

This brochure was originally published in January 1945 by the 449<sup>th</sup> BG, Operations Department, at Grottaglie. It provides a statistical Summary of the operational results attained by the Group in the first twelve months of combat operations.

## "NAZI OIL TOP ALLIED AIR TARGET"

## COUNTER AIR OFFENSIVE FINISHED PRODUCT FIRST....

- Jan 8 Nostar
  - 13 Perugia
  - 16 Osoppo
  - 19 Perugia
  - 20 Guidonia
  - 30 Udine
  - 31 Aviano

#### NIPPED IN THE BUD ....

- Feb 22 Obertrubling Acft
  - · Factory Regensburg
  - 23 Ball Bearing Plant Steyr, Austria
  - 25 Prufening Acft Factory Regensburg
- Mar 24 Ball Bearing Plant Steyr, Austria
- Apr 2 Ball Bearing Plant Steyr, Austria
  - 12 Werk I Acft Assembly Plant Weiner Neustadt
  - 23 Aircraft Factory (Heinkel) Schwechat

#### NO DELIVERY ....

- Apr 4 Bucharest M/Y
  - 5 Ploesti M/Y
  - 15 Bucharest M/Y
  - 16 Brasov M/Y
  - 24 Ploesti M/Y
- May 5 Ploesti M/Y

Analysis of the targets attacked during the first year of combat operations reveals the part this organization played in accomplishing long range plans of the Allied Nations. Early in the war economists throughout the United Nations declared that the final defeat of Germany could be accomplished by an all out attack on her oil resources and reserves. As a matter of academic interest, these statements were accepted and made part of the overall strategy of the war.

Although the aim was establishing early in the war, factual accomplishment was delayed for a period of years to meet more immediate and pressing demands. The RAF did attempt an air attack in 1940 and 1941 but simply did not have adequate forces of aircraft to accomplish this aim. In the lull that followed, the Germans were able to undertake a huge program of expansion in their oil industry, completing new refineries and synthetic plants.

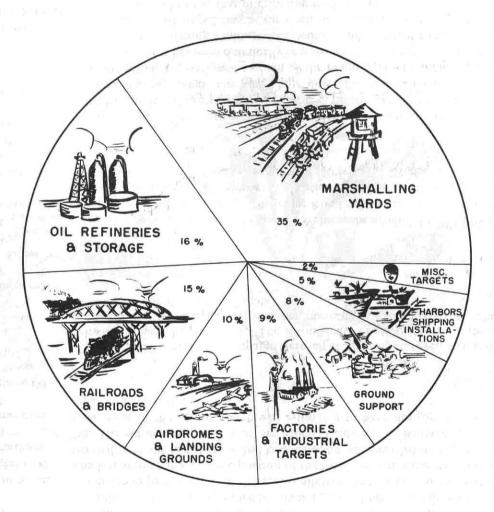
The arrival of fleets of American heavy bombers over Europe brought the plan nearer to accomplishment. To meet this threat the Germans turned to building defensive fighters in tremendous numbers.

The leaders of the American Air Forces were not unaware of this, (Quotation from a BBC broadcast distributed by MAAF Intelligence Section.) They saw that if the Germans were allowed to carry through their huge program for mass producing single engine fighters, literally on a scale such as the world had never seen, it might never be possible to strike at the vitals of Germany by daylight. And so the first task of the Forts and Libs was to strike down the rising defensive power of the German Air Force itself . . . . .

That struggle culminated in a spell of exceptionally clear weather in the final week of February (1944). In that week Americans bombed almost every one of the basic fighter assembly plants. The work of that week . . didn't prevent the Germans from turning out fighters....But did..decide the balance of air power . . .

Air superiority having been won, the attack on oil began. This started in April with attacks on the

#### ANALYSIS OF TARGETS ATTACKED



May 6	Brasov M/Y
TOP PI	RIORITY
May 19	In Spezia Oil Store
25	Porto Marghero Oi
31	Romano Americana
	O/R Ploesti
June 6	Romano Americana
	Ploesti O/R
9	Porta Marghera Oil
10	Trieste Oil Stores
11	Constanta Oil
	Refinery
14	Osijac Oil Stores
16	Bratislava Oil
24	Romano Americana
	Ploesti O/R
July 3	Giurgiu Oil Stores
9	Concordia Vega
	Ploesti O/R
15	Romano Americana
	Ploesti O/R
22	Romano Americana
	Ploesti O/R
23	Berat Oil Refinery
30	Lispa Budafpuszta Oil Field

Unirea Standard

Dacia Romano

Oil Stores Vienna

Vosendorf Oil Refinery

Florisdorf Oil Refinery Moosbierbaum Oil Ref

Blechhammer Oil Ref.

