

\*By authority of the Commanding General, 14th Air Forco. 

FINAL ISSUE

#### FOURTEENTH AIR FORCE HEADQUARTERS



Transfer of 14th Air Force Hoadquarters during early August prevented regular publication of the 8 and 15 August Weekly Intelligence Summaries. With the cossation, then, of hestilities it was thought appropriate to postpone the next issue until official V-J Day to include a summary of activity during the final two weeks of combat. Moreover, because the 14th Air Force Summary has aimed since its inception to synthesize and disseminate only such information as bore immedi-ately upon the 14th Air Force mission against the enomy within the China Theater, it is further appropriate that with the successful conclusion of that mission the Weekly Intelligence Summary should, with this issue, appear for the last time.

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### C.A.T.F. & FOURTEENTH AIR FORCE LOSSES AIR COMBAT - GROUND FIRE - ON GROUND 464

### ENEMY SHIPPING LOSSES

 JULY 1942 - AUGUST 1945

 SUNK
 PROBABLY
 SUNK
 DAMAGED

 994,389 TONS
 414,700 TONS
 861,600 TONS

TOTAL -2,270,689 TONS

REPRODUCED BY 2201ST ENGR. AVN. REGT.

ENEMY	TRANSPO	RTATION	LOSSES
LOCOMOTIVES	R.R.CARS	TRUCKS	BRIDGES & APPROACHES
DESTROYED- 1072	1243	4783	573
DAMAGED- 2707	5725	7354	654

### CASUALTIES INFLICTED BY AIR ATTACK

PERSONNEL

HORSES

66,782

19,757

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#### SUMMARY OF THE WEEKS OF ALLS AUGUST 1945.

During the week 2-8 August operations of the 14th Air Force dropped sharply as a result of bad weather and the commencement of 10th Air Force operations in China. Total missions flown were only 85 as compared to 235 last week. Combat sorties decreased also from 627 to 257. P-51's frew 160 sorties; B-25's, 46; P-47's, 30; F-5's, 7; F-6's, 6; P-61's, 4; P-40's, 4; and P-38's, 0.

Only 658 briefed transport sorties were flown during the week, about one-half the usual number.

Leaflets were dropped over targets from French Indo-China to North China. No consolidated figures on total droppings were available.

There were no interceptions reported during the week. One twin-engine and one single-engine plane were damaged by strafing at TSINAN airfield. One 14th Air Force plane was destroyed by ground fire.

Targets ranged from the North China railroads south to the North River area. No missions were flown this week in French Indo-China. Bridges, rolling stock, river shipping, troop concentrations, convoy movements, ground installations and buildings were attacked. In addition some missions were flown in cooperation with the Chinese ground forces in the CHUANHSIEN-HENGYANG-PAOCHING area, and in the northern SICHWAN area.

In North China there were 24 fighter, 3 medium bombor, and 1 escorted medium bomber combat missions flown. Their principal targets were railroad bridges along the PINGHAN, the TSINPU, the TUNGPU and the LUNGHAI railroads. At least 15 bridges were reported damaged or rendered completely unserviceable. 81 locomotives and an unestimated number of railroad cars were destroyed or damaged.

Honan Province was attacked only once by fighters in the SICHWAN battle area. A Japanese headquarters' buildings were attacked and damaged and an unestimated number of casualties was inflicted.

The YANGTZE River area around HANKOW was attacked once by fighters. In this attack 12 x 150' barges were damaged.

In Hunan Province there were 12 combat fighter and 5 medium bomber missions flown. These were concentrated in cooperation with the ground forces attacking in this area. SINNING was bombed and strafed on at least 4 occasions. Buildings, trenches, pillboxes, especially in SINNING were heavily bombed and strafed. Sixteen P-51's attacked in one mission and 15 in another on this area in concentrated raids. Conveys which were still moving up' the SIANG River valley were bombed and strafed continuously. HENGYANG, PAOCHING and CHUANHSIEN were all attacked as directed by panels.

Kiangsi Province was attacked only 4 times by fighters in the KAN River valley. Japanese withdrawal in this area had been completed. Buildings and supply dumps were destroyed and an estimated 100 Japanese troops woro killed.

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In KWANGTUNG Province the NORTH River area was attacked . twice by fighters and once by escorted medium bombers. From YINGTAK to SAMSHUI 20 sampans were damaged and 2 cargo boats were sunk. From ICHANG to LOKCHONG, 11 junks were destroyed or damaged.

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Due to regrouping of units no missions were flown in French Indo-China this wock.

During the week 9-15 August operations of the 14th Air Force were further reduced. Total missions flown were only 68 as compared to 85 last week. Combat sorties also decreased from 257 to 219, P-51's flew 174 sorties; B-25's, 21; P-47's, 13; P-61's, 7; and F-5's, 4.

Only 381 briefed transport sorties were flown during the week.

Leaflets were dropped in North China in the SIANG and YANGTZE River areas and around CANTON. No figures on total leaflet droppings were available.

No enemy interceptions were reported during the week. No planes were destroyed on the ground and no 14th Air Force planes were lost to ground fire.

Targets were localized in three general areas, the North China railroads, YANGTZE River area and in HUNAN Province, Rolling stock, river shipping, warehouses and troop concentrations were attacked.

In North China there were 19 combat fighter missions flown, Their targets were bridges on the TSINPU, TUNGPU and PINGHAN railroads. Locomotives and railroad cars were destroyed or damaged. In addition ground targets were attacked at PUCHOW, YUHSIANG, TUNGCHEN, and FENTINGTUKOW. In these attacks warehouses and other buildings were destroyed, gun positions were hit and an unestimated number of casualties was inflicted.

Eleven fighter and one escorted medium bomber combat missions were flown. These missions attacked shipping from HANKOW to POYANG LAKE damaging or destroying 33 sampans, 38 junks, 44 boats and 16 steamers of more than 100 feet. Buildings and warohouses in towns along this route were also attacked.

In HUNAN Province there were 16 fighter, 6 medium bomber and 1 oscorted medium bomber combat missions flown. Supply and troop movements north from HENGYANG and INCLASSIFIEL

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CHANGSHA were attacked. There were, 5 intestions flown against the enemy troop concentration the areas of LILING and ISUHO FERRY. Many buildings were destroyed. River shipping was heavily bombed and strafed with 143 junks, 104 sampans and 13 large boats reported destroyed or damaged.

Since the cossation of hostilities 14th Air Force missions have been of a reconnaissance, photo and leaflet-dropping nature. Leaflets announcing the surrender of Japan have been dropped in a great many areas of occupied China.

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#### SUMMARY OF GROUND OPERATIONS FROM 1 AUGUST to THE END OF HOSTILITIES

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Japanese forces in Hunan continued their withdrawal during the last two weeks of combat activity falling back to prepared positions in the TUNGANHSIEN area, southwest of HENGYANG. Between this point on the railway and PAOCHING, due north, the enemy line had largely disintegrated, troops having evacuated to the PAOCHING area. Chinese operations along the length of the Hunan retreat route represented only moderate pressure directed at severing the railroad and highway. In the PAOCHING and YOUNGFENG areas, Chinese elements maintained contact although stubborn Japanese defense of these flanking positions had successfully withstood whatever Chinese strength had been committed. Constant air reconnaissance over the SIANG River valley disclosed an incessant flow, mostly at night, of troops and supplies by river and convoy toward CHANGSHA and YOCHOW. Manifestly the enemy w as making an all-out effort to shift the bulk of manpower and equipment reserves in Hunan to the HANKOW area for transfer northward.

