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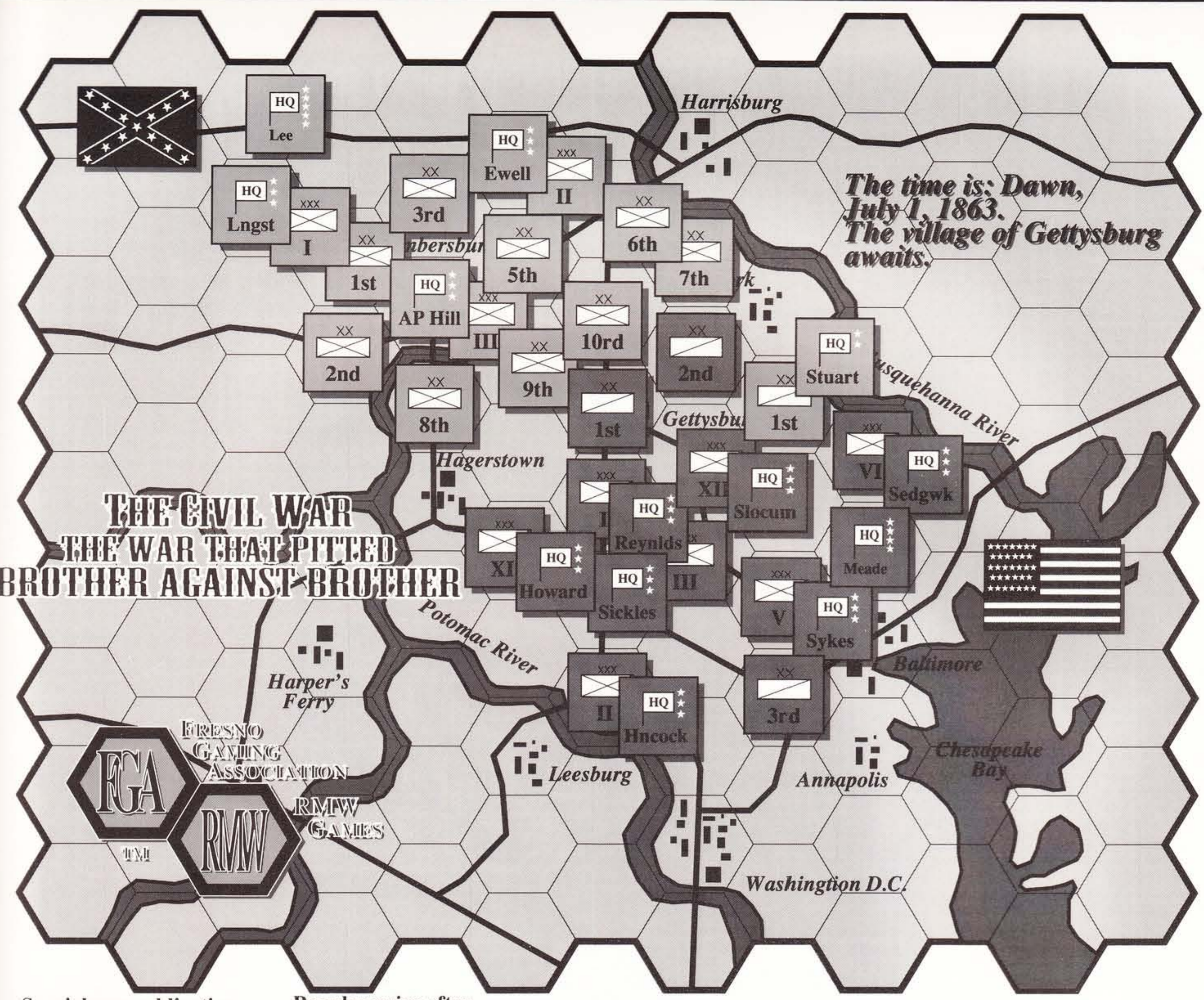
# COMMAND

M A G A Z I N E



# CHACO





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Volume No. 1, Issue No. 1 will ship the last two weeks of June 1991. Available at your local hobby shop or directly from us early in July 1991.



# COMMAND

## MAGAZINE

SEPT-OCT 1991

ISSUE #12

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Next issue will be the first in our new expanded format. The game will be *Desert Storm: Mother of all Battles*, with a solitaire-play historical scenario, and several two-player what-ifs (including: "What if the Iraqis really were the 'Prussians of the Middle East'?" "What if the Iraqis had the Death Ray?" "Godzilla Strikes," and "What if *Grossdeutschland Panzer Korps* Came Through an Inter-Dimensional Portal from the NNN Universe to Help the Iraqis?") Be there (or be square). Aloha.

**On the Cover:** A reproduction of a Paraguayan propaganda poster from the Chaco War.

**Editor:** Ty Bomba

**Art and Graphics Director:** Larry Hoffman

**Business Manager:** Christopher Perello

**Associate Editor:** Christopher Perello

**Contributing Editors:** Craig H. Barrett, Thomas M. Kane, Marty Kufus, James P. Werbaneth, Carl O. Schuster, James Dingeman, Richard Jupa, Andrew Preziosi, L. Dean Webb

**Command Magazine®** is published six times a year by XTR Corp. Domestic one year subscriptions are \$45.00. Overseas subscriptions are \$57.00 (surface) and \$69.00 (airmail). Trial three issue subscriptions are \$26.00 (domestic), \$32.00 (overseas-surface) and \$38.00 (overseas-airmail). Two-year subscriptions are \$80.00 (domestic), \$104.00 (overseas-surface) and \$128.00 (overseas-airmail). Overseas subscriptions must be paid in U.S. dollars (only) by means of an international money order, U.S. or Canadian postal money order or credit card. All orders should be made payable to Command Magazine

or XTR Corp., and should be sent to Command Magazine, P.O. Box 4017, San Luis Obispo, CA 93403. VISA or MasterCard orders may also be made by telephone or fax:

**Telephone:** (805) 546-9596

**FAX:** (805) 546-0570

*Command Magazine* is published bimonthly for \$45.00 per year by XTR Corp, 3547-D South Higuera, San Luis Obispo, CA 93401

2nd Class authorization is pending, postage prepaid at San Luis Obispo, CA..

**POSTMASTER:** Send address changes to *Command Magazine*, P.O. Box 4017, San Luis Obispo, CA 93403.

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# WAHOO!

## The Battle of Washington

July 1863

Wahoo! is an "alternative-history" game of the American Civil War. It examines what could've happened if the Rebels had won on the second day at Gettysburg. As the shattered remnants of the Army of the Potomac retreat toward Baltimore to reorganize, Gen. Robert E. Lee and his Army of Northern Virginia race to the District of Columbia. There, Lee hopes to fight one climactic battle, win the city, and thus force the Union to recognize southern independence.

Wahoo! is a low-complexity wargame, and uses a state-of-the-art evolution of SPI's classic Blue & Gray™ system. Units are brigades; each of the game's 20 turns equal 45 minutes of real time, and each hexagon on the map represents 400 yards. Rules cover variable unit strengths, morale, ranged artillery (with offensive and defensive bombardments), fire in the city, militia, leaders, fortifications, and uncertain reinforcements. Wahoo! comes with 300 full-color, die-cut playing pieces, a 34x22" map showing Washington and the surrounding area as it was in 1863, and a 20 page rules folder.

**Pre-Release price until 15 Sept: \$16.00. Retail Price: \$20.00**

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# COMMANDER'S CALL

by Ty Bomba

## The Schedule

I'm inserting this section of *Commander's Call* into the magazine at the last possible minute before this issue is printed. So, I can now tell you with certainty next issue the game will be *Desert Storm: Mother of all Battles*. And that will also be the first issue in the new, expanded format.

Issue no. 14 will be *Victory at Midway*. I know that because: (1) I've raced to tabulate enough of issue no. 11's feedback to see that *VaM* will not fall under the 6.2 mark; and (2) designer Ben Knight had actually already finished (Got that? *Finished!*) the game before he sent me the blurb. We've had *VaM* here at the office since May; Chris and I *really* like it and have played and developed the hell out of it.

Jack Greene, a man many consider the "sea god of wargames," once counseled me that naval games would always lag behind land games in popularity because they (the naval games) require paperwork and/or extensive off-map record keeping. Well, I'm here to tell you Ben has come up with an excellent system that doesn't have any of that. I predict you're going to like *VaM* a lot — and wait 'til you see the follow-on ziplock we're planning.

I hope you'll excuse me if I stop here for now, and keep my "predictions" modest for the magazine-game schedule.

As for the ziplocks, if *Wahoo!* isn't out by the time you're reading this, it soon will be (by 15 September). After that will come *Red Star Falling* or *Perfidious Albion* — whichever we complete development on first. We're looking to have both of them out by year's end.

## Alexandros

There has been a small but steady stream of complaints about the playbalance of our game from issue no. 10. Namely, that the Macedonians can't win. The designer, when I approached him with this, claims that's because too many of you are trying to play that side as if it were "Panzer Group Alexander." However, he also came up with some nice new rules that should work to keep everybody happy — see this issue's errata section.

Also, I've now also got Mr. Markowitz's *Xenophon* and *The Wars of the Successors* variants for *Alexandros* here in the office. As soon as I can find 60 (!) spare counters, you'll have them.

## Chaco — Not Your Average Bear

*Chaco* undoubtedly represents the most unusual topic we've yet covered in the magazine (and for my money, it

ranks right up there with the ziplocks, too). I believe *Chaco* will do well in the feedback for several reasons. First, even those who aren't attracted enough by the topic to actually play the game, will still (mostly) feel satisfaction at filling in another historical chink in the wall of their collection. Second, those who do play will be pleasantly surprised to find just what 4-5 years of design, development, and redesign can do for a game in terms of "smoothing the wrinkles." Third, our small (but growing) number of Latin American customers will be delighted to at last (so to speak) be on the map.

## Sad But True

Last issue's offering marks the end of the "Profiles in Command" series. They just wouldn't "fit" any longer, given the magazine's new format (which starts, remember, next issue), and I can't justify including them in the rules/gaming insert.

This feature has been, without doubt, the most popular thing we've presented in the magazine. In their whole, six-issue run we've only gotten three unfavorable remarks about them. (And, friends, if you don't understand how unusual that is — you've never edited a magazine.)

## Progress Reports

### Berlin'45: The Last Battle

by designer John T. Desch

*B'45* is coming along extremely well. The map is done, the O.B. is 99 percent perfected, the first-draft rules are complete, and a half-dozen play tests have gone smoothly.

The game will feature three main scenarios: 1) the historical Soviet/German battle; 2) an "Operation Eclipse" what-if, in which we run the planned attack on the city by the Western Allies, using *1st Allied Airborne Army* as the spearhead; and 3) a summer or '45 Allied/Soviet slugfest. (The historical scenario will also be playable within the context of several what-ifs, such as the very plausible creation of a German mobile reserve.)

The game system is a spin-off of the tried-and-true *PGG*, with mobile assaults, exploitation movement, and a potent air game. The unit-scale is operational (mostly divisions, but also including some of everything from regiments to corps). The 34x22" hex map is mostly maneuver area, which extends from Görlitz to Stettin on the east, and to Leipzig — Magdeburg is just off map — on the west. Berlin itself is a 20-hex blob of urban sprawl in the center. All significant terrain

(Continued on page 45)



# SHORT ROUNDS

## Historical Perspective . . .

### The Big Fear — 1898/1991

[Ed's Intro.: During the months prior to the start of the Gulf War, it often seemed to us here at the XTR offices our news media, and a good portion of the public, had caught what we called "the Big Fear." That is, rather than portraying the Iraqi armed forces to be the poorly-led, ill-trained, under-motivated, bunch of twits they are, the so-called "experts" talked of the coming fight as an intense one, lasting months, and perhaps even involving an Arab terrorist offensive here in the U.S. It got to the point, during the hours and days after the first SCUD landed, we felt the network anchors might soon call on the President to make our unconditional surrender.

It turns out — as with so much else in American history and culture — what goes around does indeed come around.]

At the beginning of the Spanish-American War, the public pressured the U.S. military to act in two contradictory directions. First, they wanted the army to land in Cuba as soon as possible — the public wanted the Spanish "rape" of the Cuban people to be ended forthwith.

The second public demand was for forces (primarily naval) to be assigned to protect the Atlantic coast from possible raids by the Spanish fleet. In light of that potential threat from the enemy, U.S.

army operations would have to wait for resolution of the situation at sea, or would need to depend upon the navy for escort protection.

Rather than devoting the fleet to the blockade of Cuba and deploying it in the best position to intercept Spanish naval movements crossing the Atlantic, our navy was forced to divert ships to patrol the coast in response to the public's fears. Prior to the war, the Navy Department had directed "the preparations of a scheme for a 'mosquito flotilla' for coast defense." That auxiliary naval force eventually comprised 41 vessels, distributed to protect important strategic points along the U.S. coast. That, however, was not enough to allay the terror felt by the inhabitants of the coastal towns and cities. It turned out, then, the greatest threat to U.S. Navy operations was not opposition by the Spanish at sea, but interference in planning from their own shores.

Politicians, reacting to the public hysteria, placed great pressure on the Navy to provide protection for virtually every part of the eastern seaboard. Theodore Roosevelt, Assistant Secretary of the Navy at the start of the war, later summed up the situation as follows:

[A] fairly comic panic . . . swept in waves over our sea-coast . . . The state of nervousness along much of the seacoast was funny in view of the lack of foundation for it . . . The Governor of one state actually announced that he would not permit the National Guard of that state to leave its borders, the idea being to retain it against a possible Spanish invasion. So many of the businessmen of the city of Boston took their securities inland to Worcester that the safe deposit companies of Worcester proved unable to take care of them . . . on Long Island clauses were gravely put into leases that if the property were destroyed by the Spaniards the lease should lapse. As Assistant Secretary of the Navy, I had every inconceivable request made to me . . . Congressmen . . . Chambers of Commerce and Boards of Trade of different coast cities all lost their heads . . . and raised a deafening clamor and brought every species of pressure to bear on the Administration . . . to distribute the navy, ship by ship, at all kinds of ports with the idea of protecting everything everywhere.

A Georgia congressman wanted a ship to protect Jekyll Island, according to Roosevelt, "because it contained the winter homes of certain millionaires. A lady whose husband occupied a very influ-

ential position . . . came to insist that a ship should be anchored off a huge seaside hotel because she had a house in the neighborhood."

The navy resisted such pressures because its leadership understood the true weakness of the Spanish fleet and they didn't want to divide the U.S. battle forces in light of what they viewed to be a very unlikely threat. The public's perception of that same threat, however, was not influenced by the navy's evaluation. Instead, the public heard from European (and some American) commentators, who greatly magnified the capabilities of the Spanish fleet and disparaged those of our own navy.

The absurdities of some of those commentaries were impressive. Many called the U.S. Navy a "mercenary navy," with too many foreign sailors (that is, immigrants) who would be unwilling to risk their lives in battle. Others discounted the physical capabilities of the U.S. Navy's vessels and claimed their crews would desert at the earliest opportunity if war seemed likely. At the same time, when assessing the strength of the Spanish fleet, these commentators added in ships being built but not yet ready for commissioning, others that were obsolete and used only for training, all the while ignoring significant readiness problems.

On the other side, the Spanish Navy's own view of



the situation and its own capabilities demonstrated the real extent of the threat. Admiral Pascual Cervera y Topete, the commander of the Spanish fleet, feared the American Navy would seize the Canary Islands and operate from there against shipping off the Spanish coast. He called for retaining the Spanish Navy in home waters, rather than steaming out "like Don Quixote... to fight windmills and come back with broken heads." Cervera considered any thought of action off the U.S. coast as "a dream, almost a feverish fancy... A campaign against that country will have to be... a defensive one or a disastrous one." But the Spanish Minister of Marine ignored Cervera and ordered

the fleet to cross the ocean.

While the U.S. Navy was able, to some extent, to avoid completely frittering away its strength on port-guarding duties, substantial diversions still occurred. As Secretary of the Navy John D. Lang later wrote: "Apologies are profuse now for the fears of Spanish bombardment entertained by certain coast cities and towns, but in April 1898 there was insistent demand for protection, and the department was compelled to modify the rule of concentration as the guide of its conduct during the war."

Thus, the main Atlantic Fleet was divided in two, with the "Flying Squadron" deployed at Hampton Roads, rather than at Key West with the rest of the fleet, in order to

cover the east coast from the Spanish threat. In mid-May, powerful elements of that squadron, including the protected cruisers *USS Columbia* and *USS Minneapolis*, were detached as the "Northern Patrol Squadron" to sail the waters between Rhode Island and Maine. These ships called at different ports to reassure the local inhabitants, who were terrified by what the papers called "the spectre of Adm. Cervera."

That "spectre," however, was not simply a civilian fear. Troop movements from New York to Florida were made by rail rather than sea, because the army command feared the Spanish Navy was abroad somewhere on the high seas off our coasts. As long as Cervera's location re-

mained unknown, the U.S. Atlantic Fleet remained divided into two distinct forces: the first blockading Cuba, and the Flying Squadron guarding against a possible attack on the east coast.

The Spanish Navy's greatest value to that nation's war effort was as a fleet-in-being. In that capacity it had at least some ability to restrict the U.S. Navy's operations simply through its existence. The Spanish government sacrificed that role when it ordered Cervera's ill-prepared and outnumbered squadron across the Atlantic. As soon as Cervera's squadron was discovered in the Caribbean, the U.S. fleet was able to concentrate against it and destroy it.

— Adam B. Siegel

## Weapons Backdate...

# One Brief Shining Moment: The Grant Tank

The Grant tank was a lumbering vehicle of mediocre design which was soon rendered obsolete by its newer cousin, the Sherman. Yet, for a brief period of less than a year, the Grant played a dominant role in the battles of the North African theater in World War II. Ugly, but reliable, with an excellent gun mounted in an unusual location, the Grant proved a savior to the British *8th Army* during the decisive battles at El Alamein.

The Grant, or more correctly the M3 medium tank, was designed, developed and produced in a short period at the Detroit Tank Arsenal in Center Line, Michigan. Chrysler Corporation engineers worked feverishly with tank designers from Rock Island Arsenal to ensure all production facilities were

compatible with the new design. That design, created in March 1941, was in full production by August.

The version of the M3 used at Alam Halfa, dubbed the "Grant I" by the British, was a six-man tank with a powerful Wright gasoline engine and thick armor of up to 56mm on its front slope. Unfortunately, the hull was of a riveted manufacture which

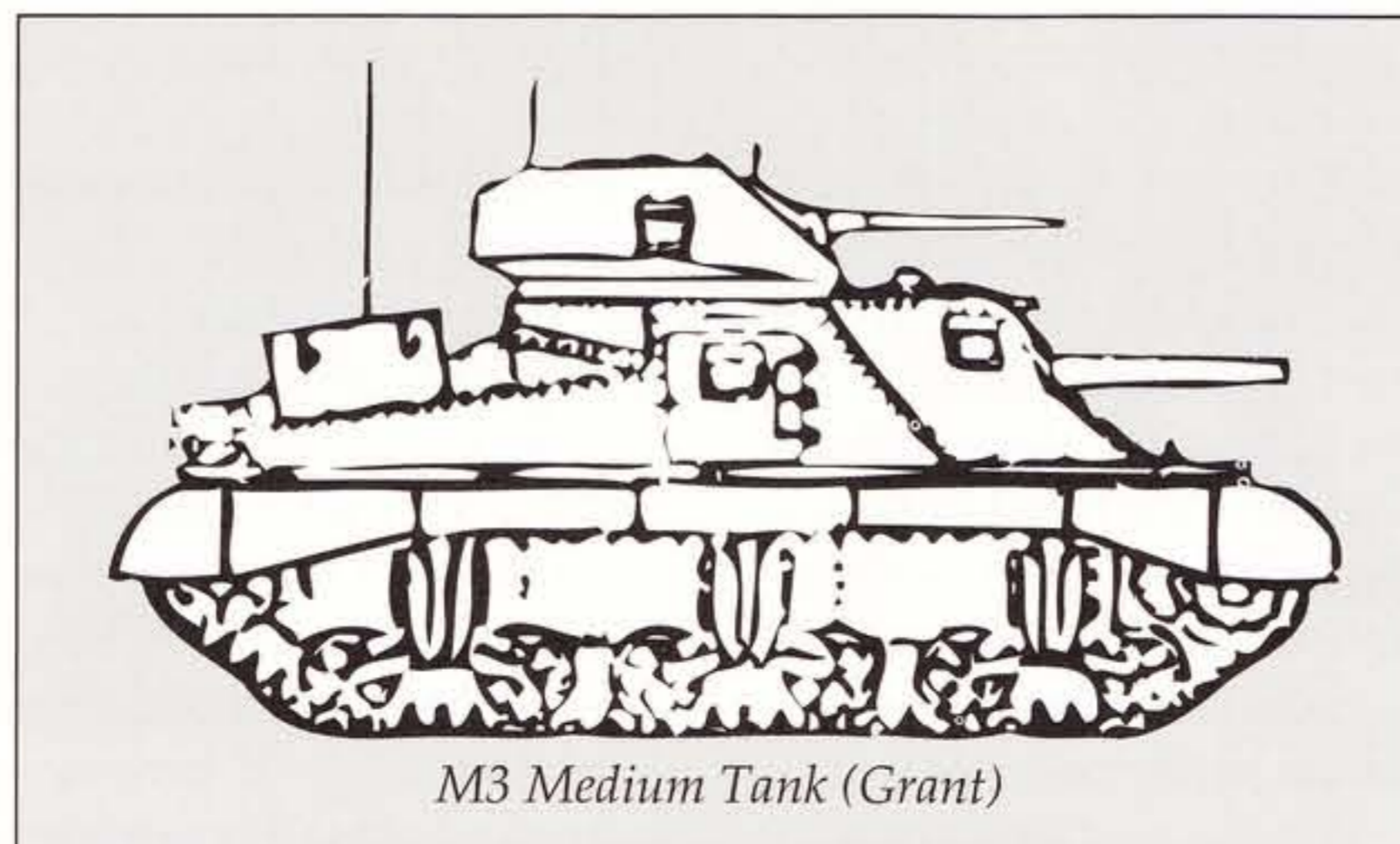
weakened its ability to resist enemy rounds.

But its greatest strengths (and weaknesses) were in its weapons. The Grant had a 75mm main gun, a 37mm secondary gun, and 3 Browning machineguns. That big 75 was an outstanding weapon that enabled the British tankers to out-range all of the German tanks Rommel then had in his units. At the same time,

though, it was mounted in a "sponson" located on the right side of the hull, while the smaller 37mm was in the small turret above. It was the sponson's side-hull location that severely limited the gun's ability to traverse to the left and soon relegated the Grant to obsolescence.

A sponson was chosen over a turret not through engineering oversight, but because the still-aborning U.S. tank assembly lines could not yet handle turrets of the size needed for a 75mm. The idea was to get a workable tank with a big gun to Allied units — quickly. By May 1942, the British had 167 Grants in the Western Desert. Despite heavy losses in the Gazala fighting, constant resupply still allowed *8th Army* to field over 150 Grants for the first Alamein battle.

The sponson drawback aside, the M3 proved well enough suited for Montgomery's defensive tactics there. Its high silhouette was reduced by using dug-in, "hull-down" positions, and



M3 Medium Tank (Grant)



the limited field of fire was offset by preplanning, with tanks arranged to cover all possible avenues of enemy approach. With those preparations made, the long range and penetrating power of the Grants' 75mm could be used to maximum effect.

The M3 was soon overshadowed by the M4 Sherman (although the Grants did continue to see service

throughout the war, particularly in Burma). Nonetheless, the Grant was an essential ingredient to eventual British success in the Western Desert. For despite its design flaws, the Grant gave a much needed morale boost to British tankers who in it finally had an armored vehicle that could compete with the Germans.

—Curtis S. King

### Trendlines...

## Women in NATO Armies

In Panama City, on 20 December 1989, a woman soldier of the U.S. Army engaged hostile troops as part of her normal mission. Capt. Linda L. Bray commanded a platoon of the 988th Military Police Company in a firefight against Panamanian soldiers. After a three-hour battle, she and her platoon had killed three of the enemy and captured a large cache of weapons.

Current U.S. law excludes women from "combat assignments." That is, they cannot be directly assigned to the traditional combat arms: infantry, armor, artillery. The Bray episode, though, shows how such distinctions become largely irrelevant once the shooting starts.

It's not only in the U.S. armed forces the role of women is being redefined and expanded. At NATO's founding, the number of women serving in the member nations' uniformed services was so small as to be insignificant — today, over half a million women serve full time in NATO armies. In fact, the only member states which don't have women on active service are Iceland and Italy. In a third, Portugal, their presence is minimal (9 aviation officers).

The nations with the highest percentages of women in service are those (not surprisingly) with volunteer armies: Canada and the U.S. No NATO nation currently mandates any kind of mandatory service for its female citizens.

Several member nations have stricter assignment limitations than are imposed in America. For example, the German constitution forbids women all assignments involving even the use of weapons. Effectively, that limits German women to the medical corps. France, Spain and Greece decline to use them in combat roles, much like the U.S. policy. Denmark will allow them every job except fighter pilot, while Canada keeps them out of submarines.

At the opposite policy extreme, Belgium, Norway and the Netherlands place no assignment limitations on their women at all. Given the current general decline in the numbers of available service-age males in most NATO member states, we can expect those last three nations represent the trend of things to come for women — a continued erosion of artificial barriers to full female participation in the rigors of war.

—Dario Beneditti

### Historical Perspectives...

## A Great Power Needs a Great Army?

During the coming decade, the U.S. Army will no doubt go through its largest proportional reduction since the general demobilization at the end of World War II. Only a few years before 1945, though, that great army had sprung from a base far smaller than the one it will probably be reduced to now.

On 2 February 1939, the U.S. army had **nine** divisions. All were at peacetime manning levels, which were about half of wartime authoriza-

tions. But even at full peacetime strength, each division should have had about 14,000 men; in reality, most fell far short of even that figure.

Further, these divisions were still organized on a "square" pattern, with 12 infantry battalions, 18 artillery batteries, and 28 specialty companies (signal, engineer, ordnance, medical, etc.). As the war in Europe began, all but three of the divisions were actually at only "cadre" level.

—John Mertens

DIV.	STRENGTH	MISSING UNITS
1	8,800	1 inf. bn., 8 arty batteries, 12 spec. cos.
2	10,000	6 arty batteries, 13 spec. cos.
3	8,500	1 inf. bn., 8 arty batteries, 14 spec. cos.
4	4,400	4 inf. bns., 5 arty batteries, 20 spec. cos.
5	3,800	6 inf. bns., 16 arty batteries, 25 spec. cos.
6	3,400	6 inf. bns., 16 arty batteries, 26 spec. cos.
7	3,500	7 inf. bns., 15 arty batteries, 25 spec. cos.
8	4,200	8 inf. bns., 15 arty batteries, 17 spec. cos.
9	2,500	7 inf. bns., 16 arty batteries, 23 spec. cos.

### Historical Perspectives...

## Yet Another Disease: Tin Disease

Ever try running around in the freezing cold and snow with your button-fly jeans undone or your jacket open? Well, a contributing factor to "General Winter's" effect on Napoleon's troops in Russia was due to their buttons, or rather, their lack thereof.

That is, the buttons on the uniforms of the Grand Army were made of tin. When that metal gets cold, somewhere around freezing, it acquires "tin disease" — it becomes brittle and actually crumbles

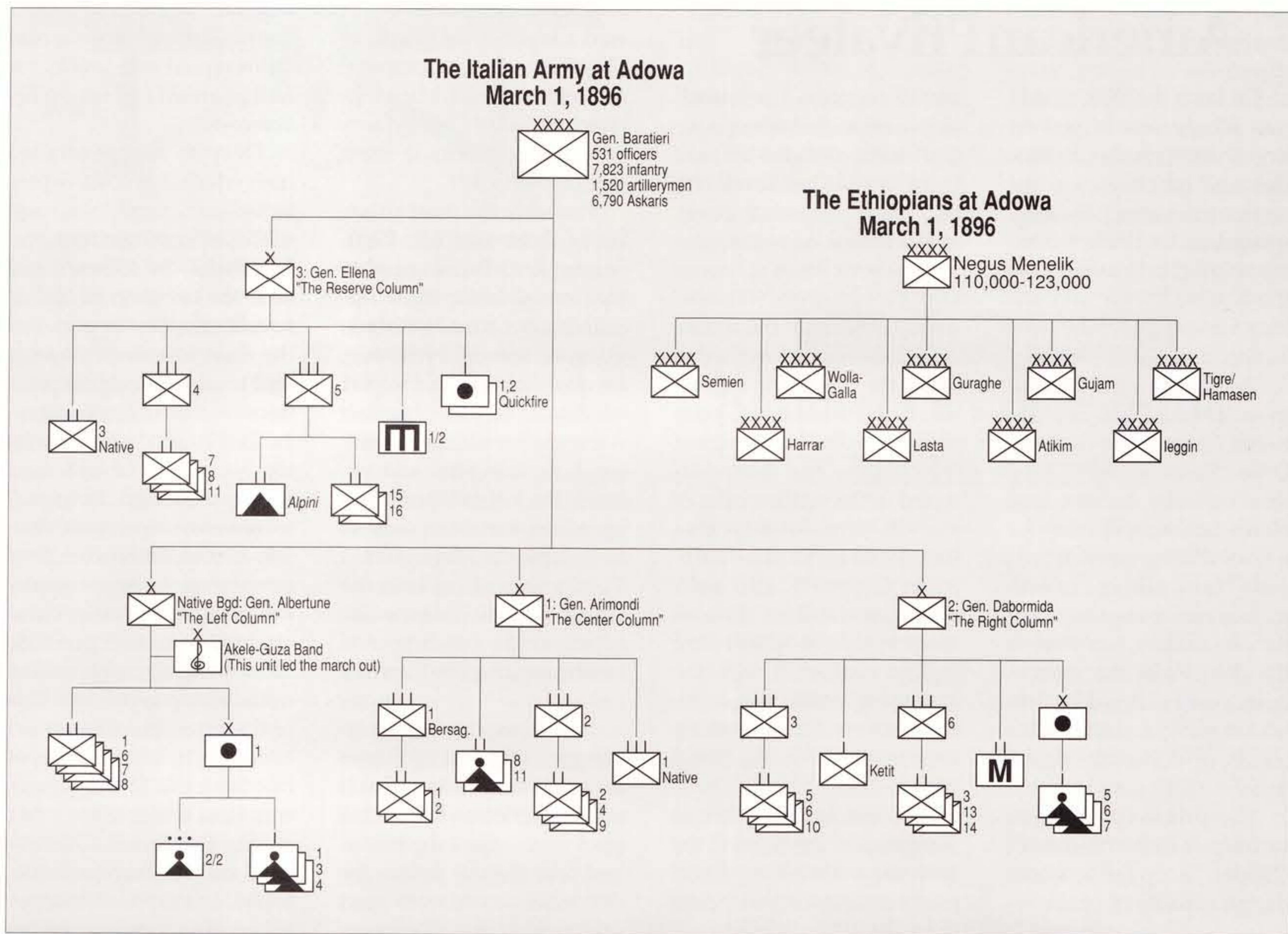
to the touch. And Russian winters are *very* cold.

As a result, the buttons on the trousers, jackets and overcoats of the French in Russia simply disappeared as the campaign wore on. Without buttons they couldn't easily keep their clothing shut against the cold. Thus, many of the troops who had survived disease in the summer and autumn finally succumbed to freezing near the end (pun intended).

—Peter Warnock



# Ethiopia Revisited



*This rare photo shows a group of Ethiopian warriors of the Denakli Tribe dancing with joy after hearing the Negus' mobilization decree (which was presented here in issue #10).*



## Samuel Reid — American Privateer

On land, the War of 1812 was fought out in several largely inconclusive battles. Despite much American myth to the contrary, the same was true at sea. While victorious ship fights like that of the *U.S.S. Constitution* over the *H.M.S. Java* and *Guerriere* were Yankee morale boosters, they really did nothing to alter the overall naval balance between Great Britain and the United States. So, then, if there were no really decisive land or sea battles, just what (or who) did bring that war to its end? War weariness in both nations can be used as part of the explanation, but more to the point were the tremendous losses suffered by British shipping concerns at the hands of American privateers.

The privateers' favorite ship type was the "Baltimore Clipper," a top sail schooner design capable of (then) in-

credible speeds. These small ships were "schooner-rigged" with fore and aft sails that allowed them to sail into the wind at a much closer angle than a square-rigged ship. Above those schooner sails, though, there were also two "top sails" of the square rigged type. These worked to allow the clippers to run before the wind like their square rigged kin. The hull design of the clippers had been perfected in the relative calm of the Chesapeake Bay area (hence the nickname "Baltimore Clipper"), and their slim, graceful lines allowed them to turn at speed. That agility, combined with the sailing rig, made it possible for them to outrun anything then available in the Royal Navy.

The daring and outright arrogance of some of the privateers was nothing short of astounding. One seized the

weekly Dublin-London mail packet boat every week for three months — this in the British Navy's own backyard. Another sailed up the Thames River and personally delivered a letter to the offices of Lloyd's Insurance Company in London, which stated, in effect, that all of England was now under blockade from that one schooner.

Probably the most amazing of those men was Capt. Samuel Reid. In command of the *General Armstrong*, a top-sail schooner armed with nine guns and crewed by 90 men, he was anchored in the port of Fayal, in the Spanish Azores, when a British squadron hove into view and entered the neutral port. The squadron was composed of five ships: the *Plantagenet*, a 74-gun ship of the line; the *Rota*, a 38-gun frigate; the *Carnation*, an 18-gun brig, and two transports, the *Thais* and *Calypso*.

The transports were carrying artillery and 2,000 men for use in the coming assault on New Orleans. The British plan was to land the troops and take the city before the Americans could even react

to their presence. While the Americans were aware some kind of assault was to take place, they had only militia immediately available for the defense. Gen. Andrew Jackson was dispatched to the city, but it would take weeks for him to arrive and set up his defenses.

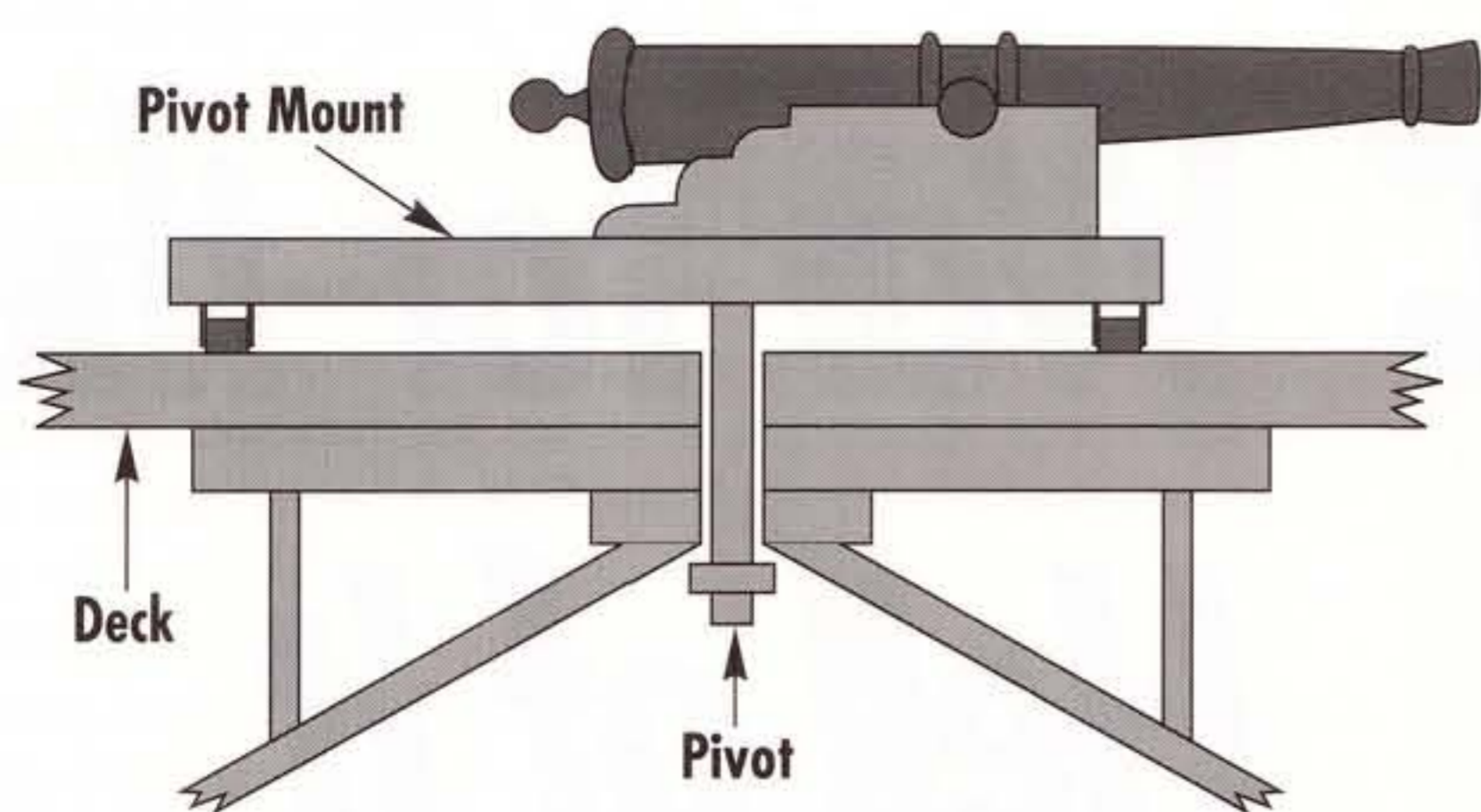
Despite the neutrality laws which should have protected the *General Armstrong*, the British commander, Capt. Lloyd, decided to board and seize the privateer he had so handily trapped in port. But the Americans were no fools and began making preparations for their defense as soon as the British showed up on the horizon. Reid had used long oars, called "sweeps," to move his ship into the shallowest part of the harbor, thus preventing the bigger enemy ships from getting close enough to use their guns. He then strung up anti-boarding nets to help repel attackers and cleared his ship for action. Finally, as four boats put out from the British squadron, Reid was ready.

The boats were accompanied by the brig *Carnation*, which was to prevent the privateer from getting under way and perhaps sailing past the approaching boarders. But as those boats full of British sailors tried to close on the clipper, Reid kept them back with shots from his broadside guns.

Like most privateers, the *General Armstrong* was armed with "long guns." These were heavier than the standard weapons of the day, but accurate to a longer range. (It was not the privateers' practice to slug it out with their intended victims; rather, they stood off at long range and damaged their enemies' sails before closing to board once their opponent was helpless.) Reid's ace in this contest was the long range "24 pounder" pivot gun mounted near the







center of his ship's deck. The pivot mounting allowed the gun to be brought to bear on any quarter of the battle not actually blocked by the structure of the *General Armstrong*.

Reacting to Reid's well-placed fire, the British boats pulled back out of range and waited for nightfall. At midnight they tried to close again, but cool and disciplined fire was once more brought to bear as they came toward the schooner. Wood splintered, boats sank, men drowned, and the English again beat a hasty retreat away from the feisty little ship.

Angered, Capt. Lloyd mounted a much larger effort the next morning. The population of Fayal lined the roof tops around the harbor as 12 barges, each armed with a cannon, were lowered into the water. Then 400 men were put aboard and the barges were rowed toward the *General Armstrong*. They raised red flags as they closed on the schooner, indicating they intended to take no prisoners.

Reid and his crew again made them pay as they sailed into gun range. The 24-pounder "Long Tom" opened fire first, smashing some of the barges as they tried to close. Grape shot swept others clean of men, and fierce hand to hand fighting broke out along the sides of the schooner as the British began to board. Cutting down the anti-boarding nets, they managed to take the bow of the small ship, killing three of

Reid's lieutenants. But Reid then personally led a counterattack, clearing the foredeck of his ship. Bodies began to fill the waters of the harbor, and decks literally ran red with blood, most of it British.

Some of the barges began to drift away, while others sank and still others limped off with only four or five men left alive to man them. When the smoke finally cleared, the American flag still flew from the rear of the *General Armstrong*.

Lloyd became incoherent with rage, actually jumping on the deck of the *Plantagenet* as he ordered the *Carnation* to be dragged into range, from where it could sink the schooner with cannon fire. But Reid personally aimed his "Long Tom" cannon for the return fire, knocked down the *Carnation's* main topmast, smashed the bowsprit, and repeatedly holed the hull of the brig, killing 15 of her crew. After an hour the brig was withdrawn, but she had hurt her smaller opponent, dismounting most of the *General's* guns and wounding many of the crew.

The British prepared for yet another assault. But as they began to lower more barges and fill them with sailors, Reid set his ship afire and rowed to shore with the survivors of his crew, over half of them wounded. Lloyd demanded the Spaniards give up the Americans or he would burn Fayal to the

ground. The Americans responded by retreating to an old convent, where they barricaded themselves in and yelled for the British to, "Come and get us if you want us!"

Lloyd declined, finally coming to his senses over the diplomatic scene he was causing. The fighting had cost him 210 men killed, 140 wounded, plus the damage to the *Carnation*, as well as the loss of

many of the crewmen needed to sail the two transports. It took the British three weeks to repair the damage and reinforce their crews. Those were three weeks in which the attack on New Orleans could not go forward without its artillery; three weeks in which Andrew Jackson was able to reach the city and set up defenses. Reid had changed the course of the war.

— Russ Jennings

### Historical Perspectives...

## Southern Soldiers in the Union Army

During the American Civil War, the Confederacy raised about 800,000 men from the territory of the rebel states. From that same territory the Union recruited almost 160,000. While the bulk of those southern recruits were black, about 5 percent of the South's available white military manpower also ended up wearing blue jackets. Southern loyalists, in fact, eventually amounted to about 7.5 percent of all Union troops.

— John Mertens

### Union Troops Recruited in Southern States

State	Blacks	Whites
Alabama	4,969	2,576
Arkansas	5,526	8,289
Florida	1,044	1,290
Georgia	3,486	-
Louisiana	24,052	5,224
Mississippi	17,869	545
N. Carolina	5,035	3,156
S. Carolina	5,462	-
Tennessee	20,133	31,092
Texas	47	1,965
Virginia	5,723	-
Assigned to Northern units	5,052	-
<b>Totals</b>	<b>98,398</b>	<b>54,137</b>
<b>Grand Total:</b>	<b>152,535</b>	



In issue nine we reported on the World War II test flights of American and German helicopters. This is one of the American YR-4B models, shown during its January 1944 tests. Had some high-powered Allied ground commander latched onto these things, the what-ifs are astounding. (Photo courtesy of the Imperial War Museum.)



# The Chaco: War for the Hell of It

by Bruce W. Farcau

[Ed's Note: In this main article, all Bolivian units and leaders are in italics; all Paraguayan are in plain text.]

## Background

In the 1930s, the heads of state and people of Europe and the United States were worried about *important* matters. The depression was ravaging the economies of the industrialized world. Japan was encroaching on a virtually defenseless China. Hitler and his party of fanatics first gained influence, and then complete power, in Germany. With all that, few noticed or cared that tens of thousands of Latin Americans were dying in a bitter war in the heart of South America.

As the sun rose on the morning of 14 June 1932, a ragged column of soldiers emerged from a tree line and began to wind their way across the grassy plain before it. The column did not present a very martial image. The troops trudged along, staring at the ground, carrying their rifles by the barrel and balanced on one shoulder, their large round caps tilted at every angle. Their once-khaki uniforms, except for dark patches under their arms and down the middle of their backs, had long since taken on the color of the gray-brown dust that covered the ground and coated the spiny bushes and grass through which they marched.

These 28 officers and men, under *Maj. Oscar Moscoso*, drawn from the Bolivian *Lanza Cavalry Regiment*, had been wandering across the hot dry bush of the Chaco for over two weeks in search of a large lake *Moscoso* had first seen while on an aerial reconnaissance mission on 25 April 1932. The column was now headed toward a promising dark area on the horizon that had been spotted by one of the men from the top of a tree. As they drew closer, the men could see the dark vegetation ahead and an occasional water fowl lazily circling overhead.

Like horses smelling water in a desert, the men unconsciously quickened their pace, moving faster and faster through the knee-high grass, until they were running and stumbling toward the lake. Frantically, they crashed through the ring of thick brush along the shore and drank gratefully of the muddy waters. Across the lake, they could make out the few low buildings of the Paraguayan "fort" *Moscoso* had seen from the air.

