

Naval Energy Forum

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“Our Past Is Prologue”

A lecture by James D. Hornfischer, author of
Neptune’s Inferno: The U.S. Navy at Guadalcanal
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In the age of sail, before the days of mineral-burning warships, our ships of the line moved with the wind, unconstrained by the scarcity of consumables beyond those required by their crews to subsist.

A hundred years later, in the nuclear age, our naval leaders enjoyed similar freedom from time to time, driving ships powered by the near-limitless capacity of nuclear propulsion.

In between, however, was another era entirely. World War II, as increasingly again now, was a time when all naval commanders had to reckon with the

restrictions imposed by the scarcity of fuel, both in supply and in transport. The operating radius of their ships, and their time on station, were thus constrained. “If an enemy lay beyond that radius, the fleet might as well be chained to a post,” a maritime historian has written.

During the Guadalcanal campaign, from August to November 1942, scarcity of fuel was a factor in every type of operation. In the skies, our fighter pilots fought air-to-air, above and around their own base, giving them a tactical advantage over the Japanese, who were fighting at the outer limit of their range. On the ground, our Marines needed fuel for their vehicles, and, occasionally, chemical recreation. They discovered that torpedo fuel, transported and stored in convenient five-gallon cans, could be mixed with papayas, limes and fruit juice. Blended with ice, it made for a heavy-caliber grog.

We’re here today to talk about larger fuel appetites. Namely the positively gluttonous appetite of our

capital ships.

In early 1942, the U.S. had plenty of fuel. America supplied two of every three barrels of the world's oil, and had 60 percent of the world's refining capacity.

And yet, as the fight for Guadalcanal was kicking off, Admiral Nimitz was beset by theater-wide fuel shortages that compelled him to fight the South Pacific campaign with one hand tied behind his back. The German U-boat campaign required a massive redirection of tankers to the Atlantic. With just 7 fleet oilers in service, and limited fuel supplies deployable to the South Pacific, CINCPAC was forced to choose between operating its fast carrier task forces, or operating its battleships. It did not have the oil to do both.

By the late spring of 1942, the battleships of Task Force One had been fully repaired and modernized. But owing to their fuel gluttony, they had to stay home. At a speed of 15 knots, Task Force One—six

battleships—and her escorts of four to six destroyers would burn 300,000 barrels per month, a number equivalent to the total oil storage capacity in the Pacific in early 1942. A carrier task force was almost as expensive in terms of fuel usage. A task force of two CVs and eight to ten escorts burned 225,000 barrels a month, or 7,500 barrels a day, at long-range cruising speed. A typical oiler of the day carried 65,000 to 140,000 barrels, enough to keep one of those carrier task forces operating at cruising speeds for about 14 days. At battle speed, of course, that number dropped rapidly.

Given the small number of tankers available in the South Pacific—Frank Jack Fletcher had just three of them in the critical early days of August—the use of carriers and battleships anywhere but on the U.S. West Coast was an ‘either-or’ proposition.

Wanting to employ his newly repaired and modernized BBs in the South Pacific, Admiral King urged “continuous study” of the problem, but

Nimitz vetoed any plan to operating them out of Pearl Harbor. The fuel simply wasn't there.

Even with the battleships at home, Nimitz's COMOPAC, Admiral Robert Ghormley, saw right away that fuel was a critical constraint in operations.

At the end of July, he wrote Nimitz about certain problems that kept him from advancing D-Day on Guadalcanal. "The big one right now is fuel," Ghormley wrote. "We are working on that as hard as we can.... Some tankers are arriving behind schedule, so it is going to be difficult. I fear any chance of advancing Dog day is not possible."

And of course, fuel shortages were at the root of the most famous controversies of the campaign: Admiral Fletcher's employment of his carriers in support of the landings.

Ghormley defended Fletcher's decision to pull them out after D-Day plus 2: "Criticism has been made

that Fletcher could have stayed longer,” Ghormley would write. “That is a question of judgment—hindsight is better than foresight. When Fletcher, the man on the spot, informed me he had to withdraw for fuel, I approved. He knew his situation in detail; I did not.”

This cautious approach bothered the Marines, of course. It chapped our more battle-minded line officers as well. Serving in the USS *Atlanta* (CL-51), Lieutenant Commander Lloyd Mustin, later VADM Mustin, complained to his diary in August: “We have no high commanders capable of playing ball in the same league with the Japs.... I wish to God, Wild Bill Halsey were back here to put a little fire, drive, and action into things. Completed fueling today. Three days of it. Just steaming in circles, north of Noumea.”

The fuel shortage was paid for in blood. Lack of fuel kept our battlewagons sidelined from the brutal surface fighting that took place in the Slot. For three-and-a-half critical months, the only muscle

available for midnight collisions with the Japanese was a squadron of treaty cruisers, “tin clads” as they were known. They were one-third the displacement of the *Kongo*-class battleships they faced.