In Kwangtung Japanese forces had presented only token resistance to attacks by Chinese regulars and commandoes at TANCHUK during the first week of August. What had been a major Fourteenth Air Force base until October of 1944 was again in Allied hands. Thereafter small remaining Japanese garrisons along the WEST River moved with increasing speed toward CANTON. Meanwhile, east of CANTON in the WAICHOW-FINGSHAN area marked concentrations were reported similar in strength and the nature of their preparations to the concentrations preceding the initial withdrawal movement from the WAICHOW area in late May. Sources in southern Kwangtung anticipated a second major withdrawal operation toward either KUKONG or KANCHOW. Troops and supplies were also gravitating toward CANTON from the south. However, there were no indications that 25rd Army Headquarters or those of the South China Expeditionary Forces were moving out of southern KWANGTUNG where approximately 60 - 75,000 Japanese troops appeared committed to the defense of the CANTON-HONGKONG area against possible Allied landing operations. Enemy units still held SWATOW in token strongth as the eastern anchor of what had earlier represented a strongly fortified coastal belt.

In northern Kiangsi Frovince during the last two woeks of hostilities the body of 15 - 18,000 troops moving north along the KAN River valley had completed its transfer to NANCHANG. Likewise, the movement eastward from the CHANGSHA-HENGYANG area of a similar sized body had merged with those from the south in the NANCHANG-KIUKIANG area. These moving east from the SIANG valley represented the bulk of two divisions seeking to avoid heavy losses in personnel and equipment being suffered by enemy forces in the congested narrow transit corvidor from CHANGSHA through YOCHOW to HANKOW. 14th Air Force

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fighters flying day and night missions over the SIANG Valley were inflicting sufficiently heavy damage to force diversion of troops and supply columns from this corridor eastward to NANCHANG. Such diversion, however, proved only partially successful in escaping attack; fighters and medium bombers ranged almost daily from CHIHKIANG into north KIANGSI striking at moving columns and supply areas. Throughout the course of these withdrawals through the Chinese 9th War Area, enemy troops were forced to resist constant harassing activities by Chinese elements under the command of General Hsieh Ye -"The Tiger" - Commander of the 9th War Area. At the outset of the Japanese movement north from KANCHOW down the KAN River valley toward NANCHANG, General Hsieh had candidly stated that he could not hope to prevent the operation with forces and equipment then available to him. But he assured unrelenting harassment so long as the enemy was within the area for which he had assumed responsibility. He made good his promises.

Along the length of the YANGTZE River valley from HANKOW to NANKING and SHANGHAI the ground situation was fluid. Into HANKOW were gravitating outlying garrisons in the Bulge Area - principally from KINGMEN, TANGYANG and ICHANG, the point on the YANGTZE boyond which the Japanese failed to penetrate from late fall in 1938 until the end of the war. Traffic counts taken at arbitrary points along the FingHan Railway north of HANKOW showed a large prependerance of traffic moving north with only incidental supplies being shipped south. Movement was no longer restricted to the protection of daylight hours attesting to the mounting urgency of transferring men and supplies to the north. Transit down the YANGTZE River was equally pressing, although hampered by extensive mining of the river. Special barracks areas and administrative posts had been established between KIUKIANG and WUHU to accommedate large bodies of enemy troops.

Fragmentary information from Honan indicated what substantial troop movements eastward from appeared to bo extensively prepared positions along the HAN and TAN Rivers in western Honan. Since early June when determined Chinese defenders stalled the enemy's westward drive in the mountains between NANYANG and HSIAN, Japanese strategists abandoned the campaign for the 14th Air Force northorn pattern of fields in favor of securing defenses along the western edge of the Honan buffer zone protecting the PingHan Railway. Fully cognizant of the rehabilitation program among Chinese armies constituting an increasing counter-offensive threat to their positions throughout central and north-central China, the Japanese progressively committed men and material to strengthoning western defenses. Applied to the Honan area, the policy called for expanded defenses at HSIHSIAKOU, SICHWAN, LIKUANCHIAO, and LAOHOKOW to oppose possible Chinese operations directed at the progressively crucial PingHan corridor. Despite continuing troop movements out of the defensive area, there was evidence to support the assumption that enemy strength along the HAN and TAN Rivers was being maintained through adequate replacement. Throughout the remainder of North China, the characteristic paucity of information continued to obscure specific developments. Strength in the Yellow River Bend and farther north in Shansi Province was being reduced. Progressive

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deployment of strength eastward, into Shantung antial ong the Kiangsu coast was generally assumed, although intelligence was not sufficiently specific to reveal units, strengths involved, or the detailed nature of coastal defenses. What could be safely demonstrated and supported was the general impression of desperate enemy efforts to prepare vulnerable coastal areas and major lines of troop and supply movements against inevitable Allied attack.

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Since the close of hostilities, a Japanese document submitted to Chinese military authorities at CHIHKIANG during initial surrender negotiations revealed the presence in China of 100,000 enemy troops under the Japanese 23rd Army Command, i.e., in Kwangtung, the Luichow Peninsula and Hainan Island; 350,000 troops in the area under 6th Area Army Command, i.e., Hunan,Kwangsi, and Hupeh; 340,000 in the 6th and 13th Army areas, i.e., the Yangtze River Valley, NANKING, SHANGHAI, and the Hangchow Bay area; 300,000 in North China. The total figure according to the Japanese document wad 1,090,000 troops in China proper.

The Japanese surrender to Chinese authorities has for the most part been orderly and in good faith. In the Kwangtung and coastal areas, the Japanese insisted upon completion of formal surrender "at the top" before laying down arms. Reports from Hunan have described irregular Japanese conduct in the FAOCHING area with looting, burning, and raping following the end of hostilities. However, General Ho Ying-chin, Commander of all Chinese ground forces, has officially denied the reports, and regularized negotiations have gone forward at assigned points in the Hunan area. In North China an isolated instance of insolence and bravado was reported wherein an individual Japanese garrison commander threatened to fight independently and resort to gas in defending his position to the end. Generally, however, Japanese commanders and ranks, alike, are acknowledging that the end has finally arrived and that the defeat of their cause is complete and unequivocal.

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#### THE CURRENT CAPACITY OF CHINESE RAILROADS

DATA ON AIRFIELDS

CLIMATE OF SHANGHAI

TRANSPORTATION - DAMAGE AND REPAIR

LATE REPORTS OF PREVIOUS MISSIONS



#### THE CURRENT CAPACITY OF CHINESE RAILROADS

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1. The capitulation of the Japanese armed forces in China and the resulting necessity of rapidly reoccupying vast areas of territory until now under onomy control, poses a logistical problem of considerable magnitude. Not only must occupying troops be moved into key positions with the greatest dispatch, but military supplies and equipment must be laid down in quantities that will certainly tax the capacity of all existing means of transportation. In addition there is the problem, equally urgent, of maintaining the civilian economy of the large cities of the eastern seaboard.

2. It is evident therefore that an evaluation of the actual current status of the various rail lines is a matter of the first importance. The following two reports are presented for what value they may have in determining the extent to which the China railroad system may be employed as answering current logistical needs.

3. The first report, <u>Military Traffic on the</u> <u>Southern PingHan Railway</u>, was prepared early in August, before V-J Day, by OSS, R & A, attached to A-2, 14th Air Force. It is believed that this gives a fairly accurate picture of the amount of military traffic actually moved by the Japanese over the rail line between HANKOW and the YELLOW River during the latter part of June and the first half of July. There is no reason to believe that the capacity of the line has been materially improved since that date. It must be borne in mind that operations cited were carried on at a time when the line was subject to intensive air attack with the result that a high percentage of traffic was limited to the hours of darkness. Full twenty-four hour operation, under peacetime conditions, does not mean, however, that traffic could automatically be doubled or trebled. As pointed out in the report, one of the chief limiting factors is the current shortage of locomotives and it seems most improbable that this condition can be materially relieved for some time to come.

4. The second report, <u>Current Status of Railroads in</u> <u>Occupied China</u>, was prepared by M.I.S., Washington, on 13 July, 1945. Although a portion of the material in this report duplicates information previously presented in this Summary, the report is reproduced here in toto as a timely synthesis of intelligence on Chinese railroads. Barring destruction of installations by the Japanese or through guerrilla fighting, it appears probable that the capacities given here represent a close approximation of the current status of the lines when due allowance is made for the difference in general operating efficiency between war-time and peace-time conditions, Such an alteration in status is especially applicable in the case of the southern Tatung-Puchow, the Peiping-Hankow,

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lines



### MILITARY TRAFFIC ON THE SOUTHERN PING-HAN RAILWAY

(Propared by R & A, OSS, Attached to 14th AF Hqs.)