At midnight, the Bolivians quietly made their way around the edge of the lake to the Paraguayan encampment on its eastern shore. With a shout they rushed forward, firing wildly into the air. The few men of the

Paraguayan garrison proved to be light sleepers; they came off their cots running and disappeared into the darkness. As *Moscoso's* men explored the abandoned bivouac, flushed with the ease of their victory, none realized this opera bouffe episode would spark a tragic conflict that would drain the lifeblood out of two of South America's poorest countries for three grueling years and leave close to 100,000 dead.

One point on which all historians of the Chaco War are in agreement is the fact the Chaco is one of the most inhospitable places on earth. Not exactly a desert, and not exactly a jungle, the Chaco manages to incorporate the worst aspects of each. Comprising a perfectly flat area of some 300,000 square kilometers, the Chaco is covered with a tangle of spiny underbrush growing eight to ten feet high, interspersed with stretches of grassy meadow. The sandy soil drains the strength from a walker's legs and makes driving extremely difficult in the dry season, and turns into a soupy, sucking slime during the rainy season (December-February), which brings virtually all movement to a halt. Temperatures range from well over 100°F, with oppressive humidity, in the summer, to near freezing when cold "Surazo" winds blow from the Antarctic in winter.

The Chaco is populated by a handful of primitive tribes whose numbers had been sharply reduced by continuous warfare among themselves and with their Bolivian and Paraguayan neighbors, as well as by European diseases brought in by the earliest Conquistadores. The rest of the Chaco's inhabitants consist of an unsavory assortment of poisonous snakes and spiders, long columns of huge black ants, and clouds of aggressive flies and mosquitoes.

Bolivian attention was called to this unappealing land when she lost her sea coast to Chile in the War of the Pacific, in 1879. Cut off from that ocean, Bolivia toyed with the idea of establishing a port on the navigable portion of the Paraguay River, which would allow barge traffic with the River Plate estuary and from there to the Atlantic. The planners ignored the problem of building a usable road from this projected port across hundreds of miles of trackless wilderness, which is subject to frequent inundation, to the city of Santa Cruz, and from there hundreds of miles more into the Altiplano, where the bulk of Bolivia's population and industry was located. According to the Bolivians' reading of the original Spanish grants, their territory extended to the confluence of the Paraguay and Pilcomayo rivers, which included all of the Chaco and



placed the Bolivian frontier directly across the river from the Paraguayan capital, Asunción.

For their part, the Paraguayans were still recovering from the brutal War of the Triple Alliance (1865-70), in which tiny Paraguay took on her two gigantic neighbors, Brazil and Argentina, with Uruguay thrown in for good measure. The outcome was never in doubt. As a result of that one-sided conflict, the male population of Paraguay was virtually exterminated and Paraguay incurred crushing reparations payments to the victors. To help offset those payments, the Paraguayans had for some time been selling huge tracts of land in the Chaco to foreign, mostly Argentine, investors, and had been fostering the development of railroads and agriculture in the eastern Chaco in order to expand their country's economic base.

The Paraguayans claimed the Chaco as far as the foothills of the Andes along the Parapetí River. The War of the Triple Alliance had given them a justifiable case of paranoia. They flatly refused to consider a Bolivian port on the Paraguay River, fearing any encroachment on their national patrimony would result in the end of Paraguay as a sovereign state.

So the situation developed for some 50 years, with border incidents giving way to fruitless negotiations, followed by more border incidents. The key factors in determining which incident finally triggered the war were the arrival of arms from European manufacturers, and a spectacular act of insubordination by some Bolivian officers.

In *Moscoso's* report on the lake he had discovered (Lake Pitiantuta), he outlined the importance of this rare source of water as a site for a fort to connect the areas of operation of the Bolivian 3rd and 4th Divisions. *Moscoso* was also careful to note the presence of the Paraguayan camp on the eastern shore, but *Col. Enrique Peñaranda*, commander of 4th Division, saw fit to omit that last fact from the message forwarded to La Paz.

Consequently, *President Daniel Salamanca* and the High Command ordered *Peñaranda* to "take possession of the lake." *Peñaranda* relayed that order to *Moscoso*, who—assuming La Paz knew about the Paraguayans—interpreted it to mean he should attack the camp. Following his seizure of the Paraguayan fort, *Moscoso* established a new position to the north of the old one and began to dig in.

That was the opportunity the Paraguayan field commander, Lt. Col. Felix Estigarribia, had been waiting for. He estimated he could increase the field army in the Chaco from its peacetime complement of 4,200 to 16,000 in 36 days, by utilizing river transport and railroads on the Paraguayan side of the unofficial border (demarcated by strings of opposing forts). He also knew there were only some 1,200 men of the Bolivian 4th Division immediately available for operations in the Chaco, and with the hundreds of miles of poor roads reinforcements from the Altiplano would have to cross to reach the front, the Paraguayans would enjoy an overwhelming superiority in numbers for over a month.

Estigarribia hoped to deal the Bolivians a quick, stunning blow and then dictate terms before that nation's larger population (three million, compared to Paraguay's one million) and superior economic resources could swing the balance in their favor. The Paraguayans thus began to mobilize, and the war was on in earnest.

## The First Moves — Boqueron

While *Moscoso's* reinforced troops, now numbering about 170, half of whom were raw recruits, beat back the first Paraguayan probing attacks, *Col. Peñaranda* contin-





ued his policy of insubordination and misinformation. *Peñaranda* informed *Salamanca* that *Moscoso* had withdrawn to the western shore of the lake to build his fort. Thus, when news came of the Paraguayan attacks, La Paz believed them to be unprovoked actions on the part of the Paraguayans and, rather than try to open negotiations, girded itself for war.

On 15 July, a force of 400 Paraguayans arrived at the lake and began to encircle the Bolivian fort. Although the first attacks were repulsed, the Paraguayans soon unleashed a terrible "secret" weapon, the Stokes-Brandt mortar of World War I fame (and of which the Bolivian army had none). The mortars were ideal for use in the

bush, and their high-explosive rounds terrified the Bolivian recruits, who fled in panic, leaving *Moscoso* with only 14 loyal troopers. *Moscoso* wisely withdrew to Fort Camacho, while the Paraguayans continued to shell his old positions for several hours before realizing their enemy had fled.

Amid widespread patriotic demonstrations throughout Bolivia, the High Command ordered the seizure of the Paraguayan forts Corrales, Toledo, and Boqueron "in reprisal." This had worked well for them in 1928, when the Paraguayans had seized Fort Vanguardia. They failed to realize, however, this time the Paraguayans were serious and Lake Pitiantuta was not just another border incident.

On 27 July, a mixed force of about 400 Bolivians under *Peñaranda* took Corrales against only token resistance, and on 28 July, Toledo fell to them as well.

On 31 July, three Bolivian battalions (from as many different regiments) attacked Boqueron, supported by several biplanes. After a two-hour battle, the Paraguayans, part of Regiment Curupaity, feigned a rout and then ambushed the Bolivians, inflicting heavy casualties, including the detachment commander, *Lt. Col. Aguirre*, who was mortally wounded as he raised the flag over the fort.

Meanwhile, the Paraguayans were fast building an impressive force at their advance base of Isla Poi, only 60 kilometers from Boqueron. There Estigarribia received an unsigned order calling for the capture of Boqueron, but adding, "It is important that the operation appear to have been on the initiative of the (military) command." Estigarribia was told the order came from President Eusebio Ayala. That was all the encouragement Estigarribia needed.

By 7 September, some 5,000 troops, now grouped into I Corps, had been assembled at Isla Poi. Facing them at Boqueron were 448 men and officers with two aging Krupp field pieces under *Lt. Col. Manuel Marzana*.

The Paraguayan troops advanced confidently, expecting an easy victory. Regiment Curupaity demanded the honor of retaking the fort. They were supported by Regiment Itoro and an artillery group, with another regiment in reserve, while Cavalry Regiment Toledo moved to cut off Bolivian reinforcement from Yujra.

The attack began at 0530 hours on 9 September. The Paraguayan left, advancing across an open field, was badly mauled by Bolivian machinegun fire, while the right chopped its way through the tangled bush. A battalion of Bolivian reinforcements coming up from Yujra, unaware the road was already cut, was ambushed and destroyed by the Paraguayan cavalry. During the course of the day, the Paraguayans launched eight bloody attacks, getting to within 40 meters of the enemy trenches, but each was repulsed.

Clearly, Estigarribia was still learning his trade at this point. Although trained in France, he lost hundreds of enthusiastic infantrymen relearning the lessons of defensive firepower that had been taught in World War I.

On 14 September, the Bolivians briefly reopened the Yujra road and rushed in reinforcements and supplies. Estigarribia, seeing his troops being cut to ribbons in frontal assaults, decided to invest the fort and let hunger and thirst do his work for him. He again cut the Yujra road and ordered his artillery to reduce the fort by bombard-

## On the Diplomatic Front

Negotiations concerning the Chaco border dispute had been going on intermittently for about half a century when the war broke out; they continued until the final peace treaty was signed on 21 July 1938. Despite the efforts of literally hundreds of diplomats, these negotiations counted for very little. The two countries only refrained from war due to their unpreparedness, started the war as soon as they were ready, fought for three bloody years until both were exhausted, and only let hostilities end after one side had what it wanted and the other was too weary to fight further.

The most interesting character to emerge from the Chaco's diplomatic arena was certainly Carlos Saavedra Lamas, Foreign Minister of Argentina. He constantly pushed forward or claimed credit for peace proposals that might work to bring him fame, and sabotaged those initiated by others. He tried to exclude other diplomats from negotiations that appeared promising, and sought to have them drawn in only when failure was imminent. He also oversaw the substantial clandestine aid Argentina gave to Paraguay during the war — which was a critical factor in keeping the war going.

It was only after Saavedra Lamas' removal as foreign minister that more serious-minded officials were finally able to draft an acceptable peace treaty. For his efforts, though, in arranging the armistice of 1936 Saavedra Lamas was awarded the Nobel Peace Prize. That was certainly ironic, in that his machinations were in no small way responsible for the war lasting as long as it did.

Despite a stated goal of "peace without victors or vanquished," Paraguay essentially dictated the peace terms because of her military victory. Bolivia finally gave up all hope of achieving a port on the River Paraguay, and Paraguayans were left with control of almost the entire Chaco.

One interesting lesson that might have been learned here was the League of Nations was doomed. Certainly that was proved later, but if the League could not prevent and then could not stop a war between two landlocked and poverty stricken nations, in which no great power had any interest, how could anyone hope that same body might deny Japan or Italy or Germany the fruits of their aggressions?

The one concrete action taken by the League — an arms embargo against Paraguay in reprisal for rejecting a League peace offer — proved ineffective when Argentina continued to carry out covert resupply. It was quickly abandoned when others pointed out such embargoes should be the punishment for aggression, and not for refusal to accept a League proposal.

In any event, the world diplomatic community of the day viewed the Chaco War as such an unimportant event, no one was interested in trying to draw lessons from it.



ment. Inside the fort, *Marzana* ordered ammunition rationed. *Peñaranda* had few reserves left to attempt to lift the siege, since the reservists who had been recently called up were still in training far to the rear and the rest of the available forces were tied down holding Toledo and Corrales. While a column of about 50 men, under *Capt. Ustares*, worked their way through the incomplete Paraguayan lines to Boqueron, *Peñaranda*, with the main body of 550, ran into over 2,000 Paraguayans of the reinforced Regiment Corrales, and was bloodily repulsed.

*Peñaranda* then pleaded with La Paz for permission to fall back and defend Arce, and hope for a diplomatic breakthrough to save Boqueron's defenders. But the Bolivian High Command here first made a mistake they would repeat again and again. They announced to the jingoistic press the defense of Boqueron was vital to the Bolivian war effort, and having thus compromised themselves, they felt it politically impossible to abandon the fort.

Meanwhile, *Estigarribia* had reinforced the besieging troops with fresh units and sent replacements to the depleted ones. The investing force now composed the 1st and 2nd Divisions, plus a new Regiment Boqueron, made up of cadets from the military academy and the upper classes of Asunción. The new regiment even came equipped with its own artillery section and mounted squadron. (While some units in the Chaco were designated as "cavalry," even those usually fought on foot, due to the difficulty in supplying horses with water. Each division generally kept a small mounted squadron for reconnaissance duties.) This brought the Paraguayan strength to about 7,500 men, 24 guns, 8 mortars and 6 aircraft.

By 17 September, the defenders of Boqueron were reduced to stripping the Paraguayan dead in no man's land for ammunition—a dangerous source of resupply at best. Of the two wells that provided the fort's water, one had been destroyed by a Paraguayan shell, and the other had come under Paraguayan fire, so its approaches soon filled with piles of bodies as increasing thirst slowly drove the defenders mad. Bolivian aircraft tried to drop supplies—an occasional bag of bullets, bread, or medicines—but as the Paraguayan ring drew tighter, these drops often fell into enemy hands.

Late on the 17th, two Bolivian battalions, under *Capt. Montalvo*, surprised a battalion of Regiment Boqueron, scattering the cadets and briefly opening a corridor to push supplies into the fort. But a counterattack by Regiment Itozo forced the relieving battalions themselves into Boqueron after an all-day fight. On 20 September, *Marzana* ordered *Montalvo* and his remaining troops, the only relatively fresh ones in the fort, to make a breakout attempt and take word to *Peñaranda* there was virtually no ammunition or water left, and food would only last one more day.

The breakout was successful, albeit with heavy losses to the Bolivians, and the follow-on delivery by air of 50 lbs. of beef jerky and some medical supplies encouraged *I Corps* commander *Gen. Carlos Quintanilla* to order the defenders to hold just a little longer.

On 26 September, the Paraguayans renewed their assault with forces now grown to over 9,000 men. *Marzana* was forced to shift men from one point on his perimeter to another to meet the Paraguayan threats. The one remain-



*A Paraguayan sentry somewhere in the Chaco.*

ing Krupp gun in the fort blasted the attackers over open sights, and the artillerymen shifted to incendiary rounds to set the surrounding grass on fire. With all reserves committed, the Paraguayan push was finally repelled by a desperate Bolivian counterattack.

By 27 September, *Estigarribia* was thinking of calling off the attack within a day or two, since water was becoming a problem for his large force. However, the Bolivian Army Chief of Staff, *Filiberto Osorio*, together with *Quintanilla*, had decided to call on one last effort by the trapped garrison, and sent a plane to drop a message into the fort exhorting the defenders to hold out for ten more days with the aid of more air-dropped supplies. Within that time, the message promised, sufficient forces for the relief of Boqueron would have arrived.

*Marzana* called a meeting of his few remaining officers to discuss the message. Nineteen days and nights of near constant fighting told on the officers' faces as they concluded that, while the troops could possibly survive a



*A new group of Paraguayan recruits arrives in the Chaco.*



# THE CHACO WAR





few more days, ammunition hardly remained for ten minutes' sustained action, much less ten days. Another consideration was the large number of wounded lying unattended and covered with flies and maggots. The officers thus decided to call for surrender terms.

On 29 September, the Bolivian parliamentarians were escorted through the lines to meet Estigarribia. The sudden cessation of all firing from inside the fort convinced one Paraguayan lieutenant the defenders must be surrendering; he rushed forward to have the honor of capturing their commander. The lieutenant was followed by his platoon, who were in turn followed by more and more Paraguayans. The Bolivians had orders to hold their fire, so the Paraguayans were swarming over the trenches before any action could be taken.

All told, the Paraguayans rounded up 20 officers and 446 Bolivians inside the fort. Lt. Col. Carlos Fernandez, commander of the Paraguayan 1st Division, watched the ragged prisoners filing past and asked, "But where are the rest?"

The fall of Boqueron shattered the already fragile Bolivian morale. Beside having lost a substantial portion of their forces in the field, the Bolivians had lost virtually all of their troops who were acclimated to the Chaco. The fresh ones arriving daily were ill-trained reservists, coming straight from the cool, dry air of the Altiplano at 13,000 feet above sea level, after a trip by train, truck and on foot, that generally took over a month. Their heavy woolen uniforms were not suited to the sweltering heat of the Chaco, and the change in climate caused them to sweat away precious moisture their inadequate water rations could not replace. Lack of training, poor equipment, and mistrust of their white officers, caused the troops, most of whom were Indian campesinos, to flee in droves before the Paraguayan attacks.

Estigarribia's advance from Boqueron was slow and cautious; he expected the same degree of resistance from every Bolivian fort. The Bolivian troops, though, were in full flight and abandoned Yujra, Castillo and Arce in quick succession. At Alihuata, *Peñaranda* gave a stirring speech to about 4,000 troops present. But of those, only about 700 men of the veteran *Loa*, *Lanza*, and *Campero Regiments* were moved enough to stay and fight. *Peñaranda's* further call for volunteers brought in about 300 more, but 3,000 or so others continued to retreat.

Fortune now made a rare appearance on the Bolivian side. Mistakenly believing over 1,000 Bolivians to be stationed at Fernandez, Estigarribia diverted his 1st and 4th Divisions from the main pursuit to deal with this non-existent threat. That allowed the Bolivians time to consolidate their forces at "Kilometer 7," north of Saavedra, along a grassy field which ran perpendicular to the road.

At this point *Peñaranda* was evacuated for medical reasons, and command fell to Lt. Col. *Bernardino Bilbao Rioja*. He proved to be one of Bolivia's few competent and brave officers, and he quickly put the defense in order. Long lines of trenches were dug, observation posts set up in the few trees, wire strung, and machineguns and artillery dug in. *Bilbao* demonstrated that Bolivian troops, even some of those who had mutinied at Alihuata, could perform prodigious feats of labor and courage if properly led. During this fortunate respite, fresh units arrived, bringing Bolivian strength at Kilometer 7 to over 1,500.

## Enter Gen. Hans Kundt

The fall of Boqueron also presaged the fall of the officers responsible for that disaster. Having convinced the public a Bolivian victory at Boqueron would win the war, the High Command now faced just the opposite situation. Bolivian public opinion demanded the return of *Gen. Hans Kundt*, a German officer, to command the army.

*Kundt* had served on the German military mission to Bolivia from 1911 to 1914, when he was recalled for duty on the Eastern Front. During World War I, he served as a lieutenant colonel in the Landwehr in 9th Army. In 1915, he was made chief of staff of the Xth Reserve Corps, and eventually was given a regimental, and later a brigade, command. Following the collapse of Germany in 1918, *Kundt* returned to Bolivia as a private citizen, hoping to become a gentleman farmer. In 1921, however, he was called on to assume the post of chief of staff of the army, a position he held off and on until 1930, when he was unceremoniously booted out of the country after having become too involved in politics. He then returned to Germany, where he was when recalled by *Salamanca*.

*Kundt* remained a chief of staff at heart, and was known for the time he devoted to the troops, observing their training and personally checking on supply arrangements. This, coupled with his Prussian sense of discipline, won him the admiration of the common soldier, as well as the resentment of the aristocratic, strutting Bolivian officer corps. That group was made up of men who were generally the black sheep of upper class families, and who were accustomed to having their own way. That resentment, coupled with *Kundt's* lack of real strategic or tactical talent, doomed his efforts from the start.

When the Bolivian High Command learned of *Salamanca's* intention to replace *Gen. Osorio* with *Kundt*, there was an uproar. In a furious letter to *Salamanca*, *Quintanilla*, pressured by his unscrupulous subordinate *Col. David Toro*, denounced the President's lack of faith in the officer corps, blamed him (in his capacity as Captain-General of the Army) for the recent defeats, and haughtily announced the army would continue to recognize *Osorio* as chief of staff.

*Salamanca*, tougher than his 65 years and emaciated appearance might have suggested, demanded *Quintanilla* present himself in La Paz to answer charges of insubordination in the face of the enemy. *Quintanilla* quickly proved to be all talk, and sent a telegram begging the President's forgiveness and explaining he had only wanted to protect the honor of the army. But *Salamanca* stood firm and relieved *Quintanilla* as well, and *Kundt* assumed the multiple roles of commander of the army in the field, commander of *I Corps*, and chief of staff. *Toro*, who increasingly takes on the characteristics of Iago in this piece, quietly receded into the background to await the arrival of his old friend, *Gen. Kundt*.

## Kilometer 7 — Kilometer 12

On 7 November, the long-expected attack on Kilometer 7 finally came, but the Paraguayans sent only Regiment Corrales (900 men), assuming the Bolivian defenders were still totally demoralized. The rest of the Paraguayan 2nd Division was still at Alihuata, some 50



kilometers away. By now, though, the Bolivian force at Kilometer 7 had grown to over 3,500—and they had little trouble in mowing down the attacking lines of infantry as the Paraguayans tried to cross the open ground in front of the trenches.

*Bilbao* now saw the opportunity to take offensive action, as much to restore his troops' morale as to try to defeat the isolated Paraguayan regiment. He ordered *Regiment Murguía* to envelope the Paraguayan right, supported by *Compero* and *Campos*, while three other regiments pinned the enemy frontally.

*Bilbao's* attack kicked off at 0400 hours on 10 November, but was poorly coordinated. *Murguía* got around the

Paraguayan right, but was then repulsed by a spirited counterattack. One Paraguayan battalion broke and ran, but a Paraguayan regiment had fortuitously just arrived to relieve *Corrales*, and the Paraguayan commander also threw in the cooks and orderlies to plug his line. Finally, at 1700 hours, *Bilbao* ordered the attack broken off, and the Bolivians returned to their side of the grassy field.

All in all, things had not gone well for the Bolivians. They had lost about 400 casualties, and two regiments of the pinning force had panicked and run toward *Saavedra*, and were only stopped there by the threat of artillery fire from their own guns. *Bilbao* had, though, shown both the enemy and his own men the Bolivian army could attack as well as retreat, and had given the Paraguayans a bloody nose (about 500 casualties).

Renewed attacks from the now reunited Paraguayan 2nd Division ended without results. The fighting at Kilometer 7 settled into dreary trench warfare, with each side heavily fortifying its side of the field while maneuvering to try to turn the other's flank. Losses mounted rapidly in these attacks, with some Paraguayan regiments that had begun the war with 1,200-1,600 men reduced to 300-400.

But now *Kundt* arrived at the front and had fleshed out two more Bolivian divisions to reinforce the 4th and 7th already in the field: the 3rd at *Robore*, and the 8th, to which he gave the task of seizing *Platanillos*. On 12-13 December, the 8th Division attacked that place under the cover of six aircraft bombing and strafing ahead of them, against a single Paraguayan regiment (the *Valois Rivarola*, 700 strong). After a confused fight, the defenders escaped, but *Estigarribia* was furious at the loss of the fort and ordered the regimental commander court-martialed. *Estigarribia* then let his forces pass over to the defensive to rest and regroup, and he pulled back from Kilometer 7 under cover of a Christmas truce.

On 26 December 1932, the Bolivian 4th Division, finding itself facing empty trenches at Kilometer 7, began to advance. *Peñaranda*, now back in command, received reports from aerial reconnaissance of Paraguayan forces at Kilometer 12, but believed this to be just a rear guard. In a disjointed attack by 3,100 Bolivians (from ten regiments), his planned turning movement failed to swing wide enough, and all the units ended up attacking frontally against 2,700 Paraguayans of the 1st Division. Despite forcing back the Paraguayan flanks, the Bolivians failed to break the well-entrenched lines, and were forced to retreat under a torrential rain storm on 28 December after losing 700 casualties.

## Nanawa: Verdun of the Chaco

After failing at Kilometer 12, *Kundt* shifted his gaze eastward to the Paraguayan fort of *Nanawa*. On 29 December, the 7th Division, supported by some troops drawn from 4th, advanced on that town and seized the outpost of *Duarte* after a two-hour battle. *Nanawa* proper was defended by the Paraguayan 5th Division, under Lt. Col. *Luis Irrazabal*, with a total strength of 2,500, and a battery of *Krupp 75s*. Over the coming months, *Nanawa* would become the Verdun of the Chaco, grinding up the troops of both armies at a terrifying rate.

The Bolivian forces were divided into detachments: *Detachment Frias*, with elements of four regiments plus an

## Politics by Other Means

Clausewitz is famous for his dictum war is politics carried on by other means. In the Bolivian, or even the broader Latin American, context, it could be claimed politics is war carried on by other means. The constant involvement of the military in politics is something alien to Anglo-Saxon tradition, but it is common in Latin American life.

Throughout the war, the Bolivian officer corps resisted the wishes of their nominal "Captain General," *Daniel Salamanca*, to an extent that would have prompted Abraham Lincoln to institute daily firing squads in front of the White House. No more telling example of this insubordination is possible than the "true" story of the outbreak of the war.

When *Maj. Moscoso* first spotted *Lake Pitiantuta* while on aerial reconnaissance, he recognized its strategic importance and prepared a full report for *La Paz*, including the lake's location, size, and the fact there was a small Paraguayan fort on the eastern shore. The report eventually read by *Salamanca* and High Command, however, contained no mention of a Paraguayan presence, and they consequently ordered *Moscoso* to "take possession of the lake." *Moscoso* naturally assumed this order included the eviction of the current residents, which he accomplished with ease, thus provoking the Paraguayan counterattack.

Who did this deed? The finger of history points at none other than then-Lt. Col. *Enrique Peñaranda*, soon to be commander of the army, and later president. As temporary commander of the 4th Division, he received the first copy of *Moscoso's* report and apparently altered it to eliminate all mention of the Paraguayan presence.

That this was the case is supported by the fact that, when *La Paz* learned *Moscoso* had evicted the Paraguayans, the government immediately ordered him to evacuate the Paraguayan fort and set up his own encampment on the western (that is, "Bolivian") side of the lake, to avoid further problems. But *Peñaranda* intercepted that order, did not pass it on, and then informed *La Paz* it had been relayed. Therefore, when the Paraguayans did attack, the Bolivian government saw the action as a blatant act of vengeance over a minor original incident which had caused no casualties. Thus the emotional decision was taken to retaliate by seizing *Boqueron* and the other Paraguayan frontier posts.

Why would *Peñaranda* or anyone else do such a thing? Well, promotions were few and far between in the peacetime Bolivian army (and even fewer and farther between for those without personal or family connections). It certainly can be seen from *Peñaranda's* later performance—first overthrowing *Salamanca* and later installing himself as president—he was not without ambition. But only he could tell the full story.



artillery battery, *Detachment Quiroga*, with two regiments, and *Detachment Reque Teran*, with parts of five regiments and supported by twelve 75mm guns. *Col. Frias* was to swing to the right, and *Col. Reque Teran* to the left, in a double envelopment, while *Col. Quiroga* pinned frontally with his smaller unit. *Kundt* confidently predicted Nanawa's fall by noon on 20 January 1933.

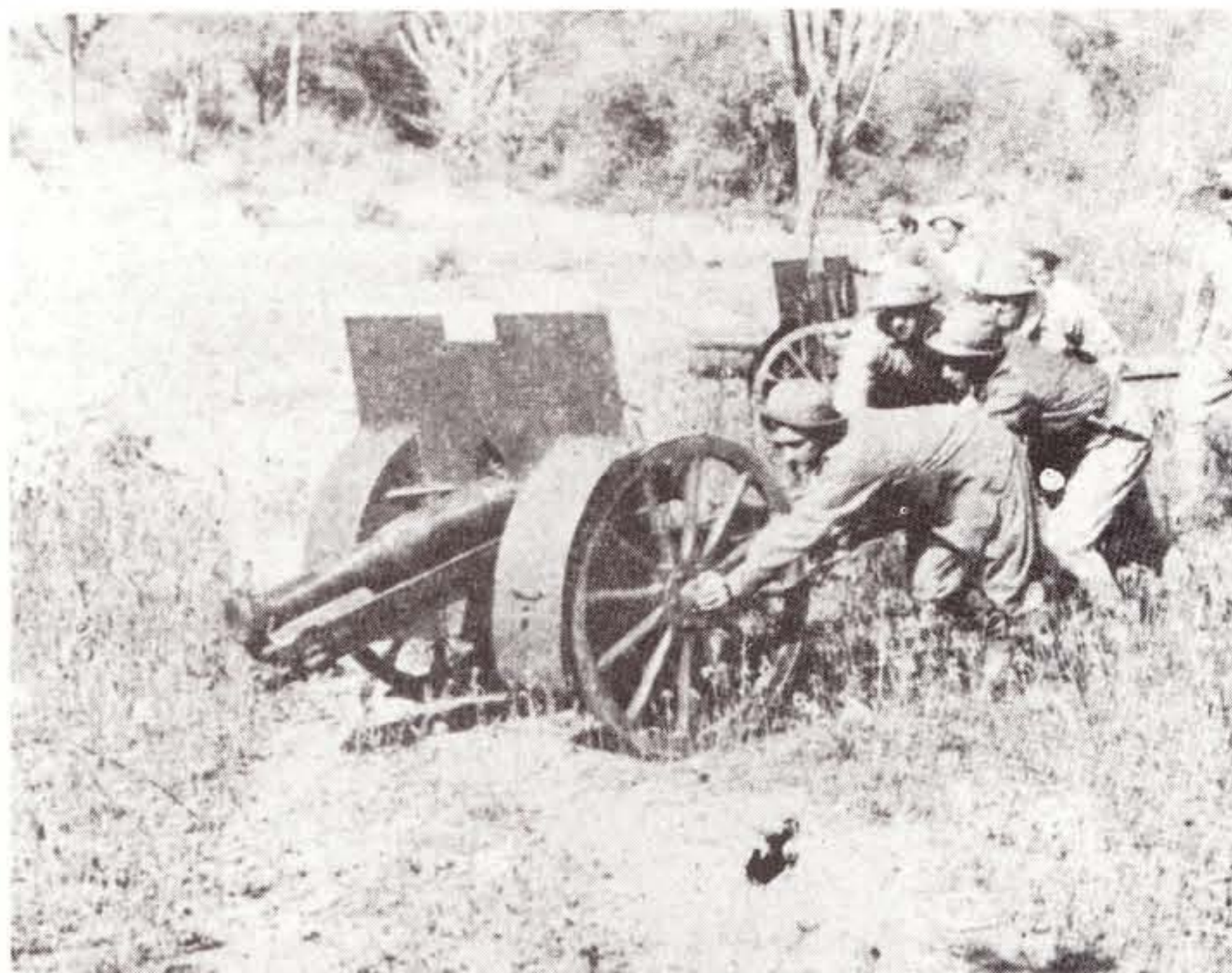
During the night of 19-20 January, the Bolivian forces began to move into position, but their advance was slow due to heavy rain and the tangled brush through which the flanking columns had to cut a path. On 21 January, *Reque Teran's* detachment launched a furious attack on the "Isla Fortificada" (literally, "fortified island," a large clump of woods separated from the main Nanawa defense lines and surrounded by open ground), but without success. Attacks all along the line continued through the 23rd, when *Reque Teran* sent one squadron from the *Abaroa Cavalry Regiment* to accomplish the deep flanking movement his whole column was supposed to have carried out. That squadron succeeded in cutting the Gondra road, but soon found itself in a desperate fight with 1,000 Paraguayans coming as reinforcements to Nanawa.

At 0600 hours on 23 January, on the right flank, *Regiment 41*, unsupported, succeeded in cutting the Suhin Road and penetrated deep into the Paraguayan left, even taking some of the fort's field kitchens. Had *Regiment 41* been supported by the rest of *Detachment Frias*, the battle might have ended right then in a stunning Bolivian victory, but a squadron from the Paraguayan Cavalry Regiment *Aca Vera* cut them off, and *Maj. Rene Pantoja* was forced to lead his regiment out of the trap with a desperate bayonet charge, which left most of his men dead behind enemy lines. At that point, *Irrazabel* asked permission to abandon the fort, but *Estigarribia* flatly refused.

On 24 January, the Bolivians unleashed a 3,000-round barrage on the "Isla," but the infantry failed to follow-up, not knowing the defenders had actually fled. The next day, *Regiment Azurduy* finally moved forward, but was immediately pinned by Paraguayan machinegun fire from the reoccupied "Isla." The Bolivian artillery, having wasted all its ammunition the previous day, sat helpless while the infantrymen lay in the open grass for hours without water, until they were finally able to slip back to their lines after dark.

Meanwhile, to the north, the Bolivian *3rd Division* advanced on Corrales, which the Paraguayans had retaken. The initial Bolivian attack proved a total failure, as the *Regiment Warnes* ran into an ambush in which its commander was killed and the troops then fled the field, taking the men of *Battery Sossa* with them. The *3rd Division* finally regrouped and pushed the Paraguayan *Regiment San Martin* out of Corrales and into an ambush set up by a Bolivian company infiltrated into their rear. Crossing an open field (later dubbed "Campo de los Muertos," or "Field of the Dead"), the Paraguayan column ran into a crossfire from Bolivian automatic weapons which disabled six trucks and the regimental command car. The Bolivian company then withdrew, and a renewed Paraguayan attack ran into a column of their own troops coming to reinforce them.

The Bolivians also attempted to recapture Fernandez with *Regiment 47* and the *Colorados*, believing the place to be only lightly held, but the attack on 21 January encoun-



*Paraguayan gun crews manhandle their pieces into position.*

tered murderous fire which cost some 800 casualties and virtually annihilated both units.

*Kundt* then stripped the *8th Division* of troops to reinforce the *3rd* (now 3,000 strong) for an advance on Toledo. The terrible roads and lack of transport slowed the Bolivian advance to 30 kilometers in 15 days. Despite the support of ten airplanes, the Bolivian attack on 25 February was beaten back in vicious hand-to-hand fighting with Paraguayan machetes wielded against Bolivian bayonets.

By a stroke of luck, a Paraguayan patrol penetrated the Bolivian lines and ambushed a staff car carrying the plans for the deployment of *3rd Division*. Lt. Col. Juan B. Ayala, commander of the Paraguayan II Corps, quickly realized the importance of the documents, which clearly showed Bolivian weaknesses and their lack of reserves. Ayala ordered an advance by three regiments around the Bolivian left, and on 11 March they cut the Corrales road. The Bolivians were forced to retreat to a new line in front of Corrales, but, again, several regiments refused to stop



*A group of Bolivian POWs under guard.*



and retreated on toward Camacho. Only the threat of air strikes finally brought the mutineers under control, but the units were disbanded and the regimental numbers permanently removed from the army rolls.

## Bolivia: *Dramatis Personae*

**Hans Kundt.** A German officer who served on that nation's military mission to Bolivia before World War I, and who returned to serve as Bolivian Chief of Staff after fighting on the eastern front. He was expelled from Bolivia in 1930 for interfering in national politics, but was recalled to service after the fall of Boqueron.

His experience as a staff officer enabled him to organize the chaotic Bolivian supply and support system, but his lack of imagination led him from one frontal attack to another. His demands for unquestioning obedience and his attention to detail earned him the respect of the common soldier and the hatred and resentment of the proud and aristocratic officer corps.

Oddly, one of the few Bolivian officers he trusted was Toro, a key conspirator in his final ouster. Kundt barely escaped an investigation by the government into his conduct of the war, and returned to Germany where he died a short time later.

**Enrique Peñaranda.** A Bolivian officer with extensive experience in the Chaco, he rose to command the army after Campo Via, largely through the machinations of Toro. Possessed of considerable personal courage, he lacked the strength of will to exact obedience from the rebellious officer corps. Following the war he served a term as president.

**German Busch.** At the start of the war, he headed a scouting unit in the largely unexplored Chaco. A brave and talented young officer he rapidly became a national hero in a country where heroes were in short supply. After the war, he overthrew Toro and was president at the time of the signing of the final peace treaty. He became depressed by the enormity of his job and committed suicide in 1939.

**Bernardino Bilbao Rioja.** Certainly the best commander on the Bolivian side, he was repeatedly called on to save hopeless situations and invariably did so. His lack of political ambition allowed others to keep him from obtaining any key position in the army. He is the only one of the principal officers of the war still living, and a movement is under way to have him given the honorary rank of Marshal.

**David Toro.** A veritable caricature of the pompous, undisciplined Latin American army officer. Spending much of the war screaming like a spoiled child for more power and resources, he is found not far behind almost every act of insubordination committed by the officer corps. He was also directly or indirectly responsible for many of the worst disasters suffered by the Bolivian army. He overthrew President Tajada Sorzano in 1936, using the guise of an enraged "Young Turk" officer returned from the fighting line. He, in turn, was overthrown by Busch.

**Jose L. Lanza.** The enigma of the Chaco War. He was treated like a leper by most of the officer corps, due to his close association with Salamanca. In fact, Salamanca fueled this suspicion by putting forward Lanza's name whenever a rebellious or incompetent officer needed to be replaced. Lanza was arrested along with Salamanca in 1934, and eventually was forced to retire.

One of the great "what-ifs" of this war is what difference Lanza could have made on its outcome had he been in command. Since he would have been opposed at every turn by the resentful officer corps, it is doubtful he could have done much real good. On the other hand, he could not have done much worse.

## On to Alihuata

After failing in his first major offensive, Kundt's new plan called for the 4th Division and the newly formed 9th to seize Alihuata. The 4th, at Kilometer 7, would pin the Paraguayans, while the 9th would swing wide, around the Paraguayan right, and fall on them from the rear. To that end, Bolivian sappers had been laboring for weeks to cut access trails along the left of the Bolivian line, behind a screen of infantry meant to keep away Paraguayan patrols.

By 1 March, the 9th Division had advanced some 42 kilometers, but on 10 March they were spotted by a mounted Paraguayan patrol which raced to warn the commander of Alihuata, Capt. Chirkoff (one of several White Russian emigrés serving with the Paraguayans.) Bolivian troops then quickly cut the roads to both Arce and Kilometer 12. Bolivian *Regiment Chaca Itaya* rushed forward in an unsupported frontal attack and lost an entire company before withdrawing. After this rude beating, the Bolivians satisfied themselves with occupying the roads, and on 13 March discovered Chirkoff had quietly evacuated Alihuata, after having caused 150 Bolivian casualties.

Estigarribia threw together a scratch force of 1,300 men at Arce — made up of cooks, orderlies, raw recruits, and a few veterans from Nanawa — to try to reopen communications with the 1st Division, which was now isolated at Kilometer 12. On the Bolivian side, *Bilbao Rioja* was named the new commander of 9th Division, and he immediately sent two regiments to hold off the enemy from Arce while he pushed a third onto the Paraguayan 1st Division's rear.

Meanwhile, the Bolivian 4th Division was conducting a leisurely advance from Kilometer 7, despite Kundt's urgings for more haste. Col. Fernandez, commander of the Paraguayan 1st Division, had been aware of the 9th's trail-cutting to his rear for some time and had been busy cutting one of his own eastward to Gondra. *Peñaranda* was aware of this trail as well, and had begged Kundt for troops to cut it. *Regiment Chichas* was finally sent from the meatgrinder of Nanawa, but too late. On the night of 17 March, the 3,000 Paraguayans of the 1st Division quietly slipped out of their Kilometer 12 trenches and escaped to Gondra.

The loss of Alihuata caused widespread dissension in Paraguay, with the political opponents of President Ayala attacking his and Estigarribia's conduct of the war. But in sharp contrast to the permanently strained relations between *Salamanca* and the Bolivian High Command, Ayala wrote to Estigarribia, "You can rest assured that my authority, both personal and political, will be on your side in good times and, above all, in bad."

On 10 May 1933, after nearly a year of savage fighting, Paraguay officially declared war on Bolivia. For a short time the Chileans threatened to cut off the passage of arms to Bolivia, while Argentina secretly continued to support Paraguay. Peru and Brazil, however, announced the passage of arms would continue to Bolivia. Chile eventually honored the Treaty of 1904, which allowed free transit of goods to Bolivia in return for Bolivian recognition of the loss of her coastal territory to Chile.

*Bilbao Rioja* was soon returned to his staff slot, and



Col. Jacinto Reque Teran was named commander of 9th Division. Reque Teran ordered Arce taken and sent two regiments to do the job. In the five days of heavy fighting that followed the initial assault on 10 May, many of the recruits who had recently arrived to reinforce those regiments died, and were buried in unmarked graves, never having been introduced to their sergeants by name. Similar attacks by three regiments under Col. Felipe Arrieta also failed to accomplish anything except further enlargement of the casualty lists.

After having already lost 25 percent of its strength, Detachment Arrieta was ordered to cut its way through the bush to the northwest to aid 8th Division in its attack on Fernandez. After two days of bitter fighting, Detachment Arrieta returned to Alihuata on 1 June, carrying its wounded through a torrential rain, while 8th Division went back to Platanillos, having been reduced to 8 officers and 531 troops, down from an original strength of 2,000.

In one of the great blunders of the war, Kundt abandoned the impregnable trench line at Kilometer 7, leaving 9th Division at Alihuata and sending the 1,200 men of the 4th in pursuit of the Paraguayan 1st Division at Gondra. The 4th was supposed to cover over 8 kilometers of frontage and also concentrate forces strong enough to take Gondra from 3,000 Paraguayans. Of course, the unit proved incapable of doing either.

## Second Nanawa

After thus failing again, Kundt shifted his attention to Nanawa once more and planned a major offensive to coincide with the opening session of the League of Nations. Estigarribia, however, was well aware of Kundt's preparations and had concentrated 9,000 troops at Nanawa. He also emplaced 75mm guns in the forward trenches to deal with the tanks the Bolivians were known to be bringing up. The Paraguayan forces were grouped in a rough semi-circle, with its open side facing east. A cavalry brigade held the southeast portion, with the 5th Division in the center and the 4th Division in the north, in contact with the 1st Division at Gondra.

Kundt planned for his attack to start on 4 July. His order to the troops went into considerable detail, such as specifying the "bandolier should be worn from the left shoulder to the right belt," and advising that tea or "mate" (a tea-like beverage) should be carried in the canteens. His attention to petty detail and his obsession with seizing Nanawa blinded him to any concept of overall strategy or anticipation of possible enemy reaction.

Kundt deployed Detachment Frias in the south with four regiments, supported by six flamethrowers and two tanks, while Detachment Quiroga covered the northern curve of Nanawa with four regiments, two flamethrowers and two tanks. The attack was to be supported by three batteries (of four guns each) of 75mm guns and two of 105mm. The Bolivian air force was to concentrate on knocking out the Paraguayan artillery. The signal for the assault would be the blowing of a mine that had been dug under the troublesome "Isla." The odds of success for a force of 9,000 Bolivians (of whom only 2,000 were designated for the initial assault) attacking frontally against an equal number of Paraguayans sitting in trenches under construction for six months were not good.

## The Sinews of War

It has often been said, "Amateurs talk of strategy, but professionals talk of logistics." The mundane business of providing armies with "beans and bullets" has always been the single most vital factor in warfare, but there are few examples clearer than the Chaco War in which the tempo and course of the campaign rested squarely on the logistical networks supporting each army.

At the outset of the war, the Bolivians were laboring under a severe handicap. Every man, bullet, sack of flour, bandage and gun used in the fighting had to make its tortuous way from the Bolivian population centers in the Altiplano, over hundreds of miles of bad road, to the front. The distance from La Paz to Asunción is approximately the same as that from Berlin to Moscow, but here the two capitals were separated by an inhospitable desert, which was only being explored prior to the start of the war.

Bolivian reinforcements began their journey with a train trip, usually lasting a week, from La Paz to the railhead at Villazon. Then they would spend several days riding in open trucks (if they were lucky) over dirt roads to Villa Montes, the gateway to the Chaco. From there, most men had to march, across hundreds of kilometers of dusty or muddy roads and tracks, still wearing their heavy woolen uniforms in the burning sun, perhaps arriving at the front less than a month after their starting date.

Supplies moved even more slowly, and it was the difficulty of supply, as much as the financial constraints of the two belligerents, which prevented the wider use of artillery or armor in the war. To give an example of the weakness of the Bolivian supply system, there existed no bridge over the River Pilcomayo near Villa Montes, and all supplies and reinforcements had to be ferried across on rafts, a dangerous undertaking which cost dozens of lives. It was not until late 1934 a bridge was finally constructed by the Bolivian logistical command.

Conversely, the Paraguayans enjoyed early advantages in this respect. From their capital, Asunción, Paraguayan reinforcements could travel in one day or less by boat, up the Paraguay River and then by rail to within 40 kilometers of Isla Poi. While this supply route was short, it had limited capacity and was stretched to its limits throughout the war. Paraguay's smaller economic base was also strained to provide enough trucks, or even ox carts, to haul supplies over those 40 kilometers to the front.

As the Paraguayans advanced, however, the advantage gradually shifted to the Bolivians, whose supply lines became progressively shorter. The final Bolivian offensive at Villa Montes was made possible, despite the disasters of the preceding years, largely because they had supplies in abundance, and the Paraguayans were by that point short of everything.

