

JUNE 1991

Strategy & Tactics

NUMBER 143 US \$13.75

COMPLETE HISTORICAL
GAME INSIDE!

RIO GRANDE THE BATTLE OF VALVERDE

A Richard Berg Game



Also in this issue:

Light Infantry and the Prussian Army
Profile: Ardant du Picq
Incoming Mail
For Your Information

Strategy & Tactics

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PRINTING: Ebsco Media, Birmingham, AL

ADVERTISING: Rates and specifications
available on request. Write P.O. Box 4049,
Lancaster CA 93539-4049.

SUBSCRIPTION RATES are: Eight issues per
year—the United States is \$60/1 year. Cana-
dian and Overseas surface mail rates are
\$72/1 year. International rates are subject
to change as postal rates change. All pay-
ments must be in U.S. funds drawn on a U.S.
bank and made payable to **DECISION
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Mastercard accepted (with a minimum of
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NEXT ISSUE: Chad: The Toyota Wars.

Special Note: The middle section
of the rules (pages 27 to 38) has
been designed to be pulled out
for easy reference to the charts
and rules summary.

This issue we have a broad look at warfare
in the 18th and 19th centuries. **Rio Grande/
Valverde** was the culminating battle of the
Civil War campaign for the Far West. David
Ameson's article covers the entire campaign,
one of the most mobile in the Civil War. The
second article, by Brigadier General R. E. Bell
(US Army, retired), is on the collapse of the
Prussian Army in 1806 and the rise of light
infantry. It examines the interrelationship of
war, tactics, politics and society. Dealing with
the theoretical side of 19th century military art
is Dr. Steven Fratt's *Profile of Ardant du Picq*,
a little known but highly influential French
officer, military analyst and philosopher of
war. We also have **Incoming Mail**, with read-
ers letting us and the world know what they
think.

As you may have noticed, we are making
extensive use of the modular approach to ar-
ticles. This is a convenient way to present
technical data and incidental material. Some
of the modules are written by people other
than the main article's author. This is partially
because there are a lot of people out there who
have access to specialized information. And it
also gives us a chance to showcase more writ-
ers and get more readers involved.

Series Games

We have several series games in progress,
including **Trajan** (Ancient wars), *Obscure
Wars* and the *Italian Campaign*. The idea be-
hind series games is to create a game system
and then use it to do several related wargames.
This has been tried in the past, but has had
several problems. It was either too simplistic,
and tried to cover too much (such as SPI's
QuadGame system, which used the same rules
for everything from Napoleonic through con-
temporary battles); or else there were so many
changes made from game to game that players
had to relearn the system each time. The con-
ception we are going with is to make the games
multi-tiered: Each will have a common set of
rules for movement, combat, etc. Each game
will then also have a set of specific rules,
dealing with its own period and special con-
ditions of warfare. This should cut learning time
down, while at the same time making each
situation unique.

Work in Progress—Games

Chad. This will be next issue's game. It's a
pretty free-wheeling affair. In one recent
playtest I went charging across the deserts of
northern Chad with a French airborne brigade
and some camel recon units, only to be sur-
rounded by various guerrilla factions. It was

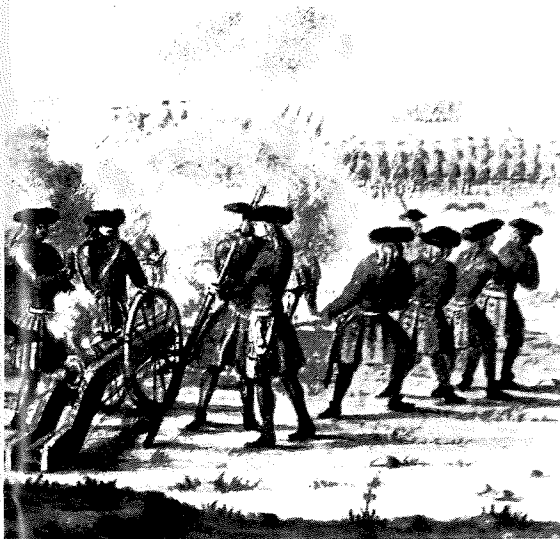
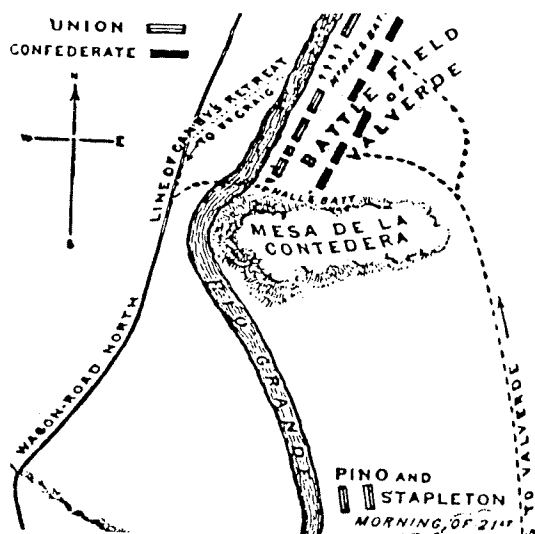
hard-fighting to cut my way through. The
game has some extensive political-economic
rules, but there is an introductory scenario
which allows you to dispense with them. **Chad**
gives players some interesting strategies, as
they must balance their forces between
offensives into the enemy's territory with
maintaining "presence" in areas they control.
Losing your presence in an area gives the
enemy's guerrillas the opportunity to run
amok. Designer, Richard Davis; Developer,
Keith Schlesinger.

Trajan. This is the prototype for our pre-
modern series of wargames. We have worked
out the final problem, which was having a
combat system which caught the tactical de-
tails. A commander in those days had to be
both a strategist and tactician. Initially we had
just a tactical battle board, onto which units
were placed when a battle was called for. Play-
ers resolve combat in a grand tactical manner
by refighting the entire action. The battle board
is divided into 91 squares, and each type of
unit can employ different tactical formations
(so a legion can declare a wedge attack, mul-
tiple line, etc.). The only problem with this
was that it slowed play down, as every battle
required, in effect, a subgame to be fought. So
we added an alternative "strategic" combat
system, which still gives the player with supe-
rior tactics the edge. The way it works is that a
battle is fought in three rounds. In the first
round, only missile qualified units fire. In the
second, everyone engages in combat, and in
the third (pursuit) round, cavalry has an edge.
There is also provision for horse archers keep-
ing out of range of slower troops. The system
catches one of the key factors of ancient war-
fare, the superiority of discipline over mere
numerical superiority, by making most losses
in terms of demoralization. This affects lower
morale class units more...veterans can fight on
all day while barbarian types take off for the
hills. Players have the option of utilizing either
the battle board or strategic system to resolve
battles. So you can trust to your skill or to
fortune (dice rolls). Designer, Joseph
Miranda.

Sicily. This will be the first in a series of four
games covering the entire Italian campaign in
World War Two. They will be published at
intervals of several issues each in *S&T*. Sicily
will simulate Operation Husky, while subse-
quent games will cover the war through the
Salerno, Anzio and Gothic Line campaigns, as
well as provide options for invading Sardinia
and Corsica. The game series uses a unique
system to simulate operational level combat.
Designer, John Schettler.

(continued on page 55)

Strategy & Tactics



Typical Infantry Unit

Companies	K	Regiment
Type of Unit	5 US	Fire Range
	8	
Combat Strength	2-7	Movement Allowance

Typical Mounted Cavalry Unit

Companies	A(Ind*)	Regiment
Type of Unit	Col Vol	Fire Range
	1	
Combat Strength	6-12	Movement Allowance

FEATURES

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by David Arneson

The campaign for the Far West in the American Civil War.

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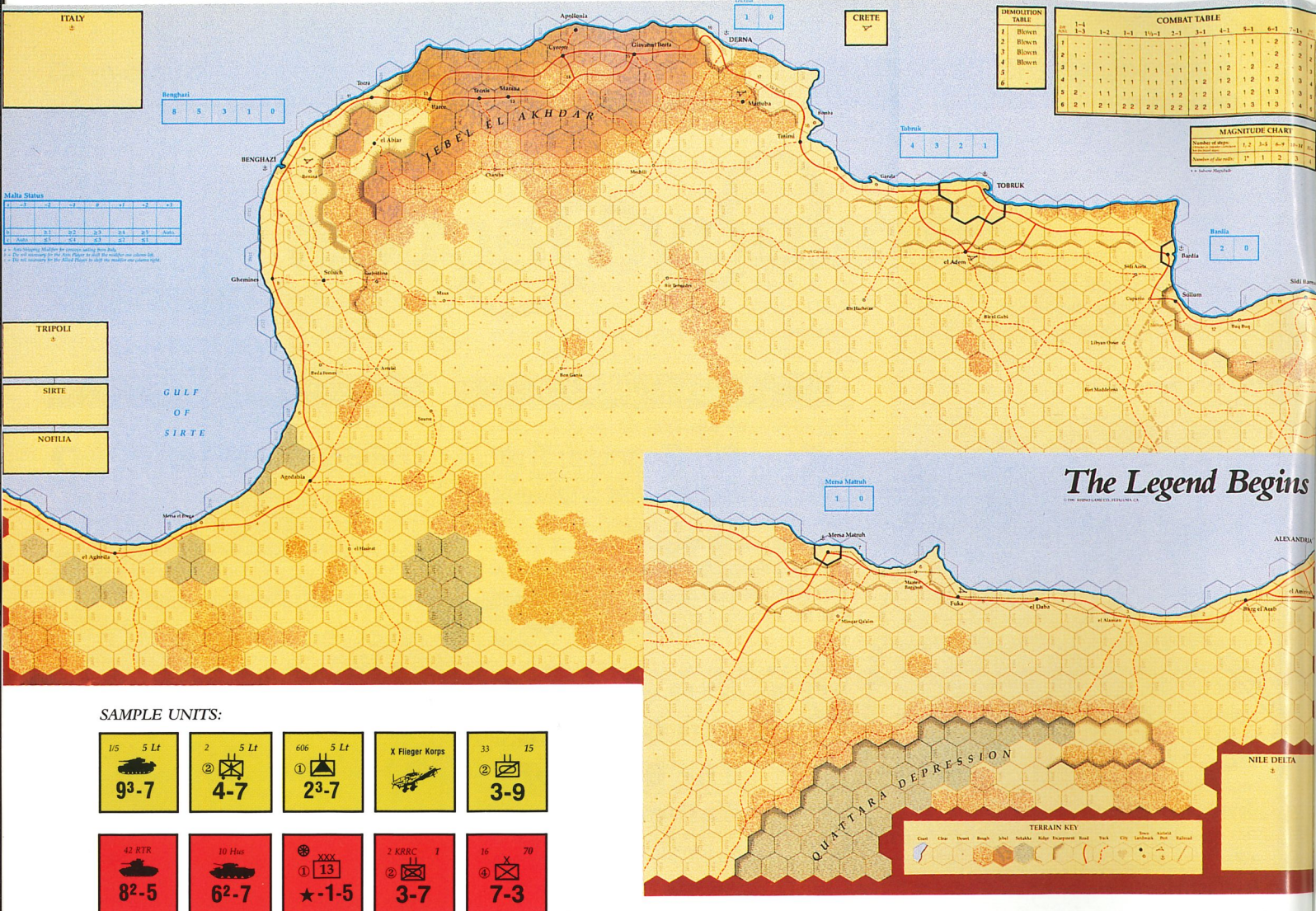
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Cover illustration is by an unknown American artist titled *Fight for the Standard*. It was provided by Wadsworth Atheneum, Hartford, CN from the Ella Gallup Sumner and Mary Catlin Sumner Collection.



The Legend Begins

THE AFRIKA KORPS 1941

The Legend Begins is an operational level game on the North African War from March 1941 to December 1941. The period covers the Tobruk siege, Operation Brevity, Battle Axe, and Crusader.

The scale is brigade and regimental, but includes a substantial number of battalion units. Each weekly turn is divided into segments, allowing players to realistically simulate the fast and furious desert battles that sometimes lasted only a few days (Brevity and Battle Axe). The beautiful full-color map covers the entire area of action from the Gulf of Sirte to Alexandria.

Never before has a game on the North African campaign given players a chance to maneuver their forces with realistic limitations, while covering all of 1941 in a playable fashion. Bold battle-field maneuvers (like Rommel's daring end-runs around the Allied open flanks) can succeed in this game, but they can also lead to disaster.

The design emphasizes the superiority of the tank in the desert, and the progress both sides made in tank and anti-tank warfare during the campaign. At the start, the Allied player is suffering from a disadvantage in tank quality, but slowly his obsolete British M-VI's and Cruiser tanks will be replaced by Crusaders and Stuarts. Eventually, his superiority in numbers will allow him to undertake a large offensive.

The Legend Begins includes three adjoining maps (total length 49"), 400 die-cut 1/2" unit counters, a Turn Record/Reinforcement Card, a Set-up and Scenario Card, two Game Table Cards, two Organization Cards, two Display Cards and a 24 page rule booklet. All packaged in a ziplock bag.

The Legend Begins is available for shipment now for \$22.00 (CA residents add 6% sales tax). Postage is paid (sent 1st Class/Priority Mail) within the U.S. and Canada. Overseas orders please add 20% for Air Mail. All foreign orders must be in Postal or International Money Order (U.S. Funds).

GUARANTEE: Rhino Game Company is a small company dedicated to the principle of satisfied customers. The map and the die-cut unit counters are of the highest quality. If you buy the game direct from me and find the value not to your satisfaction, return the game (unpunched and in good order) and you will receive a full refund.

Mark Simonitch
President





RIO GRANDE

The Battle for Valverde, 1861-62

By David Arneson

Detail of cover illustration: provided by Wadsworth Atheneum, Hartford, CN from the Ella Gallup Sumner and Mary Catlin Sumner Collection.

President Jefferson Davis and other Confederate leaders were anxious to extend the Confederacy into the western United States. This would have several strategic advantages. A westward move would give the South the opportunity to engage in a grand strategic outflanking of the North. Such a move might strengthen secessionist factions in New Mexico, Colorado, Nevada and California and swing their states/territories into the Southern camp. The West contained useful mineral resources. California's gold fields would bolster the shaky Confederate economy. Once the southwest was acquired, the Confederacy would have an opening onto the rest of the world. The Northern Navy would not be in a position to maintain a blockade of the Pacific coast. Confederate cruisers and privateers could use California as a base to eliminate the Union's Far Eastern trade, while obtaining some of that trade for themselves.

It was Texans who spearheaded the idea for a drive westward. Texans had always considered the Rio Grande's headwaters in New Mexico to be the state's proper western border. In 1841, under Presi-

dent Lamar, they had attempted to annex the area from Mexico, unsuccessfully invading the country. This failure had always rankled Texans and now there seemed a chance to obtain the area, get a little revenge, and show the eastern Confederacy how 'Patriotic' Texas was.

The Confederate government had reason to believe that there was much potential anti-Union sentiment in the region. The list of officers stationed in the southwest who had joined the Confederacy at the outbreak of the Civil War was long and impressive. Lieutenant "Joe" Wheeler, Capt. Richard S. Ewell, Lieutenant Colonel George B. Crittenden, Captain Carter L. Stevenson, Major Henry Hopkins Sibley, Captain Cadmus M. Wilcox, Major James Longstreet, and General Albert Sidney Johnston. Longstreet and Ewell became Lieutenant Generals, Wilcox a Major General, Johnston commanded the Confederate Department of the West until killed at Shiloh, and the others became Brigadier Generals of note.

Disunion seemed even more likely when a convention was held in Mesilla on March 16th, 1861 that claimed to represent the people of Arizona (Then considered to

be the southern half of the territory of New Mexico). They voted to repudiate the "Black" Republicans, attach themselves to the Confederate States of America, and resist any Federal officers appointed to the territory. The Confederacy also assumed that the Mormons in Utah would welcome any chance to escape the grasp of Washington. With Utah in sympathetic hands the last practical route from the east to California would be blocked. This would render any re-conquest unlikely. The annexation of a couple of Mexico's northern states was also considered to be likely.

It was, at first, hoped that sympathetic military officers in the area would be a key element in peacefully acquiring the area. Opening actions in Texas confirmed in southern minds that the supplies and bases they needed would be handed over to them by sympathetic officers. In one instance Union Lieutenant Colonel B.S. Roberts determined that his commander, Lieutenant Colonel Crittenden disloyal. Roberts then travelled to Santa Fe to denounce that officer. Roberts was astounded to find that Lieutenant Colonel Loring reproved him and ordered Roberts to mind his own affairs and return to Fort Stanton! Roberts

was able to warn officers at Fort Craig and Albuquerque about the state of affairs before he returned.

In contrast to the attention that the South was paying to the Southwest, the attitude of Northern officials was at best characterized as neglect. In May, Union Commander General Winfield Scott ordered that ten companies of troops in Utah, four companies of the U.S. 10th Infantry, as well as all of the 5th and 7th Infantry Regiments, then serving in New Mexico, be sent east! When warned about the Confederate threat to the southwest, Secretary Simon Cameron of the War Department commented "measures have been or will be taken commensurate with its (the area's) importance." This was a casual interest at best. In July of 1862, Brigadier General B.S. Roberts testified before the Committee on the Conduct of the War: "Utter neglect of the Adjutant General's Department for the last year to communicate in any way with the commanding officer of the Department of Mexico, or to answer our urgent appeals for reinforcements, money, and supplies."

On the Santa Fe Trail

The success of John Baylor's "Buffalo Hunt" led to the formation of the Confederate Department of Texas. Colonel Baylor was assigned to raise what would become the 2nd Texas Mounted Rifles at San Antonio. When this unit was complete, Baylor led 700 men (six companies) to Fort Bliss. Three hundred men of this regiment arrived there ("A" & "E" Companies, Teel's Artillery Company) during the first week of July, with many having been detached to garrison other forts along his route. Additionally, the Confederates raised a unit known as "The San Elizario Spy Company" locally.

Baylor's first intelligence was that all Federal troops from Arizona were concentrating at Fort Fillmore (only 44 miles away), a move he thought presaged an attack. Actually, the Union troops were under orders to evacuate and move to Fort Craig when enough supplies had been obtained. On the 23rd of July Baylor led 230 men from companies "A" and "E", "The Spy Company," and a section of Teel's artillery against Fort Fillmore, New Mexico. The 28 artillery men with two 12 pounder mountain howitzers quickly fell behind. The fort was defended by 700 men

U.S. Forces Stationed at Fort Fillmore (Major Lynde)

3rd U.S. CAVALRY (companies "B" and "F") (54 men), (1st U.S. Mounted Rifle Regiment, 7th United States Infantry (seven companies, about 300 men), (det. "A", "B", "D", "E", "G", "I", and "K"), Four 12-pounder Mountain Howitzers.

CS Forces Operating against Fort Fillmore: "The San Elizario Spy Company", 2nd Texas Mounted Rifles ("A" and "E"), Enroute: one section of Teel's Artillery (two 12-pounder Howitzers), totaling about 258 men

Union Forces stationed at Fort Stanton: (Lieutenant Colonel B. S. Roberts)

3rd Cavalry (1st Mounted Rifles) (two companies probably "A" and "H"), 7th U.S. Infantry (two companies).

Detached to Fort Fillmore from Fort Stanton to guard a herd of cattle and the stagecoach to Fort Fillmore:

Companies "I" & "G" (45 men) 3rd U.S. Cavalry, 100 head of Cattle.

Action Near Fort Fillmore

Order of Battle

U.S. FORCES: 3rd U.S. Cavalry (1st Mounted Rifle Regiment-2 companies, companies "I" & "G" joined with 45 men during the retreat), 7th United States Infantry (seven companies), Totalling about 500 men.

CS FORCES: 2nd Texas Mounted Rifles, (companies; "A", and "E"), San Elizario, Spy Company, totaling about 230 men.

NOTE: Following the surrender, Baylor paroled the prisoners and supplied them with enough food, arms (50 old muskets), and equipment to travel through the Apache lands to Fort Craig. The pardoned troops were assigned to non-combatant duties for the remainder of the war. Lynde was court martialed and stripped of his rank. On July 27th, 1866, when passions had cooled, Lynde was restored to his former rank by President Johnson and retired.

of the 7th U.S. Infantry under the command of Major Isaac Lynde. By the 25th, Baylor was camped 600 yards from the fort in the town of Mesilla. Major Isaac Lynde led out 380 of his men to demand the Texan's surrender. A brief skirmish ensued. After losing seven to nine men, Major Lynde withdrew back to Fort Fillmore.

During the night, Major Lynde heard that the Confederates would soon be reinforced with artillery. He also feared that the fort would be cut off. So he abandoned Fort Fillmore, after setting fire to the post

and destroying most of the supplies. Lynde then began a night march towards Fort Stanton (140 miles away) to escape from the Confederates. The Federal forces were intercepted the next day by Baylor. The Texans found the Federals to be quite disorganized, fatigued by the heat, and short of water. The march had been poorly planned and executed, and without adequate water many men collapsed along the route. Major Lynde had taken an advance party to Augustine Springs and was returning along the column's route with water when Baylor arrived. With only about 100 men still able to fight, Lynde surrendered 476-700 men, two guns, 200 cavalry re-mounts, \$17,000 in Federal drafts, and a herd of 300 cattle. Colonel Baylor and his Texans were ecstatic!

Baylor immediately declared that all former U.S. territory south of the 38th parallel was now the Confederate Territory of Arizona and that Mesilla was the capital. He promptly appointed himself the new Governor! The Confederates then recruited two additional companies from local manpower: "The Arizona Rangers" and "The Arizona Guards," each enlisted for 12 months service.

Union Colonel Roberts abandoned Fort Stanton in August, sending two infantry companies to Albuquerque, while he and the two companies of cavalry joined Canby at Santa Fe. Four companies of troops from Forts Breckenridge and Buchanan, under Captain Moore, evaded Baylor's attempted interception and reached Fort Craig safely.

A new Confederate expedition under General Sibley was organized in San Antonio to conquer the rest of New Mexico and open the way to California. In August, Sibley set up his Headquarters near San Antonio, but recruiting was slow. By September 20th, the 4th Regiment (10 companies, four 12 pounder brass howitzers) began training at Camp Sibley. By October 23rd the 5th Regiment (10 companies, four 12 pounder brass howitzers) was ready to be mustered in, although two of its companies were armed with lances. The 7th Regiment (10 companies) was not ready until November 15th. Within the Brigade they were referred to as the 1st, 2nd, and 3rd Regiments of the Sibley Brigade.

The Confederate column finally started west on October 26th, travelling in small groups because of the water shortage. The

Overall the training of these new units was low. The 4th had about a month and the 5th and 7th about two weeks. Pyron's Battalion (2nd Mounted Rifles) was a "veteran" by comparison, having been in service for six months and engaged in military type duties almost all of that time. The next two months leading to the battle of Valverde would be spent marching over the desolate wastes of West Texas and Southern New Mexico.

Federal troops were armed with issue Springfield Rifles, Sharps Carbine, Colt Revolvers, and sabres. California troops were carefully raised and equipped, and Federal stockpiles in the state were greater than those in Colorado or New Mexico. The California Column was, therefore, as well equipped as the Regulars were. The New Mexico militia were probably armed with the "French" Muskets which were offered for sale in 1864. It is likely that

The Colorado troops did not initially receive government issue equipment. So in the first few months each recruit drilled with various guns of private manufacture. When the arms finally did arrive they were few in number and inferior in quality. By late autumn of 1861, the three companies dispatched to Fort Wise under Lieutenant Colonel Tappan were the best equipped. The remaining seven companies remained at Denver under Major Chivington, drilling and waiting for more equipment.

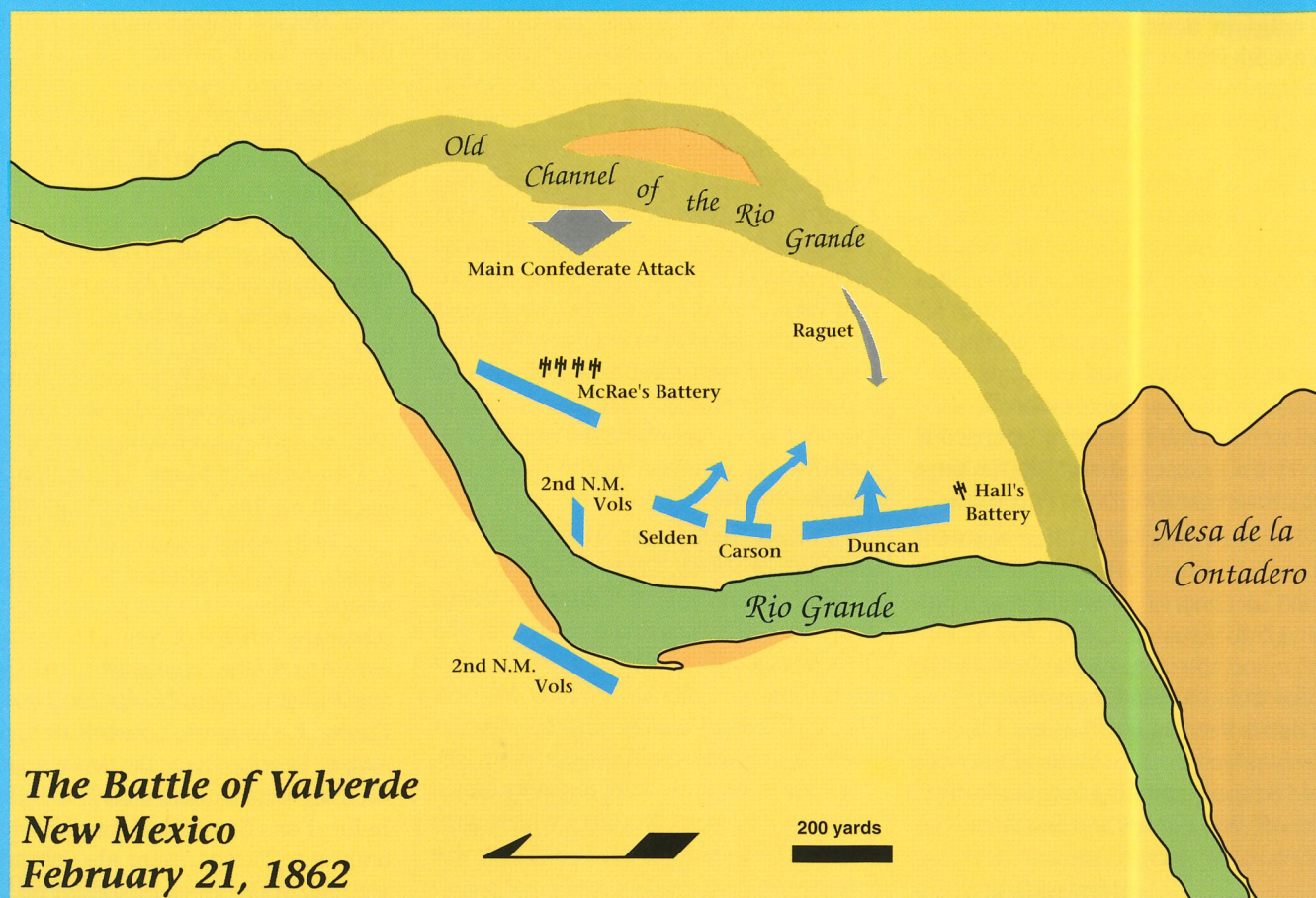
Canby sought to augment the 2,466 men in his Department with volunteer troops. In June, Canby requested Governor Abraham Rencher of New Mexico to raise eleven volunteer companies, and Governor William Gilpin of Colorado, two more. Canby also sought to concentrate his command. During June, the troops at Fort McLane were withdrawn to Fort Fillmore. In July Forts Breckenridge and Buchanan, both near Tuscon, were also abandoned and their troops moved towards Fort Craig.

This abandoned the southern route of the Overland stage and left Arizona at the mercy of the Apaches.

After Lynde's surrender Canby asked New Mexico's new Governor, Henry Connelly, to raise four more companies of volunteers. On September 14th the Governor responded by organizing a territorial militia. On September 8th Canby asked Governor Gilpin for four to six more companies of troops.

By December 14th (the 4th Regiment had arrived on the 17th) Sibley had reached Baylor's command (7 companies Cavalry, 2 companies Arty) 630 men at Fort Bliss and the invasion proper was





The Battle of Valverde
New Mexico
February 21, 1862

Order of Battle at Valverde

U.S. FORCES: (3,810 men under Colonel Canby)
 (Sibley said Canby had 5,000 men).

COLORADO-Dodd's (Mtd.) Company (2nd Colorado Infantry).

NEW MEXICO-Graydon's Company of Volunteers.

1st (Colonel C. Carson, eight companies, 512 men),
 Infantry

2nd, (Colonel Pino, seven companies, 490 men)
 Infantry

3rd (Colonel Chavez; seven companies, 234 men)
 Infantry

4th Infantry (one company, 63 men)

5th (two companies) Infantry

NEW MEXICO MILITIA: About 1,000 men, hastily
 organized and poorly equipped.

REGULARS-1st ("D" & "G*" companies) Cavalry

2nd ("G" Coy) Cavalry

3rd ("C", "D", "G", "I*", and "K") Cavalry

Hall's Battery (two 24-pounder Howitzers,
 McRae's Battery (manned by Coy. "G" of
 the 2nd and Coy. "I" of the 3rd U.S. Cav.)

5th ("B", "D", "F", "I", and "K") Infantry

7th ("C", "F", and "H") Infantry

10th ("A", "F", and "H") Infantry.

*detached

CS FORCES: (1,750 men under Lieutenant General Sibley) (Canby reported that Sibley had 2,600 men.)

2nd Regiment Texas Mounted Rifles ("A",
 "B", "D", "E", "G" and "H" companies,
 Major Pyron)

4th Regiment Texas Mounted Volunteers
 (ten companies, Colonel Scurry)

5th Regiment Texas Mounted Volunteers
 (ten companies, Colonel Green; two compa-
 nies armed with lances and revolvers)

7th Regiment Texas Mounted Volunteers
 ("A", "B", "F", "H", and "I" companies,
 Colonel Sutton)

"The Arizona Guards"

"The Arizona Rangers"

Teel's Battery (eight 12 pounder Brass
 Howitzers)

U.S. Forces Left At Fort Craig:

COLORADO-Ford's Independent Company

NEW MEXICO-1st and 2nd New Mexico Militia
 (Colonel Armijo, ten companies, 272 men). Four
 companies Mounted Militia (Otero) 200 men.

underway. While at Fort Thorn, Sibley authorized the raising of a new company called "The Brigands." On the 20th, Sibley issued a bombastic proclamation claiming the entire area of Arizona and New Mexico for the Confederacy. The invasion had begun! During a review of his troops, one company failed to receive the order to turn and marched proudly off the parade ground and into the desert. Sibley was heard to say "Gone to Hell I suppose." This was probably the most accurate observation he would make in the coming months.

Shortly after the invasion had commenced, Captain Sherrod Hunter and a new Company (Company "A" of a new frontier Regiment proposed by Baylor) were sent to occupy Tuscon, Arizona. Hunter's 100 men arrived there on February 28th and were well received by the citizens — due in no small part to the fact that these were the only soldiers available to protect them from rampaging Apaches. Hunter remained in Tuscon until May 4th, 1862, when the approach of the California Column forced his withdrawal. Hunter's scouts had brushed with Carleton's scouts on April 15th at Picacho Pass, 40 miles west of Tuscon, resulting in the most westernmost "Battle" of the Civil War.

Sibley was grossly overconfident. He believed that his troops could live off the land and acquire whatever else it needed from Mexico. He also counted on the support of the local citizens. Baylor's report in October that the Mexican population was decidedly pro-Northern was ignored.

Sibley had planned to start his invasion in the Fall of the year rather than during the harsh New Mexico winter but the delay was, again, due to his optimism on how quickly troops could be raised. Sibley was certain that after an easy march, additional war materials could be captured from numerous Federal stores. The lack of supplies caused his men to take what they wanted locally and doomed Sibley's recruiting efforts at an early date...but then he could hardly arm his *own* men at that time so the lack of volunteers was not really a factor. Efforts to purchase supplies in northern Mexico also failed as only gold would be accepted as payment; Federal agents had no such problem buying supplies for the California column.