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Intelligence supplied by the Office of Strategic Services concorning railway traffic on the southern Ping-Han RR provides the first detailed information on traffic movements along this strategic rail line. This information in turn affords a partial check on the present capabilities of the line as affected by Fourteenth Air Force attacks on railway bridges and locomotives.

The data are in the form of daily reports on train movements north and south at a point near HSINYANG (32-O6N, 114-O5E), 130 miles north of HANKOW. Such movements are reported on 20 days during the 26-day period from 24 June to 19 July 1945. It is assumed in the analysis which follows that all traffic occurring on these 20 days was duly reported. Whether there were additional unreported movements on the remaining 6 days is not known, but the 20 daily reports can probably be taken as representative of traffic during the months of June and July.

From these reports, supplemented by other information, it appears that the southern Ping-Han was able during June and July to carry a volume to traffic which was substantial in relation to routine Japanese military requirements in this area, though incapable of handling heavy troop and supply movements and particularly of effecting quick transfor between HANKOW and the YELLOW River. The line was being operated well below its estimated capacity, either because no additional traffic was required for military purposes, or because additional locomotives could not be spared from other lines. Air attacks had not reduced operating capacity below the level required to meet the ordinary maintenance needs of the Japanese Army in this region, but they precluded its use for largo-scale, speedy ro-deployment of combat divisions to other areas.

#### Traffic Pattern

Thirty-one northbound trains totalling 723 cars were observed on the 20 days between 24 June and 19 July. The average daily train movement north toward HSIN-YANG was therefore 1.5 trains, or 36 cars.

Southbound movement was only 85% of northbound movement, the 20-day total amounting to 25 trains aggregating 613 cars. The average daily movement south from HSIN-YANG was therefore 1.25 trains, or 31 cars.

Northbound trains were apparently loaded more or less to capacity with Japanese troops and military supplies. By contrast, of the total of 613 cars moving south, 344 (56%) were reported empty. In addition, many other cars may have carried only partial loads. This confirms other ground intelligence indicating that military movements along the southern Ping-Han in June and July were predominantly northward from HANKOW.



The average northbound train was 23 cars in length. The average southbound train was 25 cars. These train lengths seem surprisingly long for this relatively weak railway. However, average train tennage remains low. Over half the southbound cars were empties; while perhaps às many of 40% of the northbound cars carried troops, and a high proportion of the remainder carried trucks, tanks, and guns. This resulted in a comparatively light tennage per car. The same number of 30-ten cars leaded to capacity with heavy freight might have required 50-75% more locomotives.

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Rolling stock in the HANKOW yards totalled 141 cars on 11 July and 136 cars on 21 July. Traffic north and south at HSIN-YANG during this period averaged about 45 cars each way per day. If the latter also reflects traffic at HANKOW, this indicates a 3-to-1 ratio between rolling stock in the yards and daily arrivals and departures. In other words, the average turn-around time at HANKOW was about 3 days, if all cars observed were in service.

Of 20 northbound trains for which arrival time at HSIN-YANG is reported, over half (13) reached that point between 0200 and 0700 hours in the morning. Of 19 southbound trains, 9 left HSIN-YANG between 1900 and 2400 hours in the ovening and 8 between 0600 and 0900 hours in the morning.

#### Troop Movements

Northbound traffic was almost 100% military in character. Troop movement prodominated, the total number of troops moving north by rail during the 20 days being reported at 13,900 men. The average per day was 700; the average per train 450. If all troops travelled in boxcars at 50 men per car, they occupied 280 cars or 40% of the total. Movement at this rate represents the transfer of one full infantry division with supporting frmy units (20,000 men) per month.

Troop movement south by rail amounted to only 1,500 men during the 20 reported days. The average per day was therefore only 75; the average per train 60. Presumably these were largely replacements being shipped to the HANKOW areas.

#### Military Supplies and Equipment

At least 60% of the 723 cars moving north through HSIN-YANG were leaded with military supplies and equipment. Total amounts itemized in daily reports were as follows:

trucks	219
tanks	118
horses	800 ×
'cannon' (guns?)	. 170
amounition (boxes)	1,900
gasolino, alcohol,	
MG's, rice, clothing,	etc

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Military freight traffic on this scale, approximately 20 freight cars per day, is also just about sufficient to move in one month the equipment of a Japanese infantry division as such divisions are likely to be equipped in China today.

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Southbound freight movements, by contrast, included little in the way of ammunition, ordnance, vehicles or fuel. They consisted almost wholly of rice, salt, charcoal and bridge construction materials--probably also largely for Japanese use.

As in the case of troop movements this contrast between northbound and southbound freight confirms the fact that the Japanese have been using the Ping-Han RE to carry out-evacuation of troops and equipment from HANKOW rather than reinforcement of the area.

#### Effectiveness of Air Attacks in Interdicting Traffic.

During the 4-week period under review the southern Ping-Han was subject to a number of attacks by Fourteenth Air Force planes. Daylight sweeps, or the fear of them, served to confine traffic to night movement during flyable weather. Bridge attacks south of HSIN-YANG had put twp bridges out of service at the beginning of the period (24 June). They remained out through the last week of June, and at least one of them through the first two weeks of July.

North of HSIN-YANG, in the stretch between HSIN-YANG and HSIN-CHENG, there were 5 successful attacks on 4 bridges during the period. At least one of these bridges was unserviceable from 24 June to 2 July and 2 to 4 of them (including by-passes) after that date. On the entire southern Ping-Han, therefore, 3 bridges were out during the last week of June and 3 to 5 bridges during the first 3 weeks of July.

From the above traffic reports it is evident that these operations against the Ping-Han, while occasioning delays and temporary interruptions, did not suffice to interdict movements of troops and supplies on the section south of HSIN-YANG. Lacking ovidence of congestion at points north it must be concluded that through traffic to the YELLOW River was satisfactorily maintained at this level.

As noted above, car movements amounting to 723 cars in 20 days, or 1,000 per month, are sufficient to transfor troops northward at a rate of one full division of 20,000 mon with divisional ordnance and equipment per month. This includes an allocation of 650 cars for supplies and equipment. At 15 short tens per car, 650 cars represent a capacity of 9,000 tens per month. Actual tonnage moved was considerably below this owing to the high proportion of trucks, tanks, guns and horses.

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If personnel had been movement y other means and the railway given over entirely to movement of supplies and equipment, a movement of 1,000 freight cars per month each with a 15 ton lead would haul 15,000 tons. This larger tennage could probably have been achieved with the same number of locomotives, for a 23-car train would still carry less than 350 tons, which is no more than half the train lead on most North China railways.

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Military supply to the amount of 15,000 short tons is a considerable tonnage in relation to the routine requirements of the Japanese forces in China. A typical Japanese division which is engaged in garrison duty in China with little or no combat activity is estimated to require no more than 600-750 metric tons of supplies and replacements of equipment (excluding food, forage and construction materials locally procured). In sharp fighting of a continuous character, its maintenance requirements in the field rise to 2,500-3,000 tons. Thus 15,000 short tons per month will meet the garrison needs of at least 15 divisions, or will maintain at least 4-5 divisions in active combat (excluding supply losses from air attack).

These estimates are cited here because of a common tendency to over-estimate the logistical requirements of the Japanese Army in China under present conditions; also to under-estimate the Japanese ability to maintain the necessary minimum of military traffic even on railways under continuous air attack. (See R&A/OSS, Hq 14th AF, <u>Supply Requirements of the Japanese Army in China</u>, 30 July 1945).