Water became the critical commodity for both sides during the long dry season in that arid region. Much of the scant vehicular resources of both armies had to be committed to hauling water to the troops every day. Only the Paraguayans made an intelligent effort to confront this problem, creating a special engineering unit trained and equipped to locate and dig new wells as the front advanced. It was this capability, more than almost any other, which gave them the tactical flexibility to outmaneuver the Bolivians through the bush country.

It would be safe to speculate that, had the far larger Bolivian army been able to mobilize and concentrate with the speed of the Paraguayans, all of the tactical and strategic ability of Estigarribia, *et al.*, would not have been enough to prevent a rapid and complete Bolivian victory.



At 0830 hours on 4 July, the Bolivian barrage and air attack commenced, but little damage was done to the defenders hidden in deep bunkers made of logs and earth. In the south, Bolivian troops, moving up after the barrage lifted, were quickly pinned down by murderous machinegun fire. The flamethrower teams were picked off by Paraguayan snipers. The tanks, finding themselves without infantry support, retreated to their starting point.

## Airpower in the Chaco

The air forces involved in the Chaco War were tiny by any standard, but they still managed to perform vital support functions. Both sides were equipped with a variety of flimsy biplanes, some of them dating from the First World War. Potez (French), Curtis (U.S.), and Vickers (British) aircraft were the most common. Both sides also possessed a limited number of tri-motor cargo planes.

**Reconnaissance:** Perhaps the most valuable function performed by the air forces was aerial observation. In the flat bush country of the Chaco, mere trees became vital observation posts, and virtually nothing else was available. Aircraft could keep tabs on enemy troop movements and the progress of trail cutting in the bush. They also served to guide friendly forces through the featureless country to their objectives.

**Ground Support:** One of the few bright spots of the war for Bolivia was the performance of her air force, which essentially ruled the skies. The bombing and strafing of enemy troops was done more for its moral than its physical effect, as the aircraft involved were too weak and too few in number to make much of an impact. As both sides developed rudimentary anti-aircraft defenses, this activity was largely abandoned in favor of pure reconnaissance.

**Supply:** Both armies made use of aerial resupply to sustain isolated forces, but the small number of planes involved, and the still primitive state of the world military community's perception of aerial resupply, prevented this having much effect. Where forces were closely engaged, as in Boqueron, the effect was nil.

Where landings could not be made, resupply involved simply throwing out bags of bullets, medicine, food, etc., often with disastrous results for the cargo. Supply planes often did, however, save many lives by ferrying seriously wounded soldiers from forward airstrips to base hospitals — a technique armies of more modern nations would not develop for another decade.

**Interdiction:** David Zook, in *The Conduct of the Chaco War*, criticized the Bolivians for failing to take advantage of their air superiority by interdicting Paraguay's vulnerable supply lines. Zook, an American Air Force officer, seems to be blaming the Bolivians of 1932-5 for not applying the lessons learned by the U.S. Air Force in World War II. In fact, the Bolivians did make efforts to attack Paraguayan truck convoys, but their aircraft were simply too few in number to turn such raids into major successes. Also, Bolivian air attacks on the Paraguayan supply base of Puerto Casado provoked protests from the Argentines, many of whose citizens were busy trading with the Paraguayans there, and the threat of Argentinian retaliation was more than enough to shelve this tactic.

The air war was conducted with chivalry in an otherwise brutal and bloody war, not unlike that of World War I. On one occasion, the funeral of a Bolivian flier at the front was interrupted by the appearance of a low-flying Paraguayan aircraft. The Bolivian mourners scattered, fearing a strafing run, but the Paraguayan merely jettisoned a large wreath, woven of Chaco thorn bushes, onto the grave of his former foe.

In the north the mine finally exploded with a terrific roar, hurling tons of earth in all directions, but it seems to have been about 30 meters short, and the "Isla" remained untouched. The Bolivians charged anyway, quickly covering the open ground and overrunning much of the "Isla." One Bolivian tank was knocked out by direct artillery fire, and the other then retreated. The Bolivian flamethrowers worked with hellish effect here, driving the Paraguayan machinegun crews from their dugouts.

Lt. Col. Brizuela, of 5th Division, seeing the rapid Bolivian advance, began to burn his files. But Irrazabal ordered Regiment Boqueron, and any scattered reserves that could be found, to move up and support the 5th. A lone company of the Regiment 24 de Mayo still held out in the "Isla," and a counterattack by the Paraguayan reserves caught the forward Bolivian forces in a crossfire. Finally, the Bolivians abandoned all they had gained. Continued attacks over the next three days also came to nothing.

Bolivian losses in this abortive offensive were over 2,000, while the Paraguayan forces lost only 159 dead and 400 wounded. Estigarribia later described the carnage of the "Isla" as being like a butcher shop, with severed limbs and corpses dangling from the trees and the stench of death everywhere.

With the Bolivians clearly stalled, Estigarribia turned his thoughts to taking the initiative again. Maj. Rafael Franco, commander of 1st Division, suggested a double envelopment of the Bolivians at Gondra. The Bolivian 4th Division had been weakened by the transfer of troops to Nanawa and was badly over-extended. Using infiltration tactics, Franco succeeded in cutting a number of roads behind the 4th Division on 11 June, but the timely intervention of Maj. German Busch, with a mixed force of cavalry troopers and cooks, managed to keep communications open and allowed the 4th to escape the trap. The Bolivians then set up a new line at Campo Via.

Without missing a step, Estigarribia quickly shifted his attack to Alihuata. The Bolivian 9th Division had also been stripped to support the attack on Nanawa, and was chopped into several isolated groups. On 12 September, the Paraguayan 7th Division surrounded Regiments *Loa* and *Ballivian* at Campo Grande. Piecemeal Bolivian relief efforts from Alihuata were easily defeated, and no reserves were available to cut through the Paraguayan ring. By 15 September, the trapped soldiers were dying of thirst. Four water trucks had arrived just before the Paraguayan attack, but that was now gone, and the Bolivian commander, Col. Capriles, finally surrendered along with his 13 officers and 520 men. A few hours earlier, at Pozo Favorito, a smaller Bolivian force was also surrounded and captured.

Kundt was called back to La Paz for what he assumed would be his dismissal. Instead, he was cheered through the streets by crowds fed on government propaganda. It turned out the cabinet only wanted a briefing on the war situation. Kundt breathed a sigh of relief and painted a rosy picture for the politicians.

During Kundt's absence from the front, a group of officers led by Col. Toro declared their refusal to follow the German any longer, but Kundt was riding high on a wave of popularity, and he was able to have Toro temporarily relieved.



Beginning on 12 November, the Paraguayans began a series of diversionary attacks on the Nanawa front. One attack surrounded an entire regiment and netted over 400 Bolivian prisoners, but the main purpose of these activities was to hide preparations for a renewed offensive in the Alihuata-Gondra area.

## Campo Via

The 9th Division's left was hanging in the air, and Kundt made efforts to strengthen it by drawing troops from the 4th and 7th Divisions at Nanawa. This was characteristic of Bolivian operations throughout the war, as commanders found it easier to shift troops from one point of the front to another, rather than collect and maintain reserves to deal with problem areas. On 3 December, however, the Paraguayans came storming across Campo 31, over-running the *Regiment Colorados* and quickly cutting all of the 9th Division's escape routes. Kundt instructed Col. Banzer of the 9th to "proceed according to the situation," and Banzer accordingly tried swinging to his right, in the hope of escaping via 4th Division's area (and not knowing the Paraguayans had already arrived there).

On 6 December, Maj. Franco, of the Paraguayan 1st Division, heard of the fall of Alihuata and proceeded, without orders, to hurl 6,000 troops against the 1,300 men of the Bolivian 4th Division. In a surprise attack at 0430 hours, 7 December, Franco overran *Regiment Campero*, after a short barrage and fierce hand-to-hand fight. Kundt, totally unaware of the scope of this threat, sent only 140 reservists to stop the Paraguayan advance.

On 8 December, the 9th Division continued to blunder deeper into the Paraguayan trap. A force of sappers, under the protection of *Regiment Lanza*, was ordered to cut an escape trail toward Kilometer 22, but heavy sniper fire forced suspension of the work until nightfall. While the sappers worked in relays in the oppressive heat, Kundt ordered the destruction of all heavy equipment that would slow a breakout attempt.

*Regiments Lanza, 20, and 50* were designated to spearhead the breakout. *Lanza* succeeded in piercing the Paraguayan line, due to a coincidental bombing run by planes from Saavedra just at the point of attack. But *Regiments 20 and 50* were held up. *Lanza's* commander then sent 160 men ahead to Saavedra and attempted to hold a corridor open with the rest, but none of the trapped forces showed up at the breach, and *Lanza* was soon overrun by a Paraguayan counterattack.

By 11 December, Banzer and Col. Quint, the new commander of 4th Division, radioed Kundt the water was gone and ammunition was running low. Kundt merely repeated, "Obey orders . . . destroy equipment . . . breakout." Franco then communicated to Banzer that the Bolivians' trucks must not be destroyed if the trapped forces wanted any water upon their surrender. Paraguayan trucks would not be used to supply prisoners. Banzer agreed, and at 1430 hours he surrendered both divisions, yielding a total of 7,500 prisoners.

Kundt then headed for Muñoz. Passing through Saavedra, he returned responsibility to Peñaranda (now commander of I Corps) for 9th Division and departed. Peñaranda scraped together the survivors of the disaster,



Typical Chaco War entrenchments.

some 3,000 in all, including a few troops who had escaped the pocket, but mainly reserves who had been left outside the pincers. Kundt's subsequent cables to La Paz gave the impression Peñaranda had fought his way out of the trap with a large force, thus mitigating the tragedy and making Peñaranda an overnight hero. Peñaranda was promoted to Brigadier by acclamation.

## Truce

Estigarribia was slow to exploit his success, and let Peñaranda's 3,000, plus the 3,000 of the 7th Division facing Nanawa, escape unmolested. The Bolivians evacuated Saavedra, burning or carrying off all the supplies so laboriously accumulated there over the past months, and prepared to abandon Muñoz as well. On 18 December, President Ayala proposed a ten-day truce to the League of Nations, which the Bolivians readily accepted. Belatedly, the Bolivian High Command rescinded the order to abandon Muñoz, but the Paraguayans stormed the place, allegedly after the truce had taken effect.

This time Kundt was in hot water with the government, which was more upset over the loss of so much territory than with the loss of half its army. Toro was actively maneuvering behind Kundt's back to arrange his ouster and to have the pliable Peñaranda named in his place. In effect, he presented the government with a fait accompli, and Peñaranda's sudden popularity prevented them from naming another candidate. Toro was named the new commander of I Corps.

The truce was extended to 6 January 1934, and only too late did the Paraguayans realize they had given the Bolivians valuable time to rebuild their shattered army. By December 1933, Bolivia had mobilized 77,000 men, of whom only 7,000 were now in the field. 16,000 were dead, 32,000 sick or wounded, 10,000 captured, 6,000 deserted, and 6,000 more scattered in garrisons across the country.

By 7 January, Bolivian strength had rebounded to almost 11,000, compared to 28,000 Paraguayans. Toro's I Corps, along the Pilcomayo, included the 4th and 7th Divisions, and Bilbao's II Corps, with the 3rd and 8th Divi-

(Continued on page 42)



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# The Chaco War

## If this is your first wargame, read this box first.

Do not try to memorize these rules! No one does that. Wargame rules are written to create a game system that simulates military realities as far as possible. As you play the game, you'll find that things flow along according to a certain real-world kind of rhythm. After a few game turns, that rhythm will become second nature to you and you won't need to refer to the rules as often. Read the rules through in their entirety once before you punch out the playing pieces. Look up specific rules when you need to, and use a pen or highlighter to make notes and reminders to yourself on rules which give you trouble.

This is a wargame of intermediate complexity. That means if you're new to the hobby you can learn to play it on your own, though you'll no doubt find it easier to get into if you find a more experienced gamer to teach you.

We have omitted our usual set of Beginner's Rules with this game. We recommend that on your first play-through you use only the rules in those sections marked with the § symbol and play the Boqueron scenario (section 17.2).

## CREDITS

**Design:** Bruce Farcau

**Development:** Paul Dangel

**Playtesters:** Walt Henny, Phil Klein, Charles "Fritz" Sydow, Sam Collins, James P. Werbaneth, Walt Dippel, Rev. Jack Werth, Ty Bomba, Chris Perello.

**Map:** Mark Simonitch

**Layout & Counters:** Larry Hoffman

Thanks to the other players who worked on this game over the last 5 years. Your names have been forgotten but not your efforts. Special thanks to Jamie Esteve of Buenos Aires, Argentina.

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## § 1.0 INTRODUCTION

The Chaco War (1932-1935) is a simulation of the struggle between Bolivia and Paraguay for the desolate Chaco region in Central South America. The war which began as a series of border incidents ended as one of the most sanguinary conflicts ever fought in the western hemisphere.

**Game Scale.** Each hex represents 15 kilometers from side to opposite side. Each game turn represents one month of real time.

## § 2.0 COMPONENTS

**2.1 In General.** The components of the game are the rules, the map, and 190 counters. The other 10 counters are replacement and/or variant counters for other games — their use is explained in the Errata/Variant sections of the magazine. Several charts and other player aids are provided to ease play. You will need to provide one standard six-sided die.

**2.2 The Rules.** Read the rules through once before beginning play. The rules are organized by topic to assist the players in locating a rule about which they have questions. Familiarize yourself with the organization of the rules.

**2.3 The Map.** The map represents the militarily significant terrain in the Chaco region. The hexagonal grid is printed on the map to regulate the placement and

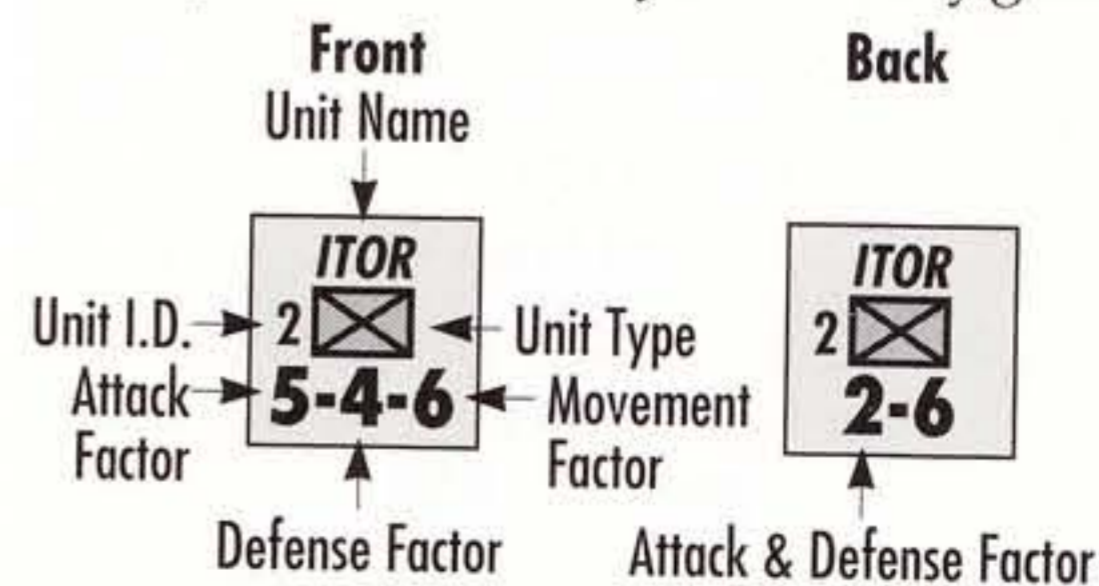
movement of units. A unit is considered to be in only one hex at a time. Each hex contains terrain features which may affect the movement of units and combat between units. Terrain on the map has been altered slightly from their real-world configurations to fit within the hex grid, but the relationships between the terrain from hex to hex are accurate to the degree necessary for presenting players with those same space-time dilemmas faced by their historical counterparts in the actual campaign.

**2.4 The Counters.** There are 190 counters in this game. Carefully punch out the counters. Trimming the dog-ears off their corners with a fingernail clipper will greatly facilitate handling and stacking during play.

There are three types of counters: combat units (2.4-2.12), non-combat units (2.13 — 2.20) and markers (2.22).

**2.5 Combat Units.** Each combat contains the following information: Nationality, Unit Identification, Unit Type, Attack, Defense and Movement Factors.

There is nothing on the counters to indicate the size of the unit. Most infantry/cavalry units in the game are regiments, but as the war progressed the words "regiment" and "battalion" ceased to have much meaning because they rarely gave a accurate indication of actual unit sizes. We have dispensed with the usual unit size symbols for this reason. Typically, each infantry/cavalry unit represents from 400 to 1,200 men. An artillery unit represents a battery of 12 heavy guns.



This unit in the Paraguayan 2nd (Itoro) Infantry. On its full strength side it has an attack factor of 5, defense factor of 4, and a movement factor of 6. On its reduced side its attack and defense factors are 2 and its movement factor is 6.



**2.6 Nationality.** The nationality of each unit is determined by the background color on the counter. Note the colors inside the unit type boxes have no effect on play. The color schemes are as follows:

- Bolivian: Green
- Paraguayan: Lt. Brown

**2.7 Unit I.D.** Most units are identified by either a number or name, some have both. Unit I.D. has no effect on play except for the initial set-up in some scenarios. The following names have been abbreviated:

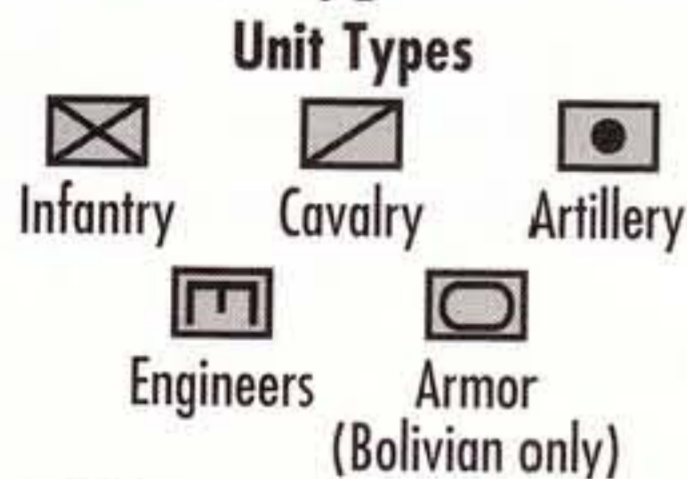
**Bolivia**

- ABAR - Abaroa
- AZU - Azurduy
- BALLI - Ballivián
- CAMA - Camacho
- CAMPE - Campero
- CAST - Castillo
- CCB - Cochabamba
- CHAC - Chacaltaya
- CHIC - Chichas
- CHOROL - Chorolque
- CHUQ - Chuquisaca
- COLOR - Colorados
- MURG - Murguia
- PARA - Parapetí
- SOCA - Socabaya
- VANG - Vanguardia
- WARN - Warnes

**Paraguay**

- AC - Aca Caray
- AV - Aca Vera
- BN 40 - Battalion 40
- BOQ - Boqueron
- COR - Corrales
- CURU - Curupayty
- ITA Y - Ita Yutyuyi
- ITOR - Itoro
- R NU - Rubio Nu
- SAUC - Saucos
- SM - San Martin
- TOLE - Toledo
- TUYUT - Tuyuti
- 2 MAY - 2 de Mayo
- VR - Valois Rivarola
- YAC - Yacuyubas

**2.8 Combat Unit Types.**



Most of the combat units are infantry or cavalry. There is no functional difference between cavalry and infantry. Historically, cavalry units rapidly became dismounted units because of the paucity of forage and water for the horses. Other

combat units include Artillery, Engineers and Armor (Bolivia only).

**2.9 Attack Factor.** The measure of a unit's ability to participate in offensive combat.

**2.10 Defense Factor.** The measure of the unit's ability to participate in defensive combat.

The Defense Factors of artillery units are enclosed in parentheses. This number is used only when artillery is defending and there are no other combat unit types (infantry, cavalry, engineer or armor) stacked with it.

If a combat unit has no middle number then the left number on its counter is both its Attack and Defense Factor.

**2.11 Movement Factor.** The measure of a unit's ability to move across the map. The movement factor is made of movement points (MPs).

**2.12 Steps.** The number of "Steps" a unit contains is the measure of its ability to absorb combat losses before being eliminated. Elimination in game turns does not mean that every man is dead, but only that the unit has ceased to function effectively. All infantry/cavalry and artillery units have two steps. The front or stronger side of the unit is what shows when ever the unit is first placed on the map. A unit on its front side is forced to take a loss due to combat or attrition the unit is flipped to its reduced side.

Engineer and armor units have only one step and are eliminated when forced to take losses.

**2.13 Non-Combat Units.** There are four types of non-combat units: leaders, general headquarters, trucks and supply units.

**2.14 Leaders.** Each leader counter contains the following information: Nationality, Name, Political Rating, Command Rating, and Movement Factor. Flipping the leader to his reverse side indicates he is out of General Supply (see 8.0). Leaders with a letter in place of a name are unnamed junior commanders.



This counter represents the Paraguayan leader General Estigarribia. He has a political rating of 3, a command rating of +2 and a movement factor of 12.

**2.15 Political Rating.** The measure a leader's power and influence within the political/military structure of his country. The greater the number, the more "pull" he has.

**2.16 Command Rating.** The measure of the leader's military acumen, not only as a tactical/operational commander but as an administrator and "inspirational" figure. Command ratings affect combat supply point generation, combat resolution and retreat/rout die rolls. This number can be positive, negative or zero.

**2.17 Leader Abbreviations.** The following leaders' names have been abbreviated:

**Bolivia**

- Marz - Marzana
- Peñar - Peñaranda

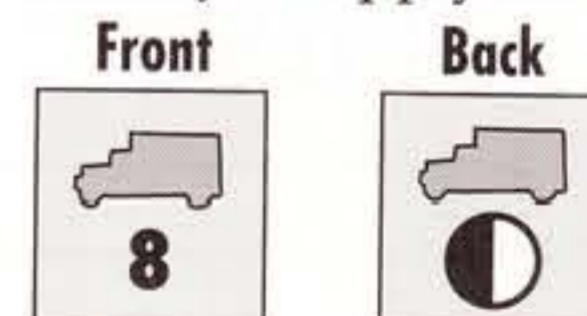
**Paraguay**

- Estig - Estigarribia
- Ferna - Fernandez
- Irraz - Irrazabal

**2.18 General Headquarters.** These units represent the logistical and control center of the two armies. Their use is explained in Rules Section 8.5. They have only a movement factor. The OOS on the reverse side indicates the GHQ is out of General Supply.

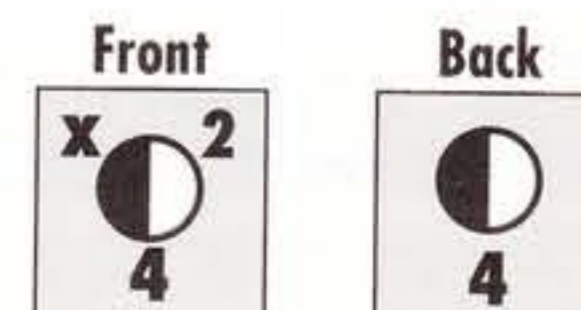


**2.19 Trucks.** All truck units have a movement factor of 8. The front side (with the MF showing) indicates that the truck may be used to transport combat units and combat supply points. The back side indicates that the unit is "attached" or dedicated to its army's supply network.



**Beginners Note.** Ignore all references to supply units and combat supply points until you're comfortable with all the other facets of the game system.

**2.20 Supply Units.** A supply unit is used to represent combat supply points (CSPs). All supply units have a movement factor of 4. The front side represents 1 CSP and the back side represents 2, 3, or 5 CSPs.

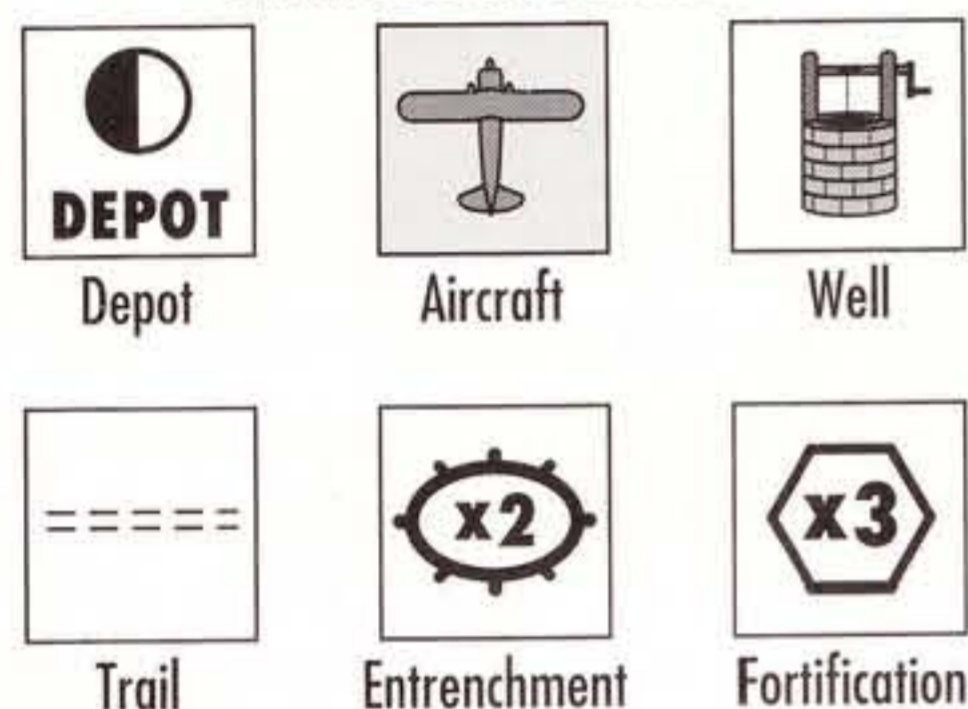




**2.21 Mechanized and Non-mechanized Units.** Armor and truck units are mechanized (mech); all other units are non-mechanized (non-mech). The distinction is important for movement purposes.

**2.22 Informational Markers.** The functions of these counters are explained in later sections of these rules.

#### Informational Markers



**2.23 Charts and Player Aids.** The following charts and tables are needed to play: Combat Results Table (CRT), Terrain Effects Chart (TEC), Artillery Barrage Table (optional), Supply Table, Retreat/Rout Table, Attrition Table and Loss Reference Chart. The boxes on the map are the Leader boxes, Available and Replaced Leader boxes, Reinforcement box, Deadpile box, Available Truck box, Air Marker box, and the Supply Radius box. The tracks on the map are the Turn Record Tracks (month and year), Replacement Points and Victory Point tracks.

## § 3.0 SET UP & HEX CONTROL

**3.1 Set Up.** Select the scenario to play and follow the instructions for unit placement on the map (see 17.0). All unused combat units are placed in the owning side's Reinforcement Box. All remaining truck units are placed in the Available Truck box. All unused leaders are placed in the Available Leader Box. Air markers are placed in their boxes. Replacement markers are placed in the zero boxes of their tracks. Victory Point markers are placed in the boxes designated by the scenario being played. Place the Month/Year markers on the correct boxes of the Game Turn Record Tracks.

**3.2 Hex Control.** Each hex is controlled by only one player at a time. The control of a hex switches instantly from one side to the other as soon as a combat unit from the enemy side enters it. Each scenario describes the beginning areas of hex control. Control is important for adjudicating victory.

## 4.0 THE TURN SEQUENCE

**4.1 In General.** Each game turn is divided into two player turns. Each player turn is subdivided into several phases. Each action taken by a player must be taken in the appropriate phase. Once a player finishes a phase, he may not go back to perform some forgotten action unless his opponent graciously permits it.

**4.2 Outline Sequence.** The complete Turn Sequence is given below in outline form. The rest of the rules are organized so as to explain things in the order they are encountered as you progress through the Turn Sequence.

### I. Weather & Truce Check

#### II. Paraguayan Player Turn

- A. Supply Phase
- B. New Unit Phase
- C. Movement Phase
- D. Bolivian Reaction Movement
- E. First Combat Phase
- F. Bolivian Reaction Combat
- G. Second Combat Phase
- H. Construction Phase
- I. Political Phase

#### III. Bolivian Player Turn

- A. Supply Phase
- B. New Unit Phase
- C. Movement Phase
- D. Paraguayan Reaction Movement
- E. First Combat Phase
- F. Paraguayan Reaction Combat
- G. Second Combat Phase
- H. Construction Phase
- I. Political Phase

### IV. Victory Check

**Beginners Note.** Ignore all references to Weather (Rainy Season), Truces, Leaders, Supply and Combat Supply, Armor, Aircraft, Artillery, Engineers and the Political Phase.

## 5.0 WEATHER

The January and February game turns are Rainy Season turns. December turns are possible Rainy Season turns. All other turns are considered to be dry weather. At the beginning of each December turn either player rolls one die and on a result of '1', '2' or '3' that turn is a Rainy Season turn. Flip the Month/Game Turn marker to its 'Rainy Season' side as a reminder. Rainy Season turns increase terrain costs for unit movement and for tracing Lines of Communication.

## 6.0 TRUCES

**6.1 In General.** At the beginning of each game turn either player rolls one die to see if the diplomatic community has arranged a truce. On a roll of a '1' there is the possibility of a truce and a second die is rolled. On a '1' or '2' a truce is in effect for this game turn.

**6.2 Refusing the Truce.** If a truce comes into effect, either player may refuse the truce by reducing his Victory Point total by 10 VPs and the turn is played normally. The player with the most VPs gets first opportunity to decline the truce. If both VP totals are equal, roll a die for right of first refusal.

**6.3 Effects of a Truce.** During a truce turn all game functions are performed normally except for the following:

- 1) neither side may initiate any combat;
- 2) units may not move into enemy zones of control (EZOCs, see 7.0) unless that hex is already friendly occupied (units already in EZOCs may move out of them);
- 3) units may not enter enemy-controlled settlement hexes; and
- 4) EZOCs have no supply effects (but the presence of enemy combat units still blocks supply).

**6.4 Duration of Truce.** In the Weather & Truce Check of subsequent turns either player rolls one die to see if the truce continues into that turn. On a '1' or '2' the truce continues unless one of the players refuses it (and pays the 10 VP cost). A truce can go on indefinitely as long as a '1' or '2' is rolled each turn and neither player refuses it.

**Design Note.** As both sides were totally dependent upon arms and financial support from the outside, any serious effort by the League of Nations or by neighboring American nations to end the conflict would likely have succeeded. The League was relatively unconcerned and the neighboring countries had no strong motive to stop the war. The truces that were arranged never developed into an end to the war largely due to the fear of both governments of presenting their own people with a defeat after their extensive propaganda campaigns had whipped the people to a frenzy. However, when one side had essentially what it wanted, and the other had lost too much to continue the fight, a peace



was possible. This is reflected in game terms with the possibility of a "truce" becoming a permanent ceasefire.

## § 7.0 ZONES OF CONTROL

**7.1 In General.** Most units exert "Zones of Control" (ZOCs) into the six surrounding hexes. There is no qualitative difference between a hex containing a ZOC exerted by one unit and a hex containing ZOCs exerted by more than one unit. The ZOCs of both sides may be exerted simultaneously into the same hex. Only infantry/cavalry units exert a ZOC. NO other unit type exerts a ZOC. ZOC-exerting units stacked with them would continue to do so.

**7.2 Limits.** ZOCs do not extend into Mountain hexes, or across river hexsides or international borders.

**7.3 Movement Effects.** During the Movement Phase, a unit may not enter an enemy ZOC (EZOC) unless a friendly leader is moving with the unit *or* a friendly leader is already in the EZOC hex. The unit must stop in the first hex entered which contains an EZOC.

Units in EZOCs may not perform Reaction Movement (10.10). A unit beginning its Movement Phase in an EZOC may move out of the EZOC, provided the first hex it enters contains no EZOC. A leader is not required for a unit to exit an EZOC. A unit that exits an EZOC could enter another EZOC in the same Movement Phase, provided a leader is present, but would have to stop there.

**Design Note.** The importance of leadership in getting troops into contact cannot be overstated. Move your leaders first!

**7.4 Combat Effects.** ZOCs have no effect on combat — units are not required to attack adjacent enemy units.

**7.5 Retreat/Rout Effects.** Retreating/routing combat units may not enter EZOCs. If a combat unit is unable to complete its retreat/rout due to EZOCs it ends its retreat/rout movement in the last available hex and takes a step loss or, if it only has one step, is eliminated.

Non-combat units forced to retreat through EZOCs are treated as follows: truck and supply units are eliminated; leaders are placed with nearest friendly unit, and GHQ's are removed from the map for 1 game turn.

**7.6 Advance After Combat Effects.** Advancing units ignore EZOCs when they enter the vacated enemy hex.

**7.7 Supply Effects.** Unnegated EZOCs block the following:

- the Line of Communication (LOC) between the GHQ and a supply source;
- the supply radius between a supplied leader/GHQ unit, depot or supply source hex and a unit receiving supply; and/or
- the path between a GHQ and a potentially "isolated" combat unit.

**7.8 Negating ZOCs.** For the purposes of supply and retreat effects, the presence of a friendly *combat* unit in a hex where an EZOC is being projected "negates" that EZOC even if that friendly combat unit type does not exert a ZOC itself (i.e. artillery, armor and engineers). EZOCs are never negated for movement.

## 8.0 SUPPLY

**8.1 In General.** There are two types of supply, General and Combat. General Supply represents the basic needs for survival and decent morale (food, water, clothing, mail, etc.). General Supply is not represented by any counters, but is measured abstractly by tracing lines of supply. General Supply is determined for each combat unit at the beginning of each player turn and is explained in sections 8.3-8.13. Combat Supply represents what is required over and above General Supply to carry out effective combat operations (ammunition, weapons, equipment, etc.). Combat Supply is represented by supply units on the map and is determined at the instant of combat (see sections 8.14-8.15 and 12.12).

**Design Note.** A detailed logistical simulation of the Chaco War would warrant a game all its own. On the other hand, the total abstraction of supply would leave the players without an inadequate simulation of the difficulties faced by their real life counterparts. The supply mechanics presented here are accurate in their effects, appropriate for the game's scale and (we hope) intuitive enough that the player's will not have to constantly refer to the rules after learning them.

**8.2 The Supply Table.** Each player consults this table during his supply phase to determine the availability of new combat supply, replacements and new trucks he


will receive that turn. The roll is modified by the length of his army's primary LOC (8.6), and by the quality and location of his Army Commander (15.1).

Roll one die and adjust the result according to the Supply Table modifiers. Cross-reference the modified result with the appropriate Line of Communications length column. The left number is the number of new Combat Supply Points (see 8.14). The right number is the number of new replacement points received (see 9.1). A 'T,' if present, indicates a new truck unit is received (see 9.6).

**8.3 General Supply.** Every combat unit must receive General Supply during the owning player's supply phase or it is subject to attrition (8.12). General Supply originates at a friendly Supply Source (8.4). The primary method of delivering it to combat units is along the Line Of Communications (8.6) the army's General Headquarters (8.5). The length of the Line of Communications determines the army's supply radius (8.7) for that turn. Combat units can draw General Supply from the GHQ, depots (8.8), a supply source, and/or any leader (8.9) within the supply radius of the GHQ, a depot, a supply source, or another leader already in supply.

A player checks his units for General Supply once in each of his player turns. Only combat units need General Supply. An attrition check is the only effect on combat units not in General Supply. Truck and supply units do not check for General Supply.

**Design Note.** Each army has only one LOC, which is the primary supply route for that army. The length of the LOC determines the supply radius for the entire army. Think of the LOC as the trunk of a tree and the GHQ, leaders, and depots as branches.

**8.4 Supply Sources.** Supply source hexes are printed on the map with a  symbol. All supply sources are on the map's edges except for two: the Paraguayan railhead (3447) and Villa Montes (2807). The railhead and all supply sources on the south map edge are Paraguayan; Villa Montes and all the sources on the north map edge are Bolivian. Only friendly-controlled supply source hexes that are not in enemy ZOCs may be used as supply sources. Supply source hexes are always in General Supply.

The railhead serves as a supply source

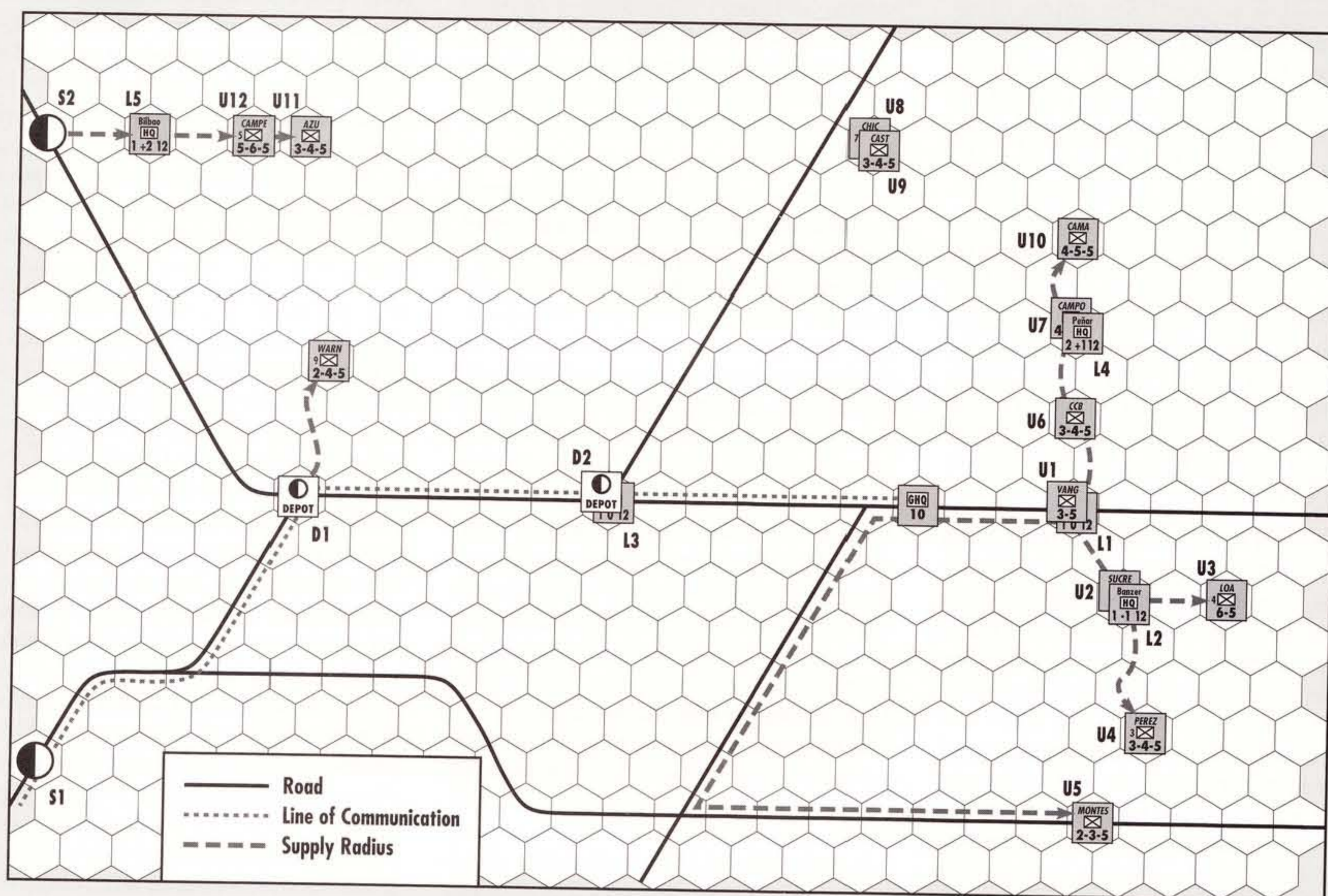


(and is in General Supply) only if the terminal hex and all the other railroad hexes are free of Bolivian combat units and their unnegated Zones of Control (ZOCs). Villa Montes serves as a supply source (and is in General Supply) only if

its hex and all the hexes adjacent to the river (Rio Cuevo) between Villa Montes and the north map edge are free of Paraguayan units and their unnegated ZOCs.

8.5 General Headquarters (GHQ). This

counter represents each army's administrative and logistics center. Its location on the map determines the Line of Communication for General Supply and for generating new Combat Supply Points, Replacements and truck units.



### SUPPLY EXAMPLE

#### Bolivian Supply Phase (all hexes are BUSH hexes)

**General Supply LOC Determination, Depot Placement and Supply Radius Determination.** The Bolivian player traces an LOC from a supply source hex (S1) to his GHQ unit. He places two depots on settlements in hexes D1 and D2. It is not a rainy season turn so the LOC length is 20. The Supply Table shows that the supply radius for an LOC of that length is 8. He places the supply radius marker with the 8 side showing in his Supply Radius Box.

**Check Combat Units & Leaders.** Since there is an LOC between the GHQ and the supply source, the GHQ counter is not flipped to its OOS side and it has a supply radius of 8 movement points. Combat unit 5 (U5) is within this radius via the road as is U1 and leader 1 (L1) who in turn has an 8 MP radius for being in General supply. This puts U2, U6, U7, L4 and L2 in supply. U10, U3 and U4 are within the supply radii of L2 and L4. U8 and U9 are not in supply even though there is a leader (L3) with an attached truck at D2. This is because the supply radius to them would have to combine Mech and Non-Mech movement rate which is not allowed. L5 is within the supply radius of S2 and he extends supply to U11 and U12.

**Attrition Check.** U8 and U9 must make attrition die rolls. Neither unit has water nor is isolated so the die roll for each is modified by -1.

**New Combat Supply Points.** The Bolivian player rolls one die and subtracts 1 from it for his army commander's command rating (which happens to be Peña who is stacked with the GHQ unit). The result is a 6, reduced to a 5. On the 0-20 column (the LOC length) on the Bolivian side of the Supply Table, a 5 results in 4 CSPs, 4 replacements, and 1 new truck. The replacements are added to the Bolivian Replacement Track for distribution in the New Units Phase. The truck is taken from the Available Truck Box and will be placed on S1. The 4 CSPs could be distributed among any of the leaders and the GHQ since all are in General supply

(Had this been a rainy season turn the LOC length would be 40 and the supply radius 4 MPs. This would mean that units 11, 8, 9, 10, 7, 4, and 5, and leader 4 would be out of general supply. L4 would be flipped to its OOS side and would have no supply radius.)



The GHQ has two sides: a General Supply side and an Out Of Supply side. If, in its Supply Phase, the GHQ cannot trace a valid LOC, the GHQ counter is flipped to its Out Of Supply side. If a player's GHQ is off the map or not able to trace an LOC he does not make a supply die roll and receives no new CSPs, trucks or replacements for that turn.

The GHQ does not count for stacking and has no combat strength or ZOC. If an enemy unit enters the hex occupied by the GHQ, the GHQ is removed from the map and is returned to the map on the following turn during the owning player's New Unit Phase (see 9.0). It may be placed on any hex not in an enemy ZOC to which a valid LOC can be traced. If, in his Supply Phase, a player cannot trace a LOC for his GHQ because of the presence of terrain, enemy units and their ZOCs, he may voluntarily remove the GHQ from the map and return it to play on the next turn as described above.

**8.6 Line Of Communication (LOC).** An army's LOC is a path of contiguous hexes traced from a supply source to the GHQ. Any one supply source can be used, and it need not be the same source every turn. The length of the LOC is measured using the LOC cost column on the TEC. The path may NOT include hexes occupied by enemy combat units or their unnegated ZOCs, swamp hexes (unless traversed by a road), or enemy-controlled settlement hexes. Enemy non-combat units and markers *do not* block an LOC. LOCs may be of any number of hexes in length — the only effects of a longer LOC is a shorter supply radius and fewer benefits from the supply table.

**8.7 The Supply Radius.** The length of the LOC determines that army's supply radius for that turn. Consult the Supply Table. If the turn is a Rainy Season, use the Rainy Season movement costs. A box labeled Maximum Supply Radius is located on the map, and each player has a supply radius counter with 8 on one side and 4 on the other. If the supply radius is 8, place the counter in the box with the "8" side showing. If the supply radius is 4, place the counter in the box with the "4" side showing. If the supply radius is 6, remove the marker from the box. Once determined, the supply radius remains the same until the player's next supply phase.