Colonel Canby, the new Federal commander for the southwest was far more

vigorous than Sibley and had begun early to concentrate his resources. Yet Canby was no stranger to Sibley. He had been Sibley's classmate at West Point, best man at his wedding, and was married to Sibley's wife's cousin. Colonel Canby was not sure whether the Confederates would advance up the Rio Grande or instead along the Pecos River in eastern New Mexico. So he posted scouts to watch both routes and kept his troops concentrated in a central position. He then sought to gather supplies, raise funds and restore morale to his troops, regardless despite Washington's neglect. Morale was a problem. Many key officers had deserted and the troops had not been paid in over a year. Canby also had to deal with mutinies among the volunteers at Fort Union and Camp Connelly. With the coming of February Canby also received word the Sibley's army was on the march.

On February 7th, the 5th Regiment and Teel's artillery kicked off the Confederate advance up the Rio Grande. By February 16th the entire Confederate "Army" was just a mile below Fort Craig. They challenged the Union garrison to an open battle but Canby sensibly declined. On the 19th the Confederates crossed to the east bank of the river and by the 20th Sibley had maneuvered to within two miles of the fort. Sibley had determined to move north of the Federal post, recross the river, and cut the union line of communications to Santa Fe and force Canby into a battle. Sibley's movements were delayed for some two days because of severe sandstorms throughout the area. By February 10th the Union authorities in the east were finally reacting. General David Hunter at Fort Leavenworth requested Governor Gilpin to send all organized units of Colorado troops to reinforce Colonel Canby. Oddly enough, the Denver government had requested such an order over a month earlier! On February 13th orders to move out were issued to the 1st Colorado Regiment (seven companies) to join Canby. The Regiment did not actually begin its march until the 22nd, the day after Valverde.

On the 20th of February there was a brief skirmish. The Federal troops (New Mexico Militia) under Colonel Miguel G. Pino and Robert H. Stapleton performed poorly and were easily repulsed by a few howitzer shells. That night the Confederates survived "Paddy" Graydon's mule attack (where explosives-laden mules were

The Confederate Army of New Mexico

(AKA Sibley's Arizona Brigade)

Officially organized in early December (14th) of 1861 by H.H. Sibley, the Brigade included all the Confederate troops on the Rio Grande above Fort Quitman, including Arizona and New Mexico. It comprised the 4th, 5th, and 7th Texas Volunteer Cavalry, Baylor's Regiment (five Companies of mounted Infantry), three Independent cavalry companies, and a six-gun battery (12 pounder Howitzers) with a strength of 3,700 men. After the Confederate withdrawal into Texas most of these units were organized into "Green's Texas Brigade." Under that designation they saw service on January 1st, 1863, at Galveston and during the Red River campaign in 1864. Many of these men went to Mexico with "Joe" Shelby at the end of the Civil War to serve Maximilian of Mexico.

4th Regiment (Lieutenant Colonel William R. Scurry) 10 companies plus artillery, 810 officers and men.

5th Regiment (Colonel Thomas Green) 10 companies plus artillery, 835 officers and men.

7th Regiment (Lieutenant Colonel John S. Sutton) five companies, 414 officers and men. Pyron's Battalion (Major Charles L. Pyron) Baylor's 2nd Mounted Rifles Regiment six companies and the "Brigands", 456 officers and men.

Teel's Artillery (two companies, Seven-12 pounder Brass Howitzers).

Totaling 2,215 officers and men.

sent amidst a Confederate column in the hopes of blowing them to smithereens) and prepared to cross the river six miles north of the fort on the next day. The crossing by the main Confederate force would be covered by a feint at the fort itself. Also on the night of the 20th hundreds of horses and mules stampeded from the Confederate's camp, seeking water at the Rio Grande. Two hundred of these were gleefully gathered up by Federal patrols. As a result, the Confederates had to abandon about 30 wagons for lack of pack animals, the loss falling most heavily on the 4th Texas.

The Union forces commanded by Canby had anticipated Sibley's maneuver to the north and stationed detachments at likely crossing points along the Rio Grande. Because of this, Lieutenant Colonel Roberts, with the 3rd U.S. Cavalry, reached the Valverde crossing at the same time that the Confederates did on February 21st. At 8 AM a detachment of Sibley's troops dem-

onstrated south of the fort while the main body moved to cross the Rio Grande six miles north at Valverde ("Green Valley")

The Battle of Valverde

Skirmishing began about 8 AM. Fighting on foot, the U.S. 3rd Cavalry with some mounted volunteers were able to force the Confederates away from the river. Canby dispatched more artillery and infantry to back up Roberts. Another force, including Graydon's Spy Company and several companies of Pino's and Stapleton's mounted New Mexico Militia, who were on the east bank shadowing Sibley's movements, also marched towards Valverde. Roberts found 180 Texans under Major Pyron (2nd Texas) already at the river. The Texans had arrived, watered their horses and then moved into a grove of cottonwood trees near the river. Robert's immediately dispatched Major Thomas Duncan with four companies of cavalry to attack the resting rebels. In a sharp skirmish the Texans were driven from the grove, back onto higher ground. With that Roberts was able to deploy his two guns on the eastern shore. Soon four field guns, commanded by Captain Alexander McRae, and two 24 pounder howitzers under Lieutenant Robert H. Hall were also on the west bank of the Rio Grande.

By 10 AM the action was on in earnest and a Confederate force advancing from the southeast towards the river was taken under artillery fire. At this point the Union batteries were supported by Captain David H. Brotherton's Company (5th U.S. Infantry) and Major Duncan's skirmishers. About 10:30, Lieutenant Colonel Scurry arrived with about half the 4th Texas, along with Lieutenant John Riley's howitzer battery. A terrific artillery and rifle duel raged across the field. The rebels made valiant efforts to retake the cottonwood grove but failed. By noon, Roberts had been reinforced by Dodd's Colorado Company and Captain Henry H. Seldon's Regular Infantry Battalion, including Captain Benjamin Wingate's and P.W.L. Plympton's Companies. Seldon's battalion immediately crossed the river, fixed bayonets, and charged the rebel position located in a small wood on the Union left. The attack succeeded but they were immediately counterattacked by Captain W.L. Lang's Lancer Company (5th Texas). Dodd's Company (2nd Colorado) held the extreme Federal

left and bore the brunt of the lancer's attack. Firing two well timed volleys, they decimated the lancers and then counterattacked, inflicting severe losses.

Ovando J. Hollister (Dodd's Company) later wrote that each Texan was armed with a lance having a blade three inches wide and twelve inches long, mounted on a nine-foot shaft. A red guidon was attached to each lance to "drink the blood" of impaled victims. The lancers advanced in three columns at the gallop and "looked as if the Devil had set them on end." As they approached, Captain Dodd shouted, "They are Texans. Give them Hell." And they did. Some of the lancers were transfixed on the bayonets on their intended victims and lifted out of their saddles, but the greater part "bit the dust" before they got close enough to use their lances." Of the two companies of lancers, only three men remained unhurt, while forty-two of their dead horses were strewn about the area.

Colonel Thomas Green reported, "The lancer charge was one of the most gallant and furious charges...ever witnessed in the annals of battles." Colonel Scurry stated that "the desperate courage (of the lancers) was ineffectual against great odds and superior arms." The two lancer companies together suffered the greatest proportional loss of any unit in either army at Valverde.

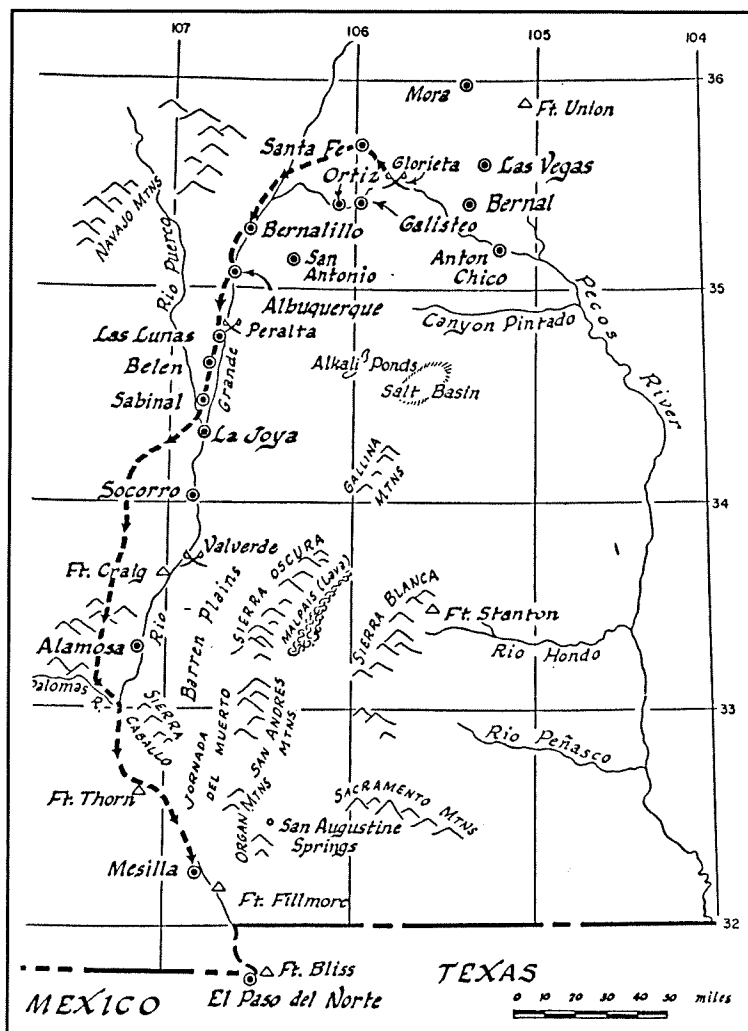
Meanwhile, Colonel "Kit" Carson's New Mexico Regiment (eight companies) were sent up the west bank of the river to forestall a flanking maneuver by 500 Texas cavalry. So far, the Federal forces had the advantage. Most of the troops of both armies were now on the field. The Federal forces were deployed on both sides of the Rio Grande. The Texan's line ran parallel to the Union one on the eastern bank. By 1 PM General Sibley had become "indisposed" and Colonel Thomas Green had assumed command of the rebel army. After Seldon's column had forced back the Confederate right, and the Colorado troops had repulsed the lancer charge, Colonel Roberts ordered the Federal guns to cross the river. McRae's battery (six guns) was posted on the left and Hall's two huge howitzers on the right. Upon unlimbering at their new positions the guns renewed their bombardment of the Confederate line. Their fire, combined with Seldon's and Duncan's, forced several Confederate companies to take cover behind the sand hills

just east of the field.

There the rebels rallied and renewed their attacks on the Union line with great enthusiasm. The sloping approach toward the river from the south and east, covered with trees and ridges of sand further back, permitted the Southern officers to concentrate and rally their men almost unobserved. By 1:00 PM Captain Teel's Howitzer battery entered into a duel with the Yankee guns. His 12 pounder howitzers were no match and soon Teel had only five men standing to man his guns. He held his ground in the face of the Federal fusillade and a grass fire until more Confederate howitzers arrived. Teel was then sent to the Confederate left. Again, his shorter ranged guns did badly until three of them had been disabled. Teel then ordered his guns to hold their fire until Yankee troops came within range.

Canby had meanwhile determined that the demonstration towards Fort Craig was not dangerous and that only a weak Texan force still guarded their camps on the east bank. He ordered Pino's regiment, stationed east of the river to observe the rebel camp, to recross the river and head up the west bank towards the battle. Leaving a detachment to guard the post Canby then proceeded with the last section of McRae's battery and a troop of cavalry towards the battlefield. Arriving about 2:45pm, Canby surveyed the situation. He decided to envelope the Confederate left flank with the Union right and center. Canby ordered both Pino's and Carson's regiments (both were now on the west bank opposite Valverde) to cross the Rio Grande and join the main Federal force. While organizing this attack five companies of Pino's regiment refused to cross the river. While Pino (no one doubted his courage) vainly sought to get them to move, the Confederates struck again.

Confederate Colonel Tom Green knew that the only way the Confederates could win was to eliminate the Yankee guns. Screened by the woods and sand hills Green resolved to attack the Union batteries by two separate columns. Major Henry W. Ragnet led 250 screaming Texans armed with shotguns, squirrel rifles, revolvers and lances against Hall's battery on the southern part of Canby's line. Ragnet's troops charged down the hill but their efforts failed. They were repulsed with heavy



losses.

The Confederate attack against the right battery fared much better. 750 Texans, led by Colonel Scurry, attacked McRae's battery. The Texans charged across some seven hundred yards of scrub brush and scattered cottonwoods on foot, waving everything from double barreled shotguns to Bowie Knives. The answering storm of Union cannister fire and musketry did not give the rebels pause. Supported by Plympton's regulars (two companies) and the part of Pino's regiment that had crossed the river, the battery was now engulfed in a furious hand-to-hand fight with revolvers, clubbed rifles, bayonets, and knives. Finally the Union supporting units fell back, despite Canby's efforts to stop them. Captain Wingate's Battalion was sent from Hall's battery after the attack there was repulsed. Wingate temporarily repulsed the rebels, but the Texans rallied and drove the Federal troops back in turn. When the smoke cleared, Scurry's men were in full possession of all six of McRae's guns. (The following apocryphal story was given great

circulation. As Lockridge neared the Federal guns he shouted "Surrender McRae, we don't want to kill you!" McRae, one arm already shattered, and leaning against a gun for support, replied, "I shall never forsake my guns." Both officers then raised their revolvers, fired at each other, and fell dead across the gun.)

Canby, who by now had his horse shot out from under him, determined that further action was profitless. He ordered all his troops on the eastern shore to withdraw to the west bank. The

captured guns as well as Teel's howitzers inflicted additional losses on the Federal forces as they recrossed the Rio Grande. Once on the other bank Canby ordered his army back to Fort Craig. The retreat was covered by Seldon's four Companies of Regulars as well as the Colorado company. The retreat itself was in fairly good order but a rebel pursuit was forestalled when Canby called for a truce. The truce was to last two days so that the wounded could be cared for and the dead buried. Green agreed to this.

Much of the blame for losing the battle fell on Canby since, until his arrival, the action had gone well for the Union. The New Mexican troops in the battle were also criticized for failing to support the artillery battery when the Texans attacked it. Credit for winning the battle must go to Colonel Green who organized the successful Confederate attack on the batteries.

Federal losses were 62-68 killed, 140-157 wounded, and 35-100 missing. But these returns were not complete. Sibley

claimed that Canby lost 300 men killed and wounded. The Confederates lost about 36-40 killed and 150-200 wounded. One Federal report claimed 150 killed and 450 wounded in Sibley's force!

Pike's Peak or Bust!

The day after the battle, Sibley sent Colonel William Steele to ask for Canby's surrender and request medical supplies for the wounded of both sides. Canby knew that the Confederates lacked heavy guns and so declined the offer. Supplies were sent and the Union wounded returned to Fort Craig while the Confederate casualties were moved to Socorro and Albuquerque. Canby claimed the Federal loss was due to the refusal of militia and volunteer regiments to cross the river. Canby stated, "The battle was fought almost entirely by the regular troops (outnumbered three to one by the Confederates) with no assistance from the militia and but little from the volunteers." He stated that large numbers of the militia and volunteers had deserted, but felt that this added to his strength rather than diminished it. New Mexico Governor Connelly, who had stayed at Fort Craig during the battle, absolved the local troops, whom he claimed were merely following the example of two regular companies which had failed to charge! Other even more jingoistic comments punctuate the official reports.

Privately, many officers felt that the battle would have been won had Canby stayed at Fort Craig and allowed Colonel Roberts to retain command of the field forces. Roberts in turn blamed other officers for failing to seize the positions near the ford as ordered (no one recalled him issuing those orders however!).

It would seem that the courage and valor of the Texas troops was a big factor in the Confederate victory. Armed with little more than shotguns, they rallied and attacked the Federal batteries, capturing the larger one. The U.S. Regulars fought well but overall Union performance was uneven. Obviously, some units suffered from bad morale. The Colorado troops did as well as the best on either side, while the New Mexicans fought adequately at best and dismally in general. Governor Connelly candidly admitted that the militia could best be used in preparing their lands for the coming harvest!

Meanwhile, Sibley, after dispatching a glowing report of his victory (and asking for reinforcements!), was determined to by-pass Fort Craig and capture Santa Fe. Using the Federal supplies there the Confederates could then press on towards Colorado while a small force would open the road to California. Allowing his men two days rest, Sibley resumed his advance. But the order to advance was not quick enough to capture needed Union supplies. Canby had realized the importance of Union supply depots scattered around the state, and had sent couriers long with the remaining New Mexico troops ahead with orders to destroy them.

Lieutenant Colonel Henry C. McNeil was sent ahead to Socorro with five companies of the 5th and two guns to seize that place. After a brief exchange of fire, most of the New Mexico volunteers scattered and went into hiding. Captain Nicolas Pino, commanding only a handful of men (2nd New Mexico Volunteers), then surrendered to the Confederates on February 25th. Interestingly enough, the Confederates administered an oath of neutrality to their New Mexican prisoners rather than asking for their parole. With that the Confederates captured some 250 small arms and quickly rearmed their lancers with firearms. A hospital was established there by Sibley and by the 27th 200 men were recovering there.

On March 3rd the supplies at Cubero, New Mexico, were captured — not by Sibley's Confederates but by four local citizens! Located sixty miles west of Albuquerque, the residents were led by Dr. E. F. Kavenaugh. They surrounded the local depot and the commander, Captain Francisco Aragon, surrendered the depot and 47 men of the New Mexico Volunteers. On March 5th a detachment of Confederates (Company "A" 7th Regiment) arrived and hauled some twenty-five wagons loaded with general supplies, 60 rifles, 3,000 rounds of ammunition, and other ordnance supplies back to Albuquerque. This was enough to last Sibley's men for thirty days. Also on this date the three companies of the 1st Colorado ("B," "H," and "F") at Fort Wise began their march to join Canby at Fort Craig.

Sibley's plans were frustrated by Major Herbert M. Enos, Albuquerque's Quartermaster — probably the man actually responsible for defeating the Confederate

invasion. On March 1st, Enos evacuated and destroyed all the stores there as Sibley reached Belen, 35 miles to the south. On March 4th the Federal stores at Santa Fe were loaded on 120 wagons, valued at \$250,000, and directed towards Fort Union along with the territorial Governor, Dr. William Connelly. By the time Sibley reached Santa Fe — the 23rd — the Federal supplies were far out of his reach.

The Confederates were also having other problems. After Valverde there was a severe lack of horses in Sibley's army. As a result of this the 4th Regiment was dismounted. This was a great hardship since Confederate Cavalry provided their own horses and if dismounted had to find remounts. Nonetheless, the men's spirits were high.

The rebel advance continued and on the 4th Sibley detached the 4th Regiment to cross to the east bank of the Rio Grande. Then the Regiment veered off to take station at San Antonio, N.M., at Carnuel Pass. By the 7th Sibley had entered Albuquerque. Some supplies had now been found at Albuquerque and Sibley's quartermaster figured he now had supplies for three months. Since forage was quite sparse most of the army was moved eastward into the mountains. Unperturbed, Sibley issued some bombastic proclamations and pushed on towards Santa Fe on March 13th. The advance was led by Major Charles L. Pyron's regiment, the "Brigands." These had been sent even further ahead and entered Santa Fe on the 10th. Their reception was cool although the Armijo brothers gave Sibley some \$200,000 in goods from their warehouses.

After waiting two weeks in Albuquerque, the main army began to move. On the 18th of March Major Shropshire was sent with five companies (A, B, C and D) of the 5th to reinforce Santa Fe. The rest of Green's regiment stayed in Albuquerque to block any move by Canby from Fort Craig. With supplies running low and the majority of the people indifferent at best to the Southern cause, the invaders could not remain idle. The great stores at Fort Union beckoned and Sibley knew the place well — he had helped in its modification a few years ago. Once the Fort was captured, New Mexico would be secure and the Confederates that much closer to Colorado.

On March 8th the now united 1st Colo-

rado Infantry, under Colonel John P. Slough, had reached Raton Pass. Since learning of Valverde the troops had abandoned all but necessities marching 40 miles a day — this in spite of severe snow fall. At the Pass they received word from Colonel Paul at Fort Union that the Confederates were in possession of Albuquerque and Santa Fe (not true yet). Concerned that the 800 Regulars and New Mexico militia could not hold the fort, he asked the Colorado troops to move quickly. The 1st then abandoned everything but their guns and blankets and pushed on another 30 miles that night to the Cimarron River, where exhaustion forced a halt. They had covered 92 miles in 36 hours.

On March 10th the Regiment (950 men strong) reached Fort Union, having covered over four hundred miles in thirteen days. During the next twelve days at Fort Union they were supplied with regulation uniforms, arms, and ammunition from government stores there. But the routine of the fort did not sit well with these men and there were several serious disciplinary incidents. Colonel Slough took command of all union troops over the objections of the post commander, Colonel Gabriel R. Paul. Slough's commission date was senior to Paul's in spite of Paul's years of army service! After his troops were re-equipped Slough proceeded towards Santa Fe.

Back in Washington, the Federal government was beginning to realize the seriousness of the situation. On March 20th Secretary of War Edwin H. Stanton approved General Halleck's suggestion that four to five thousand men be sent to New Mexico. The next day Halleck also suggested that Colonel Canby be made a Brigadier General.

On the 21st Sibley continued the advance towards Santa Fe with most of his men (4th Regiment, a Battalion of the 7th) too late to engage in the decisive battle of the campaign. Company "A" of the 4th stayed to guard Albuquerque, while "A" of the 7th was still at Cubero. Scurry had, meanwhile, pushed on towards Fort Union. Unknown to Sibley, Colonel John P. Slough, 1st Colorado Regiment, had left Fort Union three days earlier with 1,342 men from there to meet the Texans. So Sibley began his march on the 25th of March. Colonel Paul had been left with a small force of Regulars and New Mexico

Volunteers to hold the fort amounting to some 300 men.

Slough continued his plans for a march even after receiving an order from Canby on the 21st (Canby had been promoted General) to Paul telling the latter to remain at the fort. ("Not addressed to me!" said Slough). On the 24th the column had reached Bernal Spring fifty miles southwest of Fort Union. Even a new order from Canby directed at Slough on the 25th did not stop his plans to continue the advance. By the 25th Scurry's Texans had reached Johnson's Farm and was preparing to renew the advance the next day.

On March 26th Slough sent Major Chivington with a detachment (418 men) of the 1st into Apache Canyon through Glorieta Pass towards Pigeon's ranch. Chivington began his march at 3 PM that afternoon to try and surprise the Confederate forces holding Santa Fe. Slough followed with another 924 men. Meanwhile about 60 miles east of Santa Fe the Confederate advance, under Pyron, with 250-300 men (and two of Teel's guns) entered the pass from the west. At midnight Chivington arrived at Kozlowski's Ranch, about halfway between Bernal Springs and Glorieta Pass, and learned that there were rebels in the area. At 2 AM on the 26th Chivington sent Lieutenant George Nelson with 20 Cavalrymen out to capture the enemy scouts. When the prisoners reached Chivington he ordered an immediate advance to seize the initiative. Nelson had discovered that Sibley's advance guard was at the other end of the pass.

The Battle of Johnson's Ranch (or Apache Pass)

Chivington moved out at 8 AM and crossed the top of the Pass about two in the afternoon. A Confederate advance party of 30 men was captured by 20 mounted Colorado troops and sent back to Chivington. Chivington ordered his men to advance at the trot. When they rounded a bend in the canyon the advancing Confederates were spotted about a third of a mile away. Although surprised by the charging Union troops, Pyron deployed his men in an orderly manner, unfurled the Lone Star flag, and opened the action with a shot from one of his two howitzers. The Colorado troops panicked and there was some confusion until Chivington rallied them.

Federal Order of Battle in Northern New Mexico After Valverde

U.S. FORCES:

COLORADO-Ford's Company of Volunteers REGULARS-2nd Cavalry (1 Company), 3rd Cavalry ("E" Company), 5th Infantry (one Company)

Slough's Column

1st Regiment Colorado Volunteers
Ford's Company 2nd Colorado Volunteers (Mtd.)
Battalion of Regular Infantry (5th U.S. Infantry, Captain W.G. Lewis)
Regular Cavalry (Capt. Geo. W. Howland, 1st & 3rd U.S. Cavalry)
4th New Mexico Volunteers (1 Co)
Ritter's Battery (Captain J. F. Ritter, 15th U.S. Infantry, four guns)
Claflin's Battery (Captain Ira W. Claflin, four Howitzers).

Phase I

As the Confederates advanced in a skirmish line, Winkop, Anthony and later Walker (dismounted) deployed on the left slope among some evergreen trees. Downing's Company held the irregular slope on the Union right. Howland's and Cook's mounted troops formed a reserve. The remaining Colorado companies formed in front along the road.

After a rapid exchange of fire the Texans withdrew about one and a half miles to a point where the canyon narrowed considerably. Captain Howland failed to harass their retreat. Where the Confederate retreat crossed a sixteen foot long log bridge over an arroyo the bridge was burned. The canyon then turned south with a steep rocky bluff provided a natural defense. The rebels placed their guns on a mound at the foot of the bluff and deployed men in the rocks and trees on the canyon slopes nearby.

Phase II

Chivington ordered Downing and Howland (now dismounted) to climb the mountainside on the Union right. Their fire drove the Confederates out of the canyon floor. On the left Winkop and Anthony were to outflank the Texans and force them back. Cook's mounted Volunteers were kept in reserve out of howitzer range. All other troops deployed to engage the Texans frontally. After an hour the Federal forces forced back the Confederates with Downing being in a strong position to flank

the entire rebel line. At this juncture Company "F" (Captain Cook, Colorado Volunteers) charged down the road, leapt the Arroyo at the bridge, and charged back and forth through the retreating Texans with his 103 men. With this, the rebel artillerymen hot footed it back up the main canyon with most of Pyron's men. A group of some 70 Confederates were cut off in a side canyon and forced to surrender.

With nightfall *both* sides withdrew — the Federals to Pigeon's ranch and the Confederates to Johnson's. There a messenger from Pyron caught up with them asking for a one day truce which Chivington agreed to. Union losses are placed at five killed and 14 wounded while Confederate losses are said to have been two killed, three wounded (probably a lot higher) and 72 prisoners.

The Battle of Glorieta Pass (or Pigeon Ranch)

Both sides sent for reinforcements on the 27th. Chivington received some 3900 infantry and cavalrymen from Slough while the remaining troops stayed at Bernal Springs. At 3 AM Colonel William R. Scurry and his men reached Pyron at Johnson's Ranch with some 700 men. There Scurry prepared for the expected Union advance. But the Union forces had run out of water and had had to make a further withdrawal back to Kozlowski's Ranch. There Chivington was joined by the main Union force under Colonel Slough. It was not until the following morning that the Union troops advanced to again occupy Pigeon's ranch and to rest there. The remainder of the battle was brief as the Confederates, under Scurry, now tired of waiting for the Yankees, had determined to advance themselves. Just prior to the opening of the battle Colonel Slough detached Chivington with some 400 men while he advanced up the canyon with the remaining seven hundred. Scurry divided his command among Major Charles L. Pyron, Henry W. Ragnet, and John S. Shropshire. The seventeen companies totalled some 1,100 men from the 4th, 5th, and 7th Texas and the Volunteer Company. There were also three guns (a gun was left with the wagon train with several companies of troops). When notified by his scouts that the Union forces were advancing, Scurry formed his troops and awaited the Federal advance.

Order of Battle for Johnson's Ranch

CS FORCES

Major Pyron (2nd Texas Mtd. Rifles) Commanding

Pyron's Battalion

5th Texas Cavalry (four companies)
Major John Shropshire, one Sct. of Teel's Artillery, (two 12-pounder Brass Howitzers)

U.S. FORCES

Chivington Commanding

COLORADO-1st Infantry ("A", "D", "E", and "I" companies), Captains Wynkop, Anthony, Downing, and Maile, Company "F" (Mtd) Captain Cook

REGULARS- (two companies, drawn from the 1st & 3rd Cavalry), Captains Walker, and Howland
Totaling 200 Mounted Troops and 180 Infantry).

The battlefield was located a half mile west of Pigeon's Ranch. Its terrain was mostly a rough gorge a few hundred yards wide with a wagon trail running down the middle. The ground was interrupted by deep gulches and arroyos. On each side the terrain rose steeply. Scrub growth, boulders, scattered junipers, and pine trees further rendered it unsuitable for cavalry and artillery. The engagement lasted most of the day with first one side and then the other gaining a slight advantage. Both sides showed extreme bravery. The battlefield in the cedar covered, rock strewn canyon floor was more "bushwhacking" on a grand scale than a formal battle. The Federal troops were forced to stay on the defensive during most of the battle as the odds were against the Yankees. Had Scurry been aware of the rebel superiority he would have been more aggressive. But events two days before had made him cautious of these "Pike's Peakers." The one attack on the Confederate guns was led by Companies "D" and "I" (The 'German' company, now led by Lieutenant Kerber) but was repulsed with loss. Even so, the guns were forced to withdraw temporarily, with many casualties, including its commander.

Various incidents stand out: Downing's Company discovered a masked Confederate gun and suffered heavily from its grape and cannister. Union officers then became concerned about their position and withdrew some 400 yards towards Pigeon's ranch. Their new line extended from a rocky ledge over a gulch to an Arroyo and

then up a wooded bluff where Claflin's battery was emplaced. Ritter's guns were placed in the center.

Riflemen from Companies "D" and "I" busily picked off most of the Confederates' remaining gunners while two Confederate and one Union gun were disabled. Colonel Scurry realized that the only hope of breaking the Federal line was to concentrate his superior numbers in repeated charges against the Federal position. By mid-afternoon he had been joined by two of the companies earlier detached to guard the supply train. Scurry ordered a general charge but Federal skirmish fire forced them back. Joined by more men from the center, the attack was renewed but repulsed by the Coloradans delivering volleys. Ground was yielded most grudgingly as the Federal line was pushed back to the ledge of rocks north of Pigeon's ranch. At times the troops fired on each other from the opposite sides cedar bush clumps. Scurry later said, "Our men and officers...pushed forward among the rocks until the muzzles of the guns of the opposing force passed each other."

The final Union position on the bluff commanded the valley floor and was held for four hours against five Confederate attacks. Each attack was thrown back with heavy rebel losses. Seeing that he had gained a slight advantage on the his left flank Scurry began directing the Confederate efforts towards capturing the Union artillery, which had proven to be decisive at Valverde. So the Texans charged forward against the two Federal batteries. The rebels were on the verge of capturing the guns but the Colorado troops threw them back. A storm of grapeshot, cannister and shell, combined with a galling fire from the Union infantry, repulsed the attackers each time.

About this time a Texas detachment gained a small hill on the Union right. From there they opened a deadly fire on Ritter's battery, forcing them to withdraw. At this point the Federal line was only some forty yards in front of their supply wagons.

By 5 PM Slough ordered a further retreat to Kozlowski's Ranch. Wagons and guns began to withdraw down the road one by one. Some of the Yankees objected to this retreat since they felt that the Confederate forces were spent. Slough felt that he

Order of Battle for Glorieta Pass

US FORCES

COLORADO-1st Colorado Infantry ("C", "D", "G", "I", "K", and "L" companies, about 400 men).

NEW MEXICO-4th New Mexico Volunteers (one Company, 50 men)

REGULARS-1st and 3rd ("E") US Cavalry, (Howland-150 men); Ritter's Battery (two 12-pounder & two 6 pounder guns, 53 men). Claflin's Battery (four 12-pounder Howitzers, 32 men)

About 200 men were detached to guard the Federal supply trains.

CS FORCES

Commanded by Colonel Scurry
Scurry's Texas Cavalry Regiment
detachment from the Texas

Pyron's Battalion

"The Brigands" (1 Coy)

Teel's Artillery (three 12-pounder Howitzers)
Totaling 1,000 men

Another 200 men and a single Howitzer were left to guard the Supply Train at Johnson's Ranch.

