.)</u>			
No. 207 (Training) Group A.O.C.:— A/A/C W. Sowrey, C.B.E., D.S.C., A.F.C.	Nairobi	HQ ME.	HQ ME.
No. 211 Group	Tobruk	AHQ WD.	AHQ WD.
No. 213 Group O.C.:— G/C S.D. McDonald, D.F.C.	Beit Mery	AHQ Levant	AHQ Levant
No. 214 Group O.C.:— G/C R.M. Foster	Habbaniya	AHQ Iraq.	AHQ Iraq.
<u>Wing Headquarters</u>			
No. 250 Wing O.C.:— G/C J.W. Turton-Jones	Ismailia	AHQ Egypt	AHQ Egypt
No. 252 Wing O.C.:— G/C G.L. Carter	Seagull Camp Mex.	AHQ Egypt	AHQ Egypt
No. 258 Wing O.C.:— A/G/C K.B.B. Cross, D.F.C.	Gambut	AHQ WD.	AHQ WD.
No. 259 Wing O.C.:— G/C C.N. Lowe, M.E., D.F.C.	Nicosia	AHQ Levant	AHQ Levant
No. 260 Wing O.C.:— A/G/C A.S. Jackson	Ismailia	AHQ Egypt	AHQ Egypt
No. 3 (S.A.) Wing O.C.:— Col. H.G. Wilmot	Maaten Bagush	AHQ WD.	AHQ WD.
No. 262 Wing O.C.:— A/W/C F.E. Rosier	El Adem	AHQ WD.	AHQ WD.
No. 263 Wing O.C.:— G/C V.O. Croome	Beirut	AHQ Levant	AHQ Levant
No. 231 Wing O.C.:— A/G/C E.C. Lewis	El Dhaba	205 Gp.	205 Gp.
No. 236 Wing	Kabrit	205 Gp.	205 Gp.
No. 237 Wing	Wadi Natrum L.G. 82.	AHQ Egypt	AHQ Egypt
No. 238 Wing	Shallufa	205 Gp.	205 Gp.
No. 241 Wing	Khanka	AHQ Egypt	AHQ Egypt

<u>Unit</u>	<u>Location</u>	<u>Control.</u>	
		<u>Admin.</u>	<u>Operational.</u>
<u>Wing Headquarters (Contd.)</u>			
No. 244 Wing	Bilbeis	AHQ Egypt	AHQ Egypt
No. 242 Wing	Fayid	205 Gp.	205 Gp.
No. 232 Wing	El Firdan	AHQ Egypt	AHQ Egypt
No. 233 Wing	El Firdan	AHQ Egypt	AHQ Egypt
No. 234 Wing O.C.:— W/C E.W. Whitley	Maaten Bagush	AHQ WD.	AHQ WD.
No. 235 Wing	Fuka Satellite	201 Gp.	201 Gp.
No. 2 Wing S.A.	Alomata	207 Gp.	207 Gp.
Adv. HQ No. 2 Wing S.A.	Dabat	207 Gp.	207 Gp.
Wing HQ.	Mosul	AHQ Iraq.	AHQ Iraq.
Air Transport Wing HQ O.C.:— W/C E.J. Laine	Mersa Matruh	AHQ WD.	AHQ WD.
<u>R.A.F. Stations at:—</u>			
Aqir C.O.:— W/C A.W. Vincent		AHQ Levant	AHQ Levant
Amman C.O.:— T/W/C D.M.H. Craven		AHQ Levant	AHQ Levant
Amriya C.O.:— S/Ldr. G.E.D. Lowe		AHQ Egypt	AHQ Egypt
Asmara C.O.:— W/C V. Maxwell		203 Gp.	203 Gp.
Basrah C.O.:— W/C M. Wiblin		AHQ Iraq.	AHQ Iraq.
Dar es Salaam		207 Gp.	207 Gp.
Eastleigh C.O.:— A/W/C G.B. Nicholas D.F.C.		207 Gp.	207 Gp.
Gaza C.O.:— S/Ldr. H.R. Goodman		AHQ Levant	AHQ Levant
Habbaniya C.O.:— G/C L.F. Forbes, M.C.		AHQ Iraq.	AHQ Iraq.
Haifa C.O.:— A/W/C Black		AHQ Levant	AHQ Levant

G. 219858/TC/1/49

<u>Unit</u>	<u>Location</u>	<u>Control</u>	
		<u>Admin.</u>	<u>Operational</u>
<u>R.A.F. Stations at:-</u>			
Hal Far		HQ Med.	HQ Med.
Heliopolis		AHQ Egypt	AHQ Egypt
C.O.:-			
G/C C.F. Horsley			
Helwan		AHQ Egypt	AHQ Egypt
C.O.:-			
W/C L.W.B. Rees, V.C., O.B.E., M.C., A.F.C.			
Ismailia		AHQ Egypt	AHQ Egypt
C.O.:-			
A/W/C D.O. Butler			
Kalafrana		HQ Med.	AHQ Med.
Khormaksar		AHQ Aden	AHQ Aden
Khartoum		203 Group	203 Group
C.O.:-			
W/C W.S. Reed			
Luga		HQ Med.	HQ Med.
C.O.:-			
G/C J.S. Chick			
Lydda		AHQ Levant	AHQ Levant
C.O.:-			
A/S/Ldr. A.E. Morgan			
Mersa Matruh		AHQ WD.	AHQ WD.
Mombasa		207 Group	207 Group
Mosul		AHQ Iraq	AHQ Iraq
Nairobi		207 Group	207 Group
C.O.:-			
W/C H.E.T. Crocker			
Ramleh		AHQ Levant	AHQ Levant
C.O.:-			
W/C T.W. Mulcahy-Morgan			
Shaibah		AHQ Iraq	AHQ Iraq
C.O.:-			
W/C R.J. Legg			
Shandur		AHQ Egypt	AHQ Egypt
C.O.:-			
A/W/C Duke of Newcastle			
Sheikh Othman		AHQ Aden	AHQ Aden
C.O.:-			
G/C F.O. Soden, D.F.C.			
Suez Road		HQ ME	HQ ME.
C.O.:-			
S/Ldr. F.B. Young			
Wadi Saidna		203 Group	203 Group

<u>Unit</u>	<u>Location</u>	<u>Control</u>	
		<u>Admin.</u>	<u>Operational</u>
<u>R.A.F. Stations at:-</u>			
Summit C.O. W/C C.S. Moore		203 Group	203 Group
Takali		HQ Med.	HQ Med.
Takoradi A.O.C. A/C H.K. Thorold, D.S.C., D.F.C., A.F.C.			
<u>S.A.A.F. Stations</u>			
Mogadishu		207 Group	207 Group

<u>Unit and Category</u>	<u>Location</u>	<u>Control</u>	
		<u>Admin.</u>	<u>Operational.</u>
<u>R.A.F. Squadrons</u>			
No. 6 "Army Co-operation". C.O.:— S/Ldr. P. Legge	L.G. 224	AHQ Egypt	AHQ Egypt
No. 8 "Light Bomber".	Khormaksar	AHQ Aden	AHQ Aden
No. 8 (1 Flight) "Light Bomber"	Fuka LG 17	AHQ WD.	AHQ WD.
No. 11 "Light Bomber" C.O.:— A/W/C A.J. Smyth, D.F.C.	S.W. Maaten Bagush Satellite LG 116	AHQ WD.	AHQ WD.
No. 14 "Light Bomber" C.O.:— A/W/C J.K. Buchanan, D.F.C.	S.W. Maaten Bagush Satel- lite LG 116	AHQ WD.	AHQ WD.
No. 18 "Light Bomber"	Sidi Barrani L.G. 05.	AHQ WD.	AHQ WD.
No. 30 "Fighter" C.O.:— S/Ldr. F.A. Marlow	E. Sidi Bar- rani L.G. 121	AHQ WD.	AHQ WD.
No. 31 Detachment "Transport"	Bilbeis	AHQ Egypt	AHQ Egypt
No. 33 "Fighter" C.O.:— A/S/Ldr. D.L. Gould	Sidi Heneish	AHQ WD.	AHQ WD.
No. 37 "M - H. Bomber" C.O.:— W/C R. Nash	16 miles W El Dhaba LG 09	205 Group	205 Group
No. 38 "M - H. Bomber" C.O.:— W/C J.H. Chaplin, D.F.C.	Shallufa	205 Group	205 Group
No. 39 "Torpedo Bomber" C.O.:— W/C A.J. Mason	Burg el Arab	201 Group	201 Group

<u>Unit and Category</u>	<u>Location</u>	<u>Control</u>	
		<u>Admin.</u>	<u>Operational</u>
<u>R.A.F. Squadrons (Contd.)</u>			
No.39(Detachment) "Torpedo Bomber"	Sidi Bar-rani L.G.05		
No. 40 "Fighter"	Luqa	HQ Med.	HQ Med.
No. 45 "Light Bomber" C.O.:-- A/W/C C.B.B. Wallis	Helwan	AHQ Egypt	AHQ Egypt
No. 46 "Night Fighter" C.O.:-- F/O T.W. Rossiter	Fayum Rd.	206 Group	206 Group
No. 47 "Torpedo Bomber" C.O.:-- A/S/Ldr. E.B. Grace	Amriy LG87.	201 Group	201 Group
No. 52 "Light Bomber"	Habbaniya	AHQ Iraq	AHQ Iraq
No. 55 "Light Bomber" C.O.:-- A/W/C Foord-Kelsey	Fuka LG 17	201 Group	201 Group
No. 69 "Gen. Reconn.	Luqa	HQ Med.	HQ Med.
No. 70 "M ~ H. Bomber" C.O.:-- W/C J.H.T. Simpson	El Dhaba	205 Group	205 Group
No. 73 "Fighter" C.O.:-- S/Ldr. D.H. Ward	Sidi Heneish L.G.12.	AHQ WD.	AHQ WD.
No. 80 "Fighter" C.O.:-- A/S/Ldr. J.E. Urwin-Mann	40 miles S. Sidi Barrani. LG.109.	AHQ WD.	AHQ WD.
No. 89 "Night Fighter" C.O.:-- W/C G.H. Stainforth	Abu Sueir N.	AHQ Egypt	AHQ Egypt
No. 94 "Fighter" C.O.:-- A/S/Ldr. E.M. Mason, D.F.C.	Sidi Heneish L.G.101.	AHQ WD.	AHQ WD.
No. 104 "Light Bomber"	Kabrit	205 Group	205 Group
No. 107 "Light Bomber"	Luqa	HQ Med.	HQ Med.
No.108 "M ~ H. Bomber" C.O.:-- A/W/C R.J. Wells, D.F.C.	Fayid	205 Group	205 Group
No. 112 "Fighter" C.O.:-- A/F/L C.R. Caldwell	Sidi Heneish W. L.G.13.	AHQ WD.	AHQ WD.
No. 117 "Transport" C.O.:-- W/C W.E. Rankin	Bilbeis	AHQ Egypt	AHQ WD.

<u>Unit and Category</u>	<u>Location</u>	<u>Control</u>	
		<u>Admin.</u>	<u>Operational</u>
<u>R.A.F. Squadrons (Contd.)</u>			
No. 126 "Fighter"	Ta kali	HQ Med.	HQ Med.
No. 127 "Fighter"	Hurghada	206 Group	206 Group
No. 147 "Heavy Transport"	Kabrit	205 Group	205 Group
No. 148 "M - H. Bomber" C.O.:— A/W/C F. Rainsford	Kabrit	205 Group	205 Group
No. 185 "Fighter"	Hal Far	HQ Med.	HQ Med.
No. 203 "Gen. Recon". C.O.:— W/C A.F. Johnson	Burg el Arab	201 Group	201 Group
No. 203 (Det.) "Gen. Recon".	Sidi Barrani L.G. 05.	201 Group	201 Group
No. 208 "Army Co-op". C.O.:— A/S/Ldr. L.G. Burnand, D.F.C.	Sidi Azziz	AHQ WD.	AHQ WD.
No. 208 Det. "Army Co-op".	Acroma	AHQ WD.	AHQ WD.
No. 213 "Fighter" HQ and 1 Flt.Det. C.O.:— S/Ldr. G.V.W. Kettlewell	Edku	AHQ Egypt	AHQ Egypt
No. 213 "Fighter" Detachment.	Port Said	AHQ Egypt	AHQ Egypt
No. 213 "Fighter" Detachment.	Ismailia	AHQ Egypt	AHQ Egypt
No. 213 "Fighter" Detachment.	Khanka	AHQ Egypt	AHQ Egypt
No. 216 "Transport" C.O.:— W/C G.R. Howie	Khanka	AHQ Egypt	AHQ Egypt
No. 216 Det. "Transport"	Mersa Matruh	AHQ WD.	AHQ WD.
No. 220 "Heavy Bomber"	Shallufa	205 Group	205 Group
No. 223 "Light Bomber" C.O.:— A/S/Ldr. W.A. Wild	Shanlir	AHQ Egypt	AHQ Egypt
No. 223 (Det.) "Strat. Recco. Unit". C.O.:— A/S/Ldr. S. Ault	Maaten Bagush LG 14.	AHQ WD.	AHQ WD.
No. 229 "Fighter" C.O.:— A/S/Ldr. W.A. Smith	Sidi Heneish S. L.G. 102.	AHQ WD.	AHQ WD.
No. 230 "Transport" C.O.:— W/C M.C. Collins	Aboukir	201 Group	201 Group

<u>Unit and Category</u>	<u>Location</u>	<u>Control</u> <u>Admin.</u>	<u>Operational</u>
<u>R.A.F. Squadrons (Contd.)</u>			
No. 237 (Rhodesian) "Army Co-op". C.O.:— W/C E.T. Smith, D.F.C.	El Firdan	AHQ Egypt	AHQ Egypt
No. 238 "Fighter" C.O.:— A/S/Ldr. H.F. O'Neill, D.F.C.	Sidi Heneish S. L.G. 102.	AHQ WD.	AHQ WD.
No. 244 "Light Bomber" C.O.:— A/S/Ldr. R.O. Porteous	Shaibah	AHQ Iraq	AHQ Iraq
No. 244 Det. "Light Bomber"	Sharjah	AHQ Iraq	AHQ Iraq
No. 249 "Fighter" C.O.:—	Takali	HQ MED.	HQ MED.
No. 250 "Fighter" C.O.:— A/S/Ldr. E.J. Morris	Port Said	AHQ Egypt	AHQ Egypt
No. 252 "Coastal type" C.O.:— A/S/Ldr. A.G. Wincott	Edcu	201 Group	201 Group
No. 260 "Fighter" C.O.:— W/Cmdr. T.B. Beresford	Sidi Heneish L.G. 101.	AHQ WD.	AHQ WD.
No. 261 "Fighter" C.O.:— A/S/Ldr. D.R. Walker	St. Jean	AHQ Levant	AHQ Levant
No. 261 1 Flight "Fighter"	Nicosia	AHQ Levant	AHQ Levant
No. 267 "Transport" C.O.:— W/Cmdr. C.S. Wynne-Eyton, D.S.O.	Heliopolis	AHQ Egypt	HQ ME.
No. 272 "Coastal type" C.O.:— W/Cmdr. R.G. Yaxley, D.S.O., M.C., D.F.C.	Edcu.	201 Group	201 Group
No. 272 Det. "Coastal type"	Gelawla L.G. 10.	201 Group	201 Group
No. 274 "Fighter" C.O.:— A/S/Ldr. S. Linnard	Sidi Heneish N. L.G. 12.	AHQ WD.	AHQ WD.
No. 971 "Balloon" C.O.:— F/Lt. G.A. Usher	Alexandria	AHQ Egypt	AHQ Egypt
No. 972 "Balloon" C.O.:— A/S/Ldr. W.M. Frew	Haifa	AHQ Levant	AHQ Levant
No. 973 "Balloon" C.O.:— F/Lt. C.G. Whiteside	Kantara	AHQ Egypt	AHQ Egypt

SECRET

<u>Unit and Category</u>	<u>Location</u>	<u>Control.</u>	
		<u>Admin.</u>	<u>Operational</u>
<u>R.A.F. Squadrons (Contd.)</u>			
No. 974 "Balloon" C.O.:— A/S/Ldr. E. Garland	Shallufa Canal Stn.	AHQ Egypt	AHQ Egypt
No. 974 Det. "Balloon"	Steamer Point	AHQ Aden	AHQ Aden
No. 975 "Balloon" C.O.:— A/S/Ldr. P.C. Campbell	Port Said	AHQ Egypt	AHQ Egypt
No. 976 "Balloon" C.O.:— S/Ldr. J. Rigby	Kasfareet	AHQ Egypt	AHQ Egypt
No. 977 "Balloon"	Kantara	AHQ Egypt	AHQ Egypt
Signals Squadron	Shallufa	205 Group	HQ ME.
<u>F.A.A. and combined F.A.A./R.A.F. Squadrons</u>			
No. 805	Maaten Bagush	C.inC. Med. through appropriate Formation Headquarters.	
No. 815 (Det.) "Torpedo Bomber"	Dekheila		
No. 826               "       "	Maaten Bagush L.G.15.		
No. 828               "       "	Hal Far		
No. 829               "       "	Dekheila		
No. 830               "       "	Hal Far		
R.N. Fighter Sqdn. "Fighter"	Sidi Heneish L.G.12.		
R.N. Det. "Torpedo Bomber"	Hurghada		
R.N. Fulman Flight "Torpedo Bomber"	Fuka Satellite		
<u>R.A.A.F. and Combined R.A.A.F./R.A.F. Squadrons</u>			
No. 3 "Fighter"	Sidi Heneish W. L.G.13.	AHQ WD.	AHQ WD.
No. 450 "Fighter" C.O.:— A/S/Ldr. G.H. Steege	Sidi Heneish N. L.G.12.	AHQ WD.	AHQ WD.
No. 451 "Army Co-op". C.O.:— A/S/Ldr. R.D. Williams	Heliopolis	AHQ Egypt	AHQ Egypt
<u>S.A.A.F. Squadrons</u>			
No. 1 "Fighter" C.O.:— Major M.S. Osler	Sidi Heneish W. L.G.13.	AHQ WD.	AHQ WD.
No. 2 "Fighter" C.O.:— Major G. Krumneck	S.W. Maaten Bagush Sat. L.G.115.	AHQ WD.	AHQ WD.