The supply radius is measured in Non-mech movement points (see 2.21 and 10.4). Any combat unit within the radius is in

General Supply and is eligible to receive combat supply. When measuring the radius, do not count the hex the unit is in, do not count the hex providing supply.

The radius cannot extend into a hex containing impassable terrain, enemy combat units or their unnegated ZOCs, or enemy-controlled settlements. Non-combat units DO NOT block supply radii.

If an LOC does not exist (either because the GHQ is off the map or is blocked from all supply sources) the Supply Radius is set to 4.

**8.8 Depots.** A depot represents a supply terminus along the LOC. Depots project a supply radius. A depot may be placed on any settlement along the LOC. There are four depots that are used by both sides. Any number of the depot markers can be used (from zero to four) and different settlements can be used for depot placement each turn so long as each settlement is on the LOC. After each player's supply phase, remove the depots from the map.

**8.9 Leaders.** Each leader who is in General Supply projects a supply radius. A leader is in General Supply if he is within the supply radius of the GHQ, a supply source, a depot, or another leader who is in turn in General Supply. A leader in General Supply may deliver General Supply to combat units or to other leaders within the supply radius of the providing leader. Note that it is possible to make a chain of leaders from the GHQ, a supply source or a depot. Each leader in the chain can provide General Supply to all combat units in his radius and to the next leader(s) in the chain.

**8.10 Drawing General Supply.** All friendly supply sources, a GHQ with a valid LOC, depots and leaders in General Supply may provide General Supply to any combat unit within its supply radius. Any combat units within the supply radius of any of these sources is in General Supply. All other combat units are out of general supply and must roll for attrition.

**8.11 Attached Trucks.** A player may attach a truck unit to any hex from which a supply radius is being projected. The attached truck allows the radius distance to be measured at *either* the Mech or non-Mech movement rates. When tracing a supply radius to a particular hex, Mech and non-Mech movement rates may *not* be mixed.

The truck unit may be attached at any time during the player's Supply Phase and is indicated by flipping the truck unit

to its "attached" side. Attached truck units may not move, even if the leader/GHQ unit to which they were attached moves. They must remain in that hex until the next friendly Supply Phase, at which point any attached truck not stacked with a leader, GHQ or supply source hex *must* be flipped back to its normal truck side. Those still stacked with a leader, GHQ or supply source may remain attached if the player wishes. Trucks may not be attached to a depot marker that is not stacked with a friendly leader.

Attached trucks are destroyed (placed in the Available Truck Box) if forced to retreat/rout or if enemy units enter their hex.

**8.12 Attrition.** If a combat unit fails to receive General Supply it must check for attrition. Only combat units are subject to attrition. Roll one die for *each* unsupplied unit. Modify the die roll if any of the conditions listed in 8.13 applies.

If the modified die result is greater than "1", there is no effect on the unit. On a result of '0' or '1' the unit loses one step (a unit with only one step remaining is eliminated). If the result is less than '0' (i.e. negative) the unit is eliminated regardless of the number of steps it has — it has surrendered and is worth extra victory points (see 16.2). It is possible for some units in a stack to surrender while others are simply reduced and/or unaffected.

If all the units in a hex are eliminated by attrition and a leader is left alone in the hex, displace him to the nearest friendly combat unit and roll for the loss of Victory Points (see 10.3 and 16.2)

There are no cumulative effects for being unsupplied on consecutive game turns. If a unit survives the attrition die-roll, even if it takes a step loss, it functions normally for the remainder of the turn.

**8.13 Attrition Modifiers.** The following three conditions modify the attrition die roll. The conditions are cumulative and may cancel each other out.

**Water.** If a unit has no water subtract 1 from the die roll. A unit has water if: 1) it is on a "wet" settlement or "well" hex; 2) it is adjacent to a river hexside; or; 3) the turn is a rainy season game turn.

**Isolation.** If a unit cannot trace a supply path of any length through hexes free of enemy units or unnegated EZOCs it is "isolated." Subtract 2 from the die roll.

**Air Supply.** The Bolivian player may expend 1 unused air marker to "drop"



supplies to *one* combat unit (not stack) rolling for attrition. The air marker is flipped to its "USED" side. The unit receiving air supply may be anywhere on the map. Add 1 to the die roll. Air supply does *not* put a unit in General supply. Only one air supply drop may be made per turn. There is no combat air supply and no Paraguayan air supply at all.

**8.14 Allocating Combat Supply Points (CSP).** CSPs received from the Supply Table die roll may be placed on any supply source, the GHQ or any leader. The hex of placement must be in General Supply at the moment of placement. CSPs are expended during the Combat Phases allowing combat units to fight at their full effectiveness (see 12.12). A player receives new CSPs once in his player turn, during his Supply Phase. CSPs may not be withheld from the map — any new CSPs which are not allocated are lost. CSPs may be allocated to depots only if a friendly leader is stacked there also.

**8.15 Supply Units.** CSPs are represented on the game map by Supply Units. The back of each supply unit represents 1 Combat Supply Point and the fronts show multiples of x2, x3, and x5 CSPs. The units/points may be combined or broken down as needed. When stacked with a leader they may be placed on that leader's Leader box to help reduce large stacks. There is no counter limitation for supply units and extras may be constructed as needed.

Supply units move at the non-Mech movement rates and may be carried by trucks (see 10.11). Supply units have no combat strength and do not project a ZOC. Supply units may be captured and used by the enemy (see 10.3 and 12.9).

## § 9.0 NEW UNITS

**9.1 Replacements.** Replacement points represent troops and equipment used to replenish combat units already in play. There are no counters representing the replacements themselves — keep track of the number of unused replacement points available using the Replacement Point Track on the map.

Replacement points are received from the Supply Table roll during each supply phase (see 8.2). Adjust the track marker to record the new replacement points. Unused replacement points may be accumulated from turn to turn but no more than 9 may be saved. Any points saved above that limit are lost.

**9.2 Eligible Units.** Only infantry and cavalry type units on their reduced sides may receive replacements. Units receiving replacements must be in General Supply at the instant of receipt. No unit in the dead pile may receive replacements.

**9.3 Effect of Replacements.** A unit receiving a replacement point is flipped from its reduced side to its full strength side and that player's replacement point total is reduced by one. There is no limit to the number of times a reduced unit may be returned to full strength.

**9.4 Reinforcements.** Reinforcements are new combat units which enter play during the course of the game. The number of new units each side receives is dependent on its reinforcement schedule. The particular counter(s) that are used are drawn randomly from the player's Reinforcement Pile. If the Reinforcement Pile is exhausted the player's Dead Pile becomes his Reinforcement Pile and a new Dead Pile is started. If both piles are empty the player receives no reinforcements that turn; they may not be accumulated. Reinforcements arrive at full strength and are placed on the map on any friendly-controlled supply source hex(es) within stacking limits.

### Reinforcement Schedule

#### Bolivia

September 1932: 2 units

All other turns: 3 units

#### Paraguay

Sept. 1932 to Jan. 1933: 3 units

All other turns: 2 units

**9.5 Call-Ups.** At the beginning of his Reinforcement Phase, a player may declare a "call-up" of reservists and pay an immediate VP cost. For each call-up, the player rolls one die and draws that many combat units from his reinforcement pile. These units are taken *in addition* to the units he would normally draw for that turn. The Bolivian player may make as many call-ups as he wishes during the game. The Paraguayan player may only make two. Each call-up costs that player 5 VP's.

**9.6 Trucks.** New truck units received from the Supply Table die roll are placed on the map like combat unit reinforcements. The number of truck unit counters available to each side is a design limitation. Additional truck counters may not be added to the counter mix if all a player's truck counters are in play. If all are in play and more are called for on the Supply Table, the new ones are ignored. Any time a

truck unit is destroyed, put it back in the Available Trucks box on the map.

## § 10.0 MOVEMENT

**10.1 In General.** A unit's movement factor (MF) represents its relative ability to move across the map. The MF is made up of movement points (MPs). A unit's MPs may not be saved from turn to turn, nor may they ever be transferred or loaned from one unit to another. Units that do move need not expend all their available MPs.

A unit moves from hex to hex in any direction of combination of directions during its move; no skipping of hexes is allowed. Finish moving one unit before starting the movement of another. Once a player has started moving another unit, he may not go back to adjust previously-moved units without his opponent's permission.

Each player moves his units during the Movement Phase of his own player turn and, under more restricted conditions, in the Reaction Movement Phase of his opponent's player turn (see 10.10). During his Movement Phase he may move all, some or none of his units.

See 11.4 for movement of stacks of units.

**10.2 Enemy Units.** A moving unit may not enter a hex containing an enemy combat unit, and must cease movement on entering a hex in an EZOC.

**10.3 Non-Combat Units.** Friendly non-combat units may not enter hexes occupied by enemy units. Friendly combat units may move through hexes occupied by enemy non-combat units. The effect on the enemy unit varies by unit type as follows:

**Leader:** move him to the nearest friendly (to the leader) combat unit. If he is a named leader, the moving player adds VPs equal to the leader's political rating times one die roll. This procedure is also used for leader displacement per sections 8.12 and 12.9.

**GHQ:** remove it from the map for one turn per 8.5.

**Truck:** it is eliminated; removed it from the map and place it in the Available Trucks box.

**Supply unit:** roll one die for *each* supply point in the hex. It is captured on a '1' or '2,' otherwise it is eliminated. Replace the captured CSP(s) with a supply unit of the correct color. It is treated as a friendly CSP from then on.



SUPPLY TABLE							
LOC Length Supply Radius	Paraguay			Bolivia			
	0-20 8	21-40 6	41+ 4	0-20 8	21-40 6	41+ 4	
-3	1/0	0/0	0/0	2/1	1/1	0/0	
-2	1/0	1/0	0/0	2/2	1/1	0/0	
-1	2/0	1/0	0/0	2/2	1/1	1/0	
0	2/1	1/0	1/0	3/2	2/2	1/0	
<b>DIE ROLL</b>	1	3/1	2/1	1/0	3/3	2/2	1/1
	2	3/1	2/1	1/0	3/3	3/2	1/1
	3	3/1	2/1	2/1	4/3	3/3	2/2
	4	4/1	3/1	2/1	4/3/T	3/3/T	2/2
	5	4/2/T	3/2/T	2/1	4/4/T	4/3/T	3/2/T
	6	4/2/T	3/2/T	2/1/T	5/4/T	5/4/T	3/3/T
	7	5/2/T	4/2/T	3/1/T	5/4/T	5/4/T	3/3/T
	8	5/2/T	4/2/T	3/1/T	5/4/T	5/4/T	4/3/T

**DIEROLL MODIFIERS:**  
 +/- Army Commander's  
 Command Rating  
 -1 if the Army Commander  
 is not stacked with his GHQ  
 -3 if the Army Commander  
 is cut off from his GHQ, i.e. if  
 a path of hexes of any length  
 cannot be traced from the  
 Army Commander's hex to  
 his GHQ without entering en-  
 tering unnegated EZOCs.

Results: Combat Supply Points/ Replacement Points/T (New Truck)

TERRAIN EFFECTS CHART				
Terrain Type	Movement Cost		LOC Cost	Combat Effect
	Non-Mech	Mech		
CLEAR	1 (2)	2 (P)	2 (4)	-1 from dieroll if 50% or more of attacker strength attacking from or into.
BUSH	2 (3)	P (P)	3 (6)	-1 from dieroll if at least 1 defender is in this terrain.
MARSH	3 (P)	P (P)	P	-1 from dieroll if at least 1 defender is in this terrain.
ROAD	1/2 (2)	1/3 (2)	1 (2)	NO EFFECT
HILL	2 (2)	3 (P)	3 (6)	-1 from dieroll if at least 1 defender is in this terrain.
MOUNTAIN	3 (3)	P (P)	P	-2 from dieroll if at least 1 defender is in this terrain.
RIVER HEXSIDE*	+2 (P)	+4 (P)	+6 (P)	Strength of all units attacking across is halved (rounded up). Prohibited on Rainy Season Turns
FERRY (2807/2707)	+1 (+2)	+2 (+4)	Same as River Hexside	
CLEARING HEXSIDE	Same as Clear		Same as clear	
SETTLEMENT	NO EFFECT		NO EFFECT except if overprinted with an Entrenchment or Fortification symbol	
RAILROAD	NO EFFECT		NO EFFECT	

\* An engineer unit that is adjacent to the hexside allows units to cross at the FERRY movement rate. Also, engineers allow units and LOC to cross rivers during a Rainy Season turn at the regular non-Rainy Season River hexside cost.

Non-Mechanized (Non-Mech) units are all infantry, cavalry, artillery, engineer, GHQ, leader and supply units. Mechanized (Mech) units are trucks and armor unit types.



COMBAT RESULTS TABLE							
ODDS RATIO							
Die Roll	1-2	1-1	2-1	3-1	4-1	5-1	6-1
-1	E/-	E/-	50R/-	25R/10	25R/25	25/25	25/25R
0	E/-	50R/-	50R/10	25R/25	25/25	25/25R	25/50R
1	50R/-	50R/10	25R/10	25/25	25/25R	25/25R	10/50R
2	50R/10	25R/10	25R/10	25/25	25/25R	25/50R	10/E
3	25R/10	25R/10	25/25	25/25	25/50R	10/50R	10/E
4	25R/25	25R/25	25/25	25/50R	10/50R	10/E	-/E
5	25R/25	25/25	25/25R	25/50R	10/E	10/E	-/E
6	25/25	25/25	25/25R	10/50R	0/E	-/E	-/E

Odds less than 1-2 are treated as 1-2 but all defender results are '-'

Odds greater than 6-1 are treated as 6-1

Modified die rolls less than -1 are treated as -1

Modified die rolls greater than 6 are treated as 6.

Results:

ATTACKER/DEFENDER #: Minimum Percentage Loss of printed strength points

E: Elimination

R: Retreat/Rout Check

-: No Effect

RETREAT/ROUT TABLE			
Dieroll	1	2	3-6
Bolivian	ROUT	ROUT	RETREAT
Paraguayan	ROUT	RETREAT	RETREAT

Dieroll Modifier: Command Rating of the leader in the stack with the greatest Political Rating

BARRAGE TABLE (Optional)				
Die Roll	Number of Artillery Units Barraging			
	1	2	3	4
1	1	1	2	2
2	0	1	1	1
3	0	0	1	1
4	0	0	1	1
5	0	0	0	1
6	0	0	0	0

Result: 0, 1 or 2 = number of steps from D  
Add 1 if the hex is entrenched or fortified.

ATTRITION TABLE
Attrition Dieroll Result:
2+ no effect
0 — 1: unit loses 1 step
< 0: unit is eliminated or, if isolated, surrenders
Attrition Dieroll Modifiers (cumulative):
No Water: -1
Isolated: -2
Air Supply: +1 (Bolivian only)

LOSS TABLE			
CF	10	25	50
1	1	1	1
2	1	1	1
3	1	1	2
4	1	1	2
5	1	2	3
6	1	2	3
7	1	2	4
8	1	2	4
9	1	3	5
10	1	3	5
11	2	3	6
12	2	3	6
13	2	4	7
14	2	4	7
15	2	4	8
16	2	4	8
17	2	5	9
18	2	5	9
19	2	5	10
20	2	5	10
21	3	6	11
22	3	6	11
23	3	6	12
24	3	6	12
25	3	7	13
26	3	7	13
27	3	7	14
28	3	7	14
29	3	8	15
30	4	8	15
31	4	8	16
32	4	8	16
33	4	9	17
34	4	9	17
35	4	9	18
36	4	9	18
37	4	10	19
38	4	10	19
39	4	10	20
40	4	10	20

CF = Combat Factors



**10.4 Terrain.** A unit expends one or more MPs to enter each hex. The terrain in each hex will affect the number of MPs expended. To enter a hex, a unit must have enough MPs remaining to pay the full MF cost for it — a unit is *not* guaranteed the ability to enter one hex per turn.

The MP cost and other movement effects of each terrain type are summarized on the Terrain Effects Chart, and some of the more important distinctions are given below.

**10.5 Rivers.** River hexsides cost non-Mech +2 MPs and Mech units +4 to cross in addition to the terrain cost of the hex being entered. An engineer adjacent to a river, on either its combat or building side (see 14.2), allows all friendly units to cross adjacent river hexsides at the Ferry crossing rate of +1 non-Mech and +2 Mech MP cost instead. The engineer may have moved and/or move later in the phase and still provide this river crossing benefit.

During a Rainy Season turn rivers may be crossed only with the assistance of an engineer but at the regular (+2/+4) MP costs. Exception: the Pilcomayo River may be crossed in the Rainy Season without an engineer, but only at the ferry through hexside 2807/2707.

**10.6 Clearings.** Clearings exist along hexsides rather than inside hexes. Units may move *along* clearings as though they were clear hexes. Each clearing hexside costs 1 MP. The clearing hexside may *not* be in an EZOC. A clearing hexside is in an EZOC when *either* of the two adjacent hexes is covered by an EZOC. A unit may not end its movement on a clearing hexside; it must end its movement in a hex. This means that a unit moving along a clearing hexside must have enough MPs remaining to enter one of the adjacent hexes before it can cease movement. Clearing hexsides can be treated as clear hexes for LOC paths, supply radii, isolation determination, and movement. Units may *not* use clearing hexsides for retreat/rout movement or advances after combat.

**10.7 Roads** allow units to ignore the MP costs of other terrain in the hex. Non-Mech units pay 1/2 (one half) MP per road hex entered. Mech units pay 1/3 (one third) MP per road hex entered. To use a road, a unit must move across the hexside crossed by the road; that is, it must travel along the road. Entering a road hex through a hexside not crossed by the road does not generate any move-

ment benefits - in such cases the unit pays regular terrain costs. A unit may combine road and off-road movement in any way during a Movement Phase.

**10.8 Rainy Season** turns increase the movement costs of some terrain and prohibits movement into some terrain. Rainy season terrain costs are shown in parentheses next to the regular terrain costs on the Terrain Effects Chart. If the rainy season cost is a "(P)" that terrain is prohibited during rainy season turns.

**10.9 Other Prohibitions.** Except when on roads Mechanized units may not enter Marsh or Mountain hexes nor may Artillery units enter Marsh hexes.

**10.10 Reaction Movement.** During the Reaction Movement Phase of the opponent's player turn, a player may move some, none or all of his units which meet the following conditions and restrictions (all other movement rules apply normally):

1) the unit may not begin its Reaction Movement Phase in an EZOC;

2) the unit must begin the Reaction Movement Phase stacked with a leader and must remain with that leader for the entire move (the leader may not move off after the unit stops);

3) the unit may move only 1/2 half its MF (round up)

4) a unit may not be picked up by a moving stack; and

5) a unit dropped off a moving stack must end its movement when dropped.

**10.11 Truck Transport.** Unattached truck units may be used during the Movement and Reaction Movement Phases to carry combat and supply units. Each truck may carry one combat unit, whether full strength or reduced, or two CSPs. Artillery can be transported by truck and counts as one combat unit. Bolivian armor units cannot be transported by truck. Any number of leaders and GHQ units may be transported by one truck in addition to any other cargo.

To carry a unit, the truck moves to the unit's hex and expends 2 MPs to pick up the unit. The truck and its cargo is then moved as one unit with the normal movement restrictions. The carried unit may be dropped off at any point during the truck's movement. Transported units are automatically dropped off when the truck unit ceases its movement. A truck unit may transport any number of units/points in one Movement Phase provided it does not exceed its MF. Transported units can-

not expend their own MPs in that Movement Phase.

Trucks used for transport in the Reaction Movement Phase may only carry units which meet the conditions listed in 10.10.

**10.12 Off-Map Movement.** Both sides may move units between certain hexes on their friendly map edges by using off-map movement via the off-map movement boxes printed along the edge of the map. Units move from the entrance/exit hexes onto the connected off-movement boxes and reenter the map at the entrance/exit hex at the other end. Enemy occupied entrance/exit hexes may not be used to reenter the map. Combat is not permitted between units in an entrance/exit hex and an adjacent off-map box. Friendly units may not use enemy off-map movement boxes. Units may end their movement on off-map boxes and may change their direction, if desired. Units that begin the Supply Phase on an off-map box are always considered to be in General Supply. There are no stacking restrictions for off-map movement boxes. Each off-map movement box indicates a movement cost of either 1 MP or 1 Turn. A unit wishing to moving along "1 MP" boxes simply pays the 1 MP cost for each box entered. Both regular and reaction movement may be used to move along "1 MP" boxes. For a unit to enter a "1 turn" box it must begin its Movement Phase in an adjacent entrance/exit hex and is then placed in the "1 turn" which completes its movement. A unit that begins its Movement Phase in a "1 turn" box may move normally starting with either connecting entrance/exit hex. Reaction movement may not be used to enter or exit "1 turn" boxes.

**10.13 Mounted Cavalry Units (Optional).** Players have the option of using cavalry units as true mounted cavalry instead of being dismounted as they were historically. When used as mounted cavalry they receive a movement bonus but lower their chances of survival. The option to use mounted cavalry must be declared at the beginning of the game and *must* be used for the duration of the game. All cavalry units, on both sides, must be treated as mounted if this option is in effect.

**Effects.** 1) All cavalry, on both sides, has a movement allowance of 8. 2) If an attacking force is composed of half or more cavalry units the combat die roll is decreased by 1. 3) Cavalry units *always*



roll for attrition, whether in General Supply or not. If they are not in General Supply their attrition die roll is modified by an extra -1.

## § 11.0 STACKING

**11.1 In General.** Stacking is the placing of more than one unit in a single hex. Each player has a limit on the number of units which may be in a hex. That limit must be met at the end of each player's Movement and Reaction Movement Phase, and at the end of each individual combat. If a hex is overstacked at any one of those times, the excess units (owner's choice) must be removed and put into the dead-pile. Any number of units may pass through a hex in a given turn.

**11.2 Stacking Limits.** The terrain in each hex determines the number of units that may stack in that hex. No more than 6 infantry/cavalry or artillery units may stack in a clear hex or in *any* hex containing an entrenchment or fortification. No more than 4 infantry/cavalry or artillery units may stack in any other type of hex. Reduced units count the same as full strength ones.

**11.3 Stacking Exceptions.** Leaders, GHQs, engineers, trucks and supply units are never counted for stacking.

**11.4 Movement Of Stacks.** During his Movement Phase, a player is never forced to move stacked units together - each may be moved individually. If units are to be moved together, they must start the Movement Phase already in the same hex. If units with different MFs are moving together in a stack, the entire stack uses the MF of the slowest unit. Slower units may drop off the stack to enable the faster units to continue moving.

If a stack of units is moving together and the player wants to split off one or more units, the stack may be temporarily stopped while that unit(s) is moved off. The parent stack may then finish its movement.

During the Reaction Movement Phase, unit movement and stacking is more restricted. (see 10.10).

## § 12.0 COMBAT

**12.1 In General.** Combat can occur at three times in a single player turn: in the First Combat Phase, in the Reaction Combat Phase, and in the Second Combat Phase. The procedure for resolving combat applies to all three of these combat

phases. During his Combat Phase(s) a player's units attack opposing units in adjacent hexes. The player making the attack is the attacker and the other player the defender, regardless of the overall situation. Combat is always voluntary. The attacker may make as many or as few attacks as he wishes, within the combat restrictions, and need not announce all attacks in advance. He may resolve them in any order he wishes. Each attack is resolved before the next is begun.

**12.2 Restrictions.** A combat unit may attack if it is stacked with or adjacent to a friendly leader at the instant the attack is declared. One leader allows any number of units to attack provided they are all stacked with or adjacent to that leader. No attacking unit may be involved in more than one attack and no enemy unit may be attacked more than once per combat phase. A leader may initiate any number of attacks. A unit's attack and defense strengths are indivisible and may not be divided among different battles, either on attack or defense. Once an attack is declared it must be executed regardless of what the final combat odds are.

**12.3 Multiple Hex/Unit Combat.** A stack of units defending must defend as a single unit. Attacking units stacked in one hex need not all attack, and if they do attack they need not attack the same defending hex. Attacking units in two or more hexes may attack together into a single hex provided they are stacked with or adjacent to a friendly leader or leaders. Attacking units in one or two or more hexes may attack together into two or more hexes, providing that *all* attacking units are adjacent to *all* defending units and there are enough attacking leaders present. Any number of leaders may participate in a single attack but only one can be used to modify the combat die roll. In an attack with defenders in more than one hex and with different terrain types in those hexes, the one type of terrain that most benefits the defender is used for combat calculations.

### 12.4 Combat Procedure.

**1. Determine Combat Strengths:** The attacking player allocates his combat supply to the attacking units, if/as he wishes, and totals the attack factors of the attacking units; supplied attackers attack at full strength and unsupplied attackers at half strength. The attacker's total is then modified for terrain effects. The attacker may allocate one of his unused air markers to

the combat. The defending player allocates his combat supply to the defending units, as he wishes and totals his defense strength; supplied at full and unsupplied at half. The defender's total is then modified for terrain effects. The defender may allocate one of his unused air markers to the combat.

**2. Compute Odds:** Divide the defender's total combat strength into the attacker's total combat strength, rounding any remainder in the defender's favor. The result is the odds ratio (odds).

**3. Resolve the Combat:** Find the column heading corresponding to the odds obtained in the previous step. Roll a six-sided die, modify the result for terrain effects, aircraft and the attacking leader's command rating. Cross-index the modified die roll result with the odds column and apply the combat result. At odds higher than 8:1, the 8:1 column is used. At odds below 1:2, the 1:2 column is used but the defender suffers no effect, only the attacker results are applied.

**12.5 Combat Results.** The result to the left of the slash applies to the attacker and that on the right to the defender. The results are applied to the appropriate force as a percentage of combat strength lost, retreats, or elimination. A "-" means the units of that side are not affected in any way. An "E" result means that all involved units of that side are "Eliminated" (12.9). A "10", "25" or "50" is the percentage of combat factors lost by the affected side. (12.6). An "R" result means that the affected side must check for retreat or rout in addition to any loss in combat strength (12.7-12.8). Apply the defender's result first.

**12.6 Percentage Losses.** When an attacking or defending force is required to lose a percentage of its combat strength the owning player satisfies this loss by either flipping units to their reduced sides or by eliminating them altogether. The amount of combat strength lost must be equal to or greater (any remainder is rounded up) than the percentage called for in the combat result. Losses are based on the total, unmodified combat factors of the involved units. Artillery units always use their parenthesized defense factors when used to take losses. Use the Loss Chart for a quick and easy determination of the numbers of factors lost.

Loss distribution is entirely at the owning player's discretion as long as the minimum loss requirement is met. When



a unit is flipped from its full strength to its reduced side, the combat factor difference between those sides is counted.

A force can be entirely eliminated by percentage losses even though the combat result was not an "E". When a percentage or "E" result causes BOTH the attacker and defender to be eliminated, the combat result is changed to "-/-" (No Effect) and there are no losses to either side.

**12.7 Retreat/Rout Check.** Combat units that receive a "R" combat result must check to see if they retreat or rout. The owning player rolls one die for each of affected units and consult the Retreat/Rout Table. If a leader is present in the hex the die roll is modified by the leader's command rating. If there is more than one leader in the hex the one with the highest political rating must be used for all retreat rolls in that hex. Each unit's retreat/rout check and movement is completed before the next unit is checked. Each player retreats/routs his own units.

#### 12.8 Retreat/Rout Movement.

**Retreating combat units** move 1 hex away from the enemy that caused the retreat result. The hex must not be in an unnegated EZOC and stacking limits may not be violated. A river hexside may not be crossed. Units unable to retreat take a step loss instead.

**Routing combat units** move their full movement allowance (just as though they were moving normally, pay all terrain costs) as far away from the enemy as possible and toward a friendly supply source. Rout movement should be through clear hexes and along roads when possible but always towards a supply source. No hex may be entered more than once. A routing unit stops, after it has moved at least one hex, anytime it enters a hex containing a friendly leader/GHQ unit or an entrenchment or fortification. A routing unit may not enter an enemy ZOC (even if negated) or cross a river. If forced to do either it takes a step loss instead. Units may rout into and through enemy-controlled hexes. Units may not retreat/rout onto any off-map movement boxes.

**Non-Combat Units.** Leader unit(s) in that hex must be placed with either the retreated or routed units, owning player's choice (note there is no VP loss from leader displacement — see 10.3). Unattached truck and supply units are placed with any *retreated* units. Trucks may only

retreat to hexes they could normally enter, otherwise they are eliminated. If all combat units are *routed*, any truck and supply units are eliminated. *Attached* truck units are always eliminated if forced to retreat/rout.

**12.9 Elimination.** On an "E" combat result all combat units and trucks, both attached and unattached, of the affected side are removed from the map. Combat units are placed in the deadpile box; trucks go into the Available Truck Box. Leaders are placed with the nearest friendly combat unit and that side loses victory points equal to the leader's political rating x 1 die roll, if he is a named leader (see 10.3). CSPs are subject to capture (see 10.3) only if the attacker chooses to advance after combat; otherwise they are eliminated.

**12.10 Further Combat.** If a unit retreats or routs into a hex in which other units are involved in a defense later in the phase, the retreated/routed unit does not contribute to the defense of the new hex. If the subsequent combat result yields an 'R' or 'E' result or if all the original defenders are lost due to a percent result, the previously retreated/routed units are automatically destroyed. Their destruction does not satisfy any of the new hex's combat result.

**12.11 Advance After Combat.** After any combat in which the defending hex(es) are emptied of defending combat units, all units, combat and non-combat, in the attacking hex(es) may move into the vacated hex. This one hex advance is not considered part of regular movement. Advancing units may ignore EZOCs. Advancing units may not enter prohibited terrain and must observe stacking limits. After any combat in which the attacking units have been eliminated or retreated and the defender's combat result was '10' or '-', any or all of the defending units may occupy the attackers vacated hexes. Advance after combat is optional for the victorious side but the option must be exercised immediately.

**Beginners Note.** Ignore Rule 12.12.

**12.12 Combat Supply.** CSPs may be expended during the Combat Phase to provide attackers and defenders with combat supply. Units without combat supply have their combat strengths halved (rounded up).

A unit is in combat supply when it is:

1) stacked with a CSP or 2) within the current supply radius (as described in 8.7) of a leader/GHQ unit or a supply source hex that is stacked with a CSP. The CSP must be expended (remove it from the map, it is available for re-use). Depots do not provide combat supply and should not even be on the map at this time.

One CSP will supply any number of units *for one combat*. The point is expended when the player allocates it to the combat. Providing combat supply is not mandatory; a player may withhold combat supply if he wishes.

The attacker always allocates his combat supply point first.

**12.13 Terrain Effects On Combat.** All effects are summarized on the Terrain Effects Chart (TEC). All effects are cumulative.

The attacker subtracts one from the combat die roll if at least one-half of his combat strength points are attacking from a Clear hex or across a Clearing hexside.

The attacker subtracts one from his combat die roll when attacking into a Bush, Hill or Clear hex.

The attacker subtracts two from his combat die roll when he attacks into a Mountain hex.

The combat strength of all units attacking across a River hexside is halved (rounded up). Attacks across rivers is prohibited on Rainy Season Turns.

Units defending in an entrenchment hex have their combat strengths doubled.

Units defending in a fortification hex have their combat strengths tripled.

**12.14 Leader Effects On Combat.** The command rating of the attacking leader modifies the combat die roll. Add the rating if it is positive; subtract it if it is negative. If more than one attacking leader is involved in the combat the one with the greatest political rating *must* be used unless the army commander is one of them and then his command rating *must* be used. Defending leaders never modify the combat die roll.

## 13.0 ARMOR, ARTILLERY & AIRCRAFT

**13.1 Bolivian Armor.** In any Bolivian attack in which 1) an armor unit participates and 2) the defenders receive an 'R' combat result *and* 3) more than one-half of the defender strength was in Clear terrain without a fortification or entrench-



ment, the Paraguayan player subtracts 1 from the Retreat/Rout die roll.

Armor units are mechanized. The armor units cannot be replaced — once lost, they are gone for good. There are no Paraguayan armor units.

**13.2 Artillery Barrage (Optional and not for Beginners).** In any combat phase both players may use their artillery to barrage adjacent enemy units. All barrages are resolved before any regular combats. All attacker barrages are resolved first and then all the defender's. The barraging player totals the number of eligible artillery units (reduced artillery units count as 1/2) that will barrage the same hex. He rolls one die and modifies the result. This result is cross referenced on the Artillery Barrage Table with the number of barraging units (drop fractions). The barrage result is given is steps lost by the defending units. The owner allocates the losses to his units. Barrage attacks require the presence of a leader as in regular combats. Each barraging artillery unit (full or reduced) expends one CSP. Artillery without combat supply cannot barrage. Artillery units that have barraged may participate in any following regular combats.

**13.3 Aircraft.** The air markers are an abstract representation of the tiny and variegated air forces available. The Bolivian side has three markers and the Paraguayan one. An air marker may be used once per game turn; when used flip it to its 'USED' side as a reminder. All air markers are returned to their front (unused) sides at the beginning of each new turn. Air markers may be used to provide ground support during any combat. After the combat odds have been determined but before the die is rolled one aircraft marker may be allocated to the combat, attacker first. An attacking air marker increases the combat die roll by 1 a defending air marker decreases it by 1.

The Bolivian player may use one air marker per turn to provide modify the Attrition die roll one combat unit (8.12).

## 14.0 ENGINEERS

**14.1 General.** In addition to functioning as regular combat units, engineers can construct entrenchments, fortifications, wells (Paraguay only) and trails. Engineers adjacent to rivers allow friendly units to cross those river hexsides at a reduced movement cost (see 10.5).

**14.2 Construction.** To build one of the

fixtures, an engineer unit must not move or participate in combat, either attacking or defending, during its entire player turn. At the beginning of its Movement Phase flip the unit to its 'building' side. If it is still on its 'building' side, in the Construction Phase of the same player turn, it completes the fixture and the unit is flipped back to its combat side. The owning player may move an engineer unit while it is on its 'building' side but it is flipped back to its combat side and no construction may be done by it that player turn. A 'building' engineer may participate in combat but it is flipped back to its combat side for doing so. If attacked during the enemy Reaction Combat Phase it must defend normally and may not complete a construction. Construction may take place in an EZOC.

**14.3 Entrenchments.** One entrenchment marker may be built in a hex containing any type of terrain except marsh. Entrenchments double (x2) the defense combat strengths of any units that occupy the hex. Entrenchments are permanent and may be used by either side.

**14.4 Fortifications.** An engineer builds a fortification by upgrading an existing entrenched hex. When the construction is completed flip the entrenchment marker to its fortification side. Fortifications triple (x3) the defense combat strengths of any units that the hex. Entrenchments and fortifications may not exist in the same hex. Fortifications are permanent and may be used by either side.

**14.5 Trails.** Engineers may build trails in bush, hills and mountain hexes. Place a trail marker in the engineer unit's hex when completed. A trail marker causes the hex to be treated as a Clear hex for all purposes. Trails can be used by either side. Trails must be maintained by engineers or they will revert back to their original terrain (remove the trail marker). One engineer unit can maintain trails in every adjacent hex including the one it occupies. (It helps if the Trail marker is placed with the arrow pointing to the engineer unit maintaining it.) It does not have to be on its 'building' side to do so and the maintaining unit does not have to be the one that built it. Trails do not have to be maintained. If a trail is in the same hex as an unnegated EZOC, it may be maintained only with the permission of the enemy player. If permission is denied the trail goes. Maintenance of trails is

determined at the conclusion of the Construction Phase.

**14.6 Wells.** Paraguayan engineers (only) may dig wells in any hex. In the Paraguayan player's Construction Phase he rolls one die for each 'building' engineer attempting to dig a well. On a result of '1', '2', or '3' the attempt is successful and a well marker is placed on the hex. The hex now serves as a water source and can be used by both sides. A well can be destroyed by moving a unit into (or through) the well hex and declaring it 'destroyed' removing the marker. Only two wells may be on the map at one time but the markers can be used repeatedly.

## 15.0 LEADERS

**15.1 In General.** Each side has 10 leader counters. Each side may have no more than five leader counters on the map at any time. At the beginning of each scenario one of these five leaders one is designated by the scenario instructions as being the army commander. The other four are his subordinates. All other leaders are placed in the Available Leader Box. To aid in remembering which leader is army commander, place the 'Army Cmndr' marker in his Leader Box printed on the map. The army commander can never be an unnamed leader.

In his Political Phase a player's army commander *or* one of his subordinates may be replaced. He may do one or the other, not both. If he is forced to make an army commander replacement attempt, he may not make any other attempts that Political Phase.

**15.2 Replacing the Army Commander.** An attempt to replace the army commander *must* be made when that leader's command rating was used in a combat, either attack or defense, in which his side suffers a "50" or "E" result (as a reminder, flip the Army Commander marker to its "?" side) and one of his subordinates has a greater political rating. If there are several with higher political rating the one with the highest is used (select randomly if there is a tie). This leader is known as the "challenging subordinate."

**15.3 Procedure.** The owning player rolls one die. Add the difference between the army commander's political rating and that of the challenging subordinate. Add '1' for each additional subordinate with a political rating greater than the army commander's. The player may also add



or subtract '1' to the die roll result, as he wishes, by expending 5 VPs for each '1' added or subtracted. A maximum of 15 VPs ('3' added or subtracted) may be expended per attempt.

**Results. 1)** If the modified die result is least two times greater than the army commander's political rating, he is replaced. Place his counter in the Replaced Leaders box and make the challenging subordinate the new army commander. Draw a new leader counter, at random, as a subordinate replacement for the new army commander.

**2)** If the result is greater than but less than two times the army commander's political rating, he survives the challenge and there is no other effect.

**3)** If the result is equal, place the challenging subordinate in the Replaced Leaders box and the owning player selects (his choice) a new leader from any of those in the Available Leaders box.

**4)** If the result is less than the army commander's political rating the challenging subordinate is put into the Replaced Leaders box and a new leader is drawn at random from the Available Leaders box.

**15.4 Voluntary Replacement of the Army Commander.** A player may voluntarily attempt to replace the army commander in any Political Phase (without condition) in the same manner described above except the player *may* add '1' for each subordinate with a higher political rating than the army commander's. This addition is optional and if used the player must indicate which subordinates are supporting with the +1.

**Results. 1)** If the result is at least two times greater than the army commander's political rating he is replaced as in result '1' of rule 15.3. If the player used subordinate support that subordinate becomes army commander (select one at random if several supported). Draw a replacement leader at random.

**2)** If the result is equal to or greater than the army commander's political rating but by less than two times, the replacement fails and that player's VP total is reduced by the army commander's political rating number plus one die roll.

**3)** If the result is less than the army commander's political rating, the replacement fails and the owning player's VP total is reduced by the army commander's political rating number plus 2 times one die roll.

**15.5 Replacing a Subordinate.** Players may not attempt to replace a subordinate whose political rating is greater than the army commander's. To replace any other subordinate the player rolls one die. He may add '1' to the result at a cost of 2 VPs, up to a maximum of 6 VPs.

**Results. 1)** If the result is greater than the leader's political rating he is placed in the Replaced Leader's box and a new leader is drawn at random from the Available Leader box.

**2)** If the die result is equal to or less than the leader's political rating the replacement attempt fails and the player's VP total is reduced by that leader's political rating number plus one die roll.

**15.6 New Leaders.** New leaders enter only when drawn as a result of a replacement of an existing leader. All new leaders are taken from the Available Leader box. When this box is exhausted all the leaders in the Replaced Leader box are put in the Available Leader box for later use if necessary. New leaders are placed on the map on any friendly supply source or unisolated friendly unit.

Unnamed leaders may only be subordinates. If one is drawn for the army commander position, draw another leader counter. Draw from the Replaced Leaders box for the army commander if there are only unnamed leaders in the Available Leader box.

## § 16.0 VICTORY

**16.1 In General.** Victory is determined by the number of Victory Points (VPs) the players have accumulated. A victory check is made at the end of the scenario being played and at the end of every truce turn. The player with the most VPs wins; the difference between the VP totals will determine the extent of the victory.

If at the end of a truce turn one player has 50+ VPs more than his opponent, he is automatically declared the winner and the game is over (a negotiated settlement has been reached).

**16.2 VP Schedule.** Players add and subtract Victory Points (VPs) throughout the game. VPs are recorded on each player's VP Track using the VP counters. VP's are added and subtracted (immediately) according to the following schedule:

- for each eliminated enemy combat unit: +1
- for each enemy combat unit surrendered due to isolation: +2 (*instead* of the '1' added for elimination, not in addition

to it)

- for each captured (not destroyed) enemy CSP: +1

- for each enemy-controlled settlement (except for those listed below) captured as a result of an advance after combat: Roll 1 die and add the result to the VP total. For Villa Montes, Charagua, Isla Poi and Nanawa roll 2 dice and add the result to the VP total.

- for each enemy-controlled settlement (except for those listed below) captured during a friendly movement phase: Roll 1 die, double it and add the result to the VP total. For Villa Montes, Charagua, Isla Poi and Nanawa roll 2 dice, double their sum and add the result to the VP total.

- for each friendly combat unit exited off the opponent's map edge: +1

- for each reinforcement "Call Up" made by the player: -5

- for each named Leader displacement (8.12, 10.3, 12.8 & 12.9): 1 die roll x the leader's political rating

- VPs expended to modify a leader replacement attempt die roll (Advanced Rule only).

- VPs lost for failed leader replacement attempts.

**16.3 Victory Levels.** The game is won by the player with the greater number of victory points. If both have the same number, flip a coin. To determine the degree of victory subtract the losing player's total from the winner's. If the difference is:

50 or more:	Decisive Victory
20 to 49:	Substantive Victory
1 to 19:	Marginal Victory

**16.4 Sudden Death.** The *instant* a player's VP total goes negative (less than '0'), he loses, the game ends and that player is expected to do the honorable thing.

**16.5 VP Option.** The variable VP's awarded for captured enemy settlements accurately reflects how politicians and media overstated and, at times, understated the significance of these settlements to national morale. Generals would abandon a worthless settlement only to learn that journalists were claiming that it was being "defended to the death." However, some players strongly feel that the VP's awarded for capturing enemy settlements is *too* variable. If you feel that the variable VP method is too much like "YATZEE in the jungle" use the following VP schedule for captured settlements:

- for each enemy controlled settlement (except for those listed below) captured as a result of an advance after combat: +3



VPs. For Villa Montes, Charagua, Isla Poi and Nanawa: +5 VPs.

for each enemy controlled settlement (except for those listed below) captured during a friendly movement phase: +6 VPs. For Villa Montes, Charagua, Isla Poi and Nanawa: +10 VPs.

## 17.0 SCENARIOS

**17.1 In General.** Each scenario starts begins the game at pivotal point in the war. The scenario instructions gives an situational briefing, the scenario length, starting and ending turns, unit selection and deployment instructions, starting Victory Point levels, starting supply radius number (for Bolivia only), army commander, and settlement control.

In each scenario trucks may be attached or not, as desired, and engineer units must begin the game on their combat sides. All leaders, combat units and trucks that are not initially deployed on the map are placed in their appropriate boxes. In all scenarios Bolivia starts with 3 air markers and Paraguay with 1 air marker.

**Design Note.** It is strongly recommended the Boqueron scenario be played first (several times) before proceeding to the others.

§ **17.2 Boqueron: The First Paraguayan Offensive.** In this scenario, the war has only recently begun. The initial fighting over the outpost at Lake Pitiantuta has resulted in the Bolivian seizure of Boqueron and several other Paraguayan outposts. Instead of seeking a negotiated settlement, the Paraguayans, under Felix Estigarribia, hope to take advantage of their ability to concentrate troops in the combat area more quickly than the Bolivians and seek a quick victory. The desperate Bolivian defense of Boqueron proved that this would not be just another Latin American opera bouffe war.

**Game Length:** 6 Turns (September 1932 — February 1933)

### **Bolivian Deployment:**

Boqueron (2440): Leader Marazana (Marz), 21st infantry and 1 CSP  
Acre (2241): Leader Peñaranda (Peñar), 14th and 16th infantry, 1 artillery unit and 1 CSP  
Saavedra (1741): Leader Peña (Peña), 5th cavalry, 1 truck and 3 CSPs  
Corrales (2635): 5th infantry (reduced)

Toledo (2836): 4th infantry (reduced)  
Camacho (3034): Leader A, 3rd infantry (reduced) and 2 CSPs

Muñoz (1537): Leader B, GHQ, 20th infantry, 1 artillery unit, 1 truck and 2 CSPs

Villa Montes (2807): Montes, Azu and 47th infantry units; 1 engineer and 1 artillery unit; 2 trucks and 2 CSPs

Starting Supply Radius: 6

Starting Victory Points: 20

Peña is the Army Commander

### **Paraguayan Deployment:**

Tte Montania (3038): Leader A, 5th infantry (reduced) and 1 CSP

Hex 2837: 7th infantry (reduced), entrenched.

