55BW Mission Summary No. 158, 31 Jan 45 (Cont'd).

1. General Summary. On 31 Jan 45, 149 B-24 a/c (158 a/c scheduled) took off to bomb the MOOSBIERBAUM O/R in AUSTRIA. These a/c comprised two forces designated as Red and Blue Forces composed of 72 and 77 a/c respectively. Red Force took off from home base from 0800-0841A and Blue Force took off from 0900-0941A. Group assemblies and Wing rendezvous were accomplished as ordered. There was a total of 12 early returns (5 Red Force, and 7 Blue Force).

Escort of P-51s were met at 1206A at 4640-1730 and departed at 1400A at 4819-1737. A few crews reported P-51 escort at an earlier hour and further south than the foregoing observation. Two Groups, in both instances Red Force units observed P-38 fighter escort at 0950A and 1206A which departed at 1347A and 1500A.

In Red Force there were 64 effective sorties and 8 non-effective sorties (including 5 early returns). A total of 126 tons of 500 1b GP .1 & .01 & .025 bombs were dropped on MOOSBIERBAUM and several targets of opportunity as explained in the individual Group reports which follow. Red Force attacked MOOSBIERBAUM O/R at 1317-1325A from 24,500-26,600'.

In Blue Force there were 65 effective sorties and 12 non-effective sorties (including 7 early returns). A total of 128 tons of 500 lb GP .1 & .01 & .025 bombs were dropped on MOOSBIERBAUM O/R and several targets of opportunity as explained in the group reports which follow. Blue Force a/c attacked M0OSBIERBAUM O/R at 1431-1436A from 24,500-26,600'.

All bombing by Red and Blue Forces was accomplished by PFF methods on MOOSBIERBAUM O/R. No results were observed.

Flak encountered at the Primary Target ranged from SIH to MIH. It is significant that one Group of Blue Force which was the second unit in the Wing formation encountered no flak at MOOSBIERBAUM. IAH was encountered at MARIBOR. SAH at 4518-1705 which was rail flak from the railroad SE of ZAGREB. SAH was encountered at NAGYKANIZA.

3 U/I e/a believed to be jet propelled were seen. There were no encounters.

Weather: Over the ADRIATIC it was 6-8/10 which increased to 8-10/10 alto stratus over AUSTRIA with tops at 12-14,000'. At the target, clouds were multilayer with tops at 20-22,000'. On return the alto stratus lowered to 12-14000' tops over the ADRIATIC. Visibility was 15-20 miles at times 10 miles in haze.

118 B-24 a/c landed at home bases from 1515-1700A. A total of 11 a/c from both forces landed at friendly fields. 5 a/c are listed as missing. No a/c were lost at the target or due to enemy action. 3 a/c crash landed at home bases and at friendly fields.

2. 460th Bomb Group. On 31 Jan 45, 39 scheduled a/c were dispatched to bomb the MOOSBIERBAUM O/R near VIENNA, AUSTRIA. Red Force, consisting of 19 a/c, took off at 0810A. Blue Force, consisting of 20 a/c, took off at 0915A. Assembly by both forces and rendezvous with the 485th and the Wing were on time. PFF was used during assembly by Red Force.

2 a/c of Red Force returned early. 1 jettisoned bombs at 4823-1715, the other a/c jettisoned 7 X 500 at 4814-1749. 1 bomb hung up, was lost on the runway while landing.

2 a/c of Blue Force returned early. A/c jettisoned 4 bombs in ADRIATIC. 4 at 4605-1707, 2 at 4745-1723 and 6 at 4800-1725.

35 a/c penetrated to the primary target, 17 a/c of Red Force and 18 a/c of Blue Force. From 25,300', 17 a/c of Red Force dropped 33.5 tons of 500 1b GP bombs, .1N & .01 & .025T fusing at 1324½A. 1 a/c jettisoned 2 bombs before target time in order to hold formation. At 26,000', 17 a/c of Blue Force were over the target at 1431A. 11 a/c dropped 21.5 tons of bombs at 1431A. 2 bombs were jettisoned at 4815-1555. 7 a/c of Blue Force failed to bomb the target. 1 a/c bombed a town at 4639-1610, dropped 2 tons on this target of opportunity at 1459A from 23,500'. 1 a/c returned 8 bombs to base, 1 jettisoned 8 at 4720-1530, 1 jettisoned 8 in the ADRIATIC and 1 jettisoned 8 at 4315-1610. Disposition of 2 a/c is unknown.