Order of Battle for Major Chivington's Detachment

5th United States Infantry companies A & G (Captain W.H.Lewis & A.B.Carey-60 men)

1st Colorado Volunteers: Company "A" (Wynkop-68 men, Company "B" (Capt. Logan-75 men), Company "E" (Anthony-71 men), and Company "H" (Sanburn-80 men)

2nd Colorado Volunteers: Company "B" (James H. Ford-76 men)

had accomplished all that he could do. Actually, the soldiers on both sides were so exhausted that neither side could have continued the affair. About this time Scurry asked Slough for a 24 hour truce which was accepted. The decisive action had not occurred here but rather some miles behind the Confederate lines and Scurry needed to assess the damage.

The Federal advance (900 men) began at 8 AM from Kozlowski's Ranch. Colonel Slough had detached Major Chivington (430 men) to circle around the Confederate flank and take them in the rear while Slough engaged them in the front. If possible Chivington was also to destroy the rebel supply train. Chivington's detachment left the ranch at about 9:30 AM. Governor Connelly reported, "Major Chivington with 500 men had been ordered to make a detour of the heights...he found the enemy's whole

train packed together...guarded by 200 men...He made a sudden and unexpected attack on them, and captured the whole train..." Chivington then proceeded to burn the wagons, destroying all the Confederate supplies and the sixty-four wagons left at Johnson's ranch. Chivington then hastened back to rejoin Slough for the main battle but arrived too late. Rumors now spread among the Confederates that Canby was attacking their rear. (Actually Canby was some 140 miles to the south at Socorro.) Scurry claimed a victory but told Sibley that he was forced to fall back because of Chivington's attack. Total losses in the two battles were Confederates 60 Killed, 100 wounded, and 91 captured or missing; Union, 51 Killed, 78 wounded, and 24 captured or missing.

So after the battle both armies again retreated. The Union forces returning to Fort Union. Only later did they realize that Chivington's action had dealt a death blow to the Confederate invasion. The Confederates, thinking that Canby had cut their lines of communications, retired towards Santa Fe.

Sibley said, "The loss of my supplies so crippled me that after burying my dead I was unable to follow up the victory. My men for two days went unfed and blanketless...I was compelled to come to Santa Fe for something to eat."

Busted: The Retreat from New Mexico

On the 29th, Scurry fell back to Santa Fe and sent a message to Sibley, who was still at Albuquerque, informing him of the battle's outcome. Sibley immediately left with six of Green's companies. Companies "D" of the 2nd, "A" of the 4th, and three guns under Captain Reily were left to guard the town. With his loss of transport, Sibley first fell back on Santa Fe, vainly seeking to gather more supplies. The first plan was to fall back towards Fort Stanton to a town called Manzano and await reinforcements from Texas. From there both Fort Craig and Fort Union could be closely watched. Before this could be done Canby led a force of 860 Regulars and 350 volunteers (1,210 men) out of Fort Craig towards Santa Fe to join forces with the Federal troops advancing from Fort Union. Colonel Carson had been left at the Fort with ten companies of New Mexico Volunteers. Sibley's first counter move was to gather his forces and head south to save his remaining supplies. Canby's strategy was to join the troops from Fort Union and then drive the Confederates from the territory. Canby's first target would be Albuquerque. Such an attack would certainly bring Sibley from Santa Fe with his army.

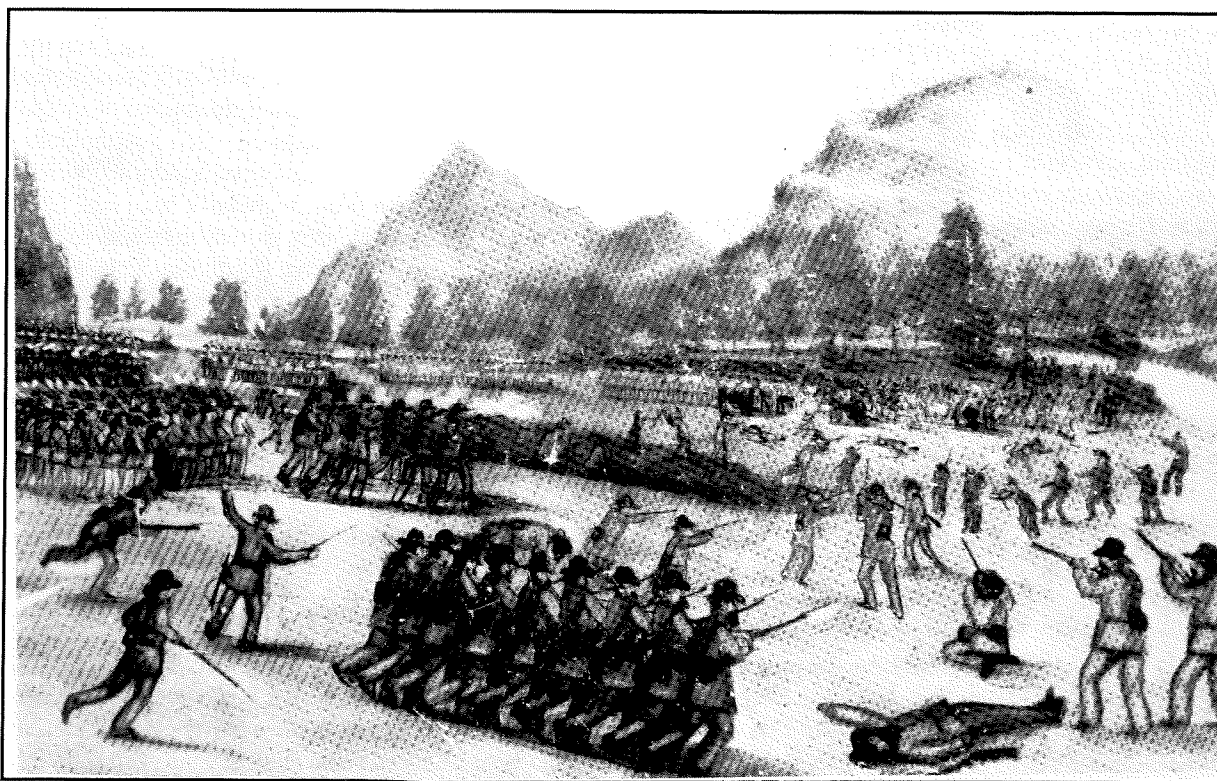
Sibley was now in a tight spot. Supplies were scarce and he did not have

enough men left to attack either Federal force successfully. Sibley, therefore, decided to retreat. Most of the remaining heavy equipment was destroyed and eight Confederate howitzers (from the 4th and 5th Regiments) were buried. The captured Federal guns were retained however, as were three of Teel's. Although there were a few skirmishes, the Confederates were allowed to escape to Fort Bliss. The only major engagement was the battle of Albuquerque on April 10th. Again the battle opened with an exchange of artillery fire. This continued until the townspeople complained to General Canby who then broke off the action.

Canby then slipped away to Carnuel Pass and effected his junction with the Fort Union troops while Sibley's Army rushed into Albuquerque. By April 11th Sibley's entire command in New Mexico was concentrated at the town. With only 20 days supplies left the Confederates began their retreat. The last skirmish took place on April 18th at Peralta. The 4th and 7th Regiments were on the west Bank while the 5th and Pyron's Battalion moved along the east bank. The plan was to cover the Peralta Ford and destroy Fort Craig before leaving the territory.

Upon reaching Peralta, Green's 5th Texas had established themselves in Governor Connelly's house. When General

Canby arrived late on the night of the 18th, "his ears were assailed with the sound of revelry. The violin was in full blast, accompanied by other, and more noisy, instruments. The enemy seemed entirely unconscious of his approach." (The Texans pretty much trashed the Governor's house, carrying off or destroying some \$30,000 in property, a hefty sum in those days.)



Sibley rushed the rest of the Army to support Green, but the results were tactically indecisive. After six hours, a rising sandstorm ended the battle. All the Confederates were now moved to the west bank of the Rio Grande. The Union was successful in the battle and forced Sibley to destroy most of his remaining supply train (Some 60 wagons). With Canby just across the river there was no hope of taking Fort Craig and a real danger that Carson might block the Confederate retreat long enough for Canby to trap Sibley's Army. The other consideration was that the Confederate army simply did not have enough ammunition to fight another battle!

Allowing his troops to take only seven days' rations, Sibley ordered the wagons and most of the baggage to be destroyed. Remaining provisions were packed on mules, and a night march begun. Sibley now took the army on the "old" trail twenty miles west of Fort Craig. The retreat through the San Mateo Mountains was a nightmare. Sibley determined to avoid Canby at Fort Craig and directed his men to march well west of that post through mountainous terrain. This route lacked food, water, and was so ill marked that many times the troops lost their way. What few wagons Confederates still had were abandoned while men and horses died from exhaustion and exposure to the elements. Only seven headquarters wagons were retained, as well as a few light wagons and ambulances belonging to rebel sympathizers who had decided that staying in the territory was now unhealthy. The troops criticized Sibley vehemently when sick soldiers were thrown out of these wagons to make room for some Mexican "lady friends" of the general! Even then the Confederates held on to their captured Federal guns, as Colonel Scurry had sworn that trophies would be brought through at all costs. A company (from the 4th) was assigned to pull each of the six guns along the road.

Eight days later the survivors of Sibley's army reached Alamosa after a hundred mile march through hostile country. Some additional supplies reached the troops before they reached Fort Bliss during the first week of May. While at Fort Bliss the "Valverde" Battery was formally organized under the command of Capt. J. D. Sawyers of the 5th Texas. The respite was brief. Word arrived with Hunter's Arizona

detachment — they arrived May 4th — that the California column was fast approaching. Sibley continued to retreat to avoid being overwhelmed.

Major Pyron's Battalion was due to be mustered out in May so some of his men along with Hunter's Company "A," "The Arizona Guards" and the "Arizona Rangers" were organized into a new Battalion "Herbert's Battalion" (1st Texas Arizona Battalion Mounted Rifles). Along with Steele's "Fresh" Battalion these troops would act as a rear-guard for Sibley's retreat.

The arrival of Carleton's lead cavalry (two companies, 130 men), combined with a reported Confederate advance through Indian Territory into Kansas, removed the need for an active pursuit of Sibley's Army in Canby's mind.

Two additional regiments of Texas cavalry were dispatched to help cover Sibley's retreat in case of a close Union pursuit, but no action occurred. Sibley, with about half of his original force, reached San Antonio a few weeks later with 1,200 to 2,000 emaciated survivors, this after a gruelling 700 mile march. Upon reaching San Antonio the men were given a sixty day furlough to rest and find horses for themselves. On July 8th, Steele evacuated Fort Fillmore and destroyed all public property there. On the 12th he did the same at Fort Bliss. Steele continued east, destroying all the posts and public property along the route to San Antonio. This prevented any Union pursuit and indeed marked the end of the Civil War in west Texas.

Canby moved his army to Fort Craig and went into garrison. Although criticized for allowing the Confederates to escape (only a detachment of the 3rd U.S. Cavalry, and "Graydon's Spy Company" actually pursued the Confederates), Canby rightly said that he lacked the supplies to feed so many prisoners. It should be noted that the Union forces had also outrun their supplies and for six weeks had to subsist on quarter rations drawn from Fort Craig.

Troops Engaged in the Battle of Albuquerque

US FORCES:

COLORADO-2nd Infantry Regiment (Company "A")

NEW MEXICO-Graydon's Spy Company

REGULARS-3rd US Cavalry Regiment

CS FORCES:

Sibley's "Army"

Order of Battle for Peralta

US FORCES:

COLORADO-1st (ten companies) and 2nd (two companies), Infantry

NEW MEXICO-2nd Infantry Regiment (eight companies ?)

REGULARS-5th Infantry Regiment

US FORCES at Fort Craig under "Kit" Carson

1st New Mexico Infantry Regiment (seven companies)

2nd New Mexico Infantry Regiment (two companies)

4th New Mexico Infantry Regiment (one company)

CS FORCES:

AT START: 5th Texas Cavalry (Thomas Green).

REINFORCEMENTS: 4th Texas Cavalry (Colonel Scurry)

one Battalion 7th Texas Cavalry

Pyron's Battalion (2nd Texas Mounted Infantry)

Teel's Artillery (eight Howitzers)

The Valverde Battery (six guns)

Significance of the Campaign

With the failure of the Confederate invasion, the west was safely in Union hands. So the gold kept coming from the fields of Colorado and California into the Federal treasury, and the dreams of a western Confederate empire died. Had the Colorado troops not stopped Scurry at Glorieta Pass the West might have been lost, or at least the Union would have had to pull troops from other theaters to deal with the threat. The advance of the California Column assured a lasting Union success and the western territories were never threatened again by rebel forces.

In the framework of the war west of the Mississippi, it was another Confederate pipe dream that failed. Few troops who served in the New Mexico campaign on the Union side ever served in any other theater. They spent the rest of the war keeping the supply lines open, Indians pacified, and rebel sympathizers thwarted. The Union success lay in what it denied the Confederates and what the attempt cost them. The hundreds who died, the guns and supplies

lost, were a major defeat for the Confederacy. Had the troops been used in a strike on Kansas or operations in Missouri the Union would have been much harder pressed then it was. Had the West's gold been lost to the Federal coffers the cost of victory to the Union would certainly have been higher, but it would not have cost Lincoln the war.

Still, the campaign has a number of lessons, not the least of which was the importance of logistics to 19th century operations. Both sides formulated much of their strategy around gaining access to supplies. It was the threat to Confederate lines of communications, and destruction of their supply wagons, which finally brought Sibley's offensive to a halt. The Valverde campaign was one of the most mobile operations of the American Civil War. Both sides operated across vast tracts of sparsely populated terrain. This, combined with the relatively small forces on each side, meant that the flanks were always up in the air, and again, this meant that a campaign of a maneuver was just as decisive as frontal assault. There is also the quality of the troops to consider. Although the militia and volunteers were of uneven quality, when properly led they proved effective. It was largely a question of employing them in capacities in which they were most suited.

Order of Battle for a Proposed Union "Field" Force to Pursue Sibley's Army

Dated June 18, 1862

1st Column (Canby)

5th U.S. Infantry (eight companies), McRae's (four 12 pounder guns, two 32 pounder Howitzers) Battery 2nd Column (Chivington)

1st Colorado Infantry (eight companies), Battery 3rd Column: (Captain Morris)

1st U.S. Cavalry (two companies) 3rd U.S. Cavalry (three companies) 1st Colorado (one Cos.), 2nd Colorado (two companies), One Sct. Mountain Howitzers (two 12 pounder Brass Guns)

Fort Craig Garrison; four companies Infantry, two Cos. Cavalry.

Between Fort Craig and Mesilla: two companies Infantry, two Cos. Cavalry.

What's a Brevet?

A Brevet rank for all practical purposes is an honorary title. It is commonly awarded for gallant and meritorious action in time of war. The rank has *none* of the authority, precedence, or pay of that rank. Upon occasion officers would claim that his brevet rank be recognized as a his real rank. One George A. Custer was known to do this after the Civil War. Actions for which an officer would receive a brevet rank can be considered to be highlights of an officer's career. It also encouraged promising officers in the small peacetime army which was severely limited in the number of officers it could contain. In 1806, the articles of war prescribed that while a brevet rank had no significance while the officer served with his own unit (Regiment) or branch (Infantry, Cavalry, Artillery, etc.) the brevet rank would count when he served on a courts-martial or when commanding detachments made up of different corps (branches). The officer could also claim his brevet rank when serving in provisional organizations made up of units from other regiments and companies. The item that really caused problems was the last one that stated that the brevet rank could also be used "on other occasions."

The future 20th president (James A. Garfield) is quoted as saying, "It is now impossible to judge from an officer's title or uniform what his actual position and command might be...Captains command Majors and Colonels, and a Colonel not infrequently finds two or three brevet Colonels among the Company and field officers of the regiment."

The regulations were quite vague about the whole matter and during the war there was a great deal of confusion. Finally on March 3rd, 1863 an act authorized the award of brevet ranks to officers of the United States Volunteers (USV). As a result of this some 1,700 officers were breveted Brigadier and Major Generals. Most of these brevets were awarded on March 13th, 1865 as the war was drawing to a close. Many of these brevets were political in nature rather than for military accomplishments. This flagrant abuse led to the abandonment of the brevet system within the US Army. In 1869 the act of 1806 was repealed. R.N. Scott states, "The provisions in (this act) renders valueless a long series of discussions and opinions, from the second comptrollers and the attorney generals, as to the condition under which pay and command, according to brevet rank, obtained under current legislation" Brevet rank shall not entitle an officer to precedence or command except by special assignment of the President; but such assignment shall not entitle an officer to additional pay or allowances." This victory saved the treasury Department a bit of money and allowed Regular Army officers (read West Point) to reestablish their precedence over the thousands of USV officers, many of whom stayed in the army after the Civil War.

Finally, there is the question of leadership on both sides. Clearly, the decisions of a few men made much of the difference. At both Valverde and Glorieta Pass, the decisions of the leaders to attack or fall back made the difference between victory and defeat. While it is easy enough to criticize their decisions retrospectively, it was a different matter from their perspective. Each commander, obviously, knew his own men's condition better than the enemy's. The ad hoc nature of the armies, without a formalized command structure, also made control difficult and, if anything, given the gamut of troop training, it is laudable that both armies performed as well as they did. ■

Mule Mines and Indian Scouts

The night before the battle of Valverde the commander of the "Spy" company, one Captain Kames ("Paddy") Graydon asked permission to launch a night attack the rebel camp. He was allowed to do so. Paddy had not bothered to explain the details. Paddy had prepared a couple of wooden boxes, in each of which he caused to have placed half a dozen 24-pounder howitzer shells, with the fuses cut. Two condemned mules were selected to carry the load. The Captain with three or four of his men crossed the river just below the fort and proceeded in the darkness towards the Confederate camp. Graydon's idea was to get the torpedo mules within sight of the enemy picket-line without being discovered. Then he would light the fuses and direct the mules towards the picket-line. The released mules would seek to join the Confederate's own mule train.

Graydon's party arrived within 150 yards of the enemy posts, and everything being in readiness the fuses were lit. The Captain and his men then withdrew. The mules, however, preferred the company of the scouts and obediently followed them instead. Moving quickly Graydon's men kept ahead of the mules until the fuses burned down and the shells began to explode. The rebel camp was quickly put under arms but Graydon returned safely to Fort Craig sans mules. Meanwhile the rebels were left to wonder what was going on out in the desert that night.

Ardant du Picq and the Art of Tactical Analysis

by Dr. Steven Fratt

Shortly after 7AM on August 15, 1870, near Metz, a German shell burst above a road embankment sheltering the French Regiment of the Line in another engagement in the Franco-Prussian War. Twelve men were killed and wounded, including four officers. By far the greatest loss for the regiment, the French Army, and modern tactical analysis was the mortal wounding of Colonel Charles-Jean-Jacques-Joseph Ardant du Picq. The shell horribly mangled the colonel's legs, and the regimental surgeon, lacking appropriate instruments, could not perform the required amputation. Du Picq was transferred to the Metz hospital where he died on August 19th. He was forty-nine years old. Fortunately for students of military history, du Picq left a variety of works, including pamphlets, memoranda, correspondence and notes which have been compiled and entitled *Battle Studies*.

Ardant du Picq is not as well known to the American student as are Clausewitz, Jomini, Liddell-Hart, J.F.C. Fuller, or even Sun Tzu. However, for the student of battle tactics, he is the Dean of methodical analysis. Clausewitz and the others are known and studied for their strategic principles of war. Du Picq complained that Jomini and others did well enough when dealing with strategy and operations but never could satisfy his desire to understand what happened to a battalion, company or squad during battle. Since he was not able to learn about lower tactics from the military giants of his day, du Picq set out for himself to find the explanations for the mysteries of tactical actions on the battlefield. As a consequence of studying classical battle accounts and nineteenth century military correspondence, du Picq developed a methodological style and perspective which penetrated the shroud of obscurity surrounding battlefield tactics. Before we look at du Picq's methods, we should benefit from understanding the historical context surrounding tactical studies in late nineteenth century France.

The Late Nineteenth Century Tactical Debate

For many influential thinkers in the later nineteenth century, the usual starting point for tactical studies was the analysis of battlefield formations and weapons specifications. The reason for choosing them was that the tacticians thought they needed to understand the interrelationship between the destructive fire of new weapons and a commander's employment of proper formations to counter the material effects of such fire. Tactical science involved develop-

ing geometric counterschemes to neutralize the technically enhanced effects of enemy fields of fire. The notion that tactics involved geometric and technological analysis made the enterprise seem all the more scientific and therefore, modern. That firepower had an obvious impact on morale tacticians had taken for granted. Since firepower had become more deadly, many military thinkers, especially in France, assumed their analysis needed to deal with the augmented factors of increased firepower, rather than wasting time on antiquated notions of morale on the battlefield. They tried to be "scientific" and concentrated their efforts on studying the quantifiable data obtained from weapons specifications, or spent time debating the deployment geometries of skirmishers as opposed to battalion columns. The "skirmisher school" advocated a thinning of battleline in order to reduce the destructive effects of enemy firepower. On the other hand, the "impetus school" argued against skirmish tactics which encouraged static battles which could only be decided after a wasteful mutual attrition. The proper way to avoid inevitable attrition by enemy firepower was to pass through the "beaten zone" as quickly as possible and come to close quarters, thus silencing the enemy's fire and forcing a decisive outcome to the attack. The proper formations for such impetuous attacks appeared to be various forms of columns, since the rear ranks of a deep formation would encourage the front ranks to continue forward to the objective. Ardant du Picq had to address the question of increased enemy firepower, just as the above two schools, but argued that the key to the solution must be with a study of the human psychological factors of battle, rather than jumping into a material, physical analysis of formations versus increased firepower.

Primacy of Morale

Du Picq rejected the thinking of fellow tactical pundits because he thought their analysis superficial and their conclusions erroneous. He argued that the key to understanding battle lay not in weapons analysis, drillbook manuals, or formation geometries. The fundamental reality at the center of every battle, whether ancient or modern, was the human tendency to resort to "self preservation" over all other instincts inherited or learned. Every human being had a saturation point of terror and when reached, fear dominated all else in the human heart and the instinct of self preservation prevailed and defeated the soldier long before he was made a casualty or ran for the hills. If tacticians did not consider the

psychological realities of the human motivation as their primary subject of study, then they were in danger of developing tactical doctrines on the false assumption that technology or geometry was the decisive element. Tactical doctrines based on these shaky foundations were dangerous because they inevitably led to battlefield disaster. Tactics which were not a result of detailed human analysis tended to have little correlation to battlefield realities. When soldiers experienced the terrors of combat, they became apprehensive and lost confidence because they perceived the gap between their training and battlefield realities. Ultimately, under the psychological pressure of the battlefield, lack of training led to the fear and panic which resulted in largely self-inflicted defeats. Colonel du Picq tried to develop proper tactical doctrines from a sound framework. He intended to construct the new framework from tactical studies of human battlefield psychology.

Ardant du Picq's Framework for Sound Battlefield Tactics

Colonel du Picq set out to create a new basis for sound tactical doctrine. He decided that since the morale seemed the one constant in battle throughout history, he would profit from reading military histories which described tactical details. He began with the ancients and surveyed battles up through the mid-nineteenth century. As he read, he divided each tactical combat into the following five categories: the approach, the firefight, the charge, command and control, and the material results. When analyzing each category, he kept track of material data like unit strengths, formations, terrain, weapon types, approach distances, engagement distances, duration of conflict, unit losses, and ammunition expenditure. Du Picq also used questionnaire type surveys to obtain information from other officers and take advantage of their battlefield experience. In addition to material aspects of combat, du Picq searched for other intangibles which could give him clues to the morale condition of the soldiers in question. Were the men shouting or silent, ordered or disordered, calm or confused, determined or shaken by their circumstances? Du Picq's objective was to properly analyze the battlefield events and understand what the soldiers were experiencing during combat.

Ancient Battle

Ardant du Picq's studies of ancient battles led him to conclude that the Roman tactical system was the most effective combat system of the classical age. The Romans were superior to the Greeks, Persians and Gauls because they understood the dominance of the human instinct of self-preservation on the battlefield. From this understanding, they created a tactical system that anticipated, then countered realistically, human fears in hand-to-hand combat.

Roman deployment of their legions was in a checkerboard pattern of units, either maniples or cohorts. The Romans would deploy in two, three,

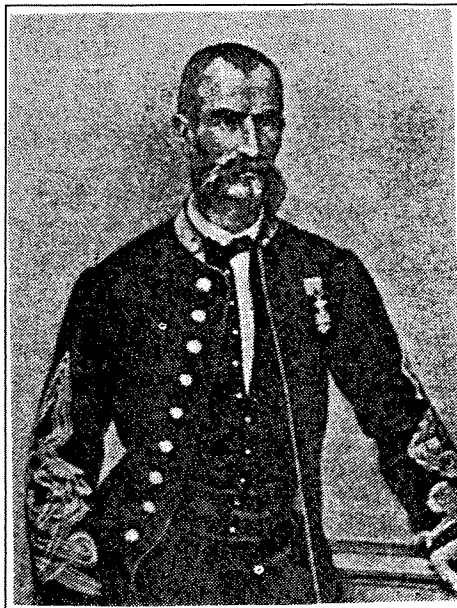
and sometimes four lines of these units, with gaps in between to allow the units of the second and subsequent lines to relieve those in the first. These tactics anticipated the impact of battlefield pressures and exhaustion of the soldiers in the first ranks and, by relieving them with veterans from the second and third lines, maintained fresh troops in contact with the enemy. In addition, the second and third ranks were far enough away from the front of the battleline to escape some of the demoralization there. The Gauls and Greeks, however, fought in a single mass or phalanx. They had their reserves, the rearmost ranks, connected physically with the first line of battle. These reserves suffered directly from the psychological pressures emanating from the front of the formation. The evidence for this pressure is when one considers that the rear ranks usually began the flight of the broken phalanx. [The French experienced a similar problem with their massed columns at Waterloo, where the rear ranks would be the first to flee from British counterattacks. Editor]

From the annals of ancient warfare, du Picq observed that the victors often won tremendous battles with little loss of life to themselves. This was because the majority of casualties were inflicted after the loser army's morale had broken. The men panicked and ran, thereby making themselves easy targets for their pursuing foes. One of the main advantages of the Romans was their superior discipline, which allowed them to keep fighting, regardless of losses. Two battles in particular fascinated du Picq, Cannae and Pharsalus. In each case the victor was heavily outnumbered, yet still won the battle. Du Picq was not willing to explain these victories by an appeal to the nebulous "genius" of the commanders, the material depth of the formations, the employment of weapons, or a traditional usage of superior tactical system.

The main reason for these victories was that Hannibal and Julius Caesar (the respective commanders in question) understood their men well and knew how much morale pressure they could take in battle. Hannibal and Caesar knew when their men would break and they took steps to help their soldiers resist their weaknesses and break the will of the enemy. The steps they took involved the handling of formations and deployment of troops, however, and this is crucial, their chosen orders of battle were predicated on the specific set of morale problems set before them, not slavish adherence to a set of military principles designed to be applied with mathematic, scientific precision. In the case of Cannae and Pharsalus, the victorious commanders were outnumbered, but they arrayed their orders of battle in such a manner to inflict the greatest amount of psychological terror on the enemy while, at the same time, encouraging their own men. At Cannae, Hannibal placed his lowest morale troops, his Gallic mercenaries, in the center, while his better disciplined African troops were on the flanks. In the battle which ensued, the Gauls fell back under Roman pressure, but the African

troops enveloped the Roman army, surrounding it and largely wiping it out. Similarly, at Pharsalus, Caesar deployed his forces in greater depth than normal. While his veterans held Pompey's forces to the front, his reserves defeated an enemy flanking movement and then pivoted to attack from the rear.

What du Picq concluded from his study of ancient battle was that tactical systems succeeded if they were developed from sound understand-



ing of the psychological friction experienced by soldiers in battle. When exceptional results occurred in battle, victory was often the result of a creative application or variation of a tactical system based on this understanding of what soldiers could withstand and achieve under real battlefield conditions — not the application of some abstract or scientific theory of hardware or formations. Let us now consider how Ardant du Picq applied these insights to the modern battlefield.

Battle in the Mid-Nineteenth Century

The technological advances of the industrial revolution applied to weaponry certainly made the nineteenth century battlefield more terrifying than its ancient counterpart. The noise of shouting soldiers was drowned out by the roar of cannon and the staccato-like popping of musketry. Engagements began at greater distances because cannon could reach infantry formations hundreds of yards away and annoy them with exploding shells. Since the terror and confusion began at greater distances, units might be tempted to take cover or break sooner rather than approach a distant foe. Soldiers found it easier to escape the supervision of their officers. One might feign a wound on the advance and be left behind by charging comrades. Skirmishers could spread out in a ragged line and find concealment in the terrain. Ironically, unless close action occurred, units might break sooner and suffer fewer casualties than in ancient battles because, despite the

increase in weapons ranges, the close-quarters butchery of the vanquished, often associated with ancient warfare, was absent. Du Picq's conclusion was that the decisive break in a force's morale occurred before actual physical contact with the enemy.

French military thinkers tried solving the problems of the modern battlefield by debating "scientifically" the benefits of dispersed versus massed formations. Ardant du Picq argued that problems of increasing terror on the modern battlefield would not be solved by such debates. Morale cohesion was not an antiquated concern. Successful tacticians would seize on modern morale dynamics and find practical easily applied tactical methods to counter the effects of the new terrors of modern battle. First of all, officers had to cut down on busy work and drill. What soldiers needed were practical battlefield rehearsals that instructed them as to what to expect in combat. With proper training, soldiers would know what to expect in battle and delay their reliance on the instinct of self-preservation. Neglect of training resulted in a gap between the soldier's expectations and battlefield realities. As the soldiers suffered from the shock of surprise in real combat, their morale and unit cohesion would suffer and they would break mentally long before the cumulative material effects (i.e., casualties) of the enemy weapons defeated them.

Du Picq thought attacks were still useful because a determined attack affected the morale of the defenders. A determined attack could create anxiety in the defender and force his position. The problem was how to counter the increased material effects of firepower. Du Picq advocated leaving one's own skirmishers to the front and not drawing them back into the company ranks for volley fire. Skirmishers were much more materially effective in loose order where they could participate in deliberate, aimed fire. If kept in skirmish order, the morale pressure against the enemy could be maintained throughout an entire attack. Drawing in skirmishers gave the enemy a moment to recover or readjust against the attack.

Du Picq preferred balanced, light formations that contained ample reserves. He argued for the reduction of the six company battalion to four companies for ease of handling. The two companies of the first line of battle would each post one platoon forward as skirmishers and hold the other three in column reserve. As the skirmishers depleted their ammunition or needed relief, the parent company would always have plenty of platoons on hand for rotation. The two companies of the second line would stay in column, protected in the rear as a battalion reserve.

Every sub-unit needed to maintain a reserve in hand, since reserves were the best for a commander to retain control over a unit. Reserves for skirmishers provided many rallying points that encouraged a sense of unit cohesion. Reserves of any size or formation could provide an immediate morale impetus when committed into battle. Colonel du Picq often commented on how, in the

confusion of battle, a squad led by a corporal could put to flight a disrupted, demoralized, massed company. Many of du Picq's colleagues thought it cowardly to find ground cover for their men in battle. The Colonel retorted sarcastically that if troops were not protected against enemy fire, they were guaranteed to flee sooner than if they had ample protection.

Finally, commanders needed to hold their units in hand until the last possible moment. Once sent into the attack or commanded to open fire, the soldiers are released from the supervision of their commander. Troops who opened fire were very hard to command. Firing troops did not cease fire easily and they became very reluctant to advance on the enemy. This reality reinforced the notion of keeping a reserve in hand at all times. Only uncommitted troops would remain controlled by a commander until they were really needed.