Within one hex of Isla Poi (2741): GHQ, leaders Estigarribia (Estig), Franco (Franco) and Fernandez (Ferna); 1st, 2nd and 4th infantry; 2nd cavalry, 1 engineer, 2 artillery and 2 truck units; 6 CSPs

Nanawa (1845): Leader Irrazabal (Irraz), 13th infantry, 1 CSP

Hex 3351: 3rd and 6th infantry, 2 CSPs  
Starting Victory Points: 15

Estigarribia is the Army Commander

**Settlement Control:** All settlements south of the demarcation line are Paraguayan controlled except Toledo (2836) and Boqueron (2440).

**17.3 Alihuata: The First Bolivian Counteroffensive.** After the fall of Boqueron and the subsequent collapse of Bolivian morale, the Bolivians were eventually able to establish a defensive line at Kilometer 7 north of Saavedra and the fighting settled down to bloody trench warfare. With the arrival of General Hans Kundt as the new Bolivian army commander, along with massive Bolivian reinforcements, the Bolivians sought to break the stalemate with strong offensives both to recapture Alihuata and Acre in the north and to advance toward the River Paraguay by taking Nanawa in the east. The overextension and dispersion of Bolivian forces eventually opened the way for the devastating Paraguayan encirclement of the 4th and 5th Divisions at Campo Via.

**Game Length:** 14 Turns (March 1933 — April 1934)

**Bolivian Deployment:** Place the following infantry/cavalry units in a cup or other opaque container: 1x8-6-5, 1x6-5, 1x6-5-5, 1x5-6-5, 2x5-4-5, 2x4-5-5, 2x4-5, 2x3-4-5, 2x3-5, 1x2-4-5, 1x2-3-5. When an infantry/cavalry unit is called for randomly draw

one of the counters from the above group.

Alihuata (2141) and/or hex 2140: Leader Kundt, 6 infantry/cavalry units, 1 artillery and 1 CSP

Hex 2042: 1 infantry/cavalry unit (reduced)

Saavedra (1741): Leader Penaranda (Peñar), 1 infantry/cavalry unit, 1 engineer and 2 CSPs

Muñoz (1537): Leader Bilbao, GHQ, 1 infantry/cavalry unit, 1 truck and 4 CSPs

Hex 1844: Leader Peña, 2 infantry/cavalry units, 1 artillery and 1 CSP

Camacho (3034): Leader Banzer, 1 infantry/cavalry unit, 1 CSP

Corrales (2635): 1 infantry/cavalry unit (reduced)

El Cruce (2234): 1 infantry/cavalry (reduced)

Villa Montes (2807): 2 infantry/cavalry units, 3 trucks and 5 CSPs

2 Entrenchment markers may be placed on any friendly occupied hexes.

Starting Supply Radius: 6

Starting Victory Points: 20

Kundt is the Army Commander

**Paraguayan Deployment:** Place the following infantry/cavalry units in a cup or other opaque container: 1x10-7-6, 1x6-6, 1x6-4-6, 1x5-6, 3x5-4-6, 3x4-6, 2x4-3-6, 2x3-4-6. When an infantry/cavalry unit is called for randomly draw one of the counters from the above group.

Acre (2241): Leader Estigarribia (Estig), 4 infantry/cavalry units, 1 engineer, 1 artillery and 3 CSPs

Isla Poi (2741): GHQ, Leader A, 2 infantry/cavalry units, 2 truck and 4 CSPs

Nanawa (1845): Leader Irrazabal (Irraz), 2 infantry/cavalry units, 1 artillery and 2 CSPs

Hex 3447: 1 truck and 1 CSP

Gondra (2043) and/or hex 2142: Leader Franco, 4 infantry/cavalry units, 1 artillery, 1 engineer and 3 CSPs

Plantamillos (2236): Leader B and 1 infantry/cavalry unit

Toledo (2835): 1 infantry/cavalry unit (reduced)

2 Entrenchment markers may be placed on any friendly occupied hexes.

Starting Victory Points: 25

Estigarribia is the Army Commander

**Settlement Control:** The following are



Paraguayan controlled: Toledo (2836), Boqueron (2440), Tte Montania (3038), Mennonite Colonies (2839), Arce (2241), Gondra (2043), Nanawa (1845), Isla Poi (2741), Guarani (2543), Castanillo (3344). All others are Bolivian controlled.

**17.4 Ballivián: Paraguay's Second Offensive.** After the Campo Via disaster, the Bolivians continued to retreat westward, but thinning Paraguayan ranks and Bolivia's huge manpower advantage permitted them to reestablish a defensive line anchored on the fortified position of Ballivián. Both sides tried daring outflanking maneuvers to the north, but it was the brilliant Paraguayan seizure of the wells at Irendagüe which collapsed the Bolivian line yet again and forced another retreat.

**Game Length:** 9 Turns (May 1934 — February 1935)

**Bolivian Deployment:** Place the following infantry/cavalry units in a cup or other opaque container: 3x3-5, 6x3-4-5, 3x4-5, 2x4-5-5, 2x5-4-5. When an infantry/cavalry unit is called for randomly draw one of the counters from the above group. Within 1 hex of Ballivián (1823): Leader Toro, GHQ, 5 infantry/cavalry units, 1 artillery, 3 CSPs, and 1 truck  
Hex 2319: Leader Bilbao, 3 infantry/cavalry units and 1 CSP  
Irendagüe (4016): Leader Banzer, 2 infantry/cavalry units and 1 CSP  
Garapatal (3224): 1 infantry/cavalry unit, and 1 CSP  
Cañada Oruro (2817): Leader Peñaranda (Peñar), 2 infantry/cavalry units, 1 truck and 2 CSPs  
Palo Marcado (2711): 1 engineer and 1 truck  
27 Noviembre (4516): 1 infantry/cavalry unit (reduced) and 1 CSP  
Villa Montes (2807): Leader A, 2 infantry/cavalry units, 1 truck and 3 CSPs  
2 Entrenchment markers may be placed on any friendly occupied hexes.  
Starting Supply Radius: 6  
Starting Victory Points: 15  
Bilbao is the Army Commander

**Paraguayan Deployment:** Place the following infantry/cavalry units in a cup or other opaque container: 1x6-4-6, 1x5-6, 2x5-4-6, 3x4-6, 3x4-3-6, 3x3-4-6. When an infantry/cavalry

unit is called for randomly draw one of the counters from the above group.

Hexes 1825, 1924 and/or 1725: Leader Estigarribia (Estig), 3 infantry/cavalry units, 1 engineer, 1 artillery, 2 CSPs and 1 truck

Cañada Strongest (2322): Leader Franco, 3 infantry/cavalry units, 1 engineer, and 1 CSP

Cañada La Paz (3228): Leader Garay, 2 infantry/cavalry units, and 1 CSP

El Cruce (2234): Leader Fernandez (Ferna), 2 infantry/cavalry units and 2 CSPs

Camacho (3034): Leader Irrazabal (Irraz), 2 infantry/cavalry units, 1 engineer, 2 CSPs and 1 truck

Saavedra (1741): GHQ, 1 truck, 2 CSPs and 1 infantry/cavalry unit (reduced)

Isla Poi (2741): 3 CSPs and 1 truck

Hex 3447: 1 truck and 1 CSP

2 Entrenchment markers may be placed on any friendly occupied hexes.

Starting Victory Points: 30

Estigarribia is the Army Commander

**Settlement Control:** All settlements south of hexrow xx26 (inclusive) are Paraguayan controlled. All others are Bolivian controlled.

**17.5 Villa Montes: The Last Bolivian Counteroffensive.** With their backs to the Andes and their oilfields now in danger, the Bolivian High Command finally organized its only successful offensive of the war. The logistical tables were now reversed, with the Bolivians close to their railhead at Villazon and the Paraguayans forced to truck their supplies over hundreds of kilometers of dusty roads across the Chaco. The truce and eventual peace settlement finally stopped the Bolivian advance, but it is arguable that had they proceeded much further from their bases, they would have been subject to yet another stinging defeat at the hands of the exhausted but still dangerous Paraguayan Army.

**Game Length:** 5 Turns (February 1935 — June 1935)

**Bolivian Deployment:** Place the following infantry/cavalry units in a cup or other opaque container: 1x3-5, 8x3-4-5, 1x4-5, 1x5-6-5, 1x5-4-5, 1x6-5-5. When an infantry/cavalry unit is called for randomly draw one of the counters from the group listed above.

Camaitindi (3107): Leader A, leader Toro, 2 infantry/cavalry units, 2 CSPs

Within 1 hex of Villa Montes (2807): Leader Bilbao, 4 infantry/cavalry units, 2 artillery, 1 engineer, 1 truck, and 1 CSP

Cuevo (3703): Leader Peña, 3 infantry/cavalry units and 2 CSPs

Within 1 hex of Charagua (4404): Leader Peñaranda (Peñar), GHQ, 4 infantry/cavalry units, 1 artillery, 1 truck and 3 CSPs

2 Entrenchment markers may be placed on any friendly occupied hexes.

Starting Supply Radius: 8

Starting Victory Points: 15

Peñaranda is the Army Commander

**Paraguayan Deployment:** Place the following infantry/cavalry units in a cup or other opaque container: 2x5-4-6, 3x4-6, 3x4-3-6, 3x3-4-6. When an infantry/cavalry unit is called for randomly draw one of the counters from the above group.

Ibibobo (2810): Leader Estigarribia (Estig), GHQ, 3 infantry/cavalry units, 1 artillery, and 1 CSP

Caprienda (3210): Leader Garay, 2 infantry/cavalry

Boyuibe (3806): Leader Fernandez (Ferna), 1 infantry/cavalry unit and 1 CSP

San Francisco (4306): Leader Franco, 3 infantry/cavalry units and 1 CSP

El Cruce (4017): 1 CSP and 1 truck

Saavedra (1741): 1 truck, 2 CSPs, and 1 infantry/cavalry unit (reduced)

Acre (2241): Leader A and 1 truck

Isla Poi (2741): 1 truck and 1 infantry/cavalry unit (reduced)

Hex 3447: 1 truck and 2 CSPs

1 Entrenchment marker may be placed on any friendly-occupied hex

Starting Victory Points: 40

Estigarribia is the Army Commander

**Settlement Control:** Charagua (4404), Cuevo (3703), Camaitindi (3107), Villa Montes (2807), San Antonia (2707) and Yacuiba (2009) are Bolivian-controlled. All others are Paraguayan-controlled.

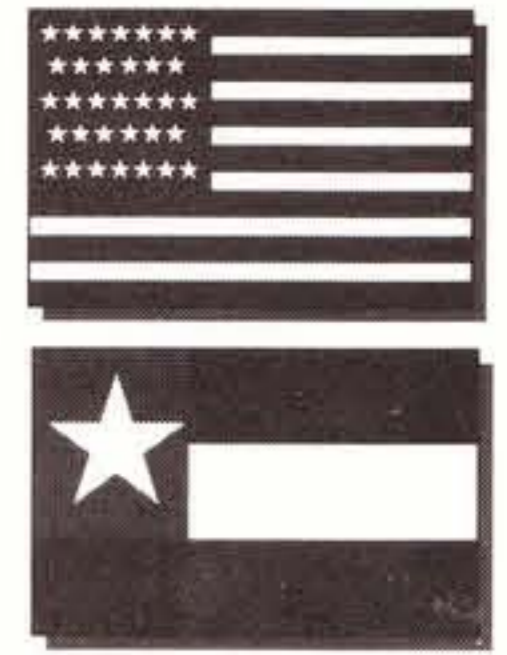
**17.6 Campaign Game.** To replay the entire war, set up the game per the Boqueron scenario. The game begins on the September 1932 turn and ends on June 1935 turn unless one player wins before then. All rules should be used when playing the campaign game. ★





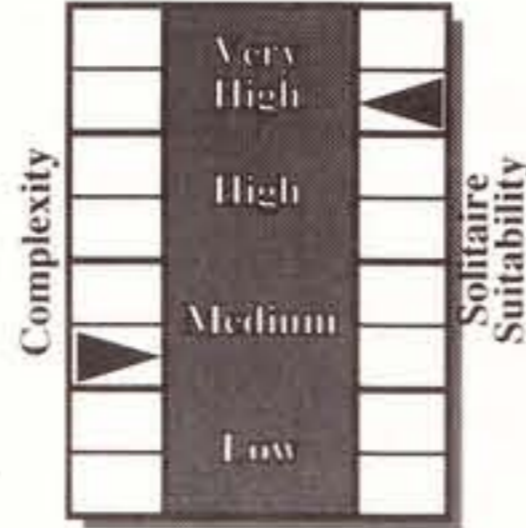
# CIVIL WAR CLASSICS, VOLUME I

## THE BATTLES OF PEA RIDGE & SHILOH



*CIVIL WAR CLASSICS, VOLUME I*, is a game and game system covering the battles of Pea Ridge in northwestern Arkansas and Shiloh in western Tennessee. Several scenarios allow players to experience many different aspects of the two battles. Short, introductory scenarios allow players to learn the game system with a minimum number of units and game turns. More complex scenarios allow players to explore portions of the battles and then move on to the battle scenarios. The battle scenario for *Pea Ridge* can be played in an evening, and *Shiloh* can be played over a long Saturday.

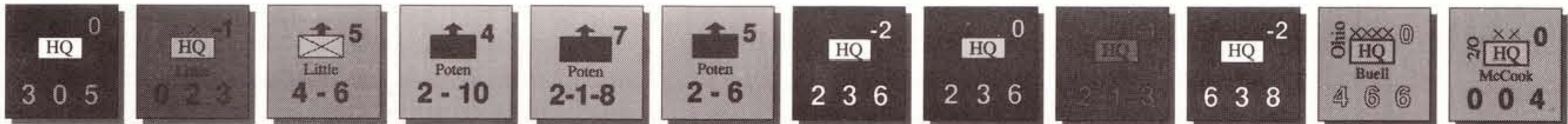
**PEA RIDGE**, Curtis vs. Van Dorn. On the 7th and 8th of March, 1862, in what has been called the "Gettysburg of the West," the Confederate forces of General Earl Van Dorn and the Union forces of General Samuel R. Curtis joined battle in northwestern Arkansas. It was the decisive battle of the trans-Mississippi region. The resulting Union victory assured that Missouri would stay in the Union and that the Union army would dominate the region for the remainder of the War.



**SHILOH**, Grant vs. Johnston, April 6th & 7th 1862. Union troops under Major General Ulysses S. Grant's overall command drove back a furious Confederate assault at Pittsburg Landing, where most of the April 6th fighting occurred. Confederate General Albert Sidney Johnston was killed in this battle and Union General William T. Sherman was slightly wounded. As a consequence of this Union victory, Confederate forces were compelled to evacuate much of Tennessee.

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- 1 Historical Booklet

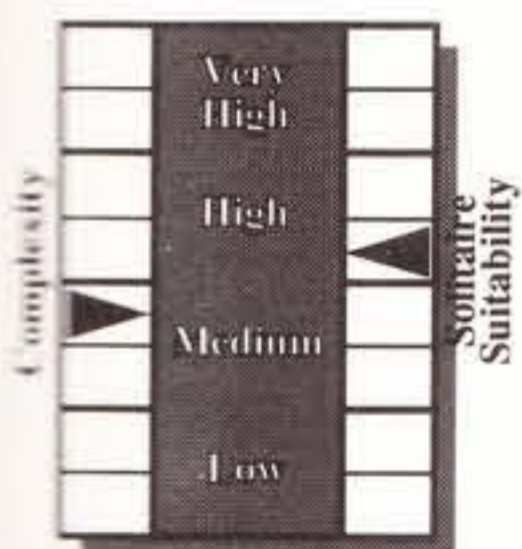
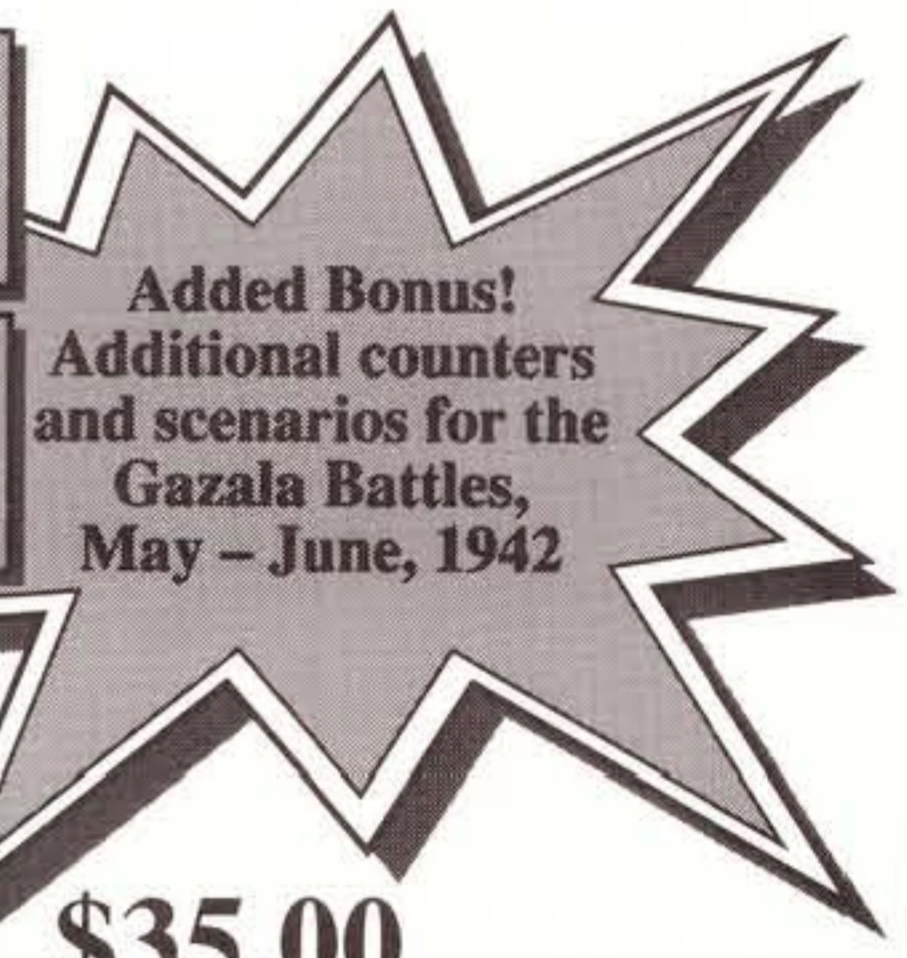
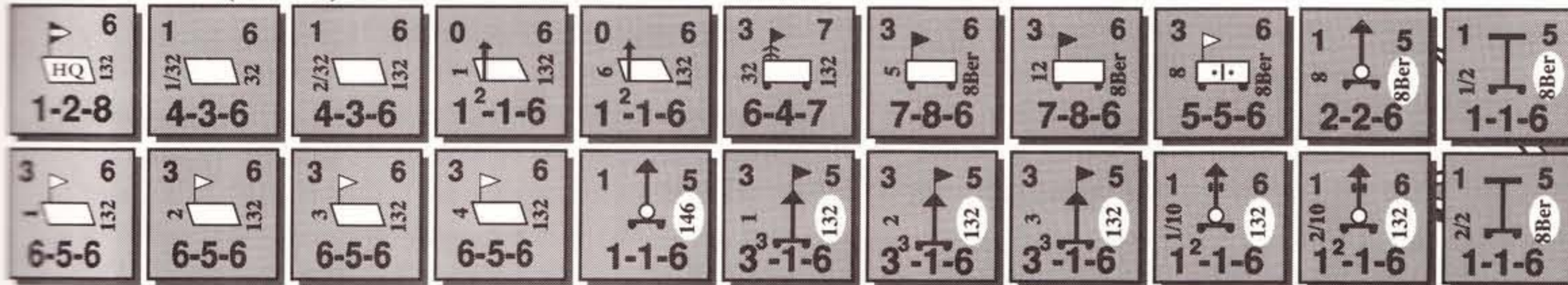
**Time Scale:** 45 & 60 minutes per game turn.  
**Map Scale:** 250 yards per hex.  
**Unit Scale:** Demi-brigades.  
**Players:** 1 to 4.

**Playing Time:**  
5 to 30 minutes for introductory scenarios.  
2 to 4 hours for Pea Ridge and  
8 to 10 hours for Shiloh.

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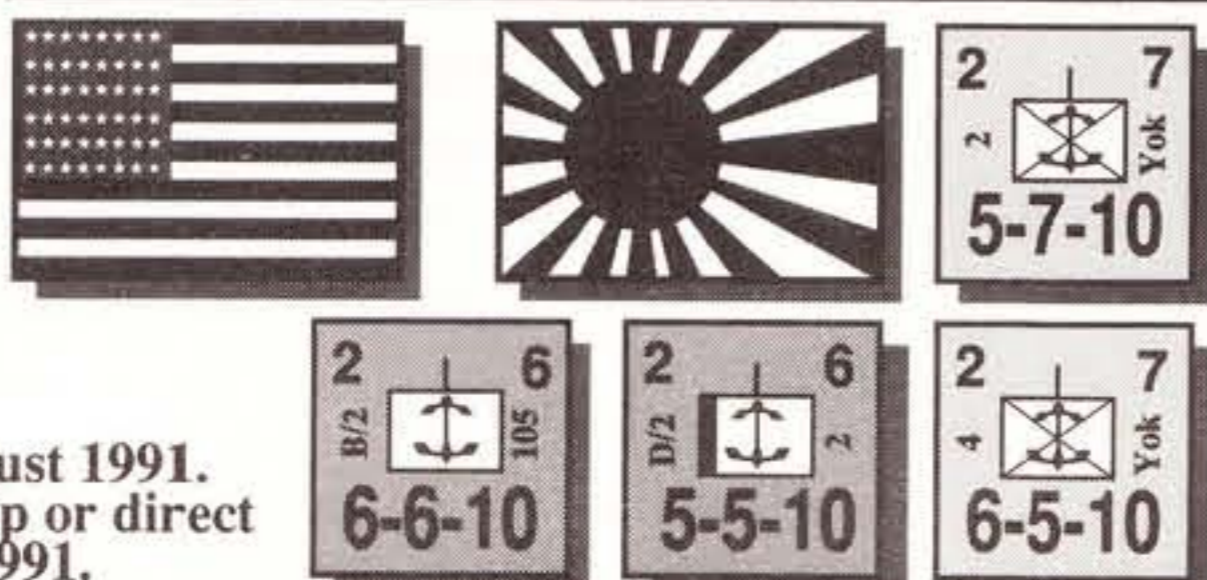
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(Continued from page 23)

sions, was to the north. On the Paraguayan side, Franco was at Toledo with II Corps (two divisions); Col. Nunez with I Corps was at Platanillos (three divisions); and III Corps, under Col. Nicolas Delgado, held Muñoz (four divisions).

The Paraguayans continued to advance, taking Camacho, La China, and Loa. By mid-February 1934, Bolivian strength had risen to over 15,000 and their retreat had begun to slow. *Toro* suggested having II Corps cover the entire front, while his I Corps made a magical sweeping movement over hundreds of kilometers of wild bush into the Paraguayan rear. The retreat continued.

At Cañada Tarija on 24 March, Lt. Col. *Angel Bavia*, along with a total of 1,500 troops belonging to the newly reformed 9th Division, were surrounded by about twice that number of Paraguayans. After several breakout attempts failed, a group of lieutenants raised the white flag and the Paraguayans poured in. In shame, *Bavia* attempted to commit suicide, but failed and was captured by the enemy, only to die on the operating table at Camacho. The Paraguayans took 1,200 prisoners and captured valuable maps of the rest of the Chaco (they had been advancing blind heretofore).

## Cañada Strongest

The Bolivian retreat finally came to a halt with the I Corps at Ballivián, the 8th Division 60 kilometers away at Cañada Esperanza, the 3rd 40 kilometers farther on at Cañada Strongest, and the reinforced 9th Division covering Carandaití and Picuiba. The Bolivian chief of operations, Col. *Angel Rodriguez*, came up with the idea of using the 8th Division as bait, while the 3rd from the north, and the 9th from the south (leaving only a small force to cover Carandaití and Picuiba) would execute a double envelopment behind any attacking Paraguayan force.

Obligingly, the Paraguayan I Corps (2nd and 7th Divisions, with 8th Division in reserve) attacked the Bolivian 8th Division at Cañada Esperanza. On 18 May, the Bolivian 9th Division, in two columns, swung north to cut the Paraguayan lines of communication, but the determined stand of a single Paraguayan battalion held up the attackers for five crucial days. By 21 May, the Paraguayan 7th Division had cut an escape trail and slipped away with all its men, guns and equipment.

In the north, *Bilbao Rioja* sent the 3rd Division on a similar maneuver behind the Paraguayan 2nd Division. Although the Bolivians succeeded in cutting off all the escape routes, the bulk of the Paraguayans then managed to fight their way out of the pocket, leaving over 500 dead and 1,400 prisoners to the Bolivians. While it was not the victory the Bolivians had hoped for, the Battle of Cañada Strongest did provide a considerable boost to their morale.

Some 18,000 Bolivian troops were now tied down defending Ballivián. *Salamanca* and *Rodriguez* pleaded with the High Command to abandon the town, and thereby shorten the line and free troops for offensive action, but *Toro*, jealous of any decrease in his personal power, fought against the idea. *Peñaranda*, much too weak to face down *Toro*, simply let matters rest. Repeating earlier mistakes, *Toro* and *Peñaranda* chose to identify the

defense of Ballivián with success in the war, exaggerating its importance out of all proportion to reality. Meanwhile, 26,000 Paraguayans continued to paralyze 35,000 Bolivians.

## A New Paraguayan Offensive

On 31 July 1934, *Estigarribia* again shifted his axis of advance, sending his 6th Division to overwhelm the small garrison at Picuiba. After a two-day fight there, the 6th then moved on to seize 27 Noviembre, Irindagüe, Villazón, and to attack a lone regiment at Algodonal. This drive turned into the first Paraguayan threat to Bolivia's oil-producing region.

Slow to respond at first, *Peñaranda* did set up a task force of about 7,000 men to drive north and cut off the 6th Division before the rest of Franco's corps could be brought to support it. Unfortunately, he chose *Toro*, now highly unpopular with his fellow officers, to command it. This move was actually meant as a demotion for *Toro*, depriving him of I Corps, but as it turned out, it allowed *Toro* one more opportunity to create a disaster for the Bolivian army.

By 5 September, *Toro* had cut the Carandaití-Picuiba road, and his task force had checked several Paraguayan breakout attempts. In his cables to *Peñaranda*, *Toro* was already describing his victory as "another Tannenberg." *Angel Rodriguez* subsequently phoned *Toro* and reminded him the seven prisoners he had taken thus far would have to be multiplied by 500 before *Toro* could claim a victory. The Paraguayan 6th Division, however, was soon able to cut a new trail and escape, leaving *Toro* with a total of only 41 prisoners, 7 guns, and 25 trucks.

To his credit, *Toro* did not let the Paraguayans escape completely, and on 23 September, managed to cut the road behind them once more. Bolivian airplanes tracked their movements and constantly bombed and strafed them from the skies. But the 6th escaped again, this time by concentrating its entire force against a single Bolivian regiment and breaking out to Villazón, where it joined the Reserve Division.

*Rodriguez* called on *Toro* to give up some of his troops for a push from Cañada Strongest against the Paraguayan center, but in his own inimitable style, *Toro* answered by demanding more troops for his command. He envisioned a double-envelopment of the Paraguayan II Corps between his force (now dubbed "The Cavalry Corps," although almost all its soldiers were on foot) and the Bolivian II Corps — with the key command role reserved for himself, of course.

*Toro* got his way, and on 6 November sent his columns out to cut off the Paraguayan 6th and Reserve Divisions. Despite heavy rains, aerial reconnaissance the next day showed *Toro's* troops to be near their objective. At that point, the Bolivian artillery opened up to cut off the Paraguayans' retreat, while *Regiment Ingavi* attacked to pin the trapped forces. But once again, this particular fox proved too much for the hounds, and the combined Paraguayan divisions threw themselves against a single company of *Regiment Cochabamba*, and successfully escaped past Picuiba, leaving some 400 prisoners in *Toro's* hands. On 20 November, the Bolivians again occupied Picuiba.



## Fiasco at El Carmen

Even while two of his divisions were being pursued and encircled in the north, Estigarribia was concentrating on a renewed offensive of his own in the center. It seemed the newly formed Bolivian *Reserve Corps*, under Lt. Col. Oscar Moscoso (of Pitiantuta fame) was sitting at El Carmen, totally unsupported, with huge gaps on both flanks. On 12 November fate intervened again, when a Paraguayan patrol ambushed a Bolivian staff car carrying plans for that corps' deployment and showing clearly all the gaps in the Bolivian lines. Estigarribia quickly made good use of the information. He designated the 1st Division to pin the Bolivians while 2nd Division pierced their line to the south, and the 7th and 8th completed the encirclement in the north.

Moscoso, just arrived at his new command, saw the danger, but unfortunately hesitated and asked for guidance from the High Command. His answer was long in coming and indecisive. Moscoso then took it on himself to strip rear echelon units to raise a force to break through the Paraguayan ring around his now trapped corps.

While he did manage to break the Paraguayan line, it proved too late to save the bulk of the troops inside. In the pocket water had run out almost immediately, and by 14 November, troops began surrendering in droves, or simply ran off, mad with thirst, to die in the bush. The Paraguayans found themselves faced with the problem of caring for thousands of thirst-crazed prisoners, and were forced to use 100 of their own precious trucks to transport and supply them.

All told, the Paraguayans rounded up 4,000 prisoners and counted some 2,000 Bolivian dead. Of the entire *Reserve Corps* (two divisions), only 2,000 ragged survivors made their way to Cañada Oruro.

The disaster at El Carmen finally forced the Bolivian High Command to abandon Ballivián, even over the still strenuous objections of Toro. In the face of heavy enemy pressure, the retreat to Ibibobo was ably conducted by Maj. German Busch. Of his officer corps, Salamanca said at that point, "I have given them everything they asked for. Only brains could I not give them."

On 27 November 1934, President Salamanca arrived in Villa Montes for what proved to be his last trip to the Chaco. After the fiasco at El Carmen, he had come to replace Peñaranda with his own chosen man, Gen. Jose L. Lanza. Lanza's name, synonymous with "Salamanca's lackey" to the other Bolivian officers, was like a red flag to Toro (no pun intended).

During the night, the house where Salamanca slept was surrounded by troops, and Peñaranda arrived in the morning to place Lanza, Salamanca, and the members of their staff under arrest. Vice President Tejada Sorzano, with whom the conspirators apparently had previous liaison, was named the new president, in mockery of constitutional procedure. The officers forced Salamanca to sign a formal letter of resignation, threatening to make an immediate peace, no matter how unfavorable, if he refused to step down. (The officers feared an outright *coup d'état* would ruin a loan of £400,000 about to be granted in London.) Salamanca later sarcastically congratulated Peñaranda on the only successful military operation he had thus far concluded.

## Decision at Picuiba

By December 1934, even the Argentine press was talking about the exposed position of the *Cavalry Corps* at Picuiba. Toro, true to form, claimed from his command post at Carandaití, 160 kilometers to the rear, he was in a position to fall on the exposed Paraguayan right, and then drive to the Pilcomayo.

On 6 December, Bolivian aerial reconnaissance spotted a new trail being cut in a northwest direction into the rear of the *Cavalry Corps* (now composed of the 1st and 2nd *Cavalry Divisions* and the 7th *Infantry Division*). Toro remained calm.

That night and the next day, the Paraguayan 8th Division, under Col. Manuel Garay, rushed 62 kilometers over the new trail and seized the vital wells at Irindagüe, behind the *Cavalry Corps*. Garay had fortunately postponed the move to await the arrival of water trucks, thus avoiding an accidental collision with the Bolivian 7th *Division*, which had unknowingly crossed his path.

On 7 December, the rest of the Paraguayan forces opened their attack. Toro was still unworried and sure the Paraguayan force at Irindagüe could be no more than a mounted raiding party, and would be easily dealt with. He ordered Irindagüe be retaken immediately, but the acting commanders of 1st and 2nd *Cavalry Divisions*, Maj. Rodolfo Flores and Felix Tabera, respectively (the actual commanders were both absent due to illness), knew there were no reserves of water for their troops. If the initial attempt to retake Irindagüe failed, their men would be trapped without water between two enemy forces.

At 0600 hours on 8 December, the *Cavalry Corps* began a painful retreat to 27 Noviembre. Tabera, taking operational command of the *Corps*, tried to keep the



Estigarribia and Peñaranda chat shortly after the armistice is signed.



movement orderly, but units soon became intermingled on the narrow trail. A covering screen of infantry held off the Paraguayan pursuit, then slowly pulled back, burning Picuiba as they withdrew.

In the intense heat, with the water in the men's canteens already gone, the Bolivian troopers began to discard their weapons and fall down in the bush, some never to rise again. The retreat continued in the relative cool of the night, but the next morning a plane dropped a furious message from *Toro*. He demanded the retreat be stopped and Irindagüe retaken. *Tabera* ignored the message, and by nightfall on 9 December the bulk of the *Corps* reached the water trucks waiting for them at 27 Noviembre. As the mobs of soldiers rushed the trucks and fought each other to be first to drink, almost as a touch of irony, the skies opened and steady rain began to fall.

Of the 5,300 men on the lists at the start of the retreat, 1,600 died from thirst or suicide en route, while many of the survivors were so weak they had to be hospitalized. Meanwhile, *Toro*, still in Carandaití, ranted the *Corps* should turn around and recapture Picuiba. He was ignored.

Unlike the other disasters of the war, Picuiba left a large number of survivors. Their stories of the horror of the retreat and of *Toro's* incompetence soon spread throughout the army and people of Bolivia. Pressure within the officer corps for *Toro's* removal became overwhelming, but *Peñaranda* managed a compromise by naming him the new chief of staff of the army.

Almost as an anticlimax, the Paraguayan III Corps discovered an 8 kilometer gap between the Bolivian 8th and 9th Divisions at Ibibobo and poured through, pinning part of the 9th against the banks of the rain-swollen Pilcomayo. *Capt. Ernesto Wende* unsuccessfully attempted to evacuate his troops across the river, losing 200 in the turbulent waters. *Wende* then turned and attacked northward, leading 280 men to safety, but the remainder of the troops in the pocket, over 1,200 in all, surrendered to the victorious Paraguayans.

Keeping up the pressure, Paraguayan I Corps then surrounded *Regiment Parapetí* at Capirenda. About half of that unit escaped, leaving the rest dead or captured.

In the north, the Bolivians continued to retreat, losing more troops drowned crossing the Parapetí. The Paraguayans had now reached the limits of their most expansive territorial claims in the Chaco.

## Villa Montes and the End

With the Bolivian army defeated and in retreat all along the front, their High Command once again turned to *Bilbao Rioja* to save the situation. He was placed in charge of the defense of the key supply center of Villa Montes, and quickly set about constructing defenses in depth. He swept the town clean of prostitutes and assorted other hangers-on and turned the place into a real fortress.

The 4th Division deployed south of the Pilcomayo to threaten the Paraguayan left and harass any enemy supply columns attempting to use the river road. The 8th Division and 1st Cavalry occupied the forward line with the 1st and 3rd Divisions in reserve, for a total of 17,000, facing only 15,000 Paraguayans. The Paraguayan attack

came on 11 February 1935, and continued for over a week without success, leaving only piles of dead on the barbed wire in front of Villa Montes.

Failing there, Estigarribia tried to seize the oil fields at Camiri, in the Bolivian II Corps area. Attacking into the foothills of the Andes (terrain on which the Bolivians finally felt at home), and operating at the end of a long supply line, the exhausted Paraguayans made only limited gains.

Estigarribia then shifted to the Parapetí region. Aided by locals who were ethnically closer to the Paraguayans than to the Bolivians, the II Corps crossed the river with its 2nd Division. By 17 April 1935, those Paraguayans, reinforced by 8th Division, occupied Charagua. This proved the high water mark of the advance.

The Bolivian army now numbered 45,000, compared to 30,000 Paraguayans who were hundreds of kilometers from their supply heads. A determined counteroffensive by the Bolivian Cavalry and II Corps easily pierced the Paraguayan line, trapping 8th Division in Charagua. But *Toro* predictably called off two regiments from the encircling force, thus allowing the 8th to break out to the Parapetí, leaving only 475 prisoners to the Bolivians. The Paraguayan 2nd Division also easily escaped envelopment and recrossed the river.

Maintaining the pressure, the Bolivians crossed the Parapetí and took Sante Fe. This new Bolivian offensive had covered 100 kilometers in 40 days, but failed to destroy any major Paraguayan units.

Finally, Gen. Rodriguez, the Argentine Minister of War, informed President Ayala the time had come to make peace. The Paraguayans had conquered more than they had ever hoped to obtain, but now faced a Bolivian army nearly twice as strong as their own. While the Bolivians could and did rebuild their army several times, if the Paraguayans were to suffer a single serious defeat, nothing would stop their enemy from driving straight to Asunción.

As a final slap to Bolivian pride, on 5 June, *Regiment Florida* of the 6th Division was surrounded near Ingavi. While most of the troops broke out, the Paraguayans netted a further 370 prisoners.

On 12 June 1935, an armistice was signed. At 1130 hours on 14 June, one half hour before the cease fire was to take effect, the Bolivian troops were ordered to open fire with every weapon they had, as a final show of force. Fearing a surprise offensive, the Paraguayans replied in kind. Large numbers of casualties were caused by this last stupidity in a stupid war, but no one seems to have bothered to count exactly how many.

In the course of the war 50,000 Bolivians had died, another 20,000 were in Paraguayan prison camps, 10,000 had deserted to Argentina, and thousands more were permanently disabled. Paraguay suffered only slightly less, losing 40,000 dead and 2,500 prisoners.

When the final treaty was signed on 21 July 1938, Bolivia accepted the fact she would never have access to the Paraguay River, and gave up virtually all of the Chaco. Paraguay, despite a peace supposedly "without victors or vanquished," had really dictated the peace terms. The word "senseless" has been applied to many conflicts, but the bloody Chaco War certainly deserves it more than most. ☼



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## COMMANDER'S CALL CONTINUED FROM PAGE 5

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has been included: forest, roads, autobahns, canals, rivers, towns, cities, fortifications, major airfields, OKW headquarters at Zossen, and the mammoth German supply depot at Juterborg. The combat system is bloody (step-reduction and/or retreats), with "intensive" attacks (losses x2), artillery points, FLAK, etc.

And, of course, no *Berlin '45* game could be complete without a "Hitler Fate Table." Anytime a Soviet or Western Allied unit enters the central Berlin hex for the first time, a die is rolled. For instance, say the U.S. manages to drop the *82nd* and *101st Airborne Divisions* on the 12-13 April turn and gain possession of Hitler's bunker. The die roll breakouts then would look like this: 1-2 and Hitler escapes (roll again: 1-3 he goes to Zossen; 4-6 he flies to Berchtesgaden, where he directs the war until early May); 3-4 and he's captured; 5 and he's KIA; 6 and he commits suicide. Once Hitler is killed or captured, the German armed forces rapidly disintegrate. [Ed's Note: We should have *B'45* for you, in ziplock, with all kinds of historical, semi-historical and what-if scenarios, during the first half of '92.]

### Others

Let's see, Paul Dangel is now developing *Tet '68*. *Corregidor '45* is at last in the office, where it is awaiting final development, along with *Blood & Iron*. The *WWI Quad* is undergoing development in Germany, by a team led by Ulrich Blennemann; that project should be back in my hands by year's end. Joe Miranda continues to plug away at his myriad projects. *Port Arthur* is in final development. *Perfidious Albion* just arrived at the office, and L. Dean Webb made the 1 June turn-in date for *Red Star Falling*. Chris and I are continuing to wrestle, as time permits, with *Gettysburg*, *Mason-Dixon*, *Poland Is Not Lost* and *Smithereens*. Forward.

### Feedback Loop Analysis: Issue 10

The winners in the new-game-proposals race were: *Nippon, Nukes & Nationalists* — 6.81; *Perfidious Albion* — 6.39; and *S.S. Panzer!* — 6.23.

The also-rans were: *Their Final Hour* — 5.93; *Ogre of Corsica* — 5.35; *Yesterday the World* — 4.21; *Battle of Hohenfriedberg* — 4.41; *Russian Civil War* — 5.21; *Operation Crossbow* — 4.50; *Southern Cross* — 5.23; *Kanal* — 5.47; *Panzer Allee* — 6.03.

The average survey respondent spends about half (5.81) of his gaming time soli-

taire. Interestingly, 9.23% claim to spend less than 10% of their time at solitaire, while 33.84% say that's how they do more than 90% of their gaming. As to preference, 9% say they'd like to increase the proportion of time they spend solitaire-gaming, while 42% want to decrease it, and 49% are happy to keep their present levels.

On the *Stones River into Gettysburg* plebiscite, 52% heartily approved of that move; 14% disapproved, and 34% had no opinion or didn't care.

Your second thoughts on issue 8's *Jutland* came out like this (first time survey / second thoughts survey): overall-6.74/6.32; map-3.97/4.53; counters-5.20/6.42 (!); rules-6.41/6.63. You estimated *Jutland's* complexity to be 4.44, and have played it to completion an average of 2.33 times, in slightly under 3 hours each time. Only 1% believe the Germans are heavy favorites to win; while 32% claim they're slightly favored. Evenly matched was the verdict of 28%; with 46% saying the Brits are slight favorites, and 3% claiming they're heavily favored to win. *Jutland*, said 68% of you, was a good game choice for the magazine.

You voted as follows about the contents of issue no. 10: *Alexandros* game overall — 7.38; map — 6.75; counters — 8.15 (!); rules — 7.07; *Alexandros* article — 7.70; *NNN* variant — 6.25; *Commander's Call* — 6.86; *Short Rounds* — 6.46; *D-Elim* — 6.72; *Cover* — 6.92; *Marching Men* — 6.98; *Civil War in the Indian Territories* — 7.16; no 10 overall — 7.40. Forty-two percent said 10 was better than 9; 13% said 10 was worse than 9; 38% said the two were of equal worth, and 7% had no opinion.

### The Feedback Loop

Please use the enclosed postcard (you'll have to put a 19¢ stamp on it, thanks) to vote on the following new game proposals and answer the survey questions.

Vote by placing one whole number (only!) in the corresponding space on the postcard. If it's an opinion question, "0" means "I wasn't motivated enough to read this article or play this game;" while in the case of new game proposals, "0" means "Don't publish this game under any circumstances!" From there, each higher number indicates a slightly more favorable opinion, until you get to "9," which means "This game/article is top-notch;" or "Please publish this new game immediately!" In yes/no questions, "1" means "yes," and "2" means "no," and "0" means "no opinion," or "not applicable."

Next issue we'll have the feedback report from issue 11. To be counted in the voting, your card must reach us by 15 September.

## New Game Proposals

**1. Sailors Take Warning: Red Sky Morning II.** When the Japanese - American naval war erupted in 1997, India decided to act. Her long standing and deep economic ties with Japan made the American blockade unbearable. Boasting the strongest navy in the Indian Ocean (given that most of the American Fifth Fleet had been recalled back into the Seventh Fleet), New Delhi felt confident her entry as Tokyo's ally would bring the war to a swift and victorious end for the two regional Asian powers.

On paper it seemed simple: the primary job of the Indian Navy would be convoy escort. But Admiral Irajahni was not prepared for the realities that awaited him and his forces in "their sea" and along the Straits of Malacca. Indonesian torpedo boats swarmed his first convoy from every direction. He knew none of those "mosquitoes" would get away, but five tankers in his formations were suddenly aflame and sinking. The war had just escalated to a new and bloodier level.

A further development of *Red Sky Morning*, *Sailors Take Warning* looks into the critical Indian Ocean theater of operations during that same future war. Special rules will be added to the basic *RSM* system to cover: *Sea Wolf*-class submarines, *Arleigh Burke*-class destroyers, *YF-22 Lightning* aircraft, *B-1s*, and coastal defense forces made up of ships below frigate-class. Several scenarios and campaign games will be included, including — of course — a big map-link-up game with *RSM*.