It may be added that even at this level of traffic, the southern Ping-Han was probably being operated well below capacity during most of June and July. There is no reason to assume that the line even with traffic confined to night operations and delayed by several damaged bridges could not have handled 2 or 3 times the June-July movement, or up to 30,000-50,000 tons per month each way if the average load per car were as much as 15 tons. This would still mean only 3 to 5 trains per day north and south, each carrying 350 tons;

Locomotive requirements would be correspondingly increased, of course. As many as 15 locomotives are probably needed now to handle 1.5 trains each way per day on the 334-mile run from HANKOW to the YELLOW River, for the average haul per engine under present conditions is unlikely to exceed 60-75 miles. To troble the traffic would run the requirement up to nearly 50 locomotives. This number the Japanese could ill afford to devote to this exposed and vulnerable line except in an emergency, for their total North China pool has probably now been reduced to no more than 700 locomotives in operation for all purposes. At this lovel of traffic, too, congestions of troops and supplies might develop in rail yards and at demaged bridges, bringing increased risk of losses from strafing and bombing attacks.

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It should be noted that a weakened line like the Ping-Han can only accomplish rather slow movement of traffic, even at its present low level. To move troops and supplies the length of the section below the YELLOW River probably takes 3 to 5 days now. The time might well be even longer if so large a proportion of the traffic were not troops, trucks, horses, and southbound empties which can be trans-shipped across damaged bridges more easily than heavy military freight. At present the element of speed may be of comparatively little moment to the Japanese providing they can maintain a steady flow of traffic; but in a tactical situation dictating rapid transfers of troops and supplies time might woll be the critical factor.

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The net results of air attacks on the southern Ping-Han to date, then, has been to confine traffic to military movements of comparatively small proportions and comparatively slow speeds. The tonnage moved has nevertheless been approciable in terms of immediate Japanese requirements. Complete interdiction will require a more intensive and continuous attack on bridges and other installations than has yot been undertaken. This conclusion is ontirely consistent with European experience, where very heavy and persistent attacks were required to cut through the cushion of non-essential traffic and interdict the critical movements necessary to sustain the German Army's front-line operations.

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#### CURRENT STATUS OF RAILROADS IN OCCUPIED CHINA

(Military Intolligence Service, Washington)

1. General features. All the trunk railroads of Occupied China are standard  $4'8\frac{1}{2}''$  gauge except the Feng-ling-tu - Taiyuan soction of the Tatung-Puchow railroad and the Tungkuan-Luan line in Shansi which are motor gaugo. All lines are single tracked except a short section of the Peiping-Mukden railroad between T'ang-shan and Ch'in-huang-tao. It was formerly believed that the section of this line between Peiping and T'ang-ku had been double tracked by the Japanese, but recent aerial photos, while not absolutely conclusive, seem to indicate single tracking only. (Note: "From a study of available photos, the following general summary of the condition of the trackage is compiled:

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- 1) Peiping to Tanku single track. 2) Tangku to Tangshan single except for 2 short double soctions.
- 3) Tangshan to Shanhaikwan mostly double with some single sections.
- 4) Shanhaikwan to Mukden 70 to 80% double track with many short and a few long single track sections.

It has been impossible on the basis of only the shall to medium scale photos available on the greater part of the line, to be completely accurate in delimiting the single and double track sections. See: Reilroads in Occupied China, Special P.I. Report no. 40, Vol. XIII, The Peiping-Mukden Railroad, Hq. 14th A.F., 5 Aug. 1945, p. 1 ff.) The lines were originally well constructed and used stone ballast and wooden sloopers. The weight of rails on nost of the standard gauge lines is from 80 to 85 lbs: per yard, although these used on the Japanese constructed Peiping-Chinhsion line and on the sections in Shansi between Ta-t'ung, Taiyuan, and Shih-chia-chung are believed to be pessibly as light as 60 lbs. Lighter rails probably were also used in the reconstruction of the southern part of the Feiping-Hankow line and the Canton-Hankew line. On the meter gauge lines 30 lb. rails are used. Most of the bridges were steel structures with loading capacities varying between E-20 and E-50. However, numercus bridges, especially on the Peiping-Hankow and Canton-Hankew lines, have been so damaged by aerial attacks that their capacity has been greatly reduced. In other cases temperary wooden structures are used to replace heavily damaged or destroyed bridges.

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2. <u>Current carrying capacity</u>. The North China railways have a rated capacity of 3,500,000 metric tons of freight monthly. Because of numerous difficulties encountered in operations, this capacity was not attained during 1944, and it is believed that the railroads are currently carrying not more than 2,700,000 tons per month. These figures do not include troop movements, for which no average rate is available. No similar overall estimates are available for Gentral and South China railroads, but it is believed that tennages carried on these lines are not large and that they are operating at much less than theoretical capacity.

3. <u>Operating difficulties</u>. The difficulties encountered by the China railroads are chiefly the following:

a. Shortage of rolling stock caused in part by a high rate of mechanical breakdowns and air raid damage. The situation is further complicated by the use of large numbers of North China cars in the Nanking-Shanghai area, the Mankow area and on long freight hauls to Manchuria and Korea. It is estimated that the rolling stock of the Morth China railways amounts to between 1,050 and 1,250 loconotives and 14,000 to 15,000 freight cars, several thousand of which for practical purposes are permanently in Contral China or in Manchuria and Korea. If to the above figure are added the locometives and cars belonging to Central China railreads, it is believed that the total rolling stock in all of China would not exceed about 1,400 locometives and 16,000 to 18,000 freight cars. Frebably 25% of these locometives are permanently out of use because of breakdowns or damage from aerial attacks.

b. Inadequate ropair capacity, caused more by shortage of materials and skilled personnel than by lack of shop facilities.

c. Aerial attacks against bridges, shops, yards and other installations, as well as against rolling stock.





d. Shortage of engineers, trainmon and other railway personnel. A large proportion of the workers are Chinese, and they are inclined to desort because of fear of air attacks.

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e. Severe weather is known to have interfered very seriously with rail operations during the winter months.

4. Capacities of individual lines. Captured documents and other sources indicate that the Japanese rate the maximum capacity of main lines at about 20 trains a day in each direction; that they consider the mean capacity as 15 trains and the minimum capacity as 8 trains. Upon the basis of evidence available as to actual operations, it is believed that these maximum capacities are practically never attained, and that the mean capacity more nearly represents the maximum number of trains which are likely to be operated. In recent times it is believed that none of the railways have operated more than 12 freight trains daily, and in many cases considerably loss than that.

In the table below the estimated capacities of the various lines are given in terms of short tons of military supplies daily in each direction. Tennage capacities for bulk commodities, such as coal and ore, would be about 30% greater than in the case of military supplies, although the number of trains daily would remain the same. All estimates take into consideration grades, track characteristics, and the tractive offort of locomotives known to have been used or likely to be used on the lines. Locomotives with a tractive offert of from 30,000 to 32,000 lbs. are believed to be used on most of the standard gauge lines of North China. Smaller locomotives are undoubtedly used on parts of the Peiping-Hankow line. The use of a 50,000 lb. tractive effort locomotive has been assumed on the Peiping-Mukden line and a 20,000 lb. tractive effort locometive on the meter gauge lines. The length of trains generally vary from 25 to 40 cars. Cars vary in capacity from 15 to 50 metric tons with the majority being 30 ton cars. The net load of military supplies is estimated to average between 16 and 20 short tons por car.