Conclusion

Ardant du Picq had no illusions that his insights into tactics would scientifically guarantee success on the battlefield. He founded no school of tactics. He knew too well that a set tactical doctrine would not work practically on the modern chaotic battlefield. Commanders needed to train their soldiers for actual combat situations, understand their weaknesses, and protect them as much as possible from the horrors of modern battle. What is significant for the student of military history and the wargamer is that the reading of Ardant du Picq's *Battle Studies* encourages one to engage in the rational, humanistic study and analysis of tactical "snippets." Du Picq thought such studies would lead to practical useful tactical doctrine. Perhaps our practise of his method would refresh our thinking and lead to creative, rational, game systems that would remind us that battle is a thoroughly human activity, rather than a mere exercise in mathematics, geometry and die rolling.

Dr. Steven D. Fratt is an assistant Professor of History at Trinity College, Deerfield, Illinois. He has been a wargamer for 27 years. He specializes in the Ancient era, Napoleonic, and the American Civil War.

(Colonel du Picq's *Battle Studies* can be found in *Roots of Strategy: Book 2, Three Military Classics*, Harrisburg, Stackpole Books, 1987.)

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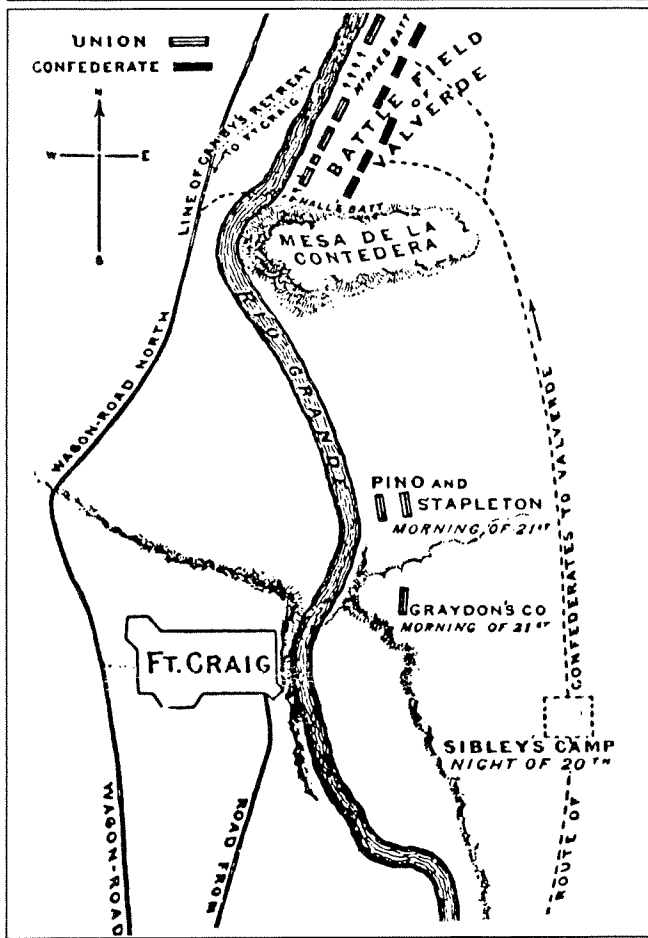
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RIO GRANDE

THE BATTLE OF VALVERDE

New Mexico Territory: February 21, 1862

A RICHARD BERG GAME

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(1.0) INTRODUCTION

Rio Grande is a game of the Civil War Battle of Valverde. This was the major action of Confederate General Henry Sibley's offensive into New Mexico in 1862. The objective of the campaign was to seize the Union Department of New Mexico as a base for operations into California. The Confederates were opposed by Union Colonel Edward Canby with a mixed force of regulars and volunteers. The game highlights cavalry vs. infantry fighting, as well as the problems in using cavalry in a pitched battle.

(2.0) COMPONENTS

The game includes the following:

One 17" x 22" game map

100 Diecut counters

The rules you are reading

A die. Actually, you'll need two, so don't be cheap.

(2.1) The Game Map

The 17" x 22" map depicts the area of southern New Mexico over which the battle

was fought and is covered by a hexagonal grid which is used to regulate movement and combat. The different types of terrain and how they affect play are covered in 5.2, below.

(2.2) Counters

There are three types of counters in the game: combat units, leaders and informational markers.

(2.21) *Combat Counters* represent the units which fought in the battle: infantry, cavalry or artillery, examples of which can be seen below. Each combat unit is rated for Combat Strength, Range (number of hexes through which they can fire) and Movement Allowance. Cavalry units are represented in Mounted status, although they may Dismount. (See 6.4.) The use of these ratings is discussed in the rules. All combat units are back-printed, the reverse side showing a reduced strength for that unit (8.19). Additional information gives the company identification letter and the regiment to which that company belongs. Artillery batteries have the battery commander's name and the section letter. Independent units (no specific leader) are noted as such.

Typical Infantry Unit

Companies	K	Regiment
Type of Unit	5 US	Fire Range
	8	
Combat Strength	2-7	Movement Allowance

Typical Mounted Cavalry Unit

Companies	A (Ind*)	Regiment
Type of Unit	Col Vol	Fire Range
	1	
Combat Strength	6-12	Movement Allowance

Full Strength

Infantry	Mntd. Cavalry	Artillery
K	A (Ind*)	McRae
5 US	Col Vol	a
8	1	20
2-7	6-12	2-9

Reduced Strength

Infantry	Mntd. Cavalry	Artillery
K	A (Ind*)	Hall
5 US	Col Vol	
8	1	17
1-7	4-12	1-9

(2.22) Leaders

1. **Combat Leaders** are those leaders directly commanding troops. They are rated for **Action** (a negative [-] number for Union, a positive [+] number for Confederates, or a 0); and **Command Range**. The reverse side of a Combat Leader is his Replacement, if killed. (Leaders also have a **Movement Allowance**.) All ratings are explained in 10.1.

2. **Overall Commanders** are in charge of the respective armies. They do not lead troops but, rather, affect the performance of the Combat Leaders in their command. In addition to a **Command Range** they have **Command Points** which can be used to help their subordinate Combat Leaders.

Combat Leader

(Name)	ROBERTS	(Command)
Rank	US Cav Col-1	Action Rating
	6-15	
Command Range		Movement Allowance

Overall Commander

(Name)	SIBLEY	Command
Rank	ANM *** [3]	Command Points
	8-15	
Command Range		Movement Allowance

(2.23) **Informational Markers** include Dismounted markers (to indicate that status), Step Loss Markers to record combat losses, plus Action status markers, Ammo loss markers, Free Fire indicators and markers to note Disrupted or Routed status.

(2.3) Game Length

Play starts with the 0830 turn and continues until the end of the 1800 game-turn (by which time it is pretty dark, anyway) - unless one side Withdraws before that - a total of 20 possible turns. Because of the relative paucity of units - especially at the beginning - a complete game can be played in about 4-5 hours (exclusive of learning time).

(2.4) Game Scale

Each infantry strength point equals about 25 men, each mounted cavalry SP represents 12-13 men (25 when dismounted), and each artillery strength point is one gun. Infantry and cavalry units are companies, with their leaders being regimental commanders. Each artillery unit is a section. The map scale is 70 yards per hex.

(2.5) Terminology

Familiarity with the following terms should help in understanding the rules:

Command - All units led by a commander
Action - What a Command or individual unit may do.

Free Action - An action that may be performed without rolling on the Turn Continuation Table. Free Actions are *usually* available when (1) the player has the Initiative Bonus; (2) after the opponent's Third Consecutive Action; and (3), when the opposing player rolls on the TCT in your dice range.

Initiative - The player with the Initiative is the one undertaking actions

Turn Continuation Table (TCT) - The TCT is the mechanic the game uses to determine whether a player may undertake a chosen action or whether the Initiative will, instead, pass to the opposing player.

Zones of Control - The six hexes adjacent to the hex a combat unit is in. This represents the area into which that unit exerts its presence through its firepower.

Fire Combat - The use of rifles, muskets and cannon to inflict losses on the enemy at various ranges.

Melee Combat - The effort to dislodge enemy troops from a position by the sheer weight of numbers and the power of momentum. Sometimes, historically, called "Shock." When undertaken by mounted cavalry, it is called a **Charge**.

Morale - The measure of a command's training, equipment and *esprit de corps*, all of which add up to how well that command can fight and how long it can withstand taking losses.

Regulars - Term referring to professional U.S. units (designated "US"), as opposed to:

Volunteers - In this battle, local militia, usually (but not necessarily) of poor quality.

(3.0) THE GAME TURN

Rio Grande is played in *Game Turns*. Each game turn is composed of a number of *phases*. The phases of each game-turn must be undertaken in the exact sequence given below. The player who goes first in each game turn is determined by the rules for Initiative (4.1). Players then move and fight in the Action Phase. When all phases of the Sequence have been completed, the turn is over.

SEQUENCE OF PLAY**A. Initiative Determination Phase:**

Both players roll one die, to which they may add Command Points from their Over-

all Commander, if he is present. The high total gains the Initiative; see 4.1.

B. Action Phase: All Actions (4.3) are performed in this phase, as below:

1. The Player with the Initiative (4.11) may use his Initiative Bonus to undertake one "Free" Action (4.13); THEN

2. [The Player Segment] The player with Initiative chooses a desired Action and rolls on the Turn Continuation Table. If successful, he performs the chosen Action and then repeats this section again; OR,

3. If the TCT calls for a Random Event, the player consults the Random Event Table (see Battle Rules) and follows the instructions therein; OR,

4. If unsuccessful on the TCT (i.e., the adjusted die roll falls within his opponent's range), the opposing player now performs any one "Free" Action of his choice and then HE reverts to his Player Segment.

Play continues to alternate among '2', '3' and '4' until the Phase is Finished as per 4.4.

C. Recovery Phase:

1. Players roll to rally Disrupted/Routed units.

2. Place Replacement leaders. (10.31, *et seq.*)

(4.0) THE TURN CONTINUATION SYSTEM

The player whose 'play segment' it is, chooses what he wants to do (action). He rolls two dice; if they fall within his range, he performs his chosen action. If they fall in his opponent's range, his opponent goes. If it is a '7' it is a possible random event.

A player may perform any Action in his Player Segment with any eligible unit, subject to the restrictions particular to that Action. Before performing a given Action, a player must first consult the Turn Continuation Table (TCT) to determine whether or not he can perform the Action, unless he receives a Free Action; see 4.13 and 4.23[2].

(4.1) Initiative

(4.11) To determine which player will first have the Initiative - i.e., which Player has the Play Segment and can undertake actions - each player determines how many of his Overall Commander's Command Points he wishes to use (see 11.23) and rolls one die, adding those points to the die roll. CP's may be added only if the Overall Commander is on the map. The player with the higher total has the Initiative. Ties? Roll again, using the same Initiative points.

(4.12) The Confederate Player automatically has the Initiative on the first turn of the

game.

(4.13) The player who wins the Initiative die roll receives an Initiative Bonus of one "Free" Action at the start of his first Player Segment. He may undertake any one Action without first rolling on the TCT. This bonus MUST be taken at the beginning of the first Player Segment; it may not be saved for later use. The Initiative Bonus is exempt from the Free Action Exception (4.26).

(4.2) Turn Continuation

(4.21) After the player with the Initiative has used his bonus Action, he may either pass play to his opponent or he may attempt further Actions. To do the latter he must:

1. Announce what Action he wishes to perform and with which units; he then

2. Rolls **two** dice and consults the TCT. The TCT dice roll is adjusted by the Action Rating of the Combat Leader commanding the units wishing to undertake that action. The CSA player will add (+) to his dice roll; the Union player will subtract (-). If a rating is '0' there is no adjustment to the dice roll. See, also, 4.22.

Example: The Union Player wishes to move all his US Cavalry (4 units) plus Hall's artillery section. All combat units are within Roberts' Command Range, and his Action Rating is -1. The Union Player rolls two dice and gets '7'. Roberts' "-1" rating adjusts that roll to a '6', which falls within the Union Player's Turn Continuation Range. The Union Player may now move all his cavalry, Hall's section *and* the Roberts leader unit.

(4.22) If the Confederate player is undertaking an Uncoordinated Action with an Out of Command unit (4.32) he subtracts one (-1) from his TCT dice roll, while the Union player adds one (+1).

(4.23) The TCT dice roll results are as follows:

1. If the adjusted dice roll falls within the range listed for that player, he *must* undertake the action he has chosen.

2. If the adjusted dice roll falls within the range of the opposing player, that player immediately undertakes any one "Free" action of his choosing *without* consulting the TCT (Exception: see 4.26), after which it is now his Player Segment;

3. If the adjusted dice roll is a '7' a Random Event may occur. See 12.0. Play remains with the rolling player unless the Random Event Table states that it passes to his opponent. In either case, after the event, play reverts to the Player Segment.

(4.24) A player may always voluntarily Pass the Action Phase to his opponent simply by

saying so. When this happens the player to whom play is passed begins a normal Player Segment (*no* free Action).

There are three exceptions to the above: The Consecutive Action Exception (4.25); the Free Move exception (4.26) and the Repeat Action exception (4.27).

(4.25) **The Consecutive Action Exception:** Regardless of the above, *no player may execute more than three (3) consecutive actions*, including any Free Actions. Once a player has completed his third consecutive action, his opponent may:

1. Perform one free action (see 2.4) with any eligible units (4.26); OR

2. If - and only if - he has no units eligible to undertake a Free Action he may, instead, use a TCT dice roll to *attempt* an Action; OR

3. If all his units have already undertaken two Actions and he has "Finished" for the turn, he still rolls on the TCT, as per #2. See 4.42 for the effects of such dice rolls.

Regardless of which of the above occurs, play reverts to the first player (with whom the Initiative remains) and the "three" cycle starts anew - unless the phase has ended as per 4.42. Use the Consecutive Action Track to keep a record of how many actions have been so performed.

(4.26) **The Free Action Exception:** *Out of Command units AND Command Units with leaders who have a Printed Action Rating of '0' may not undertake a Free Action.* The player must always roll on the TCT for those units. **Exception:** Independent units (10.4), even if Out of Command, *may* use a Free Action.

(4.27) **The Repeat Action Exception:** No commander may lead, or no unit may perform, two consecutive actions unless there are no other units with which to perform an action. Any intervening action or attempted action by either player is sufficient to break the continuity. *Commanders with an Action Rating of +2/-2 and Overall Commanders may ignore this restriction.*

(4.28) The Turn Continuation Table
(See Maps)

(4.3) Actions

There are three things a unit may do (actions): Movement, Combat, and Resupply.

(4.31) Any number of Actions may be undertaken by a player in his Player Segment of the Action Phase within the restrictions of 4.2 and 4.34. An unsuccessful TCT dice roll is not an Action.

(4.32) **Coordinated Actions** are those in which more than one unit may partake and

require those units to be "In Command."

An **infantry** or **cavalry** unit is In Command if it is within the Command Range of its Combat Leader. Otherwise, it is Out of Command. (However, see 11.4.)

An **artillery** unit is In Command if it is within the Command Range of *any* combat leader.

Command status is determined at the time of the Action but before the TCT dice roll; it lasts for the duration of the Action, regardless of what happens during that Action. Coordinated Actions use the Action rating of the Combat Leader as a TCT dice roll modifier. Overall Commanders may move in a coordinated action if the combat leader coordinating such action is in the Overall Commander's Command Range; otherwise he must move in Uncoordinated Action. Coordinated actions include **Movement** (5.0); **Forming Square** (Union "regulars" only; see 6.3); *any* form of **Combat** (8.0); **Resupply** (8.3), and **Mount/Dismount** (6.4).

(4.33) **Uncoordinated actions** are undertaken by individual units (i.e., all units in the same hex, only) that are Out of Command, independent units, or by leaders wishing to move alone. In Command units may not undertake an Out of Command action unless their leader is Action-2 status. Out of Command units use the automatic TCT modifier in 4.22; independent units use '0'; and leaders use their Action Rating. OC's moving individually use +/- 2. Uncoordinated Actions are **Movement** (5.0); **Fire** (8.1), or **Mount/Dismount** (6.4). Uncoordinated units may not initiate a melee.

(4.34) A unit (even a leader) may perform *only two actions* in a given turn. "Free" Fire (without subsequent melee; see 8.18), Mount/Dismount and Resupply are *not* treated as actions for this purpose; such actions do not alter Action Status. Use the Action markers to indicate status. Note that a leader with an Action-2 status may not command his combat units, even if some of those units have not yet reached Action-2.

(4.35) An action commanded by a leader is considered to be undertaken by that leader AND all units in his command actually performing the action. An action undertaken by an individual unit - even a leader - applies (for 4.34) only to that unit.

Example: Lewis, commanding all regular US Infantry, has in his command 6 infantry units. Because of combat, however, Lewis has become separated from his troops (they are out of his range). The Union Player, therefore, uses an action to move Lewis into

range of 5 of his 6 units. He then uses an Uncoordinated Action to move the sixth unit into Range. All of Lewis' companies are now in his Command Range. However, both Lewis and the 6th company have Action-1 status, while the other five units have no such status.

(4.4) Finishing the Action Phase

(4.41) **Two Player Finish:** The Action Phase is over when one of the following occurs:

1. All *In Command* units of *both* players, excluding Independent units, have undertaken two actions in that turn.

Example: For the Union, Roberts, Lewis, Carson and Valdez's commands are all Action-2. Pino's regiment is Action-1 and neither the C/5th New Mexico Volunteers nor the A/Colorado Volunteers has undertaken any action. For the CSA, all commands are Action-2 and all independent units Action-1. The Union has the Initiative. If he undertakes an action with Valdez's 3rd New Mexico Vols, after completing the action the Phase is over. If he undertakes an action, instead, with the Colorado Vols, the turn continues until Valdez's men do something.

2. A Random Event ends the phase.

3. Both players voluntarily and consecutively PASS. A Pass may only occur in a Player Segment in which the player *CHOOSES* to perform *NO* actions. If a player performs an action and then passes play to his opponent, this is *NOT* considered a Pass for the purposes of this section.

(4.42) **One Player Finish:** If *one* player has completed two actions for *all* his units, or declared he is *Finished* (4.43), when the opposing player continues to roll the following TCT dice roll changes are in effect:

- All remaining (opposing) units that are eligible to undertake an action may each undertake only *one* additional action.

- If, in rolling for an action for an Out of Command or Independent unit that attempt fails, that unit is *Finished* for that turn.

- An adjusted 2, 7, or 12 is automatically a Phase Finished.

- Three consecutive dice rolls in the finished player's range end the Phase.

(4.43) A player, all of whose units have undergone at least one (4.34) Action and who has at least one unit in Action-2 status, may declare that he is *Finished* for the turn.

(5.0) MOVEMENT

Players move units by expending movement points for each hex they enter, up to a unit's maximum allowance.

When a player has successfully rolled a Movement Action for his units on the TCT, those chosen units may move.

(5.1) Movement Allowance

All units have their movement allowance printed on the counter. The Movement Allowance represents the total number of Movement Points (MP) that that unit may use in any *one* Movement Action. These MP's may not be saved or transferred in any way. A unit does not have to use all of its Movement Allowance; the player may choose to expend less. He may never expend more. Note that the movement allowance of a dismounted cavalry unit is one-half of its mounted allowance (or '6'); see 6.4.

(5.2) Terrain and Movement

(5.21) Each type of unit spends different numbers of MP's to enter/cross the various types of terrain. For example, it may cost an infantry unit 1 MP to enter a clear hex, whereas it will cost an artillery unit 2 MP's to enter the same hex. The different types of terrain and their costs are listed on the Terrain Effects Chart. Any terrain not listed on the Chart has no effect on play.

(5.22) The Rio Grande map uses a system of graduated elevation to represent the three-dimensional contours of the battlefields. The three levels represent gradual changes of about 30 feet, changes which should be considered as relative rather than absolute. Units must pay one extra movement point when crossing to a *higher* level. There is no cost to move downhill.

(5.23) No unit may cross an **Unpassable** hexside. These represent the almost vertical sides, and 150-300 foot elevation, of the Mesa de la Contadero. The unusual shape of the map in the SE corner represents another, similar plateau.

(5.24) **Grove** hexes represent small groups of trees and thickets. They do not block Line of Sight, although they do offer some protection.

(5.25) **Sand Dunes** represent ridges of shifting sand behind which are the gullies that represent what used to be the old path of the Rio Grande. Sand Dunes are considered *higher than Level 3* and block Line of Sight from any Level three or lower hex. (which means you can hide behind them.)

(5.26) To take advantage of a **Road** (in reality, a packed-dirt trail) a unit must enter that type of hex from a similar, connecting hex. Otherwise, it must use the other terrain type in the hex to determine movement costs. Roads negate all other movement costs in that hex/hexside.

(5.27) There are two types of River hexes: **Deep River** and **Fordable River**. The latter may be entered by any unit, while the former are prohibited; they may not be entered voluntarily. If any unit is forced to enter a Deep River hex during retreat or rout movement, it is eliminated. Units moving through hexes containing land and river use the land cost. All "all-river" or sand-bar/river hexes are treated as Level-1, so moving from 2010 into 2110 is an "uphill" move. Note that units firing while in an all-Fordable River hex suffer a penalty (see the Fire CRT), and artillery units may never fire when in an all-river hex.

(5.28) There are two types of **Sand Bar** hexes: land sand and river sand. River sand bars - those sand bars not connected to the shore - are ignored; they have no effect. Units moving into/through hexes containing any Land sandbar use the sandbar cost if entering from another Land sandbar hex or the "clear" cost if entering from an all-clear or road hex. River sand-bar hexes are treated as Level-1.

(5.3) Enemy Units and Movement

A friendly unit may never enter a hex containing an enemy combat unit; it may enter a hex containing only an enemy leader, in which case the latter is immediately placed with the nearest combat unit in his command after rolling for possible elimination (See 11.31). There are further restrictions concerning enemy Zones of Control (see 6.2).

(5.4) Command and Movement

Units that are In Command and all mounted cavalry (whether Out of or In Command), which are undertaking Movement Actions move normally. Out of Command units on foot may *not* enter an enemy Zone of Control (although they may leave one). There are no other restrictions.

(5.5) Bringing in Reinforcements

(5.51) Reinforcements enter the game map using a Movement Action. If more than one unit enters through the same hex, the first unit pays the cost of the entrance hex, the second its cost plus that of the first, and so on (i.e., they are assumed to be entering in a column, each unit behind the preceding). Reinforcements may not enter the map in a hex occupied by enemy units, but may enter into an enemy ZOC. Units unable to enter are held off the map until able to do so.

(5.52) Units scheduled to arrive without a leader may use that leader's Action Rating (whether he is on the map or off) to enter the game. Independent units still use '0.' In addition, they may continue to use that Action Rating (even if Out of Command) as long as they undertake only Movement Actions and they do not enter an enemy ZOC or find themselves in one. If they violate those restrictions, they're on their own. As soon as they come within their leader's Range this section no longer applies.

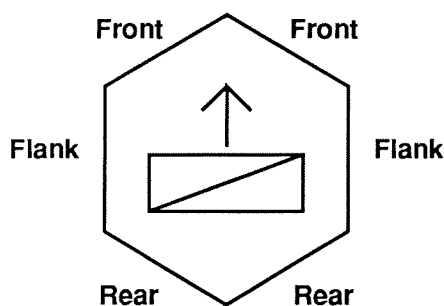
(5.53) Units scheduled to arrive in a given turn that are not brought in that turn must be brought in (in a succeeding turn) before other, later scheduled reinforcements.

(6.0) FACING, FORMATIONS AND ZONES OF CONTROL

Each unit must face towards the vertex of the hex the unit is in. The way a unit is faced determines which hexes surrounding it that unit controls, inhibiting enemy movement.

(6.1) Facing

(6.11) All combat units must be faced towards a vertex (joint) of the hex it is in - not a hexside - as per the diagram. All units in the same hex must face in the same direction.



(6.12) Facing determines which of the unit's hexsides are **Front**, which are **Flank**, and which are **Rear**. There are always two of each types of hexsides.

(6.13) A unit may change facing any time - and in any direction - only during a Movement Action. If a unit wishes to change facing without moving it must still undertake a Movement Action; it doesn't move - although it does count as an action.

(6.14) Facing effects a unit's Zone of Control (6.2) and combat (8.0). It has no effect on movement direction.

(6.2) Zones of Control (ZOC)

(6.21) Combat units exert Zones of Control; leader units do not.

(6.22) Combat units exert ZOC's through their Front and Flank hexsides; they do not exert a ZOC into their Rear hexes. **Exceptions:** Units with "Broken" Morale (see 9.2) and individual artillery sections alone in a hex exert ZOC's only through their *frontal* hexes.

(6.23) ZOC's do not extend through hexsides or into hexes across or into which that unit could not normally move. In addition, ZOC's do not extend across Sand Dune hexes.

(6.24) It costs 1 MP, in addition to the cost of the terrain in the hex, to enter an enemy ZOC. A unit must stop when it enters an enemy ZOC. It may not move further in that movement action, regardless of how many MP's it has remaining. **Exceptions:** a unit with Broken Morale (9.2) may *not* voluntarily enter an enemy ZOC, and there are die rolls restrictions for dismounted cavalry (see 6.46).

(6.25) A unit that begins a Movement Action in any enemy ZOC may move out of that ZOC at a cost of 2 MP's (in addition to the terrain). However, that unit may not enter another - or the same- enemy ZOC in that action.

(6.26) A friendly combat unit negates the effect of an enemy ZOC for purposes of tracing Command Range, but it does *NOT* do so for movement. It will negate for retreat purposes, but only if Stacking rules would allow the retreating unit to move into that hex.

(6.27) If more than one unit exerts a ZOC into the same hex there is no additional effect. Concomitantly, both sides may exert control over the same hex. Thus a CSA unit in 3113 and a Union unit in 3314 would both exert a ZOC into 3214.

(6.3) Square

Square is a combat formation used by foot units to maximize their defensive potential against charging cavalry.

(6.31) Only U.S. (regular) infantry units (no Volunteer or dismounted cavalry units) in Fair or higher Morale may form Square. Forming Square is a Coordinated Action requiring a leader. If successful, place a Square marker on top of the unit(s). Likewise, leaving Square formation (removing the marker) is a Coordinated action. Both are actions in terms of 4.34. and require an Action Status increase.

(6.32) Units may form Square only in Clear, non-river hexes. Units in Square may move only *one hex* per turn, but never into an enemy ZOC. They may not change elevation, cross a Sand Dune, or enter a River or

Grove.

(6.33) Units in Square have a six-hex ZOC, and *all* hexes surrounding the unit are considered Frontal.

(6.34) Units in Square divide their fire strength by two (halved) when firing at a target. Fractions are rounded down to a minimum of '0.'

(6.35) Units in Square have their strength tripled (3X) if meleed by cavalry and doubled (2X) if meleed by infantry or dismounted cavalry. Square units may not Melee as an action.

(6.36) Units in Square do *not* check Morale before a Cavalry Charge (8.54[5]).

(6.37) When a unit attempts to leave Square the player rolls a die (after the successful TCT dice roll). If that die roll is a 1-4, the unit successfully leaves Square. If a 5 or a 6, it leaves Square but is Disrupted.

(6.38) Units in Square may Stack, as per 7.0[1]. However, artillery may not stack with a unit in Square, nor may a unit form Square if it is stacked with artillery.

(6.39) Regardless of how many units are in Square, that hex is a Massed Target (see 7.0).

(6.4) Mounted and Dismounted Cavalry

Cavalry units may operate either mounted or dismounted.

(6.41) All cavalry counters represent their Mounted status. Dismounted status is represented by the Dismounted markers. When a cavalry unit is in Dismounted status place a Dismounted marker on top of it.

(6.42) To change status requires a *Mount/Dismount Action*. If successful, simply place or remove the Dismounted indicator, retaining all informational markers attached. Mounting/Dismounting, although it requires a TCT dice roll (or a Free Action) does *not* affect Action-1/2 status (as per 4.34). However, a cavalry unit in Action-2 status may *not* change formation. Cavalry in an all river or sand-bar/river hex may not mount/dismount.

(6.43) The Dismounted counter contains a "1/2" indicator for MA and SP. This means that the present strength (SP) and Movement Allowance (MA) of the mounted version is halved, rounding *down*. In addition, the following small-arms fire Ranges are available:

U.S regular cavalry: 5

All other units: 4

DISMT D
MA: 1/2
SP: 1/2
Rng: 4-5

(6.44) *Mounted cavalry* may not stack with any other type of counters; only one such counter is allowed per hex. If two dismounted cavalry units in the same hex mount, place one mounted unit in an adjacent hex not in an enemy ZOC. (This means that units may not mount/dismount in an enemy ZOC.)

(6.45) *Mounted cavalry* units may fire, but *only* at adjacent enemy units. Each unit fires separately; they may *not* combine fire - even if that means a defending unit is fired at more than once. In addition, their strength is halved (rounding down) AND there is an automatic one column to the left adjustment on the Fire CRT.

(6.46) *Dismounted cavalry* is treated as infantry, unless specifically noted otherwise in the rules. However, dismounted cavalry was often reluctant to engage in hand-to-hand combat—Confederates and “volunteer units” more so than the US regulars, who were trained (or rather trained a bit more) in such tactics. Therefore, before a dismounted cavalry unit may voluntarily enter an enemy ZOC the player must roll the die for each, individual unit, comparing it to the **Commitment Ratings**, below. If the die roll is the same as or higher, the unit may enter the ZOC. If it is higher, the unit may not enter that ZOC and must cease movement for that action.

Commitment Ratings

US Regular cavalry: 5

Confederate cavalry: 3

US Volunteer cavalry: 2

Confederate Independent cavalry: 1

Die roll Adjustments

If stacked with Combat or Superior Leader: -1

If Poor Morale: +1

If Broken Morale: +3

(7.0) STACKING

Stacking refers to the number of combat units allowed in any one hex at any one time.

The Basic Rule is that only *one combat unit* is allowed in a hex. There are, however, important exceptions:

1. Two infantry or *dismounted cavalry* units from the *same regiment* may occupy the same hex. However, only the top unit in that hex may fire.

2. One artillery section may stack with any one infantry or *dismounted cavalry* unit. *Both* units may fire.

3. All artillery sections from the *same battery* may stack together if there are no infantry/cavalry units in that hex.

Units that may stack together may move together. Otherwise, each unit is moved separately.

If there is more than one infantry/cavalry unit in a hex that hex is considered a **Massed Target** and a unit firing against such hex gets a one rightward Fire column adjustment; see 8.17.

There are no stacking restrictions for Leaders or markers. Stacking limits apply at ALL times during the turn.

(8.0) COMBAT

Units may **'fire' at enemy units, hoping to cause casualties, and/or they may assault (melee) them to try to force them to retreat.**

When a combat unit undertakes a Combat Action it may do *one* of the following:

1. **Free Fire** (Infantry, dismounted cavalry and artillery; *no* return Defensive Fire).

2. **Melee** (Infantry and cavalry; includes Defensive Fire).

3. **Fire and then Melee** (Available to any adjacent combat units, although artillery never melees; includes Defensive Fire).

When choosing a Combat Action the phasing player, *before* rolling on the TCT, must state which of the above three he is going to do. *This choice applies to ALL units in that action.*

(8.1) Fire Combat

(8.11) Infantry, cavalry and artillery units may fire at enemy units within the Range on their counter. A unit is never required to fire; firing is always voluntary. Artillery may *not* fire if in an all-river or river/sand bar hex.

(8.12) Firing infantry and dismounted cavalry may combine their strengths, and artillery may combine fire with artillery. Foot units may not combine fire with mounted units, and infantry/dismounted cavalry may not combine fire strength with artillery unless all such units are firing at a range of one hex. A unit may be fired at only once in a single Action, with the *exception* of units that may not combine fire having only one unit/target at which to fire. (See 6.4.)

(8.13) Units may fire through their front or flank hexsides at any enemy unit within Range and Line of Sight (8.2). If there is more than one enemy unit that a friendly unit can fire at it must choose which unit is the target. A combat unit cannot split its strength to fire at more than one hex.

(8.15) If an artillery unit is alone, in an enemy ZOC, and wishes to fire it must, if it can (i.e., it is facing the enemy unit), fire at the enemy unit exerting the ZOC. If facing

makes this impossible, it may fire at other units.