Florisdorf Oil Refinery

Moosbierbaum Oil Ref

Florisdorf Oil Ref.

Ploesti O/R

Ploesti O/R

Aug 17

Nov 5

6

12

17

19

11

Dec 2

Rumanian lines of communications, marshalling yards, to first prevent the flow of oil to the Recih. Later the program was expanded to attacking the refineries and the storage facilities themselves. To this group as part of the 47th Wing, was allotted the task of destroying the oil refineries at Ploesti, which represented a sizeable portion of the total German capacity. That the job was well done is attested to by the fact that the 2nd Unit Citation was awarded for the raid on Concordia Vega, July 9th. The subsequent capture of the Ploesti fields by the Russians permitted detailed study and assessment of the dmage which was estimated to have destroyed 90 per cent of the productive capacity at Ploesti.

The full effects of the oil campaign were felt at the years end even on the Western Front. In a recent release, General Eaker stated, "The Rundstedt counteroffensive in the west last December was limited if effectiveness by fuel shortage resulting in great part from attacks on the German Oil industry by our strategic air forces.

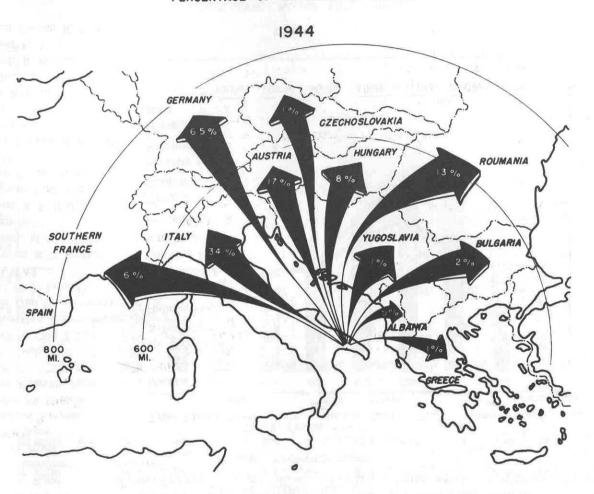
Oil, long considered by many to be the Wehrmacht's Achilles heel has been the number 1 priority target since the Spring of 1944. In order for Rundstedt to carry out his offensive, the Germans had to build up a fuel reserve. There is every indication that they hoarded every drop of oil for the preceding two or three months. . . forcing the luftwaffe to remain inactive."

To prevent the recovery of the German oil industry retained the same high priority on the bombing list. Synthetic oil plants which loom large in the present German productive capacity received their share of the bombings. The Nazi's have developed countermeasures. . . . (the effective use of repair squads which are stationed at each of the major synthetic plants). . Actual destruction of these synthetic plants has been practically impossible since only the destruction of certain key portions of the plant (representing a minute area) would render a plant completely inoperative. Repair squads necesitated constant policing by the strategic air forces to keep the oil industry down, a job which is difficult and as huge as that of crippling the industry.

The secondary campaign has been ground support not only for the American Armies but also for Schwechat Oil Refinery the Russians. While some missions have been in direct support, the great majority have represented

#### ANALYSIS OF FLIGHTS MADE

PERCENTAGE OF ATTACKS BY COUNTRY



Dec 12 Florisdorf Oil Refinery 18

THE HELPING HAND ....

Jan 22 Terracina Road (Anzio Beachhead)

Feb 17 Lake Di Nemi Bivouac Area

Beachhead Support Mar 2 Cisterna Di Littoria Troop Assembly Area

INVASION.....

Aug 6 Toulon Sub Pens Marseilles Gun Empl. 12 Toulon Gun Emplacements 13 Genea Gun Emplacements 14

Coast of S. France 15

NO WITHDRAWAL....