Estimated	Capa	citics	of China	Railroad	S
(Short tons of mi	lita	ry sup	olies dail	y in oac	h diroction)
Name of Line	Not per	Load Train	Max.Capa- city	Pr <u>Operati</u>	actical ng Capacity
	Short	t Tons	Trains Daily	<b>Trains</b> Daily	Short Tons Daily
Canton-Hankow					
Lei-yang-Wu-ch'	ang	200		4	800
Peiping-Hankow					
Hankow-Hsin-hsi	ang	400		4	1,600
Hsin-hsiang-Pei	ping	700	15	10	7,000
Shanghai-Nanking		700	15	10	7,000
Tientsin-Pukow		700	15	10	7,000
Lung-Hai		375	15	10	3.750

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Nanc of Linc	Net Load por Train Short Tons	Trains Daily	Pr Oporati Trains Daily	actical Ing Capacity Short Tons Daily	
Tsinan-Tsingtao	700	15	10	7,000	
Shihchiachuang	5 <b>7</b> 00	15	10	7,000	
Taiyuan Taiyuan Tatung-Puchov	300	15	10	3,000	
Yung-chi-Taiyus Taiyuan-Tatung Poiping-Suiyuan Poiping-Mukdon	an 260 280 250 860	10 10 12 18	6 8 10 14	1,560 2,240 2,500 12,000	
Poiping-Chinhsion	n · 280	7	5	<b>1,</b> 400	

5. Canton-Hankow Line. This railway is in operation from Canton 45 miles north to Ydan-t'an (23-42N, 113-08E). From Yuan-t'an north to Leiyang (26-26N, 112-50E) a 259 mile stretch is partially Costroyed, but is being reconstructed by the Japanese. From Lei-yang to Mu-ch'ang (across the river from Hankow) the line is in operation, but it is constantly disrupted by aerial attacks on bridges, yards, track and rolling stock. A number of bridges are so soriously damaged that wooden by-pass bridges have to be used. Through traffic on this section except for light notor driven trains is believed impossible, and all trains travel at night because of aerial attacks. There are no passenger trains, and so far as is known the line is used almost exclusively for military purposes. It is believed that not more than the equivalent of three er four light trains daily of 8-12 cars each are able to operate. There is no regular train ferry across the Yangtze River at Hankow, but several barges with a capacity of 5-6 freight cars each are used for the transfer of rolling stock.

6. Poiping-Hankow Line. This line was opened to traffic throughout its ontire length in October 1944 after reconstruction by the Japanese of a 203-mile section south of the Mollow River. It is subject to constant disruption by aerial attacks on rolling stock, bridges and other installations, while guerrilla attacks have also disrupted the line, especially around Hsinhsiang. Trips from Hankow to Esin-hsiang, just north of the Yellow River, usually take several days because of the disrupted state of the section of the line south of the Yellow River. The Yellow River bridge seems to be upsafe for heavy locenotives or for more than a few leaded cars at a time, and a number of other bridge across the Yellow River via Chong-hsion, E'di-fong and Esinhsiang is a wooden structure and has been damaged on numerous occasions by aerial attacks. Southbound traffic carries ceal, salt, coment and military supplies, while northbound traffic, especially from Hsin-hsiang north carries ceal, cetton, iron ere, and food preducts. Trains run only at night south of the Yellow River, and available evidence indicates that not more than 3 or 4 trains daily in each direction operate over this section average length of trains is from 15 to 25 cars. The expective of the line north of the Yellow River is center, areaded the form the Yellow River is center, areaded the form the Yellow River is center, areaded the form the Yellow River is center.

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7. <u>Tientsin-Pukow Line</u>. This is the most important of the railways connecting Central China with North China, because it has been less seriously affected by aerial attacks and because all sections have been in operation for a long time. A large percentage of the coal used in the Shanghai-Manking area is carried south on this line. It also carries small quantities of salt and other commercial goods, as well as military supplies. Southbound traffic is estimated at a monthly rate from 150,000 to 200,000 metric tens. Northbound traffic carries coal, iron ore, rock phosphate, and other export commedities destined for Japan, Korea and Manchukue in addition to local freight. The estimated monthly rate of movement of northbound export commedities is from 50,000 to 100,000 metric tens. Current information indicates that only about 10 freight trains a day are operating in each direction on the line. Its ruling grade is .67 per cent. The rail forries at Pukow which connect this line with the Shanghai-Manking line have been damaged at various times by aerial attacks, but they are presently in operation.

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8. Tatung-Fuchow Line. This railroad, running the length of Shansi Province, is divided into two sections.North from Taiyuan to Ta-t'ung it is standard gauge. The southern section from Feng-ling-tu to Taiyuan is moter gauge, thus making through traffic inpossible. The southernmost section of the line from Feng-ling-tu to Yung-chi has been destroyed for some time, but from Yung-chi north the line is in operation. Traffic on the line has been seriously disrupted by aerial attacks, and at present trains operate only at night. One passenger and two 15-car freight trains nightly in each direction are reported in operation on the southern sections of the line. The ruling grade on the meter gauge section south of Taiyuan is 1.25 per cent and on the standard gauge section between Taiyuan and Ta-t'ung is about 1.80 per cent.

9. <u>Peiping-Suivan Line</u>. This line is in operation throughout its entire length of 508 miles, but has often been disrupted by guerrilla activity in the Kuei-sui-Rao-t'ou sector and has been subjected to aerial attacks in the Ta-t'ung area. The section from Ta-t'ung to Feiping is especially important because of the coal, iron ore, pig iron, weel and other raw materials which it carries from Inner Mengelia to North China, for use there and for expert to Japan, Korea and Manchuria. The estimated southeastern menthly rate of movement of these commedities is about 100,000 metric tens. The capacity of the line is limited by grades of 3.3 per cent in the Nan-k'ou Pass north of Feiping. Large Mallet engines are used in this pass, but even so, the net load per train of military supplies which can be carried northward through the pass is estimated at about 250 short tons per train. It is believed that not over 8 to 10 trains daily normally operate over the section between Feiping and Ta-t'ung and that even fewer trains operate between Ta-t'ung and Pao-t'ou.

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. M.L. W. 10. <u>Peiping-Mukdon Line</u>. This is the most important line connecting North China with Manchuria and is believed to have the highest capacity of any of the railways in North China, Thus far it has not been seriously interfored with by aerial attacks; although it has at times been disrupted by guerrilla activity. It is believed currently to be devoting most of its capacity to the movement of coal, iron ore, pig iron, phosphate rock, aluminous shale, salt and other raw materials to Korea and Manchukuo and to Korea for export to Japan. Estimated current northeast-ward movement of these commodities is about 300,000 metric tons per month. Current information would indicate that only about 10-12 freight trains daily are operating in each direction on the line.

ll. Feiping-Chinhsien Line. This provies an alternate route connecting Manchukuo and North China. It passes through very rough country, however, and is believed to be a very low capacity line. Operations at times have been seriously interfered with by guerrilla activity, and at present it is doubtful that even 5 trains daily are in operation.

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#### DATA ON AIRFITLDS

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In the following list of airfields, those have been selected in territory formerly occupied by the enemy which are most likely to be of service to or along the routes of re-occupying forces. Only the lengths and directions of runways are given, together with the condition of the field as it can be determined from the best and most recent photo cover available.

> HANKOW-WUCHANG AREA Mission 5 MA 87, 20 Aug 1945

- 2. WUCHANG A/D (30+31N, 114-20E) 1 N-S runway 4400' x 175' 1 E-W runway 4100' x 175' Field serviceable.
- 3.WUCHANG SAT. A/F (30-37N, 114-22E) 1 NNE-SSW runway 5300' x 380' Field serviceable.
- 4. HANKOW SAT A/F (30-35N, 114-08E) 1 NE-SW runway 4900' x 180' Field serviceable.
- 5. TSINGSHAN L/S (30-38N, 114-29E) l NE-SW runway 5000' x 250' Missions 5 MC 192 and 193, 24 Aug 1945. Runway and taxi strips appear abandoned and overgrown, probably usable only in emergency.

-/-

SHIHHWEIYAO AREA Mission 5 ME 166, 25 July 1945

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KIUKIANG AREA Mission 5 ME 172, 28 July 1945

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2. ERH TAO KOW L/S (29-49N, 115-56E) JNGLASSIFIED 1 NW-SE runway 38001 x 500' Strip unserviceable.

