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AIR OPERATIONS IN
CHINA-BURMA-INDIA THEATER

prepared by

Edward M. Hudak
Major, Field Artillery, 047803
31 May 1949

Air operations in China-Burma-India
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(BRIEF)

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COMMAND AND GENERAL STAFF COLLEGE
Department of Operations and Training
Fort Leavenworth, Kansas
31 May 1949

File No. 2-117

SUBJECT: Air Operations in the China-Burma-India Theater

TO: Director, Department of Operations and Training, C & GSC

1. PROBLEM. -- To determine the need for, extent and results of air operations in the China-Burma-India Theater.

2. FACTS BEARING ON THE PROBLEM. -- a. The critical condition of the Chinese prior to World War II.

b. Strategic importance of China to the United States after hostilities with Japan opened.

c. The inadequacy of the Chinese Air Force to support her ground forces or provide adequate protection to the supply lines against Japanese air attacks.

d. Seriousness of the supply situation in China after the Japanese blocked the Burma Road and tightened her blockade on the East and South of China.

e. India and China were in danger of being overrun by the Japanese after conquest of Burma.

f. Importance of strategic locations of Burma and India to the United States.

g. The employment of air transport to overcome terrain obstacles in movement of supplies.

h. The only American units committed to combat in the China Theater were air force organizations.

i. Air operations were conducted in the China-Burma-India theater by the United States Army Air Force.

j. Important contribution of air power in the China-Burma-India Theater to the ultimate defeat of Japan.

3. DISCUSSION. -- a. China's critical condition, as a result of Japanese aggression, motivated the extension of aid to China. Credits first granted in 1933 and 1934, were renewed in

1938 for \$25,000,000 and, with additional loans, reached a total of \$170,000,000 by the end of 1940. Economic support which the United States withdrew from Japan, was extended on a growing scale to China.

b. The attack on Pearl Harbor and subsequent capture of islands in the Pacific, denied us the natural bases for an offensive against Japan from the mainland of China. It made India, at best, a difficult and possibly temporary way station.

c. Overland transport into China, rather than oceanic shipping to Burma and India, proved to be the bottleneck of China-Burma-India supply. The Burma Road was China's life line to the outside world, after Japan had occupied the coast and established a naval blockade in 1938. The distance by air from Lashio, the railhead in Burma fed by the port of Rangoon, to Kunming in Yunnan Province, is 260 miles. The Chinese began to build it late in 1937 to circumvent the Japanese blockade. The first traffic in 1939 brought supplies into China at the rate of 3,500 tons a month, rising to 12,000 tons monthly in 1941, with the introduction of American methods of maintenance; though a large proportion of the tonnage went for gasoline to fuel the trucks. From the middle of 1941 to the fall of Burma, which closed the Road, it was protected by the Flying Tigers, officially the American Volunteer Group, under Brigadier General Claire L. Chennault. This small group shot down 286 Japanese planes with the loss of only eight pilots.

d. Realizing the importance of the China, Burma and India area, and the magnitude of the subsequent operations to be conducted therein, the China-Burma-India Theater was established early in 1942. Lt. General Joseph Stilwell was placed in command of the United States troops.

e. Concurrent with the formation of the China-Burma-India Theater, plans were made for the expansion of air effort in the India-Burma and China Theaters. The Tenth Air Force was

activated and became operational in the Theater, in the summer of 1942.

f. The Tenth flew from India bases with a three fold mission of guarding the "Hump Line" of the Air Transport Command, into China, and attacking enemy supply in Burma, and Thailand. It bombed 150 targets, including Rangoon, the Moulmein and Akyak docks, Lashio and Henzada storehouses, and the rail junctions of Rangoon, Mandalay and Sagaing, almost denying the enemy use of rail lines in Burma.

In its career, the Tenth Air Force destroyed 622 enemy aircraft, losing only one plane to every two planes destroyed. It flew some 96,000 sorties and dropped approximately 47,600 tons of bombs on the enemy, successfully disrupting Japanese supply lines in Burma and preventing the enemy drive toward India.

g. Prior to the activation of the Tenth Air Force, the Chinese were being supported by the American Volunteer Group, which became operational in December 1941.

With the termination of their contracts with the Chinese Government on 4 July 1942, they were replaced by the China Air Task Force. Although a part of the Tenth Air Force, excessive distance and lack of adequate communication precluded close supervision by the Tenth Air Force. Operating independently, with the same mission as their predecessors, they destroyed 182 enemy aircraft and probably destroyed 87. During their operations they dropped 350 tons of bombs and sunk 50,000 tons of enemy shipping.

h. On 10 March 1943, the China Air Task Force was redesignated the Fourteenth Air Force, operating directly under the Theater.

Though numerically small, the responsibility of the 14th Air Force was a man-sized job. It had to conduct effective fighter and bomber operations along a 2,000 mile front, which extended from Chunking and Chengtu in the north, to Indo-China

to the south; from the Tibetan Plateau and the Salween River (in Burma) in the west; to the China Sea and the Island of Formosa in the east.

Taking full advantage of their interior position, the Fourteenth jabbed the enemy off balance and kept him guessing.

Although extremely handicapped, due to lack of adequate supplies, the results of their operations indicate the degree of success attained.

i. From the birth of the China Air Task Force in July 1942 to the end of May 1945, the United States forces in China destroyed 2,348 Japanese aircraft, with another 778 probably damaged. Japanese shipping losses amounted to 2,267,389 tons. They destroyed or damaged 3,918 locomotives and a larger number of railroad cars.

j. During the operations, the Air Transport Command protected by the Tenth and Fourteenth Air Forces, transported troops, supplies and equipment to all parts of the Theater.

k. The Twentieth Bomber Command, based in India and China, operated their B-29s to strike at targets out of reach of the other air forces.

4. RESULTS. -- a. Contribution of Air Power. A partial indication of air power's contribution to the victorious results attained in the China-Burma-India Theater is listed above. In spite of their impressiveness, the listed data does not present the overall objectives gained as a result of the victories indicated. The following presentation covers these objectives.

b. Air Power in India-Burma.

(1). Air power not only played the major role in preventing Japanese occupation of India but completely isolated the Burma battle fields. This action proved demoralizing to the enemy and had an adverse effect on his war making capability.

(2). The Air transport operations on which the survival of the ground depended, and the forces operating on

the ground, were rendered free from air attack by the enemy with the attainment of air superiority in the India-Burma area.

(3). By direct attack on enemy troops, installations, equipment and lines of communication, air power aided in the destruction of Japanese forces in Burma.

(4). From India-Burma, air power supplied the military effort in China in the greatest air transport effort of its time.

c. Air Power in China.

(1). Air power was instrumental in preventing the occupation and control of all of China by the Japanese armies.

(2). Strikes on shipping and interdiction of North China's railways and highways, and very heavy bombardment attacks on Japanese home islands by China based aircraft, materially assisted in the disruption of the entire Japanese war economy and war making potential.

(3). Operations of China based air power forced the Japanese to dissipate logistical potential to campaigns in China, which otherwise might have been more effectively employed in the Pacific. By attaining air superiority, China based air power assured the allied forces and operations protection from enemy air attack.

(4). China based air power contributed heavily to the attrition of Japanese military power.

5. CONCLUSIONS. -- a. Air operations in the China-Burma-India Theater have given rise to the formulation of new doctrine and provided strategic planners with a wider range of thought in determining operations for the future.

b. The Potentiality of Air Transport Conclusively Demonstrated. Prior to 1942, air transport was confined in the main, to carrying passengers, limited supplies, usually of an emergency nature, mail, aid for cargo transport on a limited

scale. The situation in China demanded that some form of aerial transport be initiated since the terrain and the enemy prevented use of the conventional land and sea lanes of communication.

c. Initial successes soon proved that only the numbers of available aircraft and airfields limited the amount of cargo that could be air lifted. As these planes were supplied, new airfields constructed and personnel made available, the intensity of the ground and air operation increased.

d. The ability of air transport to adequately provide for combat forces isolated from land and sea lanes of communication was amply demonstrated.

e. The acceptance of this new doctrine, new because it was not accepted by strategic planners prior to 1942, gives rise to three ideas.

(1). Land or sea lines of communication to battle areas are not essential, though the size force supported will be governed by limitations discussed previously. The aerial line of communication is particularly adaptable to operations in areas where: (a). difficult terrain forms a barrier to land lines; (b). sea lines or waterways are not available or enemy controlled; (c). a combination aforementioned conditions; (d). the use of an aerial line of communication may be required where speed rather than economy is the governing factor.

(2). Force may be masses, supplied and sustained anywhere in the world.

(3). Air transport will provide flexibility in the defense of an extensive area, where the resources of a nation precludes the establishment of a defense of the entire area, and the exact location of the enemy strike is unknown.

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3. DISCUSSION. -- Part I. Critical Condition of China Prior to World War II.

a. Period 1937-1938. Beginning with the Marco Polo

Bridge outbreak on 7 July 1937, China steadily lost her fight with the Japanese. Ill-equipped, and having lost her best armies and meager air force in the initial engagements, she offered little effective or sustained resistance to the Japanese advances.

By the end of 1938, superior Japanese forces overran Shanghai, Nanking, Hankow, Canton and the strategic Pearl River Delta. Japan now controlled China's northern railroads; had sealed off the Yangtze and Yellow Rivers; controlled ninety-five percent of China's modern industry; had possession of the major seaports and held key areas in eleven Chinese provinces.

Secure in the belief that they now held strategic and economical control of China, the Japanese settled down to a gradual attrition of China's resources as the most convenient means of achieving their objectives in China.

Knowing that China did not possess sufficient armed strength to counter-attack, the Japanese expected an early capitulation by the Chinese Government due to the strangulation effect imposed by the blockade.

The Chinese were able to hold out, however, on the meager supplies coming in on the Burma Road, through Northern Indo-China, the Trans-Siberian Railway and via their lone airway from the coast to the interior from Hongkong.

b. Period 1939, 1940, 1941. Little ground was given up by the Chinese during 1939, 1940 and 1941, but she still suffered losses. Her economic difficulties increased in scope as Japanese pressure tightened the blockade which limited China's contact with the outside world. This limited contact was further curtailed when the Japanese gained control of Northern French Indo-China and the British, acting under Japanese pressure, closed the Burma Road. War between Russia and Germany in 1941, cut off the trickle of supplies coming in on the Trans-Siberian railway and the northwest Russian highway. The fall of Hongkong in December 1941, eliminated the only air route between the Chinese Coast and the interior.

Though the Burma Road was reopened in October of 1941, the Lend-Lease supplies that dribbled in, about 15,000 tons a month, were inadequate to materially effect the scale of China's war effort.

c. Situation in China at the End of 1941. The Chinese army was stalemated along a broken 2,000 mile front, and forced to operate on very meager rations and extremely limited amounts of all type supplies and equipment. Morale was at a low ebb. The Nationalist Government, established at Chungking, was rapidly losing prestige as her people were subjected to mounting economic hardships. Her air force was reduced to practically a paper organization. The American Volunteer Group in China provided the only air defense available, but this small force was not adequate to drive the Japanese out of China. (See Appendix I, Annex 2.)

Part II. -- American Interest in and Aid to China Prior to World War II.

a. General. -- The attitude of the United States towards Japan's aggression had been one of moral disapproval rather than overt opposition. As China's position became more critical, however, there was a growing tendency to stiffen those measures which implied a warning of more concrete action if Japan persisted in her course.

b. Aid to China. -- Japan's blockade of China in 1938, crystallized the thinking of the United States and prompted the extension of aid to China.

Credits first granted China in 1933 and 1934 were renewed in 1938 for \$25,000,000 and with additional loans, reached a total of \$170,000,000 by the end of 1940. The economic support which the United States withdrew from Japan was extended on a growing scale to China. Small as this aid was it helped China to sustain its resistance to Japan. (See paragraph 1, Appendix II to Annex 2.)

c. Military Mission, Lend-Lease, and Technicians to Aid of China. -- In August 1941, the United States sent a military mission to the aid of China. The mission included technicians to assist in improving the Burma Road and a staff of military advisors.

Lend-Lease was extended to China in April 1941. Small initial shipments of Lend-Lease items arrived in China in the summer of that year.

China's appeal for American engineers and pilots was answered by a number of United States citizens who volunteered their services in various categories. Among the latter was a retired Army Air Force Officer named Claire Lee Chennault. Under his able leadership, the American Volunteer Group, known as the Flying Tigers, was formed in 1941, and provided China's first air defense against the Japanese since the loss of her own air force early in 1938. (See Appendix III, Annex 2.)

Part III. -- Strategic Importance of China to the United States after Hostilities with Japan Opened.

a. The importance of China in the conflict with Japan resolves itself into the following considerations.

(1). If China were to capitulate, her resources of men, materiel and food, and her geographical location would be of material assistance to Japan.

