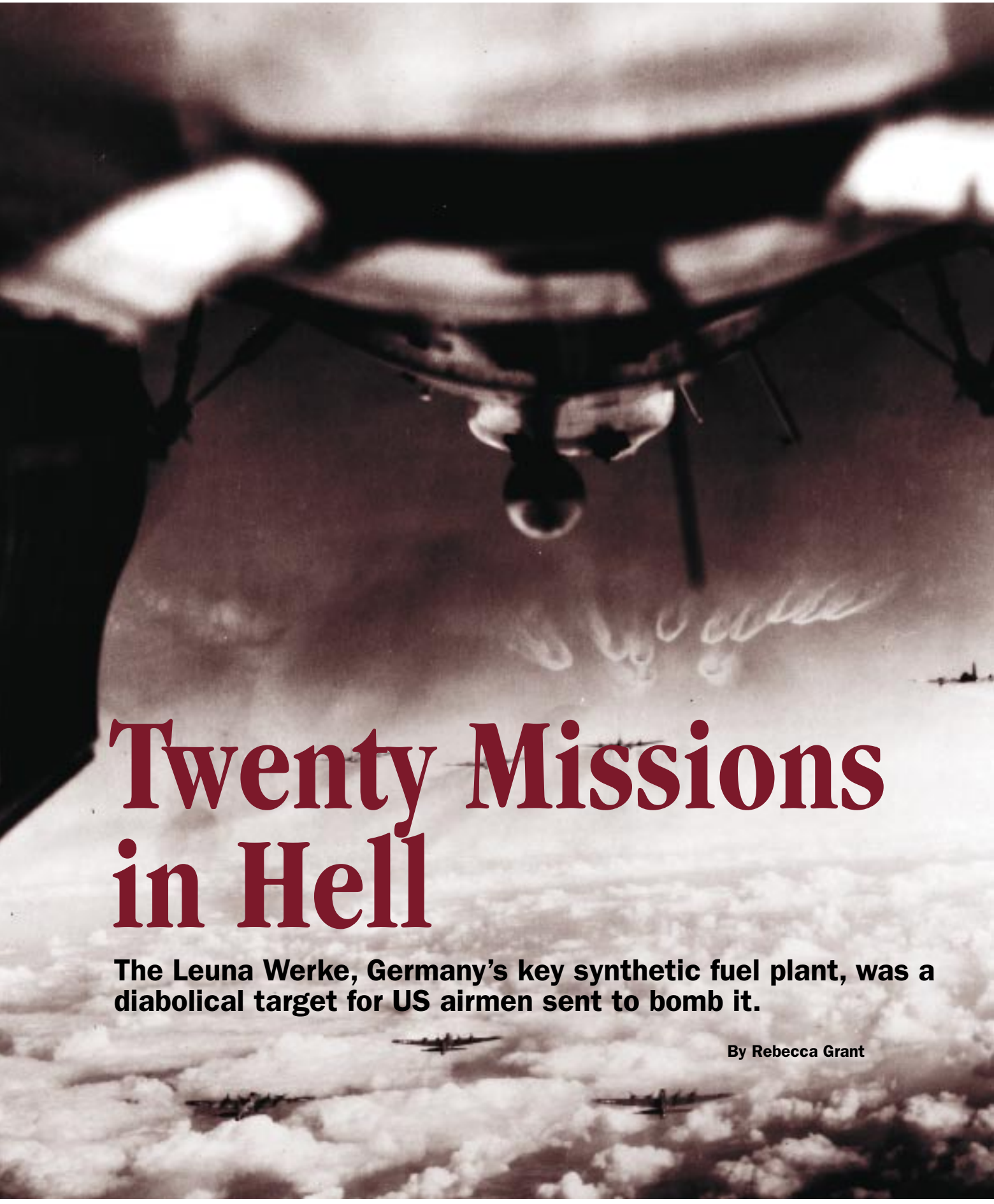


Twenty Missions in Hell

The Leuna Werke, Germany's key synthetic fuel plant, was a diabolical target for US airmen sent to bomb it.

By Rebecca Grant

The ham, bacon, sausage, and fresh eggs were an ominous sign. B-17 copilot Lt. Ted Abbott had never flown an operational mission before, but so sumptuous was the 4 a.m. breakfast served to crews of the 384th Bomb Group at Grafton Underwood, England, that he knew a tough mission must be ahead.