3. KIUKIANG SAT L/S (29-45N, 115-58E) 1 NE-SW runway 4400' x 215' Strip unsorviceable

-/-

#### NANCHANG AREA Mission 5 ME 179, 15 Aug 1945

- 1. NANCHANG A/F (28-38N, 115-52E) 1 NNE-SST runway 3275' x 320' Field limited operational
- 2. NANCHANG L/S (28-42N, 115-49E) 1 NNW-SSE runway 5900' x 180' 5 ME 176, 15 Aug 1945 Strip probably/serviceable. un

-/-

#### ANKING AREA Mission 5 ME N10, 20 Jug 1945

- 2. ANKING SAT A/F (30-32N, 117-06E) l NE-SW runway 5500' x 215' Field serviceable.

-/-

LUCHOW AREA Mission 5 MD 17, 9 Feb 1945

#### -/-

WUHU AREA Mission 5 MB 56, 10 June 1945

-/-

NANKING AREA Mission 5 MB 74, 24 Aug 1945

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2. NANKING SAT A/F (31-58N, 118-50E) l NE-SW runway 52QO' x 320 Field serviceable

- 3. NANKING E L/S (32-02N, 118-53E) 1 NE-SW runway 3850' x 130' Strip serviceable.
- 4. TAI CHIAO CHAN A/D (32-00N, 118-49E) 1 N-S runway 3300' x 185' 1 ESE-WNW runway 3200' x 185' 1 NE-SW runway 4300' x 300' Field serviceable.

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<u>WUTSIN AREA</u> Mission 5 MD 142, 10 June 1945

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TUNGTAI AREA Mission 5 ND 77, 13 Apr 1945

1. TUNGTAI A/F (32-53N, 120-18E)
 1 N-S runway 5450' x 1000'
 1 E-V runway 6050' x 695'
 N-S runway aprears under construction. Field
 probably not serviceable.

-/-

#### SHANGHAI AREA Mission 5 MB 74, 24 Aug 1945

- 1. CIVIC CENTER L/S (31-16N, 121-32E)
   1 E-W runway 7200' x 200'
   5 MB 72, 20 Aug 1945.
   Runway and taxi-strips appear in good condition.
- 2. GEE MAI ROAD L/S (31-16N, 121-32E) 1 NNE-SS/ runway 7200' x 175' Runway serviceable.
- 3. HUNG JAO A/D (31-10N, 121-20E) 1 NNW-SSE runway 6500' x 330' 5 MA 88, 23 Aug 1945. Runway serviceable.
- 4. KIANGWAN A/D (31-21N, 121-31E) 1 N-S runway 5200' x 380' 1 E-W runway 5600' x 490' 1 NW-SE runway 4900' x 830' 1 NE-SW runway 5000' x 490' Field serviceable.

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5. LUNGHWA A/D & SEA PLANE BASE (31-10N, 121-27E) 1 N-S runway 5400' x 420' 1 E-W runway 4300' x 420'

1 NE-SW runway 4300' x 420' 1 NW-SE runway 3900' x 420' 5 NB 71, 19 Aug 1945. A/D and Seaplanc base probably serviceable.

6. TACHANG A/D (31-18N, 121-25E) 1 N-S runway 4800' x 200' 1 E-W runway 4800' x 200' 1 NE-SW runway 3400' x 220' 1 NW-SE runway 5200' x 220' Field serviceable.

7. WOOSUNG 1/D (31-25N, 121-18E) 1 NW-SE runway 5700' x 320' 1 NE-SW runway 3600' x 320' Field serviceable. S-W extension of NE-SW runway probably unserviceable.

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### SINYANG AREA Mission 5 MD 161, 20 July 1945

1. SINYANG A/F (32-04N, 114-06E)
1 ENE-WSW runway 2900' x 125' (sod)
1 NNW-SSE runway 3400' x 125' (sod)
Runways probably unsorviceable.

-/-

CHENGHSIEN AREA Mission 5 MD 169, 26 July 1945

- 1. CHENGHSIEN A/F (34-44N, 113-44E) 1 NNE-SSW runway 4500' x 165' Field serviceable.
- 2. CHENGHSIEN SAT. L/S (34-43N, 113-43E) 1 WNW-ESE runway 5300' x 620' 1 NE-SW runway 5500' x 300' 5 MD 150, 1 July 1945 Strip serviceable.

-/-

PUCHOU AREA Mission 5 MC 164, 3 Aug 1945

1. PUCHOU A/F (34-55N, 110-17E) 1 NE-SW runway 4600' x 235' Field serviceable.

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ANYI AREA Mission 5 MC 164, 3 Lug 1945

1. ANYI A/F (35-08N, 110-58E) 1 E-W runway 4800' x 240' A/F appears abandoned. Runway unserviceable.







MUNCHENG AREA Mission 5 MC 164, 3 Aug 1945

Field sorviceablo.

LINFEN ART Mission 5 MC 164, 3 Aug 1945

1. LINFEN A/F (36-03N, 111-31E) 1 NNE-SSW runway 4050' x 150' Field serviceable

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LOYANG AREA Mission 5 MC 167, 4 Aug 1945

1. LOYANG A/F (34-43N, 112-24E) 1 ENE-WSW runway 3000' x 360' Field unserviceable.

<u>YELIOW RIVER BRIDGE AREA</u> Mission 5 NC 158, 31 July 1945

1. YELLOW RIVER BRIDGE L/S (34-59N, 113-34E) 1 E-W runway 5000' x 340' (sod) Strip abandoned.

> ANYANG AREA Mission 5 MC 172, 10 Aug 1945

1. ANYANG A/D (36-08N, 114-21E) 1 NNE-SSW runway 4800' x 510' Field serviceable.

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SIMSIANG AREA Mission 5 MC 180, 14 Aug 1945

1. SINSIANG A/D (35-16N, 113-55E) 1 NNE-SSV runway 5400' x 330' (sod) 1 N-S runway 3350' x 330' 1 ENE-WSW runway 3560! x 330! Field sorviceable.

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KAIFENG AREA Mission 5 MC 178, 13 Aug 1945

1. KAIFENG A/D (34-43N, 114-24E) 1 NNE-SSW runway 4070' x 165' Field serviceable. -/-







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2. LANTIENCHANG A/D (39-57N, 116-162) 1 N-S runway 3200' x 210' 1 NE-SW runway 3000' x 150' 1 NW-SE runway 3000' x 150' Field serviceable.

3. TUNGHSIEN A/F (39-55N, 116-39E) l NNE-SSW runway 5300' x 680' Fiold serviceable. -/-

> TIENTSIN AREA Mission 5 MC 193, 24 Aug 1945

#### HANGCHOW AREA Mission 5 ME 177, 16 Aug 1945

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1. MANGCHOW A/D (50-20N, 120-14E)
1 MNE-SSW runway 4550' x 200'
1 MNW-SSE runway 2600' x 120'
NNE-SSW runway serviceable.
NNW-SSE runway limited serviceability.

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#### CANTON ARBA Mission 5 ME 107, 18 Jul; 1945

1. WHITE CLOUD A/D (23-10N, 113-152) 1 NNE-SSW munway 4260' x 400' 1 NNW-SSE runway 3740' x 300' Field serviceable.

2. FIEH HO A/D (23-08N, 113-19E) 1 N-S runway 5000' x 320' 1 E-W runway 3100' x 190' Field serviceable.

- 3. UNIVERSITY L/S (23-07N, 113-20E) 1 NW-SE runway 5400' x 550' Strip serviceable.
- 4. WHATPOA L/S (25-08N, 113-24E) 1 N-S runway 5000' x 300' Strip scrviccable.
- 5. WHITE CLOUD SAT. A/F (23-14M, 113-17E) 1 MNE-SSW runway 3700' x 350' Field serviceable.

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#### HONG KONG AREA Mission 5 ME 157, 18 July 1945

> AMOY AREA Mission 26 PS- 6 PS-5M164-D32H2V (26-39), 13 June 1945.

> SHATOW AREA Mission 20RS-6RG 5M170-22 IV (1-29), 19 June 1945

> NINGPO AREA Mission 5 MC 4, 16 Jan 1945

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#### CLIMATE OF SHANGHAI

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(Taken from General Climatic Information Guide No. 19; submitted by 14th Air Force Staff Weather Officer.)