(2). If she remained free, her strategic location on the flank of Japan's extended line of communication would provide a base for air operations against the life lines of the Japanese Empire.

(3). Similarly, if China remained in the war against Japan, a base was available for attrition operations against a considerable portion of the Japanese war machine.

(4). Loss of bases in the Pacific, early in the war, placed the United States in a position remote from Japan's home bases, thus creating a requirement for an operating base from

which to strike at and cripple Japan's industrial potential.

b. In brief, the United States was committed to keep China fighting, to deprive Japan of her assistance and to provide a base on the enemy's flank from which to attack his war machine.

Part IV. -- Allied Plans for Air Operations in Support of China.

a. Need for Bases in China. To strike at the Japanese homeland, on the ground or from the air, the United States required bases within aircraft operating ranges and additional bases from which to launch ground operations, concentrate supplies and in general provide extensive logistic support for sizeable operations. It appeared quite evident that a corridor into China from India and Burma must be kept open so that supply to bases in China would be insured. With the tempo of Japanese air attacks on the Burma Road increasing, firm steps were taken to increase the air defense of the Burma Road and increase the air operations in support of China. (See Annex 3.)

b. India and Burma as Strategic Factors. With the ports of China under Japanese control, supplies would have to be brought in at the available ports on the Burma and India coasts. There is little about, either Burma or India to recommend them as theaters of operation. Their chief disadvantage is their great distance from the United States. No available sea route is less than 13,000 statute miles. Available port facilities are limited. Transportation and communications facilities are inadequate. The railroad system, lacking sufficient rolling stock and complicated by the existence of various gauges, would prove of little usefulness. The climate subtracts from their desirability, running into excesses of temperature and humidity. Burma is the gateway to China's roads. Conquest of all of Burma would be most dangerous because of the threat to the land routes from India to China.

The following considerations are of added significance in

determining the importance of India and Burma to the overall operations in the theater:

(1). If India and Burma were overrun; their combined resources and potential would be made available to the Japanese and similarly denied to the allied war effort; the value of China as a base for air operations against Japan would be lessened to a great degree if not completely nullified; the ability of China to maintain sustained resistance against Japan's advances would be jeopardized.

(2). If one or both remained free, allied operations could be conducted according to plan.

It is therefore apparent that their geographical proximity to China and allied considerations, coupled with the tactical situation, declared India and Burma to be of vital importance to the Allied Nations.

c. Formation of the China-Burma-India Theater. The Jap advance in the early months of 1942 toward the southern approaches of China, penetrating into Burma, threatened the life line of China. The loss of this road would not only be disastrous for China but would seriously hamper the entire allied effort against Japan. Plans were therefore made for creating the China-Burma-India theater of operations, with Chinese, British and American officials occupying command positions. In February, Lt. Gen. Joseph Stilwell was appointed Commander of United States Forces in the new theater. (See Annex 4.)

At the same time, Japanese penetration into the Netherlands East Indies foretold the dissolution of the ABDA (American, British, Dutch, Australian) Command operating in that area. Faced with these expected losses and the growing seriousness in the CBI, plans were made to establish an air force in the India-Burma region and Australia. The India-Burma force would supplement the assistance China was now receiving from the American Volunteer Group and the Royal Air Force operating in China.

d. Activation of the Tenth Air Force in the China-Burma-India Theater. With the decision made to establish an air force in the India-Burma region, Headquarters United States Army Air Forces, India-Burma, was established at Delhi in March 1942. This location was selected to effect better coordination with the British.

A planning group, headed by General Brereton, started making plans for increased air operations in the theater. Their material assets consisted of \$250,000 in American currency, one LB-30 and five war weary B-17s.

Their gigantic task was made more bleak by Japanese advances throughout Southeast Asia, toward the subcontinent of India, where they could deliver a severe blow to the Allied cause in the Orient. (See paragraph 1, Annex 5.)

Demands from other theaters and the policy of concentrating first on the elimination of Germany gave the CBI a low priority. This situation formed an obstacle in the obtaining desired personnel and equipment for the Tenth Air Force. Though it was activated on 12 February 1942, at Patterson Field, Ohio, it was not until 17 May 1942 that the Headquarters and Headquarters Squadron arrived in India. (See paragraph 2, Annex 5.)

e. Mission of the Tenth Air Force. In addition to defending India from the skies, the Tenth Air Force would also be required to: provide an aerial supply line to China; assist General Stilwell's forces in Burma; develop India, apart from its own defense, as a base for striking the Japanese wherever they may be within bomber range.

f. Early Operational Difficulties. With its force now consisting of six B-17s, two LB-30s and ten P-40s, limited patrol and transport operations were undertaken without any appreciable delay. Extensive operations had to await the arrival of more planes, procurement of suitable type of aircraft, training of personnel, and provision for facilities.

Requests for badly needed P-38s equipped for photographic work were turned down. Lacking adequate fighter protection, bombing attacks had to be made at night under very unfavorable conditions. (See paragraph 4, Annex 5.)

During this early period organizational difficulties were corrected to the extent possible, with the major portion of the time spent in training, developing techniques and preparing plans for subsequent operations.

g. Materiel Difficulties. Most of the aircraft arriving from the United States were in need of major repairs and, in some cases, complete overhaul before they could be put into combat. Many of the planes brought to Karachi in need of engine replacement had to wait for weeks before replacement spares arrived.

h. Personnel Problems. The unsatisfactory climate, absence of recreational facilities, sporadic delivery of mail from the United States, all had an adverse effect on the morale of the personnel. The inactivity resulting from lack of proper equipment for operational and training activities did little to bolster their spirits. The prospect of being overrun by the advancing Japanese further aggravated an undesirable situation.

Part V. -- Air Operations.

a. For evolution of air organization in the India-Burma-China Theaters see following Annexes:

(1). Annex 6 - China Theater

(2). Annex 7 - India-Burma Theater

b. American Volunteer Group. -- (1). Operations. The American Volunteer Group provided the first organized air resistance the Japanese had faced since the beginning of the Sino-Japanese War in 1937. Beginning operations on 21 December 1941, the American Volunteer Group kept jabbing at the Japanese whenever and wherever they could.

The combined effort of the American Volunteer Group and the Royal Air Force kept the important Port of Rangoon open for

almost three months after the first enemy assaults began.

(2). Results of Operations. During its six months of operation over Burma and China, the American Volunteer Group destroyed 297 enemy aircraft in air combat, while losing 14 of their own P-40s. The air supply route over the Hump was successfully defended, as well as the supply bases depots in Kunming. (See Appendix III, Annex 2.)

c. Tenth Air Force. -- (1). Early Operations. Air operations by the Tenth Air Force were officially inaugurated on the 2/3 April 1942, in an attack by B-17s on shipping at Port Blair, Adaman Islands in the Bay of Bengal. This and similar operations entailed the use of an advance base near Calcutta, a distance of 1200 air miles from the home base at Karachi. Subsequent operations were characterized by the same difficulties of distance and the shortage of aircraft, as well as unfavorable weather conditions. Consequently these early missions were little more than harassing missions.

(2). During this same period, the India-China Ferry (See Annex 8), conducted operations transporting supplies from India to Burma and China. Service facilities and supply and maintenance installations were also in the process of being built. (See Annex 8.)

Operations, in the main, were still of a defensive nature due to the inadequacy of equipment, personnel and supplies, coupled with Japanese capabilities which indicated still further advances in the China-Burma-India Theater.

Improvement of the Allied situation in the Indian Ocean permitted movement of air bases eastward.

Late in June, the 23d Fighter Group and elements of the 11th Bombardment Squadron were assembling in China. This regrouping was partially in anticipation of replacing the American Volunteer Group whose contracts would expire on 4 July 1942, but mainly to provide increased air support for British and Chinese forces

operating in China. (See Annex 9.)

d. China Air Task Force. -- (1). Operations. The China Air Task Force became operational on 4 July 1942. In order to bring important enemy targets in Southern China within bomber and fighter range, operations were conducted from a string of bases running in a northeast-southwest line starting from Henyang, followed by Lingling, Kweilin, Liuchow and Nanning. To guard the ferry over the Hump, aircraft operated from Yunnanyi, in Western China, and Dinjan in Assam.

Bomber strikes included attacks on important Japanese airfields at Nanchang, southeast of Hankow and Tien Ho airdrome, at Canton, in an effort to reduce Japanese numerical superiority. Fighter aircraft challenged every Japanese bomber raid over Free China, accounting for a number of enemy aircraft during every engagement. (See Annex 10 for details of operations.)

(2.) Results. During their eight months of operation, from 4 July 1942 to 10 March 1943, the claims of Headquarters China Air Task Force included 182 enemy aircraft destroyed, and 87 probably destroyed. During the operations, 350 tons of bombs were dropped on Japanese installations and 50,000 tons of enemy shipping sunk. During the same period 24 American aircraft were lost to enemy action.

e. India Air Task Force. -- (1). Operations. The India Air Task Force organized in October 1942, had very little available combat power during its organization period. To add to their difficulties, the equipment required for an adequate early warning system was not available.

f. Late in October word was received that the Tenth Air Force was to be relieved of responsibility of operating the Ferry, effective 1 December. (See paragraph 1, Annex 11.) Before any of the forces could be deployed, the Japanese attacked Dinjan on 25 October. Approximately 100 planes bombed and strafed the field at Dinjan, as well as the newer fields at Chabua,

Mohanbari, and Sookerating. Due to the inadequacy of the early warning system, the Americans suffered heavy losses. Five transports, five P-40s and two P-43s were destroyed, while four transports and 13 fighters were badly damaged. On the next day and the 28th, however, when the enemy came over again, the India Air Task Force squadrons were able to destroy fifteen Japanese raiders with little damage to themselves.

For several weeks while the India Task Force was being built up, General Haynes employed his forces defensively with only occasional offensive missions by small flights of heavy bombers.

g. The opening attack of this campaign occurred on November 20, when eight B-24s carrying 40,000 pounds of bombs attacked the marshalling yards at Mandalay. From Myitkina in Northern Burma, to Bangkok in Thailand, and Port Blair in the Andaman Islands, the India Task Force strafed at low level and bombed from high altitudes. In 17 heavy bombing raids between November 20 and December 31, they dropped 414,000 pounds of high explosives on enemy targets.

From April to December 1942, heavy bombers flew only 179 sorties and dropped 299 tons of bombs. Medium bombers from July to December flew 331 sorties and dropped 346 tons of bombs. Fighters from July to December 1942 flew 791 sorties and dropped 24 tons of bombs. Total tonnage dropped was 669 tons. (See paragraph 1, Annex 11.)

2. Air Operations In India and Burma During 1942. -- a. During 1943 the India Air Task Force, concentrated on active defense of the Ferry Route between India and China and the airfields and equipment in the Assam area.

b. During 1943, bomb totals of the India Air Task Force had been stepped up to an unusual degree. In January, the total of bombs dropped was about 200 tons; by May, it reached 1,400 tons. From November 1942 through September 1943, heavy and medium bombers performed 714 missions, flew 4,792 sorties, dropped 6,158

tons of bombs and destroyed 44 enemy planes, with 39 probable destroyed. In all, the India Task Force lost only 12 planes.

c. By November 1943, the Tenth Air Force was making headway in gaining limited air superiority over Burma. That November, the Tenth joined General Stratemeyer's Eastern Air Command, which in turn was a part of the Southeast Asia Command under Lord Louis Mountbatten.

d. Heavy bomber sorties for the year 1943 mounted to 2,751, with 4,651 tons of bombs dropped. Light bombers flew 4,003 sorties and dropped 4,243 tons of bombs. (See paragraph 2, Annex 11.)

e. Local superiority, gained in the latter part of 1943, was maintained in 1944.

3. Air Operations in India and Burma During 1944. -- a. During January and February counter air force operation were mainly defensive in nature. This was primarily due to the fact that the newly activated Eastern Air Command was in the process of planning its operations.

b. In February 1944, in attempting to attain local air superiority in support over the battle area of his Arakan offensive, the enemy expended a major effort against the allied air forces. However, the newly acquired Spitfires of one group took such a heavy toll that he was forced to abandon the effort. Verified Allied claims for January and February were 40 enemy aircraft destroyed, 19 probably destroyed and 102 damaged. During March, April and May offensive fighter action by Army Air Force units over Japanese bases, substantially broke the Japanese dominance of the air over Burma, destroying 224 aircraft, probably destroying 29 and damaging 58. (See paragraph 3, Annex 11.)

c. The combined Army Air Force and Royal Air Force score during March, April and May was 309 enemy aircraft destroyed, 56 probably destroyed and 193 damaged.

d. In June 1944, a marked change in operational policies by the Japanese was evidenced. The enemy seemed to have turned to a form of hit and run guerilla warfare. As a result, the number of enemy aircraft destroyed by the Allied Air Force, in the last half of 1944 never reached the totals amassed during the period March, April and May.

e. The enemy did, however, conduct nuisance raids during this period and continued to send out photo and visual reconnaissance missions. The latter very seldom were permitted to return to their bases. This lack of air reconnaissance intelligence eventually led to complete Japanese disorganization and utter ignorance of the penetration movement which captured Meiktila.

f. By the end of 1944, as a result, air superiority in Burma had been supplanted by air supremacy.