The mission briefing on that morning of July 29, 1944 confirmed Abbott's forebodings. "After a few words, the officer drew the curtain and immediately there was deathly moan from all the experienced personnel," Abbott recalled.

The target? The Leuna Werke, at Merseburg, deep in the heart of Germany.

The US bomber crews were only too aware that this sprawling I.G. Farben chemical factory was the crown jewel of Germany's synthetic fuel industry. By mid-1944, it was also one of the most protected targets in Germany, ringed by a bristling array of at least 1,700 88 mm and 105 mm flak guns.

"I didn't think I would live long enough to get out the door of the briefing room," Abbott later wrote in the 384th's unit history.

"Aircrews viewed a mission to Leuna as the most dangerous and difficult assignment of the air war," concluded the *United States Strategic Bombing Survey.* No wonder. The United States Army Air Forces' IMPACT report determined that flak was behind a full 62 percent of bomber losses by the fall of 1944.

Another who vividly remembered Leuna was Tom Landry, then a 20-year-old B-17 copilot, who later found fame as coach of the NFL's Dallas Cowboys. "I can still picture the angry black cloud of exploding flak filling the sky as we approached our target that day," said Landry, "and I remember the helpless, sinking fear I felt as we followed our squadron leader into the heart of that cloud."

In all, American airmen flew 20 missions to the place they called "Flak Hell Leuna."

Crews that flew to Leuna were part of a deadly duel over Germany's synthetic fuel production, and their success—or lack of it—was watched anxiously by both sides.

There was no question that oil was a strategic weakness for Germany. In 1938, Germany imported 28 million barrels of oil—about 60 percent of its total supply. Germany was already in the synthetic fuels business and produced about nine million barrels in 1938. The Leuna plant had started producing fuel from coal in 1927.

When war broke out on Sept. 1, 1939, Hitler annexed Austria's oil facilities. The German fuel program shifted gears in other ways, too. Romania, an Axis ally, cranked up national production from 2.8 million barrels in the year 1938 to 13 million barrels in 1941. That decision made Romania's giant Ploesti refinery and oil works a supercritical target. (See "Ploesti, Through Fire and Flak," April 1994, p. 78.)

Synthetic fuels would ultimately supply the bulk of Germany's aviation gasoline, high octane fuels, and other vital chemical byproducts.

Pressure Point

Early in the war, British analysts kept a close eye on this potential weak point. Conquering Europe left Germany short on oil reserves—at first. RAF Bomber Command made a few costly efforts to bomb major oil targets like Politz. However, synthetic fuel production doubled from 1940 to 1943.

For their part, US officials had high hopes for oil missions. They saw oil as the vulnerable jugular of the German military machine both on the ground and in the air.

As a result, oil targets were consistently featured on US target lists. In early 1944, synthetic fuel looked more and more like a critical pressure

At far left, the open bomb bay doors on a B-17 Flying Fortress frame this view of B-17s heading to Leuna Werke on a 1944 raid. Pictured here is some of the damage caused by the B-17 raids.

Gen. Dwight Eisenhower in 1944 sits in the cockpit of a B-26 bomber in the European Theater. Ike knew the importance of oil to the German war machine and was anxious to disrupt production.

point relevant to the upcoming ground campaign.

"In the first few months of 1944," wrote British historian Lionel Lacey-Johnson, "overall reserves of fuel for the German Army and the Luftwaffe were as high as they had been at any time since 1940."

Those operational reserves preyed on the minds of the senior American commanders as they prepared for Normandy. Attacks on oil targets might be a way to impede enemy operations.

Lt. Gen. Carl A. "Tooey" Spaatz, commander of US Strategic Air Forces in Europe, was not seeking a knockout "panacea" blow to the Germany economy. Rather, he believed that disruptions in the synthetic fuel supply could lead to huge battlefield advantages. Oil tied in directly to German military effectiveness. The operational impact of fuel shortages would also be easy to track via Ultra intelligence intercepts.

Tedder's Skepticism

But Gen. Dwight D. Eisenhower's deputy, British Air Chief Marshal Arthur Tedder, was skeptical about targeting oil. "I am not sure as to the real vulnerability of the new synthetic oil plants, where the enemy has presumably taken immense precautions against an air attack by means of dispersal, protection, etc.," Tedder noted at the time.