<u>Unit and Category</u>	<u>Location</u>	<u>Control.</u>	
		<u>Admin.</u>	<u>Operational</u>
<u>S.A.A.F. Squadrons (Contd.)</u>			
No. 5 "Fighter" C.O.:— Major T.E. Frost	Kasfareet (M.E.P.)	AHQ Egypt	AHQ Egypt
No. 4 "Fighter" C.O.:— Major A.X. Kriel	S.W. Maaten Bagush Sat. L.G.115.	AHQ WD.	AHQ WD.
No. 12 "Light Bomber" C.O.:— Major J.I. Nash	Amriya LG99	AHQ Egypt	HQ ME.
No. 12 Det. "Light Bomber"	El Firdan	AHQ Egypt	HQ ME.
No. 21               "               " C.O.:— Lt.Col. J.D. Pretorius	Amriya LG 99	AHQ Egypt	HQ ME.
No. 24 "Light Bomber" C.O.:— Lt.Col. J.T. Durrant	Sidi Barrani L.G.76.	201 Group	201 Group
No. 40 "Army Co-op". C.O.:— Major E.A. Biden	Burg-el-Arab	206 Group	206 Group
No. 41 "A" Flight "Fighter"	Gilgil	207 Group	207 Group
No. 41 "C" Flight               "	Ainzo	207 Group	207 Group
No. 60 "Light Bomber" C.O.:— Major E.U. Brierley	Quotafiya Sat. LG.21.	HQ ME.	HQ ME.
<u>Other Allied Squadrons</u>			
No. 2 (Yugo-slav) "Reconn".	Aboukir	201 Group	201 Group
No. 13 (Hellenic) "Gen. Rec." C.O.:— S/Ldr. S. Dacopoulos	Mariut LG 86	201 Group	201 Group
No. 335 (Hellenic) "Fighter" C.O.:— S/Ldr. X. Varvaressos	El Dhaba W. LG.20.	AHQ WD.	AHQ WD.
Free French "Lorraine" "Light Bomber" C.O.:— Capt. De St. Pereuse	Rayak	AHQ Levant	AHQ Levant
Free French "Allsace" "Fighter" C.O.:— Sqn/Cmdt. Tulasne	Abu Sueir	AHQ Egypt	AHQ Egypt

## (Merchant Shipping at the Disposal of Italy)

APPENDIX VIII

FROM ENEMY SOURCES (P.1/4203)(over 500 G.R.T.)										FROM E.S.L.A.C. (including ships under 500 tons)									
A. ON AFRICAN CONVOY ROUTE					B. IN ENTIRE MEDITERRANEAN including 'A'					C. ON AFRICAN CONVOY ROUTE					D. IN ENTIRE MEDITERRANEAN including 'C'				
By Royal Navy & Allied Navies	By Air Attack R.A.F. & F.A.A.	Other causes including Mines etc.	Total		By Royal Navy & Allied Navies	By Air Attack R.A.F. & F.A.A.	Other causes including Mines etc.	Total		By Royal Navy & Allied Navies	By Air Attack R.A.F. & F.A.A.	Other causes including Mines etc.	Total		By Royal Navy & Allied Navies	By Air Attack R.A.F. & F.A.A.	Other causes including Mines etc.	Total	
1	2(i)	2(ii)	3	4	5	6(i)	6(ii)	7	8	9	10(i)	10(ii)	11	12	13	14(i)	14(ii)	15	16
<u>JANUARY 1942</u>																			
3,252	19,506	Not operating	Nil	22,758	21,721	19,506	Not operating	Nil	41,227	3,553	19,506	Not operating	Nil	23,059	22,022	19,506	Not operating	Nil	41,528
DAMAGED: TOTALS:										(12th-31st Jan. 1942) CAT.II = 15,252 TONS CT.III : 24,000 TONS									
BY AIR ACTION:										(12th Jan-28th Feb. 1942) CAT.II = 27,435 TONS CT.III = 25,000 TONS									
E.S.L.A.C. total includes 301 tons of shipping under 500 tons																			
<u>FEBRUARY 1942</u>																			
19,832	4,115	Not operating	1,483	25,430	26,712	4,115	Not operating	2,817	33,644	22,277	4,115		1,483	27,875	29,157	4,115		2,817	36,089
DAMAGED: TOTALS:										{ 1st-15th Feb. } CAT.II = 15,100 CAT.III = 6,000 TONS { 16th-28th Feb. } " = 9,500 " = Nil									
BY AIR ACTION:										See above									
E.S.L.A.C. total includes 1202 tons of shipping under 500 tons, and the 1243 ton "Lido" sunk by S/M off Cape Dukato (1.2.42 ?)																			
<u>MARCH 1942</u>																			
16,769	1,086	Not operating	Nil	17,855	21,981	1,086	Not operating	6,008	29,075	17,276	6,452		Nil	23,728	17,276	6,452		6,008	29,736
DAMAGED: TOTALS:										{ 1st-15th Mar. } CAT.II = 18,000 TONS CAT.III = 9,000 TONS { 16th-31st Mar. } " = 15,000 " " = 2,000 "									
BY AIR ACTION:										( 1st-31st Mar. ) " = 33,000 " " = 11,000 "									
E.S.L.A.C. total includes 507 tons of shipping under 500 tons, and the 5366 ton "Securitas" sunk by a/c at Palermo and not recorded in P1/4203																			
P1/4203 total includes the 5212 ton S.S. "Maddalena G" by S/M torpedo, and not recorded in E.S.L.A.C. (Corfu Roads)																			
<u>APRIL 1942</u>																			
15,989	Nil	Not operating	Nil	15,989	15,989	Nil	Not operating	Nil	15,989	15,989	Nil		Nil	15,989	16,597	Nil		240	16,837
DAMAGED: TOTALS:										{ 1st-15th April } CAT.II = 8,000 TONS CAT.III = 8,000 TONS { 16th-30th April } " = Nil " = 3,000 "									
										{ 1st-15th April } " = 8,000 " " = 8,000 " { 16th-30th April } " = Nil " = 3,000 "									
E.S.L.A.C. total includes 848 tons of shipping under 500 tons																			

OPERATIONAL SORTIES BY BOMBER AIRCRAFT - EGYPT/CYRENAICA (BASE)

SECRET

25th Feb. - 19th May, 1942

APPENDIX IX (Page 1)

DUTY	LULL IN THE DESERT							TOTALS
	25th Feb. to 10th Mar.	11th Mar. to 24th Mar.	25th Mar. to 7th Apr.	8th Apr. to 21st Apr.	22nd Apr. to 5th May	6th May to 19th May	20th May to 25th May	
PORTS AND BASES	125	85	135	100	128	163	27	763
AERODROMES AND LANDING GROUNDS	10	135	90	62	32	6	124	359
ENEMY CAMPS POSITIONS AND LINES OF COMMUNICATION	2	18	20	17	3	15	38	113
SHIPPING AND SUBMARINES	20	11	10	13	9	4	5	72
TOTALS	157	249	255	192	172	188	194	1307

OPERATIONAL SORTIES BY FIGHTER AIRCRAFT - EGYPT/CYRENAICA (BASE)

SECRET

25th Feb. - 19th May, 1942

APPENDIX IX (Page 2)

DUTY	LULL IN THE DESERT							
	25th Feb. to 10th Mar.	11th Mar. to 24th Mar.	25th Mar. to 7th Apr.	8th Apr. to 21st Apr.	22nd Apr. to 5th May	6th May to 19th May	20th May to 25th May	TOTALS
OFFENSIVE SWEEPS - LAND	50	499	247	261	251	286	122	1,716
GROUND ATTACK	19	22	71	30	58	38	62	300
BOMBER ESCORT	-	163	174	38	-	65	117	557
RECONNAISSANCE ESCORT	-	12	11	1	8	66	71	169
LOCAL DEFENCE	838	719	1,114	1,038	769	658	335	5,471
SHIPPING PROTECTION	237	296	226	448	524	669	383	2,783
TOTALS	1,144	1,711	1,843	1,816	1,610	1,782	1,090	10,996

OPERATIONAL SORTIES BY BOMBER AIRCRAFT - MALTA (BASE)

SECRET

25th Feb. - 19th May, 1942

APPENDIX IX (Page 3)

DUTY	LULL IN THE DESERT							
	25th Feb. to 10th Mar.	11th Mar. to 24th Mar.	25th Mar. to 7th Apr.	8th Apr. to 21st Apr.	22nd Apr. to 5th May	6th May to 19th May	20th May to 25th May	TOTALS
PORTS AND BASES	57	1	-	-	1	-	-	59
AERODROMES AND LANDING GROUNDS	-	-	2	-	18	-	-	20
ENEMY CAMPS POSITIONS AND LINES OF COMMUNICATION	-	2	-	-	-	-	-	2
SHIPPING AND SUBMARINES	5	9	1	3	10	-	9	37
TOTALS	62	12	3	3	29	-	9	118

Reference:-  
S. 53417/Org.

APPENDIX X

MIDDLE EAST COMMAND  
RE-ARMING PROGRAMME  
GROUPS - WINGS - SQUADRONS

(As advised by Air Ministry Signal OX 5592 dated  
28 March as amended by OX 6131 dated 8 April).

PART I.

(a) COMMANDS

A.H.Q. W.D.  
" Egypt  
" Levant  
" Iraq  
" Malta  
H.Q. B.F. in Aden

(b) GROUPS

201 Naval Co-operation, Alexandria  
203 Maintenance, Sudan  
205 M. & H.B., Egypt  
206 Maintenance, Egypt  
207 East Africa  
211 Fighter, W.D.  
212 Egypt (nucleus)  
213 Levant  
214 Iraq North  
215 Iraq South  
216 Ferry, Egypt

(c) WINGS

<u>Categories</u>	<u>Type</u>	<u>Policy</u>
Defensive	Fighter	7
Offensive	Fighter	8
Bomber	Light	4
Bomber	Medium	4
Bomber	Heavy	1
Naval Co-operation	G.R. T.B. and Ship attack	3
Transport	-	3
		<u>30</u>

/PART II

PART II - SQUADRONS

<u>Categories</u>	<u>Type of aircraft</u>	<u>Estab.</u>	<u>Total No. of Sqdns.</u>
Fighter Squadrons	Hurricanes, Kittyhawks, Tomahawks, Spitfires.	16 I.E.	35
Twin-Engined (L.R.) Fighters	Beaufighters: Coastal type Night Fighter type	16 I.E. 5 16 I.E. 2	7
Light Bombers	Blenheims, Bostons, Baltimores, Vincents	24 I.E. (equivalent to 19 Sqns. at 16 I.E.)	13
Medium Bombers	Wellingtons (includes 2 T.B.) ( " 2 A.S.V./T.B.)	20 I.E.	9
Heavy Bombers	Liberators	16 I.E.	3
Torpedo Bombers	Beauforts	16 I.E.	4
G.R./L.P.	Marylands, Blenheims, (Hudson III's)	16 I.E.	4
Army Co-operation	Hurricanes	18 I.E. (equivalent to 6 Sqns. at 12 I.E.)	4
Flying Boat	Sunderlands	6 I.E.	1 80
P.S.U. P.R.U.	Marylands, Blenheims Hurricanes, Mosquitos, Beaufighters, Spitfires	14 I.E. 2 flts. 14 I.E. 3 "	1 1
Signals Squadron	Wellington, Blenheims	15 I.E.	1
Transport Squadrons	Bombay, Lockheed, D.C.2., Hudsons	24 I.E.	6
Communication Squadron	Various types	24 I.E.	1 10
			90

MISCELLANEOUS UNITS

34 (SA) Flight	Ansons (G.R. duties)	5 I.E.
35 (SA) Flight	" " "	5 I.E.
G.R.U.	Wellingtons	6 I.E.
2 Yugo-Slav.	-	-

MOON SQUADRONS

7½

MALTA: See page 12.

/A

A detailed list is attached. Programme issued on 24.3.42 is hereby cancelled and must be destroyed by fire.

(Sgd.) A. A. D. SEVASTOPULO

Wing Commander,  
ORG. II.

6.5.42.

DISTRIBUTION:-

AIR MINISTRY (3):-

A.O.C.-in-C.  
D/A.O.C.-in-C.  
A.O.A.  
S.A.S.O.  
A/S.A.S.O.  
S.O.O.  
C.M.S.O.  
S.E.S.O.  
S.A.O.A., SAAF.  
C.S.O.  
C.R.O.  
S.P.S.O.  
B.P.S.O.  
AIR STAFF PLANS  
S.A.P.S.O.  
S.O.A.O.  
S.T.S.O.  
ARMAMENT  
C.D.O.  
S.I.O.  
ESTABLISHMENTS  
OPS. RECORDS  
SPARES (5)

1. D.O.O.
2. D.W.O.
3. D. of PLANS

PART I - (b) GROUPS

<u>Consec. No.</u>	<u>Group No.</u>	<u>Type</u>	<u>Command</u>	<u>Remarks</u>
1.	201	Naval Co- operation	HQ. RAF. ME.	-
2.	203	Maintenance	" " "	-
3.	205	M. & H.B.	" " "	-
4.	206	Maintenance	" " "	-
5.	207	-	" " "	-
6.	211	Fighter	A.H.Q. W.D.	Controlling fighter operations.
7.	212	-	A.H.Q. Egypt	Nucleus. Awaiting personnel from U.K.
8.	213	-	A.H.Q. Levant	In command of Northern Syria.
9.	214	-	A.H.Q. Iraq	Nucleus to eventually command Northern Iraq. Awaiting personnel from U.K.
10.	215	-	A.H.Q. Iraq	To command Basrah area. Awaiting personnel from U.K.
11.	216	Ferry Gp.	HQ RAF. ME.	Forming. Awaiting personnel from U.K.

PART I - (c) WINGS

<u>Consec. No.</u>	<u>Wing No.</u>	<u>Location</u>	<u>Command/ Group</u>	<u>Remarks</u>
<u>DEFENSIVE FIGHTERS:</u>				
1.	234	M'Bagush	A.H.Q. Egypt	Formed from our own resources. Personnel expected from U.K. W.S.18.
2.	246	Mombasa	A.G.Q. E.A.	Awaiting Air Ministry authority to form.
3.	250	Ismailia	A.H.Q. Egypt	-
4.	251	Basrah	A.H.Q. Iraq	Personnel arrived W.S.16.
5.	252	Mex	A.H.Q. Egypt	-
6.	259	Cyprus	A.H.Q. Levant	-
7.	263	Beyrouth	A.H.Q. Levant	-

/OFFENSIVE FIGHTERS:

PART I - (c) WINGS (contd.)