4. Air Operations in India and Burma During 1945. -- a. It was obvious that the main Japanese air strength had been withdrawn to Siam. On 15 March, 40 P-51s of the American Second Commando Group, flew a 1,600 mile round trip from Cox's Bazaar and attacked Don Mouang Airfield, 12 miles north of Bangkok. They achieved complete surprise and destroyed 26 enemy aircraft, probably destroyed 6 and damaged 31, for a loss of one P-51. Allied bombers continued to bomb Rangoon and the Don Mouang area with little or no opposition.

b. By the last of April 1945, there were only 12 enemy aircraft, fighters, in Burma and they were based in the Moulmein area. These, plus a few that could be brought in from Siam, occasionally showed themselves over the fighting front, but were ineffective as a defensive or offensive force. (See paragraph 4, Annex 11.)

c. The Eastern Air Command, which included the Tenth Air Force for a period, destroyed, probably destroyed or damaged 1114 enemy aircraft between 15 December 1943 and 1 June 1945, in

India-Burma.

5. Tenth Air Force Operations In China. -- a. Role in China.

In addition to operating with its major forces in the India-Burma area as discussed in the preceeding paragraphs, the Tenth Air Force was responsible for certain operations in China. (See paragraph 5, Annex 11.)

b. Air Operations on the Salween River. During the period September 1944 to January 1945, the Tenth Air Force fighter-bombers, flew approximately 1,800 sorties from Burma bases against Japanese positions on the Salween front.

c. The China Offensive. In April, Headquarters Tenth Air Force was ordered to China. The advanced detachment was located in Luliang when a change of decision was made 2 May 1945, removing the Tenth from China and standing it down from combat operations at Piardoba, India. In the last week in June the decision was changed and the Tenth Air Force was again ordered to China, closing at Piardoba and opening at Kunming on 23 July 1945.

d. The basic conception of the reorganization in China, established the Fourteenth Air Force as the strategic air force to operate generally north of the twenty-seventh parallel on Japanese lines, of communications and strategic targets, and the Tenth Air Force as the tactical air force to cooperate with the Chinese ground armies operating south of the twenty-seventh parallel. (See paragraph 5, Annex 11.)

6. Postwar Occupation, Evacuation and Supply. -- a. With the end of the war, the Tenth Air Force was selected by the commanding general, Army Air Forces, China Theater, as the operating agency for all intra-China air transportation. Headquarters Tenth Air Force, moved back to Kunming on 25 August 1945. (See paragraph 6, Annex 11.)

4. RESULTS. -- a. Contribution of Air power. A partial indication of air power's contribution to the victorious results

attained in the China-Burma-India Theater is provided in a tabulation of statistical data based on claims submitted by the operating air forces. (See Annex 15, India and Burma; and Annex 16, China.)

Here In spite of their impressiveness, the listed data does not present the overall objectives gained as a result of the victories indicated. The following presentation covers these objectives.

b. Air Power in India-Burma.

(1). Air power not only played the major role in preventing Japanese occupation of India but completely isolated the Burma battle fields. This action proved demoralizing to the enemy and had an adverse effect on his war making capability.

(2). The air transport operations on which survival of the ground depended, and the forces operating on the ground, were rendered free from air attack by the enemy with the attainment of air superiority in the India-Burma area.

(3). By direct attack on enemy troops, installations, equipment and lines of communication, air power aided in the destroyal of Japanese forces in Burma.

(4). From India-Burma, air power supplied the military effort in China in the greatest air transport effort of its time.

c. Air Power in China.

(1). Air power was instrumental in preventing the occupation and control of all of China by the Japanese armies.

(2). Strikes on shipping and interdiction of North China's railways and highways, and very heavy bombardment attacks on Japanese home islands by China based aircraft, materially assisted in the disruption of the entire Japanese war economy and war making potential.

(3). Operations of China based air power forced the Japanese to dissipate logistical potential to campaigns in China, which otherwise might have been more effectively employed.

in the Pacific. By attaining air superiority, China based air power assured the allied forces and operations protection from enemy air attack.

(4). China based air power contributed heavily to the attrition of Japanese military power.

5. CONCLUSIONS. -- a. Air operations in the China-Burma-India Theater have given rise to the formulation of new doctrine and provided strategic planners with a wider range of thought in determining operations for the future.

b. The Potentiality of Air Transport Conclusively Demonstrated. Prior to 1942, air transport was confined in the main, to carrying passengers, limited supplies, usually of an emergency nature, mail, aid for cargo transport on a limited scale. The situation in China demanded that some form of aerial transport be initiated since the terrain and the enemy prevented use of the conventional land and sea lanes of communication.

c. Initial successes soon proved that only the numbers of available aircraft and airfields limited the amount of cargo that could be air lifted. As these planes were supplied, new airfields constructed and personnel made available, the intensity of the ground and air operation increased.

d. The ability of air transport to adequately provide for combat forces isolated from land and sea lanes of communication was amply demonstrated.


e. The acceptance of this new doctrine, new because it was not accepted by strategic planners prior to 1942, gives rise to three ideas.

(1). Land or sea lines of communication to battle areas are not essential, though the size force supported will be governed by limitations discussed previously. The aerial line of communication is particularly adaptable to operations in areas where: (a). difficult terrain forms a barrier to land lines; (b). sea lines or waterways are not available or enemy controlled;

(c). a combination aforementioned conditions; (d). the use of an aerial line of communication may be required where speed rather than economy is the governing factor.

(2). Force may be massed, supplied and sustained anywhere in the world.

(3). Air transport will provide flexibility in the defense of an extensive area, where the resources of a nation precludes the establishment of a defense of the entire area, and the exact location of the enemy strike is unknown.


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Major, Field Artillery
Student

ANNEXES: See Contents.
CONCURRENCES: Omitted.
NONCONCURRENCES: Omitted.
CONSIDERATION OF NONCONCURRENCES: Omitted.
ANNEXES ADDED: Omitted.

COMMAND AND GENERAL STAFF COLLEGE

DEPARTMENT OF OPERATIONS AND TRAINING

Fort Leavenworth, Kansas

ANNEX 1.

22 November 1948

MONOGRAPH SUBJECT NUMBER 2-117

Regular Course, Phase V, 1948-49

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REFERENCES: The Campaign in Burma; Eldridge, Wrath in Burma; Ayling, Old Leatherface of the Flying Tigers; White and Jacoby, Thunder Out of China; Belden, Retreat With Stilwell; Bellah, The Password was Mandalay; Burchett, Bombs Over Burma; Rolo, Wingate's Raiders; Rumsey, "Air Supply in Burma," The Army Quarterly, Oct. 47; Russell, Forgotten Skies; Mims, Chennault of the Flying Tigers; "Chennault and His Flying Tigers," Readers Digest June 1942; "Burning Man," Time 4 May 42; Mazet, "How to Beat the Japs in China," Flying, June 43; Craven and Gate, The Army Air Forces in World War II.

NOTE TO STUDENTS:

1. The references above are furnished to give the student enough material with which to begin his research. It is anticipated that the student will make use of all other available sources in order to give adequate scope to his subject and, when appropriate, to complete development of the subject to date.

2. The scope suggested below is intended as a guide only, and is not to be construed as a limitation on the student's perusal of the subject.

SCOPE:

1. American interest in, and aid to, China prior to World War II.
 - a. Lend Lease.
 - b. Technical assistance to Chinese Air Forces.
 - c. Formation of the American Volunteer Group (Flying Tigers).
2. Strategic importance of China after hostilities with Japan opened.
3. Allied plans for air operations in support of China.
 - a. India and Burma as strategic factors.
 - b. Formation of the CBI command.
 - c. Handicaps in early planning:
 - (1) Materiel.
 - (2) Personnel.
4. Air Operations.
5. Results.
6. Conclusions.

AIR OPERATIONS IN THE CHINA BURMA INDIA THEATER

ANNEX 2

AMERICAN INTEREST IN, AND AID TO CHINA
PRIOR TO WORLD WAR II

CONTENTS

Appendix I	--	American Interest In China
Appendix II	--	Aid To China
Appendix III	--	American Volunteer Group

AIR OPERATIONS IN THE CHINA-BURMA-INDIA THEATER

AMERICAN INTEREST IN CHINA PRIOR TO WORLD WAR II

Appendix I to ANNEX 2

1. GENERAL. -- a. In the years preceeding 1940, the United States and Great Britain tried, by appeasement, to settle the turmoil created by Japan in the East. Though each recognized the danger to her interests, neither was in a position to back diplomatic reproofs by a threat of armed forces. Recognizing the predicament these two powers were in, and motivated by individual but paralleling desires, Germany, Japan and Italy culminated a direction of strategy by drafting and signing the Berlin Pact on September 27, 1940.

b. Hitler, knowing that American aid was injecting steel into Britain's continued resistance, felt that the Pact would force the United States to divert her attention and resources to the Far East. Britain, left to her own devices, would then become easy prey for the Nazi talons. Japan, on the other hand, was certain the combined strength of this powerful coalition would be sufficient to cause the United States to cease interfering with either the European or Eastern situation. History has proven the error in their judgement.

c. The real effect was to reveal how fundamentally the outcome of the European conflict was bound up with American survival. If the Axis were defeated in Europe, Japan would cease to be a menace. But if Germany and Italy won, the United States would find herself menaced not only in the Pacific, but possibly even on the American Continent. It was on the Atlantic side that the real menace lay, and only the desperate struggle of Britain for survival kept it from becoming an immediate threat. If Britain went under, America and the dictators would stand face to face in deadly and implacable conflict.

d. By April 1941, the American Government had reached a position which was short of war only in a nominal sense. A stand

was taken that denoted clearly an intention to forcibly prevent a German victory even to the extent of resorting to armed conflict. Their actions, however, indicated that they hoped to contribute to a Nazi defeat without going to this last extreme. This hope even resulted in certain steps, such as the continued shipments of oil to Japan and the sending of supplies to French Africa, which represented a lingering faith in the possibility of appeasing the minor members of the Axis. But if there were contradictions in Washington's policy, they were concerned with the ultimate aims, rather than with the means.

2. WAR IN CHINA, 1937-1938. -- a. Since the Marco Polo Bridge outbreak, 7 July 1937, the Chinese lost ground steadily to the Japanese. Facing little effective or sustained resistance, the Japanese Army pushed inland south and west along the North China main rail line to the Yellow River.

b. By the end of 1938, the superior forces of the Japanese had seized control of China's northern railroads, had sealed off the Yangtze and Yellow Rivers, controlled ninety-five percent of China's modern industry in the area, had possession of the major seaports and held key areas in eleven Chinese provinces. Only the absence of roads and railroads to the vast interior of China and the difficult terrain prevented further advances by the invading forces.

(c. The Japanese now believed they held strategic and economic control of the country. Expecting China to capitulate when the strangulation effects of the blockade were felt, they settled down to a war of waiting. Knowing China had lost most of her best fighting forces and what air force she had in the initial engagements, no counter attack was feared.

3. AMERICAN INTEREST AROUSED. -- a. China's critical situation made itself felt in the State Department of the United States. It was readily realized that China could not hold out against the Japanese without outside assistance.

b. As a result, the policy of the United States toward China changed. China must not be lost to the Allies. Aid, however, was to be limited, since the attitude of the United States had not as yet fully crystallized to an extent sufficient to produce an all out effort. (See Appendix II to Annex 2.)