(8.16) To fire, the player states which units are firing at which targets. He totals the Combat Strength (see 6.4) of all units firing into a given hex and then locates the corresponding column on the Fire Combat Table (see the Battle Rules). Thus, 14 Combat Strength Points would fire under the 11-15 column (unadjusted). Combat strengths may be adjusted for Range; see 8.22.

(8.17) The Fire Column may be adjusted - shifted in one direction or the other - by a variety of factors, listed below. Shifts to the right favor the firing player; shifts to the left favor the defender. The maximum overall shift allowed may never be more than two columns in either direction and no shift may go further to the left or right than the printed columns.

Shift

1 to the Right (1R)

1 to the Right (1R)

1 to the Right (1R)

1 to the Left (1L)

1 to the Left (1L)

Variable to Left (?L) Terrain Effects (See the Terrain Effects on Combat Chart)

Reason

Any units are firing into/through enemy's rear.

Infantry/artillery firing at *mounted* cavalry.

Massed Target

Mounted cavalry unit firing

Disrupted units firing Defensive Fire.

(8.18) Units may engage in **"Free" Fire** (*without* Melee) actions. These are *not* an action in terms of 4.34, although they *do* require TCT rolls, etc. And they *do* use ammunition; see 8.3. *However*, a unit may "Free" Fire only *once* a turn. In addition, a unit in Action-2 status may not Free Fire. When a unit Free Fires, place a Free Fire marker on it. When it fires again in the same turn, remove it and charge an Action.

(8.2) Range and Line of Sight

Units can fire at any enemy units within their range, but only if they can "see" them. Certain types of terrain will block the ability to see or fire.

(8.21) Range, the number of hexes through which a unit may fire, is counted from the firing unit to the target, ignoring the hex the firing unit is in and counting the target hex.

(8.22) Each individual *infantry/dismounted cavalry* unit adjusts its strength for Range effects as follows:

1. If *adjacent* to the target, double the strength (2x);

Rules continue on page 39

RIO GRANDE RULES SUMMARY

(1.0) Introduction

Rio Grande is a game of the Civil War Battle of Valverde, the major action of Confederate General Henry Sibley's offensive into New Mexico in 1862.

(2.0) Components

1. The Game Map:

The 17" x 22" map depicts the area of southern New Mexico over which the battle was fought and is covered by a hexagonal grid which is used to regulate

2. Counters:

a. **Combat Counters:** Each combat unit is rated for Combat Strength, Range and Movement Allowance. Cavalry units are represented in Mounted status, although they may Dismount. All combat units are back-printed, the reverse side showing a reduced strength for that unit.

b. Leaders:

(1) *Combat Leaders* are those leaders directly commanding troops. They are rated for Action (a negative [-] number for Union, a positive [+] number for Confederates, or a 0); and Command Range. The reverse side of a Combat Leader is his Replacement, if killed.

(2) *Overall Commanders* are in charge of the respective armies. They affect the performance of the Combat Leaders in their command. They have Command Points which can be used to help their subordinate Combat Leaders.

(3) *Informational Markers* include Dis-mounted markers, Step Loss Markers, Action status markers, Ammo loss markers, Free Fire indicators and markers to note Disrupted or Routed status.

3. **Game Length:** Play starts with the 0830 turn and continues until the end of the 1800 game.

(3.0) The Game-Turn: Sequence of Play

A. Initiative Determination Phase:

Both players roll one die, to which they may add Command Points from their Overall Commander, if he is present. The high total gains the Initiative.

B. Action Phase

All Actions are performed in this phase, as below:

1. The Player with the Initiative may use his Initiative Bonus to undertake one "Free"

Action ; THEN

2. [The Player Segment] The player with Initiative chooses a desired Action and rolls on the Turn Continuation Table. If successful, he performs the chosen Action and then repeats this section again; OR,

3. If the TCT calls for a Random Event, the player consults the Random Event Table (see Battle Rules) and follows the instructions therein; OR,

4. If unsuccessful on the TCT (i.e., the adjusted die roll falls within his opponent's range), the opposing player now performs any one "Free" Action of his choice and then HE reverts to his Player Segment.

5. Play continues to alternate among '2', '3' and '4' until the Phase is Finished.

C. Recovery Phase:

1. Players roll to rally Disrupted/Routed units.

2. Place Replacement leaders.

(4.0) The Turn Continuation System

The player whose Play Segment it is chooses what he wants to do (termed an "Action"). He rolls two dice; if they fall within his range on the Turn Continuation Table (TCT), he performs his chosen action. If they fall within his opponent's range, his opponent performs an action. If he rolls a "7" he rolls for a Random Event.

a. Under certain circumstances, players may also perform *Free Actions*. These require no TCT roll.

b. Generally, after a player performs three consecutive actions, play reverts to the other player.

2. **Actions:** There are three types of Actions: *Movement, Combat and Resupply*.

3. Actions may be either Coordinated or Uncoordinated.

a. *Coordinated Actions* are those in which more than one unit may partake and require those units to be "In Command."

b. *Uncoordinated actions* are undertaken by individual units that are Out of Command, independent units, or by leaders wishing to move alone. Uncoordinated units may not initiate a melee.

4. A unit may perform only two actions in a given turn. "Free" Fire Mount/Dismount and Resupply are not treated as actions for this purpose.

5. An action commanded by a leader is considered to be undertaken by that leader AND all units in his command actually performing the action.

6. Ending the Action Phase:

a. **Two Player Finish:** The Action Phase is over when one of the following occurs:

(1) All In Command units of both players, excluding Independent units, have undertaken two actions in that turn.

(2) A Random Event ends the phase.

(3) Both players voluntarily and consecutively PASS.

b. **One Player Finish:** If one player has completed two actions for all his units, or declared he is Finished (4.43), when the opposing player continues to roll the following TCT diceroll changes are in effect:

(1) All remaining (opposing) units that are eligible to undertake an action may each undertake only one additional action.

(2) If, in rolling for an action for an Out of Command or Independent unit that attempt fails, that unit is Finished for that turn.

(3) An adjusted 2, 7, or 12 is automatically a Phase Finished.

(4) Three consecutive dicerolls in the finished player's range end the Phase.

(5.0) Movement

Units Move by expending movement factors. When a player has successfully rolled a Movement Action for his units on the TCT, those chosen units may move.

1. Each type of unit spends different numbers of MP's to enter/cross the various types of terrain.

2. A friendly unit may never enter a hex containing an enemy combat unit; it may enter a hex containing only an enemy leader.

3. Units that are In Command and all mounted cavalry which are undertaking Movement Actions move normally. Out of Command units on foot may not enter an enemy Zone of Control.

4. Reinforcements enter the game map using a Movement Action. Units scheduled to arrive without a leader may use that leader's Action Rating (whether he is on the map or off) to enter the game.

(6.0) Facing, Formations, and Zones of Control:

All combat units must be faced towards a vertex of the hex it is in. All units in the same hex must face in the same direction. Facing determines which of the unit's hexsides are Front, which are Flank, and which are Rear.

1. A unit may change facing only during a Movement Action.

2. Facing affects a unit's Zone of Control

and combat. It has no effect on movement direction.

3. **Zones of Control:** Combat units exert Zones of Control; leader units do not.

a. Combat units exert ZOC's through their Front and Flank hexsides. ZOC's do not extend through hexsides or into hexes across or into which that unit could not normally move. In addition, ZOC's do not extend across Sand Dune hexes.

b. It costs 1 MP, in addition to the cost of the terrain in the hex, to enter an enemy ZOC. A unit must stop when it enters an enemy ZOC. A unit that begins a Movement Action in any enemy ZOC may move out of that ZOC at a cost of 2 additional movement point. However, that unit may not enter another - or the same- enemy ZOC in that action.

c. A friendly combat unit negates the effect of an enemy ZOC for purposes of tracing Command Range, but it does NOT do so for movement. It will negate for retreat purposes, but only if Stacking rules would allow the retreating unit to move into that hex.

4. **Forming Square:** Only U.S. (regular) infantry units in Fair or higher Morale may form Square. Forming Square is a Coordinated Action requiring a leader.

5. **Cavalry units** may operate either mounted or dismounted.

a. All cavalry counters represent their Mounted status. Dismounted status is represented by the Dismounted markers (example above). To change status requires a Mount/Dismount Action.

b. The Dismounted counter contains a "1/2" indicator for MA and SP. This means that the present strength and Movement Allowance of the mounted version is halved, rounding down. However, their range is increased.

(7.0) Stacking

Generally, only one combat unit is allowed in a hex.

a. Two infantry or dismounted cavalry units from the same regiment may occupy the same hex. However, only the top unit in that hex may fire.

b. One artillery section may stack with any one infantry or dismounted cavalry unit. Both units may fire.

c. All artillery sections from the same battery may stack together if there are no infantry/cavalry units in that hex. If there is more than one infantry/cavalry unit in a hex

that hex is considered a Massed Target. There are no stacking restrictions for Leaders or markers.

(8.0) Combat:

1. When a combat unit undertakes a Combat Action it may do one of the following:

a. **Free Fire** (Infantry, dismounted cavalry and artillery; no return Defensive Fire)

b. **Melee** (Infantry and cavalry; includes Defensive Fire)

c. **Fire and then Melee** (Available to any adjacent combat units, although artillery never melees; includes Defensive Fire).

2. **Fire Combat:** Infantry, cavalry and artillery units may fire at enemy units within the Range on their counter. Units may fire through their front or flank hexsides at any enemy unit within Range and Line of Sight. To fire, the player states which units are firing at which targets. He totals the Combat Strength (see 6.4) of all units firing into a given hex and then locates the corresponding column on the Fire Combat Table. The Fire Column may be adjusted - shifted in one direction or the other - by a variety of factors.

3. Units can only fire at enemy units if they are within range and line of sight. Unit fire strength may be increased depending upon the range to the target.

4. **Melee:** "In Command" infantry and cavalry may melee any enemy units in their Zones of Control. Prior to resolving the melee the defending player may Defensive Fire.

5. **Cavalry Charge:** Mounted cavalry may charge enemy units as a Melee Action. Only "In Command" (or independent) mounted cavalry units with Fair or higher morale that are not Disrupted, routed or in an enemy ZOC may charge (or counter-charge). The enemy player may also conduct Counter-Charges.

6. **Rally and Rout:** Disrupted and Routed units may be rallied in the Recovery Phase, Disrupted units first. Rout occurs only as a result of trying to rally a Disrupted unit; it is not a combat result.

(9.0) Morale

A unit's level of Morale depends on how many casualties it has taken. Morale levels may affect melee and victory. There are four levels of Morale: High, Good, Fair and Broken.

(10.0) Command

Combat Leaders are the (regimental) commanders directly leading troops. The Overall commanders are in charge of their "armies."

1. A *Combat Leader's* Action Rating is the modifier for all TCT dice rolls involving that leader: a plus [+] for Confederates, and a minus [-] for Union. A Combat Leader's Command Range is the maximum number of hexes distant a combat unit in that leader's command may be from the leader and still be considered In Command.

2. The *Overall Commander* has **Command Points (CP)**. These may be used to:

a. Influence the Initiative die roll; AND/OR

b. Affect Charge Morale Checks; AND/OR

c. Increase a subordinate Combat Leader's Action Rating by 1; AND/OR

d. Increase a subordinate Combat Leader's Command Range by 1.

3. *Independent* units are noted with the letters "Ind" on the counter. Independent units are always In Command and use Coordinated actions. When operating without a leader, they use an Action Rating of "0."

(11.0) Random Events

Random events occur on an adjusted TCT dice roll of "7." The player rolls two dice and consults the Random Events Table.

(12.0) Set-up and Reinforcements

The game starts with the 0830 turn. Certain units begin on the map; others enter as reinforcements through each side's respective entry area.

(14.0) Victory Conditions

Players play until one side is forced to Withdraw or, failing that, until the end of the 1800 game-turn, after which victory is assessed. Player's are awarded Victory Points for eliminating enemy units and certain game events. The player with the most Victory Points wins.

(9.2) MORALE LEVEL EFFECTS CHART

Level	Effect
High	1. One column adjustment in their favor in melee 2. Subtract one from Rally die rolls.
Good	No effects
Fair	One column adjustment against units in melee.
Broken	1. Two column adjustment against units in melee. 2. May not voluntarily enter an enemy ZOC. 3. Exert a ZOC through only their Frontal hexsides, not flank. 4. Add one to Rally die rolls. 5. May not form Square

(9.3) CHARGE MORALE

High = 10
Good = 8
Fair = 6
Broken = 5

Adjustments:

- #	Leader Action Rating
-1	Commander Point
-1	Infantry or dismounted Union Regulars being charged
+2	Dismounted Confederate or Union Volunteer cavalry being charged

THE RALLY TABLE

Die roll	Present Status	Effect
1	Disrupted	Rallied
	Routed	Rallied
2-4	Disrupted	Rallied
	Routed	Change to Disrupted
5	Disrupted	No Change
	Routed	Rout Move
6	Disrupted	Routed and Rout Move
	Routed	Rout Move

Rally die roll adjustments (cumulative)

1. If the Disrupted or Routed unit is in an **enemy ZOC**, add one to the die roll.
2. If the Disrupted or Routed unit is **mounted cavalry**, subtract one from the die roll.
3. If the unit is **Broken Morale**, add one to the die roll.
4. If stacked with a **Leader**, subtract one from the die roll.
5. If unit has **High Morale**, subtract one from the die roll

(6.46) DISMOUNTED CAVALRY COMMITMENT RATINGS**Commitment Ratings**

US Regular cavalry: 5
Confederate cavalry: 3
US Volunteer cavalry: 2
Confederate Independent cavalry: 1

Die roll Adjustments

If stacked with Combat or Superior Leader: -1
If Poor Morale: +1
If Broken Morale: +3

(8.54) CAVALRY CHARGE PROCEDURE

1. TCT Action rolled.
2. Announce charging units, target, and path.
3. Defender announces countercharge.
4. Resolve countercharges.
5. Target unit morale check.
6. Defensive fire.
7. Charging units melee.

THE TURN CONTINUATION TABLE

Dice Range	Who Goes?
2* - 6	Union Player
7*	Random Event
8 - 12*	Confederate Player

* = See 4.4 [4]

ADJUSTMENTS

1. Leader's Action Ratings
2. Out of Command: -1(CSA); +1(Union). Does not apply to Independents.
3. Automatic +2(CSA)-2(Union) for Resupply.

THE GAME SYSTEM:

Rio Grande is a small-unit adaptation of Simulation Design, Inc.'s **Battles & Leaders** System of games, based on an original design by Rob Markham. Players interested in playing more games with this system should take a look at **1862** (an earlier, and somewhat incomplete version of the system) and **1863** (being published by GMT games). Both contain four games/battles each, covering the larger engagements of the American Civil War.

SOURCES

Hall, Martin H., *Sibley's New Mexico Campaign*, (Univ. of Texas Press, 1960). The only narrative study of the campaign and the battle. As such, invaluable.

Whitford, William C., *Colorado Volunteers in the Civil War*, (Rio Grande Press, 1971). Contains a remarkable amount of numerical information.

_____, *War of the Rebellion; Official Records of the Union and Confederate Armies, Series I, Vol. 9*. (National Historical Society, PA, 1971). The map is based almost entirely on the one in the Atlas accompanying the Records. The reports, as usual, are both enlightening and confusing. Both sides appear to have won, if you believe what you read.

And for those interested in this sort of thing, the old Clint Eastwood/Serge Leone, spaghetti-western, *The Good, The Bad and The Ugly*, purportedly (and remarkably loosely) concerns itself with this campaign and battle! We did not use it as a source, although we were sorely tempted to use one of the umpteen close-ups of Lee Van Cleef's beady eyes (was he the "bad" or the "ugly"? for the magazine cover.

CREDITS:

Game Researched and Designed By:

RICHARD H. BERG

Initial Game Development: **Paul Dangel**

Playtesters: **David Fox, Mike Malesky, Gerry Palmer.**

This game was playtested and developed with the help of the GENIE™ Computer Information System. Both the Designer (R.BERG7) and the publisher (DECISIONGAME)

are members of that system and can be contacted through the Strategy and War Games section. If you have any questions concerning these rules, please send them along with a self-addressed, stamped envelope, to Strategy & Tactics c/o Decision Games ATTN: Rio Grande Questions; PO Box 4049, Lancaster CA 93539-4049.

FIRE COMBAT TABLE

OF (ADJUSTED) SP'S FIRING

Die	0*	1-2	3-5	6-9	10-14	15-20	21-27	28+
1[A]	-	-	-	-	D	1	1	1
2	-	-	-	D	1/D	1	1	1
3[A]	-	-	-	D	1	1	1	2R
4	-	-	D	1/D	1	1	2R	2R
5	-	D	1/D	1	1	2R	2R	2R
6[A]	D	1/D	1	1	2R	2R	2R	3R

* = Used only when column shift or reduction to 0 SP's requires.

Explanation of Results

1,2, or 3 = These are the number of steps a unit loses. If there is more than one unit in a target hex the top unit absorbs the loss. If the loss exceeds the top unit's strength, then the bottom unit takes the remaining losses. Regardless of the #, artillery firing alone at two hexes or greater can only cause a 1 step loss.

1/D = If only artillery is firing and its strength is *not* multiplied, use the "D." Otherwise, use the "1."

R = If a unit has Fair Morale, roll one die. If odd, it must Retreat one hex and cannot offer Defensive Fire or Melee. If Broken Morale, the Retreat is automatic. All units retreat towards their entrance hexes. Retreat is treated like regular movement (although it is not an action), which means the units have to be (re-)faced in the direction they are retreating.

D = **Disrupted Affects** *all* units in that hex. Disrupted units:

1. May undertake only one additional action that turn, if they have not already reached Action-2 status. That additional action may only be Movement.
2. Their movement allowance is halved and they may not enter an enemy ZOC.
3. Cavalry may not counter-charge or Retreat Before Combat
4. There is a 1L Fire Column shift if they fire Defensive Fire (even in combination with other, non-Disrupted units.)

A = Ammunition Depletion. If the die roll is a '6,' unit is now Low on Ammo. If unit already Low and die roll is a 1, 3, or 6, unit is Out of Ammo.

- = No Effect

Adjustments to Fire Results Column

Shift

- 1 to the Right (1R)
- 1 to the Right (1R)
- 1 to the Right (1R)
- 1 to the Left (1L)
- 1 to the Left (1L)
- ? to the Left (?L)

Reason

- Any units are firing into/through enemy's rear, or is Routed.
- Target is mounted cavalry
- Massed Target
- Mounted cavalry firing
- Disrupted units firing Defensive Fire.
- Terrain Effects (See the Terrain Effects on Combat Chart)

All adjustments are cumulative, and the maximum net Fire column shift is two (2).

(8.2) RANGE EFFECTS ON FIRE COMBAT

Unit Type	Adjacent Hex	2 hexes to one half range	Greater than one half range	
Infantry	x2	x1	x1/2	
Dismounted Cavalry	x2	x1	x1/2	
Mounted Cavalry	x1	—	—	
		Defensive Fire	2-3 Hexes	Greater than one half range
Artillery	x4	x8	x3	x1/2

FEEDBACK **QUESTIONS** **STRATEGY & TACTICS** **#143**

How to use the feedback response card:

Please read the following Feedback questions and give us your answers in the form of letters or numbers. We appreciate and encourage you to make further comments about *Strategy & Tactics*, specific concerns about the hobby, or gaming in general.

1. Is your age: under 30 (mark 0), 30-39 (mark 1), or over 40 (mark 2)?
2. Is your education: less than a four year college degree (mark 0), a Bachelor's degree or some graduate school, but no advanced degree (mark 1), or a Master's or Doctorate degree (mark 2)?
3. What is your gender (male=0, female=1)?
4. With what issue did you start reading *Strategy & Tactics*?
5. How many boardgames are in your collection: 50 or less (mark 0), 51-200 (mark 1), 201 or more (mark 2)?
6. Do you own or have access to a computer to play computer wargames (0=No, 1=Yes)?
7. How many computer wargames are in your collection?
8. What is your average gaming time per month?
9. How much do you spend on wargaming per month?
10. How many gamers do you know within 50 miles of your home?
11. What is the total number of games you have played solitaire in the past year?
12. What is the total number of games you have played face-to-face in the past year?
13. What is the total number of games you have played by mail in the past 12 months?
14. What is the total number of play-by-mail games you have participated in in the past 12 months?
15. Not including yourself, how many people have read at least one of your issues of *Strategy & Tactics* in the last twelve months?
16. Did you obtain this issue by subscription (0) or buy it at a store (1)?
17. Are you a subscriber or buyer (1) to *Fire & Movement* (if none, Mark 0)?
18. Are you a subscriber or buyer (1) to *MOVES* (if none, Mark 0)?
19. From your perspective, is the number of people in the hobby increasing, decreasing, or staying the same (0=steeply decreasing, 5=staying the same, 10=steeply increasing)?
20. How do you rate your satisfaction with the

hobby as a whole (0=worst ever, 5=neither happy nor unhappy, 10=best ever)?

21. Has *Strategy & Tactics* improved or declined in the past year? (0= significantly declined, 5= stayed the same, 10= significantly improved) Please provide specific comments on how we can improve in the space below.

Please rate the following on a 0 (low) to 10 (high) scale.

22. This issue overall.
23. (game) Rio Grande: The Battle of Valverde
24. Rio Grande (lead article)
25. Rio Grande (modules)
26. FYI column
27. Outgoing Mail
28. No question.
29. Profile—Ardant du Picq
30. Prussian Light Infantry (second article & modules)
31. Incoming Mail
32. What percent of wargames do you buy through mail order (please list the mail order house in the comments section)?
33. Optimally, how many hours should a magazine wargame take to play?
34. We have so many good historical articles (not to mention games) that we are considering publishing one or two 128-page issues without a game in 1992 (same cover price/counts as one subscription unit). This would be in addition to the regular issues with games. How do you rate this idea? (0=No interest at all, 5=neither interested nor disinterested, 10=can't wait to see this!)
- Out of twenty future *S&T* games, what number of these games should come from each era listed below (please make sure they add up to twenty; no fractions, please)?
35. Ancient (Rome, Greek, Biblical, 3000 BC to 600 AD).
36. Dark Ages and Renaissance (600-1600 AD).
37. 30 Years War and Pre-Napoleonic (1600-1790).
38. Napoleonic (1790-1830).
39. Civil War, 19th Century (1830-1900).
40. World War I (1900-1930).
41. World War II (1930-1945).
42. Modern (1945 to present).
43. Future/hypothetical wars.
44. Editor's Choice.

Rate the following wargame proposals for future *Strategy & Tactics* magazine games. Following are proposed game titles, with a brief description of the game itself. Please rate these on a scale of 0 through 10 (with "0" indicating no desire to see the game published through "10" indicating a high degree of desire to see it published).

45. **The Successors:** This would be a game in the Ancient Wars series, and would simulate the wars between the generals who succeeded Alexander the Great—the Diadochi. The game map would include all of Alexander's Empire,

from Egypt to India to Thrace. Units would be historical, and would represent the types of classifications used by the Hellenistic armies: phalangites (heavy infantry), peltasts, psiloi (light troops), etc. The game would include several scenarios, representing the major wars of the successors, and would include a multi-player game where each of Alexander's generals tries to grab control of his Empire. Players would be able to utilize treachery, assassination and arranged marriages as well as military force to win supreme power.

46. **Caesar:** This would be a game in the Ancient Wars series, and would follow the campaigns of G. Julius Caesar in the conquest of Gaul (modern France/Belgium). The Roman player would march northwards to defeat Gallic forces and suppress revolts. The Gauls would mobilize their considerable manpower and try to bring the Romans to ruin. As in the other games in the series, players would deal with various aspects of ancient warfare, including fighting battles, diplomacy and political maneuvers, espionage, and rabble-raising. Units would represent legions, auxiliaries, barbarian hordes, and leaders, and would include a tactical module for resolving battles. The game would show the differences between Roman and "barbarian" forces through the interaction of unit types and varying degrees of army discipline.

47. **The Hundred Years War:** This would be the first in a series of Medieval warfare games. It would simulate the conflict between England and France in the 13th/14th century. In the Hundred Years War, the English won stunning victories at Crecy and Agincourt and gained control of much of France before finally being defeated. Units would represent various types of military forces, including longbowmen, heavy cavalry, pikemen, early artillery, etc. Of course, there will be a tactical module to resolve battles, as well as rules for diplomacy. Special rules will show the Medieval outlook on warfare. All historical personages, including Henry V and Joan of Arc would be included. The game would include scenarios for all the major stages of the War, and a grand campaign scenario.

The following four games are from the Empires at War Series. These would be folio sized games covering decisive battles of the late 19th century. These battles were all unique in that infantry, armed with rifles, were the primary force on the battlefield. The games would cover key factors such as command control, tactical options, and morale, as well as weapons effectiveness. Please rate each of them individually.

48. **Inkerman 1854:** This was the result of a Russian attack in the Crimean War to break the siege of Sevastopol. The British and French threw the Russians back in a confused fray.

49. **Solferino 1859:** This was the major action from the Piedmontese War. Austrian Forces,

continued on page 34

Christopher's CORNER

FEATURING WARGAME MAGAZINES

Wargamer Vol.1

Iss #	Title	Price
2	Battle of Eylau	\$125
3	Africa	100
4	Bleenheim	80
5	Kesserling	65
6	Condor	60
9	Bloody Buna	60
10	Chinese Civil War	50
12	Aces High	50
13	Forward to Richmond	40
14	Assault on Leningrad	60
15	Drive on Damascus	60
16	Carrier Strike	60
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19	Sturm Nach Osten	50
20	Little Round Top	50
21	Siege at Peking	60
★ 22	No Trumpets, No Drums	50
23	Decision at Kasserine	60
24	Lawrence of Arabia	50
★ 25	Never Call Retreat	25
26	Race to the Meuse	12
27	Peter the Great	12
28	Port Stanley	50
29	Lodz: Blitz in the East	12
30	Stars and Bars	12
31	Clash of Steel	12
32	Napoleon at Lutzen	20
34	Khyber Rifles	40
35	West Wall	25
36	Unconditional Surrender	30
37	China Incident	20
38	Hath No Fury	12
39	Hellfire Pass	20
40	Fight on Beaches	12
41	O'Connor's Offensive	12
42	End of the Iron Dream	20
43	Wellington	12
44	MacArthur	20
45	Custer's Luck	35
46	House of Sa'ud	20
47	Stalingrad	30
48	The Red Baron	12
49	Napoleon vs. Charles	20
50	Knights of Justice	20
51	Duel in the Desert	12
52	Glory Road	20
53	Dunkirk:Dynamo	20
54	Condottieri	12
55	Okinawa	15
56	First Team	12
★ 57	Race for Tunis	20
58	Empires: 1914	12
59	Bloody Keren	12
60	Anvil-Dragoon	12
62	Fallen Eagle	25

Fire & Movement

Issue #	Price/each
2-3	\$25
5-7, 9, 15, 18	20
10-14, 16, 17, 19	15
20-27, 29	10
30-40	8
41-50	6
51-71	5

Strategy & Tactics

Iss #	Title	Price
1	Remagen Bridgehead	\$125
3	Earth Destroyed	60
4	Gamescience Vietnam	55
5	Jutland Project	55
6	Siege of Bodenberg	50
7	Siege of Bodenberg	55
9	Sinai Wargame	50
10	Battle of Ulsan	50
11	Brittany Campaign	50
12	Rules-Naval Games	45
16	Avalon Hill Interview	45
17	Table Top Wargaming	35
18	Crete	40
★ 37	Scrimmage	50
42	The East is Red	45
★ 45	Op. Olympic	50
46	Combined Arms	35
49	Frederick the Great	40
81	Battle for Germany	65
★ 52	Oil War	40
55	Breitenfeld	40
61	October War	40
★ 62	South Africa	35
63	Veracruz 1847	30
66	Siege of Constantinople	35
69	Tannenberg	30
70	Crusades	40
★ 71	Cassino	30
72	Armada	30
74	Ney vs. Wellington	50
75	Napoleons Art of War	45
79	Berlin '85	30
80	Wilson's Creek	40
81	Tito	20
82	Fifth Corps	30
83	Kaiser's Battles	20
84	Operation Grenade	20
86	Cedar Creek	40
88	BAOR	35
92	Iwo Jima	35
93	American Civil War	40
94	Nordkapp	30
95	Soldiers of the Queen	40
96	Singapore	40

★ indicates that a punched copy of this game is available for half the cost of the mint game.

Strategy & Tactics

Iss #	Title	Price
97	Trail of Fox	\$40
98	Central Command	40
99	Thunder/Luetzen	40
100	Superpwns War	30
101	Cromwells Victory	30
103	Road Vicksburg	15
104	13: Colonies Revolt	30
105	Ruweisat Ridge	10
106	Pleasant Hill	40
107	Warsaw Rising	20
108	Remb Maine	40
109	Target Libya	40
110	Hastings: 1066	20
111	Korea	40
112	Patton to War	30
113	Battle of Abensberg	25
115	Kanev	10
116	Manchu	10
117	North German Plain	10
118	Tigers are Burning	10
119	Horse Soldiers w/ Brice's	30
120	Nicaragua	10
121	Indian Mutiny	10
122	Pegasus Bridge	30
123	Campaigns Valley	20
125	Far Seas	30
126	Beirut '82	10
127	Rush for Glory	10
128	Africa Orientale	30
129	Harvest of Death	10
130	Tsushima	12
131	Donau Front	12
132	Iron Cross	12
133	Baton Rouge	12
135	Sideshow	30
136	Borodino: Doomed Victory	30
137	Men at Arms	12
138	Eylau	15
139	Arabian Nightmare	20
140	Objective: Tunis	20
141	Hannibal: 2nd Punic War	14
142	Tarawa: Red Beach One	14
	Special Edition #2	6

Mint Games

SPI War in the Pacific	\$515
SPI War of Ring	
(+ mini games)	135
SPI Starforce Trilogy (box)	105
SPI Starforce Trilogy (flat)	85
SPI Wellington's Victory	80
SPI USN	70
SPI World War 3	60
SPI Year of the Rat	60
SPI Kharkov	55
SPI Foxbat & Phantom	
(Designers Edition)	50
SPI Stonewall	40
SPI Freedom in the Galaxy	40
SPI East is Red	35
SPI East is Red (folio)	30
SPI Panzer Battles	30
SPI Combined Arms	30
SPI Combined Arms (Z-Pack)	25
SPI Cauldron (folio)	20
SPI Sword & the Stars	20
AH Luftwaffe	30
AH Fortress Europa	30
AH Bull Run	30
AH Devil's Den	30
AH Napoleon at Bay	30
AH Conquistador	30
AH Civilization	30
AH Starship Troopers	30
AH Freedom in the Galaxy	30
AH Twixit	30
AH Cross of Iron	25
AH Hundred Days Battles	18
AH Dauntless	18
AH Little Round Top	15
AH Battle for Italy	15
GDW Fire in the East	
(incl play aid kit)	90
GDW Double Star	40
GDW Belter	40
GDW 1815	40
GDW 3rd World War	30
GDW Persian Gulf	30
GDW Road to the Rhine	30
GDW Normandy Campaign	25
GDW Suez '73	25
GDW Arctic Front	25
GDW Assault	25
GDW Air Strike	20
GDW Air Superiority	20
GDW Blue Max	12
GDW A House Divided	12
3W Shot & Shell	100
3W Lawrence of Arabia	60
3W Kesserling (Z-Pack)	50
3W Hitler's Last Gamble	40
3W Never Call Retreat	40
3W Rommel at Bay	20
3W Aces High (Z-Pak)	20
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Sim Can Nap's Last Triumph	30
Sim Can Seapower & the State	30
Sim Can Dieppe	30
NOVA Fire on the Volga	40
GM2 Quebec 1759	30
OSG Devil's Den	30

BATTLEPLAN

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6	\$10
7	8

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41-42, 44-47, 50	10
27-29, 40, 51-59	8
Complete Set (1-62)	599

GRENADIER

Issue #	Price/each
18, 23, 24, 29	\$5
30, 33	\$4

VIP'S

Issue #	Price/each
1	\$5
3-5	\$6

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FEATURING WARGAME MAGAZINES

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VG 5th Fleet	40
VG 2nd Fleet	35
VG 6th Fleet	35
VG Carrier	35
VG Central America	35
VG Open Fire	35
VG Battle Hymn	35
VG Ambush	25
VG Purple Heart	25
VG The Korean War	25
VG Vietnam 1965-75	25
VG Hell's Highway	25
VG Panzer Command	25
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WE Assault on Hoth	20
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EXCAL Barbarian	28
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EXCAL Golden Horde	16
EXCAL Trax	14
EXCAL Iron Horse	14
EXCAL Total War	12
EXCAL Cassino	10
GMT Airbridge to Victory	34
GMT Operation Shoestring	39
GMT Silver Bayonet	29
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B List Items

Any Wargamer, Volume 2 issues up to #25 (except for issue #14), Moves 61,63 Fire & Movement issues #57 through 73 (except for issue #60) Strategy & Tactics Special Edition #2 VIP of Gaming #1, Special Edition #1

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under Emperor Franz Josef, attacked a Franco-Piedmontese army. French elan won the day in a hard fought affair.