Spaatz made the case to Eisenhower during a meeting in March 1944. Everyone knew that the Germans were stockpiling fuel in France, which meant that oil attacks would not have an instant effect. Spaatz briefed that concentrated attacks on the synthetic fuel plants might force German ground commanders to be more cautious with their maneuver plans later in the game.

More important, Spaatz saw the synthetic fuel plants as the best targets to lure the Luftwaffe into battle. "We believe they will defend oil to their last fighter plane," Spaatz told Eisenhower and other commanders.

That got the supreme commander's attention: Keeping the Luftwaffe out of the Normandy battle was the basic precondition for the whole invasion. Even Tedder was gloomy about beating down the Luftwaffe in time.

The supreme commander noted in his memoirs that he had been "most anxious to continue the destruction of German industry with emphasis upon oil." He also said Spaatz convinced him that over time the diminishing oil reserves would have a "profound" effect on the land battle to unfold across Europe and "the eventual winning of the war would be correspondingly hastened."

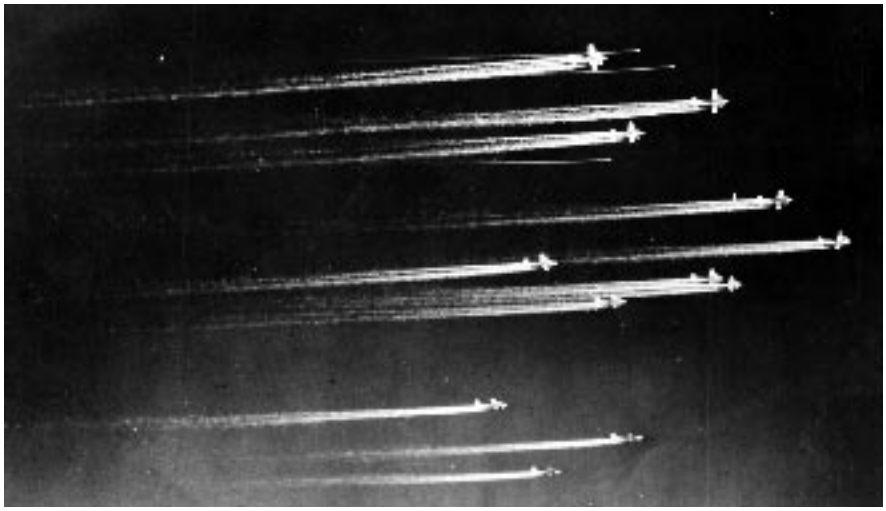
Spaatz and Eisenhower were both thinking beyond the Normandy hedgerows. "Every German commander had always to calculate his plans in terms of availability of fuel," Eisenhower reasoned.

In early May 1944, the oil plan got rolling and it was to soak up 11 percent of the total USAAF effort in theater before it was over. Eighth Air Force bombers first attacked Leuna on May 12. The impact was immediate.

"Surveying a bombed hydrogenation plant from the air, I was struck by the accurate carpet bombing of the Allied bomber fleets," noted Hitler's armament minister Albert Speer on May 19, 1944. Production at Leuna stopped, but repair crews numbering in the thousands restored partial operations in 10 days.

Bombers struck Leuna again on May 28 and shut it down for a week. On June 6, Britain's cryptographers delivered a high-level intercept stating that "Allied action" against Germany's synthetic oil plants, as well as Ploesti, left the Germans without enough fuel for training, according to historian Williamson Murray.

Thus began a protracted duel between the bomber crews and the Luftwaffe pilots, flak directors, and conscript labor forces trying to keep production going. At stake was the tactical mobility of the Wehrmacht and the last hopes for



B-17s and their fighter escorts head for targets in Germany. From May 1944 on, German oil consumption outpaced production.

Lt. Gen. Carl Spaatz made the case for the Leuna raids to Eisenhower. Interrupting oil production was only one value of the targets—the USAAF wanted to disable the Luftwaffe before the Normandy Invasion.

the Luftwaffe to challenge Allied air superiority.

At the center of it all was dreaded Leuna. Overall, 6,552 bomber sorties dropped 18,328 tons of bombs on it.

More than a million people were in the German flak forces by mid-1944. "Most flak gunners were deployed in batteries of six to 12 guns," wrote historian Donald L. Miller in his bomber history *Masters of the Air.* "Around Leuna, Speer set up Grossbatterie, each of them equipped with up to 36 guns capable of firing a barrage or box of shells into a prearranged spot."