AIR OPERATIONS IN THE CHINA-BURMA-INDIA THEATER

AID TO CHINA, INCLUDING LEND LEASE

Appendix II to ANNEX 2

1. AID TO CHINA. -- a. The attitude of the United States toward Japan's advance had been one of moral disapproval rather than overt opposition. There was a growing tendency to stiffen these measures which implied a warning of more concrete action if Japan persisted in her course.

b. In 1938, the credits first granted China in 1933 and 1934 were for \$25,000,000. Further indirect aid was given China when the State Department brought pressure to bear on manufacturers to impose an embargo on the export of various supplies such as aircraft parts. The denunciation of the trade treaty in July 1939 opened up the possibility of more official steps. In July 1940, the President applied licensing provisions to cover a list of commodities which included ferrous-metals, ammunition, aircraft equipment, aviation gasoline and certain categories of scrap steel. This did not as yet constitute an embargo, for the licenses continued to be issued; but it did raise the prospect that 26 percent of America's export of war materials would be cut off at any moment by executive order.

c. During the summer in 1940 and prior to the signing of the Pact between Germany, Japan and Italy, it was quite evident to the State Department that such an agreement was pending. Based on this knowledge and after a revision of foreign policy which was dictated, the United States took steps which constituted a reply. On September 26, the export of scrap, so vital to Japan's steel industry was embargoed on 16 October. At the same time a loan of \$25,000,000 to China was announced, to be liquidated by American purchases of Tungsten. In October, further warning measures were taken in strengthening of America's forces in Hawaii. Further, the State Department advised Americans in Japanese controlled territories to return home as soon as they could arrange their affairs.

d. China's rising hopes were further elevated by Britain's announcement to reopen the Burma Road on 18 October after having to close it three months previous as a result of diplomatic pressure exerted by Japan. Russia had made it clear that she would continue to send aid to China. The Netherlands Indies, heartened by the stands taken by the United States and Great Britain, strengthened her defenses. In spite of an agreement increasing oil deliveries to Japan, they were effectively resisting her more extreme demands.

e. December brought further happiness and aid to China. Washington extended credits to her totalling \$100,000,000. This was followed by an extension of export license provisions to an important range of iron and steel products. Canada had already placed a ban on the export of copper to Japan. Britain, on 10 December, granted to China credits of 10,000,000 pounds sterling.

f. It was becoming rapidly apparent to the Axis powers that the strategy of the Berlin Pact, instead of forcing a new American retreat, had actually led to a reversal of the retreat which had formerly been in progress.

2. MILITARY MISSION AND TECHNICIANS TO AID OF CHINA. -- In August 1941, the United States sent a military mission to China under Brigadier General Magruder. The mission included technicians to assist in improving the Burma Road. Arms and other supplies were being sent to China, while Japan credits were frozen, and the shipment of oil and metal supplies were cut off from the United States and the Netherlands Indies. Individual assistance was provided in the form of American citizens, all qualified technicians, engineers and pilots, who, over a course of years, offered their services to China. Among the latter was a retired Air Corps Officer, Claire L. Chennault. Under his leadership, the Chinese fought the Japanese Air Force until Russian entry into the European

war in June 1941 cut off China's main source of aircraft supply. Faced with a dwindling air force, and almost a complete lack of resupply, he evolved a plan in creating the First Volunteer Group. The spawning of this group was the start of what was later to become the Japanese Nemesis in their attempted conquest of the Orient. (See Appendix III to Annex 2.)

AIR OPERATIONS IN THE CHINA-BURMA-INDIA THEATER
FORMATION AND SUBSEQUENT OPERATIONS OF THE AMERICAN
VOLUNTEER GROUP (FLYING TIGERS)

Appendix III to ANNEX 2

1. EARLY DIFFICULTIES. -- a. In the middle of 1940 President Roosevelt announced that Lend-Lease aid was to be extended to China. This announcement came after the Japanese had invaded Indo-China and were in a position to threaten Burma. To the Chinese Government, pitifully weak in supporting air forces, this additional aid provided a much needed stimulant. The first thought, of Dr. T. V. Soong, China's Minister of Foreign Affairs, located in Washington, was pilots and planes.

b. He immediately called for Claire Lee Chennault, who was then China's Director for Aviation Training, to advise him in the matter. Chennault had previously attempted to obtain planes and crews from the U. S. but had not been successful. This trip, he felt, would provide a realization of a dream, and implementation of a plan that he had been working on for three years. Success was not immediately his, however, since China was low on the list of priorities. Those planes that were not being shipped to England, were earmarked for United States pursuit squadrons. To add to his problem, the United States officials refused any aid in the form of qualified pilots.

c. The problem of planes was finally partially answered by a release to China of a hundred P-40's turned down by the Army and refused by the Royal Air Force. Though they lacked engines, an adequate quantity was made available by the General Motors Allison Factory, who had a supply of engines on hand that had been rejected by the Army for minor faults.

d. A radical change in the attitude of the United States Government opened the door to the answer on the question of pilots. With the needed authority provided, the Central Aircraft Manufacturing Company of China, was designated as the intermediary for

the Chinese Government in engaging pilots and ground crews. The Army, Navy and Marine Corps were instructed to release pilots who would like to volunteer for this service. This included ground crews and technicians.

2. ARRIVAL IN BURMA AND ADDED TRAINING. -- a. Early September 1941, the first group of Americans, dressed as civilians, arrived at Rangoon, Burma. The group included pilots, mechanics, ground crew men, doctors and nurses. Since practically all had received combat training with the United States Marines, Navy and Air Force prior to volunteering for this mission, they were ready and eager to do battle with the Japs. They reckoned without complete understanding of a harsh taskmaster who was to be their boss, Col. Claire Lee Chennault.

b. Realizing the full value of this recently acquired comparative wealth in personnel and equipment, he was reluctant to employ them against a capable enemy who outnumbered them by a tremendous margin. Instead, there followed several months of added training under the tutelage of Chennault at the airfield located in Toungoo, Burma. Considerable time was devoted to learning Japanese technique; a study of his aircraft, particularly from the standpoint of vulnerability and flight characteristics; aerial discipline and combat tactics. The men were trained to match the strong points of the P-40's against the weak points of the Zero. Above all, they acquired an appreciation of the value of trained pilots and operational aircraft in this part of the world where both were at a premium. It was during this period that the shark faces appeared on the noses of the P-40's. This was done, when it was learned that the Japs had a lifelong fear of the shark.

c. Three and a half months after the arrival of the first planes in Burma, the AVG was ready to go. Of the original 100 planes and pilots 90 planes remained and a few over 90 pilots. The remainder were lost during training.

d. The primary mission of the American Volunteer Group was the defense of the Burma Road, China's last remaining avenue of communication with the outside world.

3. TIGERS IN ACTION. -- a. The American Volunteers' first reconnaissance missions, preparatory to combat with the Japanese Air Force, took place even while America's ships and planes in Hawaii were still smoking from the Jap's sneak attack against the United States. For seven months thereafter, the Flying Tigers were almost the sole hope of the beleaguered forces, which for more than four years had been fighting desperate battles with little material help from the Allies. In fact, the American Volunteer Group provided the first organized air resistance the Japanese had faced since the beginning of the Sino-Japanese War in 1937.

b. Under Chennault's guidance, the Flying Tigers hurled themselves against overwhelming odds. Their motivation may have been the realization that now the battle was not alone for China, but for the United States. Limited only by the available supply of gasoline and ammunition, they relentlessly attacked Japanese bomber flights, shipping, installations, troop concentrations and supply lines.

c. The Japs seldom sent fighter escort with their bomber flights. Their almost complete freedom of operation from air attack and the distance they operated from the bases, had provided them with a security they were soon to lose. This fact, coupled with the tactics developed by Chennault in employing his fighters in pairs, inflicted a heavy toll on the Japanese bomber flights.

d. Between 18 December 1941 and 4 July 1943, the American Volunteer Group piled up the astonishing total of 297 confirmed air victories, taking a Japanese personnel toll conservatively estimated at 1,500 pilots, navigators, gunners and bombardiers. This mass of damage caused by the American Volunteer Group was accomplished with minimum loss to their own ranks.

e. Increased shipments of ammunition, planes, gasoline and spare parts permitted more extensive operations, however, the group was still relatively small compared to the enormity of the task they faced.

f. The problem of short supply was ever prevalent. In spite of increased shipments, the supply could not keep up with the demand. The inadequacy of suitable lines of communications into China was a serious detriment to the operating air forces. Due to excessive use, and a lack of adequate spare parts and maintenance crews, the engines wore out and planes were grounded until replacement parts arrived.

4. END OF THE AMERICAN VOLUNTEER GROUP. -- a. After a colorful period of operations the American Volunteer Group was disbanded 4 July 1942. As a windup, they bombed Hankow, Japan's main war base in Western China; sank an enemy war ship, two transports, set ablaze a river warehouse and bombed military establishments.

b. During their period of operations they had successfully accomplished the mission of providing air protection for the Burma Road. They had achieved limited local superiority to such an extent that the Japanese High Command made repeated attempts to wipe them out of existence but without success. With the assistance of the Royal Air Force in China, they kept the important port of Rangoon open for almost three months. In stopping the enemy push, temporarily, into Southern China through the Salween Gorge, and in giving certain Chinese areas their first relief from enemy bombing, they bolstered both Chinese and allied morale.

c. The members of the American Volunteer Group were given an opportunity to be inducted into the Army Air Force and remain in China as part of the 23d Pursuit Group. Most of the pilots decided to go back to the United States for a brief rest, others, who originally came from the Navy and Marine Corps went back to those services; still others elected to take positions with commercial air concerns. Only five pilots and a small number of ground men were inducted into the Army Air Force on 4 July, but

approximately 20 additional pilots remained on duty until replacements arrived.

AIR OPERATIONS IN THE CHINA-BURMA-INDIA THEATER

EVOLUTION OF SUPPLY SUPPORT TO CHINA

ANNEX 3

1. BURMA ROAD AND SUPPLY LINES TO CHINA. -- a. Overland transport into China rather than oceanic shipping to Burma and India proved to be the bottleneck of China-Burma-India supply. The Burma Road was China's life-line to the outside world after Japan had occupied the coast and established a Naval blockade in 1938. The distance by air from Lashio, the railhead in Burma fed by the Port of Rangoon, to Kunming in Yunnan Province is 260 miles. Yet the country is so mountainous that the Road actually twists over seven hundred miles of hairpin curves and steep grades; part of it is fit only for one way traffic and none of it is over sixteen feet wide. The road was literally clawed out of the mountain-side by an army of workmen numbering over a hundred thousand. The first traffic in 1939 brought supplies into China at a rate of 3,500 tons a month, (the Berlin air lift is delivering an average of 8,000 tons each day), rising to 12,000 tons monthly in 1941 with the introduction of American methods of maintenance. A large proportion of the tonnage went for gasoline to fuel the trucks. From the middle of 1941 to the fall of Burma, which closed the Road, it was protected by the Volunteer Group.

b. The closing of the Burma Road, first by Japanese diplomatic pressure, then by the Japanese conquest of Burma, left China stranded for supplies. The only land routes to the country from India were pack animal trails over the mountains, one from Darjeeling, northeast to Lhaso in Tibet and thence east to Chungking, and another from Sadiija to Tali and Kunming. The trip into China over these trails took 2 months, and the country was so rugged that only light supplies such as medicines could be carried on the backs of porters.

2. SUPPLY BY AIR. -- a. In this crisis Lt. General Joseph B. Stilwell, appointed the American Commander of China-Burma-India

early in 1942, resorted to an air ferry over the Himalayas. The Ferry System was pioneered by the United States 10th Air Force under Major General Lewis H. Brereton and then transferred to the Air Transport Command in order to free the 10th's bombers for raids on enemy targets in Burma. At first air traffic was limited because the planes consumed a large part of the gasoline they were trying to carry into China. The system grew steadily, however, and by the end of 1943 a greater tonnage was moving into China every month by air than had ever gone overland by the Burma Road. These supplies supported the operations in China of the United States 14th Air Force, established early in 1943 under General Chennault to carry on the work of the Flying Tigers in defense of China.

b. This dangerous passage by air over the Himalaya Mountains, became known as the Hump. The pilots ran a gauntlet of enemy fighters in Burma and the other gauntlet of extreme latitude and dreadful weather across the world worse terrain. For us to get help of any sort to our Chinese Ally must have looked to the Japanese to be an impossible task. Here again the error of their thinking was proven in the period to follow.

AIR OPERATIONS IN THE CHINA-BURMA-INDIA THEATER

ANNEX 4



AIR OPERATIONS IN THE CHINA-BURMA-INDIA THEATER
ACTIVATION, EARLY OPERATIONAL PROBLEMS AND DIFFICULTIES
OF THE TENTH AIR FORCE

ANNEX 5

1. GENERAL. -- With the decision made to establish an air force in the India-Burma region, General Brereton and a small group of officers flew to Ceylon, India. He carried \$250,000 in American currency wrapped in a blanket to assist in financing the venture, one LB-30, five war weary B-17s and orders to take command of the Tenth Air Force. It was a time of danger. The Japanese were pushing through Southeast Asia toward the sprawling sub-continent of India, where they could deliver a severe blow to the Allied cause in the Orient. They were able to increase the forces used in the Burma and China offensive with units drawn from the completed Malayan campaign. With the Japanese successes in cutting the Rangoon-Lashio railroad North of Pegu, it became apparent that Rangoon would shortly fall and the use of the Bay of Bengal would be denied to Allied shipping. Facing this situation, General Brereton began to make plans for establishing the Tenth Air Force in India. At New Delhi, where headquarters had been located to effect better coordination with the British, General Brereton, formally assumed command of the new Air Force on March 5, 1942.