50. Koniggratz 1866: This was the major action from the Austro-Prussian War, where Prussian forces, armed with breech-loading rifles, decisively defeated the Austrians and established hegemony in Germany.

51. Mars-la-Tours 1870: This was one of the major actions of the Franco-Prussian War, where Von Moltke defeated French forces under Marshal Bazaine, leading to the collapse of the Second French Empire.

52. Boer War: This would be part of the **Obscure Wars** series. It would cover the conflict between the British Empire and the Boers (descendants of Dutch/Calvinist settlers) in South Africa at the turn of the 20th century. While the Boers were outnumbered, they had the advantage of fighting for their home terrain and the war saw several upsets against the British. The war began with the Boers laying siege to several British-held cities. The British rallied the full force of their Empire against the Boers, defeating them in the field, but the war continued as a guerrilla conflict. The game would include provisions for superior Boer tactics, guerrilla warfare, armored trains, and all historical leaders.

53. Balkan Wars, 1912-13: This would be in the **Obscure Wars** series. It would include both the First and Second Balkan Wars, in which the fate of Southeast Europe hung in the

balance. In the First Balkan War, Greece, Serbia and Bulgaria attacked Ottoman Turkish holdings in Europe and besieged Constantinople. In the Second Balkan War, Bulgaria attacked Greece and Serbia and was soundly trounced. The game would account for the wildly varying military skill on both sides, and allow for diplomatic infighting and backstabbing.

54. Blood on the Tigris: This simulates Britain's 1914-16 Mesopotamian campaign against the Ottoman Empire. Brilliant but vain-glorious Indian Army General Townsend bluffed and maneuvered up Iraq's rivers against Turkish forces thrice his numbers to take the glittering city of Baghdad, but just short of his objective the Turks rallied, trapping his army and eventually forcing his surrender. This was one of the few mobile World War I campaigns, and will include strategic, operational and tactical decisions for both sides. Both players will have to deal with the military as well as political situation, and will have the option to gain the support of Arab and Persian factions. Rules will cover morale, aircraft, optional reinforcements, spies (including Wassmuss — Germany's Lawrence of Arabia) and some of the most bizarre terrain on Earth. To be designed by Colin Denis.

55. IDF: The Arab Israeli Wars. This is an operational/strategic level simulation of the military clashes between the Arab and Jewish states which have erupted in the last 35 years.

The map will depict the area from Cairo to Beirut. Central to the game will be differences in leadership, training and morale which were characteristic of the wars; by expending initiative points, players can increase their movement and combat capabilities. IDF will use a unique strategic/tactical initiative system. Game scale will be division/brigade, with air strikes. Each game turn will represent 20 miles. A Political Event table will also have an impact on operations, and can end the game with a ceasefire or alter victory conditions. Scenarios will include the 1956 Suez Campaign, the 1967 Six Day War, the 1973 Yom Kippur War, and the 1982 Israeli Invasion of Lebanon. There will be also be an option for fighting longer campaigns, including the 1948 Independence War and a generic "counter-terrorism" conflict. Also included are U.S./Soviet intervention forces and a future "what if" war. To be designed by Arnold Blumberg.

56. On To Damascus: This depicts the Israeli offensive on the Golan in October 1973. The attack was a bitter struggle as the Israeli forces assaulted in-depth Syrian defenses. The Israelis came within 20 miles of Damascus before Iraqi, Saudi and Jordanian troops halted the advance. The game is battalion level, and includes airpower, anti-tank missiles, and morale. A highly mobile game with many decisions for both sides. To be designed by Perry Moore.

FEEDBACK RESPONSE • #143

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Further Comments

- | | | | |
|----|----|----|----|
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| 12 | 26 | 40 | 54 |
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| 14 | 28 | 42 | 56 |

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EXPIRES SEPTEMBER 4, 1991

THE MELEE TABLE**Attacker-Defender Odds/Ratio**

Die	1-4	1-3	1-2	1-1	3-2	2-1	3-1	4-1	5-1	6-1	7-1+	MELEE COLUMN ADJUSTMENTS:	
1	AR1	EX+ AR	EX	EX+ DR	EX+ DR	DR	DR	DR1	DR1	DR1	DR1	Shift	Reason
												1 to the Right (1R)	Any meleeing units are attacking into/through the enemy's flank or rear hexsides, or defender is Routed. However, this modifier is NOT used if the attacker is in the ZOC of a different enemy unit.
2	AR1	AR	EX+ AR	EX	EX+ DR	EX+ DR	DR	DR	DR1	DR1	DR1		
3	AR1	AR	AR	EX+ AR	EX	EX+ DR	EX+ DR	DR	DR	DR1	DR1		
4	AR1	AR1	AR	AR	EX+ AR	EX	EX+ DR	EX+ DR	DR	DR	DR1	Variable to the Left (?L)	Terrain Effects (See the Terrain Effects Chart)
												1 to the Left (1L)	Any Defender has High Morale
5	AR1	AR1	AR1	AR	AR	EX+ AR	EX	EX+ DR	EX+ DR	DR	DR1	1 to the Right (1R)	Any Defender has Fair Morale
												2 to the Right (2R)	Any Defender has Broken Morale
6	AR1	AR1	AR1	AR1	AR	AR	EX+ AR	EX	EX+ DR	EX+ DR	DR1	1 to the Right (1R)	Any Attacker has High Morale
												1 to the Left (1L)	Any Attacker has Fair Morale
												2 to the Left (2L)	Any Attacker has Broken Morale
												1 to the Right (1R)	Charging unit is a Lancer (L); defender is on foot (and not in Square).

Explanation:

AR = All attacking units retreat one hex

AR1 = All attacking units retreat one hex plus one unit loses one step (8.19). Attacking player designates which unit receives loss.

DR = All defending units retreat one hex

DR1 = Same as AR1, except applies to Defender

EX = Both attacker and defender lose 1 step each and remain in place.

EX+AR = Both attacker and defender lose 1 step each and attacker retreats one hex

EX+DR = Same as EX/AR except Defender retreats

All adjustments are cumulative, and the maximum net Melee column shift is three (3).**THE TERRAIN EFFECTS CHART**

Terrain	MOVEMENT				COMBAT	
	Inf	Arty	Mtd Cav	Leader	Effect* on Fire	Melee
Clear	1	2	1	1	—	—
Grove	2	3	3	1	1L	—
Marsh	2	NO	4	2	—	—
Land Sand Bar	2	3	2	2	—	—
Deep River	NO	NO	NO	NO	—	—
Fordable River	2	4	3	2	1L ^c	1/2L ^a
Sand Dune	+2	+5	+4	+3	1L	1/2L ^a
Road	1	1	1	1	—	—
Up 1 Level	+1	+1	+1	+1	1L	1L ^b
Enter Enemy ZOC	+1	+1	+1	+1		
Leave Enemy ZOC	+2	+2	+2	+2		

— = No Effect

NO = Not Allowed

* = All listed affects shift the Combat Result column 1 or 2 left.

^a = If all units attacking from or across, 2L; if only some, 1L. This adjustment does NOT apply if defending units are in an all-river or river/sand-bar hex.^b = Shift applies only if all units attacking up.^c = Infantry/cavalry units firing while in a river hex adjust the fire column 1L. Artillery unit may never fire while in a river hex.

THE RANDOM EVENTS TABLE

Dice Event

2 SCUDAHOO, SCUDAHAY. This really didn't happen in the battle (it happened the night before), but it was too good to resist. If the Union Player rolls this event AND Graydon's Spy Company is on the map and east of the river, they try the old Exploding Mule Gambit. (They strap some explosives to some mules and head them towards the enemy lines.) Roll one die:

1. Mules lope into the nearest enemy unit in Graydon's LOS and blow up, creating quite a mess and Disrupting that enemy unit.
- 2-4. Mules wander off upriver in search of another jackass. Nothing happens.
- 5-6. Mules wonder why they're being sent off without a good meal. Halfway to the CSA lines they reconsider their itinerary, turn around, and head home. Graydon's Company is immediately retreated three hexes and Disrupted.

3 IT PAYS TO KEEP RESERVES. The player *not* rolling this event may (if he wishes) *move* any In Command units from one command, OR any one Out of Command/independent unit, without any restrictions (other than those imposed by the Action rules). He must make his choice and complete such movement within the next 15 seconds. Starting...now! After he has finished, the rolling player must complete the action he originally chose, even if the opposing player moved nothing. This movement is considered a normal Movement Action for all moved units.

4 HESITATION. If the action chosen was Movement, and the leader commanding the action (or the Out of Command/independent unit) is not within six hexes of the nearest enemy unit, halve the Movement Allowances of the moving units. Otherwise, No Event.

5 NO EVENT.

6 GREAT COOGA MOOGA, GEMME OUTA HERE. If the action was supposed to be a CSA Fire Action and any of the units firing was artillery firing at units of the 2nd NM Vols or the 3rd NM Vols, any D or worse result becomes a **Rout** (plus whatever step losses are incurred), and any No Effect result becomes a **Disrupted**. This event may occur only twice in a game; after that, or failing the above requirements, No Event.

7 SIBLEY ILL. The CSA commander had been quite ill in the days preceding the battle, but dragged himself out of his "ambulance" to lead his troops. Historically, by 1 P.M. he was unable to continue and handed command over to Col. Green. If this event is rolled, the CSA Player rolls two dice and consults the table, below. If rolled before Sibley has arrived or after he has left, treat as No Event.

2 or 12: Sibley feels better. Increase his CP's and Range by 1, up to their printed maximum.

3,4,10: No Change

5 or 9: Sibley feels worse, reduce CP's and Range by 1.

6 or 8: Sibley feels worse, reduce CP's and Range by 1. CSA Player may, if he wishes, remove Sibley. Green still arrives at listed time.

7 or 11: If this is the 1200 turn or later, remove Sibley. If earlier, treat as a '6' dice roll.

8 COMMAND CONFUSION. The Action is cancelled. Instead, the player who rolled the event rolls one die for the Leader leading the action he originally planned. To this die roll add that leader's Action Rating (as a positive number if Union). If the total is:

4+ = Nothing Happens. Try a new action.

1-3 = That leader is considered to have undergone an Action (even though he really hasn't). Give him - but not his units- Action-1 status, or, if already Action-1, Action-2.

These restrictions are cumulative if rolled for the same leader. i.e., the actions can add up. If an uncoordinated/independent unit action, treat as No Event.

9 FREEBIE TIME. The Player rolling this event may *move*, free of any restrictions (other than those imposed by the Action rules), any one Out of Command/independent unit. After doing this, he returns to complete his chosen action. The freebie move does *not* count as a "consecutive" action.

10 NO EVENT.

11 BUT WE ORDERED THE CHATEAU ALBUQUERQUE, '59! Several sources indicate that the Union "army" either was not supplied with grape/canister for their guns or they quickly ran out. If this event is rolled by the CSA Player, the Union player has no grapeshot/canister left in his Supply wagons. For the Union, ignore all artillery Range adjustments for 1, 2 and 3 hexes; the Defensive Fire adjustment becomes 2x.

12 TAKE FIVE; SMOKE 'EM IF YOU GOT 'EM. If this is the 1300 turn or later, the Action Phase is over; perform this turn's Recovery Phase but skip the *entire* next turn. Any reinforcements due are delayed until the next turn. If this event would cause the last turn to be skipped, or this has already been rolled in this or the previous turn, treat as No Event.

THE DESIGNER:

RICHARD H. BERG, winner of the 1987 Charles Roberts Award for Lifetime Achievement, has had over three dozen games published, including Best Game of the Year winners, *Terrible Swift Sword* (1976), *War of the Ring* (1978), and *South Mountain* (1985). 18 of his designs have been nominated for "best game" over a period of 15 years. He is the president of Simulation Design, Inc., creator of the *Great Battles of the American Civil War* system, and lives in Scarsdale, New York, with his wife, Karen, and son, Alex. He is presently working on a book on Civil War battles.



Counter Errata (note that the counter manifest in the rules is correct):

Union Units

Wingate (reverse of Lewis) is a -1, not a -2.

Confederate units:

H/5 Tex reverse should be a 4 not a 5.

C/5 Tex reverse should be a 5 not a 8.

BIOGRAPHIES

Confederate Leaders

John R. Baylor: As a Captain in the Texas militia, Baylor raised a regiment under the ruse that he was organizing a "Buffalo Hunt" in December of 1860. This formed the nucleus of Texas State Forces before secession. Given the rank of Lieutenant Colonel, Baylor accepted the surrender of Federal forces in San Antonio during May. Baylor's next action saw him lead 300 men into southern New Mexico in June and July 1861. He first captured Mesilla and then Fort Fillmore. During the events leading up to and after Valverde, Baylor was named Military Governor of the Confederate territory of Arizona. After the failure of the New Mexico campaign Jefferson Davis revoked Baylor's commission and political appointment. In 1863 he served as a private during the Galveston campaign and then disappeared into obscurity.

Thomas Green (1814-1864): Green was a well known Texas hero. He had moved to Texas and joined the revolt against Mexico, participating in the battle of San Jacinto. He was soon promoted to Major. After a brief sojourn in politics he served in the Texas army from 1840-1843, fighting Indians and defending the frontier during the Mexican invasion of March 1842. During the Mexican War he served under General Taylor and fought at the battle of Monterrey. Afterwards, he was a clerk for the Texas supreme court. Green was commissioned Colonel of the 5th Texas Mounted Rifles on August 20th of 1861. The 5th left San Antonio with 926 officers and men, began the campaign with 835 men and returned to San Antonio with 454 officers and men fit for duty. After the failure of the New Mexico campaign he was prominent at the battle of Galveston on January 1st, 1863. After that battle he served with Dick Taylor at Camp Brisland and assumed command of Shelby's brigade at that time. Green was appointed a Brigadier General on May 20th and led "Joe" Shelby's "Iron Brigade" at LaFourche, Fordoche, and Bayou Bourbeau. Returning in Texas he led a cavalry division against General Banks when the latter made a landing near the mouth of the Rio Grande. Green then returned to Louisiana for the Red River campaign. He was killed by a cannon shot from a gunboat on April 12th, 1864 at Blair's Landing while leading an attack against the Federal gunboats. General Taylor said of Green that the latter was "Upright, modest, and with the simplicity of a child, danger seemed to be his element, and he rejoiced in combat. His men (Green's) adored him and would follow wherever he led..."

William R. "Dirty Shirt" Scurry (1821-1864): Scurry was appointed Lieutenant Colonel of the 4th Texas Mounted Rifles on August 23rd, 1861 by General Sibley. Colonel Reily, the regimental commander, being detached for diplomatic duties in Mexico, Scurry commanded the regiment during the New Mexico campaign. Scurry served in the 2nd Regiment of Texas Volunteers during

the Mexican War. He participated in the battle of Monterrey and was a Major by the time the war ended. After the New Mexico campaign, he raised his own regiment and served in Texas and Arkansas. He was appointed Brigadier General on September 12th 1862. He commanded the Confederate land forces at Galveston on January 1, 1863, taking a leading part in the Confederate victory there. During the Red River campaign of 1864 he commanded a brigade at Mansfield and Pleasant Hill. He then accompanied Kirby Smith to Arkansas to oppose Steele's advance. During that operation Scurry was mortally wounded in April of 1864 at Jenkins' Ferry.

"...William R. Scurry was one of the readiest extempore speakers in Texas. A story is told to the effect that he went to Shreveport driving an ox wagon and arrived there hot, dusty, and begrimed with the dirt of the road, to find a public celebration going on, of some kind, and a number of speakers holding forth. Somebody pushed Scurry forward and called for a speech from him. He poured forth a torrent of eloquence that held the crowd spellbound until some exuberant spirit yelled at the top of his voice, "Go to it, Dirty-shirt."

Henry Hopkins Sibley (1816-1886): Sibley graduated from the US Military Academy at West Point in 1838 (a year before Canby did), 31st out of a class of 45. He served in the Seminole War and the Mexican War (Captain, Company "I," 2nd US Dragoons, one brevet), and on the American frontier. He also invented the Sibley Tent. Other peace time service included duty in 'Bleeding' Kansas (1855-1857), the Utah Expedition of 1857 and New Mexico (1860-1861). Sibley became a Colonel in the Confederate Army in May 1861, three days after resigning his major's commissions in the U.S. Army. He was assigned to Albuquerque at the time. In another month Sibley was promoted to Brigadier General and assigned the Department of New Mexico. He also acquired a reputation as a very heavy drinker in an army where heavy drinking was quite common.

After the failure of the New Mexico Campaign, Sibley served in Louisiana against Banks' 1863 Red River campaign. Sibley was accused of disobedience and unofficer like conduct after the battles of Irish Bend and Fort Brisland. Sibley was acquitted of the charges but not restored to command, there being a general low opinion of his abilities, health, and sobriety. After the war he served briefly in Mexico and then as General of Artillery in the army of the Egyptian Khedive until 1874. Sibley then returned to the US, dying in relative poverty twelve years later.

William Steele (1819-1885): Born in New York, Steele graduated from the US Military Academy in 1840. He served both in the Seminole War and the Mexican War (one Brevet). Steele then spent the rest of the pre-war years on frontier duty Indian fighting and was a Captain in the 2nd US Dragoons when he resigned his commission. Steele was then appointed Colonel of the 7th Texas. A detachment of Steele's

battalion left San Antonio and made it to the invasion jump off point, while Colonel Steele and the remaining five companies were left on garrison duty in the Mesilla-El Paso area. After evacuating West Texas, Steele was named a Brigadier General and commanded the defences of Galveston Texas in 1864. He also participated in the Red River campaign of that year and inherited the command of Green's Cavalry Division after the latter was killed. After the war he held several public offices.

John Schuyler Sutton (?-1862): Sutton commanded "Sutton's Battalion" (companies "A," "B," "F," "H" and "I") of the 7th Regiment Texas Mounted Volunteers. A native of New York, he joined the Texas Army in 1839 as a 2nd Lieutenant. Captured during the 1841 Texas Invasion of New Mexico he was released the next year. He remained active in Texas' military affairs, fighting at the battle of Monterrey. He spent some time in California between 1850 and 1856 but then returned to Texas. Sutton was severely wounded while charging the Federal battery at Valverde. While lying wounded he raised himself on an elbow, pointed towards the battery, and urged his men on as they passed. Refusing to have his shattered leg amputated, he died the day after the battle.

United States Leaders

Edward Richard Sprigg Canby (1817-1873): Canby served in both the Seminole and Mexican wars, receiving two brevets in the latter. Before the Civil War he was stationed at several posts on the frontier. The start of the War found him Colonel 19th US Infantry in New Mexico. He was successful in holding the area and stopping the Confederate invasion. He was later sent east to become Assistant Adjutant General in Washington, D.C. He then commanded the Union Military Division of Western Mississippi from May 1864 to the end of the War. Severely wounded by Confederate guerrillas, he nonetheless led the Union campaign against Mobile in 1865 and accepted the surrender of Generals Taylor and Kirby-Smith. After the war he commanded the Department of the Colombia. While in that post he was murdered by Modoc Indians under a flag of truce while negotiating a peace treaty. Canby thus became the highest ranking officer killed during the Indian Wars.

John Henry Carleton (1814-1873): Carleton joined the United States Army after the "Aroostook War" of 1839 in Maine. He subsequently served with Kearny on the 1864 Rocky Mountain Expedition and on General Wool's staff during the Mexican war. Earning a brevet rank in the later conflict Carleton continued to serve on the frontier fighting Indians and exploring the west. A Captain in the 1st US Cavalry, he was later appointed Colonel of the 1st California Infantry and Major in the 6th US Cavalry. He was then busy raising and organizing the troops that would become the "California Column" until the spring of 1862. Before reaching the Rio Grande, Carleton was appointed a Brigadier General of

14 RIO GRANDE

US Volunteers in April 1862, just before capturing Mesilla Texas. In September he replaced General Canby as head of the Department and retained that post until the end of the war. Carleton continued on active duty after the Civil War and died while still in the Army.

Christopher "Kit" Carson (1809-1868): A famous frontiersman whose exploits are still well known today, Carson also served with Fremont and Kearny as a scout during the Mexican War. The Kentucky born Carson was appointed Lieutenant Colonel of the 1st New Mexico Cavalry on July 25th, 1861 and made the Regiment's Colonel on September 20th of that year. He was breveted a Brigadier General (US Volunteers) for his actions at the battle of Valverde. His best known action in the Civil War was the suppression of the Navajos in 1863-64.

John M. Chivington: Chivington was an able leader in the military, religious, and political arenas. He was a methodist preacher who took time off from military duties on Sunday to preach in Denver Churches. More than just a leader, Chivington became a symbol. Chivington used good tactics at Glorieta Pass. Two days later his destruction of the Confederate wagon train spelled the final doom for Sibley's invasion. More importantly, in the grand scheme of things it made him a hero who, with the influence he thus acquired, did great damage to Colorado, as well as perpetrating several atrocities. Chivington's lasting fame came in 1864 along the banks of Sand Creek but that is a tale for another time.

John P. Slough (1829-1867): Born in Ohio, Slough moved west after being expelled from the Ohio Legislature for "striking a member." Active in Colorado politics, he was appointed a Captain of 1st Colorado on June 24th, 1861, and Colonel on August 26th. His first military assignment was commanding Fort Garland with three companies of the 1st Colorado. Moving his regiment to Fort Union he advanced and fought Scurry's Confederates at Glorieta against Canby's orders. After the battle he fell back to Fort Union and did not again advance until ordered to do so by Canby. Active command of the 1st was pretty much left to Major Chivington, and he also gathered most of the laurels for the victory. On 1 August Slough resigned, convinced that the other officers in the regiment were "out to get him!" Slough then went east and was made a Brigadier General serving in various commands in the Shenandoah Valley and Virginia. After the war he was a Chief Justice of the New Mexico Supreme Court. The state Legislature made several attempts to have him removed, with Slough challenging the bill's author to a duel in 1867. Slough lost. ■

ORDERS OF BATTLE

UNION: DEPARTMENT OF NEW MEXICO¹

COLONEL EDWARD CANBY (Overall) [19th U.S. Infantry]²

5th U.S. Infantry

(Capt. W.H. Lewis)

Cos. B, D, F, I and K

7th U.S. Infantry

(Capt. Benj. Wingate)³

Cos. C, F and H

10th U.S. Infantry

(Capt. Henry Selden)³

Cos. A and H

1st U.S. Cavalry

(Col. Benj. Roberts)

Cos. D and G

3rd U.S. Cavalry

(Maj. Thomas Duncan)³

Cos. C, D, G and K

1st New Mexico Volunteers

(Col. Kit Carson)

Cos. A, B, C, D, E, F, G and H

2nd New Mexico Volunteers

(Col. Miguel Pino)

Cos. A, B, C, D, E, F and G

3rd New Mexico Volunteers⁴

(Lt. Col. Jose Valdez)

Cos. A, B, D, F and G

5th New Mexico Volunteers⁵

(Col. Stapleton)³

Co. C

Independent Units

Co. A, 2nd Colorado Vols.

Graydon's Spy Company⁶

ARTILLERY

McRae's Provisional Battery⁷

Hall's Provisional Battery⁸

Notes on the Union:

1 = Canby also had at his disposal 1000 "Mexican" militia, under Colonel Armijo. He considered them so ill-trained and worthless that he refused to use them. Also floating around were Ford's Colorado Volunteers, probably under Major Chivington, the "Fighting Parson". He would earn lasting ill-fame two years later for the Sand Creek Massacre of Black Kettle's Cheyenne.

2 = The unit of assignment for the Union regular officers often differed from the units they actually led. E.g., Roberts was officially Colonel of the 5th New Mexico Infantry. He commanded the Union cavalry at Valverde. Leaders are listed here with and of the units they actually led.

3 = These were the actual commanders of these regiments. They do not appear in the game for playability purposes. Thus, Roberts commands all the US regular cavalry, while Lewis leads all the US regular infantry.

4 = Several reports state that this regiment had 7 companies at Valverde, not 5. It appears, however, that two of them were left behind as garrison.

5 = Company D of the 4th New Mex. Vols and Co. F of the 5th New Mex. Vols appear in

several reports as present under Stapleton.

These units were around but do not appear to have taken an active part in the battle. (Again, they may have been doing garrison duty.)

6 = Ah, good old James Paddy Graydon's boys, of exploding mule fame. See the accompanying article.

7 = McRae's battery was an *ad hoc* organization of guns manned by men from company G, 2nd US Cavalry and Company I, 3rd US Cavalry. McRae, himself, was a captain in the 3rd U.S. cavalry.

8 = Hall was an officer of the 10th U.S. Infantry, and his gunners were from company F of that unit.

CONFEDERATE ARMY OF NEW MEXICO BRIG. GEN. HENRY SIBLEY (Overall)

2nd Texas Mtd. Rifles

(Maj. Chas. Pyron)¹

Cos. B, D, E and Frazier's Arizona Rangers

4th Texas Mtd Vols.

(Lt. Col. Wm. Scurry)²

Cos. A, B, C, D, E, F, G, H, I and K

5th Texas Mtd Vols.

(Col. Thomas Green)

Cos. A, B, C, D, E, F, G (Lancers), H, I and K

7th Texas Mtd Vols.

(Lt. Col. J.S. Sutton)³

Cos. A, B, F, H and K

INDEPENDENT UNITS⁴

San Elizario Spy Co

Arizona Guards

Hunter's Arizona Vols

Phillips' Brigands

ARTILLERY⁵

Teel's Battery

Reilly's Battery

Wood's Battery

Notes on the Confederates

1 = The actual commander of the 2nd Texas Mounted Rifles was Colonel John Baylor, who was off with the other half of the regiment.

2 = Some sources list this as Colonel James Reilly's regiment, but Reilly seems to be with the artillery.

3 = The 7th Texas was actually led by Colonel William Steele, not present at the battle.

4 = These independent units were small "bands" of highly irregular irregulars, more suited to scouting and looting than pitched battle.

5 = The Confederate artillery appears to be, like the Union, a somewhat *ad hoc* group, although several sources state they were from Light Co. B, 1st Regiment of Artillery (Texas Volunteers), commanded by Teel. This could not be verified.

2. If the firing range is *greater than one-half* the printed range, reduce the unit's strength by one for each hex greater than half.

Examples: A unit with a printed strength of '4' and a Range of '8' would fire with 8 SP's at a Range of one hex; it would fire with 4SP's at 3 hexes; and with 1SP at a Range of '7' (the range is 3 greater than half, so you subtract 3 from the strength.) A unit may be reduced to "0" strength for firing purposes.

(8.23) Artillery adjusts its fire strength as follows:

1. When firing Defensive Fire at an adjacent hex (8.44) it use an 8x multiple (not 4x as in below).

2. When firing as an action at an *adjacent* hex, quadruple the strength (4x);

3. If firing at a Range of 2 or 3 hexes, triple the strength (3x);

4. If firing at a hex that is *greater than half* its Range, is halved (rounding down), with a minimum of 0 possible. **Example:** if an artillery unit with a Range of '14' and 2 SP's fired at a range of 2 hexes it would use 6 SP's. But if it fired at a range of 8 hexes, it would use 1 SP.

5. Whenever artillery strengths are not multiplied and the result is a 1/D, only the D result is used. In addition, artillery at two hexes or greater can cause a maximum of 1 step loss per firing, regardless of the actual, number result.

(8.24) Units firing at two hexes or more may fire only at targets to which they can trace a Line of Sight (LOS); i.e., they must be able to "see" it. LOS is traced from the center of the firing hex to the center of the target hex. **The basic premise is: if the LOS is blocked, fire is not possible.**

(8.25) For units firing at enemy units on the same elevation level the following, intervening terrain (and other) types will block LOS:

1. Sand Dunes
2. Combat units on the same elevation
3. A hex of higher elevation.

(8.26) For units firing at a target at a **different (higher or lower) elevation** the following types block LOS:

1. A hex of elevation higher than both the target and the firing unit;
2. Sand Dunes
3. Combat Units (See 8.28) in a hex higher or the same as either the target or the firing unit.

(8.27) Terrain or units can block the LOS between units on different elevations if the blocking hex is higher than the lower unit. To determine whether something blocks

between units on different levels count the hexes between the lower unit and the potential obstacle. If this distance is **less than half** the number of hexes between the firing and target units the LOS is **blocked**. If the number is equal to or greater than the total distance, LOS is **clear**.

(8.28) Artillery firing at a distance greater than three hexes may always fire *through* its own units on the same or lower level, as long as those units are not adjacent to the target unit.

(8.3) Ammunition and Resupply

(8.31) Each time a unit fires (including defensive fire) and the player rolls a '6,' that unit is *low on ammunition*. Place an "Ammo Low" marker on it. If the unit was already Ammo Low and the player rolls a 1, 3 or 6 that unit is now Out of Ammo and may not fire until Resupplied.

OUT
OF
AMMO

(8.32) To **resupply** a unit, the player must undertake a Resupply Action. If successful, the player may resupply - remove any Ammo Low or Out of Ammo marker - for any *one* In Command unit, not Disrupted and at least *three* hexes distant from the nearest enemy combat unit. Independent units and artillery must be in Command Range of any friendly leader. (There are no Supply Wagons.)

(8.33) The player does not use Leader Action Ratings to adjust a Resupply attempt. There is an automatic +2 (CSA) or -2 (Union) adjustment to this TCT dice roll.

(8.4) Melee

(8.41) "In Command" infantry and cavalry may melee any enemy units in their Zones of Control. "Out of Command" and Artillery units may not melee.

(8.42) Melee is a Combat Action. It may be conducted with a preceding Fire Combat (8.1) by any of the attacking units. Ranged Fire is not allowed. (Melee without Fire is usually undertaken only by mounted cavalry.) When Melee and Fire are combined in one action not all units must Fire; at least one unit must fire and such fire must be directed only at units about to be meleed.

(8.43) A unit does not have to melee, but if it does there are certain requirements. If a unit fired before Melee it (or another friendly unit) must melee all enemy units at which it fired. If there was no preceding fire, it must melee all enemy units in its ZOC. In the case of multiple units attacking several enemy units, the attacker may split his attacks in

any way he sees fit, as long as the Fire/ZOC requirements are met. A single unit may melee more than one enemy unit, but it may never split its strength into two or more separate melees.

(8.44) Prior to resolving the melee (but after any preceding Fire within the same action), the defending player may **Defensive Fire** with any of his units that are either about to be meleed or adjacent to a friendly unit about to be meleed. He may fire at any (but not necessarily all) of those attacking units that are in his firing unit's ZOC's. Defensive Fire is conducted in exactly the same fashion as Fire Combat (8.1 and 8.3) except that:

1. It is not an Action and requires no TCT dice roll - it is part of the other player's Melee; and

2. Artillery multiplies its strength by eight (8x), not 4x, when firing Defensive Fire (only).

3. A unit may Defensive Fire only once per action;

4. There is no advance (8.7) after Defensive Fire.

(8.45) After the defending player has resolved all of his Defensive Fire, the attacking player now resolves all remaining melees in any order he wishes. He compares the strength of the attacking units with that of the defending units, stated as an odds ratio reduced to its simplest form and rounded down in favor of the defender. Thus, a 6 point unit and a 7 point unit attacking an enemy 5 point unit would melee at two-to-one (6+7 = 13 to 5, rounded down to 2/1). The player then consults that odds ratio column on the Melee Table, makes any column adjustments (8.46; do not use the adjustments for Fire), rolls one die and applies the results immediately.