Normandy gave Leuna a respite. When July began, the Leuna Werke was up to nearly 70 percent capacity. However, that was to be the last time the plant produced at that level. Four attacks on July 7, 20, 28, and 29 plastered the sprawling facility and introduced many a crew to its dangers.

"Deathly Moan"

Copilot Abbott, who'd heard the "deathly moan" when the Merseburg target was briefed on the morning of July 29, had an eventful first mission led by Col. Dale O. Smith, who later became a general.

"I noticed that the 88s were tracking us perfectly, but exploding about a thousand feet below us," Abbott recalled. The flak adjusted fast. In moments, he saw red flak bursts "not 25 yards out." Next, flames shot up through the B-17's floor under the rudder pedals. Part of a shell exploded through the Plexiglas nose. Shrapnel hit the bombardier's helmet and sunk into the navigator's oxygen system, starting a flash fire that also cut off oxygen to the pilot.

Abbott yelled to the flight engineer for a fire extinguisher. The engineer, stunned, did not respond. Abbott started to get out of the seat when the flight engineer came to his senses and passed forward a fire extinguisher.

While Abbott was squirting out flames and attending to other anoxic crew members, the pilot passed out due to the disrupted oxygen system.

The B-17 first entered a dive and sliced through the low squadron. Other B-17s scattered to get out of its way. Then it climbed, wreaking havoc in another section of B-17s before radio operator Bob Myers figured out that no one was flying the airplane. Myers revived the pilot with a fresh oxygen bottle and the B-17 leveled out.

The July 29 mission was typical in its terrors. Me-109s and FW-190s attacked on the way in. "They only made one pass, but got some B-17s out of the group behind us," recorded TSgt. John Pratt, who flew in another B-17 of the 384th Bomb Group.

"The flak was the worst I'd ever been in—boy could they shoot," remembered Pratt. Every B-17 in the squadron was hit.

In August came a windfall. Russian forces overran the smoldering ruins of Ploesti and soon took other plants, tightening German fuel supplies even further. Now the strikes against Leuna and other targets were squeezing Germany even harder.

USAAF planners sent bombers to Leuna five times from Aug. 24 through Oct. 7, 1944.

They had to keep the plants from rebuilding, so the bomber crews returned to the Leuna Werke again and again. For the most part, they bombed regardless of the weather conditions.

The repeated attacks had a psychological effect on the German workers as well. "Today we have finished rebuilding the plants and tomorrow the bombers will come again," ran one popular saying attributed to German workers.

Key to the USAAF ability to keep up the attack was the blind bombing system known as PFF—Pathfinder Force. Select Pathfinder bombers carried a radar whose trained operator could distinguish dense urban area targets.

Coordination between the "Mickeymen" radar operators and Norden bombsights enabled formations to bomb through the overcast no matter how bad the weather.

In the fall of 1944, the Luftwaffe made its last spasmodic efforts against the bombers. Synthetic fuel plants produced nearly all the Luftwaffe's aviation gasoline—and the supplies were dwindling.

Fighter production actually peaked in mid-1944, but the Luftwaffe was not able to capitalize on this. Fuel was a limiting factor that hampered everything from engine run ups for new aircraft to the scant training hours for green pilots.

Over Leuna, sometimes the Luftwaffe fighters showed up and sometimes they didn't—but flak greeted the bombers every time.

B-17 copilot Alan Cook had this to say of his first visit to Merseburg on Oct. 7, 1944: "When I describe the flak over Leuna as a cloud, I don't mean just a wall of smoke; it was a box, the length, width, and depth of our route to the 'bombs away' point." Cook's B-17 lost two engines to flak, but made it back to an RAF advance field in Holland. The aircraft was a write off.

Horrific Attrition

Nov. 2, 1944 brought the costliest Leuna mission of all. The armada headed to Leuna consisted of 683 B-17s escorted by 642 P-51s and a handful of P-38s.

In the raid, 38 bombers were lost, and an astonishing 481 took damage. At the time, the USAAF estimated that as many as 500 Luftwaffe fighters took to the skies.