2. ACTIVATION. -- Demands from other theaters and the policy of concentrating first on the elimination of Germany gave India a low priority. This situation formed an obstacle in obtaining desired personnel and equipment for the Tenth Air Force. Though it was activated on 12 February 1942 at Patterson Field, Ohio, it was not until several months later that the Headquarters and Headquarters squadron could be sent from the United States. The Port of Karachi, on the Arabian Sea, was designated as the American Port of entry, 1000 miles away from the center of combat activity. The first large shipment of Air Corps troops arrived at this port on

12 March in a convoy sent from Australia. Originally scheduled for Java, the troops had been diverted to India. Included in this shipment were the 51st Pursuit Group, 51st Air Base Group and the 9th Bombardment Squadron and the 88th Reconnaissance Squadron (ground echelon) of the 7th Bombardment Group. These units brought the total strength of the 10th Air Force in India to 174 Officers and 3,036 enlisted men. The ten P-40s arriving with the group were augmented by six B-17s that were diverted from Java. The aircraft strength of the Tenth now amounted to six B-17s, two light bombers and ten P-40s.

3. MISSION OF THE TENTH AIR FORCE. -- In addition to defending India from the skies the Tenth Air Force was also required to: 1. Provide an aerial supply line to China; 2. Assist General Stilwell's forces in Burma; and 3. Develop India, apart from its own defense, as a base for striking the Japanese wherever they may be within bomber range. To accomplish these tasks, they required and urgently requested more men, planes and supplies.

4. EARLY OPERATIONAL PROBLEMS. -- The meager, available forces were put to work immediately. The first mission involved the delivery of 29 tons of supplies and a battalion of native Fusiliers from Asansol in India to Magwe in Burma, and evacuating 423 civilians on the return trips. This action occurred between 8 and 13 March, utilizing seven B-17s and one LB-30. After completion of this mission, they returned to Karachi for patrol duties which continued to April.

Extensive operations had to await the arrival of more planes, procurement of suitable types of aircraft, training of personnel, and provision of necessary facilities. Past experience dictated a need for improvements in materiel, tactics and training. Within limitations imposed by the situation, progress, in developing better tactics and more effective methods of training, was made. However, requests for a more suitable type of aircraft could not

be met because such planes were not then available. Requests for P-38s, equipped for photographic work, brought the same answer. Due to the long distances involved, fighters could not be employed in providing the long range bombers with the required protection. As a result, such bombing had to be confined to night operations. Lack of adequate photographic aircraft, and unfavorable atmospheric conditions, caused high altitude precision bombing to be declared impracticable. Medium bombers were felt more suitable for this type operations. Late in April, arrangements were made for assigning two medium bombardment squadrons to the 7th Group, changing the unit from a heavy bombardment to a composite group of two heavy and two medium squadrons.

5. MATERIEL DIFFICULTIES. -- Materiel difficulties were encountered. Most of the aircraft arriving from the United States were in need of major repairs and, in some cases, complete overhaul before they could be put into combat. Many of the planes brought to Karachi, in need of engine replacement, had to wait for weeks before replacement spares arrived. Need for engine replacements was increased due to the excessive dust conditions in the area.

6. PERSONNEL PROBLEMS. -- Morale of the personnel suffered greatly. The unsatisfactory climate, absence of recreational facilities, and lack of mail from the United States had a depressing effect on their mental state. The inactivity resulting from lack of proper equipment for operational and training activities did little to bolster their spirits. With the Japanese pushing through Burma and their forces operating in the Indian Ocean, the prospects of an enemy attack on Karachi further aggravated an undesirable situation.

This was just the beginning for the Tenth Air Force. Although later activity and a build-up of base facilities was to bolster the spirit of the operating personnel, they were still to experience a lack of adequate numbers of latest design aircraft,

qualified personnel and difficulties resulting from short supply
of all classes.

AIR OPERATIONS IN THE CHINA-BURMA-INDIA THEATER

AIR ORGANIZATION, INDIA-BURMA

ANNEX 6

1. December 7, 1941 - October 30, 1942. The Tenth Air Force during this period was as follows:

- a. India Air Task Force.
- b. China Air Task Force.
- c. Karachi American Base Command.
- d. The Tenth Air Service Command.
- e. India-China Ferry Command.

2. October 3, 1942 - December 15, 1943. -- a. Royal Air Force and Army Air Force air units operated under separate command. Coordination was by mutual agreement.

b. Following changes in Army Air Force units:

(1). 1 Dec. 1942: The India-China Wing of Air Transport Command activated at Chabua, Assam and took over Hump operations.

(2). 10 Mar. 1942: The Fourteenth Air Force was activated from the China Air Task Force, and became an independent air command.

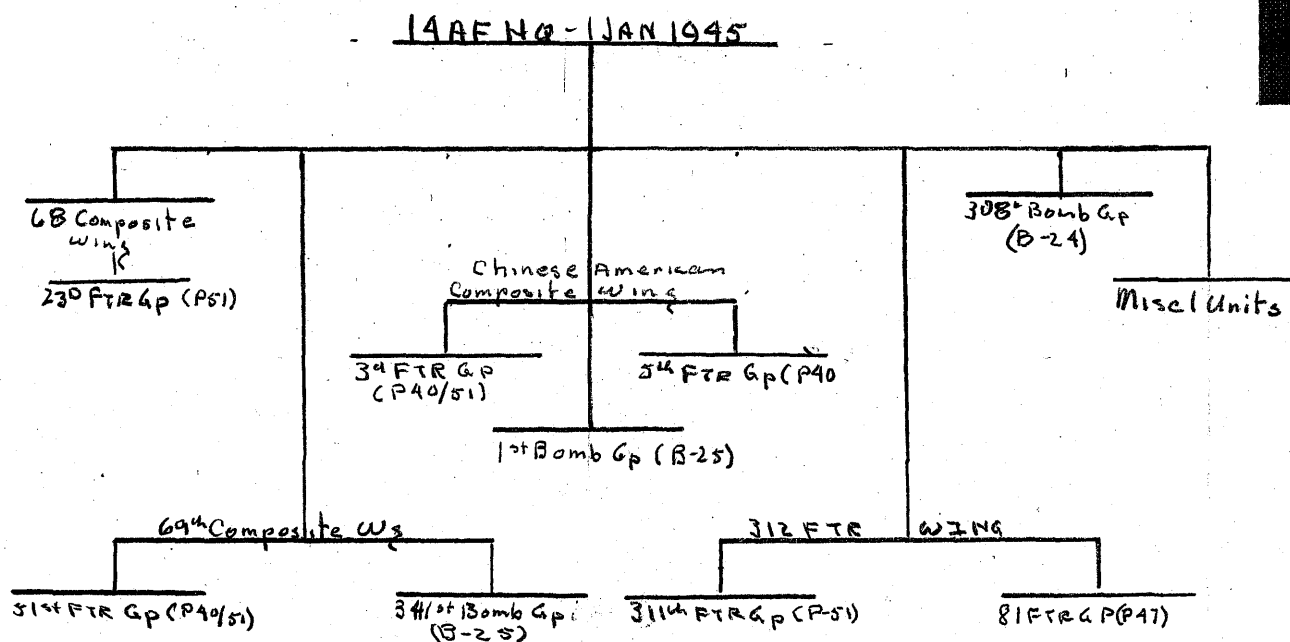
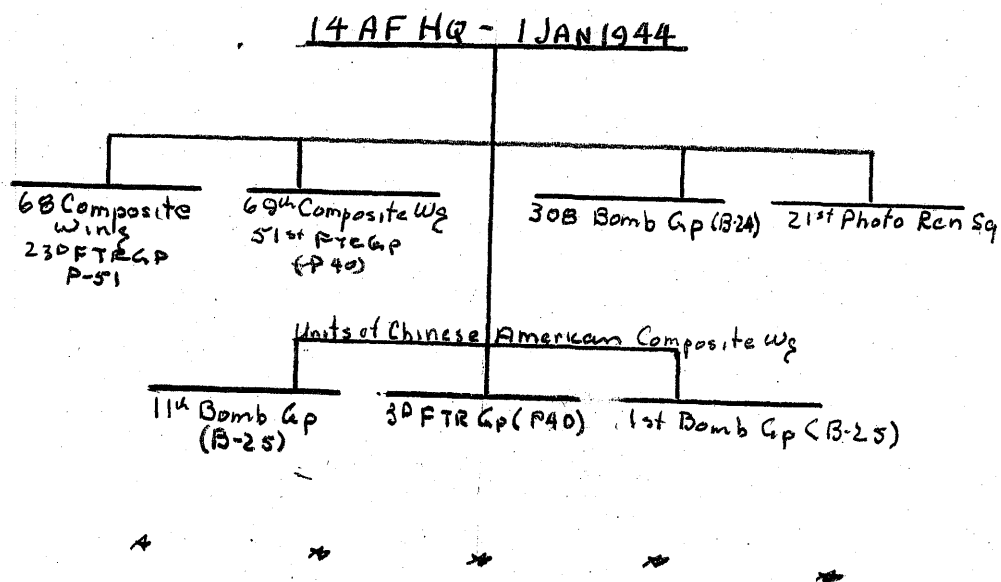
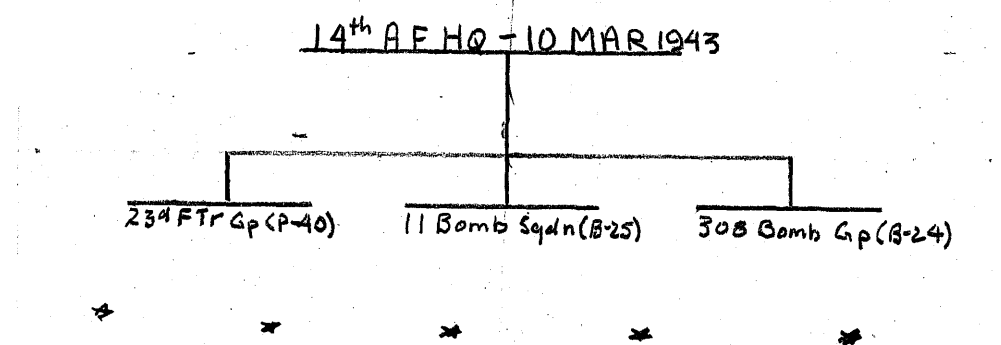
(3). 29 July 1943: Headquarters Army Air Force, India-Burma Sector was activated.

3. December 15, 1943 to June 1, 1945. -- a. Southeast Asia Command was created for the joint British and American prosecution of the war in Asia. Following major commands resulted:

- b. Eastern Air Command.
- c. 222d (Coastal) Group, RAF.
- d. 225th (Coastal) Group, RAF.
- e. Air Transport Command.
- f. Twentieth Bomber Command.
- g. Fourteenth Air Force.
- h. Hq., Army Air Force, India-Burma Sector, China -Burma-India Theater.

AIR ORGANIZATION - CHINA THEATER

ANNEX 7



AIR OPERATIONS IN THE CHINA-BURMA-INDIA THEATER

TENTH AIR FORCE FERRY AND SERVICE UNITS

ANNEX 8

1. THE INDIA-CHINA FERRY. -- As part of its mission, the Tenth Air Force contributed heavily to the early Allied effort in the China-Burma-India Theater by its ferrying operations. Though confronted with shortages of personnel and equipment, lack of suitable fields and adequate protective facilities, the 1st Ferrying Group, continued operations, transporting supplies into Burma and China. While the Japanese were closing in on important bases along the route, they evacuated wounded soldiers and civilian refugees to the limit of their capacity. Due to operational difficulties, the original plan of establishing two commands, the Trans-India, to operate from Karachi to Dinjan in Assam, and the Assam-Burma-China, to operate from Dinjan to Kunming, China, was discarded in favor of one command, the India-China Ferry.

The Assam-Burma-China Ferry, under the command of Col. Caleb V. Haynes retained its identity, however, for several months. Immediate attention was given this route due to the necessity of transporting supplies to China, whose morale had suffered a serious setback with the fall of Rangoon. The carrying capacity of the Ferry Command was increased by an addition of ten Pan-American DC-3s from Africa. Early in April, these planes were utilized in transporting 30,000 gallons of gasoline and 500 gallons of oil to airfields in China. This fuel will be used by sixteen B-25s which were moving across the Pacific aboard an aircraft carrier, preparatory to executing a daring attack on the Japanese homeland. (The Doolittle Tokyo Raid.)

Later these transports were employed in accomplishing greater tasks. When the Japanese major advance through Burma threatened to overrun the British and Chinese defenders, the DC-3s carried ammunition and supplies into the battlefield area and evacuated the refugees and wounded personnel. After the fall of Mandalay on

May 1, the planes were loaded to capacity evacuating as many passengers as possible before the Japanese could close on points along the ferry route to China. Though the planes were unarmed and subject to enemy attack, not one transport was lost in these operations.