#### LOCATION AND TOPOGRAPHY

The area covered by this guide is the portion of the coast of China immediately south of the YANGTZE River. The city of SHANGHAI is located on the left (west) bank of the HWANG-PU (WHANG-POO) River 12 miles from the mouth of the YANGTZE River. There are a few insignificant hills in the vicinity of SHANGHAI reaching clevations up to 400 feet. There are higher mountains farther to the west, about 80 miles from SHANGHAI, but they have only minor influence upon the climate.

#### REPRESENTATIVE CLIMATIC STATION

The climate of the estuary of the YANGTZE River is represented by the observations taken at ZI-KA-WEI, (31-12N, 121-26E, elevation-22 feet)\* All climatic elements represented in this guide are based on records of 10 to 62 years of observations except for ceilings, visibilities and wind frequencies for which 6 years of observations were used.

#### GENERAL CLIMATIC CONDITIONS

The climate of the lower YANGTZE River valley is governed essentially by the laternation of maritime tropical air from the East China Sea and the continental tropical (summer) and continental polar air (winter) from the interior of the Eastern Asiatic continent. The main governing influence upon the climate is the change of the seasonal monsoon winds which, in winter, carry polar continental air from the interior to the sea and, in summer, maritime tropical air from the sea to the continent.

#### TEMPERATURE

The interplay between winter and summer monsoons creates a considerable range of temporature. The mean for January is 40 degrees but cold waves occasionally depress normally high and the war est month is August (mean 83 degrees). The absolute maximum recorded is 104 degrees. Under the influence of clear skies in winter, the night temperature goes below the freezing point on as many as 16 days in January. In summer, daily maxima frequently exceed 90 degrees and, from the middle of May to the middle of Octobor, daily maxima of 75 degrees are normal.

#### PRECIPITATION.

Procipitation in this area has a very marked annual variation. Of the annual total of 45 inches, the majority falls in the summer with a maximum value in July when 7 inches a month are normal. The cool season (November through February), while not actually dry, has mean precipitation

\*Located 5 miles west of the city of SHANGHAL



below 2 inches. During the summer monsoon, excessive amounts of precipitation are occasionally observed with a 24 hour maximum of 10 inches. The maximum monthly amount observed is 19.4 inches. Long lasting rainy spells (7 or more successive days) are infrequent and constitute less than 5% of the cases in most months. July is an exception with 10% of the cases of rain spells lasting 7 days or longer. The majority of all rainy spells, however, last less than 3 days in all seasons. In March, April, August and October, nearly 75% of all rainy spells last only 1 or 2 days in succession. Snowfalls are observed nearly every year in the form of light snow flurries, but snow covers are observed on the ground only in exceptional cases.

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#### CLOUDINESS

Cloudiness is relatively high from January through September. In these months, more than .6 mean sky cover is observed with a peak of nearly .8 during the height of the summer monseen in June. From October through December, mean cloudiness is between .5 and .6. During May and June, 18 to 20 days a month are cloudy (mean sky cover more than .8). Clear days during these same months (mean sky cover less than .2) can be expected only at the rate of 2 a month. From October through January, about 8 or 9 days a month are clear. Low ceilings are rather rare and do not occur on more than about 6 days a year.

#### FOG AND VISIBLITIES

Dense fog occurs on 3 to 4 days a month at the height of the summer monsoon but is not unknown at any season. Visibilities below  $1\frac{1}{4}$  miles occur on 7 to 9 days a month in the early morning hours from November through March. Visibilities are usually better in daytime, although, during the winter, dust burdened air masses from the interior of China are common and excellent visibilities are rare. The lowest frequency of poor visibilities occurs from July through September, and good visibilities are provalent in those months, especially in daytime.

#### WINDS

Wind velocities in SHANGHAI are generally light to fresh with calms and gales occurring only rarely. From August through November over 40% of the observed wind velocities exceed 18 m.p.h. The change in prevailing wind directions between winter and summer is striking. In winter, 61% of all winds come from the northern quadrant (N, NE, NW); in summer about 68% of all winds are from the southeastern quadrant (E, SE, S). Occasionally typhoons from the China Sea strike at the coast near SHANGHAI and extreme wind velocities over 80 m.p.h. have been observed in conjunction with these storms.

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#### COMPARABLE U.S. STATION

The climate of SHANGHAI is most closely comparable to that of Allendale, South Carolina, 60 miles north of Savannah, Georgia. Mean January temperature for SHANGHAI is 40 degrees compared to 48 for Allendale. The mean July temperature for both places is 83 degrees. The absolute minimum temperature is 10 degrees in both places. The absolute maximum is 104 degrees in SHANGHAI compared with 106 degrees for Allendale. The total annual precipitation is 45 inches for SHANGHAI, 44 inches for Allendale. Maximum precipitation for SHANGHAI occurs in June while the maximum in Allendale falls in July. However, while there is a slight monsoon tendency in wind distribution in South Carolina, no striking reversal of prevailing seasonal winds as observed in SHANGHAI takes place.

#### AIR OPERATIONS (GENERAL)

JUNE-AUGUST 3-6 DAYS/MO DEC.-JAN THUNDERSTORMS NONE. SEVERE ICING DEC-FEB 1-2 DAYS/MO.APRIL-SEPT NONE EXCEPT ABOVE 13000. CEILING 1000 FT AND/OR NOV-MAR.7-9 DAYS/MO.JULY-OCT.3-4 VISIBILITY 14 MILES DAYS/MO. NOV-MAY 1 DAY/MO.JUNE-OCT.O-1 DAY/MO. GALES SKY 8/10 CLOUD COVERED MAY-JUNE 18-20 DAYS/MO.OCT-DEC 8-9 DAYS/MO. ALL MONTHS (EARLY MALL MONTHS AFTER-VISIBILITY 6 MILES MORNING 14-16 DAYS/MO)NOONS 5-8 DAYS/MO.

#### AIR OBSERVATION AND PHOTOGRAPHY

SKY 8/10 CLOUD COVERED MAY-JUNE 18-20 DAYS/MO. OCT-DEC. 8-9 DAYS/MO. VISIPILITY 6 MILES ALL MONTHS (EARLY ALL MONTHS MORNING 14-16 DAYS/MO.)(AFTERNOONS 5-8 DAYS/MO.)

#### PARACHUTE OPERATIONS

WIND VELOCITY 16 M.P.H. AUG-NOV-JAN. MAR-JULY. (40-50% OF OBS.) (20-30% OF OBS.) VISIBILITY 6 MILES ALL MONTHS (AFTÉR- ALL MONTHS NOONS 22-25 DAYS/MO)(EARLY MORNING 14-16 DAYS/MO

#### GROUND OPERATIONS-GENERAL

RAIN FREQUENCY APRIL-JUNE 12-14 DAYS/MO OCT-DEC 8-9 DAYS/MO TEMPERATURE 80 DEGREES F. JUNE-SEPT 20-30 DAYS/MO.NOV-FEB. NONE. TEMPERATURE 32 DEGREES F. DEC.-FEB. 8-11 DAYS/MO. APR-OCT. NONE.