Almost 400 men did not return; the vast majority were MIA after bailing

Robert Femoyer, a 23-year-old second lieutenant, earned the Medal of Honor for his actions on Nov. 2, 1944—the day of the deadliest Leuna raid for US airmen.

out. B-17 losses topped 5.5 percent for the day, a horrific attrition rate.

Cook was on the schedule Nov. 2 as well. His B-17 flew low section lead. Flak set engine No. 1 on fire just before the bomb run; the bombardier released, then the B-17 broke formation to put out the flames. The crew struggled west through flak and fighters until a 21-year-old P-51 pilot of the 357th found them and escorted them to allied airspace.

It was on this mission that 2nd Lt. Robert E. Femoyer earned the Medal of Honor.

Femoyer was navigator in a B-17 that was hit by three flak bursts and fell out of formation. He was wounded in the back and sides and bleeding heavily. Forced to low altitude, the B-17 was on its own. The wounded navigator refused a morphine shot in order to keep his mind clear for navigating home around the flak concentrations. For two-and-a-half hours, the 23-year-old Femoyer sat propped up with his charts as his own blood pooled around him. He finally agreed to sedation when the bomber was safely over the English Channel. Femoyer died shortly after being taken from the B-17. (See "Valor: I am the Captain of My Soul," May 1985, p. 222.)

Nov. 2 was the deadliest but not the last of the missions to Leuna. Crews risked their lives on half a dozen more missions over the flak den.

The mission of Nov. 21 was led by Lt. Col. Immanuel J. Klette, a legend who would end the war with a record 91 bomber missions. With weather closing in, Klette took the group down from 27,000 feet for clear visual bombing at 17,000 feet. Half the groups followed.

"Merseburg at 27,000 feet was perilous enough; 17,000 feet was madness," one crew member said later. Klette's 91st Bomb Group unit followed him down and brought 35 of its 36 bombers home.

Another group, the 398th, chose to climb above the cloud layer to 31,000 feet. It was there that the German fighters caught them, destroying five B-17s.

The sacrifices of Femoyer and many others were not in vain.

Production Losses

The attacks on Leuna and the other synthetic fuel plants were adding up. IMPACT, the classified bulletin, estimated that synthetic plants as a group were producing just 20 percent of capacity in September and 31 percent in November.

The Germans were aware of the grim situation. Speer sounded the alarm to Hitler louder and louder in the fall of 1944.

In September, he wrote Hitler of an airfield in the west where the 37 fighters could fly only every third day, when their fuel arrived. On the Italian front in October, Speer saw "a column of 150 trucks each with four oxen hitched to it."

Reduced production at Leuna and elsewhere had the side effects of stagnating the chemical industry and reducing materials available for explosive shells.

"The orders to the heavy bombers were to keep pounding all sources of oil, refineries, and distribution systems to the limit of their ability," said Eisenhower. "This tactic had a great effect not only generally upon the entire warmaking power of Germany but also directly upon the front," he said.

The Battle of the Bulge was a case in point. The Germans hoarded fuel for months prior to the Dec. 16, 1944 attack, then tried and failed to capture Allied stocks.

Overall, the effect of the bombers was nothing short of devastating. The *US Strategic Bombing Survey* found that from May 1944 on, the Leuna Werke averaged only nine percent capacity.

"Consumption of oil exceeded production from May 1944 on," concluded the survey.

On the battlefield, the oil attacks were crippling for Germany. Spaatz said in 1945 that while he couldn't measure it, "I am convinced that much of the Russian advance has been due to the immobility conferred on the German ground forces by our attacks on oil."

He didn't know the half of it. With Soviet soldiers on German soil, Hitler reacted by sending his 6th SS Panzer Army 350 miles south toward Hungary. His reason? According to Panzer General Heinz Guderian, Hitler argued that the destruction of the synthetic oil plants made it essential to guard Hungarian oil fields—instead of attacking the Soviet spearhead on its flanks, which Guderian wanted to do.

More humiliation was to come. "In February and March of 1945, the Germans massed 1,200 tanks on the Baranov bridgehead at the Vistula to check the Russians," noted the USSBS. "They were immobilized for lack of gasoline and overrun."

Of course, the Germans had lost countless tanks, guns, and a million men in the retreats. Still, airpower's destruction of the synthetic oil plants cramped the Reich's reaction at its final critical moments, just as Spaatz and Eisenhower had hoped.

The crews that made this possible never forgot the flak and fighters they encountered. ■

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