<u>Conseq.</u> <u>No.</u>	<u>Wing No.</u>	<u>Location</u>	<u>Command/</u> <u>Group</u>	<u>Remarks</u>
<u>OFFENSIVE FIGHTERS:</u>				
1.	233	-	A.H.Q. W.D.	-
2.	237	-	A.H.Q. Iraq	-
3.	239	-	A.H.Q. W.D.	-
4.	241	-	A.H.Q. Levant	-
5.	243	-	A.H.Q. W.D.	-
6.	244	-	-	Reduced to Cadre. Personnel posted to reinforce Adv. and Rear A.H.Q., Levant and Ferry Group.
7.	No. 7 (SA)	-	A.H.Q. W.D.	Forming at L.G. 99.
8.	(X) (SA)	-	-	Expected to arrive from Union in 4-5 months time.

LIGHT BOMBER:

1.	232	-	A.H.Q. Levant	Temporarily at El Firdan, expected to move to Rayak on or about 5 May.
2.	240	-	A.H.Q. Egypt	Forming. Personnel arrived W.S. 16.
3.	No. 3 (SA)	-	A.H.Q. W.D.	-
4.	(X) (SA)	-	-	Forming in the Union expected to arrive 4-5 months time.

MEDIUM BOMBER:

1.	231	-	205 Group	Formed by disbandment Shallufa Station. Temporarily under the operational control of A.H.Q. W.D.
2.	236	-	205 "	Formed by disbandment of Kabrit Station.
3.	238	-	205 "	Temporarily formed from our own resources. Personnel awaited from U.K.
4.	245	-	205 "	Nucleus only. Personnel awaited from U.K.

HEAVY BOMBER:

1.	242	-	205 "	Formed by disbandment of Fayid Station H.Q.
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/NAVAL CO-OPERATION;

PART I (c) WINGS (contd.)

<u>Consec. No.</u>	<u>Wing No.</u>	<u>Location</u>	<u>Command/ Group</u>	<u>Remarks</u>
<u>NAVAL CO-OPERATION:</u>				
1.	235	-	201 Group	-
2.	247	-	201 "	Personnel arrived W.S.16.
3.	248	-	201 "	Expected to arrive W.S.17 early May.

TRANSPORT HEAVY:

1.	249	-	A.H.Q. Egypt	Personnel arrived W.S.16.
2.	281	-	-	(Will form on arrival of personnel expected from U.K. See Air Ministry Signal OX 5253 dated 20 April.

/PART II

PART I - SQUADRONSFIGHTERS

(Policy - 35 Squadrons at 16 I.E.)

<u>Consec. No.</u>	<u>Squadron No.</u>	<u>Type of a/c.</u>	<u>Command/ Group</u>	<u>Remarks</u>
1.	335 (RHAF)	Hurricane I	A.H.Q. W.D.	To re-arm Hurricane II June.
2.	Alsace (FF)	"	A.H.Q. W.D.	To re-arm Hurricane II June.
3.	127 (RAF)	"	A.H.Q. Levant	To re-arm Hurricane II May/June
4.	274 "	Hurricane II A B.	A.H.Q. W.D.	-
5.	33 "	" " "	A.H.Q. W.D.	-
6.	238 "	Hurricane IIB.	A.H.Q. W.D.	-
7.	1 (SAAF)	Hurricane II A B.	A.H.Q. Egypt	-
8.	80 (RAF)	Hurricane IIC.	" W.D.	Fitted with V.H.F.
9.	73 "	" "	" "	" " "
10.	213 "	" "	" Egypt	" " "
11.	2 (SAAF)	Tomahawks	" W.D.	To re-arm Kittyhawks April/May.
12.	4 "	"	" "	-
13.	5 "	"	" "	-
14.	3 (RAAF)	Kittyhawks	" "	-
15.	450 "	"	" "	-
16.	94 (RAF)	"	" "	-
17.	112 "	"	" "	-
18.	250 "	"	" "	-
19.	260 "	"	" "	-
20.	126 "	Spitfires	Malta.	-
21.	249 "	"	"	-
22.	185 "	Hurricane II	"	-
23.	229 "	" IIC.	"	-
24.	92 "	Spitfires	A.H.Q. Egypt	Re-arming
25.	145 "	"	" "	"
26.	7 (SAAF)	Hurricane Bombers	" "	"

SQUADRONS EXPECTED FROM S.A.

27.	3 (SAAF)	-	207 Group	At present in Union shortly proceeding East Africa.
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NON-EFFECTIVE

28.	41 (SAAF)	Hartbeste	207 Group	At present Garrison Squadron, East Africa.
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PART II - SQUADRONS (contd.)

<u>Consec.</u> <u>No.</u>	<u>Squadron</u> <u>No.</u>	<u>Type of a/c.</u>	<u>Command/</u> <u>Group</u>	<u>Remarks</u>
<u>SQUADRONS EXPECTED FROM U.K.</u>				
29.	74 (RAF)	Spitfires		(E.T.A. W.S. 18 early
30.	123 "	"		(June (Air Ministry
31.	134 "	"		(Signal OX 638 dated
32.	601 "	"		(28 March).
33.	603 "	"		
34.	417 (RCAF)	"		

SPARE NUMBERS

35.	251 (RAF)	-	-
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TWIN-ENGINE FIGHTERS

(Policy - 7 Squadrons, 5 Coastal type } 16 I.E.  
2 Night Fighter type)

COASTAL TYPE

1.	272 (RAF)	Beaufighters	201 Group	-
2.	252 "	"	" "	-
3.	227 "	"	" "	Re-arming 7 May.
4.	-	-	-	(No information as yet
5.	-	-	-	(received relative to
				(arrival and numbers of
				(these two Squadrons.

NIGHT FIGHTER

6.	89 (RAF)	Beaufighter	A.H.Q. Egypt.	
7.	46 "	"	" "	Re-arming early May.

LIGHT BOMBERS

(Policy - 13 Squadrons at 24 I.E. - equivalent  
to 19 Squadrons at 16 I.E.)

Squadrons at 24 I.E.

1.	223 (RAF)	Baltimores	A.H.Q. W.D.	-
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Squadrons at 16 I.E.

2.	24 (SAAF)	Bostons	A.H.Q. W.D.	-
3.	12 "	"	" "	-
4.	8 (RAF)	Blenheims	A.H.Q. Aden	-
5.	244 (RAF)	Vincents	A.H.Q. Iraq	1 Flight to re-arm
				Blenheims.

PART I - SQUADRONS (contd.)

<u>Consec. No.</u>	<u>Squadron No.</u>	<u>Type of a/c.</u>	<u>Command/ Group</u>	<u>Remarks</u>
<u>RE-ARMING IN DELTA.</u>				
6.	55 (RAF)	Baltimores	A.H.Q. Egypt	To re-arm mid-May.
7.	21 (SAAF)	"	" "	Re-arming Baltimores early June.
8.	15 "	Blenheim Fighter	" "	Under training. Re-arming Baltimores mid-June.
9.	14 (RAF)	Blenheims	" "	Will re-arm with Baltimores towards end of June.
10.	Lorraine (F.F.)	Blenheims	A.H.Q. Levant	Awaiting aircraft.

NON-EFFECTIVE

11.	16 (SAAF)	Forming in the Union.	E.T.A. M.E. June.
12.	17 "	" " " "	" " July.
13.	52 (RAF)	Personnel expected from U.K. (Original personnel withdrawn to form 89 Squadron).	

MEDIUM BOMBERS

(Policy - 9 Squadrons at 20 I.E. of which  
4 Squadrons T.B.)

1.	37 (RAF)	Wellingtons	205 Group	-
2.	38 "	"	" "	T.B.
3.	40 "	"	" "	T.B.
4.	70 "	"	" "	-
5.	104 "	"	" "	-
6.	108 "	"	" "	(1 Flt. Liberators 4 I.E.)
7.	148 "	"	" "	
8.	458 "	"	" "	A.S.V./T.B. Arriving W.S.17 mid-May.
9.	221 "	"	201 "	A.S.V./T.B.

HEAVY BOMBERS

(Policy - 3 Squadrons at 16 I.E.)

1.	-	Liberators	205 Group	(E.T.A. end
2.	-	"	" "	December, 1942.
3.	-	"	" "	

N.B. 159, 160 Squadrons (Liberators) and 220 Squadron (Fortresses) diverted to India.

/TORPEDO BOMBERS

PART I - SQUADRONS (contd.)

<u>Consec. No.</u>	<u>Squadron No.</u>	<u>Type of a/c.</u>	<u>Command/ Group</u>	<u>Remarks</u>
<u>TORPEDO BOMBERS</u> (Policy - 4 Squadrons at 16 I.E.)				
1.	39 (RAF)	Beauforts	201 Group	-
2.	47 "	"	" "	To re-arm Beauforts as soon as possible. Temp. employed at M.U.
3.	-	-	-	(22 Squadron was diverted to India mid April.
4.	-	-	-	

<u>GENERAL RECONNAISSANCE</u> (Policy - 4 Squadrons at 16 I.E.)				
1.	203 (RAF)	Blenheims	201 Group	Re-arming with Hudsons
2.	459 (RAAF)	Hudson III's	" "	-
3.	69 (RAF)	Marylands ( $\frac{1}{2}$ Squadron)	Malta	Re-arming with Baltimores. To be brought up to full Sqdn. estab.
4.	13 (RHAF)	Blenheims - Ansons	201 Group	Temporarily H.Q. and 1 Flight Only.

<u>ARMY CO-OPERATION</u> (Policy - 4 Squadrons at 18 I.E.)				
1.	40 (SAAF)	Tomahawks and Hurricanes	A.H.Q. W.D.	-
2.	451 (RAAF)	Hurricanes	A.H.Q. Levant	-
3.	237 (Rhod.)	"	" Iraq.	-
4.	208 (RAF)	Tomahawks and Hurricanes	A.H.Q. W.D.	Re-arming Delta E.T.D. W.D. 7 May.

<u>CLOSE SUPPORT</u>				
5.	6 (RAF)	Hurricanes 2 D's.	A.H.Q. Egypt	Re-arming and training at Shandur

<u>FLYING BOATS</u> (Policy - 1 Squadron at 4 I.E. plus 1 I.R.)				
1.	230 (RAF)	Sunderlands	201 Group	

<u>P.S.U.</u>				
1.	60 (SAAF)	PSU. Marylands	A.H.Q. W.D.	5 I.E. plus 2 I.R.
2.	1434 Flight	" Blenheims	A.H.Q. Levant	5 I.E. plus 2 I.R.

<u>P.R.U.</u> (Policy - 3 Flights of 4 I.E. Plus 2 I.R.)				
1.	2 P.R.U.	Spitfires	H.Q. M.E.	One flight operating W.D. Also holding temporary Hurricane

PART II - SQUADRONS (contd.)

<u>Consec.</u> <u>No.</u>	<u>Squadron</u> <u>No.</u>	<u>Type of a/c.</u>	<u>Command/</u> <u>Group</u>	<u>Remarks</u>
<u>SIGNALS SQUADRONS</u>				
(Policy - 1 Flight R.C.M. at 9 I.E. - (6 Wellingtons, 2 Electras. 1 Proctor. 2nd Flight R.D.F. at 6 I.E. Blenheims)				
1.	162 (RAF)	Wellingtons Blenheims	H.Q. M.E.	Forming. Personnel arriving W.S.18 E.T.A. mid June.

<u>TRANSPORT SQUADRONS</u>				
(Policy - 6 Squadrons at 24 I.E.)				
1.	216 (RAF)	Bombays	216 Group	-
2.	117 "	D.C.II's	" "	-
3.	267 "	267 Lodestars	" "	Temp. acting as Comm. Sqn. Helio.
4.	147 "	Hudsons	" "	Temp. Servicing L.G. 224.
5.	163 "	Hudsons	" "	(E.T.A. W.S.18 mid
6.	454 "	"	" "	June. Air Ministry signal OX 5353 27/3.

<u>COMMUNICATION SQUADRON</u>				
(Policy - 1 Squadron at 24 I.E.)				
1.	173 (RAF) (3 flights)		Heliopolis	Forming. Personnel awaited from U.K.
1.	34 (SA) Flt. Ansons		207 Group	5 I.E. per flt.
	35 " " "		" "	G.R. duties.
2.	1 G.R.U.	6 Wellingtons	A.H.Q. Egypt	6 I.E.
3.	1425 Flt.	Liberators	U.K.	U.K. to M.E. Service.

<u>BALLOON SQUADRONS</u>				
1.	971		Alexandria	
2.	972		Haifa	
3.	973		Beirut	
4.	974		Shallufa	
5.	975		Port Said	
6.	976		Kasfareet	
7.	977		Kantara	
8.	1436 Flt.		Aden - Port Tewfik	
9.	981		-	E.T.A. W.S.18 mid June.

/METEOROLOGICAL FLIGHTS

PART II - SQUADRONS (contd.)

<u>Consec.</u> <u>No.</u>	<u>Squadron</u> <u>No.</u>	<u>Type of a/c.</u>	<u>Command/</u> <u>Group</u>	<u>Remarks</u>
<u>METEOROLOGICAL FLIGHTS</u>				
1.	1411 Flt.	Gladiators	H.Q. M.E. (Heliopolis)	Not included in programme.
2.	1412 "	"	203 Group (Khartoum)	" "
3.	1413 "	"	A.H.Q. Levant (Ramleh)	" "
4.	1414 "	"	207 Group (Nairobi)	" "

PART III

UNITS NOT INCLUDED IN M.E. COMMAND PROGRAMME

F.A.A. SQUADRONS  
Operating with R.A.F.

1.	700	Walrus	201 Group.
2.	775	-	" "
3.	805	Martlett	" "
4.	815	Swordfish	" "
5.	826	"	" "
6.	821	Albacores	" "
7.	889	Fulmars	" "

MALTA

221 Detachment Wellingtons A.S.V.		1 Flt. A.S.V. 4 aircraft.
828	Swordfish	F.A.A.
830	Albacores	"
1435 Flt.	Hurricanes	Night Fighter Flt.

MOST SECRET

WEEKLY STATE - MIDDLE EAST  
AS AT 22.5.42

Distribution: C.A.S. (5), S. of S., V.C.A.S., A.M.S.O., A.C.A.S. (O), A.C.A.S. (G), D. of Plans, D.W.O., D.G.E., D.D.E.1, D.O. Ops. (2), D.S.M., D.D.O.P., State Room, D.D.O. II, Plans 2, O.7, C.S.U., Librarian, S.6(2), War Room (2), W.O.3, W.O.5., File.