3 U/I a/c were seen on the mission. 1 believed to have been jet-propelled, was seen at 1534A at 4500-1600. In the target area, 2 U/I TEF's were seen.

35 a/c returned to base with a mean landing time of 1600A. 1 a/c landed at VIS. 1 crash landed in YUGOSLAVIA at 4350-1635. 1 crash landed at a FF and 1 a/c is missing.

3. 464th Bomb Group. On 31 Jan 45, 20 of 21 scheduled B-24 a/c comprising the Red Force took off starting at 0810A to bomb MOOSBIERBAUM O/R. 1 a/c failed to take off because 2 turrets were inoperative and the crew took off in another a/c, but was too late to join the formation. This a/c joined Blue Force.

19 a/c were over the target at 1317A (briefed 1309A) and 16 a/c dropped 30½ tons of 500 lb GP bombs .1N and .01 and .025T fused from 24,500' on a heading of 238°. 1 a/c dropped 2 tons on target of opportunity due to bomb doors not opening over primary target. Railroad round house at NAGYKANIZA 4627-1659 was bombed.

Recapitulation: (Disposition of bombs of 1 missing a/c is unknown)

Dropped on target	30½ tons
Jettisoned	5½
Dropped on target of opportunity	2
Missing a/c	2

Total	40 tons

Flak:	
NAGYKANIZA(4627-1659)	SAH
4605-1605	SAH
4634-1617	IIH
4625-1645	SIH
VARAZODIN	MAH

Flak was observed at 4808-1724 as SH and at MARIBOR as SH 1 a/c is missing. 18 a/c landed at this base between 1515 and 1536A.

Blue Force, comprising 21 B-24 a/c plus 1 a/c of Rod Force took off starting at 0910A to bomb MOOSBIERBAUM O/R. 1 a/c was an early return and 1 a/c a prior return.

1 a/c turned back at 1238A at 4610-1638 due to loss of #1 engine. This a/c dropped 2 tons of bombs on a target of opportunity at 1243A at 4605-1639, CAREVDAR from 19,500' on a heading of 180°.

20 a/c were over the target at 1429A (briefed 1409A) and 19 a/c dropped 36 tons of 500 lB GP bombs .1 and .01 and .025T fusing from 24,500' on a heading of 237°.

Recapitulation:	
Dropped on target	36.5 tons
T/0	2
Jettisoned	3.5
Returned to base	2.
Total	44 tons

Flak at the target was reported as SIH, with several a/c reporting no flak. On the approach to the target there were many flak bursts in the sky but the flak appeared to almost disappear at the time this Group went over the target.

Flak was encountered at the following locations:
4518-1705 (RR to ZAGREB) SAH 3 to 5 bursts
4521-1659 (KOVSKA)
4516-1654 (JASENOVAC)
4556-1714

22 a/c landed at this base between 1630A and 1700A.

4. 465th Bomb Group.

(RED FORCE) 18 a/c of 21 a/c of Red Force scheduled took off at 0800A on 31 Jan 45 to bomb the MOOSBIERBAUM O/R. There were 2 E/R.

Flak at the target was SIH. Crews report a moderate barrage in the skies before the formation approached the target, but only 10 to 15 highly inaccurate bursts as the formation went over the target. A

moderate barrage of flak was noted at GYOR, and scant flak was seen at NAGYKANIZSA.

16 a/c went over the target at 1321A at 25,500' and 15 a/c dropped 30 tons of 500 lb GP bombs, .1N and .1 & .025T fusing. 1 a/c jettisoned 2 bombs at 4820-1718 and 6 bombs at 4835-1630 because of loss of a booster pump and inability to keep up.

Recapitulation:

Tons dropped on Primary Target	30
Tons jettisoned by sortie a/c	2
Tons jettisoned by E/R	2
Tons returned to base .	2
	36

13 a/c landed at 1530A. 2 a/c landed at the Island of VIS and one plane is missing.