(8.46) Mounted cavalry units that are not charging/counter-charging (see 8.5) *halve* their printed strengths, retaining fractions. (Retaining fractions applies to any unit that must halve its strength.) See, also, adjustments for Square, 6.35.

(8.47) The Melee odds column may be adjusted as follows:

Shift

1 to the Right (1R)

Reason

Any meleeing units are attacking into/through the enemy's flank or rear hexsides, or defender is Routed. However, this modifier is NOT used if the attacker is in the

	ZOC of a different enemy unit.
Variable to the Left (?L)	Terrain Effects (See the Terrain Effects Chart)
1 to the Left (1L)	Any Defender has High Morale
1 to the Right (1R)	Any Defender has Fair Morale
2 to the Right (2R)	Any Defender has Broken Morale
1 to the Right (1R)	Any Attacker has High Morale
1 to the Left (1L)	Any Attacker has Fair Morale
2 to the Left (2L)	Any Attacker has Broken Morale
1 to the Right (1R)	Charging unit is a Lancer (L); defender is on foot and not in Square.

All adjustments are cumulative, and the maximum net Melee column shift is three (3).

(8.5) Cavalry Charge

As a Melee (only) Action, a Player may Charge enemy units with his mounted cavalry, subject to possible counter-charge by enemy mounted cavalry. Charging is the only way a mounted cavalry unit gets to use its printed/mounted strength. If a mounted cavalry unit is not "charging" it follows normal melee rules and uses half its strength (as per 8.46).

(8.51) Only "In Command" (or independent) mounted cavalry units with Fair or higher morale that are not Disrupted, routed or in an enemy ZOC may charge (or counter-charge). Charge is resolved like Melee, with some important exceptions, which follow.

(8.52) In order to charge enemy units the charging cavalry must start from three to six hexes distant: the **Charge Range**. In addition, no charge (or counter-charge) may enter or cross the following hexes/hexsides:

1. Grove or Marsh;
2. Sand dunes;
3. Any hex of different elevation;
4. Any all-river hex;
5. Any hex containing combat units;
6. Any Enemy ZOC, excluding the ZOC of the target.

(8.53) Cavalry may charge/counter-charge only through their frontal hexsides. The charging units may not change facing during the course of the charge. I.e., the vertex the unit faces must always point in the same

direction.

(8.54) The procedure for undertaking and resolving a charge is as follows:

1. Roll successfully on the TCT for a combat action;
2. Announce which units are charging, what their targets are, and what the course of the charge (Charge Path) is.
3. If the opposing player has any enemy units that would be eligible to charge within three hexes of any hex in the Charge Path, including cavalry units that are, themselves, targets, he may announce he will counter-charge with as many of those eligible units as he wishes. (See 8.55).
4. Counter-charge melees, if any, are resolved now (8.55).
5. All target units, other than those that are no longer targets because of counter-charges and those units in Square, undergo a Charge Morale Check (9.3).
6. Defending units that pass a Charge Morale Check may now defensive Fire at the charging cavalry (at a distance of one hex).
7. After Defensive Fire casualties (if any) are taken, the Charging units now melee their targets. Charge Melee is resolved like regular melee, except that *charging units use their printed/mounted strength*. In addition, if the charging unit is a Lancer and the defending units are *foot* units, adjust the Melee Column one to the right. (See 8.9).

(8.55) Mounted cavalry units in Action-1 status or lower that are not disrupted or Routed may Counter-charge any charging enemy unit if the former is within three hexes of a hex in the Charge Path. Counter-charge does not require a TCT dice roll, but it is treated as an Action in terms of 4.34. Counter-charge is resolved as follows:

1. For *each unit* eligible to counter-charge the player makes a Charge Morale Check (9.3). If the unit fails, it may not counter-charge (but it is not Disrupted). If it passes, it *must* counter-charge.
2. The counter-charging unit melees the charging unit in the first hex in the Charge Path that it could reach (8.52 applies to counter-charges).
3. The counter-charge attack is resolved using printed strengths. Regardless of its results, the charging unit may not continue its charge.

(8.56) More than one cavalry unit may charge a single target.

(8.57) Regardless of the result of a charge, *all* charging/counter-charging units are **Disrupted** at the end of the Action. See 8.62.

(8.58) **Lancers:** Companies B/G of the 5th Texas cavalry (CSA) are lancers. Lancers, noted with an "L," gain a 1R Melee CRT shift when charging foot units that are not in Square. However, they may *not* fire and they may *not* dismount (as they were not trained to fight dismounted).

(8.59) A charge which draws a counter-charge will, most likely, be a confused, swirling affair. This is intended, as that was what most of those mini-battles were.

(8.6) The Combat Tables

(8.61) All combat units with a reverse side have four possible steps to lose. Units with no reverse side (those with only 1 SP) may absorb only 2 Step Losses.

1. For the first step lost, place a Step Loss marker under the unit. There is no effect to its combat or movement abilities, but its Morale is now Good.

2. For the second step lost, remove the Step Lost marker and flip the unit to its "Reduced" side. The unit will now have a lower combat strength and its Morale is now Fair. If there is no reverse side, the unit is eliminated.

3. For the third step lost, place a Step Lost marker under the Reduced unit. Again, the marker has no effect, other than to lower its Morale to Broken.

4. For the fourth step lost, the unit is permanently removed from play. (Players should note that the unit is not actually wiped out to the last man; it is simply so reduced in strength and will to fight that it is useless.)

(8.62) The following are the possible results from combat:

1, 2, or 3 = These are the number of steps a unit loses. This applies to attacking or defending units as a whole - not each, individual unit. If there is more than one unit in a target/attacking hex the top unit absorbs the loss. If the loss exceeds the top unit's strength, then the bottom unit takes the remaining losses. Artillery at two hexes or greater can cause a maximum of 1 step loss per firing, regardless of the actual number result.

D = Disrupted status results from (a) enemy fire and affects *all* units in that hex; (b) Charge Morale dice rolls (9.3); and after cavalry charges; see 8.57. Disrupted units:

1. May undertake only one additional action that turn, if they have not already reached Action-2 status. That additional action may only be Movement

2. Their movement allowance is halved and they may not enter an enemy ZOC.

3. Cavalry may not counter-charge or Retreat Before Combat.

4. There is a 1L Fire Column shift if they fire Defensive Fire (even in combination with other, non-Disrupted units.)

Disrupted units may be rallied in the Recovery Phase, although there is a danger they will rout, instead.

1/D = If *only* artillery is firing and its strength is *not* multiplied, use the "D." Otherwise, use the '1'.

R (Fire RT) = This applies only to units with Fair or Broken Morale. Roll one die for each "Fair" unit. If the number rolled is odd, it must Retreat one hex and cannot offer Defensive Fire or Melee. If Broken, the Retreat is automatic. All units retreat towards their entrance hexes. Retreat is conducted like regular movement (although it is not an action), which means the units have to be (re)faced in the direction they are retreating. See 8.71. This result is *not* a Rout.

R (Melee RT) = All affected units retreat one hex, as above.

EX = Both Attacker and Defender lose 1 Step.

- = No Effect (no losses).

(8.63) The Fire Results Table

(See charts page)

(8.64) The Melee Results Table

(See charts page)

(8.7) Advance and Retreat

(8.71) A unit that is forced by melee to retreat moves one hex away from the attacker within the following restrictions:

1. It cannot retreat off the map, cross a hexside or enter a hex that it would normally not be able to move across/into;
2. It cannot enter an enemy-occupied hex;
3. It cannot enter an enemy ZOC unless that hex is occupied by a friendly unit and stacking restrictions allow it.
4. A unit forced to retreat across a Sand Dune is automatically Disrupted.

(8.72) Units that must retreat but cannot stay in place and lose an additional step. However, see 5.27.

(8.73) If, as a result of Fire prior to Melee from an adjacent hex, an enemy/target hex is left vacant, one firing infantry/dismounted cavalry unit may advance into that hex. This decision must be made immediately after the Fire Combat result and before any other fire. Advance is not an action, needs no dice roll or movement points and is not applicable to Defensive Fire or a Fire Only Action.

(8.74) If a defender vacates a hex as a result of melee/charge the attacker **MUST** advance one of the attacking units into that vacated hex.

(8.75) Mounted Cavalry

(only) that is about to be *meleed* by infantry or dismounted cavalry OR fired at by any unit at a range of three (3) hexes or less may, before the combat is resolved, **Retreat Before Combat** either one, two or three hexes (8.76). Cavalry may not Retreat Before Combat before any fire at a range of 4 or more hexes. Retreat Before Combat is not an action and does not use movement points. The cavalry unit may not retreat if it is Disrupted, routed, or in an enemy mounted cavalry ZOC at the time, or its retreat would move it into an enemy cavalry ZOC. If the action chosen by the enemy was Melee or fire from an adjacent hex prior to a melee, any/all of the units that were going to melee may advance into the vacated hex, ending the action (for those units).

(8.76) A cavalry unit that Retreats Before Combat one hex suffers no penalty. If it retreats two hexes it is considered an action for 4.34 purposes, although no TCT dice roll is necessary. If it retreats three hexes it is an action and the unit is Disrupted. Cavalry with an Action-2 status may not retreat two or three hexes.

(8.77) All retreats must be towards the respective Entrance Hexes in as direct a line as possible, following, however, the **path of least resistance** (least number of movement points to get there, unless blocked by other units, etc.)

(8.8) Rally and Rout

Disrupted and Routed units may be rallied in the Recovery Phase, Disrupted units first. **Rout** occurs only as a result of trying to rally a Disrupted unit; it is *not* a combat result.

(8.81) To Rally a **Disrupted** unit, roll one die. If the die roll is a

a. 1-4, the unit is no longer Disrupted. Remove the marker.


b. 5, it remains Disrupted

c. 6, The unit **Routs** and must Rout Move; see 8.82[c]. If the unit was in Square at the time, it goes out of Square automatically.

(8.82) To Rally a **Routed** unit, roll one die. If the die roll is a

a. 1, the unit is no longer Routed. Remove the marker.

b. 2-4, the unit is no longer Routed, but is, instead, Disrupted. It retains this new status until, at least, the next Recovery Phase.

A (Ind*)	
Col Vol	1
	6-12

c. 5-6, The unit remains Routed and must **Rout Move** half its movement allowance. Units that cannot complete this Rout Move because of friendly units (!), enemy units, ZOC's or impassable terrain move as far as they can and lose a step. Rout movement follows the precepts of retreat (8.77); units that rout off the board are eliminated. (8.83) The following Rally die roll adjustments apply:

1. If the Disrupted or Routed unit is in an *enemy ZOC*, add one to the die roll.

2. If the Disrupted or Routed unit is *mounted cavalry*, subtract one from the die roll.

3. If the unit is *Broken Morale*, add one to the die roll.

4. If stacked with a *Leader*, subtract one from the die roll.

5. If unit has *High Morale*, subtract one from the die roll

All of the above are cumulative.

(8.84) Players may choose not to undergo rally rolls for a unit. Such ignored units simply remain in place in their present status.

(8.85) Routed Units may not move, fire or melee. They may not stack with any other units. If meleed or fired at, the attacking/firing unit gets a 1R benefit.

(8.86) If an artillery unit routs it is, instead, eliminated.

(8.9) Artillery and Melee

(8.91) Artillery Strength points are never used for melee, except for 8.92.

(8.92) If artillery is *alone* in a hex and is meleed, it has a total melee strength of one (1). In this case, *any* adverse result (including an EX) eliminates the entire artillery unit.

(8.93) If artillery is **stacked** with infantry/cavalry that is meleed the artillery may retreat (if required), and all step losses must be taken from the infantry or cavalry, if possible. If artillery is required to take step losses from melee it is eliminated. It takes step losses from Fire as per 8.62.

(9.0) MORALE

Morale measures a unit's ability to fight over a period of time, usually as a function of how well it is doing.

A unit's level of Morale depends on how many casualties it has taken. Morale levels may affect melee and victory.

(9.1) Morale Levels

(9.11) There are four levels of Morale: High, Good, Fair and Broken.

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(9.12) Units at full strength with no step losses have High Morale. At full-strength with a Step Loss counter they have Good Morale. Units at Reduced Strength have Fair Morale, and units at Reduced Strength with a Step Loss have Broken Morale.

(9.13) Artillery is always considered to have Good Morale, regardless of losses.

(9.14) As units may not recover lost steps, they may never increase their Morale levels.

(9.2) Effects of Morale Levels

The Morale Level a unit is at may affect its abilities.

Level	Effect
High	1. One column adjustment in their favor in melee 2. Subtract one from Rally die rolls.
Good	No effects
Fair	One column adjustment against units in melee.
Broken	1. One column adjustment against units in melee. 2. May not voluntarily enter an enemy ZOC. 3. Exert a ZOC through only their Frontal hexsides, not flank. 4. Add one to Rally die rolls.

(9.3) Charge Morale

(9.31) Whenever a unit has to make a Charge Morale Check during the course of a Charge/counter-charge, he rolls two dice and compares the result to the Morale Check Number that corresponds to that unit's Morale Level:

High (10)	Good (8)
Fair (6)	Broken (5)

If the dice roll is higher than the Morale Check Number, that unit has failed the check (see 9.33).

(9.32) The *dice roll* may be adjusted as follows:

1. Subtract the Action Rating of that unit's combat leader (if in Range).
2. If that unit is in Command Range of its Overall Commander the player may subtract one of that leader's available Command Points, if he wishes.
3. If the unit being charged is infantry or Union Regular dismounted cavalry, add one to the dice roll.
4. If the unit being charged is dismounted Confederate or Union volunteer cavalry, add two to the dice roll.

All of the above are cumulative.

(9.33) If an infantry, artillery or dismounted cavalry unit being charged fails a Morale Check, it is **Disrupted** and must immediately be retreated a number of Movement Points equivalent to the roll of one die, or one hex (whichever is more). The charging cavalry must then enter the vacated hex and may then move an additional two hexes (if so desired), within stacking and charge path restrictions. The charging cavalry unit will stop immediately upon moving adjacent to an enemy unit. Remember 8.57.

(9.34) If a unit wishing to Counter-charge fails a Charge Morale Check, it may not counter-charge that action. There is no other effect.

(9.35) Units in Square do *not* undergo a Charge Morale Check.

(10.0) COMMAND

Leaders affect their units' abilities to move and fight.

(10.1) Combat Leaders

(10.11) Combat Leaders are the (regimental) commanders directly leading troops. E.g., Colonel Kit Carson commands all units in the 1st New Mexico Volunteer regiment.

(10.12) A Combat Leader's **Action Rating** is the modifier for all TCT dice rolls involving that leader: a plus [+] for Confederates, and a minus [-] for Union. (Note: the Action Rating is positive for Confederate leaders and negative for Union because the way the Turn Continuation Table is set up, the higher the die roll, the more favorable for the Confederates, and the lower, the more favorable for the Union. Note also that a relative comparison of leader capability can be had by comparing their absolute strengths; i.e., a minus 2 Union leader is as good as a plus 2 Confederate. And, again, note that a Union leader with a minus 2 rating is better than a minus 1.)

(10.13) A Combat Leader's **Command Range** is the maximum number of hexes distant a combat unit in that leader's command may be from the leader and still be considered In Command. The hex the leader is in does not count, but the hex the combat unit is in is. This Command Range may not be traced through or across hexes/hexsides into or across which a leader could not normally move. It may not be traced through an enemy ZOC unless that hex is occupied by a friendly combat unit, in which case the player must count the additional points for moving in/out of that ZOC.

(10.14) For "play" purposes the Union has only two Combat leaders for its Regulars,

even though there is more than one regiment for each leader. Therefore, Roberts commands all Union regular cavalry (1st and 3rd US Cavalry) and Lewis leads all Union regular infantry (5th, 7th and 10th US Infantry).

(10.2) Overall Commanders

(10.21) The Overall commanders are in charge of their "armies." They do not directly affect combat units but, rather, affect the Combat Leaders subordinate to them. Colonel Edward Canby leads the Union forces, and General Henry Sibley commands the Confederate "Army of New Mexico."

(10.22) Overall Commanders have a **Command Range**, which works in the same fashion as 10.13 except that it affects only the Combat Leaders within his range.

(10.23) The Overall Commander has **Command Points (CP)**. These may be used to:

1. Influence the Initiative die roll; AND/OR
2. Affect Charge Morale Checks (9.32); AND/OR
3. Increase a subordinate Combat Leader's Action Rating by 1; AND/OR
4. Increase a subordinate Combat Leader's Command Range by 1.

Use of a "points" for one purpose means that that point may not be used for the others that turn. However, remaining points may be used for other purposes. Thus, if Sibley uses one of his three Command Points for his Initiative die roll, he has only two points left to use to help his subordinates.

(10.24) Only one Command Point may be used for any given Action/die roll, and the commander's CP's are the maximum that may be used in one turn. Command Points must be given out *before* the dice roll they would help. Once given they are expended, regardless of the result.

(10.25) Overall Commanders may affect play only if/when they are on the map.

(10.3) Leaders and Combat

(10.31) If a leader is in a hex that is fired upon and the result was at least one Step Loss, the leader's player rolls two dice. If he rolls a '12' that leader has been killed and is removed from play. In the Recovery Phase, flip the counter over to its Replacement Leader side and place the "new" leader with any unit in his command. If an Overall Commander is replaced by a Combat Leader that is in play, the latter must also be flipped.

(10.32) If units with which a leader is stacked are totally eliminated by either Fire or Melee, or a leader is alone in a hex and an enemy

unit moves adjacent, the leader's player rolls one die:

1. If he rolls a 1-5, the leader is immediately placed with the nearest combat unit in his command and charged with an Action. If that leader is already Action-2 there is no additional penalty. (The enemy unit that moved adjacent to the leader-occupied hex may continue to move, if MP's are available.) If all combat units in his command are gone, remove the leader.

2. If he rolls a '6', the leader is killed, as per 10.31.

(10.4) Independent Units

(10.41) Independent units (units not assigned to any leader) are noted with the letters "Ind" on the counter. Artillery sections are *not* independent for the purposes of this section.

(10.42) Independent units are always In Command and use Coordinated actions. Some Union independent units - those with an asterisk (Ind*) - may also be attached, temporarily, to a combat leader within whose Range they are at the time of the action, as follows:

1. C, 4/5 New Mex Vols, to any New Mex Vol leader.

2. A, Col. Vol's, to any US (Regular) leader.

No other independent unit may be commanded by a leader - even if in the latter's range - other than the Overall Commander. (10.43) Independent units do *not* suffer the Out of Command TCT dice roll adjustment (4.22). When operating without a leader, they use an Action Rating of '0.'

(11.0) RANDOM EVENTS

Random events are unusual occurrences that may change the course of a battle.

An adjusted TCT dice roll of "7" requires the rolling player to roll two dice and consult the Random Events Table (EXCEPTION; See 4.42.) The planned Action is cancelled. The Random Event result is carried out immediately and, unless specifically stated otherwise, the same player then rolls again on the TCT. He may change his Action from what it was before the Random Event.

(12.0) SET-UP AND REINFORCEMENTS

The game starts with the 0830 turn and ends either when one side must Withdraw (see 14.0), or, failing withdrawal, at the conclusion of the 1800 turn.

For the Union, companies A/G of the

3rd New Mexico Volunteers start (*mounted*) in any Road hex.

For the CSA, the B/D and E companies of the 2nd Texas Mtd Rifles, with their commander (Pyron), start (*mounted*) in any of the gully hexes between the sand dunes east of the river and within six hexes of the CSA Entrance hexes.

Union Reinforcements

Union Reinforcements may enter through either of the two Union entrance hexes. Cavalry must enter mounted. All the units from a regiment arriving at the same time must enter through the same hex.

Turn	Units
0830	Roberts, Co. D 1st US Cav; Cos. C/D, G/K 3rd US Cav; *Valdez, Cos. D/F 3rd New Mex Vols
0900	Lewis, Co. K 5th US; Co. H 7th US; Co. B 3rd New Mex Vols; Co. C 5th New Mex Vols; McRae's battery (secs 'a', 'b'); Hall's Provisional Artillery
1130	Cos. B/D, F/I 5th US; Cos. C/F 7th US; Cos. A/H 10th US; Co. Ab (Dodd's) 2nd Colorado Vols
1200	Carson, all cos. 1st New Mex Vols
1300	Graydon's Spy Company
1430	Canby, Co. G 1st US Cav; sec. 'c' McRae's battery
1530	Pino, all cos. 2nd New Mex Vols

* = These New Mexico Volunteers may not enter until the US regulars have entered.

Confederate Reinforcements

Confederate reinforcements arrive through any CSA Entrance Hex. Cavalry must enter mounted.

Turn	Units
0900	Sibley, Scurry, Cos. A/B, I/K 4th Texas Mtd Vols.; Frazier's Arizona Rangers
0930	Cos. C/D, E/F, G/H 4th Texas Mtd Vols; Reilly's battery
1030	Sec. 'a' Teel's Battery
1100	Sec. 'b' Teel's battery
1300	Green, Cos. B/G, D/E, A/F and I/K 5th Tex Mtd Vols; Wood's Battery
1330	Sutton, Cos. B/F, K 7th Tex Mtd Vols; Co. H 5th Tex Mtd Vols
1600	Co. C 5th Tex Mtd Vols; Cos. A/H 7th Tex Mtd Vols; San Elizario Spy Co; Phillip's Brigands
1630	Arizona Guards; Hunter's

Arizona Vols.

See 5.5. for specifics on bringing in reinforcements.

(14.0) VICTORY CONDITIONS

DESIGNER'S NOTE: Sibley, with his troops in desperate need of supply, is trying to cross the river; Canby is trying to stop him. Canby is also trying to destroy Sibley's army, while Sibley is attempting to do the same to Canby so that he can continue his expedition unhindered.

Players play until one side is forced to Withdraw or, failing that, until the end of the 1800 game-turn, after which victory is assessed.

WITHDRAWAL: At the end of a game-turn in which a player has at least two-thirds (2/3) of his *non-artillery* combat units Eliminated or with Broken Morale (count eliminated units as well as not-yet-arrived reinforcements) he must Withdraw and the game is over, at which time player's total Victory Points, as below. (To save you the time, that means 17+ Union units or 15+ Confederates.) If both players reach Withdrawal at the same time, the game is over, but no one gets Withdrawal credit. Credit for units across the river apply whether a player withdrew or not.

Players are awarded Victory Points, as follows:

Points	To Whom	Why
3 VP	CSA	Each CSA unit In Command* and west of the Rio Grande.
3 VP	Union	Each Union unit In Command* east of the Rio Grande.
1 VP	Either	Each enemy unit with Broken Morale.
1 VP	Either	Each enemy unit eliminated or routed off the map.
10 VP	Either	Player with the least <i>units</i> eliminated.
15 VP		Ties? No points.
		Either Opponent Withdraws

* = Independent units must be in any friendly leader's command range.

The player with the most Victory Points wins.

Front

UNION									
CANBY New Mex Col [1]	ROBERTS US Cav Col -1	LEWIS US Inf H -2	CARSON 1NM Vol Col -2	PINO 2NM Vol Col 0	VALDEZ 3NM Vol LtCol 0	B/D 5 US	F/I 5 US	K 5 US	C/F 7 US
9-15	6-15	5-15	6-15	4-15	3-15	5-7	5-7	2-7	6-7
H 7 US	A/H 10 US	D 1 US Cv	G 1 US Cv	C/D 3 US Cv	G/K 3 US Cv	McRae a	McRae b	McRae c	Hall
2-7	5-7	6-12	4-12	4-12	8-12	2-9	2-9	2-9	2-9
A/B 2NM Vol	C/D 2NM Vol	E/F 2NM Vol	G 2NM Vol	A/G 3NM Vol	D/F 3NM Vol	B 3NM Vol	C(Ind*) 5NM Vol	GrydSpy -Ind-	A(Ind*) Col Vol
12-12	12-12	12-12	6-12	12-12	12-12	8-12	4-12	4-12	6-12
A/B 1NM Vol	C/D 1NM Vol	E/F 1NM Vol	G/H 1NM Vol	DISMT D MA: 1/2 SP: 1/2 Rng: 4-5	DISMT D MA: 1/2 SP: 1/2 Rng: 4-5	DISMT D MA: 1/2 SP: 1/2 Rng: 4-5	DISMT D MA: 1/2 SP: 1/2 Rng: 4-5	DISMT D MA: 1/2 SP: 1/2 Rng: 4-5	DISMT D MA: 1/2 SP: 1/2 Rng: 4-5
6-7	6-7	5-7	5-7						
CONFEDERATE									
SIBLEY ANM *** [3]	SCURRY 4Tex ** +2	GREEN 5Tex *** +1	SUTTON 7Tex * +1	PYRON 2Tex * +1	A/B 4Tex	C/D 4Tex	E/F 4Tex	G/H 4Tex	I/K 4Tex
8-15	7-15	7-15	6-15	5-15	12-12	12-12	10-12	12-12	12-12
C 5 Tex	H 5 Tex	BG 5 Tex	D/E 5 Tex	A/F 5 Tex	I/K 5 Tex	A/H 7 Tex	B/F 7 Tex	K 7 Tex	B/D 2 Tex
8-12	6-12	10L-12	12-12	12-12	8-12	12-12	12-12	8-12	10-12
E 2 Tex	PrzAzRg 2 Tex	Reilly a	Reilly b	Woods a	Woods b	Teel a	Teel b	SanElzr -Ind-	ArizGd -Ind-
4-12	2-12	2-9	2-9	2-9	2-9	2-9	2-9	4-12	2-12
ACTION 1	ACTION 1	ACTION 1	ACTION 1	ACTION 1	ACTION 1	DSRPTD	DSRPTD	HntrAz -Ind-	PhilpBrg -Ind-
								4-12	2-12
AMMO LOW	AMMO LOW	AMMO LOW	AMMO LOW	FREE FIRE	FREE FIRE	FREE FIRE	DSRPTD	DSRPTD	STEP LOSS
STEP LOSS	STEP LOSS	STEP LOSS	STEP LOSS	STEP LOSS	STEP LOSS	STEP LOSS	STEP LOSS	STEP LOSS	GAME TURN

Back

UNION									
C/F 7 US	K 5 US	F/I 5 US	B/D 5 US	Mrtmr 3NM Vol REPL 0	Chavez 2NM Vol REPL 0	Mrlson 1NM Vol REPL 0	Wingate US Inf REPL -1	Duncan US Cav REPL -1	Roberts New Mex REPL [1]
4-7	1-7	3-7	3-7	3-15	3-15	4-15	5-15	4-15	7-15
Hall	McRae c	McRae b	McRae a	G/K 3 US Cv	C/D 3 US Cv	G 1 US Cv	D 1 US Cv	A/H 10 US	H 7 US
2-9	2-9	2-9	2-9	5-12	3-12	3-12	4-12	3-7	1-7
1-9 A(Ind*) Col Vol	1-9 GrydSpy -Ind-	1-9 C(Ind*) 5NM Vol	1-9 3NM Vol	3NM Vol	3NM Vol	2NM Vol	2NM Vol	2NM Vol	2NM Vol
4-12	3-12	3-12	4-12	7-12	7-12	3-12	7-12	7-12	7-12
		DISRPTD	DISRPTD	DISRPTD	DISRPTD	G/H 1NM Vol	E/F 1NM Vol	C/D 1NM Vol	A/B 1NM Vol
						3-7	3-7	4-7	4-7
CONFEDERATE									
I/K 4 Tex	G/H 4 Tex	E/F 4 Tex	C/D 4 Tex	A/B 4 Tex	Walker 2 Tex REPL 0	Jordan 7 Tex REPL 0	Lekrdg 5 Tex REPL +1	Ragnet 4 Tex REPL +1	Green ANM REPL [1]
7-12	7-12	7-12	7-12	7-12	4-15	4-15	6-15	5-15	7-15
B/D 2 Tex	K 7 Tex	B/F 7 Tex	A/H 7 Tex	I/K 5 Tex	A/F 5 Tex	D/E 5 Tex	B/G 5 Tex	H 5 Tex	C 5 Tex
6-12	5-12	7-12	7-12	5-12	7-12	7-12	6L-12	4-12	5-12
ArizGd -Ind-	SanElzr -Ind-	Teel a	Teel b	Woods a	Woods b	Reilly a	Reilly b	PrzAzRg 2 Tex	E 2 Tex
1-12	2-12	1-9	1-9	1-9	1-9	1-9	1-9	1-12	3-12
PhilpBrg -Ind-	HntrAz -Ind-	ROUT	ROUT	ACTION 2	ACTION 2	ACTION 2	ACTION 2	ACTION 2	ACTION 2
1-12	2-12								
DSRPTD	ROUT	ROUT	AMMO LOW	AMMO LOW	AMMO LOW	OUT OF AMMO	OUT OF AMMO	OUT OF AMMO	OUT OF AMMO
GAME TURN	FREE FIRE	FREE FIRE	FREE FIRE	FREE FIRE	DISRPTD	DISRPTD	DISRPTD	DISRPTD	DISRPTD

Light Infantry and the Demise of the Post-Frederican Prussian Army

by Brigadier General R.E. Bell (U.S. Army, retired)

On 14 October 1806, Napoleon and the French army drove the Prussian army off the battlefield at Jena and Auerstadt and hounded it to the far corners of Germany. When the French pursuit ended, the once proud Prussian military establishment was in ruins. Its devastation was complete. The armed forces which Frederick William I organized in the 18th century, and Frederick the Great had led to victory in the Seven Years War (1756-1763) virtually ceased to exist. The obvious question is, why did this army collapse? The short answer is that its leaders had failed to keep abreast of new battle techniques. True, the Prussian leadership was largely inexperienced, overaged, ignorant, and no match for Napoleon and his generals. But the underlying reasons for the catastrophe are too complex and pervasive to simply pin the blame on a few individuals.

Essentially, the Prussian military system had stultified as the result of past battlefield success. There were political, psychological and physical manifestations which were significant. Perhaps the most important psychological factor was the inflexibility imposed on the entire Prussian society by a victorious but rigid state apparatus. In the Army, the primary physical manifestation of this rigidity was the total reliance on close order battle drill, which turned the battlefield into a bloody parade ground. In the end, Frederick the Great's achievements

cast an oppressive pall over all attempts by progressive Prussians to prepare to fight future wars. The result — disastrous defeat — was predictable, and it came on the calamitous day at Jena-Auerstadt.

It would be the French army's light infantry tactics which made the difference at Jena-Auerstadt. These gave the French a tactical ascendancy by allowing them to negate the superior Prussian fire discipline. Ironically, it was a Prussian who had served on Frederick the Great's staff in the Seven Years War who championed these new light infantry tactical evolutions. Baron Frederick von Steuben, while serving with the American army, quickly recognized the superiority of the individual fighting man, and, in effect institutionalized the employment of light infantry. So while at the beginning of the 19th century the Prussians were preparing to "fight the last war," the Americans, British and French had already recognized the utility of skirmishing, light troops, and an "open" order of battle.

Warfare in the 18th Century

By the middle of the 18th century the Prussian Army was generally considered to be the best in Europe. The reason for this was largely because of two men, Frederick William and Frederick II, known as Frederick the Great. These men built the Prussian

Army into the most efficient force in Europe, and then utilized it to build Prussian power. The army was key to the emergence of Prussia as a major state.

The social and economic environment throughout Europe was a paramount influence on the development of military doctrine in the 18th Century. The depredations of the 30 Years War (1618-48), in which much of central Europe was devastated by marauding armies, led to limitations on the conduct of war. The rise of absolutist monarchies gave central governments total control of state armed forces. This environment dictated the limited and formal nature of warfare in this century. Combat eschewed killing in favor of maneuver, and the laws and customs of war restricted attacks against noncombatants. The destruction wrought was generally minimal and this state of affairs was considered one of the "loftiest achievements of the eighteenth century." The consequences of this environment were telling. Military strategy and tactics became increasingly rigid.