EGYPT (Including Levant Area, Sudan and Aden)

Type of Aircraft	Total No. of Sqns. formed & forming	I.E. per Sqn.	Total I.E.	Aircraft in Command (x)				Arrivals during week	Remarks
				Cat. A	Cat. B	Cat. C	Cat. D		
(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(j)	(k)
<u>FIGHTERS</u>									
Spitfire	8	16	128	16	2	11	-	3	(x) For explanation of Cats. A, B, C & D, see issue of this State dated 24.4.42
Hurricane	13	16	208	273	83	64	123	18	
Tomahawk	3	16	48	59	29	-	37	-	
Kittyhawk	6	16	96	137	34	87	98	-	
Gladiator	-	-	-	26	10	-	11	-	
Beaufighter(F)	2	16	32	18	5	-	11	-	
Beaufighter(C)	4	16	64	16	11	-	24	-	
<u>HEAVY BOMBERS</u>									
Liberator	-	-	-	3	-	-	-	-	
<u>LIGHT BOMBERS</u>									
Blenheim IV	3	24	72	90	52	16	85	6	
Boston )	4	24	96	51	15	4	17	2	
Maryland )				17	12	-	11	-	
Baltimore	1	24	24	24	21	128	8	5	
Beaufort (TB)	2	12	24	4	9	8	5	3	
<u>MEDIUM BOMBERS</u>									
Wellington	9	20	180	108	44	16	67	13	
<u>ARMY CO-OP.</u>									
Hurricane (AC)	3	18	54	(Incl. in Fighters)				-	
Lysander	-	-	-	15	14	-	8	-	
G.R.(F.B.)									
Sunderland	1	4	4	6	1	-	-	-	
G.R.(L.P.)									
Hudson	2	16	32	6	12	1	6	1	
<b>TOTAL(Operational)</b>	<b>61</b>	<b>-</b>	<b>1062</b>	<b>869</b>	<b>354</b>	<b>335</b>	<b>511</b>	<b>51</b>	
<u>TRANSPORT</u>									
Valentia		-		4	2	-	2		
Bombay		-		16	4	-	1		
Lodestar		-		12	2	-	2		
Douglas D.C.2		-		-	1	-	1		
D.H.86		-		1	-	-	1		
<b>TOTAL(TRANSPORT)</b>		<b>-</b>		<b>33</b>	<b>9</b>	<b>-</b>	<b>7</b>		
<b>GRAND TOTAL (EGYPT)</b>	<b>61</b>	<b>-</b>	<b>1062</b>	<b>902</b>	<b>363</b>	<b>335</b>	<b>518</b>	<b>51</b>	
<u>MALTA</u>									
<u>FIGHTERS</u>									
Spitfire	2	16	32	43	18	-	16	17	
Hurricane	1	16	16	12	9	-	34	-	
Beaufighter	-	-	-	3	2	-	-	-	
G.R. (L.P.)									
Baltimore	1	16	16	-	-	-	-	-	
<u>LIGHT BOMBERS</u>									
Blenheim IV	-	-	-	-	-	-	-	-	
<u>MEDIUM BOMBERS</u>									
Wellington	-	-	-	2	-	-	-	-	
<b>TOTAL</b>	<b>4</b>	<b>-</b>	<b>64</b>	<b>60</b>	<b>29</b>	<b>-</b>	<b>50</b>	<b>17</b>	

MOST SECRETADEN

Type of Aircraft	Total No. of Sqns. formed & forming	I.E. per Sqn.	Total I.E.	Aircraft in Command				Arrivals during week	Remarks
				Cat.A	Cat.B	Cat.C	Cat.D		
(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(j)	(k)
<u>LIGHT BOMBERS</u> Blenheim IV	1	24	24	All details will be included under Egypt section in future.					
TOTAL (ADEN)	1	-	24						

IRAQ

<u>FIGHTERS</u> Gladiator	-	-	-	2	3	-	4	-	(a) Incl. 1 Blenheim I  (b) No return received
<u>LIGHT BOMBERS</u> Blenheim IV	2	24	48	(a) 7	1	-	7	-	
Vincent	-	-	-	5	2	-	2	-	
Audax	-	-	-	(b) -	(b) -	(b) -	-	-	
<u>MEDIUM BOMBERS</u> Wellington	-	-	-	-	-	-	3	-	
<u>ARMY CO-OP.</u> Hurricane	1	12	12	8	4	-	5	-	
TOTAL (IRAQ)	3	-	60	22	10	-	21	-	
<u>TRANSPORT</u> Wellesley	-	-	-	-	1	-	2	-	(b) No return received
Valentia	-	-	-	(b) -	-	(b) -	-	-	
Bombay	-	-	-	-	-	-	-	-	
Lodestar	-	-	-	(b) -	-	-	-	-	
TOTAL (TRANSPORT)	-	-	-	-	1	-	2	-	
GRAND TOTAL (IRAQ)	3	-	60	22	11	-	23	-	

EAST AFRICA

<u>FIGHTERS</u> Hurricane	2	16	32	No serviceability state is received from East Africa					
Kittyhawk	1	16	16						
<u>LIGHT BOMBER</u> Blenheim IV	-	-	-						
Baltimore	1	24	24						
TOTAL (EAST AFRICA)	4	-	72						

Note: Squadrons are shown under the type to which they will eventually re-arm. Some squadrons are non-operational whilst re-arming.

(Sgd.) R.P. MUSGRAVE WHITHAM

D.W.O.

W.O.7  
29.5.42

MIDDLE EAST STATE - LIST OF SQUADRONS

	EGYPT	MALTA	ADEN	IRAQ	SOUTH AND EAST AFRICA	LEVANT AREA	SUDAN	TOTALS	REMARKS
<u>FIGHTERS</u>									
Spitfire	92, 145, 74, 123, 134, 417(Can.), 601, 603	126, 249	-	-	-	-	-	10	
Kittyhawk	3 (RAAF), 94, 112, 260 450(RAAF), 250	-	-	-	3(SA)	-	-	7	
Hurricane	1(SA), 73, 80, 213, 238, 274, 335(Gk.), 6, 229, 33, 16(SA), Alsace.	185	-	-	7(SA) 41(SA)	127	-	16	
Tomahawk	2(SA), 4(SA), 5(SA)	-	-	-	-	-	-	3	
Beaufighters(F)	89, 46	-	-	-	-	-	-	6	
" (Coastal)	227, 252, 272, 251	-	-	-	-	-	-		
<u>LIGHT BOMBERS</u>									
Blenheim IV	14, 15 (SA)	-	8	52, 244	-	Lorr- aine	-	6	
Baltimore	223	-	-	-	17(SA)	-	-	2	
Beaufort (TB)	39, 47	-	-	-	-	-	-	2	
Boston III	12(SA), 24(SA), 55	-	-	-	-	-	-	4	
Maryland }	21(SA)								
<u>MEDIUM BOMBERS</u>									
Wellington	37, 38, 40, 70, 104, 108 148, 458(RAAF), 221	-	-	-	-	-	-	9	
<u>ARMY CO-OPERATION</u>									
Hurricane	40(SA), 208	-	-	237(RHD)	-	451(RAAF)	-	4	
G.R. (F.B.)									
Sunderland	230	-	-	-	-	-	-	1	
G.R. (L.P.)									
Baltimore	-	69	-	-	-	-	-	1	
Hudson	459(RAAF), 203	-	-	-	-	-	-	2	
<b>TOTAL</b>	<b>58</b>	<b>4</b>	<b>1</b>	<b>3</b>	<b>4</b>	<b>3</b>	<b>-</b>	<b>73</b>	

W.O. 7.  
22.3.42

G.219858/JW/1/49

## AIRCRAFT REINFORCEMENTS - MIDDLE EAST COMMAND

1942	MIDDLE EAST					MALTA	GIB.	GRAND TOTAL	
	EX. UNITED KINGDOM				EX. UNITED STATES	TOTAL	EX. U.K. BY SEA		EX. U.K. BY SEA
	BY SEA			BY AIR VIA MED.					
	VIA WEST AFRICA	VIA ADEN SUDAN, SUEZ.	VIA MISC. PORTS						
FEB.	134	8	-	105	81	328	-	21	349
MAR.	127	42	-	122	154	445	-	24	469
APR.	133	18	-	122	61	334	79	1	414
MAY	63	42	-	96	98	299	47	41	387

DETAILS OF AIRCRAFT ERECTION AND DELIVERY OF AIRCRAFT (FEB. 1942 - MAY 1942)

WEST AFRICAN REINFORCEMENT ROUTE - TAKORADI AND LAGOS

AIRCRAFT ARRIVALS AND DESPATCHES TO MIDDLE EAST

Month	Arrived at Port	Hurricane	Blenheim	Maryland	<u>Delivered to Middle East</u>			Beaufighter	Boston	Beaufort	Miscellaneous	Total
					Tomahawk	Kittyhawk	Spitfire					
Feb.	144	117	23	1							2	143
March	72	76	30	1		50+			4			161
April	131	115	9				6	2	7		1	140
May	96	58	7				6	3	3			77

All Bostons were erected at Lagos - too large for harbour facilities at Takoradi - M.E. file S.53379 refers.

General reference. Operations Record Book, R.A.F. Station, Takoradi.

PORT SUDAN ASSEMBLY UNIT.

AIRCRAFT OUTPUT DURING PERIOD.

Period Ending.	Aircraft Arrivals During Period.	Stock at End of Period.	Boston	Tomahawk	Kittyhawk	Baltimore	Anson	Spitfire	Hurricane	Other Types	Total
27 Feb, 1942	83	62		4	123						127
27 Mar, 1942	125	129			58						58
24 Apr. 1942	80	124		1	74	10					85
29 May, 1942	100	162	1		27	25	6	3			62
TOTAL FOR PERIOD	388	477	1	5	282	35	6	3			332

## SPITFIRE REINFORCEMENT OF MALTA BY AIRCRAFT CARRIER.

FEBRUARY 1942 - MAY 1942.

NAME OF OPERATION	NO. OF AIRCRAFT LOADED U.K.	DATE LOADING U.K.	DATE FLOWN OFF	TYPE AIRCRAFT	NAME OF CARRIER	TYPE OF OPERATION	ESCORTING AIRCRAFT	NO. OF AIRCRAFT			REMARKS
								EMBARKED CARRIER	FLOWN OFF	ARRIVED	
Quarter Spotter	31	9.2.42	7.3.42	Spitfire VB	Eagle	Carrier	Blenheim	15 or 16	15	15 Malta	+ 15 aircraft not embarked at Gibraltar left for future disposal. See Bowery L.B. 18.5.42.
Scantling)		28.2.42	21.3.42	Spitfire VB	Argus	Carrier	Blenheim	16 +	9	9 Malta	
Picket (1))			29.3.42	"	or Eagle			-	7	7 "	
Picket (2))	32	24.3.42	-	-	-	"	-	-	-	-	Operation cancelled.
Gilman		arranged	20.4.42	Spitfire VC	Wasp	"	No air escort	47	47	46 +	
Calendar Newman		10.4.42									
Oppidan)	9.5.42	Spitfire VB									Wasp
Bowery )											
Hansford)			17	Eagle	17	17	60 + Malta				
Bowery )											
Hansford	16	18.5.42						Spitfire	Eagle	2	Sunderland
Bowery L.B.											
TOTAL ARRIVED MALTA											

(a) ESTIMATED AXIS AIR STRENGTH IN  
NORTH AFRICA/MEDITERRANEAN  
THEATRE AS AT 26TH MAY, 1942

SECRET

(Appendix 'B' to H.Q.R.A.F.M.E. Weekly Intelligence  
Summary No.101)

GERMAN AIR FORCE

Summary of Estimated Totals of Aircraft by Types  
26th May, 1942

Mediterranean Area

PLACE	AIRCRAFT	TYPE	TOTAL
LIBYA	Bombers	JU.88	10
	Bomber Recce.	JU.88/Me.110/He.111	15
	Dive Bombers	JU.87	70
	S.E. Fighters	Me.109	120
	T.E. Fighters	Me.110	25
	Army Co-op. and Photo. Recce.	Me.110/Me.109	20
		TOTAL:	260
SICILY	Bombers	JU.88	60
	Bomber Recce.	JU.88/He.111	30
	S.E. Fighters	Me.109	65
		TOTAL:	155
GREECE	Bomber and Bomber-Recce.	Ju.88, He.11.	105
	Coastal	ARADO, He.59,	
		He.60, T.8.W.	35
CRETE	Bombers and Bomber-Recce.	JU.88	40
	S.E. Fighters	Me.109	5
	T.E. Fighters	Me.110	5
	Night Fighters	JU.88	30
		TOTAL:	220
		GRAND TOTAL:	635

Estimated Serviceability is about 50% I.E.

/ITALIAN AIR FORCE

ITALIAN AIR FORCE

(Appendix 'C' to H.Q.R.A.F.M.E. Weekly Intelligence  
Summary No.101)

Summary of Estimated Totals of Aircraft by Types  
26th May, 1942

Mediterranean Area

PLACE	AIRCRAFT	TYPE	TOTAL
LIBYA West Sector	Torpedo Bombers	S.79	6
	Fighters	G.50	45)
		CR.42	27) 72
	Recce. and Army Co-op.	S.79	6)
		S.81	6) 24
		CA.311	12)
	Seaplanes	Cant. Z.501, )	
		Cant. Z.506 )	10
	Transport	S.74, S.75, S.81, S.82.	20
		TOTAL: West Sector	132
LIBYA East Sector	Bombers	CZ.1007	24
	Torpedo Bombers	S.79	24
	Fighters	CR.42	72)
		Mc.200	72) 216
		Mc.202	72)
	Recce. and Army Co-op.	Cant. Z.1007	6)
		CA.311	12) 18
	Seaplanes	Cant. Z.501	6
		TOTAL: East Sector	288
SAHARAN (Based in West Sector)	Recce. and Communication	GHIBLIS	
		CAPRONIS (Various)	45
		SAVOIAS (Various)	
		TOTAL: SAHARAN	45
SARDINIA	Torpedo Bombers	S.79, S.84	40
	Bomber Recce.	CZ.1007	12
	Fighter	CR.42, G.50	27
	Recce. and Army Co-op.	RO.37	12
	Seaplanes	CZ.501, CZ.506	24
		TOTAL: SARDINIA	115
SICILY	Bombers	CZ.1007, BR.20	36
	Torpedo Bomber	S.79, S.84	24
	Bomber-Recce.	S.79	24
	Fighters	CR.42, G.50 Mc.200, RE.2001	81
	Recce. and Army Co-op.	CA.311	12
	Seaplanes	CZ.501, CZ.506	30
		TOTAL: SICILY	207

/DODECANESE

SECRET

PLACE	AIRCRAFT	TYPE	TOTAL
DODECANESE ISLANDS	Torpedo Bombers	S.79	16
	Bomber-Recce.	CZ.1007	24
	Fighters	CR.42, G.50	45
	Seaplanes	CZ.501, CZ.506,	12
		RO.43, RO.44	6
		TOTAL: DODECANESE ISLANDS	103
GREECE	Fighters	CR.42, Mc.200	36
	Recce.	RO.37, CA.311	12
	Seaplanes	CZ.501, CZ.506	6
		TOTAL: GREECE	54
ALBANIA and YUGOSLAVIA	Bombers	BR.20	24
	Fighters	CR.42	9
	Recce.	RO.37, CA.311	72
		TOTAL: ALBANIA and YUGO-SLAVIA	105
		GRAND TOTAL:	1049

Above figures are based on following Establishment figures:-

Bombers	}	6 aircraft per squadron
Bomber-Recce.		
Recce.		
Seaplanes		
Torpedo Bombers		8 aircraft per squadron
Fighters		9 aircraft per squadron

Average estimated serviceability, 50%.

(b) GERMAN AIR FORCE STRENGTH IN THE MEDITERRANEAN AREA  
AS AT 31ST MAY, 1942

(Compiled from Enemy Records by A.H.B.6)

TYPE OF AIRCRAFT	TOTAL STRENGTH	SERVICEABLE AIRCRAFT
Close Range Recce.	14	10
Long-Range Recce.	67	36
Fighters S.E.	176	99
Night Fighters	36	12
T.E. Fighters	68	34
Bombers	223	124
Dive Bombers	77	31
Transports	104	68
Meteorological Recce.	9	4
Coastal	61	37
TOTAL:	841	455

MOST SECRET AND PERSONALCOPY NO.D.C. (42) 23

16 Feb. 1942.

DEFENCE COMMITTEEMALTAMemorandum by Deputy Air Officer Commanding-in-Chief

The history of the air defence of Malta is briefly as follows:-

1. Owing to the potential scale of Italian air attack on the Island, it was originally not considered feasible to use Malta as a Base for a Striking Force. After the Italians commenced air attacks on the Island, however, steps were taken to introduce one Squadron of Hurricane Fighters and these, combined with an increased scale of A.A. defence, proved capable of dealing with the rather half-hearted attempts of the Italians to neutralise the Island by air action. In consequence of the success of the Fighter and A.A. defence, it was decided to establish 2 Heavy Bomber Squadrons and later 2 Light Bomber Squadrons for attack on the Italian mainland, Tripoli and sea communications. We did this with some reluctance as we realised that if this Air Striking Force proved effective, we should force the enemy to take counter measures against the Island, which might well jeopardise its continued use as a Naval Base or as a Staging Post in the Mediterranean Air Reinforcement Route, which is vital to the Air Force here.
2. When the Germans started to move their land forces into Tripolitania, they took steps to neutralise our Air Striking Force at Malta by switching German air forces across to Sicily. In this they were successful and we were forced to withdraw both our Bomber Force and Flying Boat Unit from Malta, owing to the heavy losses we incurred on the ground. Subsequently the greater part of the German air forces were transferred away from Sicily) and we were able (with the help of increased aerodrome space and dispersal areas) to establish again an Air Striking Force at Malta, and subsequently a Naval Striking Force also was added after the Fighter Squadrons in Malta had been increased to 3 and the A.A. defence further augmented. The success of this Naval Striking Force and Air Striking Force operating from Malta during the past few months has forced the Germans to augment once again the strength of their Air Force in Sicily, obviously with the purpose of neutralising our Naval and Air activities from Malta, particularly against Rommel's line of communications.
3. The scale of bombing attack and fighter support which the Germans have been able to develop against Malta in the past two months has led to the present serious situation, in that we are once again faced with the necessity of reducing or wholly withdrawing our Air Striking Force and possibly Naval Striking Forces from Malta. Some six weeks ago we did in fact withdraw one Blenheim and one Wellington Squadron from Malta because the scale of enemy air action, combined with the unserviceability of aerodromes due to wet weather, was causing us too many losses of aircraft on the ground. These losses, and losses of reinforcing aircraft in transit, continue at a steady rate.