Sep 1 Mitrovica R/R Bridge Kraljovo M/Y 2 Trento M/Y

Ferrara R/R Bridge

Laskovac Tank and Troop Concentration

8 Nis M/Y

Messa Corond R/R Bridge 13 Larissa M/Y 14

Budapest M/Y 17 Szob R/R Bridge

18 Kraljovo R/R Bridge 19

Baja R/R Bridge 21

Larissa M/Y 22

23 Mezza Corona R/R Bridge

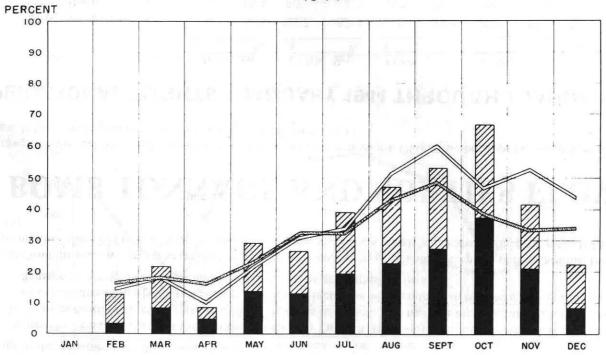
Morauska Oil Refinery attacks on communications centers and the disruption of the Nazi Supply lines. Marshalling yards represent over 1/3 of the attacks and railroads and bridges represented another 15%. Literally every country in nazi hands was reached by our Bombers during the year. A complete analysis of attacks by country and type of target follows and clearly indicates which campaign received priority in each country:

Type Target	Aver- age	Italy	Ruma- mia	Ger- many	Yugo	Hung- ary	South France	Aus- tria	Misc.
Marshalling			2.51				150		
Yards	35%	36%	42%	58%	37%	48%	10%	17%	47%
Oil Storage									
& Refineries	16	6	51	2	6	6		31	27
Railroads &									
Bridges	15	32			17	18	18		
Airdromos &									
Landing Gds	10	11		14	14	22		13	11
Factories &									
Industries	9			26		6		36	15
Ground									
Support	8	10			23		29		
Harbors and									
Shipping, etc.	5	5			3		43		
Miscellan-									
eous	2		7					3	
1	00%	100%	100%	100%	100%	100%	100% 1	00%	100%

#### AVERAGE BOMBING ACCURACY

#### COMPARED WITH 47 TH WING & 15 TH AIR FORCE AVERAGE

#### PERCENTAGE WITHIN 600' & 1000'



				15 A	F AVE		меринения				
NO SCORE	16.4	18.5	16.3	23.4	33.2	33.1	43.8	48.9	38.9	34.0	34.2
				47 WI	NG AVE	RAGE =				M C	YA JAA
NO SCORE	15.6	18.4	10.9	.22.1	31.8	34.1	51.9	60.2	47.2	53.0	- 44.3
				449 B	G WITH	IN 1000	' 777	1		1.50	
NO SCORE	12.8	21.7	8.5	29.3	26.3	39.1	47.6	52.9	66.7	41.7	22.2
		1157 8		449 B	G WIT	HIN 600	' -		LA		
NO SCORE	3.7	8.0	4.5	13.9	12.9	19.6	22.7	27.5	37.2	20.7	8.5

## **BOMBING ACCURACY**

During the summer months, the highest attainment in bombing accuracy was achieved by crews of this group. The graphic presentation of the bombing accuracy by months, reveals the steady rise from June through October. This latter month, there were but five scoreable missions which would tend to distort the figures. For this reason, October is eliminated from consideration in discussing the best bombing. September represents the peak of perfection in bombing accuracy, during the period when raids were being made on communications targets requiring "pickle barrel" accuracy. Of the ten missions scored, 5 were btter than 70%. Three of these were obtained on raids where the target was a railroad bridge and a concentration of bombs was needed to accomplish the mission successfully.

The figures shown on the chart for the months of February through April were computed sometime thereafter when the new method of scoring bombing accuracy within a 1000' circle was instituted. During these months, the combination of bad weather and limited capabilities of newly trained camera gunners are factors to be considered in reviewing the figures, since the greatest strategic damage to enemy aircraft assembly installations was accomplished than.

Throughout the year, the group has exceeded the 15th Air Force average, with the exception of four months. However, for the two last months, there has been a sharp decline in the bombing accuracy which has exceeded the drop recorded by the air force and wing.