The susceptibility of Dinjan to Japanese attack, forced the pilots and crews to get the planes off the field at dawn. Planes and pilots were working to a maximum, even after the fall of Myitkina, on May 8, in dropping food and supplies to the retreating defenders of Burma.

The fall of Burma dictated a change in the air and ground plans of operations. Heretofore, the Ferry service was considered merely as a supplement to the regular supply lines. It was now necessary to build an air cargo service with capacity enough to replace the Burma Road. From this standpoint, the ferry operations during April, May and June provided an experience which later assisted in developing aerial cargo service over the Hump on a much larger scale. The loss of bases in Burma and the heavy rains of the monsoon season reduced the amount of supplies carried over the Himalayas to about 800 tons a month. The Japanese would be ready for the big push into India when the heavy rains ceased to fall.

2. ESTABLISHING SUPPLY AND MAINTENANCE INSTALLATIONS. -- The initial work on the establishment of ground services essential to air combat was accomplished during the Burma operations, utilizing the few reinforcements arriving at Karachi for the Tenth Air Force. On May 1 the Tenth Air Service Command was activated under Brigadier General Elmer E. Adler. Necessary cadres were taken from other units of the Tenth Air Force. The main depot was located at Agra, approximately 700 miles east of Karachi.

Later in the month the 3rd Air Depot Group arrived at Karachi. The 3d Air Depot was established at Agra on 28 May. The immediate task was the construction of barracks and an airdrome, in which

native workers assisted. To provide front line service to the combat units, the 59th Materiel Squadron was divided into small base units and located at Allahabad, Kunming, Agra, Dinjan-Chabua, Chakulia and at Bangalore, where an aircraft manufacturing plant was being converted into a repair and overhaul depot.

AIR OPERATIONS IN THE CHINA-BURMA-INDIA THEATER

TENTH AIR FORCE OPERATIONS

ANNEX 9

1. EARLY OPERATIONS OF THE TENTH AIR FORCE. -- a. While elements of the Tenth were involved the preparation of supply depot facilities and transporting supplies and evacuating refugees, the bombardment groups were preparing for air strikes against the enemy.

b. The night of 2/3 April 1942 marked the beginning of bombing missions. A flight of two B-17s and one LB-30, led by General Brereton, attacked shipping at Port Blair, Adaman Islands in the Bay of Bengal. Another attack was scheduled for targets in the Rangoon, but wasn't completed due to difficulties occurring during the take-off. These operations entailed the use of an advanced base near Calcutta, a distance of 1200 air miles from Karachi. Subsequent operations were characterized by the same difficulties of distance and shortage of aircraft, as well as by unfavorable weather conditions. Consequently these missions were little more than harassing missions. Bombers operating from the advance bases at Asanol and Dum Dum, Burma bombed Rangoon shipping and air facilities. Due to lack of spare parts and major repairs required, bombing missions were restricted to the limited operational aircraft available. During this period operations were suspended for a two week period while necessary repairs were being made. Operations were further hampered during the summer of 1942 due to the adverse weather, at times grounding all bombers for weeks.

c. Taking advantage of this respite the Tenth improved early warning and antiaircraft facilities in the Assam and Calcutta areas. Improvement of the Allied situation in the Indian Ocean permitted movement of airbases eastward. The 436 Bombardment Squadron by the 1st of June was moving to Allahabad, joining the 9th Bombardment Squadron, Headquarters of the 7th Bombardment

Group moved to Barrackpore, near Calcutta. The 51st Fighter Group was moving units into Kunming and Dinjan, while the 23d Fighter Group and the 11th Bombardment Squadron were assembling in China. This latter move was partially in anticipation of replacing the American Volunteer Group in China whose contracts would expire on 4 July 1942, but mainly to provide increased air support for the British and Chinese forces operating in China.

d. The situation for the Tenth was taking on a brighter hue by June. Definite policies had been established in defining the mission of the air force. Relations between the theater commander and the air force and disposition of forces in China had been decided upon. As stated before, ferry and service organizations were operating and the badly needed combat units with personnel and equipment were due in.

e. Operations in the main were still of a defensive nature due to the inadequacy of equipment, personnel and supplies, coupled with Japanese capabilities which indicated still further advances in the China-Burma-India Theater.

Late in June 1942, the British suffered a major defeat in the Battle of Knightsbridge, in Cyrenaica. General Brereton, with all available bombers, was ordered to the Middle East. He left India on 26 June with key officers to establish operations in the Middle East. This left a seriously crippled Tenth in India under the command of Brigadier General Earl L. Narden.

AIR OPERATIONS IN THE CHINA-BURMA-INDIA THEATER

TENTH AIR FORCE IN CHINA

ANNEX 10

1. CHINA AIR TASK FORCE. -- Initially the China Air Task Force was composed of the 23d Fighter Group, the 16th Squadron of the 51st Fighter Group, one flight of 9th Photo Reconnaissance Squadron, and several flights of the 11th Squadron (M) of the 7th Bombardment Group. Operational aircraft numbered approximately seven B-25s and thirty P-40s. This force faced the problem of conducting a 5,000 mile front extending from Chungking and Chengtu to the Indo-China Red River in the South, the Tibetan Plateau and the Salween River in the West and the China Sea in the East. In order to bring the important enemy targets in Southern China within range of the B-25s and P-40s, operations were conducted from a string of bases running in a northeast-southwest line starting from Hengyang, followed by Lingling, Kweilin, Leuchow and Nanning. In order to guard the ferry operating over the Hump, aircraft operated from Yunnanyi, in Western China and Dinjan in Assam.

Although operating against numerically superior forces, the American flyers continued to inflict losses on the enemy with minimum loss to themselves.

Bomber strikes included attacks on important Japanese airfields at Nanchang, Southeast of Hankow, and Tien Ho airdrome at Canton, in an effort to reduce the Japanese numerical superiority. Fighter aircraft challenged every Japanese bomber raid over Free China, accounting for a number of enemy aircraft during every engagement.

The excellent warning system developed in China was an invaluable aid to this air war in China. Fighter planes were given ample time to become airborne and gain an advantageous position for interception thereby depriving the Japanese of their chief weapon of surprise.

As with the American Volunteer Group who preceeded them, the China Task Force was forced into periods of inactivity due to unfavorable weather, combat fatigue, exhausted supplies of bombs and fuel and need for aircraft repairs.

These periods were used to improve their weapons, developing operating technique and planning future operations.

On the 9th of August, five B-25s and three P-40s attacked an important Indo-China Port of Haiphong, marking the first time the task force had reached outside of China or Burma to hit the enemy. A 4,000 freighter was sunk in the harbor, large fires which burned for three days were started in the dock and warehouse area, while direct bomb hits on Japanese headquarters caused a number of casualties variously estimated at from 100 to 400.

The task force was successfully employing guerilla, hit and run, tactics against the Jap and keeping him guessing. Time after time the enemy would bomb a strip and later discover that the planes had previously moved to another field. In one of these moves, late in August, the bombers were transferred to Yunnanyi in Southeast China to bolster the Burma Campaign. During the last week of the month, the B-25s twice bombed Lashio, important rail center and air base. They crossed the border of Indo-China to attack enemy supply dumps at Hoang Su Phi and Phu Lo; and on the last two days of August they bombed Myitkyma, a northernmost depot of the enemy in Burma.

Following this series of tasks, the bombers returned to Hengyang and Kweilan, leaving the Burmese operations during September and October to the two B-25s and a few fighters which had been stationed at Dinjan. The main part of the task force, in the meantime, carried out raids over occupied China, harassing shipping on the inland waterways, disrupting rail communications and destroying enemy aircraft on the ground and in the air. Early in October the bombers turned their attention southward in order to aid the Chinese who were opposing renewed enemy attempts to cross the Salween River.

Eleven missions were flown against enemy targets in Northeast Burma, including supply depots at Tengchung, Mangshih, Wanling, Chefang and Lichiapo.

With the end of the monsoon season the enemy was expected to increase his air opposition to the ferry service particularly along the western end of the route which terminated at Dinjan. The Tenth Air Force, charged with both operation and protection of the ferry service, was barely in a position to carry out either task. Some improvement had been brought about in the cargo service by leasing transport planes from the China National Airways Company. In order to provide more effective defense of the ferry and to aid Chinese resistance along the Salween, all the American combat units in India were organized as the India Air Task Force. (See paragraph 1, Annex 11.)

AIR OPERATIONS IN THE CHINA-BURMA-INDIA THEATERS

AIR FORCES IN INDIA, BURMA AND CHINA THEATERS

ANNEX 11.

1. INDIA AIR TASK FORCE. -- a. The India Air Task force was organized on 30 October under Brigadier General Calib V. Haynes as commander. With the major units of the Tenth operating in China, or with General Brereton in the Middle East, the initial strength of the India Air Task Force was almost negligible. To provide a measure of protection, the 26th Squadron and Headquarters 51st Fighter Group were moved to Dinjan. Difficulties were encountered in establishing an early warning system due to a lack of adequate equipment.

b. Late in October word came that the Tenth Air Force would be relieved of the responsibility of operating the Ferry, effective 1 December. The First Ferrying Group was to be taken over by the Air Transport Command. Ferry operations were to be taken over by the India-China wing of the Air Transport Command with Col. E. H. Alexander as head. The Tenth Air Force was still to have the responsibility of providing protection for the aerial life line to China. Before any of the forces could be deployed the enemy attacked Dinjan on 25 October. Approximately 100 enemy planes, equipped with belly tanks for the long flight from the distant air base at Lashio, they bombed and strafed Dinjan as well as the newer airfields at Chabua, Mohanbari, and Sookerating. The Americans received little warning, consequently suffered heavy losses. Five transports, five P-40s and two P-43s were destroyed, while 4 transports and 13 fighters were badly damaged. But on the next day and the 28th when the enemy came over again the India Air Task Force Squadrons were able to destroy 15 Japanese raiders with little damage to themselves.

c. These assaults had a telling effect on the dire need for the return of the heavy bombers which had accompanied General Brereton to the Middle East, and added emphasis to his

requests that they be returned to Assam.

d. During the month of October, B-25s which had replaced some of the older B-17s, conducted bombing operations north of the Yangtze. The presence of the long range Liberator in the China-Burma-India Theater gave the Tenth Air Force a wider choice of targets and made it increasingly difficult for the enemy to predict where the next blows would fall. For several weeks while the India Task Force was being built up, General Haynes employed his forces defensively with only occasional offensive missions by small flights of heavy bombers.

e. This period marked the beginning of a six month campaign against the enemy which ended only with the arrival of the monsoon. The opening attack of this campaign occurred on November 20, when eight B-24s carrying 40,000 pounds of bombs attacked the marshalling yards at Mandalay and caused great damage there. From Myitkina in Northern Burma, to Bangkok in Thailand, and Port Blair in the Andaman Islands, the India Task Force strafed at low level and bombed from high altitudes. In 17 heavy bombing raids between November 20 and December 31, they dropped 414,000 pounds of high explosives on enemy targets.

f. It may be said, that the American war effort in Burma was kept alive by the India Air Task Force. The port of Rangoon and the approaches to it were attacked by our heavy bombers, which also began a patrol of the Gulf of Martaban as far south as Tavoy Island and as far west as the Andaman Islands.

2. AIR OPERATIONS IN INDIA AND BURMA DURING 1943. -- a.

During 1943 the India Task Force concentrated on active defense of the Ferry Route between India and China and the airfields and equipment in the Assam area. This included the maintenance and operation of an adequate air warning system, continuous fighter protection for the area, offensive patrols in Northern Burma with a concentrated effort to neutralize enemy airdromes, patrol of the Air Transport Command route through Burma, and escort of the Air Transport Command planes when necessary.

b. American planes operating during the wet monsoon months in 1943 proved that operations could go on regardless of the weather. As a result, up to October, almost 65 percent of the rail facilities of Burma were destroyed, a great amount of shipping was sunk, whole areas of Japanese installations were devastated.

c. By November 1943, the Tenth Air Force was making headway in gaining limited air superiority over Burma.