*STW* will include one 34x22" map, 192 5/8" counters (representing naval and air units from the U.S., India, Japan, Indonesia, Iran, Pakistan, Bangladesh, China, Taiwan, Korea, Russia, Australia, New Zealand, and maybe some others), and 100 1/2" counters. The map will stretch from Borneo in the northeast, south to Northwestern Australia, west to the east coast of Africa, and north to the Straits of Hormuz. For the ziplock line, for 20 big ones, by David "RSM" Bowers.

**2. Civil War — West.** Largely neglected by the war-game industry, the "far west" theater of the ACW was a myriad of battles fought over most of Oklahoma and parts of Texas, Arkansas, Missouri and Kansas. The campaigns mirrored the rest of the Civil War — initial Confederate successes and inept Union leadership were eventually overcome by superior northern manpower and materiel.

*GDW's* venerable *A House Divided* system is eminently suited to cover the transportation, recruitment and supply problems of campaigning in the "Indian Territories" without having to resort to complex supply and command rules. Morale would be a huge factor in combat, with ratings varying widely between not only "militia" and "veteran" troops, but different Indian tribes as well. Leaders would be given much more emphasis than in *AHD*, so the players may send Stand Watie raiding in Kansas if they desire. Leaders will be rated for combat, charisma (keeps troops from deserting), and recruiting abilities.

The tons of chrome available includes such items as Indian revolts, treaties with various tribes, even covert intervention by Mexico (the *Mescaleros*). Random events would reflect both the effects of the rest of the Civil War and the difficulties involved in following orders from far away Richmond and Washington. *CWW* would include a 34x22" point-to-point map (with all charts on the mapsheet), 200 counters, and low complexity. For the magazine, by Terry Lee Coleman.

**3. IDF: The Arab-Israeli Wars.** An operational/strategic-level simulation of the clashes between the Arabs and the Jewish state which have erupted since 1956.

The area from Cairo to Beirut is depicted using a 34x22" hex map. Units are mostly division/brigade, with air and artillery assets represented by point markers on the side of the map. Each game turn equals two days of real time and each hex 20 miles. The four scenarios included are: The Sinai '56; The



Six-Day War; The October War; and the 1982 Israeli invasion of Lebanon.

A simple move-fight sequence is used, but with the added option of expending "initiative points" to extend a given phase. These points represent the degree of training, equipment, supply, doctrine, manning level, etc., inherent in the forces engaged. A Political Events Table, which can shorten or suddenly end a turn, is included to demonstrate to the players how victory on the battlefield can be overturned at the peace table.

IDF not only recreates the operational/strategic realities of the Arab - Israeli wars fought between 1956-82, it also shows the evolution of the opposing armies from purely infantry armies in the Sinai campaign to tank-dominated organizations in the '67 and '73 conflicts to combined arms forces in '82.

Complexity about 6, 200 units, for the magazine, by Arnold Blumberg.

**4. Narrow Victory: The Struggle for the Salerno Beachhead.** In 1943 the Western Allies established their first foothold in Nazi-occupied Europe by landing in the Gulf of Salerno (Operation Avalanche) on the west coast of Italy. About 30 miles north of Salerno lay the object of the Allies' attack — the port of Naples. With that large seaport in their hands, the British and U.S. forces would have a secure base from which to conduct offensive operations against the Germans in central Italy, and perhaps draw substantial Axis formations away from the decisive theater of operations to be launched in 1944 in Northwest Europe.

After landing at Salerno on 9 September, 5th Army (British 10th and U.S. 6th Corps) fought a bitter ten days to secure its landing area against an alert and aggressive German force (made up of 6 Panzer and Panzergrenadier Divisions). The German resistance at, and then deliberate withdrawal from, Salerno prevented the Allies from taking Naples until 2 October.

NV is an operational-level game simulating the struggle for the Salerno beachhead. Each game turn represents one-half day of real time. Each hex on the 34x22" mapsheet equals 2 kilometers. Combat units are battalion sized, with backprinting for step reduction.

Special rules cover air and naval bombardment and ranged artillery (both offensive and defensive support). Mech units move during the enemy player turn, to show how mobile forces have the ability to swiftly react to enemy moves. There are no zones of control, except for fortifications and commanding high ground. Division HQ counters generate both supply and combat replacements, as well as allowing for coordinated attacks by subordinate battalions.

Several scenarios will be provided, representing the critical periods of the battle, along with a campaign game. Complexity about 6, for the magazine, by Arnold Blumberg.

**5. II Corps, Vietnam.** Throughout the Vietnam War, the II Corps Tactical Zone (Second Military Region) remained a hot-bed of NVA/VC activity. The rugged Central Highlands provided cover for the NVA infiltrating east from Cambodia and Laos, while the fertile valleys supplied them and the local VC. With the heavily populated coastal region acting as a vast source of willing (and unwilling) VC recruits, it was natural that the Communist presence in the area would be high.

From the "Silver Bayonet" operations in late '65, to the to the fall of South Vietnam, the US/ARVN forces in the region had their hands full stemming the incessant cross-border infiltration while simultaneously trying to pacify a civilian population widely sympathetic to the north.

II Corps would be a solitaire-simulation of several of the more important battles fought in the region. The 34x22" map would cover most of the area from Dak To in the northwest to Cam Ranh in the southeast. Each hex represents 5 miles and each turn equals one week. The 200 counters would be mostly battalion/regiment level, with unit strengths represented by strength chits. A variety of air and naval units would also be included, as well as informational markers.

Solitaire rules would be included for both sides, allowing the player to control either the Communists or the Allied forces, as desired. A two-player match can also be provided by merging the active player rules from both sides into a modified two-player turn sequence.

The game system would use a fluid sequence, allowing the active player to mix maneuver, combat, and many other operations freely during the game turn. Rules on US coordination and NVA/VC morale would enforce certain limitations on the active player, providing a more detailed, "commander's-eye-view" of operational planning. A wide range of operations would be available to both sides, including: Search & Destroy, Strategic Movement, Ambush, Infiltration, Close Air Support, VC Villages, Supply Caches, Ranger Camps, Naval Gunfire Support, Special Forces, and much more.

About 5-6 on the complexity scale, with scenarios played to completion in 1-3 hours. For the magazine, by Philip Thé.

**6. The Middle Sea.** In June 1940, Mussolini, hoping to expand his "New Roman Empire," declared war on France and Britain. The French were soon gone, leaving the British to contend with the Italians for the Mediterranean. TMS would be a two-player simulation of this epic struggle.

The British player must keep his supply line open to Malta and stop the Axis effort to resupply their forces in Africa. He must do this with a limited fleet (the Battle of the Atlantic is going on at the same time) and airpower. He can send supply convoys to Malta from Gibraltar or Alexandria, and may have to send supplies from Gibraltar to Alexandria to support the Western Desert Force.

The Axis player must attempt to gain full control of the Mediterranean. He will have the *Regia Marina* (Italian Navy), *Regia Aeronautica* (Italian Air Force), and some help from the *Luftwaffe* and U-boats. His major problem is fuel for the Italian fleet. The Germans control the amount of fuel the Italian gets, which will vary based on German needs on other fronts. This means you must plan your operations carefully, deciding "do I need to use this battleship now, or can I depend on the air force?" or "should I use one cruiser group or two destroyer groups?"

The game's movement system will be similar to the one used in TAHGC's *War at Sea/Victory in the Pacific* games. The combat system will allow players to divide their task groups into main, escort, scouting, and supporting groups. A Fuel Track will be used to show the amount of the precious substance available to the Italian fleet; each ship or group will use a specific amount of fuel when it sorties. Other rules will cover submarines, frogmen, and an invasion of Malta. The fighting in North Africa will be covered by simple rules, with the amount of supplies delivered having major effects on the outcome. There will be optional rules for French ships that might be used by either side, and an Italian aircraft carrier.

Each turn equals two months, running from June 1940 to September 1943, or until one side is driven from the Middle Sea. One 34x22" map, covering the Med from Gibraltar to Alexandria, 200 units, representing individual battleships and carriers, with other ships in groups, and air squadrons. Complexity about 5-6, for the magazine by David Schueler.

**7. Objective: Kharkhov.** The eastern front, August 1943. The flower of the German panzer force lies smashed south of Kursk, victims of the ill-conceived and abortive Citadel Offensive. After a two week respite, the Soviet counteroffensive begins.

Two tank armies are committed in the first echelon, and penetrate to a depth of 30 miles, despite the strenuous efforts of two panzer divisions to stop them. But reinforcements are on the way — some of the best units on the eastern front, including the *Grossdeutschland*, *S.S. Das Reich*, *S.S. Totenkopf*, and *S.S. Wiking* divisions arrive to smash the exposed Soviet spearheads and cause a near repeat of their March failure. In the end, though, the Soviets emerged as victors, but at great cost to their offensive power. It was clearly a case of the side with the last battalion to

throw in winning.

OK would be a battalion/regiment/division-scale game of medium complexity. Features include: several CRTs, German fortifications, step reduction, special Soviet artillery capabilities, maximum Luftwaffe efforts, Kampfgruppen, and leadership. Scenarios would include: The Defense of Kharkhov; The German Counterattack at Akhturka; The Initial Soviet Drive; plus the campaign game.

One full hex map, 200 counters, intermediate complexity, for the magazine, by John Desch.

**8. For Glory! The Napoleonic Wars, 1796-1815.** The aim of this game would be to make it possible to play out the entire Napoleonic Wars in one sitting — each turn equals one year, and the emphasis is strategic.

FG uses an interactive turn system based on leadership. Players use the skill ratings of their command units to gain initiative and move their forces, while their enemies do the same to react at unpredictable points throughout the game turn. Army strengths are shown with numerical "change" chits under the main counter, and have no set movement factors. (Of course, they suffer greater attrition the farther they move at one time.) Naval warfare is covered by an area-movement system. There is also a political sub-system whereby two players (one leading France and the other the various anti-French coalitions) determine which side various states will take in the coming year. Other rules cover: partisans, off-map boxes for the French and British Empires, winter campaigning, etc.

One 34x22" map (area and hex) of all of Europe, with 200 counters, and rules complexity of 5-6. For the magazine, by Roger Sandell.

**9. Viva Maximilian! The Franco-American War, 1867-69.** In the early 1860s, Napoleon III of France took advantage of the American Civil War to install his candidate, Prince Maximilian, as Emperor of Mexico. When the Civil War ended, and the U.S. demanded a French withdrawal, Napoleon complied and abandoned Maximilian to defeat and death at the hands of Juarez and his Mexican rebels.

This game presents an alternative history. By 1865, Napoleon III decides eventual German unification is inevitable. In a diplomatic coup of the first order, he recognizes the Prussian King as Emperor of Germany, signs a 20-year alliance with the new power, and thus gains a freer hand for more intrigues in North America. He responds to American demands for withdrawal from Mexico by reinforcing his puppet-ruler's armies with elite French units such as the Foreign Legion, the Imperial Guard and the Chasseurs d'Afrique. He then encourages Maximilian to revive the Mexican claim to Texas. For the second time that decade, the U.S. Government calls for volunteers to create a new mass army, and in 1867 the two nations go to war. This game would depict that war using a network movement system based on GDW's classic *A House Divided*. It would layer on some new command rules and an area-movement naval system. Despite simple rules, VM would have lots of color. The French player commands the French and Mexican imperial armies, Mexican *Rurales*, and emigre units of "unreconstructed" ex-Confederates. The U.S. player commands armies of Union Civil War veterans, Marines, Texas Rangers, Mexican rebels, "galvanized Yankees" (ex-Confederates fighting for the U.S.), and Freedmen's Brigades. Commanders would include France's Marshals Bazaine and MacMahon, and Grant, Sherman, Lee, etc., for the U.S.

Political and random events will also play a major role. Will the U.S. be faced with mass Indian uprisings? Will Britain aid either side? (Such as sending the Royal Navy's mighty ironclad, *HMS Warrior*.)

VM would have 300 counters, a 34x22" map, covering Northern Mexico, the U.S. Southwest, and the Caribbean Sea. Complexity 4-5, for the ziplock line, by Roger Sandell.

**10. I am Spartacus!** In 73 BC, Spartacus, a Thracian gladiator, led a revolt against Rome. Within a year his army of 40,000 slaves controlled most of southern Italy from their base on Mount Vesuvius. In 71 BC, their revolt was brutally crushed by the brilliant and decadent Marcus Licinius Crassus. For over 2,000



years, the name of Spartacus has been an inspiration to freedom fighters.

*I am Spartacus!* is a 200-counter, low-to-intermediate complexity magazine game which uses the *Alexandros* system to model the events of Spartacus's slave revolt. The map shows Italy, Sicily and the east coast of the Adriatic, and will have enough detail so that, for example, the area around Anzio will be a swamp region with special malaria rules. Monthly strategic turns will provide a 36-turn campaign scenario, plus some shorter ones.

Each Roman legion will be represented by several counters: Hastati, Principes, Triarii, plus one for the Eagle. And, of course, there will be special rules to cover the erratic command structure of late Republican Rome.

When a province revolts, a variable number of slave units will enter play as fairly weak irregular infantry, but they can be upgraded through training and organization. Roman slaves included many different nationalities — Gauls, Greeks, Thracians, even Africans — and each had their own style of fighting which will be handily reflected by special battle board rules. To be designed by Mike Markowitz.

## Second Thoughts

Please re-evaluate the game from issue no. 10.

11. *Alexandros* — overall

12. Map

13. Counters

14. Rule Clarity and Completeness

15. Estimate *Alexandros*' complexity, using the 1 (simple) to 9 (hyper-complex) scale.

16. About how many times have you played *Alexandros* to completion? (0=never; 1,2, etc., 9=more than nine times.)

17. About how many hours does it take to play one match of *Alexandros* to completion? (0=haven't finished one yet; 1=less than one hour; 2=less than two hours, etc.)

18. Which side is favored to win more often in *Alexandros*?

1: Macedonians are heavily favored.

2: Macedonians are slightly favored.

3: The game is evenly matched.

4: Persians are slightly favored.

5: Persians are heavily favored.

19. Was *Alexandros* a good choice for a magazine game?

## Red Sky Morning

If you've purchased and/or played our ziplock game, *Red Sky Morning*, please evaluate that game below.

20. *RSM* overall

21. Map

22. Counters

23. Rules Clarity and Completeness

24. Estimate *RSM*'s complexity.

25. About how many times have you played *RSM*?

26. About how many hours does it take to play *RSM*?

27. Which side is favored to win more often in *RSM*?

1. — The U.S. is heavily favored.

2. — The U.S. is slightly favored.

3. — The game is evenly matched.

4. — The Japanese are slightly favored.

5. — The Japanese are heavily favored.

28. Do you feel you got your money's worth by purchasing *RSM*?

29. If you had it to do over again, would you still buy *RSM*?

30. For those familiar with *RSM*: Do you feel it likely Japan and the U.S. will become involved in some kind of military conflict (against each other) during the next 20 years or so?

31. For those *not* familiar with *RSM*: same question as #30.

## This Issue

Please rate the contents of this issue of *Command*.

32. *Chaco* game overall

33. Map

34. Counters

35. Rules Clarity and Completeness

36. *Chaco* article

37. Variant counters overall

38. Commander's Call

39. Short Rounds

40. D-Elim

41. Cover art

42. I Remember

43. It is Balloon!

44. *Command* no. 12 overall

45. Was this issue better than the last? (0=no opinion; 1=yes; 2=no; 3=they were both of about the same worth.)

46. How did you obtain this issue of *Command*? (1=as part of a subscription; 2=bought as an individual copy.)

47. Did you send in a feedback card last issue? ☆

## ERRATA

### *Alexandros*

The following errata is in addition to the changes published in *Command* #11.

**10.6 The Battle Line (clarification).** If the first line is vacated due to battle and there are units in the second line, at least one of those units must move into the front line during the next movement phase. This is true for units of both sides, not just the moving side. The first line may not be vacant if there are units in the box.

**10.15 Flank and Rear Attacks (addition).** **Optional:** Any time a unit is attacked from two different boxes in the same turn, shift the final odds ratio one column to the right for *each* attack.

**11.2 City Garrisons (change).** Change the second sentence of the second paragraph to read: "A city garrison may consist of one infantry unit (not step) for each wall marker on the city."

**15.8 Persian Treasury (addition).** When the Macedonians have captured two of the treasuries, the Persian player loses his Spring replacements. When the Macedonians have captured all four of the treasuries, the Persian player may no longer rebuild or replace his foot archers or Royal Guard, and may not hire any more Greek mercenaries.

**12.11 Macedonian Recuperation (new rule).** Optional. The reduction of the Macedonian phalanx from 8-8 to 7-7 in combat represents disruption and fatigue more than actual losses — the men's armor and tight formation prevented heavy casualties unless the formation was disrupted. On any turn in which a 7-7 Macedonian phalanx has not participated in combat (siege, minor or tactical board), flip it back to its 8-8 side. This does not cost any replacement points.

### *Red Sky Morning*

**2.0 Introduction/Game Scale (correction):** Each game turn equals one month of real time.

**11.5 Nuclear Powered Ships (new option):** Those who feel the current rule for nuclear ships allows them to be too free-wheeling should substitute the following: Nuclear powered ships may never expend more than 8 movement points during any one move. The "N" now merely serves to indicate they do not suffer the movement constraints of conventionally powered ships when their supply line is blocked (they are, however, still subject to normal weapons depletion effects). ☆

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I Remember . . .

# The Western Front, 1918

by John C. Silvers, as told to Michael C. Rankin, Jr.

## How did you get into the war?

I was drafted. I got out of it for a while because I worked on the railroad, and that was a defense job. I even went and got married, 'cause I thought I was out of it. Well, that didn't last long, and off I went.

## What was the ride over like?

We left from Long Island, New York. First off, we had to wait 10 days there just to catch a boat, but we finally did, and then it was a 13 day cruise over. There were four submarines that came after our convoy, but our escorts got 'em all. They'd thought they'd got five, but after they'd shot the hell out of it, they found it was just a big clump of seaweed.

We finally landed and were sent to Winchester, England, to wait for a ride across the Channel. After a few days we got one. When we landed in France they sent us straight to the front.

## What unit were you with?

I was with *Company H, 7th Infantry Regiment, 3rd Infantry Division*. There was 250 of us in the company, and over 30,000 in our division. We needed 'em, too.

## What was your job?

I carried one o' them big Browning automatics for a while. Boy, that was heavy. I had a helper, though. I'd just yell, "Clip!" and he'd slap a new one in there after I'd hit that little button and dropped out the empty. I used to get that barrel white hot. You couldn't even put your hand near it. I had a strap, too, so I could hold it at the hip and shoot as we advanced. After a while they made me the company runner.

That's when I got buried. There was two other runners right next to me at battalion, and the shells started to come in, and they got a direct hit and I was buried from the dirt thrown up. I was fine, but they never even could find the other two.

## What was it like being a runner?

When it got hot, the average lifespan of a runner was 8 minutes. They'd give you a message at the B.C. [battalion command post], and they'd put a time on it, and you had so many minutes to get it to the company. They didn't put 12:00 or 12:30; they'd put 12:01 or 12:32.

Well, I went up there and the company wasn't there. Nobody was holdin' the line or everybody was asleep, except the

machinegunner; they never slept. I found out my company had been relieved, so I went back and on the way I ran into this second lieutenant. He had "shell shock," 'cause he was talkin' and acting funny; he looked pretty rough. I asked him if he knew where my company was. He said, "Company H? Right over there." But I told him no they wasn't, 'cause I was just over there. "Well, they advanced then," he said. So I ran back up and advanced too.

I jumped into a trench about 100 yards up. I heard voices down the trench, so I ran down that way and ran smack into some Germans! Boy, I jumped back outta there and ran like you wouldn't believe. They were confused for a minute, but then started pourin' it on me. They got a machinegun goin' too. They sent up a flare, and we'd been taught that if you couldn't get down in time to stand straight like a stump. Well, I thought that was screwy, so I flopped down on my belly. That machinegun kept tappin' away, but they didn't get me.

I crawled about 400 yards to get back to our side across no man's land. I got back and ran into that same damned second lieutenant again. He said to stay there with him for the night in his dugout, but I said I had to get back to my company. But then he told me not to worry, he'd fix it with my officers. So I stayed.

When we got up in the morning, he had me carry one of these two big suitcases he had with him, and off we went toward the rear. We got onto this cobblestone road and there was dead soldiers everywhere. It was my company! There was this one guy who'd gotten a letter from his wife the day before, sayin' she'd had a baby. And there he lay — there he lay. They'd gotten shot up when they were pullin' back after being relieved. The Germans had used their big guns that could kill 15 men with one shell. There was only 14 men left in the company after that.

## You were at St. Mihiel weren't you?

Yep. We got the Germans goin' there. We got 'em goin'! They was built right into the ground there, regular homes. We set in our artillery at night and let 'em have it, and at four in the morning we went over. We didn't all charge forward like yuh see on the television. We ran and crawled from hole to hole.



Pot Silvers in 1917.

The Germans had been there for quite a while. The French named it "Dead Man's Hill" after they'd lost 35,000 men there. The English were there for a while, too, and lost 40,000.

We went up against the Germans' *10th Division*, The Prussian Guards. They were good, solid-built troops, and didn't look a pound apart, but we slaughtered 'em. We took one of their batteries there — three brand new guns on wheels, all dug in, but they didn't have any ammunition. We'd come up on 'em too fast.

Along toward the last, we pushed 'em and pushed 'em; kept 'em goin' we did. They were runnin' so fast, one time we had to use our cavalry to catch 'em; we couldn't keep up with 'em on foot. We lost a lot of men to push 'em outta there like that. When it was over, there was only 15 men left in my company that time. My company got wiped out twice and I made it both times. I was real lucky.

## You were at the Argonne Forest, too, weren't you?

That was an awful, bloody mess, the Argonne. We'd been up on the Argonne Front for 28 days, and were due to get relieved by the *5th Infantry Division*. Well, they showed up and we moved back a mile or two. They'd brought up kitchens for us, and we took a break. We built some little fires and even got all our back mail. I musta had 10 letters, and my wife put 3 sticks of gum in one. I was just startin' to read it when the division general showed up. He got up on a wagon and said to us, "Boys, yuh gotta go back up there. The *5th Division* has retreated 3 kilometers and they're still goin'. I know when the *3rd Division*



goes back up there, we're gonna take it!"

We'd only been back a few hours, so you can imagine how mad we were — not at the general or the Germans, but at the 5th Division. We were up there for a month and didn't budge, and they were there for a few hours and retreated 3 kilometers! We all picked up and threw all our mail right into the fires; never read a word of it. We moved out and took back all 3 kilometers that same night. We lost men, but we took it all back.

The Germans there weren't done yet, though. They really poured it on us. At one point I was trapped with a couple other guys in this filled up shell hole. It was just deep enough to hide in. Every time we'd move an inch to get out, they'd hammer us with those damned machineguns. It got so we'd just wave our hands to tease 'em so they'd shoot.

It really got tough one time. They'd started to pour their artillery in on us. There was a lot of timber in there, see, and after they let up we had a helluva time getting out, 'cause timber had fallen across our hole. We had to chop and dig out.

The next morning they brought our rations up, but the rest of the company had pulled back; it had got too hot for 'em. But the Germans had quieted down, so we went over to the pile of rations, but we couldn't eat it — it was all soaked in blood. The bread was like a wet sponge of blood. All we could salvage was some cans of corn syrup. We drank that and got sick.

You can believe it or not, but when it got light and we looked around up in the trees that were still standin', there was arms and legs and other body parts blown up there by the artillery. Blood every place yuh went.

They pulled us back finally, and they was losin' so many men they put us to work burying the dead. We didn't dig deep holes for 'em; we just dug shallow — 16 inches deep. After they laid there dead for a while, maybe a leg would stick up or an arm, and I'd have to step on 'em until they got the dirt piled up on 'em again. They didn't even put blankets over 'em, just threw dirt in their faces. Hauled 'em back from the front with mule teams, stacked on the wagons like cordwood.

There was a lot of Germans at that Argonne Forest and they sure put it to us, and I don't mean maybe! They had good artillery there, and we did, too, but I think they got the best of us in that one.

#### **Were there any other big battles you were in?**

The only one you mighta heard of was the Madelaine Farm. That's where I met my friend, Klingel. He was from Louisville.

Boy, he was a prince! Me and him were together the first time I got cooties — but I'll tell yuh about that later.

Anyway, they put us in the front at the Madelaine Farm. Big, open fields and they put us in there in the broad daylight. And, oh boy, did they slaughter us! They poured their goddamned artillery at us all day long. All over the fields lay dead — dead everywhere. You'd see guys runnin' around and they'd maybe trip across a dead body, 'cause there was plenty of 'em that day. There was a lot of shrapnel flyin' everywhere, so these guys would pull dead bodies over 'em for cover. Didn't help much. My Lord and my wife was the only reasons I made it through that day.

#### **Tell me about the cooties.**

I got the cooties over there, and a lot of 'em. Cooties — yuh know — little bugs — lice. Klingel was the cause of me gettin' 'em the first time. It was dark and he found this dugout for us. He felt around in there and felt a boot. He yelled and told 'em to come out. They didn't answer, so he yanked on the boot and whole leg came off! They'd been dead in there a long time, but he went in and dumped 'em all out. We moved in, and, boy, did we get loused up! I couldn't get rid of 'em for a long, long time. They had these delouser machines — they take all our clothes and dump 'em in a pile and spray 'em. The cooties in the middle just stayed warm, though; it didn't get rid of 'em all. They sprayed us, too, and gave us some special soap, but it didn't help much either.

#### **Did the Germans use gas against you?**

They sure did. You could tell when a gas

shell was comin' — gas shells whistled. I was sittin with my partner, and he said, "Yuh better put yer gas mask on." I said, "O.K." and slept with it on in the dugout all night, but he took his off too soon and got sicker than the devil.

We'd have to walk back a long ways to get fresh water, 'cause the gas would poison it. You could dip it up in goups. It would collect in the bottom of shell holes and you'd have a helluva time jumping from hole to hole in a fight, 'cause of the goups of mustard gas in 'em.

Mustard gas looks just like the mustard yuh buy in the store. If yuh got a scratch or a sore in a place that had got gassed, they'd get yuh right outta there. The gas could get right inside yuh that way.

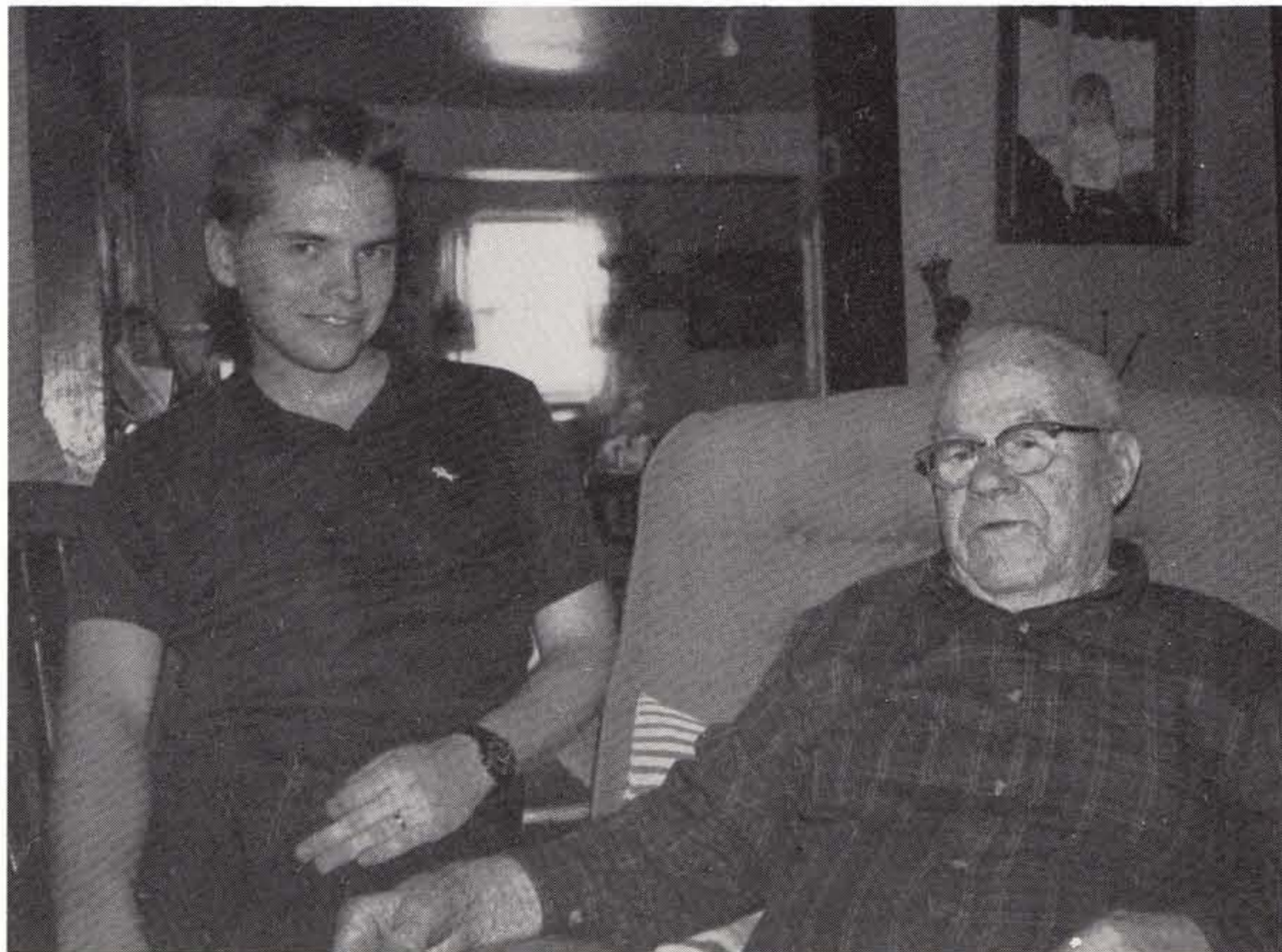
#### **Why weren't you promoted above private?**

They offered it to me, but I didn't want it. I liked being a buck private. You were your own man that way, and didn't have to worry about anybody else. After the Argonne, they offered me first sergeant of the new company they were building. I said no, so they put me on K.P. for two weeks and gave me every dirty job they had. I didn't even want PFC.

#### **Did you ever see any dogfights overhead.**

We didn't have really effective bombs in World War I, not like in this thing you just had over there in the desert. It was a different war altogether. Our main stuff was us and the artillery, and that was it.

I saw four American planes the whole time I was over there. I saw lots of German planes, but only four Americans. Once, we



*Mike Rankin (of Panama fame) with his Great-Grandfather, John C. Silvers, in 1991.*



had these three observation balloons above our front at St. Mihiel. There were four American planes flying around, guarding 'em. Well, we heard this deep "brrrrr," the sound of German planes (their engines sounded deeper than ours). When the American planes caught sight of them, they [the Americans] turned-tail and flew away. Two German planes flew in and blew up all three balloons. I don't have much use for the air corps.

### **Tell me more about the German machineguns.**

I used to laugh at those damned German machineguns. They were water cooled, so when they got hot, steam came off 'em and gave 'em away. I'd fire 'em up with my Browning then. They had a regular water tank around the barrel. There was lots and lots of 'em, though. They even had 'em up in church steeples.

This is how we took out their machine-gun nests. You'd lose a lot of men, but we'd take 'em out. The German gunner would just stick his head up every once in a while; we could never get a shot at that guy. So we'd send three or four of our guys up to draw his attention. As soon as he was busy shootin' them up, we'd run up off to his side. We kept doin' that. We'd have to send out three or four groups after the first, 'cause the machinegun would always get a bunch of our guys. They'd even get some of the guys who ran off to the side; so we'd send more o' them, too.

Finally, there'd be two or three of us up close on him, and we'd all throw hand grenades in there and blow him to hell. We used German grenades for that. Ours didn't go off half the time. The German ones were shaped like a hammer — a potato masher, really. We used 'em for other things, too. We had these big rats in the trenches with us. We laid out some food for 'em, and when they came in to eat it we'd smash 'em on the head with a German grenade. Killed 'em dead.

### **What did you think of Gen. Pershing?**

He was the best man who ever put on army boots. He was real. He wasn't like that damned MacArthur — "I shall return." Pershing never said nothin', he just did it. I named my first boy after him. I've been as close to him as you are to me now. He would just look at your rifle and ask where you were from, or if you were getting enough to eat. He didn't say much, he was a quiet fella.

### **I heard you had some trouble with the M.P.s over there. What did you do?**

Nothin'! This major came up and took a bunch of us for a detail. We went down the road a ways and he told us to wait there. Well, he never came back. (You weren't in

the M.P.s were yuh? No, that's right; you were in the infantry, too. Good, then I can tell yuh this.) I hate those M.P.s yet today. We got hungry waiting for this major, so we went to look for some food. We ran into some M.P.s on motorcycles. Boy, I hate those guys! They grabbed us and took us back to their building; they lived in a real building. It was raining out and the water was comin' in on their floor, so they had us out in the rain digging a trench around their building. They would look out the window and tell us they'd arrest us for desertion if we didn't get with it. When we finished, they let us go back to our unit. They never were gonna arrest us; they just wanted someone to dig their trench.

I got into another jackpot with them M.P.s. It was after the war on occupation duty in Andernach. We used to walk up the hill to the cafe in the evenings. There was this old German, wooden-legged, guy who lived up there. Well, some damned screwball American came by there and killed him! He was gone already when we got there, but these damned M.P.s came along and said we did it! They took us off to the German jail in town. The two town bankers were in the cell with us. They were in there for buying cigarettes from the Americans.

There wasn't even a bunk in there; we slept on the cold, wet floor. By God, our captain came up there the next morning. Capt. Richmond — boy, he was a great guy! They wouldn't even let him in the front line because he was too valuable; he ran the battalion, not the colonel. He told me and Posey Rutledge, the other guy in there with me, that he'd have us out in 24 hours. Sure enough, the next morning he showed up and we were set free and the charges were dropped.

### **What about the Marines over there?**

Well, let's just say they didn't deserve all the praise they got. That'll never change, though. They're not exactly like what they'd like yuh to think they're like, yuh know. We were just as good — probably better — we just didn't get the attention. They fought under French command a lot, see, and next to the French I guess they *would* be great soldiers. Next to us, they weren't nothin'. I've heard the stories, even seen it on television, about the Marines over there. I don't go for that. They reminded me a lot of the M.P.s.

### **Did you ever run into any tanks?**

You've probably read about these fake tanks. The Germans would find an open spot and build one right there, lookin' all mean and ready to go. They were just cardboard, though; a trick to scare us. I never seen any American tanks — we was on our own, us

and the artillery.

The Germans had real tanks, though, too. They didn't use 'em against us too often, though, even though we didn't have any torpedoes or nothin' to use against 'em.

### **Tell me about the occupation of Germany after the war.**

I lived in a house with a German family for a while. Their father was in the hospital with seven of our machinegun bullets in his legs, but his family treated me like a prince. I used to take 'em bread, and they acted like it was cake. All they had was usually some black hardtack. I asked their little boy what he wanted to do when he grew up and he said, "Fight Americans!" And he probably did in the next one they cooked up over there.

When the father got out of the hospital, he gave me a nice little officer's pistol. They wouldn't let me bring it home, though.

That was in Andernach, right on the Rhine. That's some river. We guarded some German prisoners while they built a bridge across it there. I used to go down to Koblenz a lot, too. There was a lot of old artillery and cannon balls along the river there, most of it from Napoleon's day.

But speaking of guarding prisoners, I was guarding these German women they had dismantling these shells so they wouldn't fire. I was in an observation tower with sandbags all around it in case one of the shells went off. I had a .12-gauge "trenchsweeper" to guard 'em. It wasn't like they were dangerous criminals or anything. But them damned women would yell up at me in the tower, knowin' I couldn't leave my post, "Kommen Sie hier! Kommen Sie hier!" and they'd lift up their dresses and show what they had.

Our army wouldn't allow that anyway. World War I didn't allow yuh to monkey around with women. Now, these guys in World War II — I'm tellin' yuh, those soldiers played with the women more than they fought! We couldn't do that. We went over there to fight and that's what we did.

### **When did you finally get home? What was it like?**

They let us go in the summer of 1919. I rode home in the Kaiser's wife's boat, yuh know. The *Kaiserina Wilhelmina Alexandra*, it was called, and it was a big one, all inlaid in gold. We took all them German boats, yuh know, and used 'em to ship our guys home. Well, we finally landed in New York, and then they took us to one of these camps the army had set up all around the city for guys comin' home. They gave me \$30, a train ticket back home, and my discharge paper. Three days after the boat hit land, I was home. ★



## CLASSIFIED ADS & CONVENTIONS

Individual subscribers to this magazine can place one free ad in this section each issue their subscription runs. Maximum length is 50 words, and that includes your name and address. There are no repeat ads; if you want your ad to run more than once, you must send it in new for each issue. We reserve the right to edit or exclude anything we find offensive or just plain don't like. Please type or print your ad clearly. Non-subscribers and businesses, or subscribers needing more than 50 words, can get in here for 10¢ per word. Again, no automatic repeats from issue to issue. Convention announcements run free, and may go over 50 words.

**Toledo Gaming Convention IX.** Oct. 6-7, University of Toledo, Scott Park campus. This year over 150 role-playing, strategy, tactical, and miniature games will be run. Other events include: an auction, demonstrations, painting contests, dealers, exhibitors. Featured this year are AD&D 1st and 2nd editions, Battletech, Warhammer/WH40k, Call of Cthulhu, Rifts, Rolemaster, Chill, Cyberpunk, Shadowrun, Star Fleet Battles, Gurps, TORG, MBT, and Twilight 2000. Other events include non-stop movies and open gaming. For more information, send a SASE to: Toledo Gaming Con. IX, c/o Mind Games, 2115 N. Reynolds Rd., Toledo, OH 43615.

**LAGACON-12,** 9 November 1991, presented by the Lebanon Area Gamers Assoc., at Kasper's Ark (5 miles north of Lebanon, Pa., on Rte. 72). From 10 a.m. to 11 p.m. AD&D and Battletech tournaments, plus ASL, Axis & Allies, Shadowrun and more. Food and Vendors. Pre-registration \$5 (make checks payable to Keith Roth), or \$7.50 at the door. For more information: Lebanon Area Gamers, 806 Cumberland St., Lebanon, PA 17042, or call: (717) 274-8706.

**For Sale:** Almost 150 games. Most are S&T or *Wargamer*, with the magazine included. Many have never been played. Send SASE to: Don Strickland, 77 Manor Place, Oreland, PA 19075.

**For Sale:** Mint-condition *Command #1* - \$70, and mint *Command 2* - \$60, or both for \$100. Also have mint S&T 139, *Arabian Nightmare* for \$20, and mint S&T 136, *Borodino* for \$20, or both for \$30. Will consider all offers or trades. Contact: Daniel Remington, 700 Conley Lake Rd., Deer Lodge, MT 59722.

**For Sale:** Mint copies of *Command #s 1, 2 and 3*. Also have a few other out-of-print games and some old *Moves* for sale or trade. Contact: George Chrestensen, 24540 15th Ave. S, Des Moines, WA 98189. Call: (206) 824-0701, and please leave a message; I will call back.

**For Sale:** Over 200 wargames, many from the late 1970s. Send SASE for list to: Matthew Helton, 3620 Darwin Pl., Duluth, GA. 30136.

**For Sale:** 70+ SPI wargames and copies of *Moves*. Send SASE to: B. Namani, 2501 Calvert St., #804, Washington, D.C. 20008. Tel: (202) 667-3365.

**For Sale:** Many games, including AH, SPI and others. Also many magazines, including *The General*, S&T, F&M, *Wargamer*, and others. Many out of print items; most are mint or excellent condition. For list, send SASE to: Mark Pilling, 6528 Lee Valley Dr., Apt. 303,

Springfield, VA 22150.

**For Sale or Trade:** Many wargames. Send a SASE or your list for my list. Ben Scott, 801 Georgetown Dr., North Augusta, SC 29841.

**For Sale,** still in wrappers: Three copies of *Command #2*, \$85 each; two copies of *Command #4*, \$45 each. Gary Robinson, 7235 Charmant #826, San Diego, CA 92122. Will play any XTR game face-to-face.

**For Sale:** *Hitler's Last Gamble*, *Dark Crusade*, *Attack in the Ardennes*, *Druid*, *Struggle of Nations*, *World War II* (SPI edition), *Normandy* (SPI), *Command #1, 2, 3* (unpunched), *Counterattack #1, 2* (unpunched), *Campaign #74-111*, *Grenadier #11-24*, *Battleplan #1-9*. Send SASE for complete list. John D'Addario, 35 Greenbush St., Cortland, NY 13045. Tel: (607) 753-0614.

**Wanted:** Complete issues of *Command* magazine, nos. 1, 2, and 3. Willing to pay a good price for them. Please contact: Jose Carlos Cruz Moreno, Pensador Mexicano 10, Nicolas Romero, Edo. de Mex., Mexico, 54400.

**Opponents Wanted:** Kansas City area. Play all types of wargames, especially *Command* and XTR Ziplock games. Reply to: Kevin L. May, 8804 Pflamm Rd., Apt. #304, Lenexa, KS 66215.

**Wanted:** All games by Yaquinto, punched or unpunched. All 1960s "wargames" from Milton Bradley, such as *Broadside*, *Dogfight*, etc. Also want SPI's *Pea Ridge*, *1914 Expansion Kit*, and Ming Enterprise's *Texas Revolution*. Contact: Donald Rhyne, 403 State St., Dupon, IL 62239, or tel: (618) 286-3322.

**For Sale or Trade:** SPI, 3W, Victory Games, TSR: games, magazines, military history books. New additions. Send SASE to: Mark J. Perry, 62 Swan Dr., Middletown, RI 02840.

**For Sale:** SPI, AH, Metagaming, magazines, role playing stuff. Send me your SASE and I'll send you my list. Emmett Arnold, 3420 28th St., Lubbock, TX 79410. Tel: (806) 793-7974.

**For Sale:** Reducing large private collection. Books on military history, economics, politics, science fiction and related subjects. Also wargames from many publishers, old and recent vintage, mostly mint and boxed editions. Send legal-size SASE to: W.R. Hawkins, 6756 Heatherbrook Dr., Knoxville, TN 37931.

**For Sale:** My list keeps growing. I now have several Rand games, *Custer's Last Stand* (Battleline), 1944 (Histo), *Siege of Port Arthur* (Strife), and many early SPI games. Over 300 games and magazines. Send SASE to: Doug Traversa, 4433A Larch St., Mountain Home AFB, ID 83648, or Tel: (208) 832-2559.

**For Sale:** Several wargames. Also want to trade *War in Europe* (with WWI expansion) for *Wacht Am Rhein*, and/or old S&Ts. Send SASE to: Tom Stana, 113 Hunter Way, Chalfont, Pa. 18914. Phone: (215) 997-9369.

**Limited Number Left!** Never punched, opened or read! *Command #1* at \$85 each. *Command #2* at \$65 each. First come, first served. Check or money order only. Allow two weeks for check to clear. D Company, P.O. Box 1988, Ann Arbor, MI 48106.

**FOR SALE — WARGAMES/MAGAZINES.** SPI, TSR, GDW, Avalon Hill, Victory Games, 3W, Rand and more. Magazines with games, S&T's, *Command*, 3W, *CounterAttack*, *Ares*, *AH Generals*, *Moves*, *Couriers*, *Wargamers Digest*, *Campaigns*, *Miniature Wargames*, *Dragons*. Numerous *Miniature Rules* and *Judges Guild* material. Send LONG SASE for list to: George Turner, P.O. Box 4206, Center Line, MI 48015-4206.

**OPPONENTS WANTED.** Ann Arbor and southeastern Michigan. *Command* and *Rhino* games. Advanced Squad Leader. Mark Even, 917 Sunnyside, Ann Arbor, MI 48103.

**FOR SALE:** Mint unopened Ad Technos alternative WWII wargame "Return to Europe." Make offer. Phone: 614/761-9071.

**WANTED:** Martian Metals Robotic Armor Miniatures "Rivets" and any wargames by Perry Moore. Phone: 614/761-9071.

**FOR SALE OR TRADE:** SPI, GDW Europa titles and more. Many monsters, many mint. Send SASE to Stephen Grover, 29 Otis St, Manchester, CT 06040.

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## VARIANTS

### *Red Sky Morning*

Despite the immense popularity with which RSM has been received (we sold and shipped over half the print run the first day we had it in the office — a new record for us), the one thing about it *no one* seems to like are the "Sad Sack" figures on the two ground units. O.K., here are two substitutes done up in a more high-tech-looking NATO-symbol style.