/I discussed

SECRET

I discussed this situation while in London, and on the 9th of this month Air Ministry proposed to us that we should take steps to increase the Fighter Squadrons at Malta to a total of 6, 5 of which would be Spitfires and 1 Hurricane IIC for night defence.

4. This problem requires examination. There is no doubt but that it will be very difficult to operate 5 Fighter Squadrons from Malta, without reducing the strength of our Air Striking Force considerably, unless it is found possible to do much more in the way of providing extra aerodrome accommodation and dispersal areas.
5. A.O.C. Malta is getting on with this within the limits of available resources, but in any case several months must elapse before it will be possible to establish 5 Spitfire Squadrons in Malta. Convoy assistance to get Spitfire personnel and aircraft spares into Malta from this end will be required, as only very few Spitfire spares have been sent to Malta on the cruiser which recently arrived from the West. Our ability to fly Spitfires from here to Malta will depend on the military situation.
6. Too much importance should not be attached to re-arming of Malta Hurricane Squadrons with Spitfires. As was made clear in J.P.S. Paper No. 84, the provision of Fighters with superior performance to the Hurricane is only one of the measures necessary to improve the situation. The performance of the Hurricane is not so inferior to that of the enemy fighters that they can achieve nothing, and we are taking certain steps to render Malta's Hurricanes operationally more effective. We do not know for certain that the Spitfires, when they arrive, will operate satisfactorily under these climatic conditions.
7. Over and above everything that we can do now and may be able to do in the future to increase the Fighter strength of Malta, it must be recognised that even if we achieve the complete 6 Squadrons proposed, it will still be possible for the enemy to produce a superior single-seater Fighter Force over Malta, if he is willing to maintain such a superior force in the Sicilian area, as he is doing at present.
8. The course which is immediately open to us is to increase the number of Hurricane Squadrons in Malta at the expense of the number of Fighter Squadrons in this area, and at the cost of a pro-rata diminution of Air Striking Force on the Island.
9. Up to date 7 Fighter Squadrons have been diverted from the Middle East to the Far East, and a total of 320 Fighter aircraft have been either despatched or diverted from here. The Chiefs of Staff have now directed us to despatch 2 more complete Hurricane Squadrons to Burma; the R.N. Hurricane Squadron has had to be disbanded owing to the withdrawal of the R.N. Fighter pilots by C.-in-C. Med., and it is understood that C.-in-C. Med. may also be required to withdraw his Fulmar and Martlett F.A.A. Squadrons. In the circumstances it is considered that the despatch to Malta of a further 3 Squadrons at the present time would jeopardise the air situation in the Delta and Western Desert.

SECRETARRANGEMENTS FOR CIVILIAN LABOUR ON AIRFIELDS  
IN MALTA

MOST SECRET

Cipher Message  
IN

Folio:- 49410

To:- MID.EAST (R) TROOPERS for  
SECRETARY OF STATE for COLONIES  
and CHIEFS of STAFF

21/3/42

T.O.O. ----

T.O.R. 2140/21

From:- GOVERNOR MALTA

Correction

received 0110/22

No:- HE/167 AQA 1341

MOST IMMEDIATE

Your telegram CC/3 of 20/3

ONE.

As stated in my telegram AQA 1257 of 17/3 to TROOPERS (R) MID.EAST, I am taking steps to form one labour battalion for work in unhealthy places. Difficulties of accommodation and of providing Officers and NCOs as well as requirements of other essential services, limit numbers which can be conscripted in this way.

TWO.

In addition complete register of Civilian Workers has been compiled and preparations made to call up groups of them to work as Civilian Units wherever required and whether for Services or Government. These groups will NOT however be under Military Discipline. Secretary of State for Colonies is aware of my intention to establish Compulsory Civilian Labour in this form. Defence Regulations giving necessary powers have been agreed and will be issued on 24th March. Pending formation of Labour Battalion mentioned in para. one, gangs of Civilian workers, formed under these regulations from residents in villages near aerodromes, will be put to work on aerodromes as required and will be available in about 14 days from issue of regulations.

THREE.

Subjection of aerodromes to frequent and heavy bombing and absence of slit trenches or any form of shelter for Civilian labour on aerodromes obviously present difficulties in way of securing continuous work from undisciplined workers. Nevertheless, pending formation of Civilian Units under Defence Regulations, considerable numbers of volunteer workers have been obtained by offer of higher than normal pay and these have been working regularly on aerodromes for last six days. As many police as can be spared are assisting.

FOUR.

I realise very fully necessity of maintaining aerodromes and of safeguarding aircraft on the ground and everything possible is being and will be done to secure necessary labour. I have some comments to make on HQ RAFs letter mentioned in your telegram and these will follow as soon as possible.

DDSD 3 ACTION

M of S 2

CGS 2

DAG 1

AOC in C 1

PS(C) for C in C 2

RN GHQ for C in C MED 2

DQMG 1

DAOC in C 1

C.4. 0340/22

T.T. 0410/22 GCMH.

ESTIMATED DEFICIENCIES FOR THE NORTHERN FRONT  
AS AT 1 APRIL 1942

CIPHER MESSAGE  
OUT

To : TROOPERS

From: MIDEAST

GJP/42811

28/12

1. Following for Minister of Defence and Chiefs of Staff from Middle East Defence Committee in continuation paragraph 6 (6) MIDEAST GJP/42778 (GJP/42778) of 27/12 (27/12) to TROOPERS(.)
2. Estimated position in regard to minimum security requirements in MIDEAST including IRAQ and IRAN at 1 (1) April 1942 (1942) is as follows (.)
3. NAVAL FORCES(.) Main requirement is to increase Cruiser strength to 8 (8)(.)
4. LAND FORCES(.) Total estimated requirements are :-
  - (a) For Northern Front including IRAQ and IRAN and G.H.Q. Reserve(,) 4 (4) Armd Divs(,) 15 (15) Inf Divs(.)
  - (b) For Western Desert(,) 1 (1) Armd Div(,) 2 (2) Inf Divs(.)
  - (c) Total 5 (5) Armd Divs(,) 17 (17) Inf Divs(.)
5. Estimated available by 1 (1) April 1942 (1942)(,) excluding allied contingents and internal security units :-
  - (a) IRAQ and IRAN (,)  $\frac{1}{2}$  ( $\frac{1}{2}$ ) Armd Div(,) 2 (3) Inf Divs(.)
  - (d) MIDEAST(,) 3 (3) Armd Divs(,) 10 (10) Inf Divs(.)
  - (c) Total  $3\frac{1}{2}$  ( $3\frac{1}{2}$ ) Armd Divs(,) 13 (13) Inf Divs(.)
6. Thus deficiency is  $1\frac{1}{2}$  ( $1\frac{1}{2}$ ) Armd Divs and 4 (4) Inf Divs(.)
7. In the event of our sending forces to TURKEY and occupying TRIPOLITANIA we shall be faced with a serious shortage of A.A. units(.)
8. AIR FORCES(.) Estimated strength 1 (1) April 1942 (1942) Squadrons L.R.F. 5 (5)(,) S.R.F. 26 (26)(,) L.B. 12 (12)(,) M.B. 8 (8)(,) H.B. 2 (2)(,) T.B. 4 (4)(,) G.R.  $2\frac{1}{2}$  ( $2\frac{1}{2}$ )(,) A.C. 5 (5)(,) A.S.V. Wellington 1 (1)(,) total  $65\frac{1}{2}$  ( $65\frac{1}{2}$ )(.)
9. Permanent commitments EGYPT(,) LIBYA(,) MALTA(,) ADEN(,) CYPRUS(,) PALESTINE(,) SYRIA - Squadrons L.R.F. 5 (5)(,) S.R.F. 17 (17)(,) L.B. 6 (6)(,) M.B. 5 (5)(,) H.B. 2 (2)(,) T.B. 4 (4)(,) G.R.  $2\frac{1}{2}$  ( $2\frac{1}{2}$ )(,) A.S.V. Wellington 1 (1)(,) total  $42\frac{1}{2}$  ( $42\frac{1}{2}$ )(.)
10. Required for Northern Front Squadrons L.R.F. 2 (2)(,) S.R.F. 18 (18)(,) L.B. 13 (13)(,) G.R. 1 (1)(,) M.B. 2 (2)(,) T.B. 1 (1)(,) A.C. 6 (6)(,) total 43 (43) squadrons(.)
11. We shall thus be 20 (20) squadrons short of our requirements for the Northern Front(.)

12. TROOPERS please arrange to pass most immediate to Ministry of Defence in U.S.A.

IN CIPHER ONLY

MOST IMMEDIATE

(Sgd.) R.F. CORNWALL JONES Lt.Col.  
for Lt-Gen  
C.G.S.

T.O.O. 1015 G.M.T.

<u>Distn</u>	:	M. of S.	1	D.A.O.C.-in-C.	1
		C.-in-C. Med.	2	R.N. G.H.Q.	1
		C.-in-C. M.E.F.	1	D.D.Plans	1
		A.O.C.-in-C.	1	Lt-Col. CORNWALL JONES	1

SECRET

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APPENDIX XVII

ORDER OF BATTLE

OPERATIONAL SQUADRONS IN THE WESTERN DESERT AND EGYPT, 26 MAY 1942

<u>Unit</u>	<u>Aircraft</u>	<u>B.L.G.</u>	<u>O.L.G.</u>	<u>Function</u>
<u>AIR HEADQUARTERS WESTERN DESERT - ADVANCED GAMBUT,</u>				
<u>REAR MAATEN BAGUSH</u>				
No. 211 Group		Gambut	El Adem	
<u>No. 233 Wing</u> <u>Squadrons</u>		Sidi Haneish (115)	Gambut Sat. No. 2	
No. 2 S.A.A.F.	Kittyhawk	Sidi Haneish (115)	Gambut Sat. No. 2	Fighter, Fighter-bomber
No. 4 S.A.A.F.	Tomahawk	Sidi Haneish (115)	Gambut Sat. No. 2	Fighter
No. 5 S.A.A.F.	Kittyhawk	Sidi Haneish (115)	Gambut Sat. No. 2	Fighter
No. 260	Kittyhawk	Sidi Haneish (115)	Gambut Sat. No. 2	Fighter, Fighter-bomber
<u>No. 239 Wing</u> <u>Squadrons</u>		Sidi Haneish (102)	Gambut Sat. No. 1	
Nos. 3 R.A.A.F., ) 450 R.A.A.F., ) 112, 250 )	Kittyhawk	Sidi Haneish (102)	Gambut Sat. No. 1	Fighter, Fighter-bomber
<u>No. 243 Wing</u> <u>Squadrons</u>		Qasaba (13)	Gambut	
No. 33	Hurricane IIA & B	Qasaba (13)	Gambut Main	Fighter
No. 73	Hurricane IIA, B & C	Qasaba (13)	El Adem	Fighter
No. 80	Hurricane IIC	Qasaba (13)	Gambut Main	Fighter
No. 145	Spitfire	Helwan	Gambut Main	Fighter
No. 274	Hurricane IIA & B	Gambut		Fighter, Fighter-bomber
<u>No. 3 S.A.A.F. Wing</u> <u>Squadrons</u>		Maaten Bagush	Baheira	
No. 12 S.A.A.F.	Boston III	Qotifiya (21)	Baheira	Light-bomber
No. 24 S.A.A.F.	Boston III	Qotifiya (21)	Baheira	Light-bomber
No. 223	Baltimore	Maktilla	Baheira Sat.	Light-bomber
<u>Detached Western Desert</u>				
<u>Squadrons</u>				
No. 208	Hurricane & Tomahawk	Sidi Azeiz	El Adem	Army Co-op.
No. 40 S.A.A.F.	Hurricane & Tomahawk	Sidi Azeiz	El Adem	Army Co-op.
No. 1437 S.R. Flight	Marylands & Baltimores	Maktilla (121)	-	Strat/Recce.
<u>AIR HEADQUARTERS EGYPT, CAIRO</u>				
<u>No. 250 Wing</u> <u>Squadrons</u>		Ismailia		
No. 1 S.A.A.F.	Hurricane IIA2/	Port Said	-	Fighter
No. 89	Beaufighter	Abu Sueir N.	-	Night Fighter
No. 1 G.R.U.	Wellington D.W. 1	Ismailia	-	General Recce.
<u>No. 252 Wing</u> <u>Squadrons</u>		Mex		
No. 213	Hurricane	Edu	-	Fighter
No. 46	Beaufighter	Edu	-	Night-fighter (forming)
<u>No. 234 Wing</u> <u>Squadrons</u>		Maaten Bagush		
No. 5 S.A.A.F.	Tomahawk	Sidi Haneish (115)	Sidi Azeiz	Fighter
No. 238	Hurricane I	Sidi Haneish (102)	Gambut Main	Fighter
No. 335(H)	Hurricane I	Qotafiya (20)	-	Fighter
No. 805 F.A.A.	Martlet	Qotafiya (20)	-	Fighter (Coastal)
No. 889 F.A.A.	Fulmar II	Fuka Sat. (16)	-	Fighter (Coastal)
Alsace	Hurricane	Fuka Sat. (16)	-	Fighter
<u>Detached A.H.Q. Egypt</u>				
<u>Squadrons</u>				
No. 94	Kittyhawk	Mariut (One Flight at Port Said under No. 250 Wing)		Fighter
No. 60 S.A.A.F.	Maryland	Heliopolis	-	Photo. Survey Unit
No. 162	Wellington	Bilbeis	-	R.C.M. & R.D.F.
No. 267	Various	Heliopolis	-	Transport
N. Det.	Hurricane I	Hurghada	-	Fighter

<u>Unit</u>	<u>Aircraft</u>	<u>B.L.G.</u>	<u>O.L.G.</u>	<u>Function</u>
<u>NO. 205 GROUP ISMA ILIA</u>				
<u>No. 231 Wing</u>		Qotafiya		
<u>Squadrons</u>				
No. 37	Wellington IC	Gabriya (09)	-	Medium-bomber
No. 70	Wellington IC	Qotafiya (104)	-	Medium-bomber
No. 108	Wellington	Gabriya (09)	-	Medium-bomber
<u>No. 236 Wing</u>		Daba (106)		
<u>Squadrons</u>				
No. 104	Wellington II	Daba (106)	-	Medium-bomber
No. 148	Wellington I	Daba (106)	-	Medium-bomber
<u>No. 238 Wing</u>		Shallufa		
<u>Squadrons</u>				
No. 38	Wellington IC	Shallufa	-	Medium & Torpedo-bomber
No. 40	Wellington IC	Shallufa	-	Medium-bomber
<u>NO. 201 GROUP ALEXANDRIA</u>				
<u>No. 235 Wing</u>		Sidi Barrani (05)	Bu Amud	
<u>Squadrons</u>				
No. 38 Det.	Beaufort	Sidi Barrani (05)	-	Torpedo-bomber
No. 203 Det.	Blenheim, Maryland	Sidi Barrani (05)	-	General Recce.
<u>Detached No. 201 Group</u>				
<u>Squadrons</u>				
No. 2 Y.S.	Dornier	Aboukir	-	General Recce.
No. 13 (H)	Blenheim IV	Mariut (86)	-	General Recce. and Ant-Shipping
No. 39	Beaufort I & II	Mariut (86)	Sidi Barrani (05)	Torpedo-bomber
No. 203	Blenheim & Maryland	Burg El Arab (39)	-	General Recce.
No. 227	Beaufighter	Gianacelis	-	Night Fighter
No. 230	Sunderland	Aboukir	-	General Recce.
No. 252	Beaufighter	Edu	Qasaba (10)	Fighter (Coastal)
No. 272	Beaufighter	Edu	Qasaba (10)	Fighter (Coastal)
No. 459	Hudson (III)	Burg El Arab (40)	-	General Recce.
No. 221	A.S.V. Wellington	Amiriya (89)	-	General Recce.
Sea Rescue	Wellington IC	Fuka Sat. (16)	-	Sea Rescue
<u>Fleet Air Arm</u>				
<u>Squadrons</u>				
No. 815	A.S.V. Swordfish	Maaten Bagush (14)	-	General Recce.
No. 821	Albacore	Zimla (68)	-	Shipping Strike
No. 826	Albacore	Zimla (68)	-	Shipping Strike

The following squadrons moved up as re-inforcements during June:-

No. 6	Hurricane IID	Close Support
No. 601	Spitfire	Fighter
No. 14	Blenheim IV	Light-bomber
No. 159	Liberator	Heavy-bomber

A detachment of U.S.A.A.F. Liberators also operated in June.