That November, the Tenth joined General Stratemeyer's Eastern Air Command, which in turn was a part of the Southeast Asia Command under Lord Louis Mountbatten. Its bomber forces were integrated with the Royal Air Force bombers to form the strategic Air Force, while its fighters united with the British fighters to form the 3d Tactical Air Force. In Juen 1944, the Tenth Air Force reassumed direct operational control of all its units.

d. During the interim period, the Japanese really began to feel the weight of American bombs. The strategic targets selected for the Tenth Air Force, whose headquarters had moved to Calcutta, were merchant shipping, docks, and storage and repair facilities, including terminals, rail centers, important bridges, river shipping, rolling stock (with particular emphasis on locomotives) and barracks. Insein, approximately 15 miles north of Rangoon, one of the biggest railroad yards and the only one of its size left to the Japs, was destroyed on 27 November 1943.

e. Heavy bomber sorties for the year 1943 mounted to 2,751, with 4,651 tons of bombs dropped. Light bombers flew 4,003 sorties and dropped 4,243 tons of bombs. Commencing in the fall of 1943, the Tenth Air Force offered aerial protection to Allied ground forces in North Burma. These forces, originally General Joe Stilwell's American-trained Chinese forces, were later joined by the famous American Jungle Fighters known as Merrill's Marauders.

f. The high degree of mobility and secrecy which resulted from air supply was one of the chief reasons for the success of the Marauders. Casualties were evacuated by L-4s and L-5s based at Ledo. Landing on drop areas, rice paddies or gravel bars along the river, these light planes flew the wounded to rear echelon air strips or to collection and clearing companies along the Ledo River.

g. In February 1944, in attempting to attain local air superiority in support over the battle area of his Arakan offensive, the enemy expended a major effort against the Allied Air Forces. However, the newly acquired spitfires of one group took such a heavy toll that he was forced to abandon the effort. In pressing counter-air action, Allied fighter cover soon dominated the Arakan battlefield, permitting hundreds of transports to fly in supplies to the besieged Seventh Division. A potential defeat was rapidly changing into a decisive victory.

h. On March 27, 1944, the Japanese Air Force made its last major effort against North Burma, the Assam air bases, and the Hump route to China. Eighteen enemy bombers and twenty fighters, in attempting to raid the Assam area, were intercepted by P-40s and P-51s of the AAF 5320th Air Defense Wing. In the resulting air battle, 11 enemy bombers, and 13 enemy fighters were confirmed destroyed, at a loss of two American fighters.

i. The last serious effort of the enemy to challenge Allied air power in Central Burma came in May 1944, when he sent fighter sweeps, of as many as 20 to 30 Oscars, into the Imphal area to assist the Japanese forces in the drive to Kohima and to destroy Allied transport aircraft supplying the besieged Imphal garrison. He was consistently intercepted and came off the loser in the ensuing battles.

j. The combined AAF-RAF score during March, April and May was 309 enemy aircraft destroyed, 56 probably destroyed, and 193 damaged.

k. In June 1944, a marked change in operational policies by the Japanese was evidenced. The losses he suffered in the preceding months, coupled with air superiority now enjoyed by the Allied forces caused the enemy to employ conservative tactics. Japanese air activity almost ceased during the monsoon season. Fewer and fewer aircraft were active offensively, until finally, during the closing days of the Burma campaign, few enemy fighters rose to defend even the most important installations.

3. AIR OPERATIONS IN INDIA AND BURMA DURING 1945. -- a.

In the face of Allied air pressure and ground advances the Japanese air activity shifted south to Pyinmana during February 1945. By advancing their air bases the Allies were in better positions to strike at bases deeper into the Japanese rear areas. During March, Teangoo and the surrounding airfields became the most important Japanese bases north of Rangoon. On 8 March AAF P-51s again attacked the main airdrome at Rangoon, Mingladon but were unable to find and destroy more than three enemy aircraft. On 9 March 1945, 70 B-24s and a P-47 escort, bombed Rangoon against very weak aerial defense. The next day, 24 B-24s again bombed Rangoon targets, this time without any fighter interception whatsoever.

b. In preparation for the move on Rangoon by the Allied Forces, strikes were made against Moulmein and airfields in Siam. So effective was the reduction of the Japanese force in this area that not a single enemy aircraft attempted to interfere with the Allied occupation of Rangoon. At the time Rangoon fell, the Japanese Air Force strength in Burma was zero and an estimated maximum of 50 aircraft was based in Siam.

c. The role of the Tenth Air Force in China may be divided into three headings:

(1). Direct assistance to the China theater while based in Burma.

(a). Air movement of the Fourteenth and

Twenty-second Divisions from Burma to China, 5 December 1944 to 6 January 1945.

(b). Air operations on the Salween River in support of China Expeditionary Forces, August 1944 to January 1945.

(2). The China offensive.

(3). Postwar occupation, evacuation and supply.

d. Air Operations on the Salween River. To augment the support of the Chinese Expeditionary by the Fourteenth Air Force, the Tenth Air Force established a radio link between their Headquarters in Burma and the Sixth-ninth Composite Wing of the Fourteenth. This enabled the Fourteenth to call for air strikes by the Tenth Air Force on targets holding up the advance of the Chinese Expeditionary Force. The additional air power proved necessary since the Fourteenth Air Force had insufficient supplies to provide all of the air effort required.

4. OTHER UNITS. -- Activity of following listed organizations discussed in reference Annex:

<u>a.</u> Fourteenth Air Force	- Annex 12
<u>b.</u> Air Transport Command	- Annex 13
<u>c.</u> Twentieth Bomber Command	- Annex 14

AIR OPERATIONS IN THE CHINA-BURMA-INDIA THEATER

FOURTEENTH AIR FORCE

ANNEX 12

1. PRELUDE TO THE FOURTEENTH AIR FORCE IN CHINA. -- a. American Volunteer Group. The operations of the Fourteenth Air Force can conceivably be considered as starting with the action of the American Volunteer Group, which went into action in December 1941. For six months thereafter, the Flying Tigers were almost the sole hope of the beleaguered Chinese forces, which for more than four years had been fighting desperate battles with little help from the Allies. In fact, the American Volunteer Group provided the first organized air resistance the Japanese faced since the beginning of the Sino-Japanese War in 1937. (See Appendix III, Annex 2.)

b. China Air Task Force. (1). The second prologue to the story of the Fourteenth Air Force is provided by the operations of the China Air Task Force which was activated in battle on 4 July 1942. (See Annex 10.) Chennault, who headed the American Volunteer Group, was recalled to active duty as a Brigadier General and named as Commander of the China Air Task Force.

(2). Mission given to the China Air Task Force was (a). to defend the southern and eastern approaches to the Hump air route and its China terminals; (b). to attack and destroy hostile aircraft, shipping, personnel supplies and installations in other areas when munitions are available and when such operations do not jeopardize the primary objective; and (c). to give air support to the Chinese ground forces.

(3). The China Air Task Force was assigned to the Tenth Air Force, but due to control difficulties, it was permitted to operate independently in the formulation of air plans and in carrying out air operations.

(4). The China Air Task Force operations represented a modest expansion of the American Volunteer Group effort. As with the American Volunteer Group, a controlling factor which limited

operations to a great extent was the shortages of aircraft, personnel, spare parts, gasoline and other supplies.

(5). During its eight months of operation the China Air Task Force accounted for 182 enemy aircraft destroyed, 87 probably damaged, 350 tons of bombs dropped on enemy installations and 50,000 tons of enemy shipping sunk.

2. FOURTEENTH AIR FORCE. -- a. On 10 March 1943, the Fourteenth Air Force was activated from the China Air Task Force and became an independent air command responsible directly to the China-Burma-India Theater Commander.

b. The Fourteenth Air Force grew steadily from a small force to a relatively large force with a strong striking potential. It conducted effective fighter and bomber operations along a 5,000 mile front which extended from Chanking and Chengtu in the north to Indo-China on the south; from the Tibetan Plateau and the Salween River, in Burma, in the West, to the China Sea and the Island of Formosa in the East.

c. The basic over-all mission of the Fourteenth Air Force was to prevent Japanese occupation of all China and subsequent capitulation of the Chinese National Government. To accomplish this ambitious, but imperative mission, the Fourteenth struck and harassed the enemy from strategically located airbases in China. Taking full advantage of its interior positions, which were spotted on the hub of a semi-circle stretching from Ichang to Hankow and down around the coast to Canton and Hongkong, the Fourteenth was in a position to effectively attack the Japanese concentrated around the ring of this huge tub.

d. The Fourteenth jabbed the enemy off balance and kept him guessing by jumping all over the huge map of China. If the weather was unfavorable in Northeast China, Chennault's fighters and bombers concentrated their efforts on the rich targets to the South, often for days in succession.

e. Time and time again the Japanese rushed reinforcements

to the target area, thinking the Americans were intent on a prolonged attack on that particular spot. Having thus forced the opponent's hand, Chennault would then either send his planes to strike at a relatively undefended area, or concentrate on the target which the enemy had reinforced, whichever promised the better results.

3. SUPPLY LIMITATIONS. -- a. In studying the operations of the air forces in China it is evidenced that the extent of the operations was tempered to a large degree, especially in earlier operations, by the limitations imposed by lack of adequate supply, coupled with the extreme difficulty of transporting supplies from India, and the subsequent distribution within China.

b. Starting with 872 tons received in April 1943, the amount steadily grew each month reaching 6,234 tons delivered in May 1944; thereafter the tonnages delivered increased from 12,537 tons in June 1944, to a peak month in July 1945 of 34,164 tons.

c. The increase in tonnage paralleled the growth in strength of the Fourteenth Air Force which reached its peak operating strength in 1945.

4. OPERATIONS OF THE FOURTEENTH AIR FORCE. -- a. In conducting counter-air force operations, the Fourteenth Air Force employed the same units that were charged with air defense of their own bases.

b. Numerically inferior in aircraft to the Japanese until the early part of 1945, the United States Air Forces proved more than a match for enemy, as evidenced by the eventual gain of air superiority in January 1945 which later was projected to complete supremacy of the air over China later in the year. An example of the disastrous results experienced by the Japanese in their conflicts with the Fourteenth Air Force is expressed in an analysis of the five major attacks by the Japanese against the airfield on Kunming in 1943. The enemy employed between 21 and 30 bombers and 20 to 50 fighters in each attack. Losses sustained-

destroyed, probably destroyed and damaged, totalled 150 aircraft. Opposition to these raids averaged twenty-five P-40s, one of which was lost and four of which were damaged.

c. As a result of these high losses, the Japanese abruptly terminated their daylight bombing program in China. Thereafter, during the balance of 1944, they attacked at night in smaller numbers but with greater frequency. Lacking antiaircraft artillery and night fighters, the Fourteenth Air Force employed day fighters in an attempt to break up these attacks. Only rarely were the day fighters successful when used at night. Japanese bombing was not accurate, however, and relatively little damage was done.

d. During 26 November 1943 and 20 January 1945, major offensive strikes included attacks against the Shinchiku airdrome, Formosa; Pailochi, China; Tsinan airdrome, China; Tsingtao, China; Shanghai airdrome, China. In addition to inflicting substantial damage to the facilities in the areas, partial losses to enemy aircraft that rose in opposition amounted to 209 destroyed, 31 probably destroyed and 116 damaged.

e. During 1943-1944 the United States Air Force encountered determined opposition from enemy fighters defending critical installations. During 1945, however, the enemy showed a marked and increasing unwillingness to commit aircraft, even in the defense of his most important installations.

f. By January 1945, Allied ground and air installations in China were immune to enemy air attack, and United States Army Air Force aircraft were ranging at will over Japanese occupied areas without interception. Air superiority has been established.

g. During the period 1942 to 1945 the United States Air Forces in China destroyed, probably destroyed or damaged, on the ground or in the air, a total of 4,412 Japanese aircraft with their own losses for the same period totalling 468 aircraft.

h. Other Operations. In addition to defensive and counter-air offensive, the Fourteenth Air Force conducted extensive attacks

on shipping, mining operations, railway and highway interdictions, attacks on troop concentrations, warehouse facilities, supply installations and close support of the Chinese ground forces.

5. STRATEGIC AIR OPERATIONS. -- a. Attacks on shipping during the period 1942 to 1945, including small boats resulted in claims totalling 2,292,249 tons of enemy shipping sunk, probably sunk or damaged. Principal water area covered in these attacks embraced the sea lanes of traffic from the northern end of Formosa to Saigon. The area included Swatow, Hongkong, Canton, Kainan Island, the Gulf of Tonkin and the Port of Saigon.

b. Mine laying operations constituted another phase of air force strategic air programs. Coordinated with sea sweeps of the Southeast and South China Coasts, mining of harbor areas at Haiphong, Canton-Hongkong, and at Shanghai were designed to reduce the availability of these ports to coastal shipping.

c. Mining of the approaches to Canton was probably the chief factor in stalling a Japanese drive north from Canton in the summer of 1944.

d. There can be no doubt that the mining operations took a substantial direct toll of Japanese shipping and had the indirect effect of markedly reducing the efficiency of shipping turn around time.

e. More intensive than the mining of coastal areas at irregular intervals, was the continuous mining undertaken against shipping in the Yangste River. In the seven months beginning with October 1944, B-24's laid nearly 200 tons of mines in the Hankow, Seymour, Ward and Blakenley reaches at and immediately down river from Hankow.

f. The damage caused by these mines has not been definitely ascertained, however, it can be said that the additional difficulty caused had a reducing effect on his ability to move supplies and troops on the Yangste River.