BLUE FORCE) 20 a/c of 21 a/c of Blue Force of 465 Gp scheduled took off at 0900A on 31 Jan 45 to bomb the MOOSBIERBAUM O/R. There were 2 E/R.

Scattered flak could be seen bursting to right and left of the formation between IP and target, and a small concentration could be seen at the target before the formation arrived there. The formation encountered no flak at the target. Flak was observed at OKUCAMI, 4515-1710, possibly rail flak. Flak was observed at NAGYKANIZSA and BOS GRADISKA.

17 a/c went over the target at 1431A at 25,900' and dropped 34 tons of 500 lb GP bombs with .1N and .01 and .025T fuses. Bombing was by PFF using C-l auto pilot.

Recapitulation:

Tons dropped on primary target	34
Tons unknown - missing a/c	2
Tons jettisoned by E/R	2
Tons returned to base	2
Total tons	40

14 a/c landed at 1630A. 2 a/c landed at the Island d VIS. 1 a/c crash landed in the vicinity of the field while attempting to land. 1 a/c is missing.

For the first time, "Panther" was used. Blue Force operators report picking up of largo and baby Wurtzburgs. Apparently our operators achieved considerable success in their jamming as they noted continual and frequent changes in the frequencies of the Wurtzburgs.

5. 485th Bomb Group.

(RED FORCE) On 31 Jan 45, at 0841A, 15 of 18 a/c scheduled as Red Force took off to bomb the MOOSBIERBAUM O/R in AUSTRIA. 3 a/c

failed to take off because of mechanical failures during pre-flight. 1 a/c returned early.

Flak at the target was SIH, bursts being below and behind the formation. SIH flak, probably M flak, was encountered East of GYOR. SIH flak was encountered at 4746-1808.

13 a/c landed without difficulty, mean landing time 1545A. 1 a/c landed at a FF.

(BLUE FORCE) At 0941A 15 B-24 type a/c of 17 a/c scheduled took off to bomb the same target as Red Force. 1 a/c returned early. E/R returned all bombs to base.

13 a/c were over the PT at 1436A. 10 a/c, including 1 a/c bombing with the 304th Wing, dropped 20 tons of 500 lb GP bombs fused .1N, .01 & .025T on this target on ETA.

Flak at the PT was SIH. No a/c were damaged by flak at the PT. Charlie box encountered IAH flak at MARIBOR with 2 a/c receiving minor damage.

8 a/c returned to base landing without incident at 1656A. 5 a/c landed at FF for gas.

BOMBING AND NAVIGATION ANALYSIS

1. Bombing Analysis:

a. Two forces of 18 a/c each of the 460, 464, 465, and 485 Bomb Groups of the 55th Wing were dispatched to destroy the MOOSBIERBAUM O/R on 31 Jan 45.

b. 464th Bomb Group This Group lead both the Red and Blue forces of this Wing. Target times for the two forces were one hour apart. Both Red and Blue Forces encountered 10/10 undercast conditions at the target and all bombing was done using the standard pathfinder procedure. Neither the IP nor the target were seen visually. The Red Force composed of three boxes mado individual PFF approaches on this target. The axis of attack was flown as briefed. Bombs were away from Able Box at 1317A on an axis of attack of 238°. Two corrections were made in course and five sighting angles were used.

Blue Force was composed of three boxes with lead bombardiers. Able and Charlie boxes are pathfinder approaches, but Baker box toggled on A Box due to inoperative pathfinder equipment. Two corrections were made in course and four sighting angles were used. The two forces reported seven malfunctions. Four of these were due to equipment, three showed satisfactory ground check upon return. Three a/c salvoed bombs duo to the bomb bay doors not operating properly. Ono a/c salvoed due to flak damage.

c. 465th Bomb Group: This Group flew second in the Red Force and 3rd it the Blue Force. The Red Force found the IP and target area completely cloud obscured. The PFF operator turned the formation at the IP on to the briefed axis of attack. Three angles, 70, 68, and 62 degrees were relayed to the lead bombardier, and the bombs were dropped on this synchronization. The angles checked very well with the briefed dropping angle. Bombardier of Baker Box toggled on Able Box and the bombardier of Charlie Box toggled on Baker Box, both due to pathfinder malfunctions. One malfunction was reported by this force. Bombs failed to release electrically from one a/c duo to a burned out intervalometer.