## **BOMB TONNAGE AND SORTIES FLOWN**

Throughout the year over 6600 aircraft were airborne on combat missions. Of this number approximately 9 percent returned to the base before reaching enemy lines because of weather or recall 11.

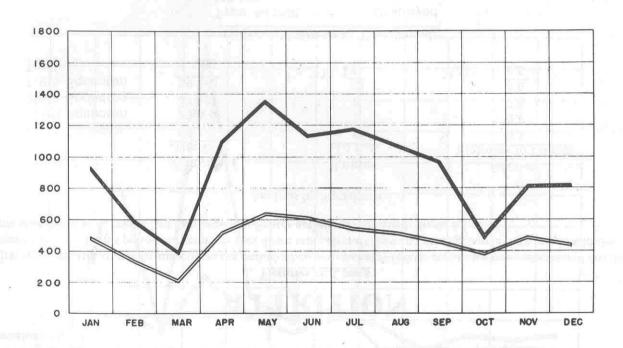
### **OPERATIONAL FLIGHTS 8 JANUARY 1944 THROUGH 7 JANUARY 1945**

	716th	. Sq.	717th	ı. Sq.	718th	ı. Sq.	719th	ı. Sq.	То	tal
	#	%	#	%	#	%	#	%	#	%
Effective Sorties	1196	80.8	1287	82.0	1210	80.1	1223	82.2	4916	81.2
Non-Effective Sorties	194	13.1	203	12.9	202	13.4	185	12.4	784	13.0
Early Returns	89	6.1	81	5.1	99	6.5	80	5.4	349	5.8
Total	1479	100%	1571	100%	1511	100%	1488	100%	6049	100%

The effectiveness of the group from month to month may be measured in some degree by the comparison of tonnage dropped on the target for each plane which crossed enemy lines. (See Following Chart.)

449 TH BOMBARDMENT GROUP (H)

#### BOMB TONNAGE AND SORTIES FLOWN



				BOME	TONN	AGE .	FANSHEN FROM IN	100 120	A 1127 3	drain.	
943	602	402	1103.9	1382.5	1139.25	1174.8	1073.25	967.68	510.85	824.5	828.75
A SECTION		- Me		SORT	IES FLO	WN =		3-1748	TO THE RE	resource p	
489	340	210	526	646	614	546	518	463	394	484	445

Tonnage Per Plane	JAN	FEB	MAR	APRIL	MAY	JUNE	JULY	<u>AUG</u>	SEPT	OCT	NOV	DEC
Crossing Enemy Lines	1.92	1.77	1.91	2.10	2.14	1.85	2.15	2.06	2.08	1.30	1.70	1.86

During the months of October and November, weather interfered with ability of the group to drop bombs in target to the greatest extent. It is interesting to note that during the months of July, August and September, when bombing accuracy was reaching its peak, this group maintained a high ratio of efficiency in tons dropped on target per ship.

A total of 22,000,000 lbs. was dropped on enemy targets during the year. This figure excludes all bombs jettisoned for any reason whatsoever.

## **ATTRITION**

#### Victories vs. Losses

The first seven months of operations covers the period when active enemy fighter resistance was encountered consistently by heavy bomber groups. In this period, our gunners shot down more aircraft than any other group in the wing. In addition, the ratio of fighters shot down to bombers lost due to enemy fighter action was unusually high, 6.5 to 1.

#### Analysis by Squadrons

	Victories Over E/A	Losses To E/A	Ratio of Victories to Losses
716th Squadron	76 1/3	9	8.5
717th Squadron	36 5/6	6	6.2
718th Squadron	47 1/3	6	7.9
719th Squadron	39 1/2	<u>10</u>	4.0
Total	200	31	6.5

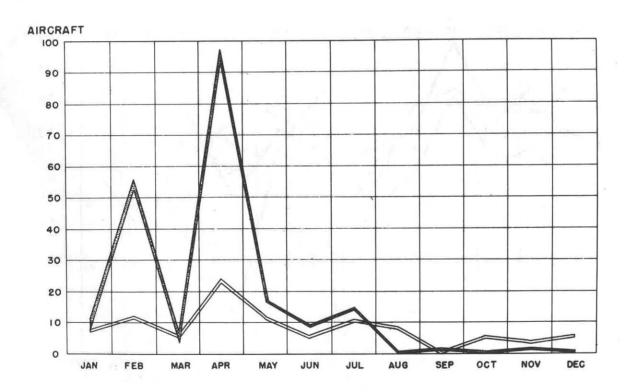
#### Analysis of Victories by Type Aircraft