6. INTERDICTION OF RAILWAYS. -- a. As easily as the American Volunteer Group, strafing and bombing of railways, locomotives, freight cars, rail yards and facilities have been lucrative and effective missions. These attacks continually disrupted the enemy movement of troops and supplies and were especially important as the Japanese advanced deeper into the interior. Tactical plans, in many instances, were altered when the supporting rail lines were rendered useless or incapacitated by American air action.

b. The enemy tried for six years to build up the capacity of the railroads to a level commensurate with their needs. At least 75 percent of their failure can be attributed to the successive damage caused by the limited Allied air power in the China theater.

c. It appears logical, therefore, to estimate that, had a relatively small increase in air power been available, to permit attack of the Tsinpu railroad and its key installations, the whole system would have collapsed, with consequent earlier termination of the Japanese campaign in South China.

7. CLOSE SUPPORT OF CHINESE GROUND FORCES. -- a. The Chinese Army sorely lacked air support in its earlier campaigns. They provided targets which the Japanese bombed and strafed at will, with virtually no opposition from the air or in the form of anti-aircraft guns. Lacking this support they were repeatedly cut up and forced to withdraw to fight on terrain which afforded them the most natural protection.

b. The little assistance provided by the American Volunteer Group and later the China Air Task Force immeasurably increased their morale and combat capability. As the support increased with the arrival of more aircraft operating with the Fourteenth Air Force, coupled with an increase in ground force strength provided by the United States and Britain, they were able to undertake offensive operations.

c. The halt of some of the Japanese major drives can

be traced directly to the close support provided by the Allied Air Forces.

d. The best summation of the effect of Allied Air Force support of ground operations is indicated by the substance of statements made by high Japanese officers. They all agreed that their conquest of China, Burma and India would have been successful, had not the Allied Air Forces interfered with their operations.

AIR OPERATIONS IN THE CHINA-BURMA-INDIA THEATER

AIR TRANSPORT COMMAND OPERATIONS IN THE CHINA-BURMA-INDIA THEATER

ANNEX 13

1. ACTIVATION OF THE INDIA-CHINA WING. -- a. On 1 December 1942, the India-China Wing of the Air Transport Command was activated, taking over ferry operations over the Hump from the First Ferrying Group of the Tenth Air Force.

b. Fear in Washington, that China could not stay in the war if the Hump tonnages were not increased, was partially responsible for this move.

c. Starting with a modest 1,226 tons of cargo over the Hump in its first month of operation, the organization grew to a size and efficiency which eventually transported 71,042 tons to China in July 1945. Between 1 December 1942 and V-J Day the Air Transport Command air-lifted to China a grand total of 721,700 tons. Of that total, 551,288 tons, 78 per cent of the whole were delivered in the last year of operations.

d. Every type of cargo was flown over the Hump: food, gasoline, lubricating oil, airplane parts, engines, radios, bulldozers, communication equipment, wire, trucks, horses, tents, bombs, grenades, bullets, howitzers, machine guns, mortars, ambulances, jeeps, in short everything that was needed to supply the air forces and ground troops in China. In addition, repairable aircraft parts and critical materiel originating in China, as well as the sick and wounded, were returned to India.

2. OTHER CHINA-BURMA-INDIA ACTIVITIES OF THE AIR TRANSPORT COMMAND. -- a. While some units of the Air Transport Command were conducting transporting supplies from India to China and intra-theater service in India, China others were busy in operations which also assisted the Allied effort in the China-Burma-India Theater either directly or indirectly. It's inter-theater service to Karachi and the ferrying of the theater's aircraft were also of great value to the theater. Between September

1943 and August 1944, some 90,000 passengers and 36,000 tons of cargo and mail were flown into Karachi by the inter-theater service. During the whole period of war 4,671 aircraft were delivered to the China-Burma-India Theater. They were used by the Air Transport Command, theater air forces, the Chinese Government and the British.

b. The India-China Division's China Wing undertook the mass movement by air from Burma and India to China, as well as within China, of whole Armies whenever the tactical situation demanded it. When bases at Kunming, Chihkiang and other areas were in danger of being overrun by the Japanese, the Air Transport Command moved thousands of troops, including their equipment and animals to the danger areas. In this manner a number of Japanese would be victories were turned into defeats. In all, the Air Transport Command transported a total of 195,893 Chinese and American troops, their equipment and pack animals from rear to forward areas both within China and from India and Burma into China.

3. AID TO THE AIR FORCES IN CHINA. -- a. Equally impressive is the assistance given the air force in China by the Air Transport Command. The operations of the Fourteenth Air Force and the Twentieth Bomber Command virtually depended on the ability of the Air Transport Command to bring in the required gasoline, spare parts, ammunition, bombs and allied supplies. During the year 1944 alone, the Air Transport Command delivered 125,143 tons of cargo to the Fourteenth Air Force. Between March 1944 and January 1945, 40,000 tons of cargo were airlifted to the Twentieth Bomber Command.

b. It may be said that especially in this type support, the Air Transport Command made its most direct contribution to the victories in China and Burma. It can readily be seen that the Chinese campaign could not have been sustained but for the Air Transport Command's line over the Hump.

c. The effectiveness of both the ground and air forces operating in China was directly proportioned to the support provided by the Air Transport Command.

AIR OPERATIONS IN THE CHINA-BURMA-INDIA THEATER

TWENTIETH BOMBER COMMAND

ANNEX 14

1. INITIAL OPERATIONS. -- a. The first very heavy bombardment units of the Twentieth Bomber Command moved into the India-China Theater in April and May of 1944. The B-29 organizations were manned by the best and most experienced personnel available to the Army Air Forces within the continental limits of the United States.

b. Operational training of the combat unit and service testing of the B-29 airplane and its equipment was conducted concurrently during the initial period.

c. The Twentieth Bomber Command was ready to start operations against the enemy by early June. A shake-down flight was flown against Bangkok on 5 June 1944. (See figure 1, appendix, annex and charts.)

d. The initial very heavy bombardment air strike against the Japanese homeland was delivered on 15 June, with their target the Imperial Iron and Steel Works in Yawata on Kyushu.

2. OPERATIONS IN INDIA AND BURMA. -- a. The main base for the B-29s was located at Calcutta, India with China selected as a staging base of operations. Many of the operational difficulties which developed as a result of the service tests conducted, were eliminated prior to the major strategic offensive against Japan.

b. With the mission of bombing strategic targets anywhere in the enemy's area, necessitated that the operations of the Twentieth Bomber Command be controlled by the Joint Chiefs of Staff. However, some missions were flown at the request of the theater commander.

c. In the operations from India bases, 5 June 1944 to March 1945, the Twentieth Bomber Command attacked 26 primary targets in 1,070 sorties, dropping 4,664.50 tons of bombs and laying 670 mines. In the performance of these missions they destroyed 19 enemy aircraft. These missions were flown in further-

ance of the over-all strategic bombing plan of the air forces in India and Burma and were aimed principally at isolation of the Japanese forces in Burma. Major targets included, railroad shops at Bangkok, Rangoon, and Malaya; oil refineries and installations in Sumatra, Singapore, and Rangoon; dock and harbor facilities at Singapore and Saigon; railroad bridges near Bangkok; supply sumps at Rangoon and mining at Saigon, Singapore, Cam Rahn Bay and Palembang.

d. To assist the Air Transport Command in supporting their operations, the Twentieth Bomber Command operated B-29s and C-46s ferrying gasoline and supplies over the Hump. They delivered 14,517 tons of supplies to their North China bases.

3. RESULTS OF OPERATIONS IN INDIA-BURMA. - a. The most important effect of the Twentieth Bomber Command's operation from its India bases, was its ability to strike at enemy targets at ranges in excess of the capabilities of the bombers in the area.

4. OPERATIONS IN CHINA. -- a. Operating from China bases, the B-29s struck at targets on the Japanese home island of Kyushu, requiring average round trips of 3,800 miles; in Manchuria, requiring 2,700 flight miles; on Formosa, requiring 2,500 flight miles. Other missions, totalling 21, were flown, usually in strength of under a hundred planes.

b. During the period June 1944 to January 1945, 1,576 combat sorties were flown dropping 5,901 tons of bombs on enemy targets.

c. On its only primary mission against a target in China proper, a force of 84 B-29s dropped 500 tons of incendiaries on Hankow. This mission was flown in coordination with the Fourteenth Air Force on 18 December 1944.

5. RESULTS OF OPERATIONS IN CHINA. -- a. Operations of the Twentieth Bomber Command from its China bases carried aerial attacks to Japanese home islands thereby assisting in the war effort by

reducing Japan's industrial capability; demoralizing the enemy; considerably increasing the morale of the Chinese and increasing their faith in the United States Government.

b. Experience gained in these operations assisted materially in the planning and execution of the historic atomic bombings which were instrumental in bringing about the end of hostilities with Japan.

AIR OPERATIONS IN THE CHINA-BURMA-INDIA THEATER
RESULTS OF AIR OPERATIONS IN INDIA-BURMA THEATER

ANNEX 15

1. The following reflects the measurable results of the operations based in the India-Burma region during the period 7 December 1941 to 1 December 1945.

a. Air transport operations, combat cargo, troop carrier, and Air Transport Command:

Tons of supplies and equipment air lifted to China---	741,283
Tons of supplies and equipment air lifted to and within Burma-----	682,308
Tons of supplies and equipment air lifted within India-----	<u>256,785</u>

Grand total of tons, air lifted-----	<u>1,680,376</u>
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Personnel air lifted to China-----	163,005
Personnel air lifted to and within Burma-----	792,084
Casualties evacuated by air-----	<u>135,703</u>

Total personnel air lifted-----	<u>1,090,792</u>
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Total personnel on air supply in Burma at peak of campaign-----	405,000
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b. Air combat operations (excluding transport):

Total sorties flown-----	251,649
Total tons bombs dropped-----	84,101
Total enemy aircraft destroyed-----	690
Total bridges destroyed-----	500
Total river and harbor craft sunk-----	3,428
Forty-seven harbors and waterways mined-----	4,576
Total locomotives destroyed-----	130
Estimated Japanese troops killed-----	50,000

AIR OPERATIONS IN THE CHINA-BURMA-INDIA THEATER

RESULTS OF AIR OPERATIONS IN CHINA

ANNEX 16

1. Following measureable results of air operations, World War II, are claimed in the Fourteenth Air Force official records.

a. Enemy shipping claims:

	<u>Sunk</u>	<u>Probably Sunk</u>	<u>Damaged</u>	<u>Total</u>
Merchant (tons)-----	992,989	413,600	859,800	2,267,389
Naval (number)-----	33	22	45	-----
Small(number) -----	5,166	688	20,026	-----

b. Enemy aircraft claims:

	<u>Destroyed</u>	<u>Probably Destroyed</u>	<u>Damaged</u>
Aerial combat-----	1,291	558	655
On ground by air action-----	1,057	220	618
	2,348	778	1,273

c. Enemy troops, claims: 68,668 killed.

d. Horses, claims: 19,941 killed.

e. Transportation equipment, claims:

	<u>Destroyed</u>	<u>Damaged</u>
Locomotives-----	1,079	2,839
Railroad cars-----	1,245	5,799
Armored vehicles (including tanks armored cars, etc.)-----	91	295
Trucks-----	4,836	7,457
Miscellaneous (including carts, wagons, steam rollers, etc.)-----	499	3,199

f. Transportation installations, claims:

	<u>Destroyed</u>	<u>Damaged</u>
Railroad yards and truckage-----	19	600
Motor pools-----	2	22
Bridges and approaches-----	580	671
Roads and passes-----	4	61
Ferries and approaches-----	1	23

g. Military installations, claims:

	<u>Destroyed</u>	<u>Damaged</u>
Airdromes-----		219
Barracks and tents-----	261	466
Fortified points-----	317	718
Unspecified targets-----	8	32
Others (including lighthouses, observation posts, etc.)-----	4	22

h. Supply installations, claims:

	<u>Destroyed</u>	<u>Damaged</u>
Warehouses-----	632	587
Storage areas-----	382	312
Docks-----	12	78

i. Industrial targets, claims:

	<u>Destroyed</u>	<u>Damaged</u>
Factories-----	23	113
Others (including water towers, power-houses, etc.)-----	14	13

j. Other damage, claims:

Compounds-----	210	1,396
Buildings-----	5,467	10,711
Radio stations-----	30	89

k. Railroad Interdiction. Extensive damage was caused in French Indo-China and North China by interdiction operations of the 14th Air Force. Key bridges, repair shops, rolling stock and locomotives were included in the targets. Interrigation of Japanese high command officers has indicated that the overall adverse effect on Japanese supply lines, resulting from this damage, was so great at times so as to influence changes in the tactical plans.

AIR OPERATIONS IN THE CHINA-BURMA-INDIA THEATER

ANNEX 17

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