ORDER OF BATTLEGERMAN AIR FORCE IN MEDITERRANEAN - 20 MAY 1942

	<u>Sicily</u>			<u>Greece and Crete</u>			<u>North Africa</u>		
	Establish- ment	Strength	Service- ability	Establish- ment	Strength	Service- ability	Establish- ment	Strength	Service- ability
Close Recce.	-	-	-	-	-	-	9	21	10
Long Range Recce.	24	28	17	12	9	5	12	13	11
S.E. Fighters	44	57	28	-	10	5	164	135	95
Night Fighters	-	-	-	39	35	18	-	-	-
T.E. Fighters	-	-	-	-	-	-	52	56	32
Bombers	78	59	32	152	118	68	11	16	7
Dive Bombers	-	-	-	-	-	-	90	71	54
Coastal	-	-	-	36	49	32	-	-	-
TOTALS	146	144	77	239	221	128	338	312	209

Establish-  
ment      Strength      Service-  
ability

Note: There were also two transport units in the Mediterranean, as follows: 106  
Their locations are not known.

60      35

Enemy Documents, A.H.B. (6).

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APPENDIX XIX

ORDER OF BATTLE

ITALIAN AIR FORCE IN THE CENTRAL MEDITERRANEAN - MAY 1942

	UNIT		LOCATION	A/C TYPE	STRENGTH	SERV.	
<u>SARDINIAN AIR FORCE</u> (H.Q. Cagliari)							
<u>Bombers</u>	36th Stormo	{ 108th Gruppo	Decimomannu	S.84	15	7	
				S.79	2	2	
		{ 109th Gruppo	Decimomannu	S.84	14	11	
				S.79	3	2	
	16th Stormo	51st Gruppo	Alghero	Cz 1007b	17	7	
		130th Aut. Torpedo Bomber Gruppo	Cagliari	S.79	17	9	
				68	38		
<u>Fighters</u>	24th Aut. Gruppo	Cagliari	C.R.42	41	32		
			G.50	19	18		
				60	50		
<u>AEGEAN AIR FORCE</u> (H.Q. Rhodes)							
<u>Bombers</u>	47th Stormo	{ 106th Gruppo	Gadurra - Maritza	Cz 1007b	12	4	
		{ 107th Gruppo	Gadurra	Cz 1007b	12	5	
				41st Torpedo Bomber Gruppo	S.79	16	11
				40	20		
<u>Fighters</u>	154th Aut. Gruppo	Rhodes	C.R.42	22	22		
			G.50	18	17		
	Rhodes Interceptor Section	Gadurra	C.R.42	6	5		
				46	44		
	<u>SICILIAN AIR FORCE</u> (H.Q. Comiso)						
<u>Bombers</u>	10th Stormo	{ 173rd Gruppo	Palermo	C.R.25	8	5	
				30th Gruppo	S.79	11	10
				32nd Gruppo	S.79	9	9
		4th Gruppo	Sciacca	S.84	13	8	
		50th Gruppo	"	Cz 1007b	11	4	
		55th Gruppo	Castelvetrano	B.R.20	13	4	
		88th Gruppo	"	B.R.20	15	0	
		132nd Torpedo Bomber Gruppo	Gerbini	S.79	19	11	
		102nd Gruppo			16	9	
		33rd Gruppo	Viterbo	Cz 1007b	18	18	
					133	78	
		<u>Fighters</u>	54th Stormo	{ 7th Gruppo	Castelvetrano	C.R.42	26
	M.C.200					30	18
M.C.202	3					2	
{ 16th Gruppo	Castelvetrano			C.R.42	13	8	
				M.C.200	30	16	
				M.C.202	7	5	
2nd Aut. Gruppo	Caltagirone		Re.2001	33	11		
377th Aut. Gr. Gruppo Interceptor Section	Palermo		Re.2001	13	3		
			C.R.42	9	7		
				164	86		
<u>5th SQUADRA AEREA</u> (North Africa)							
<u>Bombers</u>	35th Stormo	86th Gruppo	Barce	Cz 1007b )	29	19	
		95th Gruppo	"	Cz 1007b )			
	131st Torpedo Bomber Gruppo	K.2 (near Benghazi)	S.79	16	13		
	133rd Torpedo Bomber Gruppo	Castel Benito	S.79	16	9		
				61	41		

(15431)161

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	<u>UNIT</u>	<u>LOCATION</u>	<u>A/C TYPE</u>	<u>STRENGTH</u>	<u>SERV.</u>	
<u>5th SQUADRA AEREA - Contd.</u>						
<u>Fighters</u>	1st Stormo	( 6th Gruppo (17th Gruppo	Martuba Martuba	M.C. 202 ) M.C. 202 )	49 40	
	2nd Stormo	( 8th Gruppo (13th Gruppo	Martuba Martuba	M.C. 200 ) M.C. 200 )	60 42	
	4th Stormo	( 9th Gruppo (10th Gruppo	Martuba Martuba	M.C. 202 ) M.C. 202 )	56 56	
	50th Stormo	(158th Gruppo	Derna	C.R. 42 )	23	21
		(159th Gruppo	Derna	C.R. 42 )	27	27
	3rd Aut. Gruppo	K.2 (near Benghazi)	C.R. 42	22	1	
	17th Aut. Gruppo	"	G.50	30	14	
	150th Aut. Gruppo	K.3 (near Benghazi)	M.C. 200	25	25	
	160th Aut. Gruppo	"	(C.R. 42	20	9	
(G. 50			19	10		
				<u>331</u>	<u>245</u>	

NOTE

The basic unit of the Italian Air Force was the Squadriglia (Squadron). The initial establishment of a fighter squadriglia was twelve aircraft. That of a bomber or long range reconnaissance squadriglia was nine aircraft.

Three fighter squadriglie formed a Gruppo and two Gruppi went to make up a Stormo. Two bomber squadriglie formed a Gruppo, two Gruppi again going to make up a Stormo. In theory, therefore, a Stormo was approximately equivalent to a R.A.F. Group, and a Gruppo was approximately equivalent to a R.A.F. Wing. However, the average strength of a fighter Stormo was normally not more than thirty, and of a bomber Stormo, twelve to fifteen.

Allocation of the Bomber Effort during the Second Battle of Gazala and the Retreat to El Alamein27 May - 30 June 1942

	PORTS				MISC.	AIRFIELDS			GROUND FORCES
<u>SORTIES</u>	Benghazi	Tobruk	Derna	Taranto <sup>(1)</sup>	Sicilian <sup>(1)</sup> Targets etc.	Crete/ Piraeus <sup>(1)</sup>	Crete	N. Africa	North Africa
Heavy	38	40	-	18 <sup>(2)</sup>	-	-	-	-	13
Medium	148	3	-	23	37	79	3	464	359
Light	-	-	11	-	-	19	11	127	932
Total Sorties Flown	186	43	11	41	37	98	14	591	1,304
Total tonnage Dropped	180	94	7	80 <sup>(2)</sup>	56	90	4	576	1,087 heavy & medium } 54.7 light } 54.0

(1) Denotes targets attacked specifically in support of the Malta convoy 'Vigorous'.

(2) Includes one attack on the Italian Fleet at sea by eight Liberators with 13 tons of H.E.

Sources: No. 205 Group, No. 3 S.A.A.F. Wing, and Squadrons O.R.B.s. and Appendices.

Note on the Development of Ship to Aircraft  
Radio/Telephone Communication

Before the war it was naval policy to enforce strict radio silence in training exercises, because security was considered to be of paramount importance, and ship/aircraft communication was not developed beyond visual signalling with the Aldis lamp. Early in the war however, operational experience emphasised the need for R/T communication between naval escorts and reconnaissance and fighter (in this case Shore-based) aircraft. When this was first attempted, both the R.A.F. and Navy were using HF R/T for fighter-to-base and ship-to-base communication, but for this the Navy insisted on a specific wave-length which was found to be unsuitable for ship to aircraft communication.<sup>(1)</sup> The Navy therefore immediately called for VHF R/T on its fighter direction ships, and, as there were as yet few aircraft fitted with this latest development in R/T there was a period of some length in which the R.A.F. was catching-up with the Navy in installing this type. At the time of the passage of the June and August convoys to Malta, VHF was an innovation on fighter direction ships, and the R.A.F. was still in the process of equipping aircraft with it. Meanwhile the alternative HF system, on the wave length demanded by the Navy, was unsatisfactory.

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(1) This wave length, 112410 KCs was chosen exclusively because the Navy thought it had sufficient "skip" to hazard the all important security of the signalling force. For further details on Radio/Telephone Communications, see A.H.B. Monograph, Signals, Volume VI.

NOTES ON THE EMPLOYMENT OF KITTYHAWK BOMBERS

Types of Formation

1. In the present campaign the formation adopted has depended largely on the number of fighter/bombers available. The standard flight formation of pairs line abreast is often used without any apparent drawbacks.

B B B

B B B

F F F

F F F (500 feet above)

2. The more popular formation is two sections of four aircraft with a flight of six aircraft as top cover.

B B

B B B B (500 feet above)

B B

F F F (1,000 feet above)

F F F

3. The popularity of the second formation is probably due to the fact that the fighter/bomber squadrons have seldom had more than eight aircraft serviceable. In addition, it is both defensive and offensive, and the leader has good protection in depth, an important consideration when searching for M.T. on the ground or identifying a target.

4. The Top Cover formation of the Flight in standard formation is preferred by all. Patrolling above the bombers, it forms an effective screen and at the same time is well-balanced and manoeuvrable.

5. When running a "Shuttle Service", aircraft go out in single sections of four in the normal formation, well spread out.

B B

B B

Escort

6. An escort is only provided on specific occasions as follows:-

- (i) When employing more than one squadron of bombers.
- (ii) When enemy fighters are known to be operating in the target area.
- (iii) When a land battle is in progress and enemy fighters are expected to be present.
- (iv) Towards the end of a Shuttle Service period.

7. Better ground reports are brought in by escorted bombers than by unescorted bombers.

8. When possible, each bomber squadron supplies its own Top Cover, each flight bombing in turn.

### Method of Attack

9. Bombers approach the target well to one side, and make a wide orbit anti-clockwise. Automatically sections echelon right and look for suitable targets. The first pair usually attacks out of the sun and the remainder continue the orbit, going down one after the other and coming from different sides, in order to divide up the A.A.

10. Attacks are usually made from 5000 feet to 2000 feet. Diving to extremely low levels does not appear to improve the bombing results.

11. It is essential to trim the aircraft to fly "hands off" in the dive. When the bead is steady on the target, the nose is raised (to allow for the trajectory of the bomb) and the bomb is dropped.

12. After releasing the bomb the pilot pulls out for a quick look round and then continues down strafing the outskirts of the concentration.

### Rendezvous

13. The bombers have very little trouble in reforming after the attack. It is a rule that, no matter from which direction aircraft attack, the turn away is always in the same direction as the leader's.

14. The leader usually climbs and orbits in the vicinity of the target out of A.A. range. When all the bombers have assembled they set course for base with or without Top Cover.

15. The Top Cover find it difficult to keep the bombers in sight, especially if they go down to strafe, so that no effort is made to form up again. Top Cover patrol the area for a reasonable time and then return.

### Targets

16. The most suitable targets consist of small concentrations of M.T. where dispersal is usually bad and A.A. light.

17. Attacks on enemy leaguers, Armour and Lorried Infantry usually result in heavy casualties to aircraft owing to the great fire power of these units.

18. The bombing of enemy gun pits and guns is dangerous owing to the low levels at which aircraft must fly in order to find them.

19. Armed reconnaissance raids are very popular and effective.

### Tactics

20. The best tactics adopted is the Shuttle Service, whereby a continuous load of bombs can be dropped in a given area all day.

21. The success of this Shuttle Service may be summed-up as follows:

(i) Four aircraft fly out as low as 1,000 feet making a detour around any dangerous area en route to the target. Approaching the target, height is increased to 4,000 or 5,000 feet. All aircraft fly well spread out. As a result of these tactics, our aircraft are very difficult to see, and although they have often seen enemy fighters, they have not so far been intercepted.

(ii) Owing to the small number of aircraft employed, not so much attention is paid to them by the A.A. on the way out or over the target.

(iii) If a 'Shuttle Service' is started early in the day, it has often been noticed that the A.A. from the target becomes less and

less towards evening. This would indicate supplies of ammunition getting low.

22. The large formation of fighter/bombers is not liked by pilots, and is considered unsuitable for the following reasons:

- (i) By its size, it attracts all the A.A. from miles around, both en route and over the target.
- (ii) For the same reason it is not manoeuvrable, and quite often the leader finds himself flying across concentrations of enemy M.T. before he has time to turn.
- (iii) Flying low, as fighter/bombers must, the formation presents a large target with the result that there are often lucky hits on our aircraft.
- (iv) If a large formation finds low cloud in the target area, all aircraft scatter in pairs on the order "Scatter, scatter, Go". Aircraft casualties appear to increase when there is cloud about. This is probably because the A.A. gunner can get a much better silhouette and is not surprised or flustered.

#### Briefing

23. Careful briefing is a most important part of a fighter/bomber operation. The briefing officer must have a complete picture of the war in his area, and must be personally familiar with the terrain. This is most important in view of the rapidity with which targets and conditions change in a fast-moving war.

24. The Briefing Officer should be able to concentrate on Army Support operations to the exclusion of all other duties.

25. Some points in the briefing of fighter/bomber pilots are:

- (i) The pilot is never allowed to fly on a compass course and E.T.A. direct to the target. Whenever possible, a well-known topographical feature such as cross-roads, escarpments, wells, forts, passes etc. are found in the vicinity of the target, and the pilot is ordered to find the land mark before searching for the target.
- (ii) If there is any difficulty in locating the target, the pilots have orders to return to the landmark and make another reconnaissance in order to establish exactly the pin point of the target.
- (iii) Pilots usually go out from landmark to landmark but return direct.
- (iv) The maximum height for the out journey is 4,000 feet, returning usually on the deck.
- (v) The value of land movement is stressed on every sortie. There are signs that most of the pilots are becoming Tac/Rec conscious.
- (vi) The value of correct identification is also stressed, but it is difficult for the pilots owing to the lack of good intelligence data on German and Italian equipment.

#### General

28. The Fighter/bomber might be described as an M.T. "nibbler". Its best employment is against concentrations of M.T. in the form of a Shuttle Service. In this way, M.T. can be whittled down to a point where it must effect the enemy's supply and efficiency.

29. One squadron of twelve aircraft can, without hardship to the pilots, do 36 sorties per day. At a conservative estimate based on past results, 36 sorties could account for 75 M.T. per day, or 525 M.T. per week per squadron.

30. It is considered that fighter/bomber pilots should revert to their proper role of fighting at least one day in three. Pilots are apt to forget their fighter tactics if kept on bombing too long.

31. The disadvantages of the fighter/bomber are slight. Speed and manoeuvrability are practically unaffected once the bomb has been dropped.

32. It is not wise to bring a squadron to readiness for bombing and/or fighting; owing to the waste and difficulty of finding somewhere to jettison the bombs. Squadrons should be ordered to perform one role or the other.

11 July, 1942.

Source. Appendix H to A.H.Q. Western Desert Report on Operations During the Withdrawal from Cyrenaica, 26 May - 6 July, 1942. A.H.B. Ref. IIJ6/8.