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#### MECHANIZED OPERATIONS

RAINFALL	JUNE-SEPT.	5-7	INCH	ES MC	).	NOV-F		1.5-	-2.3
SNOW COVER	DEC-FEB. 1	DAY/	SEAS	ON		MAR-N	IO • IOV •	NONI	∃ .
VEHICLE MAINTEN	ANCE								
TEMPERATURE 32 HIGH TEMPERATUR	DEGREES F.	DEC- JULY	FEB.	8-11 (MEA	DA N D	YS/MC AILY	API ( NOV ווֹד יוי	R-OCI	C.NONE R(NO ROOF)
SAND AND DUST S	STORMS	DEC-	FEB	2 DAY	/s/m	0	MAT NOI	Y-JUI VE.	JA NA UL
ENGINEERING CON	ISTRUCTION								
HEÁVY RAINS		JUNI AMTS MAX	-NOV .12- 24	(MAX 19 IN HRS.	K.MC ICHE 10.	S 4 IN.	NOV AMT MAX	-MAY( 5.6-9 . 24	(MAX.MO. ) INCHES; HRS. 2.9
RIVER STAGES FROZEN SOIL	•	MAX. DEC-	42 FEB	FEET 1-2 I N	DAYS		MIN MAR-	• 24 • NOV	FEET NONE.
SNOW COVER		DEC-	FEB	I DAY	(/SE	ASON	MAR-	-NOV	.NONE.
SUPPLIES AND ST	ORAGE								Ĺ
TEMPERATURE 32 HIGH HUMIDITY	DEGREES F.	DEC- ALL ING	FEB MONT RE.	8-11 HS(E/ HUM.	DAY IRLY 90%	S/MO MORN OR M	APR• [- IORE	- 0CT )	•NONE•
ROAD COMPUNICAT	IONS						•		•
RAIN FREQUENCY		APR-	JUNE	12-1	.4 D	AYS/M	10 O	DT-DJ	EC.8-9
SNOW COVER		DEC-	FEB	l day	Z/SI	ASON	M2	113/1 AR-N(	DV NONE.

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TRANSPORTATION

PINGHAN RR

The high-light of the final days of combat operations, was the damaging of the Yellow River Bridge #195. Photo cover on 13 August revealed that two spans of the bridge were out at the north end. Investigation of the source resulted in credit for the damage ending up with the ground forces. This was the first time that the bridge had been successfully damaged since 14 April when the second span from the north end was knocked out by an aerial attack. Going back over the first 15 days of August which were not covered during 14th Air Force Headquarters moving operations, we find that bridge #84 at KAOYI had been skip-bombed on 2 August and 2 spans were destroyed as revealed by photo of 3 August. However, a by-pass for the bridge was nearing completion. On the same day 200' of bridge #265 at SINYANG were shown by strike photos to have been destroyed. On 1 August a pilot reported that he had destroyed 1 span and damaged an abutment of #256 at MINKIANG. Bridge #92 at NELKU received slight damage to 1 span on 4 August and #105 at SHAHO was rendered unserviceable by direct hits on 11 August. The two bridges at ANYANG, #126 and #130 which have always received more than their share of attention wore both hit on 2 August but were revealed as serviceable by photo on the following day.

#### WUCHANG LIUCHOW RR

The only action against this line during the first half of August was at SINTSIANG where bridges #46 and #47 were reported as hit on 1 August. Photos of the same date showed #46 as serviceable and #47 unserviceable bearing out the claim that it had been one-half destroyed.

#### TUNGPU RR

We think we can safely say without fear of contradiction that bridge #102 at YUTZE was the scene of more "Damage and Repair" than any other bridge in the world for a corresponding period. It ended July out of service but started the first of August intact. A hit was reported on 4 August destroying 1 span and possibly damaging another. Photo on 5 August showed the bridge unserviceable but by the 9th it was again usable. The following day it was hit again and damage claimed to a pier, an abutment, tracks and ties. This was a dull period in comparison to June and July. Two other bridges which received considerable attention in recent months were numbers 122 and 123 at KIEHSIU; #122 was rendered unserviceable on 1 August but the by-pass was intact by 3 August; #123 was reported hit on 11 Aug. with 2 spans and 1 pier reported destroyed and 1 abutment badly damaged. At HUNGTUNG bridge #142 was hit on 4 Aug. destroying one pier and dropping 2 spans. This damage had been repaired by 9 August when phote revealed that the bridge was serviceable.

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#### HUNAN

The highway bridge at TACHUENTIEN (26-33N, 111-42E) west of the railroad bridge #100 was attacked with a vengeance on 28 and 29 July and is reported to have ended the month out of service.

Photos of 29 July reveal that the road from HENGYANG to CANTON is in excellent condition and well travelled.

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LATE REPORTS FROM PREVIOUS, MI BONB DAMAGE

(Reports from Ground Sources and Photo Cover Compared with 14th AF Mission Reports)

Prepared by Operations Analysis Soction

#### 20 July Attack at KAIFENG

Chinese ground sources advise that on 20 July, 30 U.S. planes attacked KAIFENG killing more than 100 Jap troops and Chinese. Freight train arriving at station was completely destroyed. An identical report was made by OSS ground sources.

> 14th AF Mission Report: No attack reported on this date.

#### 20 July Attack on ANYANG

First phase photo report of this bombing shows that all bursts were in target area. Five gondola cars and rails at south end of yard were probably dostroyed. Extent of damage to barracks area was uncortain because of smoke.

14th AF Mission Report: This mission not reported.

#### 21 July Attack on TAIYUAN

First phase report of bombing on this date shows 25% of bomb bursts in the target area. Ten direct hits on spurs within target area probably damaged RR station and trackage. Similar damage was probably caused by about 20 hits on spurs north and northeast of the target area. Concontration of bombs was such as to probably render the choke point unserviceable. Remainder of bombs struck a storage depot northeast of target area; several small buildings were probably damaged. No report by 14th AF.

#### 24 July Attack at ANKING

Chinese ground sources report an attack on ANKING during which a military supply depot was completely destroyed and 40 Japaneso word killed. OSS sources made an identical report. No report was given for this date by the 14th AF.

#### 24 July Attack on HAINAN Island.

OSS ground sources report an attack by Mustangs on the city of LINKAO on HAINAN Island. A tower 20' x 20', 30' high, storing amounition was hit, the ammo exploding for 15 minutes, killing an estimated 100 Japanese.

14th AF Mission Report: None given for this date.

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#### 24 July Attack on PUCHI RR Bridge (No. 24)

First phase report shows that one bomb landed in the superstructure at the west end of the bridge with no apparent damage visible on available photos; four near misses observed. Bridge probably serviceable, but temporary damage to tracks or bridge deck may have been sustained by the direct hit.

> 14th AF Mission Report: 4 Mitchells bombed RR bridge at PUCHI damaging superstructure of first span from south approach. 4 accompanying Mustangs scored 6 direct hits on gun positions, then strafed surrounding territory, probably damaging 4 storage buildings.

#### 1 August Attack in SINSIANG Area

First phase photo cover of this attack shows approximately 20 new craters in the railroad yards. 26 cars are shown to be damaged in addition to 15 cars and 3 locomotives which were probably damaged by near misses of the bombs dropped by the 1st and 2nd elements. Bombs dropped by the 3rd element caused the damage of 10 additional railroad cars and 3 locos; 6 cars were probably damaged by near misses. Photos show that tracks have been disrupted in the center of the yards, through service is probably temporarily out, and that the loco revetment area has been blocked off by bursts on the tracks.

14th AF Mission Report: None given for this date.

#### 1 August Attack on KAIFENG

First phase photo cover shows that 7 freight cars received direct hits or near misses and were probably destroyed or severely damaged and that there was possible minor damage to trackage in the freight depot. There was probable damage to 4 warehouse type buildings and to some passenger cars in the train in east section of the yards by near misses.

14th AF Mission Report: None given for this date.

#### 3 August Attack on SUCHOW

First phase photo cover of the South TSINPU RR Yards No. 32, SUCHOW, indicates the following damage: 1st and 2nd elements made 100% hits along center and west section of target and 100% hits in south and center of target area. Estimate of results of third element's bombing is impossible due to incomplete cover. 20 cars were destroyed, 25 severely damaged, and 15 probably damaged; one car shed 90' x 20' is 50% destroyed, and one warohouse 200' x 25' received one direct hit. Strike photos of second element bomb bursts show a coverage of 60% in an area having a large concentration of railroad cars, estimated at 200.



14th AF Mission Report: A mission report is given for this date indicating a bombing raid by 14 Mitchells on RR Yards at an unstated location. 90% direct hits are claimed; 6 large fires were started with smoke rising to 6,000 feet. Many secondary explosions occurred, probably emanating from oil and ammunition dumps.

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