Type Aircraft	Destroyed
ME 109	119
FW 190	25
JU 88	18
ME 210-410	7
ME 110	16
Miscellaneous	15_
Total-	200

#### Losses

Since june 1944 this group has maintained the lowest ratio of aircraft losses per 100 sorties in the wing. In addition, most of that

#### VICTORIES VS LOSSES

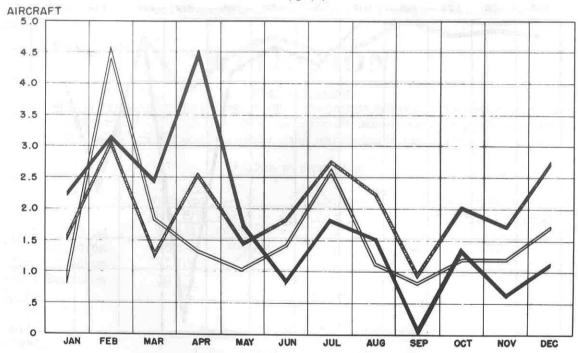


					VICTOR	IES -	y¥= 2/1 (1)			,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	
7	53	4	88	23	9	14	-	1	-	1	_
					LOSS	ES =					
11	-11	5	23	- 11	5	10	8	_	5	3	5

449 TH BOMBARDMENT GROUP (H)

#### OPERATIONAL LOSS OF AIRCRAFT

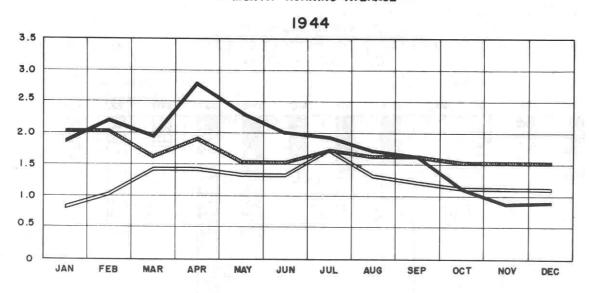
#### COMPARATIVE LOSSES PER 100 SORTIES



					449 TI	GP =					
2.2	3.1	24	4.4	1.7	0.8	1.8	1.5	0.0	1.3	0.6	1.1
				Ello m	15 AF-	B 24 =					
1.5	3.0	1.2	2.5	1.4	1.8	2.7	2.2	0.9	2.0	1.7	2.7
		1.0			15 AF-	B 17 =		804	72		
0.8	4.4	1.8	1.3	1.0	1.4	2.6	1.1	0.8	1.2	1.2	1.7

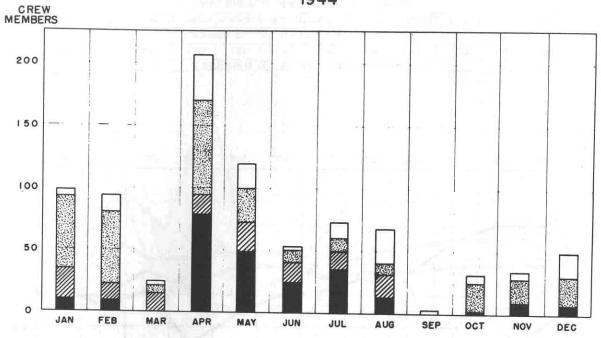
## COMPARATIVE COMBAT CREW OPERATIONAL ATTRITION RATES

LOSSES OF COMBAT CREW PER 100 SORTIES BASED ON A SIX
MONTH RUNNING AVERAGE



			EXP	ERIENC	E B-2	4 FA	F CHURC	CORES .			
2.0	2.0	1.60	1.88	1.50	1.50	1.70	1.60	1.60	1.50	1.50	1.50
			EXP	ERIENC	E B-1	7 FAF		_			
8.0	1.0	1.40	1.40	1.30	1.30	1.70	1.30	1.20	1.10	1.10	1.10
			EXP	ERIENC	E 449	BOMB	GP -				
1.83	2.17	1.92	2.57	2.31	1.98	1.92	1.70	1.51	1.07	.86	.89