NOTE ON THE FIGHTER CONTROL ORGANISATION AT MALTA

It has been described in the narrative that, at the outbreak of war with Italy, Malta had not yet been supplied with any fighters for her defence; the plans which had been made to provide fighters had not been realised owing to the emergency in the United Kingdom. Similarly, no personnel nor any up-to-date equipment had been supplied for the establishment of a ground control organisation for the fighter defence similar to that of Fighter Command although the provision of radar cover was more advanced than in any other part of the Middle East Command.

While Air Ministry was unable to contribute to the defences at Malta, the A.O.C. was anxious to do everything possible to provide air defence from local resources. Thus, in November 1939 he obtained the agreement of the C.-in-C. Mediterranean for the temporary transfer of some Fleet Air Arm fighters to Malta, an occurrence which coincided closely with the completion of the air force section of a Combined War Headquarters at Malta. The A.O.C.'s next step was to request Air Ministry for a copy of Fighter Command Battle Orders, as a basis on which to organise the combined operations of fighters, A.A. guns and radar.

The notes on fighter organisation sent out to the A.O.C. were specially prepared at Air Ministry with a view to the particular conditions at Malta, and they differed from the Fighter Command Battle Orders in several respects. For example, in these notes it was assumed that the direction of fighter aircraft would be done from the Combined Operations Room, without the aid of the sector station control employed in England, and that the Senior Air Force Officer would act as controller. As far as can be judged, this course was followed at Malta during the first year of the war after the entry of Italy, so that the Malta Controller fulfilled the duties of a Command, Group and Sector Controller in the United Kingdom; but his task was further complicated in that he controlled not only the fighters but all friendly aircraft operating in the Malta area. This was contrary to the practice in Home Commands, but in Malta, partly owing to the lack of experience in up-to-date methods, it was considered necessary to centralise the control of aircraft flying in the area because of the special conditions imposed by the small size of the island. The lack of trained staff and of equipment were doubtless a further factor in this respect: even with a single operations room the A.O.C., S.A.S.O. and a Wing Commander, were obliged to carry out the duties of controller in addition to the normal tasks of their appointments. Similarly, as there was no establishment for filter room officers, the duties of filter officers were fulfilled by two of the radar station commanders, who were thus prevented from supervising their stations, and by a flight sergeant with operations room experience.

In contrast to the deficiencies in the fighter control organisation, the radar was well provided for. Until December 1940 radar cover was provided solely by two Transportable Radio Units working alternately throughout each 24 hours period, while a G.L. set<sup>(1)</sup> was used to cover the area within their permanent echoes. Enemy formations flying at approximately 20,000 feet were normally detected

(1) Army radar set for gun-laying.

DO/AML/13  
1a & 2a

A.M. File  
S.36003/I  
144A, 145A,  
146A & B

R.D.F. File  
IIJ1/105/64

at 65-75 miles, but fading occurred between 30 and 50 miles, adding to the difficulties of interception. To provide low cover a C.O.L.<sup>(1)</sup> station became operational in December 1940 followed by a second in January 1941. Although these stations were able to plot aircraft as far out as 70 miles, they in fact provided little extra coverage because enemy formations flew too high. Until mid-January 1941, when the Luftwaffe arrived in Sicily, the Italian daylight raids usually consisted of formations of bombers, escorted by fighters, flying at an average height of 20,000 feet, and no difficulty was experienced in detecting them. Night raids usually consisted of single aircraft or a succession of single aircraft flying at approximately 10,000 feet, and were normally detected at about 40-50 miles. With the arrival of the Luftwaffe, tactics noticeably changed. Frequent reconnaissances were made by high-flying aircraft which were seldom picked up beyond 25 miles and on several occasions were only detected when within visual range.

Such was the situation in Malta in February 1941, when the Chief Radio Officer from Middle East visited Malta to report on the radar warning system. One of his officers subsequently visited the island in March/April, and as a result of each visit a report was compiled on the defence organisation at Malta. These reports contain a large proportion of technical information not relevant to this narrative, but they also contain information concerning the organisation of air defence generally, which throws light on the difficulties experienced in operating fighters at Malta. The subjects of particular interest are:

#### 1. The Warning System

There was at first no observer system, although the functions of visual observation were carried out by the guns. The R.A.F. radar coverage was good in comparison with many other defended areas, but several technical faults were found in the C.O.L. stations and their methods of sweep were faulty, so that some raids slipped through undetected. It was extremely difficult to obtain reliable height readings on the sets available, and this was a serious obstacle to controlled interception, although it will be seen that there were other obstacles to this. The identification of aircraft was not a great problem, in spite of the lack of height information and I.F.F.<sup>(2)</sup>, because the target area was small and the number of friendly aircraft low, but there was a considerable proportion of false alarms.

#### 2. Fighter Interception

The main policy governing fighter control was never to permit the fighters to leave the island; attempts to alter this policy had met with no success up to February 1941. The air raid warning was usually sounded when an unidentified plot had approached to about 30 miles from Valetta. The fighters which had usually taken off before this, climbed to a height of about 18,000 feet above Malta. They were

R.D.F. File  
IIJ1/105/64

Ibid

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(1) Chain Overseas Low (Overseas equivalent of C.H.L.).  
(2) Radar equipment for recognising friendly aircraft on the radar screen.

then warned by R/T of the position of the raider, the height being estimated visually where possible. They then searched (by day) and engaged if possible. (1)

The chief difficulty in this procedure lay in the complete inadequacy of information concerning aircraft movements over Malta. The R.A.F. radar system was quite useless once the enemy had crossed the coast, while plotting on the Army G.L. system was very spasmodic. A further drawback was that when interceptions were carried out over Malta it was not possible for both the guns and fighters to engage the enemy at the same time with safety.

In the first report, the Chief Radio Officer expressed the opinion that the size of Malta made this type of control very straightforward; but in the second report a number of drawbacks were pointed out:-

- (a) Because the fighters were never permitted to leave the Malta area, the use of radar information was limited to getting the fighters into the air and warning the guns and civil defence, i.e. it was not used by the controller to vector fighters to intercept.
- (b) The control of the fighters in the air was inefficient because interceptions were always attempted over the island, when little or no information was entering War Headquarters, the radar having faded out.
- (c) Communication by R/T between the Controller and the fighters gave the radar performance away to the enemy.
- (d) The Controller never used R/T himself but instructed the signals officer.
- (e) The method of control by running commentary, besides suffering from the disadvantages at (c) above, left the fighter commander to decide whether to look for the enemy or not. If he decided to search, he had to think out for himself, without a map, the best course to steer to achieve an interception.

Ibid

The remedies suggested for these difficulties were:

- (a) The decision to engage or not should be given as soon as a height was given for the approaching raid. (In this report it was maintained that the radar could assess heights to within 2,000 feet). The fighters should then be sent at least to that height, over a known point in Malta.
- (b) The controller should then use the R/T himself and attempt to intercept the enemy on the coast.

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- (1) The reasons for keeping the fighters over the island may have been (a) shortage of fighters and pilots, (b) limitations imposed by lack of range of HF/RT. This made it desirable (a) to operate the fighters as near the island as possible in case pilots had to bale out (b) to increase the chances of interception by patrolling the fighters in the target area.

- (c) All orders to fighters should be in the form of vectors; no reports on the enemy should be given to the fighters until the raid was within visual or sound range, otherwise the enemy could assess the radar performance.
- (d) The G.L. and observer system should be reorganised to pass plots at the rate of at least two per minute to War Headquarters. This was particularly important while the policy was maintained of intercepting over the island, where the radar information faded out.
- (e) At least one of the fighters should be fitted with I.F.F. which would work on the G.L. radar system.

In March the A.O.C. asked Air Ministry to send out some trained Filter Officers, and also asked for up-to-date information regarding interception measures. The Filter Officers did not arrive at Malta for some months, and the information on interception was evidently of little use, for Malta's difficulties continued. In May, although enemy raids were not heavy, the fighter defence was suffering considerably at the hands of Me.109s, and the A.O.C. renewed his requests for experienced pilots and better aircraft. At this point the Governor himself strongly supported the A.O.C's case in a letter to the C.A.S., pressing Malta's needs, not only for aircraft and pilots, but also for senior officers for the A.O.C's staff, and, in particular for trained controllers. Through this letter, and subsequent correspondence between Air Ministry and Malta, it was realised at Air Ministry that all air activity in the island was being controlled from one operations room. The drawbacks of such a system were immediately pointed out, and the preparation of a fighter sector operations room was immediately put in hand. In addition Air Ministry undertook to send out a Wing Commander to organise the sector operations room and to advise on the control and tactics of the fighters, and to send out some Sector Controllers as well as Higher Operational Controllers for the Combined Operations Room. It was also decided to send out VHF/RT<sup>(1)</sup> equipment to improve communication and homing, and thus enable the fighters to operate farther from the island.

Control difficulties were not the only reason for Malta's lack of success in fighter defence at this time. Other reasons were deficiencies in fighter performance and strength. As there were not sufficient fighters to maintain standing patrols, the conditions at Malta required a fighter with a fast speed of climb if the enemy raiders were to be met at their own height or above. The reason for this was that the short distance between Sicily and Malta allowed little time for the fighters to take up favourable positions, even with full radar warning,<sup>(2)</sup> before the enemy arrived. In fact, in the early days, the Italians realised this, and stepped up the height of their raids to neutralise the fighter defence.

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- (1) VHF/RT had a longer range than HF/RT, speech was clearer, tuning controls simpler.
  - (2) By 1942 Malta radar was 'watching' enemy aircraft taking off from the Sicilian airfields.

C.A.S. Folder  
ID3/673

ILJI/243/1

Considerable correspondence between Air Ministry and Malta during May and June 1941 resulted in the following improvements in the island's defence:-

- (a) A fighter sector operations room was set up, adjacent to the Central Operations room.
- (b) Additional ground staff were provided, including Sector controllers, and a Wing Commander in charge of fighter operations, as well as the filter officers already requested.
- (c) Malta was reinforced<sup>(1)</sup> with a considerable number of Hurricanes and pilots during May and June. These not only provided essential reinforcements but also replaced No. 261 Squadron which was sent to Egypt for refit, and provided aircraft and pilots for a new squadron (No. 126). A large proportion of the Hurricane reinforcements were Mark IIs.
- (d) V.H.F. equipment was provided for the fighters.

C.A.S. Folder  
ID3/673 and  
D.O.O. Folder  
IIJI/27/1

During July, Malta was visited by the Inspector General, who gave general support to the requests previously made. In particular he stressed that the defence of the island depended on the fighting efficiency and morale of the fighter squadrons, and to this end he considered a reserve of 100% of fighter aircraft in the island was not too much. He also pointed out that the regular reinforcement of fighter units with fresh pilots, and the removal of tired ones was an important factor, especially for morale, and expressed the opinion that in the event of another German air attack the garrison should be increased to four squadrons, but that these must be there in time. Further factors noted by the Inspector General were that maintenance of the fighters was carried out by only 50% of a normal establishment, although operations were continuous, and that the island had not been too well served in the quality of its staff officers. He thought that such factors affected morale whenever they detracted from the fighter defence. Ground personnel reinforcements were in fact already on the way at this time, and in September, when a further consignment of Hurricanes was delivered to the Middle East Command by the aircraft carrier method, Malta was allowed to retain sufficient aircraft to supply her three fighter squadrons with a reserve of 100%, thus bringing the fighter strength to ninety-six aircraft in all.

A.M. File  
C.S. 9943

During the latter half of 1941, owing to the absence of the Luftwaffe from Sicily Malta enjoyed a considerable respite from air attacks, and was able to concentrate her resources on an anti-shipping offensive designed to cut the Axis supply lines to North Africa. The very success of this offensive however, attracted attention to the island, and in December the Luftwaffe returned to Sicily and to the attack, and by January Malta's air defence was once again faced with the problem of how to defend a small and isolated island against an enemy greatly superior in numbers, and with considerable resources behind him.

In January 1942, the island was visited by Group Captain Embry who had recently held the appointment of S.A.S.O. to

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(1) Operations Splice, Rocket and Railway.

H.Q. R.A.F.  
Med. File  
IIJ5/101/4

A.H.Q. Western Desert. Because of the failures experienced by the Malta fighters, he had been instructed by the A.O.C.-in-C. Middle East to examine all aspects of the fighter defence. He found that the failures in fighter defence were attributable to a number of factors, chiefly:-

- (a) Hurricane performance. The Hurricanes had an inadequate speed of climb to meet the enemy at his own height or above even if they were scrambled as soon as radar warning was received. The enemy usually crossed the coast of Malta at a height between 20,000 and 25,000 feet by which time the Hurricanes were seldom higher than 15,000 feet. This made it impossible for the Hurricanes to take on the Me.109s which were considered superior in performance in every respect. Besides its practical disadvantages, the situation was very dangerous to the morale of the pilots. In addition, with the exception of the cannons of a few Hurricane IIc aircraft, the guns of the fighters were not really adequate to deal with the heavily armed Ju.88 which was carrying out most of the bombing in Malta at this time.
- (b) Control. This was made very difficult by the lack of height readings caused to a large degree by the lack of suitable sites for the C.O.L.S;(1) while the single G.C.I.(2) station had also proved a failure because of siting difficulties. Control by running commentary with all its attendant disadvantages was still the practice at Malta. A technical reason for this was that the third fixer station for plotting the defending fighters had only just been erected, so that vectoring had been impossible. A further serious drawback was the lack of a really good senior controller.

Ibid  
Encls. 10A,  
24A, 25A

As a result of Group Captain Embry's visit, steps were taken at Air Ministry to send out an experienced senior controller from Fighter Command, and the possibility of reinforcing Malta with Spitfires was at last seriously considered: at Headquarters Middle East it was arranged to send a signals officer to Malta to investigate the radar defects. In Malta, as soon as the third fixer station was completed control by vector was introduced but the first attempts were far from successful, and on 25 January the fighters were 'jumped' by Me.109s and lost five of their number, while another two made belly-landings. According to a pilot's report, there were two main disadvantages in the

Ibid  
Encl.15A

- (1) Their sites were as follows:

No. 501	C.O.L.	Fort Ta Silch
No. 502	C.O.L.	Fort Magdalena
No. 504	C.O.L.	Fort Dingli

- (2) Ground Controlled Interception radar station at Gudja. Originally interception of enemy aircraft by fighters was attempted by combining radar information of enemy positions with HF/DF information of fighter positions. G.C.I. was obtained by using ground and airborne radar to plot positions of both enemy and friendly aircraft simultaneously.

vector system. The first was that control was too slow in passing information concerning enemy positions, so that by the time it reached the fighters it was out of date, and not only useless but dangerously misleading. The second disadvantage lay in the fact that the fighters were vectored on to enemy bombers without being given any information concerning enemy fighters. A third difficulty was caused by the replacing of visual reports by G.L. reports, which broke down if a large number of plots appeared. It seemed that the best solution of the problem was for the controller to give the fighters a judicious mixture of information regarding enemy fighters and of vectors on to enemy bombers, but this required careful thinking out to prevent giving useful information to the enemy.

IIJ1/105/64(B)  
Encls. 44(A) &  
(B)

In his report on Malta's fighter defence, a radio officer from Middle East, who visited the island at the end of January, confirmed many of Group Captain Embry's statements on the chief causes of failure. He considered that the operations room was well organised, with VHF/RT and 'pip-squeak' (1) plotting of our fighters, and that the chief cause of the disappointing results obtained was that the fighters seldom attained sufficient height to meet the raiders on even equal terms. The chief reasons for this were the inferior climbing performance of the Hurricanes combined with the short warning period, and the limitations of radar height reading; the height-reading plots faded 25 miles from Malta, thus enabling the enemy to gain or lose height without our knowledge, while approaching the island. His recommendations for the immediate solution of this problem were that the fighters should be ordered to take off as soon as there was a reasonable chance that a raid plotted at Sicily would attack Malta; that, when airborne they should be ordered to attain a height at least 2,000 feet higher than the plotted height of the raid; and that they should meet the enemy twenty miles beyond the coast, where height readings could be taken.