Blue Force was turned on to the axis of attack by lead PFF operator. Tho Lead Bombardier received four sighting angles. The leader of Baker Box failed to return. Bombardier leading Charlie Box received all seven sighting angles from the PFF operator. At the release point this box was right of Baker Box. One malfunction was reported by this force. One bomb had to be salvoed but the cause is unknown because the racks were satisfactory on the ground check. All load crews of this group report good coordination.

d. 460th.Bomb Group: This Group flew third in the Wing formation on both forces. The Red Force was comprised of three boxes. A solid undercast was encountered in the target arca and a PFF run was decided upon previous to turning on course. The target is picked up in the vicinity of the IP by PFF Operator and the course was set up. Bombardier received five sighting angles. The synchronization was very good and it is believed that the bombs hit in the target area. A normal PFF synchronous run was mado and it is believed the bombs hit in the target area. The lead crew of Charlie Box has not returned, but crew members of other a/c in this box believe the run was successful.

Blue Force Bombardier received four sighting angles. The pre-set data was very accurate and only slight corrections in rate were necessary. The course over the target was set up before the bombs were released the pilot turned to stay in relative formation with the lead box. Confusion existed concerning this decision, because no bombs were seen to drop from Able Box, and it was thought that an alternate target was to be bombed. However, the lead box did drop their bombs. About this time the pilot had to feather an engine and he instructed the bombardier to drop the bombs. The bombardier picked up a town at 4639-1610 and dropped the bombs on the M/Y. The axis of attack was flown as briefed. PFF operator relayed four sighting angles. The synchronization appeared excellent and only minor displacement changes were necessary. The Blue Force reported no malfunctions.

e. 485th Bomb Group: The target area was identified by pathfinder. Bombardier and PFF Operator made a smooth run with range angles agreeing very well. The PFF set was weak and the target was picked up late. This caused some trouble in setting up course. Baker Box had an excellent run with the course somewhat to the right of Able Box. Both boxes had nearly identical dropping angles. The lead a/c of

the Blue Force is at a friendly field at this time. Deputy Lead Bombardier and PFF Operator following through report a fair run was made. Baker Box had a poor radar set so dropped on Able Box. Charlie Box also had radar trouble and did not drop on the primary target. This box made a visual run on the MARIBOR M/Y, but no results were observed.

f. Summary: Due to the complete cloud cover no results were observed or photographed. All dropping angles reported were within range of 80 mils and the bombs should have hit with fair range. The drift angles were very near those briefed so it can be assumed that deflection errors were not excessive.

2. Navigation Analysis (RED FORCE):

a. The 464th Bomb Group led the 465, 460, and 485 Groups. Rendezvous altitudes were 10,000, 12,000, 10,000 and 10,000' respectively.

b. From Wing rendezvous a course was flown to BISCECLIE and from there to the turn point HVAR. The briefed course was followed to a position 4523-1704 where the Wing began a gradual drift to the right. At 1207A the 464 was at a position 4523-1750, at an altitude of 23,000'. From here a course was flown across the eastern end of LAKE BALATON to a position 4724-1802 at 1230A.

c. Passing to the east of GYOR, the lead group at last came back on the briefed course at CIFER at 1255A. From here a course was made good to the initial point. The 464 Gp rallied by dead-reckoning to ALTENMARKT and from there proceeded to LANGENWANG. From this dead-reckoning position they made a good course to a position about thirty miles to the East of course 4614-1714 and from there proceeded home via a position on the DALMATIAN Coast 4309-1712. The 465th, leading the two other groups, rallied as briefed to ALTENMARKT and from there proceeded to their base by the briefed route back.

d. All groups turned onto the initial point by PFF and the bomb runs were made by the same means. Bomb run data follows:

Group	Axat	Tgt Time	Bmbg Alt
464	238°	1317A	24,500'
465	227°	1321A	25,500'
460	260°	1324½A	25,000'
485	256°	1325A	26,200'

c. Tho main point to criticize on this mission is the fact that the 464 Gp altered course so drastically both on the route out and on the route back. While on the route out no flak was encountered. The Group did experience considerable flak in the NAYKANIZSA region, which was many miles off course. It is realized in this headquarters that there is always a possibility of flak along the prescribed routes, and at times that it will certainly be encountered. However, these routes aro planned to give a minimum exposure to route and

target flak, and deviations from that route will often result in greater flak exposure than along that briefed. In this case the route flown followed several miles virtually along the RUSSO-GERMAN front, and it is quite remarkable that no flak was encountered. Aside from this point the fact remains that the fighter escort are briefed for a definite route, and when a group deviates considerably from that route the chances materially increase that it will lose the fighter escort, as happened to the 464th on their route back. It must be stressed in the future that, if there be doubt as to the advisability of the route in regard to flak, this headquarters should be contacted immediately. Route plans may be worked out in advance of the receipt of the operations order by use of the Mission Intention Report which is dispatched to each Group soon after the wing planning team is through with the plan. The logs on this mission were all very good and it is becoming evident that the Groups are placing more stress on log keeping.

Navigation Analysis (BLUE FORCE:

a. The 465th Group had difficulty in their line rendezvous with the 464th and finally arrived five minutes late. However, the 464th arrived on time at 1026A, followed by the 460 and 485 Groups. The 465th finally took number three position in the wing formation directly behind the 460th.

b. The route was flown closely as briefed to the target. The 464th led over the keypoint SONOGYSZOB at 13031, thirteen minutes behind schedule and at 21,000' altitude. In the vicinity of GSORNA the Charlie Box leader took over the lead of the 464th due to an inoperative PFF set in the lead a/c. All Groups rallied as briefed to ALTEMARKT and closely followed the briefed route back to base, with a few minor exceptions. In the vicinity of CRKVENA they drifted slightly to the east of course.

c. The entire route was 10/10 undercast making reliance on PFF and GEE fixes necessary. Route flak was encountered at the CRKVENA M/Y and by the 464th in the vicinity of NOVSKA.

d. All Groups used PFF to turn onto the initial point and for the bomb run. Bomb Run data follows:

Group	Axat	Tgt Time	Bmbg Alt
464	227°	1430A	24,500'
465	215°	1431A	26,000'
460	191°	1431A	25,800'
485	227°	1431A	26,000'

e. The navigation on this mission was quite satisfactory. The briefed route was closely followed despite the rather poor visibility conditions. The 465th had great difficulty at the beginning of the mission, but finally were able to fall into Wing formation. It should be emphasized to all new navigators that they will be expected

to keep neat and accurate logs during their tour of duty in this theater. As a general rule of late there has been a marked improvement in log keeping, but occasionally one is found that is not altogether satisfactory.

3. Pathfinder Analysis:

a. 464th Bomb Group (Red Force): A 10/10 undercast was encountered over the ADRIATIC which continued all the way to the target so it was necessary for the PFF navigator to assume the burden of the navigation. Numerous radar fixes were relayed to the DR navigator. Pathfinder employed LAKE BALATON, GYOR and BRATISLAVA as check points. MOOSBIERBAUM O/R was identified on the scope at a distance of 35 miles. The city of VIENNA was used as a reference point in turning the formation over the IP. Considerable drift was encountered on the bomb run, five sighting angles were relayed to the bombardier and it was necessary to make two course corrections. Synchronization appeared good and it is believed that the bombs fell in the target area. It was noted that a great deal of interference was encountered especially in the LAKE BALATON area. A certain amount of inverter trouble was encountered, but all operators were able to complete their bomb runs.

464th Bomb Group (Blue Force): The PFF navigator gave the DR navigator numerous fixes enroute to the target as weather conditions made it impossible to do visual navigation. Due to a malfunction of the range unit the HX equipment could not be used for bombing so the deputy leader assumed the lead position at CSORNA. The formation was directed over the IP using PFF methods. Two course corrections were made and four sighting angles were relayed to the bombardier. Coordination appeared to be very good.

b. 465th Bomb Group (Red Force): The lead PFF operator was able to aid in the navigation by giving fixes to the navigator at frequent intervals. Mickey Operator was responsible for turning the formation over the IP and the bomb run was completely PFF. The 70, 68, and 65 degree sighting angles were given to the bombardier, but then the target was lost as the set was weak. Bombardier reports the sighting angles agreed with the pre-set data. Leader of the second attack unit was able to relay only one sighting angle so bombs were dropped on lead of formation.