### *Alexandros*

Here are two more Arab barbarian counters, to give you the proper count for them no matter how their die roll result.

### *Hougoumont*

What if the French *had* committed a battalion of the Middle Guard to the fight for the chateau? Here they are; incorporate them into play of the Variant Scenario. They constitute a separate formation, and as such cost the Frenchman one VP to obtain them. ★



# D-ELIM

## *The Chaco War* by Paul Dangel

Since the problems faced by both sides in *Chaco* are basically the same, I won't differentiate these play-tips between the combatants. On balance, the main difference between the two armies is the quality of their leaders. For Paraguay, the problem is how to get the most out of all those good leaders. Bolivia's problem is getting a half-decent leader in charge and keeping him there.

### Supply

The side that keeps its army in supply is going to survive. Though surviving is a necessary precondition to winning, it alone is not sufficient. Carrying the war to the enemy is also required, but doing that means moving away from those safe supply sources. Get the most out of the short and medium lines of communication (LOC) distances by careful placement of the GHQ. Keep a truck attached to the GHQ and if your commander isn't good for anything else keep him there also. Don't overlook the attachment of trucks to leaders; they can extend supply to remote units holding critical crossroads.

If you're going to panic about being out of supply, save it for the rainy summer months of January and February. (That's right — summer — this is the *southern* hemisphere, remember.) It's during those months that you'll learn just how hot your dice are, because you're certain to make a good number of attrition rolls. (If you aren't making any, it's because you're uselessly cowering at your own end of the map.) If you feel your dice are good and you want to be daring, in December, run your GHQ back to within the shortest LOC length for a rainy season turn. This lets you accumulate gobs of combat supply and replacements for a Fall Offensive. That is, if you still have an army — because during those rain turns, you'll have to abandon your whole army to attrition die rolls and a possible surprise enemy rainy season offensive.

Pay careful attention to where combat supply points (CSP) get placed. It's good to stack them in the front line for instant combat supply, especially when on the defensive. However, they're wasted if the combat units stacked with them rout. Keeping them behind your lines is safer, but if

combat supply is going to reach the front, a leader will have to be stacked with them. Generally, a player on the defensive will scatter CSPs along the front, stacking them with remote units, and will accumulate the rest in rear area CSP dumps at key crossroads with a leader to distribute combat supply. The movement of those dumps and leaders toward the front is the surest sign of a coming offensive.

### Combat

Attacks should be orchestrated all along the front to make the defender choose very carefully when to burn CSPs in defense and when to withhold them. Some of the more important victories are measured not in terrain gained or enemy units destroyed, but in how much of the opponent's CSP stockpile is consumed. On the other hand, don't get suckered into expending all your combat supply for nothing, simply because the enemy won't back down.

Players most often overlook the Reaction Combat Phases. That's a big mistake. If you use the Reaction Combat Phase to counterpunch an enemy attack, either directly or on some other part of the front, there's a good chance his Second Combat Phase will be wasted in reaction to your counterattack, rather than as a follow-through of his original attack. The Reaction Combat Phase is also an excellent time to launch your own major attack. First of all, the enemy won't be expecting it then, and if he overreacts to it, he'll burn up even more of his CSPs. Secondly, you get the next Supply Phase and more of your own CSPs to either fuel a smashing success or shore up a disaster. I once saw a game virtually ended in two turns with that kind of one-two punch, and that was a Bolivian victory to boot!

When it comes to distributing losses — REDUCE! Never eliminate, even if it means giving up more than is needed to satisfy the combat result. That's because replacements will bring reduced units back to full strength far more quickly than the time it takes reinforcements to travel to the front.

### Trucks

Unsung and unglamorous, these units hold the greatest potential for bringing victory to either side. Most players scratch

their heads over what to do with them other than attaching them to the supply network, which *is* in itself an important role. The clever player, though, will take what trucks can be spared from supply (two is good, but three are better), and stack them together with some decent combat units and a leader at a crossroads near an open flank. In your Reaction Movement Phase, turn this "fire brigade" loose on your enemy's rear area and you'll short circuit whatever plans he's got brewing. This is best done in the Reaction Movement Phase, because you'll get the next Movement Phase to bring the raiders home. Of course, once your opponent has seen how effective this can be, he'll create his own motorized brigade, and before you know it, you'll both be complaining there just aren't enough trucks to build your true proto-Blitzkrieg army.

### Entrenchments & Fortifications

Since these are permanent once built, it's not a good idea to build too many, since you may find you have to retake your own works, now enemy occupied, later on. It is a good idea, however, to upgrade the entrenched settlements to forts, simply because they're already on the map and you may as well make the most of that fact. Connecting neighboring fortified/entrenched settlements, like Boqeron and Arce, with entrenchments creates a formidable defensive line and a good backstop to catch routing units. The latter is also a good reason for dropping an entrenchment on a crossroads hex behind the front.

### Victory Points

Most players view the settlements as their military objectives. That's very dangerous because of the variable VP awards for them. Settlements are important for supply and to the politicians, but not as VP generators. Battles tend to gravitate around them because they generally sit on crossroads. I don't worry about VPs during the game, except during truce turns when a 50+ difference can end play before I get rolling. The key to winning is killing the other guy's army. Do that and the VPs take care of themselves.

### Bolivian Leaders

If you're adept at defensive warfare, these guys are not all that bad. Keep the negative-command-rated army commander back with his GHQ. There he'll at least help offset his bad rating when it comes to generating CSPs. When attacking is required, save your air markers to help offset the attacking leader's command rating, but remember you can use only one air



per combat. Replacing the army commander can be tricky, and can cost more VPs than it's worth. Depending on who the army commander is, it can be more beneficial to replace the subordinates. Stacking the subordinate "deck" with Bilbao and Penaranda makes it easier to push the top man into the Replaced Leaders Box for the duration.

## Developer's Notes

During my stint as the "Senior Games Editor" of *S&T* magazine, I was privy to the votes of the 300-some feedback cards returned for each issue. The question readers consistently asked on those cards was, "Where is the *Chaco* game? What has happened to *Chaco*?"

It's been nearly five years since I first saw Bruce Farcau's original *Chaco*. That was back when Keith Poulter was publishing *The Wargamer*, and he sent me a copy for "evaluation." I returned it with the comment, "It has good possibilities, but needs some work." That was the last I saw of *Chaco* until three years later, when Jim Dunnigan became editor of 3W's *S&T*. He sent me a copy, along with the instructions, "Needs to be made into a half-map, 100-counter game." It appeared to be the same copy Poulter had sent, but there were some changes, and judging from the different styles of notes in the rules margins, it must have gone through several other hands. Also, there was a packet of playtest notes and suggestions, but no names or dates.

When designer Farcau was presented with the notion of chopping his game in half, he, being a career diplomat in real life, politely but disgustingly threw up his hands and became dismayed of ever seeing his game in print. Dunnigan gave the task to me and I gave it my best shot, but the finished result played like TAHGC's *Afrika Korps* without the *Afrika Korps*. Expecting to feel the legendary "Dunnigan Wrath," I was surprised when he expressed no disappointment at all, since he explained he didn't consider the topic to be one worthy of much attention anyway. The game got stuffed into the "In Progress" box to await developments.

It didn't have to wait for long, because shortly thereafter Dunnigan left 3W and *S&T* was bought by Cummins Enterprises (now Decision Games). Around that time, I asked Bruce about the *Chaco* game contract with 3W, and to my surprise, he informed me he didn't have one! When I then asked Ty about the possibility of putting the game in *Command*, it seemed that would be *Chaco's* last chance to see print. As it turned out, Ty was, so to speak, game — and here, at last, it is.

Judging from the questions usually asked by the playtesters during this design's long gestation, here are the answers to those you might have after first reading the rules.

**Supply.** I hate supply rules, but after reading about the Chaco War, I realized the supply rules for this simulation were going to have to be a bit longer than the bare minimum. The original rules required creating a "supply necklace" of truck units reaching across the map from board edge to front line. That took a lot of time counting, positioning, recounting, and repositioning truck units — lots of truck units. Playtesting showed it became too wearisome a task to perform every turn. We then tried going to the other extreme, and made supply completely abstract. That was easy to play, but it didn't have the Chaco War feel. After more experimenting, the current method evolved as a compromise between the accurate (complex) and the abstract (playable).

The supply mechanics are not meant to represent the actual movement of material through a supply network, but rather the efficient management of that material. Bad generals usually had bad staffs running things for them, and the more difficult the problems, the worse their solutions were. That's why an army commander with a poor command rating delivers less supply to the front than a good one; and the farther away from his home bases he gets, the less he's able to get to where it's needed most.

In most games, supply is cut and dried — a unit in supply lives and one out of supply dies, sometimes immediately, sometimes over the course of two or three turns. This is not so in *TCW*. Being in General Supply means the general staff is *certain* of getting to you what you need to survive. Being out of General Supply simply means you are *not guaranteed* to get supplies. During the war, the systems and organization needed to provide supply for everyone were very fragile and tenuous. The resourcefulness of the individual unit commanders was what mattered when things began to fall apart. That's why being out of supply is not a death sentence, but it can be if the unit is cut off (that is, isolated) from even the chance of "requisitioning" material, and is out of water.

Water is everything in the Chaco; so much that even the threat of being without water was enough to cause a unit to disintegrate.

The playtesters often questioned why only one combat supply point was always expended whether the combat involved one unit or ten. At one point in the game's evolution, there was a rule for determining

the number of units supplied per point expended. That was dumped, again, because the time consumed figuring how to milk the most out of each point became a game in itself.

Combat supply points are not meant to represent fixed tonnages of ammunition or other materials; rather, they represent the availability of munitions at the right place and time, regardless of the exact amount required. What good are mountains of supply if they aren't where they're needed? Again, we felt that by focusing on the management of supply, rather than its detailed distribution, we could avoid overly complex rules, yet preserve the feel of the historical problems.

**Combat.** From the very beginning, and almost without exception, playtesters complained about the percentage losses on the Combat Results Table. They said it caused players to lose more units than they were required to by the combat result itself. This is true, but not all the time. Generally, the complaint surfaced when a player was forced to give up his 6-4-6 unit to satisfy a 10% loss result. In all fairness, other methods were tried, such as a generic-strength-point counter mix, roster sheets, a step reduction CRT, etc., but in the end it was agreed the cures were worse than the disease. I stuck with the original CRT because it gave a good WWI feel, which is the military era being simulated. Together with the supply system, the CRT discourages "frivolous combats," where a player attacks just for the hell of it.

**Entrenchments.** Players often asked why entrenchments are permanent in the game. Entrenchments there were reinforced with wood, and wood in the Chaco has the density of iron. That's why they don't go away, and why it takes engineers to build them. The combat die roll modification for being in bush terrain reflects the improved positions the line troops would construct.

**Leaders** and the replacement system were the latest addition to the game. The historical influence the various personalities had on the war was just too great to be excluded from the game. The Political Phase should actually be called the "Bolivian Politics Phase," because the Paraguayan player should never need it. He has as much reason to replace Estigarribia as the French player in *La Grande Armee* does to replace Napoleon. So why not have the Political Phase apply to only the Bolivian player? A great way to alter the balance of the game and variety is to draw each side's starting leaders at random. This will show you how important leaders were and how different it all might have been. ♣



# It is Balloon!

by Russ Jennings

*[Ed's Intro.: Those of you not part of my 'Boomer generation, and therefore not around to watch TV in the late '60s, might not remember from where the slogan serving as this article's title is drawn. Still, I think you'll all find this piece an informative history of American military airship development. All photos in the article are courtesy of the National Archives.]*

## Anti-Japan Origins

The United States Naval Airship Program grew out of a need for long range scouting aircraft that could be used to assist the Navy in finding the Japanese battle fleet. Specifically, they were to assist our fleet as it sailed to relieve the Philippines, as called for under War Plan Orange.

The size of the Pacific Ocean precluded this search from being carried out by cruisers, the normal scouts for early 20th century fleets. So, intrigued by the Germans' successes using Zeppelins to scout the North Sea during World War I, the U.S. Navy began its investigation of lighter than air ships in 1916. By 1919, the Navy had concluded the airship was the only aircraft capable of flying the distances needed to do the job, and the Atlantic crossing of the British airship R-34 in 1921 confirmed it. At that point, Navy calculations showed one airship would be capable of scouting the same amount of ocean as a squadron of cruisers.

## The Physics — and Economics

Hydrogen was the gas used to provide the lift needed to raise most airships off the ground. One thousand cubic feet of air weighs 75 lbs., while the same amount of hydrogen weighs only 5 lbs. (thus providing 70 lbs. of "lift"). Much like a seaborne ship displaces water and floats, the hydrogen in an airship's gas bags allows it to "displace" air and float in the sky.

The gas bags are contained inside a rigid skeleton of duraluminum, which in turn provides a solid frame to which the bags can be attached, as well maintaining the characteristic and aerodynamic cigar-shape of the dirigibles. Motors are located along the outside of the frame, as well as tail and stabilizer fins, to provide control of the ship's direction and speed.

Airships are "weighed off" before they take off, meaning the lift from the gas is countered by the weight of such things as fuel, oil, cargo and water ballast. A properly weighed off ship, massing hundreds of tons, can literally be moved about by two men on the ground, each at one end of the hull.

Another factor affecting an airship's lift is the physical property of the gas itself. That is, any gas will expand as it heats or rises in the atmosphere. Thus, as an airship climbed, the gas on board would expand to the point where any more would rupture the container bags. That point was referred to as "Pressure Height," and to prevent

bursting, excess gas would be bled off into the air through valves at the top.

The process was called "valving off," and could be dicey. If too much gas was allowed to escape, the ship would become heavy and begin to sink. That sinking could, in turn, be controlled by using the engines and by dropping water ballast. Further, as the gasoline powering the engines was used up, the airship again became lighter, and that same could be true if some of the cargo was dropped as bombs.

And while gas was frequently valved off to bring a ship down, waiting until nightfall could also work. Then, as the sun went down and the gas cooled and its volume shrank, the amount of lift it provided also decreased, allowing the ship to descend. And the reverse process could also be used, by letting the morning sun heat the gas and lift a ship that was otherwise too heavy to leave the ground. Indeed, it became common practice to use this "super heating" of the sun to lift airships. It allowed more weight to be carried, and required less gas be valved off when the ship descended.

Unfortunately, while hydrogen was cheap and plentiful at \$3 per 1,000 cubic feet, it had one bad trait — it burned and exploded easily when exposed to flame or sparks. (And that was especially true when it became contaminated with small amounts of atmospheric oxygen, as happened constantly in day-to-day operations.) That was the reason most dirigibles were designed with their engines hanging outside and away from the exterior frame. Such arrangement worked to keep the engines' heat and any sparks as far away as possible from the gas bags.

The United States Navy's answer to the problem was to use the second lightest gas in nature, helium. Helium is non-explosive, yet provides 97 percent of the lift given by hydrogen. However, at the time it was found in only place on earth, near Fort Worth, Texas, and was so expensive, at \$120 per 1,000 cubic feet, that the usual practice of valving off could be utilized in only extreme situations.

Those two properties of helium were to dog the U.S. Naval Airship Program throughout its history. While three percent less lift doesn't seem like much, that difference made it necessary to stretch the length of most U.S. dirigible designs and also worked to decrease their load-carrying capacity. Much more damaging, though, was the high cost of the gas. During the tight-budget times of the 1920s and early 1930s, every effort had to be made to save as much helium as possible. In practice, that meant the airships had to be kept below 4,000 feet, lest they exceed pressure height and have to valve off some of their precious gas. That low operational ceiling kept them at the very altitude most likely to expose them to severe weather, which, not surprisingly, then became the primary cause of the Naval Airship crashes of the era.



And as if that were not enough, one further problem plagued those first U.S. dirigibles as they were trying to prove their worth to the fleet. That is, in order to help “sell themselves” to successive administrations and the public, the airships were frequently used for publicity flights over cities or fairs. That detracted from their time with the fleet, and led to considerable resentment (over the scarce dollars spent on such frivolities) among both the old “battleship brass” of the navy and its newly emerging carrier advocates.

## The Akron and The Macon

While other airships under naval insignia had actually preceded the *Akron* and *Macon* into the air, it's those two dirigibles which can be considered the first true American-designed airships. And the technological progress they embodied was considerable.

Foremost was the fact they contained an in-hull hanger deck, each capable of housing five single-seat aircraft. Those planes (see sidebar) were equipped with a hook-on apparatus above their top wing which allowed them to engage a device called “the trapeze,” which was lowered, crane-like, beneath the hull of the airship. Once hooked onto the trapeze, the plane was lifted into the airship, rehooked to an overhead trolley within the hangar, and moved to its own storage place for servicing. (And, of course, the reverse of the procedure was used to launch them.)

Further, the planes had their regular, fixed landing gear removed for the duration of their stay on the airship. Since their operational time was to be spent over water, the wheels weren't needed, and their removal increased both airspeed and range.

The mission of the planes was neither defense nor attack, but scouting. In those pre-radar days, the planes were sent out from the airship at a 60° angle to its course, and after a certain period of time, were flown back to it along a zig-zag course centered on that same path. Utilizing the planes in this way, one of the airships could effectively scout over 150,000 square miles in a day — the equivalent of what not one, but *five*, squadrons of cruisers would be needed to accomplish in the same time.

Since there was no chance of the helium exploding due to a stray spark, the engines of the two airships were kept within their hulls. This allowed for better streamlining and higher speed, as well as easy maintenance in flight. The drive arrangement of the propellers was such that the entire mechanism could be rotated 180°, and by rotating their propellers, the *Akron* and *Macon* could take off vertically and even fly backward. While that capability was only rarely used, the fact remains these two airships were the first operational aircraft capable of vertical take offs and landings.

At 785 feet in length, and containing over 7 million cubic feet of helium, the pair were among the largest aircraft ever built. They were able to cruise at 80 mph, and had a unique “Water Recovery System” along their hull sides, which enabled them to reconvert the water vapor in the engine exhaust back into liquid. This, in turn, allowed them to make their own water ballast to replace the weight lost as engine fuel was consumed.

Also unique was the provision of a secondary, aft control booth in the bottom of the tail.

Strides were also made in the ground handling of the behemoths. A miniature railroad was emplaced at their hangers, allowing them to be brought in or out in otherwise prohibitively windy conditions.

And finally, a specially modified tanker ship, the *U.S.S. Patoka*, had its on board mooring mast lengthened and strengthened, enough to allow both airships to moor on it while at sea. The idea was to replenish the airships “on station,” while they continued scouting operations. Successful moorings were soon made at Havana and the Canal Zone.

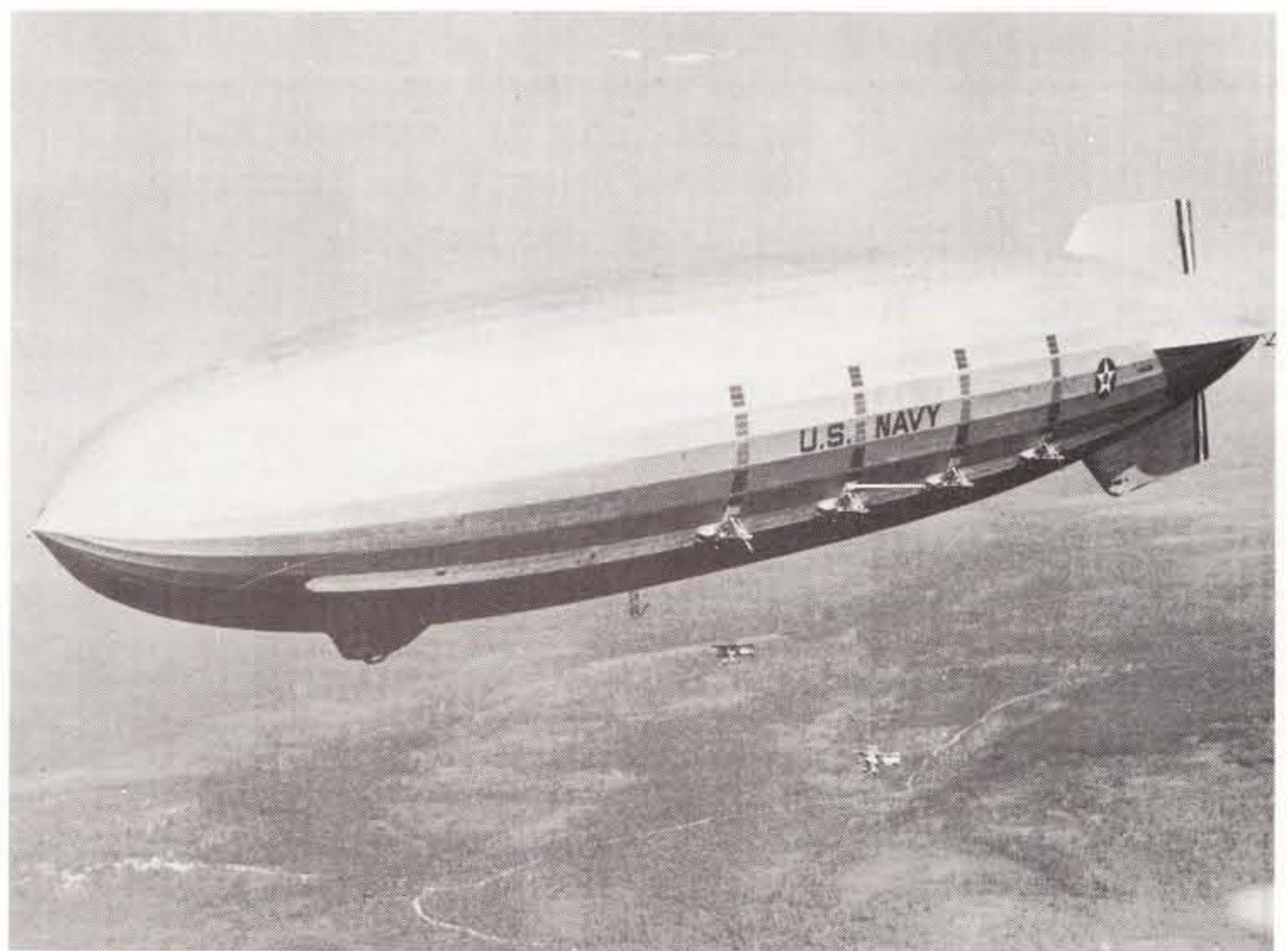
## Loss of the Akron

The main base for the twin ships was poorly located at an air base in Lakehurst, New Jersey. That spot was badly picked, first off, because most of the U.S. fleet exercises of the day took place off the west coast. And, second, Lakehurst's location put the ships in the direct path of almost every major weather front entering or leaving the continental United States.

That second factor led to the loss of the *Akron* in April 1933, when it crashed at sea off the New Jersey coast, while trying to maneuver around an approaching storm. The airship was first lifted well above pressure height, then plunged back toward and into the sea, by what we now call “wind shear.” The loss of life was almost total, with only three crewmen surviving their dunking in the cold waters.

The *Akron's* crash devastated the lighter-than-air community within the service in several ways. Not only was the loss of so many experienced crewmen a blow, the complete destruction of the airship itself gave ammunition to those opposed to further development of military dirigibles.

It was thus left for the lone *Macon* to prove the validity of the “Flying Aircraft Carrier.” But after the *Akron's* destruction, she was treated with kid gloves, and kept from any possible harm in the air, real or imagined. This led to her being kept ridiculously close to all the fleet exercises she participated in, and the development of an



The U.S. Airship *Macon*, with its trapeze lowered, about to hook-on some of its planes.



### Table: *Macon/Akron* Data

#### Crew Size (for both)

Total Complement: 16 officers, 75 enlisted  
 Flight Crew: 10 officers, 50 enlisted  
 Pilots: 4 officers  
 Mechanics: 15 enlisted

#### Dates of Service

	<i>Akron</i>	<i>Macon</i>
Christened:	8 Aug. 1931	11 Mar. 1933
Maiden Flight:	25 Sept. 1931	21 Apr. 1933
Commissioned:	27 Oct. 1931	6 July 1933
Lost:	4 Apr. 1933	12 Feb. 1935
Survived:	3 survived out of 76 on board*	81 survived out of 83 on board

\*The vast difference in survivor ratios is attributed to the difference in water temperature at the two crash sites. Wiley was one of the survivors of the *Akron's* crash.

attitude among her officers and crew that she must run for home whenever the weather threatened, be it storm, or just fog, or even night.

Kept too close to the fleet, the *Macon* came to be used for strictly "tactical" scouting — a mission for which she was never designed. That is, an 800-foot, shiny silver

cigar, floating 2,000 feet above the center of the fleet was hard to miss. In fleet wargames she was usually quickly declared "shot down" by the umpires, and soon acquired a reputation for uselessness and timidity.

### Enter Lt. Cdr. Wiley

With the assignment of a new commander to the *Macon*, Lt. Cdr. Herbert V. Wiley, all this changed. An experienced airshipman, Wiley, who had served earlier aboard the dirigibles *Los Angeles* and *Akron*, was determined to prove his airship's usefulness.

Wiley brought a fresh perspective to the *Macon's* operations. After serving those two earlier tours on airships, he'd returned to fleet duty, and there was able to observe the big balloons with a less prejudiced eye than his contemporaries in them. Just before he took command, he'd been serving as the navigation officer aboard the cruiser *U.S.S. Cincinnati*, and had listened to the complaints of the surface officers around him about the airships' poor performance.

Wiley immediately began vigorous drilling of the *Macon's* crew. They practiced night hook-ons with the scout planes, and worked to perfect the use of the then brand new "Radio Directional Homing Device." That device aided the scouts on their return to the mother ship, allowing even longer over-the-horizon missions to be flown (while the dirigible remained higher up and farther away from possible enemy observation).

He then had outboard fuel tanks fastened on the

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belly of the scout planes in place of the discarded landing gear — increasing their range another 30 percent. And Wiley also made creative use of the planes as ballast, sometimes ordering them back on board to help weigh down the airship and thus avoid the valving off of precious helium.

But even more to the point, Wiley set out to prove the airship could function in the strategic reconnaissance role for which they had originally been designed. In mid-July 1934, he got permission to take the *Macon* on an extended training flight over the Pacific.

For several days he'd been following the news reports of President Roosevelt's summer cruise aboard the cruiser *U.S.S. Houston*. That ship had left Hawaii several days before, and careful scouting of her likely course allowed the *Macon* to locate her on 19 July, 1,500 miles due south of San Francisco. Lookouts on the cruisers spotted the approach of two single engine biplanes. Shortly thereafter the *Macon* herself came into view, hooked on her scouts, and then quickly released them again to drop packages near the cruiser. The packages contained the latest newspapers for the President, along with mail specially cancelled by the *Macon's* mail clerk. Though his direct superiors were not pleased by his "misplaced display of initiative," Wiley had proved his point.

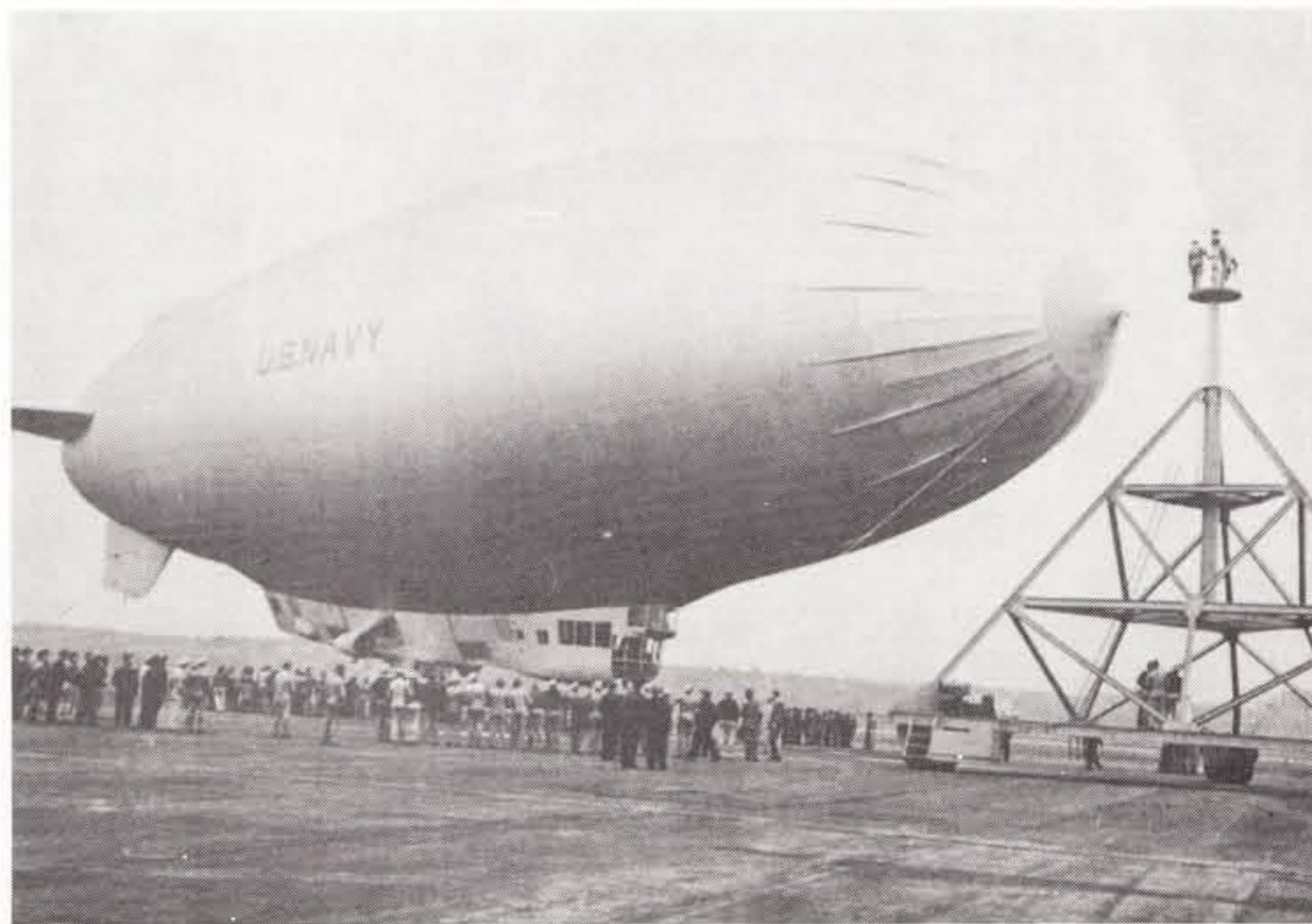
By late in the year, Wiley had honed his crew's skills to the point where he was able to scout exclusively from over the horizon, using only the five planes. In December, during a wargame, the *Macon* proved to be the only craft capable of becoming airborne in a particularly dense fog, and then flew on to locate the approaching "Blue" forces. And later that same month, Wiley again had the pleasure of being the first to locate two float planes from the *Cincinnati* that had run out of gas and been forced to land at sea.

Still occasionally "shot down" during these exercises, usually when ordered to fly too close to the main body of the fleet, Wiley had succeeded in demonstrating the proper strategic role for his airship. And in one important aspect — the nighttime launch and recovery of aircraft — the dirigible had even shown itself superior to its nearest rival, the aircraft carrier. Indeed, Wiley and his crew were planning a mock nighttime dive bombing attack on their arch rival, the carrier *U.S.S. Lexington*, when the *Macon* crashed.

## The *Macon* Lost

On 12 February 1935, while returning from a fleet exercise, the *Macon* was struck by violent wind gusts about 500 miles south of San Francisco. The gusts twisted the ship, causing it to roll, and then tore the upper tail loose from the hull. The base of the tail had been weakened earlier in the transcontinental flight from Lakehurst, while the *Macon* flew over Texas. Now it, too, tore loose, puncturing two gas cells as it did, and releasing 20 percent of the ship's lifting gas. As the *Macon* began to fall, the crew panicked and dumped all the ballast on board. That lightened the ship too much, and she rose beyond pressure height. That ascent in turn forced the valving off of so much gas, whatever chance of recovery had existed disappeared, and she fell into the sea.

The *Macon's* destruction effectively killed the Naval Airship Program. Plans for other airships were made, but



A World War II-era U.S. Navy blimp, the "M-1," shown at the time of its maiden flight, on 16 October 1943, near Akron, Ohio.

none were funded or built. One of the most interesting aborted designs was for a ship the size of the *Macon* and *Akron*, but with internal hangar space for servicing only one plane at a time. Nine exterior "perches" were, however, provided outside the hull, designed to hold a full squadron of dive bombers, all of which could be launched in a single "salvo." The presence of such an airship at early World War II naval battles, such as Coral Sea, makes for interesting speculation.

The bottom line on the pre-World War II Naval Airship Program, though, comes out to nothing more than missed opportunity and failure. While the dirigibles of those days offered real technological progress in the 1920s and early 1930s, by the time of the *Macon's* crash, they were being rapidly overtaken by the development of the aircraft carrier and airplane. The B-17 was already being planned, and seaplanes soon boasted a 1,000 mile range, with top speeds over twice that of airships.

## World War II Blimps and Beyond

Even with the loss of its last rigid airship, the Navy did not totally give up its lighter-than-air program. But it was with non-rigid airship designs, or "blimps," that the program henceforth moved forward.

It is a not well-known fact that not one U.S. ship was ever lost from a blimp-escorted convoy during all of World War II. Indeed, it was the establishment of airship bases in Africa and South America that began the process of effectively closing the Atlantic Ocean to Hitler's U-boat "Wolf Packs." Combining relatively high speeds with long "loiter times" enabled the blimps to discourage approaches by hunting submarines in the first place, and then keep shadowing them once they were sighted. It's those same characteristics which have reinterested the Navy in lighter-than-air craft today.

Unlike the rigid airships, the non-rigid designs rely on the overall shaping of their skin envelope to give them the familiar cigar shape, with only small assistance from aluminum nose rings. The nose ring also helps secure the blimp upon landing. The rest of the landing gear consists of a single, large wheel underneath the gondola (or "con-



## Sparrowhawk!

The F9C Sparrowhawk has always fascinated aviation buffs, especially those whose interests lie in the "Golden Age" of aviation development, the 1930s. Certainly the fact it served as the hook-on aircraft for the airships *Akron* and *Macon* has a lot to do with that, but the design of the planes themselves adds to their mystique. They represented the graceful apogee of biplane engi-

neering, with gull wings and spatted wheels that added to their beauty. The colorful markings they sported also appeal to the historians and individualists among their many admirers.

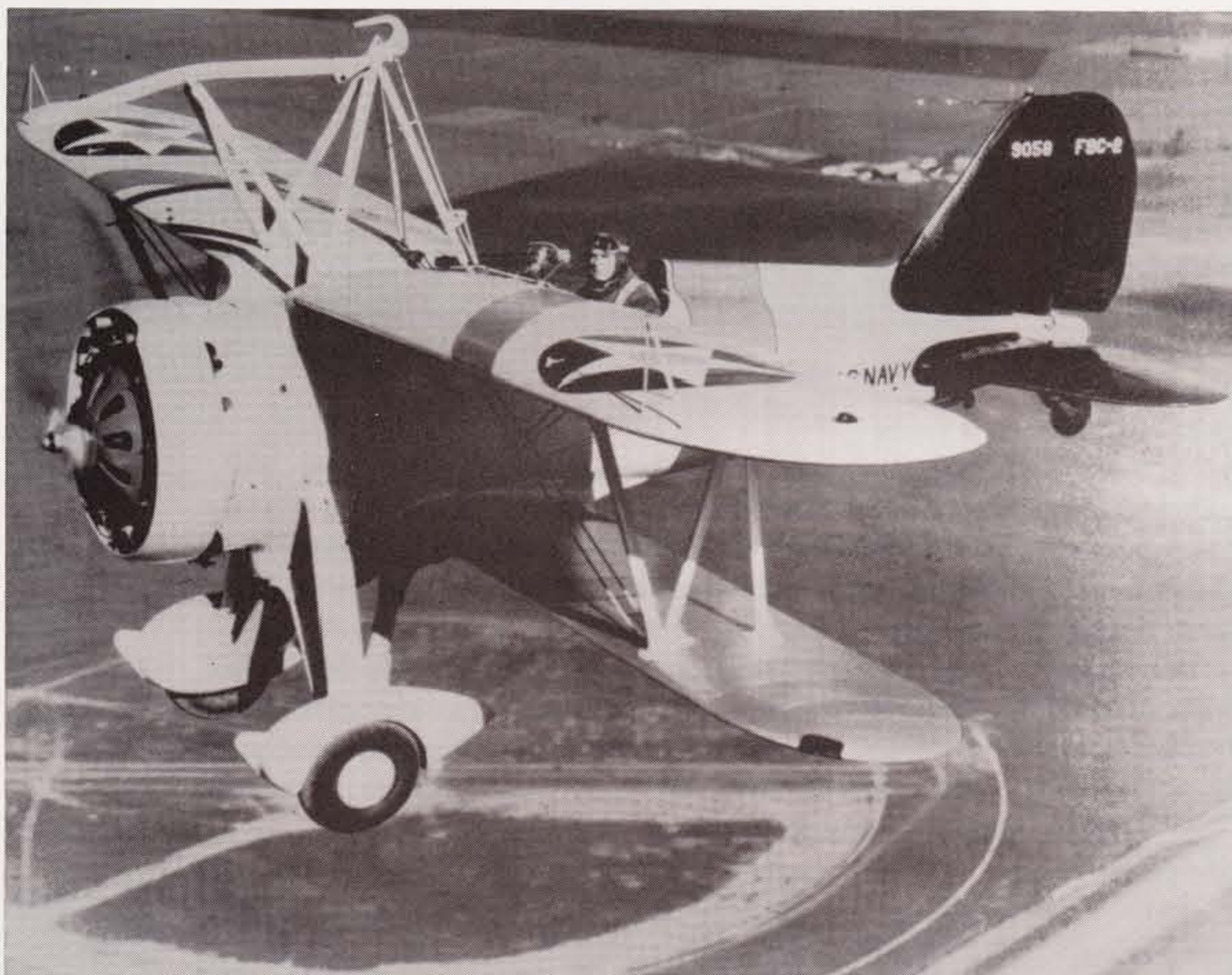
The original XF9C-1 was designed to fulfill a navy contract for a new small carrier-launched fighter. While it proved a robust and fast fighter, its landing speed was considered too high for carrier operations, and the top wing blocked too much of the pilot's forward view when taxiing and landing. While the plane was accepted as "experimental" and the contract paid (\$75,000), it was decided not to enter production with it as a series type. Some months later, though, the F9C, along with several other experimental types, were sent for deployment as high performance aircraft to be used in the hook-on experiments conducted at Lakehurst.

Because of much bickering and day-dreaming, no firm decision on hangar arrangement was reached by the time the construction of the airships was begun. Almost by default, then, a "T" shaped opening was left in the hull exterior, and a 60x70 foot hangar space was provided inside. That T-shaped opening of the hangar literally decided what the acceptable dimensions of the airships' aircraft could be. The "T" measured 30x24 feet, and not many planes were capable of fitting through it — the F9C was one of those few. It was not considered an ideal plane for the job because of its heavy weight, but the fact remained it was available.

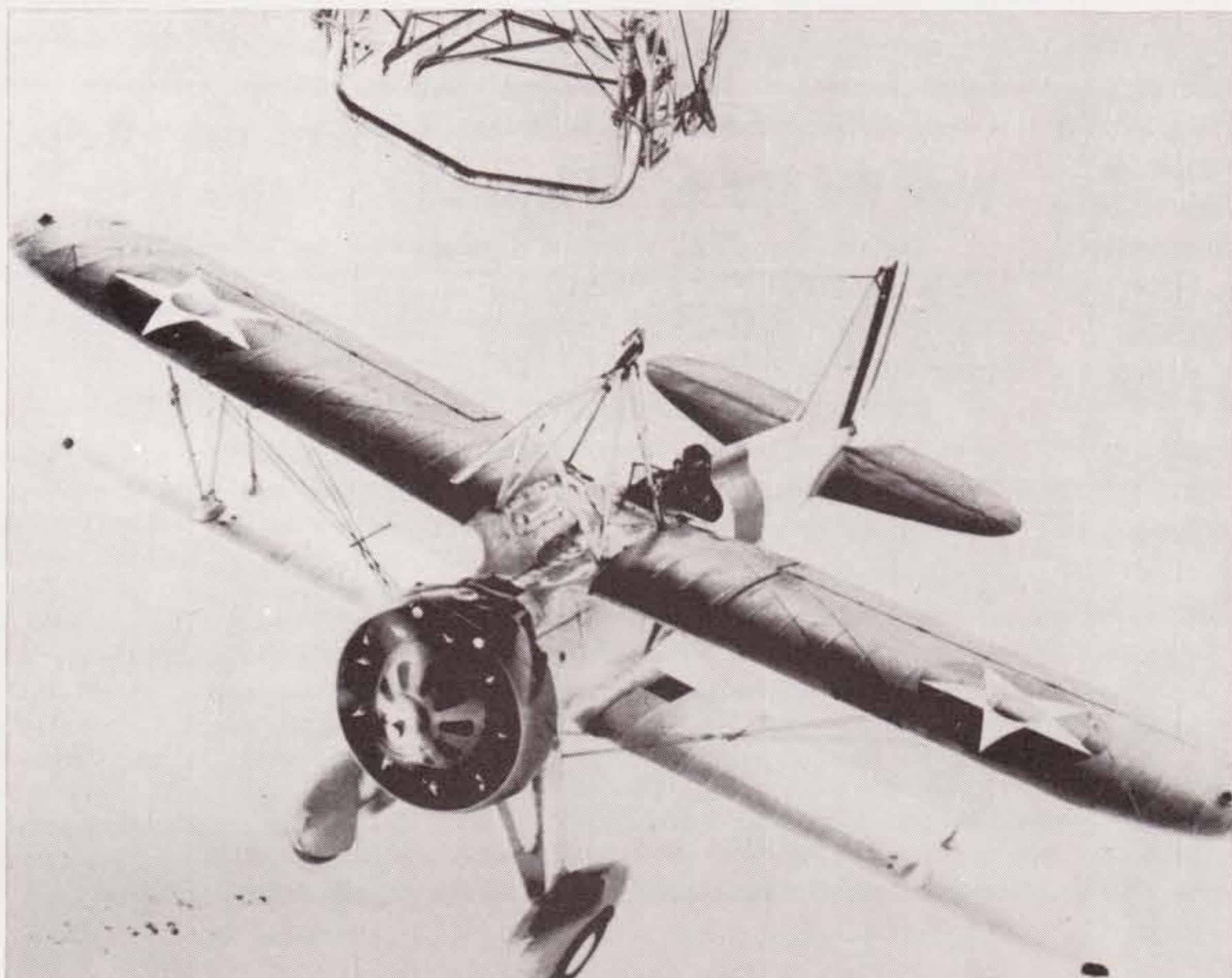
Accordingly, a second contract was issued for an improved version, the XF9C-2. The top wing was raised to improve the pilot's visibility, and was then bent down in the middle to meet the fuselage and thus maximize structural strength. A bigger engine was fitted, and when the sky hook was attached the plane weighed 250 lbs. more than its predecessor. Still, the new model was judged satisfactory and accepted for production.

Forty-five days later, six machines had been manufactured at a cost of \$23,000, each, and designated F9C's. One further modification was made when it was found the tails needed to be lengthened in order to counteract the turbulence caused by the "trapeze" hanging below the airship.

The Sparrowhawk weighed 2,770 lbs. loaded and fueled, carried two .30 caliber machine guns, and was capable of 177 mph with fixed landing gear attached. It quickly became standard operating procedure to remove the landing gear once the planes were aboard an airship, which



*The F9C-2 Sparrowhawk.*



*A Sparrowhawk approaches its mothership's trapeze.*



increased their speed to 200 mph, and allowed for a range of 500 miles when an auxiliary gas tank was fitted in their place.

The *Akron's* heavier than air squadron leader, Lt. D. Ward Harrigan, was a 1922 Naval Academy graduate who had been assigned to the then new aircraft carrier *U.S.S. Lexington*, as one of the first of the naval aviators on board. There he helped develop many of the procedures used aboard the aircraft carrier as she and her planes were first brought on line. Harrigan brought that experience and drive with him to the *Akron*, and was responsible for much of the innovating that went on there.

Harrigan's wet-navy experience made him see the big airship as just another kind of aircraft carrier, and he immediately set out to turn her into one. He advocated the hangar be used only to service the planes, and that they then be run out on a monorail trolley to a "flight deck" position alongside the hull of the airship. From there they could be launched *en masse*, or kept at the ready for whatever opportunities might arise. Unfortunately, the budget cuts of the deepening Great Depression prevented his ideas from being seriously pursued.