IIJ5/101/4(A)  
Encl. 27A

At this time, however the method and even the possibility of interception was dependent on the number of fighter aircraft available. Serviceability was low as a result of damage sustained not only in combat but also in enemy attacks on the airfields, while disorganisation was caused by water-logging on the airfields as a result of prevailing bad weather. By February 1942 shortage of fighter aircraft, spare parts and civilian labour for emergency repairs resulted in the radar system being used for little more than a long-range air raid warning system

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- (1) 'Pip-squeak' was a device designed to overcome the difficulty of fixing aircraft by R/T when several aircraft were flying at the same time. Simultaneous D/F transmissions from two or more aircraft on the same frequency resulted in no truly directional signal being received. The use of different D/F frequencies for each aircraft was impracticable. It was therefore necessary to arrange for the D/F transmission from each aircraft to be made at different times. To obviate the need for pilots to concentrate on the exact moments at which to switch on and off an automatic time-switch known as a master contactor was devised. It was driven by clockwork and was known as 'pip-squeak' because of the note heard by the pilot during his D/F transmission.

since full use of radar information for interception purposes could not be made. Before deciding whether to engage, or what method of interception to adopt, the controller had to take into consideration:-

- (a) The size of the enemy plot.
- (b) The number of our fighters available.
- (c) Our inability to replace the fighter force.
- (d) The time available to get the fighters to the desired height.
- (e) Weather conditions.
- (f) The targets needing special protection, e.g. ships in harbour, transit aircraft at Luqa.

If he decided to engage the enemy, the controller had two courses of action open to him:-

- (a) Offensive. This course could be taken in clear weather when the number of fighters available was sufficient to supply top cover, or in cloudy weather when single bombers could be intercepted by a single section of fighters, preferably in an area north of the island where reliable heights were obtainable. The method of control required for an offensive interception, when large numbers of the fighters were operating away from the island, was to give vectors, as well as the number, height, composition and speed of the raid.
- (b) Defensive. This course could be taken when a small number of fighters was available, owing to the unserviceability of airfields, and the odds were reasonable, or in cloudy weather when specific targets required defending. For this method, control would give the Hurricanes full information of the raid in relation to geographical landmarks, as well as the number, composition, course and speed of the enemy.

In the event of the fighters being placed at a disadvantage in relation to the raid the policy was to land the fighters if there were time, or, if not, to vector them out of the danger area. The conservation of the fighters was a primary factor in air defence at this time. During some periods a minimum number of fighters for interception was agreed on: if this number was not available when a warning came, interception was not attempted. It will be seen that the offensive method of interception could very seldom be carried out because of the low number of fighters available.

In early March the first Spitfires reached Malta, sixteen in all, but there were not enough of them to make a decisive difference to the fighter defence. In spite of Hurricane reinforcements from the Middle East the fighter force was greatly attenuated and was perpetually fighting against heavy odds. So acute was the situation that, although night raids were commonplace, in the middle of the month the A.O.C. closed down the night fighter flight and put the aircraft thus released, which had the advantage of cannon armament, on to day fighting. On 19th he made a request for more Spitfires, explaining that under the prevailing conditions the fighters were unable to get near the enemy bombers owing to the heavy fighter escorts provided; at the same time the raids were so sustained that it frequently occurred that after an interception a fresh wave of enemy aircraft would bomb the fighters on the airfields as they were being refuelled for the next sortie. Although sixteen Spitfires and a squadron of Hurricanes were

expected before the end of the month, even this measure of reinforcement was not enough to hold off the enemy, to make reconnaissance possible, to retain some measure of offensive activity and to ensure the passage of reinforcement aircraft.

App. O to  
Fighter Cmd  
O.R.B. for  
May 1942,  
IIM/A2/3A

During April, a scientific officer from the operational research section of Fighter Command, visited Malta to advise on the air defence problems. He found that the warning system was good and that by means of a recently introduced 'Y' Service, (1) useful information concerning the enemy could be obtained during air battles, and handed on to the fighters. He had no adverse comments to make concerning control, except that it suffered from the disadvantage of a somewhat inaccurate D/F fixer system for the fighters. At this time the usual procedure for control was to take off the few fighters serviceable, and patrol them about twenty miles off the island, until a favourable opportunity presented itself for a strike at the bombers; a general running commentary was broadcast and the fighters were told when to attack. The scientific officer considered that, while more orthodox methods would have to be employed when Malta had a squadron or two of serviceable fighters, in the conditions prevailing the existing practice seemed the best one to employ. He considered that the main problem for the control was not that of achieving interceptions but of landing the fighters after the bombers had left, and when our fighters had exhausted their ammunition and Me.109s were still patrolling the island. This problem was overcome by setting up a 'sanctuary' area well-defended by the guns, from which the fighters were escorted to their air-fields by a fully-armed fighter. Serviceability in Spitfires was low, chiefly because of the lack of maintenance staff trained to service Spitfires, but arrangements were being made at Air Ministry to rectify this. The morale of the fighter pilots was described as 'terrific', but it was pointed out that inexperienced pilots did not last long and that a high proportion of the casualties was found among the inexperienced pilots up for the first time.

In this respect it should be recorded here that although the first two Spitfire consignments for Malta were supplied with experienced pilots this was not the case with the third consignment, some of the pilots of which had no operational experience, while others had had less than twenty-five hours flying in Spitfires. This was a very serious drawback, considering the exceptionally difficult conditions at Malta and the great strategic importance attached to the outcome of the battle. The Chief of Air Staff had made Malta's pilot requirements fully clear to the A.O.C.-in-C., Fighter Command, and since there were at least fifty day fighter Spitfire squadrons in the United Kingdom in March/April 1942 the dispatch of inexperienced pilots was, to say the least, unfortunate. The very discrepancy between the number of Spitfire squadrons in the United Kingdom and the Middle East (2) would show an exaggerated policy of over-insurance in the United Kingdom, where the Chiefs of Staff had already estimated the chances of invasion as remote, and unlikely to be realised without our fore-knowledge over a period of three months. This over-insurance policy in certain circumstances might have been wise, but there seems to have been no case for it in the Spring of 1942, and in any

A.M. File  
S.36003/II  
Encl.166A, and  
H.Q. R.A.F. Med  
File IJ5/101/4  
Encl. 107A, 108A  
and 111A

(1) Radio intelligence service.

(2) i.e. the few held by Malta.

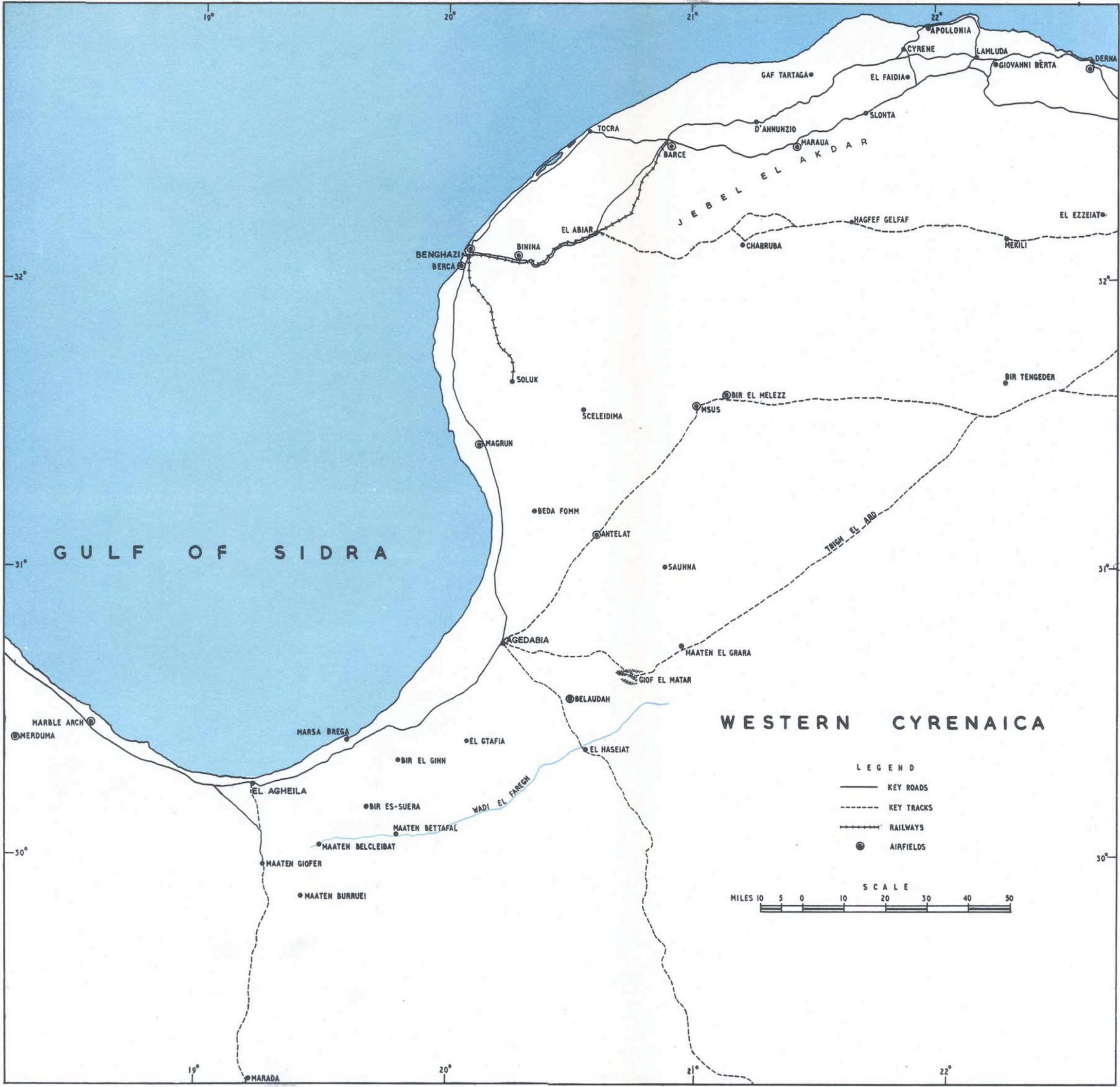
case it was in fact being carried out at the expense of overseas commands where hard battles were being fought or prepared, and where, in Malta's case, a battle for survival was being waged.

The Luftwaffe finally lost the battle of Malta early in May 1942, when a reinforcement of sixty Spitfires turned the tables on the Axis raiders. From 9 May onwards the Spitfires and Hurricanes were able to operate in sufficient numbers to meet the enemy on more nearly equal terms, and a marked decline in Axis attacks commenced. The enemy had begun to show the first signs of flagging in the last few days of April and the few days respite thus allowed, together with the Spitfire reinforcements, enabled the fighters to put up a very concentrated effort when the enemy renewed his heavy attacks in May. Until this time the low fighter strength in Malta had made it impossible to use to the full the available radar information. Then however, an interesting application of radar information was made; the night-flying technique of G.C.I. was used for successful daylight interception of high-flying raiders.

In the first half of July the enemy again mounted heavy raids against the Malta airfields, but the attack was not sustained, and in the second half of the month a new A.O.C. who had recently taken over command at Malta, introduced forward interception as the regular procedure for fighter defence. Although attempts had previously been made to meet the enemy north of the island, from the A.O.C.'s notes it would appear that the more usual procedure during the 'blitz' had been to employ the old method of interception over the island, with control by running commentary, and that this had been forced on the defence by the small fighter strength compared with the great weight of the raids. With three or more squadrons of Spitfires at his disposal the A.O.C. was able to introduce a method wherein one squadron was vectored to meet the opposing top fighter cover, a second was manoeuvred to intercept the close escort, if any, and a third was vectored to intercept the bombers. The third squadron's aim was to make a head-on attack some ten miles from the coast, thus forcing the bombers to jettison their loads. The policy was to employ this method of interception so long as the enemy did not enjoy a great numerical superiority. This 'offensive' defence was the logical step to take, once a sufficient number of fighters was held, for it possessed the great advantage of diminishing the proportion of bombers which reached the island, and consequently, the amount of damage incurred. In theory it was no innovation, but in practice it was for the first time effectively introduced only when a substantial number of high-performance fighters had made it possible. Forward interception was employed during the last German attack on Malta, 11 to 18 October 1942, with considerable success, but Spitfire casualties were heavy, serviceability being reduced from 113 to 55 in five days. This would indicate that in a small and isolated area such as Malta 'offensive' defence could not be maintained in the face of an enemy with comparatively limitless resources.

For further information concerning signals and radar in fighter interception see A.H.B. Monographs, Signals, Vol. IV - Radar in Raid Reporting, Vol. V - Fighter Control and Interception.

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WESTERN CYRENAICA

LEGEND

- KEY ROADS
- KEY TRACKS
- RAILWAYS
- AIRFIELDS

SCALE

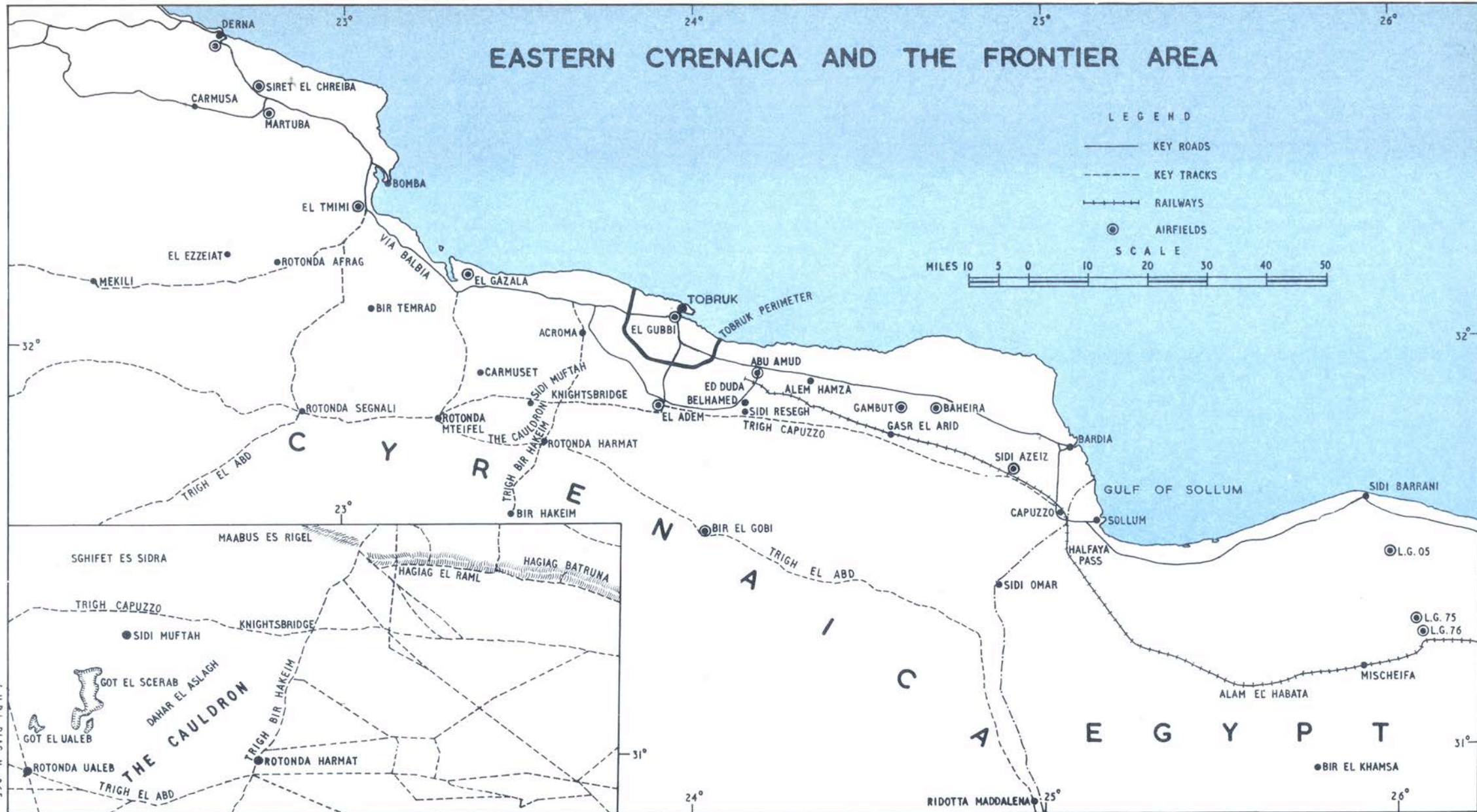
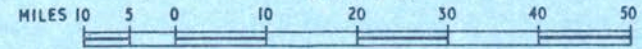
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# EASTERN CYRENAICA AND THE FRONTIER AREA

## LEGEND

- KEY ROADS
- - - KEY TRACKS
- + + + RAILWAYS
- ⊙ AIRFIELDS

## SCALE



# EGYPT - SIDI BARRANI TO THE DELTA