465th Bomb Group (Blue Force): The Mickey Operator was able to supply the navigator with frequent fixes to and from the target enabling the formation to miss all flak areas. PFF was used to turn the formation over the IP and the bomb run was completely PFF. PFF Navigator relayed four dropping angles to the bombardier. Since there was a considerable amount of drift it is not known whether the drift was killed completely. The second attack unit reported a good bomb run. Definition was good and he was able to relay seven sighting angles.

c. 460th Bomb Group (Red Force): Load PFF Operator gave considerable assistance in the rendezvous since considerable broken clouds hampered visibility. Most of the route was undercast and numerous Radar fixes formed the basis of navigation to and from the target. Lead set worked rather poorly and the target was not identified until the formation was about fifteen miles away. Although the run was short, believe the bomb run was successful. The Mickey Operator in Baker Box made an independent bomb run and was able to relay five sighting angles after making two course corrections. Results were believed to have been good. Lead plane of Charlie Box did not return to base so results are unknown.

460th Bomb Group (Blue Force): The Mickey Operator was able to furnish the navigator with about 25 fixes to and from the target. These fixes were the basis of most of the navigation. The Mickey Operator was able to direct the formation over the IP and on the bomb run although the Pathfinder equipment was very weak. He was able to furnish the bombardier with 70, 65, 58, and 46 degree sighting angles and after three course corrections were made it is thought synchronization was very good. Lead PFF Navigator of Baker Box started a bomb run giving three sighting angles when a fuse in the set blew. He felt course was killed at that point, however, the pilot turned off before bombs away so bombs were later dropped visually on a target of opportunity. PFF Navigator leading Charlie Box had a very poor set above 12,000' indicating pressure trouble. Turn on the IP was made by Mickey, using a bearing and distance from VIENNA. Target was picked up after the turn was completed and the Mickey Operator gave five sighting angles to the bombardier. Good synchronization was achieved. Coordination among the lead teams was very good.

d. 485th Bomb Group (Red Force): PFF was used extensively for navigation because of a complete cloud coverage over most of the route. All operators were instrumental in avoiding known flak areas along the route. All lead navigators were supplied fixes approximately every ten to fifteen minutes and in maneuvering around flak areas, the navigators were constantly notified of their position. PFF was used entirely on the bomb run, however since the group preceding this formation turned short of the IP it was necessary for this group to turn before the IP was reached making the bomb run quite short. It is doubtful if the drift was completely killed at the time that bombs were away. Tho rate was consistent and coordination between all teams was excellent. All planes reported poor range definition.

405th Bomb Group (Blue Force): The lead plane of Blue Force was forced to land at VIS so little is known of the results or the part that Pathfinder played on the mission. Leaders of the remaining boxes report that Pathfinder was used extensively as a navigational aid. Baker box dropped its bombs at the same time as Able Box. Charlie Box made a visual bomb run on MARIBOR.

FIGHTER ESCORT

Escort for Blue Force of the 47th and 55th Bombardment Wings was provided by the 332nd Fighter Group. The mission of the fighters was to provide penetration escort, target cover, and withdrawal support. 55 P-51s took off at 1128A. There were 13 E/Rs.

55 P-51s in a 4 squadron Group formation proceeded on briefed course to R/V poil.t at 1308A. B-24s of the 47th Bomb Wing arrived 15 minutes late after scheduled R/V time. 27 P-51s joined the assigned bombers of the 47th Bomb Wing with 4 P-51s turning back, and 23 fighter a/c continued to the target. Remaining at assigned R/V point until 1330A, 19 P-51s rendezvoused with B-24s of the 55th Bomb Wing which were 30 minutes late and furnished penetration, target cover, and withdrawal support to 4625-1543 where at 1530A the fighters left the bombers at 26,000'. Fighters report that bomber formations were satisfactory.

No significant observations or violations of radio security were reported. No fighters were lost or missing on the operation.