Of course, Japan had its own problems. Admiral Yamamoto was situated much like we were, waging war 6,000 miles from home. The Japanese struggled with these constraints all the more because of the huge investment of pride they had made in their biggest ships, which were least amenable to operating far from home at a high tempo. The Japanese were always guided by the idea that their battlewagons would fight a decisive battle over the Americans, at a time and place of their choosing. The hardware was in place. And Guadalcanal would indeed prove to be decisive. Yet as this campaign of attrition was playing out, the Emperor’s world-beating super-battleship, the *Yamato*, sat it out at Truk, 1,400 miles from the fighting front. There was never enough fuel on hand to send her into the shooting match.

The IJN, like the USN, was operating in a straitjacket zipped tight by their perilously thin oil lifeline. The destroyers of the Tokyo Express made an average of six runs a month to ferry men, arms, and critical consumables to Guadalcanal's northern coast. The typical run consisted of six destroyer-transport, with two destroyers as combat escorts. But this capacity, 36 loads a month, was inadequate. The Japanese garrison on Guadalcanal calculated its full need at about twenty times that. Providing that level of service would have required the IJN to burn up half of the monthly volume of fuel allotted to it worldwide.

As always, the strength and size of the logistics train governed the pace of operations in the forward area. At SOPAC headquarters in Noumea, New Caledonia, the harbor was choked with loaded cargomen waiting for dock space. The facilities could handle only 24 ships per month. There were often 80 or more waiting to be unloaded.

In late September 1942, Admiral Nimitz made his

first visit. On arrival, he was disappointed to learn that, owing to fuel storage problems, the fast battleship *Washington* was idling at Tongatabu, the forward fueling base, 1,800 miles from Guadalcanal. Nimitz complained to Ghormley that this was “so far removed from the critical area, that she might as well have been in Pearl or San Francisco, insofar as taking advantage of favorable opportunities is concerned.”

Closer to where the bombs were exploding, on Guadalcanal, aviation gasoline was urgently needed. The commander of SOPAC’s air forces, Rear Admiral Aubrey Fitch, told Ghormley that the combat fleet would have to step up its game before more avgas could come in. “So long as enemy ships patrol the sea area off Lunga day and night, I cannot see how [destroyers or barges] can be brought in with a reasonable chance of success.”

Our hold on the island was a three-legged stool. The airfield had to be defended by marines, who depended on naval forces for protection and supply,

and those naval forces depended on the air forces for cover. If one leg of that triad faltered, the whole thing would come crashing down.

As my book NEPTUNE'S INFERNO details, the gallant commanders of our light surface forces threw themselves into the crucible. In five important surface actions, fighting admirals such as Norm Scott and Dan Callaghan applied themselves with a vengeance to the problem of beating the Japanese. Both men died holding up their leg of the stool.

As the fighting grew more desperate, demand for avgas and bunker oil alike escalated. In October, the new COMSOPAC, Vice Admiral William F. Halsey, found he had virtually no fuel reserves at Noumea. He typed an eight-page letter to Nimitz, saying, "We need tankers and more tankers and more tankers."

The Service Force did what it could to keep the appetite of our combat forces at Noumea sated.

In the early days of August, just three oilers—the *Platte*, *Kaskaskia* and *Cimarron*—were available in the theater. By December, the train of supply was finally catching up with demand. Chartered tankers eventually filled the need at Noumea.

The shipment of avgas to the front, meanwhile, continued by day, in a catch-as-catch can manner. We used some unlikely beasts of burden: submarines, tugboats towing barges, and cargo planes. Ground crews on Henderson Field picked through the remains of the destroyed aircraft to drain the last drops from their tanks.

The campaign for Guadalcanal, known widely as Operation Shoestring, scraped by with a bare minimum of materiel and support. By the time the fuel valve to the South Pacific was finally opened wide in late 1942, the major fighting was essentially over. In seven major naval actions—five of them fought ship to ship, in the Slot—the U.S. Navy broke the Japanese will to fight.

We managed to get by with what little we had. In the end it was the Japanese whose combat power, at the point of contact, suffered most for lack of fuel.

And thank goodness for the resourcefulness of the American Navy. The momentum we gained by making Operation Shoestring work would carry us all the way to Tokyo.

Thank you.

James D. Hornfischer is the author of the *New York Times* bestseller *Neptune's Inferno: The U.S. Navy at Guadalcanal*, and two other acclaimed works of World War II naval history: *The Last Stand of the Tin Can Sailors* and *Ship of Ghosts*.

He has appeared on The History Channel, Fox News Channel's "War Stories with Oliver North" and C-SPAN's "BookTV." A frequent speaker on the subject of the war in the Pacific, the U.S. Navy, and the experience of America's sailors in World War II, he frequently addresses veteran organizations, youth and civic groups, and professional naval associations on the inspiring stories found in his books.

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