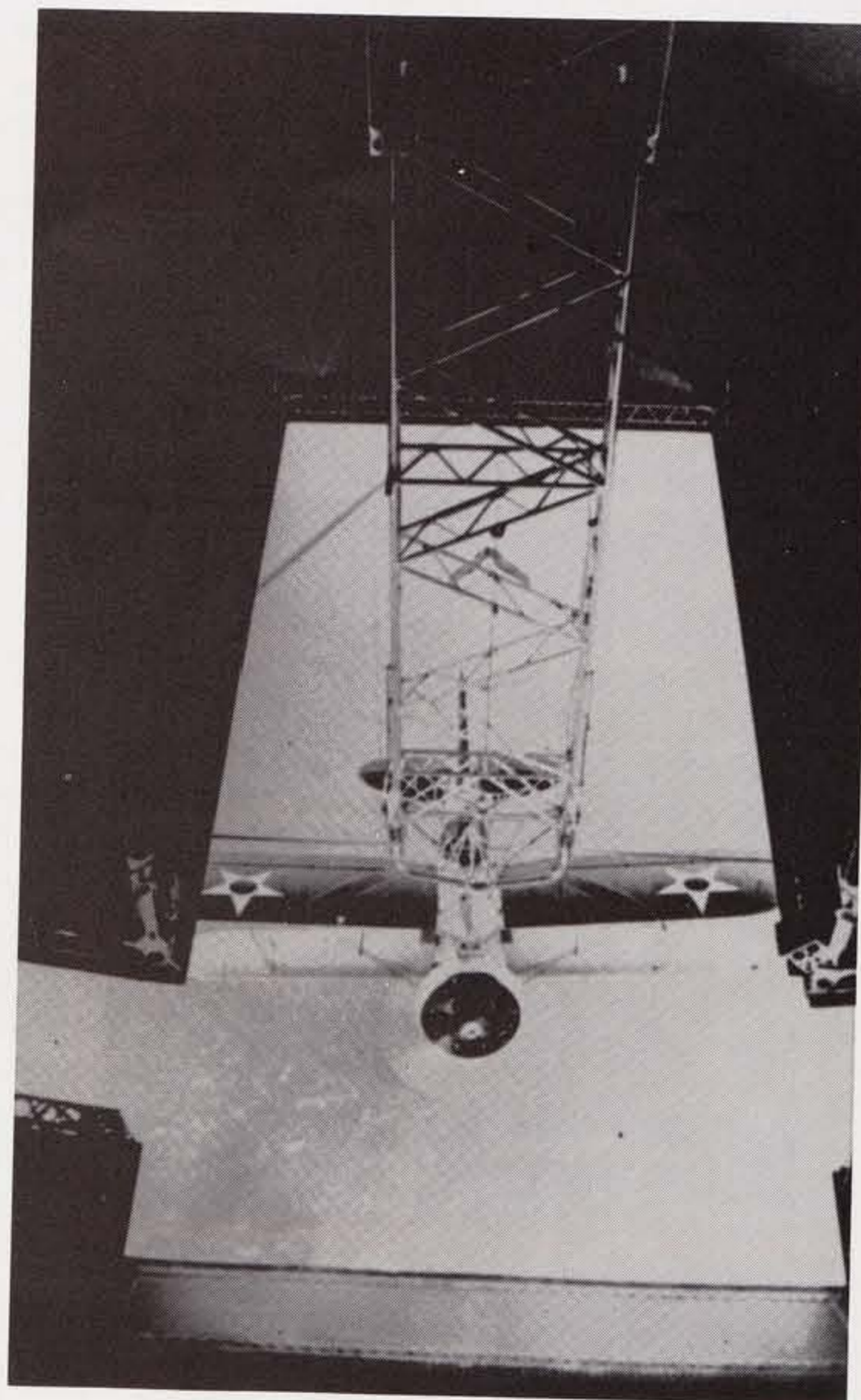
He did, however, manage to successfully oversee much of the early training of the airship's miniature squadron. They found that hook-on landings were much easier than more conventional ones. Matching the relative speeds of the "landing" plane and mothership, in fact, made hook-ons a pilot's delight. Harrington also instituted night landings on the airship, using nothing more than hand held flashlights to accomplish the task. Indeed, they found night hook-ons still easier to make, due to the usual calmness of the air then.

At Harrington's suggestion, each of the planes was given a distinctive "recognition" paint scheme. Each had its own color code, with a two foot fuselage band that was repeated on the engine cowl and wheel spats. Additionally, each section leader had a large chevron painted on the top wing. But when those in charge at the Naval Bureau of Aeronautics found out about these anarchic paint jobs, they reacted vehemently against such non-regulation work. Eventually the bureau prevailed, and the *Akron's* planes joined the fleet carrying only the regulation and staid black trim.

For a short while in 1932, though, Sparrowhawks took to the air sporting "Royal Red" tails and "True Blue" fuselage stripes, with "Lemon Yellow" wheel spats. And they landed at night, 20 years before their carrier-borne brethren were capable of it, and in so doing, carved for themselves a unique niche in the annals of aviation history.

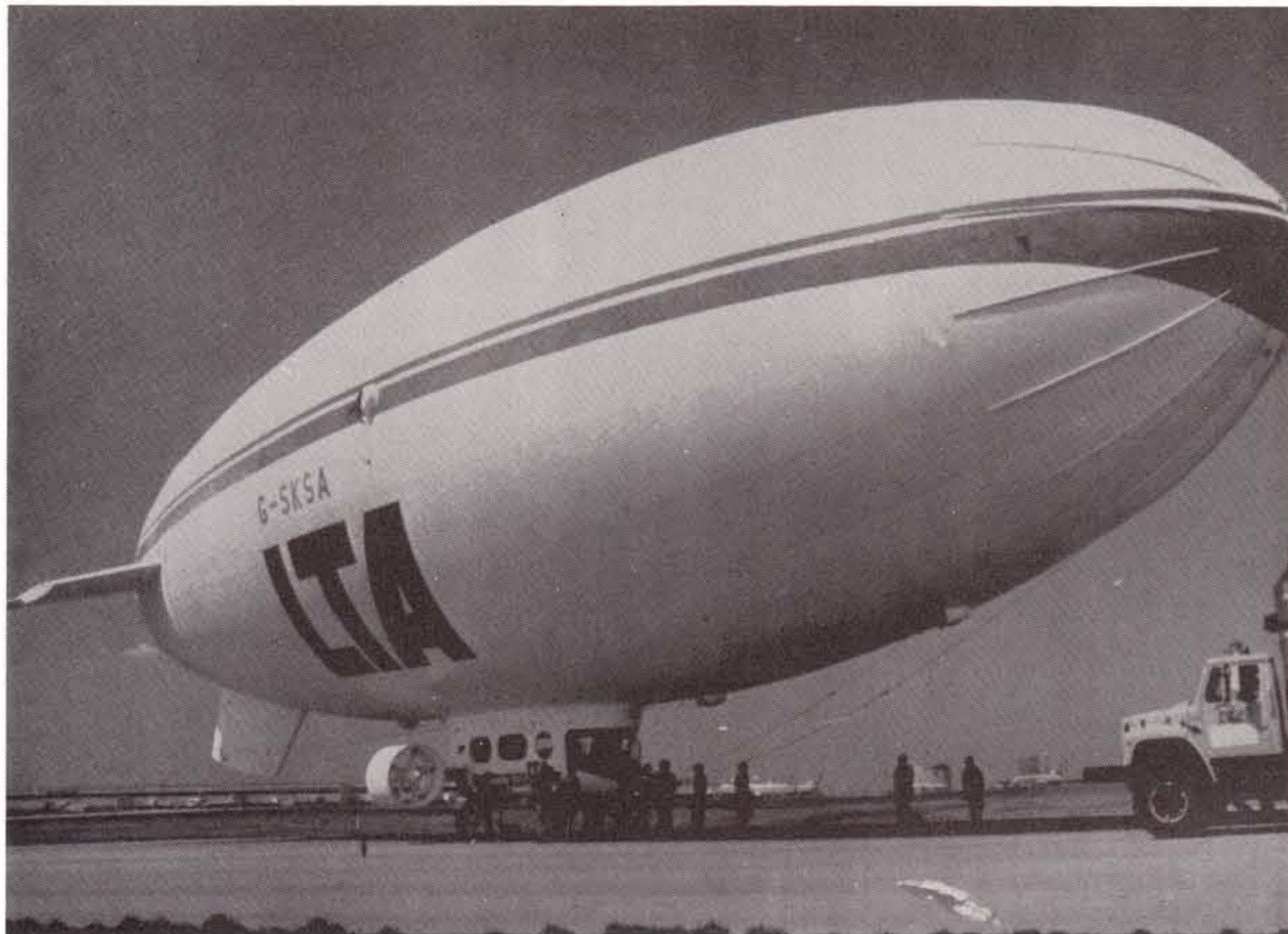


*Hook on!*



*Reeled in.*





*One of the new generation of experimental blimps ordered by the U.S. Navy in the early 1980s. Budget cuts have stalled this new development program, however, despite its early and promising successes. The blimp shown here is presently owned and used by the Golden Nugget Hotel and Casino for advertising and promotional flights.*

trol car"). The gondola is hung from wires called "cantenaries," which are fastened to the inside top of the blimp's envelope in such a way the car appears to part of the outer skin.

In order to forestall the valving off of excess helium as that gas expands or contracts within the main envelope, modern blimps utilize two air chambers, also within the envelope, to compensate for the changing volume. That is, varying the size of the "Balloonets" allows the airship to control the available volume inside its main envelope, despite changes in the helium brought on by altitude or temperature variations. The scoops used to force air into the balloonets can be seen just behind the propellers of each engine on a blimp.

In addition to helping maintain the blimp's shape, the air in each of the balloonets can be used to trim the flying attitude of the ship as it makes its way through the sky. The deflation of the rear balloonet, and the inflation of the forward one, for example, forces helium to the rear of the blimp, making its tail rise and nose point down, which allows altitude control without the use of elevators.

In general, modern blimps maintain their in-air status in full conformity with Newtonian Physics, but flying in one can be unnerving for those used to fixed-wing aircraft. Blimps are capable of climbing at angles that would stall most planes, and are almost "crashed" toward the ground at extreme angles when it comes time to land.

After World War II, blimps continued to enjoy a useful service life for almost another two decades. They were used to extend the range and effectiveness of the United States' "Advanced Early Warning System" (AEW), by carrying large radars to sea in the North Atlantic. Rotating antennas were carried inside the envelopes, and height-finding radars were placed atop the blimps, to help close gaps in the AEW system's coverage.

These large ZPG-3w class blimps set records for flight endurance that still stand today. Over 400 feet long, and displacing more than 1.5 million cubic feet of helium, these airships were powered by two 1,500 HP Wright Cyclone engines, which gave them a top speed of 80 mph. In 1957, one of these blimps made an unrefueled flight of 264 hours, covering 9,500 miles. And this was not a "P.R. flight" to gain publicity, but a real mission conducted by a fully operational airship, manned by a complete crew, and sent into the worst North Atlantic winter weather that could be found, all in an effort to realistically test blimp capabilities.

But despite their successes, by 1963 the last of the operational airship squadrons was deactivated. The Navy command felt the newer, faster jet aircraft then coming through development would be able to do a better job.

By the mid-1980s, however, that same Navy command was coming to realize an aircraft's ability to stay on station ("loiter") while carrying a useful payload was often more important

than its speed. Accordingly, in June 1987, a contract was awarded to Westinghouse Airship Industries for an operational development model of a "Sentinal 5000" blimp. Originally projected to carry the E-2c "Hawkeye" electronics array, and operating between altitudes of 5,000 to 10,000 feet, this new airship was to provide early warning for naval task forces. And since then there have been refinements in the electronics package, most notably, the addition of a phased array radar antenna, coupled to an on board computer. Both of these work together to dramatically increase the range and time at which "early warning" can be given.

Further, electronics is not the only area in which modern technology has affected the blimp. Modern fabrics will be used for the envelope, and new composite materials for the gondola, fins and engine nacelles. The gas and air bags inside the envelope will contain Mylar composites, as well as Kevlar and Nylon, in order to keep weight down and improve resistance to helium leakage.

Propulsion will resemble that used in modern main battle tanks, with transversely mounted diesels in the aft portion of the gondola for cruising economy, and a turbo-prop on the center line for high speed dashes during combat operations. The diesels will drive vectorable, pylon mounted, and ducted fan propellers, which will add greatly to the blimps' maneuverability. Tilttable through 180°, the ducted fans will allow the blimp to take off and land vertically.

The 425-foot envelope, containing 2.5 million cubic feet of helium, will allow the new airships to cruise at 40 knots for 60 hours. Keeping to the top speed of 70 knots would reduce time on station to only 18 hours. Refueling, however, is possible from any surface vessel equipped with a helicopter in-flight refueling system, or by the

*(Continued on page 62)*





0F 1/5 0/0/3 Mahan - DD17 2 12-Torp 126	0F 1/5 0/0/3 Mahan - DD20 2 12-Torp 126	2F 1/3 0/9/4 Chicago - CA29 5 0-Torp 126	2F 2/10 0/9/4 Astoria - CA34 5 0-Torp 126
0F 1/5 0/0/3 Mahan - DD18 2 12-Torp 126	0F 1/5 0/0/3 Mahan - DD21 2 12-Torp 126	2F 2/10 0/9/4 Quincy - CA39 5 0-Torp 126	2F 2/10 0/9/4 Vincennes - CA44 5 0-Torp 126
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96 2/9 0/0/0 Enterprise - CV6 3 126	0F 6/15 0/0/6 Atlanta - CL51 3 8-Torp 126	0F 1/5 0/0/3 Mahan - DD22 2 12-Torp 126
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*One of the new generation of blimps being tested for service in England.*

simple expedient of hoisting the needed fuel and supplies up to the blimps, as was frequently done during the 1950s. A 10-15 man crew, housed in a two-deck gondola with eating and sleeping areas, will enable the blimps to keep station for weeks at a time if necessary.

All of this comes together to create an airborne platform with a very low radar signature, and which can provide the means to carry out a variety of missions. In addition to their ability to perform the early warning mission, the new blimps can tow anti-submarine warfare (ASW) arrays many miles ahead of a task force, or operate dipping sonars from stationary positions.

The long loiter time the blimps will enjoy would overturn the submarines' favorite tactic of patiently waiting out their aerial opponents. The ability to carry large weapons payloads will also allow the blimps to continue the attack longer than more conventional aircraft. These capabilities would also make them ideal for carrying out mine warfare countermeasures, especially when employing towed minesweeping sleds or remotely controlled underwater robots. While blimps cannot match a helicopter's agility at search and rescue, they can help supplement it, particularly at longer ranges or in violent weather. Their lack of rotor "downwash" makes them good vehicles for pulling people from the sea.

## The Future

It takes only a small leap of the imagination to see the new blimps as coming to embody something more than just the platform types projected so far. Their use as supplemental Combat Information Centers for task forces is another obvious role. Their ability to loiter and monitor ongoing combat, act as relay for communications, and alert the task force to incoming threats, make it a good choice as *the* place to be during a battle.

But some blimp proponents are asking why stop there? Why not arm blimps and use them offensively? Carrying a store of anti-aircraft and anti-missile missiles, what would prevent such airships from ranging ahead of task forces in early warning picket lines? And a small load of cruise missiles could then provide a real surprise for an enemy task force not expecting an attack from so new and

different a quarter. The "stealth" characteristics of blimps would enable them to attack from unexpected positions, particularly when using over-the-horizon targeting.

And contrary to popular belief, blimps will not pop and plummet into the sea if hit by enemy fire. The pressure inside the gas bags is actually below that of a flat tire, typically less than .05 pounds per square inch. When a gas bag is punctured, the problem comes from outside air actually leaking *in* and contaminating the helium, which eventually causes a loss of lift. The soft skin characteristics of blimps might not even set off the warheads of some impact or proximity fused weapons.

And finally on this, the idea comes full circle. Modern blimps could provide "loiter points" for suitable fixed-wing aircraft. An AV-8 Harrier could be launched from the deck of a merchant ship in a convoy, latch onto the blimp and shut its engines down while waiting for the enemy. It could then drop free and enter battle much faster than a similar aircraft still on the deck of a ship. While such arrangements alone could not provide all the needed aircover for a convoy, no task force commander would turn down the added flexibility such loiter points would provide.

Though corresponding growth in size would allow blimps to carry more aircraft, a rigid frame would still be needed to handle more than three. But the presence of two or three aircraft-carrying blimps over a convoy would greatly complicate any enemy's attack plan, and potentially free a sea-based aircraft carrier, otherwise needed for escort, for use elsewhere.

Due to funding cuts and program rethinking, the return of the blimps to service has slowly dipped down the priority list of Navy programs. The earliest dates now mentioned for the beginning of operational tests are "around" the 1992-93 "timeframe." The Coast Guard has also given up its interest in the blimps for search and rescue missions, due to the same considerations. Interest in blimps remains strong elsewhere around the world, though, with both Britain and France testing them for use in the roles of coast guarding, search and rescue, and customs inspections.

All told then, given these airships' unique capabilities, it doesn't seem they will be absent from military roles in the sky for much longer. Various missions' needs for long loiter times and useful payload, at affordable cost, continually bring the equation back to the airship. No other aircraft offers the same capabilities over as broad a range of performance. Individually, a given type of fixed-wing aircraft may be able to out-perform the airship in a specific role, but when the larger picture is considered, the blimps show their advantages.

And finally, on a more purely human level, the airship offers an attraction no other warplane in the world can match. That is, the big, goofy smiles they cause to appear on anyone's face who sees one fly over — the romance of the airship. There is something inherently humorous about seeing one of these craft waddle through the air, making its unhurried way across the sky. The wind seems to push it easily back and forth, and the engines don't labor to keep it aloft. Nor do they fly straight and level, but seem to slowly bob up and down, like some great skyborne whale swimming slowly by as it watches those of us who live at the bottom of the ocean of air. ★





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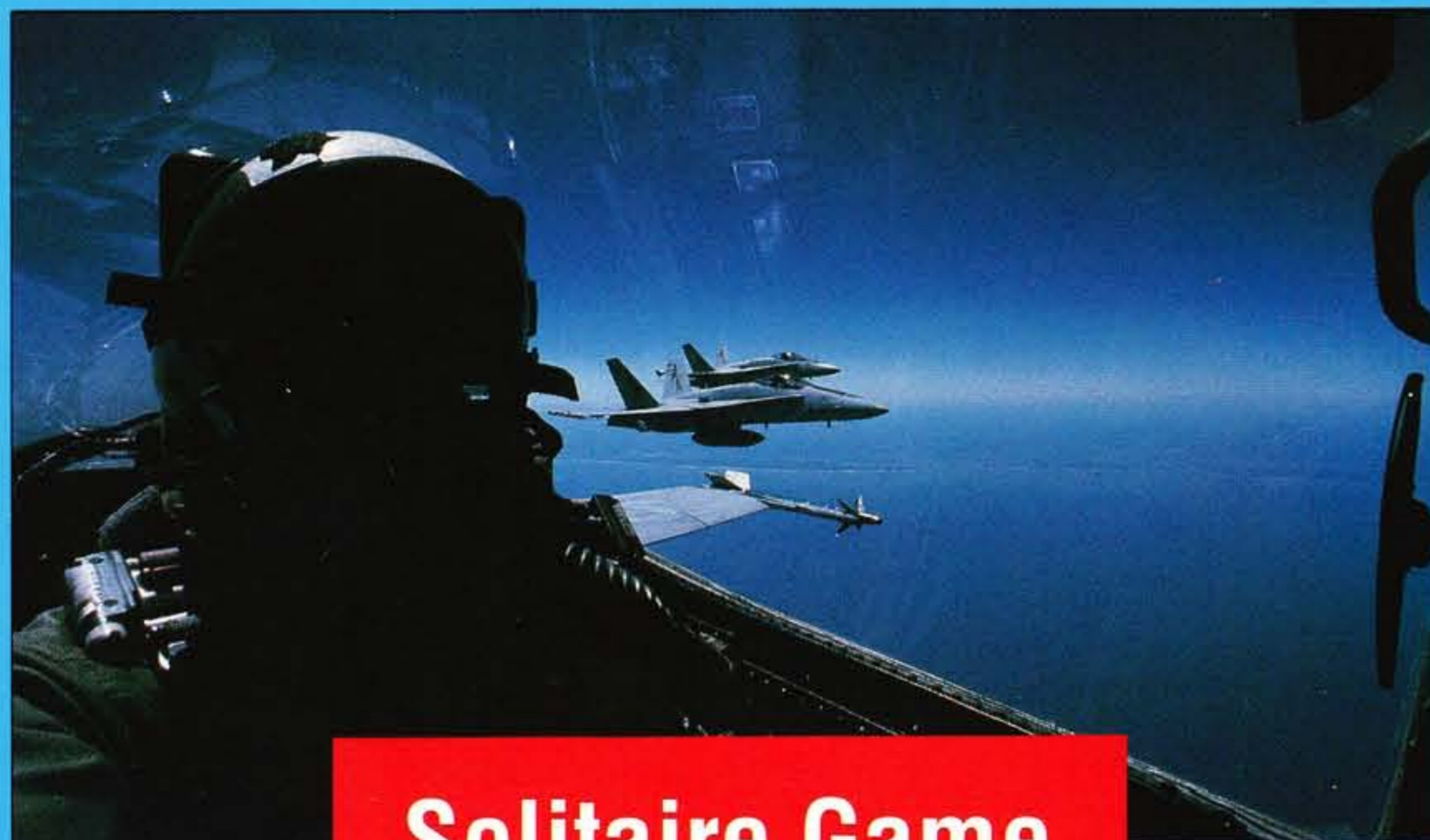


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SOCA 38	JUNIN 18	VANG 1-5	CAST 1-2-5	CHIC 7	CHAC 27	WARN 9	AZU 1-2-5	MURG 50	CAMPE 5
1-2-5	2-5	1-5	1-2-5	2-5	2-5	1-2-5	1-2-5	1-2-5	2-3-5

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1-2-5	2-5	1-5	1-2-5	1-2-5	1-2-5	1-2-5	1-5	1-5
2-1-1-4	2-1-1-4	2-1-1-4	2-1-1-4	2-1-1-4	4/7	21	20	16
2-1-1-4	2-1-1-4	2-1-1-4	2-1-1-4	2-1-1-4	1-2-5	1-2-5	1-2-5	1-2-5

Marz 500 HQ	Peña 500 HQ	Bunzer 500 HQ	Peñar 500 HQ	Kundi 500 HQ	Toro 500 HQ	USED	USED	USED	Bilbao 500 HQ
1 0 12	1 0 12	1-1 12	2 + 1 12	3-2 12	4-2 12	0 0 12	0 0 12	0 0 12	1 + 2 12
SUPPLY 4	RADIUS	ARMY ?	CMDR ?	10	10	0 0 12	0 0 12	0 0 12	1 + 2 12

4	4	4	4	4	4	4	4	4	4
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x3	x3	x3	x3	x3	x3	x3	x3	x3	Rainy MONTH Season
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### CHACO

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2-6	2-6	3-6	6-4-6	2-1-6	2-1-6	2-1-6	2-1-6	2-1-6	2-1-6
21	20	15	11	BN 40 3-2-6	SAUC 10	TUYUT 13	SM 7	VR 5	COR 3
2-6	2-6	2-6	2-6	3-2-6	2-6	1-2-6	1-2-6	2-6	2-6

19	22	39	28	40	36	R NU 2-6	YAC 2-6	ITA Y 2-6	30
1-2-6	1-2-6	1-2-6	1-2-6	1-2-6	1-2-6	2-6	2-6	2-6	2-6
2 + 1 12	3 + 2 12	USED	2-1-1-4	2-1-1-4	2-1-1-4	?	?	?	16
2 + 1 12	3 + 2 12	2-1-1-4	2-1-1-4	2-1-1-4	2-1-1-4	?	?	?	1-2-6

SUPPLY 4	E 0 0 12	D 0 0 12	C 0 0 12	B 0 0 12	A 0 0 12	10	Garay 500 HQ	Irraz 500 HQ	Ferna 500 HQ
RADIUS	0 0 12	0 0 12	0 0 12	0 0 12	0 0 12	10	1 + 1 12	1 0 12	1 0 12
4	0 0 12	0 0 12	0 0 12	0 0 12	0 0 12	10	?	?	?
4	0 0 12	0 0 12	0 0 12	0 0 12	0 0 12	10	?	?	?

4	4	4	4	4	4	4	4	4	4
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x3	x3	x3	x3	x3	x3	x3	x3	x3	x3
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COR 3 5-6	VR 5 4-6	SM 7 3-4-6	TUYUT 13 3-4-6	SAUC 10 5-4-6	BN 40 11 6-4-6	11 4-6	15 4-6	20 4-6	21 4-6

ITA Y 30 4-6	YAC 4-6	R NU 36 3-4-6	40 3-4-6	28 3-4-6	39 3-4-6	19 3-4-6
16 3-4-6	1-6	1-6	4-(2)-4	4-(2)-4	4-(2)-4	3 + 2 12 2 + 1 12

Ferna HQ 1 0 12	Irraz HQ 1 0 12	Garay HQ 1 + 1 12	GHQ 10	A HQ 0 0 12	B HQ 0 0 12	C HQ 0 0 12	D HQ 0 0 12	E HQ 0 0 12	SUPPLY 8 RADIUS
ARMY CMDR	8	8	8	8	8	8	8	8	8

8	x 2 4	x 2 4	x 2 4	x 2 4	x 3 4	x 3 4	x 3 4	x 3 4	x 5 4
x 5 4	DEPOT	DEPOT	VPs x1	VPs x10	VPs x100	REPL x1	DEPOT	DEPOT	DEPOT

DEPOT	DEPOT	DEPOT	DEPOT	DEPOT	DEPOT	DEPOT	DEPOT	DEPOT	DEPOT
x2	x2	x2	x2	x2	x2	x2	x2	x2	x2

## BOLIVIA FRONT

LANZA 5 8-6-5	INGAVI 4 6-5-5	ABAR 1 5-4-5	CHUQ 6 5-4-5	COLOR 41 3-4-5	CCB 3-4-5	CAMPO 4-5-5	CAMA 4-5-5	SUCRE 2 4-5	LOA 4 6-5
CAMPE 5 5-6-5	MURG 50 3-4-5	AZU 3-4-5	WARN 9 2-4-5	CHAC 27 4-5	CHIC 7 4-5	CAST 3-4-5	VANG 3-5	JUNIN 18 4-5	SOCA 38 3-4-5

PARI 30 3-5	CHOROL 33 3-5	Perez 3 3-4-5	FLORIDA 12 3-4-5	BALLI 3-4-5	PARA 3-4-5	MONTES 2-3-5	JORDAN 4-5	BENI 4-5	14 3-4-5
16 3-4-5	20 3-4-5	21 3-4-5	47 3-4-5	4-(2)-4	4-(2)-4	4-(2)-4	4-(2)-4	2-1-4	2-1-4

1-5	8	8	8	8	8	8	8	8	8
Bilbao HQ 1 + 2 12	A HQ 0 0 12	B HQ 0 0 12	C HQ 0 0 12	GHQ 10	ARMY CMDR	SUPPLY 8 RADIUS	VPs x1	VPs x10	VPs x100

8	8	8	8	8	8	8	8	8	8
x 3 4	x 3 4	x 3 4	x 5 4	x 5 4	x 2 4	x 2 4	x 2 4	x 2 4	x 2 4
REPL x1	VPs x1	VPs x10	VPs x100	REPL x1	VPs x1	VPs x10	VPs x100	REPL x1	YEAR

MONTH	MONTH	MONTH	MONTH	MONTH	MONTH	MONTH	MONTH	MONTH	MONTH
x2	x2	x2	x2	x2	x2	x2	x2	x2	x2

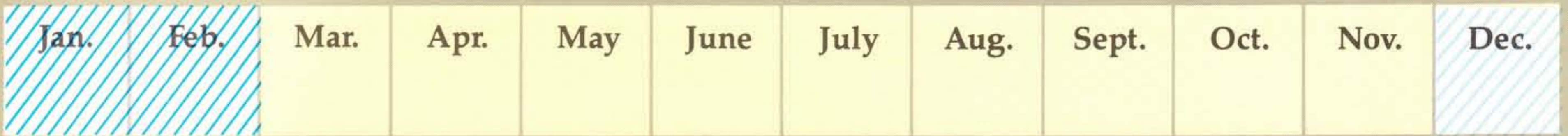
This is a supplement to Issue 12



# THE CHACO WAR



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GAME DESIGN: BRUCE FARCAU  
GRAPHICS: MARK SIMONITCH

## TURN RECORD TRACK

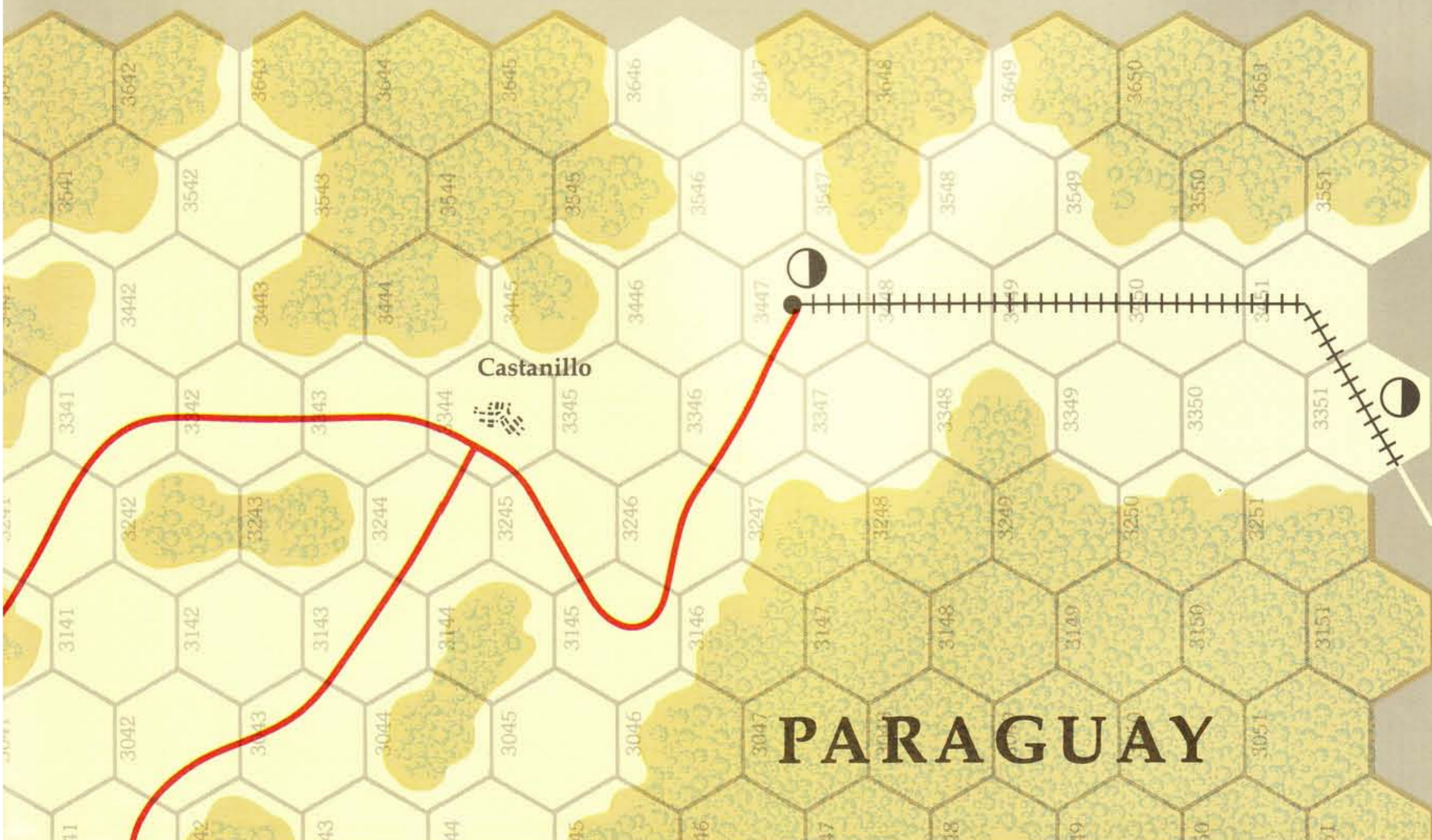
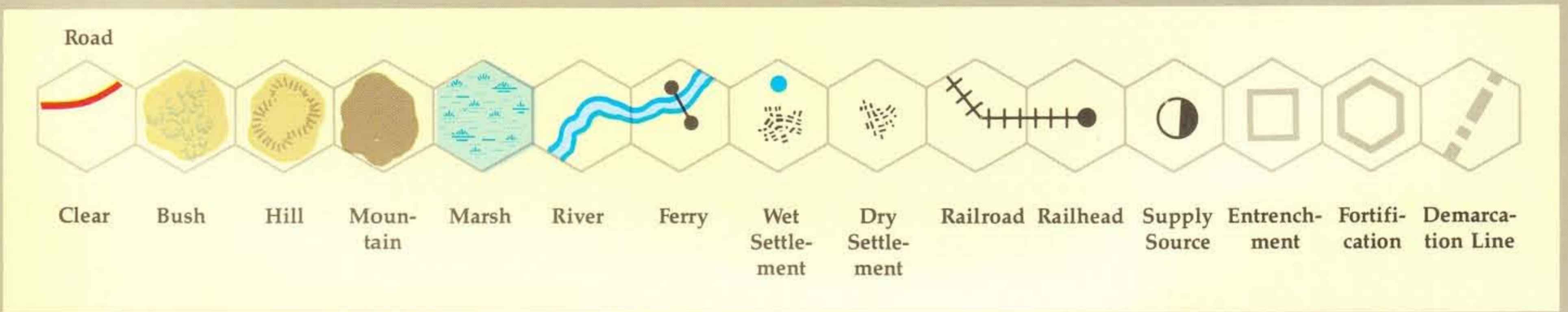


## YEAR



-  = Possible Rainy Season (Die roll 1, 2 or 3)
-  = Rainy Season

## TERRAIN KEY



1 MP





**PARAGUAYAN REPLACEMENT POINTS**

Maximum  
Supply  
Radius

0	1	2	3	4	5	6	7	8	9
---	---	---	---	---	---	---	---	---	---

**6**

**PARAGUAYAN VICTORY POINTS**

0	1	2	3	4	5	6	7	8	9
---	---	---	---	---	---	---	---	---	---

**DEAD PILE**

**AVAILABLE  
TRUCKS**

**AIR MARKER**

**REINFORCEMENT**

**PARAGUAYAN LEADER BOXES**

garribia    Franco    Garay    Fernandez    Irrazabal

Supply Only    Supply Only    Supply Only    Supply Only    Supply Only

**REPLACED  
LEADERS**

**AVAILABLE  
LEADERS**

**B**

**C**

**D**

**E**

**GHQ**





TURN  
1

MP  
1

MP  
1

MP  
1





Toledo

Mennonite Colonies

Corrales

Boqueron

La China

El Cruce

Plantanillos

Moreno

Muñoz

Las Lagunas

Esteros

ARGENTINA



ARGENTINA

VICTORY POINTS

9	8	7	6	5	4	3	2
9	8	7	6	5	4	3	2

REPLACEMENT POINTS

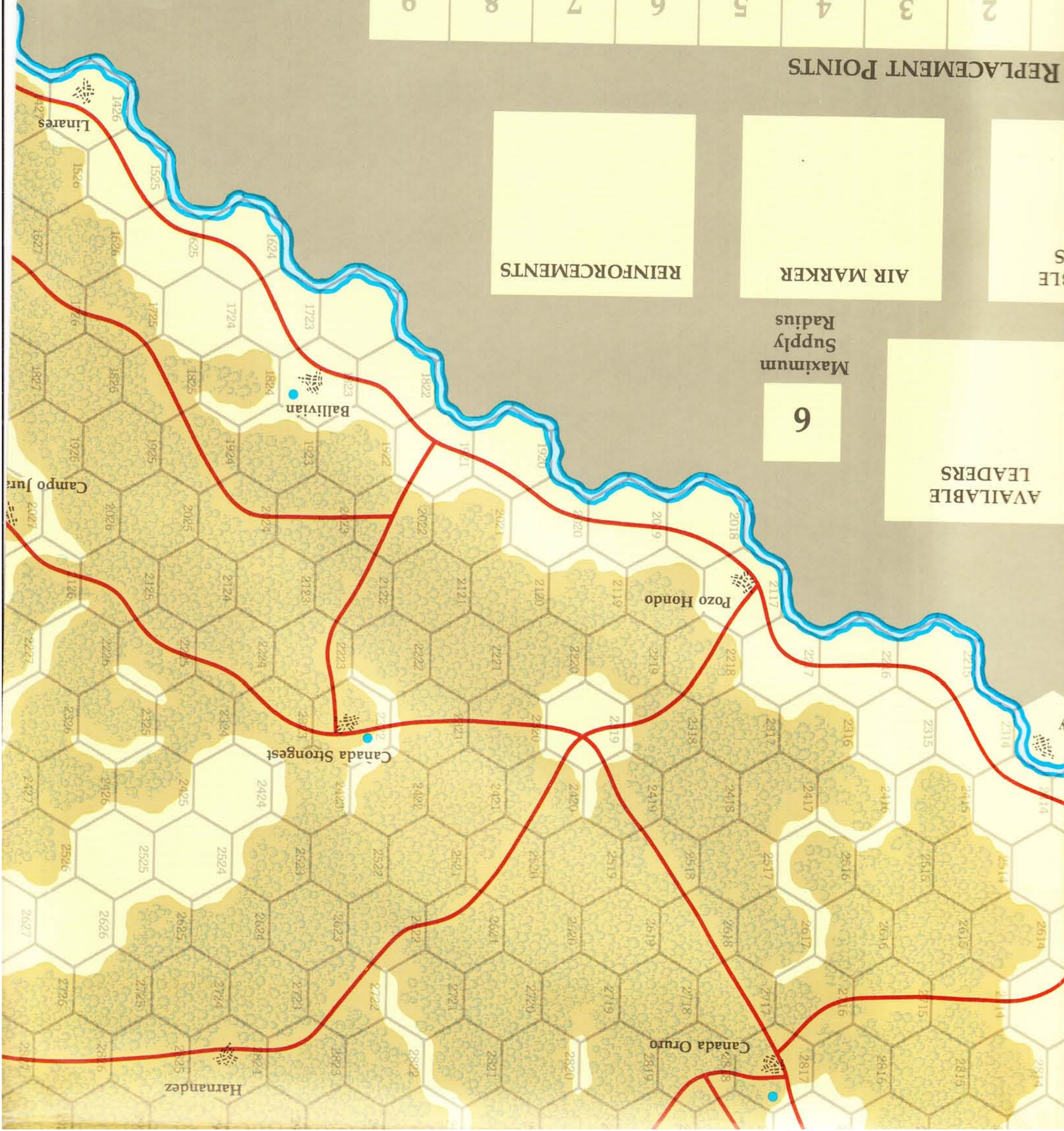
REINFORCEMENTS

AIR MARKER

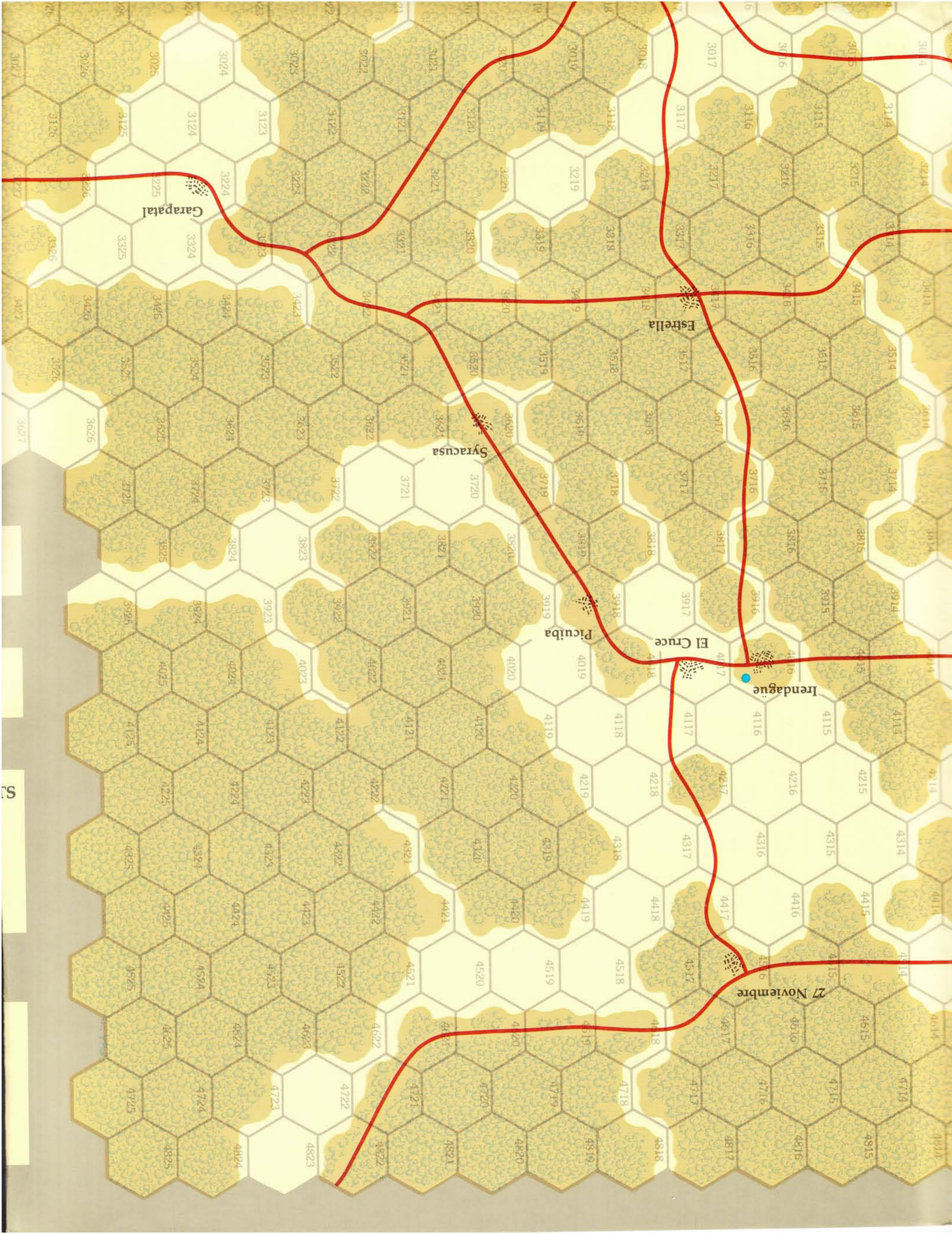
Maximum Supply Radius

6

AVAILABLE LEADERS







Carapatal

Estrella

Syracusa

Picuiba

El Cruce

Irendague

27 Noviembre











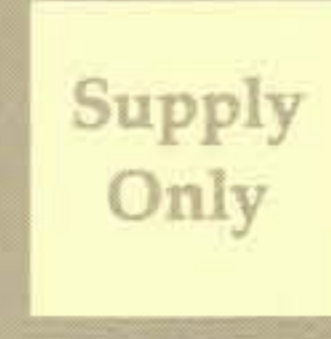
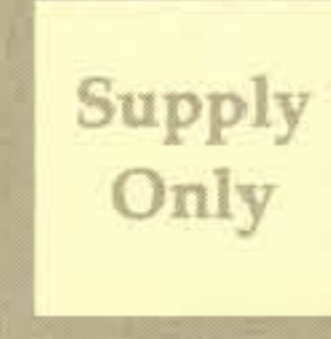



REPLACED LEADERS

DEAD PILE

AVAILABLE TRUCK

**BOLIVIAN LEADER BOXES**

- |   |   |   |  |   |   |
|---|---|---|--|---|---|
|  |  |  |  |  |   |
| Toro  | Kundt   | Penaranda   | Pena   | Bilbao  |   |
|  |  |  |  |  |  |
| Marzana   | Banzer  | Supply Only   | Supply Only  | Supply Only   | Supply Only   |
|   |   | A   | B  | C   | GHQ   |

**BOLIVIAN**

0	1
---	---

**BOLIVIAN**

0	1
---	---



1 MP

1 MP

1 TURN