#### ANALYSIS OF LOSSES OF COMBAT CREW PERSONNEL



	. w		F	KILLE	D IN A	CTION [					
2	12	2	37	13	2	11	20	2	5	- 1	3
			F	NON - B	ATTLE I	DEATHS					
1	1	-		7	=	- 1	7	_	_	3 .	15
		-	MI	A PERSO	NNEL -	NO REPOR	TS M	<u>54</u>	+		
61	59	7	76	27	10	- 11	9	-	24	20	22
			PERSONN	EL REPO	RTED PI	RISONERS	OF WAR	2///		B	
25	13	15	16	23	17	14	19	-			_
		-	PERS	ONNEL F	RETURNED	FROM	MIA I		1-20		
10	9	in item	78	49	24	36	13	Tale Tal	2	10	9
			TOTAL	CASUALT	IES (ON	AITTING	WOUNDED	)		100	
99	94	24	207	119	53	73	68	2	31	34	49

period the ratio is lower than the air force figure for either B-17's or B-24's. The unusually high losses sustained the early months of the year tended to keep the six months running average of crew losses per 100 sorties above the air force figure. However, as soon as the April losses were omitted from the calculations, the rate dropped sharply below normal Fifteenth Air Force experience. Reference to the graphic presentation of these facts will clearly show monthly comparisons of our losses with Fifteenth Air Force in both aircraft and crews.

449th Group 98th Group 376th Group 450th Group 57 66

Aircraft Losses - June - December 1944

A record was made in September when no aircraft or crews were lost to operational reasons, a figure never before experienced by any group in the wing.

## **OPERATIONS**

During the first year of operations this group flew 191 day missions and 5 night missions. Operations were conducted on 190 days of the year and briefings on 169 days.

#### DAYS OF OPERATIONS PER MONTH

January (8th to 31st) 19; February 12; March 6; April 16; May 18' June 16; July 19; August 18' September 17; October 11; November 18; December 19; January 1945 (1st to 7th) 1. Total of 190.

# DISTINGUISHED UNIT CITATIONS BUCHAREST M/Y 4 APRIL 1944

28 unescorted B-24's of this group blast their way through 100 agressive enemy fighters. Attacks from all angles, with every type weapon including aerial bombs, cannon, rockets and machine guns used by the Nazi pilots. GREAT DAMAGE INFLICTED ON COMMUNICATIONS.

#### **BOX SCORE**

Losses - 7 ships. Victories - 41 destroyed, 13 probable, and 6 damaged.

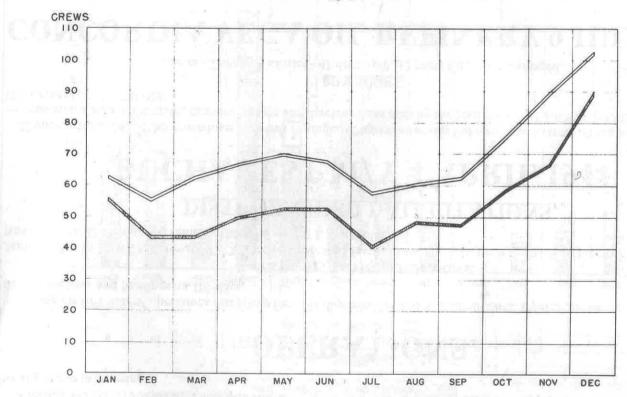
## **CONCORDIA VEGA OIL REFINERY 9 JULY 1944**

Smoke screens prove of no value to Nazis' to protect their vital oil plants from this group. A new technique in high altitude bombing is developed and brought to perfection within the group. Despite intense flak from anti aircraft, both sections employing synchronous - PFF (Radar) methods bomb and destroy the oil refinery.

Losses - three crews of which two returned (1 to duty) and 1 ship crashed, half of crew bailing out successfully.

#### AVAILABILITY OF COMBAT PERSONNEL

CREWS ASSIGNED AND OPERATIONAL



	USLA II			CREW	S ASS	IGNED		3			
63	56	63	67	70	68	58	61	63	76	90	103
19			C	REWS	OPERAT	IONAL	experimental	3			
56	44	44	50	53	53	41	49	48	59	67	. 90