The strategy of the day was one of maneuver, not of annihilation, and the purpose was to exhaust the enemy, not destroy him. The operational objective was to cut the enemy's lines of communications (his supply and retreat routes), thereby forcing his withdrawal and defeat with minimal casualties. The focal point of campaigns were fortresses (usually fortified cities) which served as bases of operations. Sieges became increasingly critical. Indeed, some of the greatest military leaders of the period, such as John Churchill, the Duke of Marlborough and the French Marshal Maurice de Saxe, fought only a comparatively few battles in their entire careers.

In this period, Germany was divided into numerous minor states and principalities, each with its own sovereign, economy and army. Among these, Prussia was the poorest in just about everything, from resources to climate, population, industry, and trade. During the 17th century, Prussian territories had been a battleground for other European armies. Prussia's leaders realized that only by having a militarily superior army could Prussia have any real independence. In the 18th century, it would be the Prussian Army which would guarantee national



Major Events

1688-1713: Reign of Frederick I. He started his reign as Elector of Brandenburg (The Electors were powerful nobles who elected the Holy Roman Emperor.).

1701: Frederick I proclaims himself King of Prussia.

1701-1713: Prussia allies with Britain. Prussian Army contingents participate in battles of Blenheim, Ramillies, Oudenarde and Malplaquet against the French.

1713: Treaty of Utrecht, ending the War of the Spanish Succession, recognizes Prussia's status as a kingdom.

1713-1740: Reign of Frederick William. Prussian army built up to 80,000 men with Prince Louis of Anhalt-Dessau as drillmaster.

1740-1786: Reign of Frederick II ("The Great").

1740-1748: War of the Austrian Succession. Prussia invades the Austrian province of Silesia, precipitating a wider European conflict. Prussia wins a succession of victories at Mollwitz (1741), Hohenfriedberg (1745) and Sohr (1745). Treaty of Dresden (1745) ends Prussian participation, with recognition of Prussian conquest of Silesia.

1756-1763: Seven Years' War. Austria, France, Russia, Sweden and Saxony join in coalition against growing Prussian power. Great Britain supports Prussia. Seven Years' war is fought worldwide, in Europe, North America (French and Indian War) and India. Frederick wins several major battles, including Rossbach (5 November 1757), where with 20,000 men he defeats 40,000 French and Austrians by rapidly

switching from front to flank to meet an enemy envelopment; and Leuthen (12 December 1757), where he defeats a superior Austrian army by concentrating his entire force against its left flank. Russians briefly seize Berlin, Prussia's capital, in 1760 but withdraw from the War when Czarina Elizabeth dies. The War ends in 1763 with the Treaty of Hubertusburg, restoring the status quo.

1786-1797: Reign of Frederick William II.

1792-1798: War of the First Coalition. Prussia allies with Austria and Piedmont against Revolutionary France. Allies invade France, but stopped at the battle of Valmy (20 September, 1792). Renewed Allied invasion brings France to near collapse, but French *Levee en Masse*, placing fourteen armies into the field. French victories repulse invasions in several battlefield victories, and then take the offensive into Belgium, the Netherlands, to the Rhine, and into Italy. General Bonaparte leads Republican French armies to victory in Northern Italy.

1797-1840: Reign of Frederick III.

1798-1802: War of the Second Coalition.

1805-1807: War of the Third Coalition. Britain, Russia, Austria and Sweden take the offensive. Prussia initially stays neutral. Napoleon forms the Grand Army, and defeats Coalition forces at Ulm and Austerlitz (1805). Austria capitulates, and Russian forces withdraw. In 1806, Napoleon forms the Confederation of the Rhine and dissolves the Holy Roman Empire. Prussia, alarmed at French control of central Germany, joins the Coalition. French defeat Prussians at Jena-Auerstadt (14 October 1806).

the land for the rest of the year. The Prussian government liked this system because it kept the citizenry productive in building the nation and did not require the king's money to be wasted abroad buying recruits.

But whereas Frederick William was more interested in forming an army as a show-piece to impress Europe (rather than fighting wars), Frederick the Great employed the Prussian army to enhance his country's territory, population, and prestige. By 1763, at the end of the Seven Years War (in America known as the French and Indian War), he had accomplished these objectives. The Prussian army was considered to be the best in Europe. It had taken on all comers and, despite being outnumbered, had won several stunning victories. When he died in 1786, Frederick left behind a nation which was enjoying peace and prosperity. It was not until the 1806 debacle that Prussia suffered significant loss of territory. Even at the battle of Valmy in 1792, when Prussia moved against the French Revolution, the Prussian army emerged from the battlefield largely unscathed. The Prussian commander, the Duke of Brunswick, decided as his troops were about to deploy on the plateau of Valmy that this was not the place where he wanted to fight. He therefore recalled his forces and marched back home, leaving the French in possession of the field and technically the winners, but hardly glorious victors.

Recruiting in Frederick's Army

Frederick's recruiting for his army reflected how he ruled and his concern for Prussia. He felt that every soldier taken from his own population deprived the country of a useful member of its economy. Frederick's solution to manning the Army was three-fold. First, he utilized what was called the "canton" system. When the system was used, soldiers were drawn from the various administrative districts in Prussia, called cantons. Cantonists served in time of peace for only two months on active duty. For the rest of the year they worked at home, which relieved the army of the cost of the soldier's support. Recruiting was mainly from the small artisans, servants, and mostly, the peasants and agricultural workers. The entire middle class, down to the more prosperous artisans, did not serve. They were considered to be too valuable to lose. When the system came to an end in 1806, it was calculated that 8,700,000 men had been *theoretically* liable to serve since the system

security, gain the state international respect, and expand Prussia's power throughout Europe. Thus, to the Army the Prussian government devoted its national resources. Indeed, it has been stated that Prussia literally starved itself into greatness!

When Frederick II ascended the throne in 1740, Prussia was beginning to emerge as a viable nation. Its army, built by his father, Frederick William, had the potential for being a powerful fighting force. It was characterized by close order drill and meticulous battlefield maneuvers. The officer corps came primarily from the rural nobility; the enlisted personnel were conscripted from the lower classes of society, or were foreign mercenaries. Discipline was harsh in order to weld these troops into an instrument which would obey tactical commands and execute drills under fire.

Prussian officers were imbued with a sense of duty from birth, and hence made perfect officers for Frederick's system. They could be counted upon to execute orders faithfully, despite the most trying circum-

stances. They received their training as cadets, followed by several years of active service. The middle classes were considered to be too valuable to squander as war casualties. The army, instead, recruited the most unproductive elements of society as professional soldiers. This led to brutal discipline, and training in the most mechanical fashion. Initiative and innovation had no place in the military establishment. The parade ground was the focus of tactical employment.

This narrow approach to warfare had additional implications. As noted, it was feasible for the nobility to become officers, but the nature of combat required little education in the art of warfare. The middle class, oriented on making money, paid taxes and avoided army service. The burden of service then fell on a narrow portion of society. As an example of this environment, at the beginning of the 18th century the Prussian officer nobleman could take his serfs into the army with him. This meant that he could exercise them as soldiers for a few months and then furlough them to work on

was initiated. But of this number, less than half, or just over four million, were actually enrolled to participate. This figure does not reflect, however, the number of men who actually served, which Frederick, even in war, kept as low as possible.

The second method of manning the army was to hire mercenaries. Frederick thus revised a policy established by his father, who, out of an army of 76,000, had 26,000 foreigners. In 1751, Frederick had 82,000 mercenaries out of an army of 132,000. As Frederick fought his battles he was ever mindful of the need for more manpower, but disliked disrupting his national economy. Therefore, he was not above recruiting prisoners of war into the Prussian army — which, considering the wide use of mercenary soldiers throughout Western Europe in the 18th century, cannot be too surprising.

The third method of providing manpower, and this time for the officer corps, was the aforementioned use of the nobility, particularly those from the rural areas. Frederick did not trust the middle class, whom he felt lacked honor and were seeking money instead of martial glory. Frederick, nevertheless, employed numerous “non-noble” officers when he could not find nobles to serve, but he frequently ignored their good services and dismissed them at the conclusion of his campaigns. The nobility generally served willingly. The high nobility, however, were not as a whole enthusiastic about service in the king’s forces. This provoked Frederick who developed a profound suspicion of them, much like he did for the middle class officers.

Unfortunately, Frederick’s officer corps, already subject to his prejudices, had its roots in its own. The imprint of nobility, no matter how minor, gave the officer caste certain prerogatives, one of them being that an officer did not have to know anything about the art of war. Frederick was concerned about this tendency and established military schools to overcome it. He founded the School of Nobles, for example, to train his higher grade officers. This became the *Kriegsakademie* (War Academy) and was the origin of the great Prussian military institutions. His success in educating his officers, however, was marginal at best as he was unable to overcome the nobles’ pervasive negative outlook.

Frederick the Great's Tactical System

Frederick the Great achieved the utmost possible within the limits established by the

political, technological and economic considerations of 18th century Prussia. Utilizing the linear tactics of the era, he won great battlefield victories, and exploited them for victory in war. The efficiency of Frederick’s army was based on the strictest discipline. He is reputed to have said that his soldiers had to be made to fear their officers more than death on the battlefield. This fear was engendered by brutal discipline. Frederick held that the slightest loosening of discipline would lead to “barbarization.” The goodwill of soldiers counted for nothing. Iron discipline was what kept the army together. The result of this discipline was an army with a high degree of tactical effectiveness, but indifferent morale.

Basing his army’s effectiveness on strict discipline gave Frederick some distinct advantages on the battlefield. The constant drills gave the Prussian infantry a rate of fire superior to that of any other army in Europe. What counted was the volume of fire, not its accuracy. The primary infantry weapon of the era, the smoothbore musket, had an effective range of about 75 meters, and was notable for its inaccuracy. The interior of the barrel was not rifled; in a rifled musket, the interior of the barrel is grooved, or “rifled.” This rifling imparts spin to the bullet when it is fired, which increases its accuracy and range. However, the rifling also increases reloading time. Given that the primary battlefield targets were mass formations of enemy infantry and cavalry, where any shot fired in their general direction stood a chance of hitting something, rate of fire was more important than accuracy.

Whereas most infantry had a rate of fire of two or three rounds per minute, Prussian infantry could deliver as many as five volleys in the same time. Volley fire was key, because it was difficult for a close ordered formation to recover from losses inflicted simultaneously; while individual losses inflicted by aimed fire might be replaced by closing ranks, the loss of an entire section of a line was harder to recover from. One of the primary results of massed infantry fire was the psychological shock caused by the noise and flash of the musket powder being detonated. This contributed to the demoralization of enemy soldiers. Because of his army’s discipline, Frederick’s battle lines were able to hold up under the most murderous fire.

On the field of battle, Frederick outwitted his opponents by doing the unexpected. At the battle of Leuthen he had the Prussian army conduct an oblique march across the Austrian front and then fall upon their flank,

winning a decisive victory. Frederick could perform such maneuvers because his army could respond instantly to any command. The discipline inculcated in his soldiers gave Frederick the advantage of being able to deploy automatically into the desired combat formation. At the same time it required certain things in return. He had to prepare carefully and precisely for each battle. Such preparation enabled him to apply his strategy of movement and encounter most efficiently. There was no place in Prussia or on its periphery which was out of reach of his troops.

But the stern discipline of the army also limited what could be done. First, the entire system, to be effective, depended on a strong leader. Frederick, using his own system, could get away with it. Unfortunately for Prussia, when Frederick died there was no one with the same ruthlessness to succeed him. Second, the close order drills (as well as virtually all military operations) had to be carried out under the close supervision of the officers. Otherwise, desertion rates soared. Men detailed to forage — or even sent to bathe — had to be accompanied by officers, lest they never return! Night marches were avoided lest soldiers slip away in the darkness. Needless to say, this limited the army’s mobility. Perhaps even more significant was Frederick’s inability to deliver the coup de grace after a battle. He seldom pursued defeated enemy forces for fear of his own troops deserting!

While Frederick could defeat the enemy decisively on the battlefield, casualties were inevitably high. Volleys were delivered from 30 to 50 paces distant. At the battle of Torgau in 1760, for example, Frederick lost thirty percent of his force. He did not like these losses, obviously, but as long as he could recruit mercenaries, he could rationalize the human cost. This gave Frederick a special advantage vis-a-vis his opponents. His willingness to fight battles was a major departure from the 18th Century orthodoxy of war, where, for the most part, battles were to be avoided.

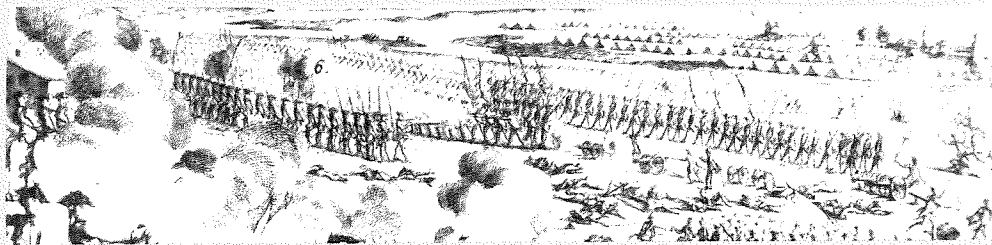
What had evolved in Prussia was a carefully balanced system which was too complicated and artificial to last for any length of time. The development of public spirit was strangled as a result of a rigid separation of the classes, each of which had its own strictly regulated and peculiar sphere and function. This situation was exacerbated by Frederick’s distrust for his subordinates. He concentrated all decisions in his own hands. When Frederick died, the structure

18th Century Linear Tactics

Armies of this 18th century consisted of a balance between infantry, cavalry and artillery. The infantry was armed with a smoothbore musket (called a *fusil*), socket bayonet and sometimes a sword (the sword was supposed to be used in melee, but was generally carried more out of a sense of soldierly honor than practical use). Given the generally slow rate of fire of the fusil, a set of battlefield procedures had been developed known as linear tactics to maximize their use. Linear tactics called for infantry to be formed up in lines, usually three or four men deep, who would continually fire their fusils in volleys. In order to concentrate firepower, and to maintain unit cohesion, the lines themselves were fairly close packed. Each man was allotted 22 inches of space, and with one to three feet between each successive rank within a line. The lines would maximize firepower because all men could bring their weapons to bear. There were several different systems for this fire, and usually it included some sort of advancing fire, where infantry lines would march forward in step, stop, fire a volley, and then continue. The idea was that by firing continuous volleys, the enemy line would be sufficiently disordered so that it could then be attacked with fixed bayonets and routed.

Since maximizing firepower was the supreme tactical objective, and since musketry in this period generated the majority of firepower, there was only one basic type of infantryman, the line infantryman (called a *fusilier* in some armies). There were some specialist types, however. *Grenadiers* were elite infantry. Originally they carried hand grenades, but the use of this weapon on the battlefield had largely died out by the mid-18th Century. Grenadiers usually consisted of the strongest, most brave men in an army, and were formed into companies assigned to line infantry regiments, or grouped into battalions. Grenadiers were given such missions as assault troops or acting as last ditch reserves. However, they were armed and trained in the same manner as line infantry. There was some experimentation with light infantry, but it would take the impact of the French Revolution and Napoleonic Wars to standardize them throughout European armies.

There were several types of cavalry — cuirassiers, dragoons, and hussars. Cuirassiers were heavy cavalry, used for shock action. They were armed with a sword, pistols, and sometimes a carbine and armored breast/backplates. Dragoons were originally mounted infantry; however,



throughout the 18th Century they continually upgraded themselves into regular cavalry, being used increasingly for shock action. Hussars, finally, were the light cavalry, used for scouting and skirmishing. Cavalry's effectiveness was on the decline in the 18th century. As infantry firepower increased it became more difficult for cavalry to charge home. Consequently, cavalry was used to deliver the final blow against troops which had already been disrupted, for attacks on flanks, and for limited pursuits.

Artillery was going through a major transition in this period. In the 17th century artillery was something of an auxiliary arm, often being manned by hired civilian contractors, and lacking any mobility on the battlefield. Throughout the 18th century, it was increasingly professionalized. Gun types were standardized. Mobility increased through the use of horse drawn limbers to move the pieces about the battlefield. Usually artillery was deployed in front of a formation, where it would conduct a preliminary bombardment. Then, during the battle itself, it would be moved about to obtain the best advantage. One factor which would see culmination in the Napoleonic Wars was that artillery was inflicting an increasing amount of casualties on the battlefield; since most artillery had several times the range of the smoothbore muskets, it could fire upon infantry and cavalry formations without fear of retaliation.

Normal battlefield deployment would have two lines of infantry in the center, cavalry on the flanks, and artillery to the front. In addition, there might be a tactical reserve, consisting of more infantry and cavalry. A typical battle plan might include first a preliminary artillery barrage. Then the opposing cavalry would charge each other to gain an advantage on the flanks. This would be followed by the infantry lines advancing to within 100 paces (or closer) of each other to deliver volleys. When one side seemed to be about to waver, the other would send in their cavalry or deliver an infantry attack home with bayonets fixed.

Much of the key to winning in this environment depended upon the ability of a commander to judge the proper psychological moment. There were two real problems in fighting: first, utilizing the proper tactics to break down enemy cohesion, and then, once that cohesion had been broken, delivering the final blow. Hence, the importance of firepower in not just causing attrition among the enemy ranks, but also disrupting and demoralizing them — a disrupted line was then a suitable target for cavalry or bayonet charge. There were other ways to disrupt an enemy, however, than direct attack. One was to outmaneuver the enemy on the battlefield. Hence the importance Frederick the Great attached to oblique maneuvers, among other things. By bringing a large body of troops onto the enemy's flank, the enemy would be forced to redeploy to meet the threat. This, in turn, would cause all but the best drilled army to fall apart due to the difficulty of re-aligning fronts under battlefield conditions. Moreover, given the relatively set-piece nature of linear tactics, an unexpected maneuver could unhinge the opposing commander's battleplan as well as his line.

Battlefield losses were moral as well as physical. Casualties averaged 20 to 40 percent for the defeated, and perhaps 10 to 20 percent for the victor. Losses from several battles could deplete both the winner as well as the loser, and, given the limited recruiting base, this could be fatal. Winning a major victory meant not only inflicting losses on the enemy's army, but also demoralizing it, thereby rendering it unfit for further combat. This is why, incidentally, in a number of battles in this period both sides could take almost equal losses in combat, yet one side emerge the winner; the loser was the one fleeing from field as a disorganized rabble, unable to reform, and without any capability to continue operations. Further, winning a battle could also mean gaining an alliance or favorable peace treaty. Hence, the importance of battle in this era, as well as the reasons for military leaders seeking combat only when it was to their own advantage.

—Joseph Miranda

was doomed to topple unless he was followed by a strong ruler. Needless to say, no such leader followed.

Von Steuben's Contribution

While the Prussians were honing the superiority of close order formation fighting on the plains of Europe from 1756 to 1763,

the British, French and American colonials were having a different experience in the North American wilderness. Here, individuality and flexibility counted more than did rigid formations. At the Battle of the Monagahela in 1755, a force of French and Indians defeated British Major General Edward Braddock's column. This led to the British experimenting with open order tac-

tics, and adding a "light" company added to each foot regiment. In the same vein, the French were influenced by their experiences fighting in North America.

The new style of warfare which was emerging was that of independent actions and open order drill. This was partially the result of the terrain in North America, where the vast forested areas made it difficult to

maneuver large bodies of troops. It was also the result of the combatants themselves. The colonials were more amenable to independent action, especially in colonial militias which were raised on the basis of service from the entire community. There was also the influence of the North American Indians who, obviously, knew nothing of close order drill but instead used hit and run tactics. It remained for a Prussian, however, to institutionalize the concept of open order drill and light infantry for the Americans, which, in turn had a decisive impact at the turn of the century in Europe.

Baron Frederick von Steuben is best known for his training the American armies in the Revolution. Less appreciated is the impact he had on tactics as they evolved from the experience of the American Revolution. Von Steuben had served as a military aide to Frederick the Great during the Seven Years War. He had a thorough understanding of Frederick's Prussian method of operations as well as the environment in which the Prussian Army conducted warfare. He also understood the influence which France -- which was considered the cultural leader of Europe -- had on Frederick. When Von Steuben came to the American colonies in 1778, he brought with him an understanding of the thoroughness of German drill and training combined with French adroitness and imagination.

Von Steuben joined an army which required the full use of his wide range of capabilities. When General George Washington took command of the American army in front of Boston in 1776, he found a force composed of excellent individual fighters, but without any training in fighting together in units. Officers, for example, were elected by their men, and were often ignorant of the basics of military science. The desire to remain popular undermined discipline. Drills were few and the men did as they pleased. The Battle of Bunker Hill had shown that American militia could stand up to British regulars, so the colonials assumed they did not have to train like the British.

At Valley Forge, where von Steuben joined Washington in 1778, he found no uniform drill, no similarity of organization, and no teamwork of any kind. He immediately began to establish training programs, disciplinary systems, cadre directives, and drill regulations. His techniques, especially for someone who had served under Frederick's command, were unique. He established a corps of instructors by organizing colonial officers at Valley Forge into

Infantry Regimental Organization

Organization	Total Strength	Subordinate Units	Companies per Batt.	Artillery Battery
Prussian				
<i>Seven Years War (1756-1763)</i>				
Infantry Regiment	1704	2 Infantry battalions	5 Musketeer 1 Grenadier	
<i>Jena Campaign (1806)</i>				
Infantry Regiment	1150	3 Infantry battalions 2 Grenadier companies 1 Depot company	5 Musketeer	
<i>Reform (1807-1815)</i>				
Infantry Regiment	2490	2 Line infantry battalions 1 Fusilier battalion 2 Grenadier companies	4 Infantry 4 Fusilier	
French				
<i>Seven Years War (1756-1763)</i>				
Infantry Regiment	1428- 4284	2-6 Infantry battalions	16 Fusilier 1 Grenadier	
<i>1789-1805</i>				
Infantry Regiment	2500	3 Infantry battalions	8 Fusilier 1 Grenadier	
<i>1805-1815</i>				
Infantry Regiment	3900	2-4 Infantry battalions 1 Depot battalion	4 Fusilier 1 Voltiguer 1 Grenadier 4 Depot	(1809-1812)
British				
<i>Seven Years War (1756-1763)</i>				
Infantry Regiment	1000	1 Infantry battalion	8 Musketeer 1 Grenadier	
<i>American Revolution & Napoleonic</i>				
Infantry Regiment	800	1 Infantry battalion	8 Musketeer 1 Grenadier 1 Light	(1789-1800)
Austrian				
<i>Seven Years War (1756-1763)</i>				
German Infantry	2280	2 Fusilier battalions 1 Garrison battalion 2 Grenadier Companies	6 Fusilier 4 Garrison	
Hungarian Infantry	1800	2 Fusilier battalions 1 Garrison battalion 2 Grenadier Companies	4 Fusilier 4 Depot	
American				
<i>American Revolution</i>				
Line Infantry Regiment	728	1 Infantry battalion	8-10 Infantry	

Notes: In the Prussian army, Fusiliers were light infantry, in the French army, line troops. Grenadiers were elite infantry. Grenadier companies were frequently detached from their regiments to form ad hoc battalions. Depot battalions/companies were responsible for training new recruits and garrison duties. Note that in the Prussian and Austrian armies, the infantry regiments had grenadier companies assigned directly to the regimental headquarters and not to the individual battalions. Number in parenthesis under "Artillery Battery" is the years in which these regiments had an artillery battery attached to them. These are official strengths; in the field, units would be often considerably understrength due to casualties, desertion, sickness, etc.

squads, sections, and companies for drill under his personal direction. These instructors were then used as cadre to instruct the rest of the Army.

Von Steuben's approach to training was entirely different from Frederick's system. He quickly came to realize that the American soldier, unlike his European counterpart, had to be told why he should do things before he would do them; but once properly motivated, would perform superior to rigidly disciplined troops. Realizing that an effective army could only be built by capitalizing upon the innate qualities of the soldiers, he re-ordered traditional training methods to account for the greater individuality of the American soldier. He, therefore, based his training on the principle that officers must respect their men. This was quite to the contrary of Frederick's approach. Von Steuben published a set of drill regulations so that there would be uniformity within the American Army. He also formed a guard for the Commander-in-Chief which was a model drill team for introducing the execution of his maneuvers. As a point of departure, he recognized that the American Army's organization resembled that of the British with the notable exception that the Colonialists had adopted the concept of, and were employing, "light infantry."

Light infantry really meant the use of skirmishers who advanced ahead of the main body and sought to destroy enemy unit cohesion before they reached the main line of resistance. Instead of operating in a solid line or column, they would advance in small groups, taking advantage of terrain for cover, and firing independently. The Americans adapted these tactics partially as a result of their experience in fighting Indians, but also because it suited their more independent-minded soldiers. Von Steuben, in his drill regulations, sought to capture the essence of this flexibility. He formed the basic infantry company into two ranks as opposed to the continental European practise of three. To simplify the soldiers' deployment, he made march movements uniform and drills sensible. In loading the musket, for example, he reduced the number of movements required from twenty-two to fifteen.

The outcome of von Steuben's efforts was a mixture of open and close order drill which could be adapted to the particular situation by troops who were disciplined but not cowed by their officers. For the battle line, Americans used the British method, but for accurate firing and skirmishing, the

independence and individuality of the American soldier were utilized. And, as the American Revolution progressed, the British also began to adopt a more open order of battle. American loyalists among the colonial population fought for Great Britain using light infantry methods. Eventually, entire light infantry regiments would be organized, and the British would organize "rifle" units, with each soldier armed with a rifled musket.

The French had also capitalized on the light infantry concept. Even before the French and Indian War, the Marshall de Saxe considered it feasible to have one tenth of a standard infantry battalion fighting as skirmishers. But it would take the experiences of the French and Indian War and the



War of American Independence to gain acceptance for light infantry in the French Army. Open order fighting and the use of cover were no longer frowned upon. Even though the French Revolution resulted in the army being manned from a different demographic basis than that of the monarchy, the lessons were retained. The concept of skirmishers (i.e., infantry fighting independently in open order rather than in massed columns or lines) had gained such a hold in the French revolutionary army that by 1793 all infantry battalions were capable of acting as light infantry. Both Napoleon and the British saw the advantages of the American open order battle drill, and both used the methods as appropriate in their campaigning.

Light Infantry and the Prussians

The Prussians had three major problems adopting the new open order battle drill. First, after 1786, when Frederick the Great died, they lacked strong leadership. Second, the arrogance in the officer corps caused any innovations to be subjected to scorn. Third,

there was the reliance on harsh discipline, which made it impossible to introduce the flexibility the light infantry tactics demanded.

Actually, there had been some attempts to introduce light infantry into European armies during the mid-18th Century. During the War of the Austrian Succession (1740-48), the Austrians raised a number of light infantry and cavalry units, the Croats and Pandours from the Balkans who had years of experience in border skirmishes, fighting the Turks. This led to other European powers doing the same on a small scale. Frederick the Great had a small number of light infantry troops designed for use in patrols and ambushes. These were provided by certain units hired just for a particular campaign, or were recruited from the *Jaegers*. The *Jaegers* were huntsmen and foresters formed into a special regiment. This unit, in any case, never had more than 2,000 men and so was really inconsequential. Also raised were several "free battalions," which were, for the most part, ill-disciplined and tended towards pillaging the countryside, leading to their own internment by the Prussian army! In 1787 the Prussians decided that each company would have ten sharpshooters, or about 40 in a battalion of 700 men. But these were still not enough to make a real difference. Again, in 1787 the Prussians organized 20 fusilier battalions which were to fight in two ranks instead of three. This made it easier to deploy troops into extended order for skirmishing. But this was but a half-hearted measure. Ordinary Prussian infantry were still not trained as skirmishers.

There were exceptions to this rigidity. Among the officers who advocated more use of light infantry were Carl von Clausewitz and his mentor and teacher, Gerhard von Scharnhorst. In 1802, Scharnhorst founded the Military Society, with a membership of nine. By 1805 there were 188 members, and discussions were held in which officers of all ranks, two Royal princes, and influential civilians like Baron Stein participated. While in existence, the club was the meeting place for the most active minds in Berlin concerning military matters. The members debated a wide range of subjects, not the least being the whole structure of Prussian tactics. This included moving away from the rigid lines of attack used by Frederick and the stress on massive volleys. The recent French victories against the armies of the Coalition were not lost on these thinkers.

Light Infantry: The French Experience

Light infantry had been on the ascendency in the French Army throughout the latter part of the 18th Century. However, it would take the Revolution to bring light infantry to its highpoint. The idea was that detachments of troops fighting on their own initiative would be able to inflict continual losses upon the enemy; meanwhile, they would use their superior mobility and ability to exploit cover to avoid heavy losses. In 1788 there were twelve battalions of *chasseurs à pied* (light infantry), in 1793, twenty-five, and by 1794, fifty. With the Revolution, the French made extensive use of line infantry (as opposed to specialist light infantry units) as skirmishers. A directive in 1793 ordered that sixty-four men from each battalion be trained as *tirailleurs* (light infantry). These were to be drawn from the fusilier (line) infantry companies of each battalion. Generally, the *tirailleurs* were to be the most valorous men, who could act independently. The idea was that since the Republican soldiers were more highly motivated (by patriotism and revolutionary ardor) they could then take the initiative necessary to fight on their own. And, supposedly, the patriotism would prevent them from deserting if let loose to fight on their own!

Light infantry tactics were divided into two general categories: *petite guerre*, and *tirailleurs en grandes bandes*. *Petite guerre* was the use of light infantry for outposts, raids, and advance or flank guards. In these roles, light infantry was distinctly subordinate to line infantry. They served mainly to provide security so that the line troops could deploy and fight with a minimum of interference. In *tirailleurs en grandes bandes*, the light infantry would make the primary effort. Here, masses of skirmishers would engage the enemy, attempting to cause sufficient disruption through attrition and demoralization so that line infantry and cavalry could finish him off with a mass attack. There are also recorded several instances where light infantry completed the action, making the final attack with the bayonet. Light infantry tactics were also useful in broken terrain or house to house fighting where, obviously, the more rigid lines and columns could not operate freely.

One of the advantages of light infantry was that, in their open order, they did not present the enemy with a mass target. This, combined with their use of terrain for cover, reduced losses due to enemy fire. Of course, this also proved to be a vulnerability, because they could not stand up to enemy shock attacks, especially from cavalry. Consequently, light troops had to be backed up by troops in line or column. Therefore, combined arms tactics became increasingly important on the battlefield. One of the key factors of tactics in this period was the importance of leadership, as lower level commanders deployed their troops in different combinations of formations in order to gain the best advantage.

French light infantry tactics were developed

to act in union with heavier line infantry. There were several standard formations for line infantry in late 18th/early 19th Century armies: line, column, and square. Each bears some commentary here. A line was just that, a line of soldiers standing shoulder to shoulder facing the enemy, usually two or three men deep. Its main advantage was that it could maximize firepower to the front. There were several different types of musketry, which can be grouped into two sorts: commanded, and *feux de deux rangs* (or fire at will). Commanded volleys could be of several types: in one type, fire would be by ranks, wherein the first and second ranks would fire alternatively, for example, with the third rank waiting in reserve. An alternative type of volley fire was fire by platoons, where the firing line would be divided into a number of sections, and each section would fire at once. In *feux de deux rangs*, only the first volley was commanded; after that, each man reloaded and fired independently. The problem with the line was that it took a high degree of training for it to function in the attack, since simply keeping the men aligned was extremely difficult as they moved forward. This was especially true when moving through broken terrain, where different parts of the line would be moving at different rates. The Prussians (and other professional armies) could pull this off due to their constant training and rigid discipline, but in the French Revolutionary armies, composed of a cadre of veterans and a mass of raw recruits, it was a different matter.

Another formation used in this period was the column. Columns were deeper than the line, and were generally intended as assault formations. There were several types of columns. The column of companies at full distance was a marching formation, used for moving large bodies of men in a non-tactical situation, such as a road march. Then there was the closed column by divisions, intended for battlefield maneuver. The "division" was a unit of two combined companies of each battalion. The formation was actually a series of company lines, one behind the other (and, in fact, had a greater front than depth). Then there was the attack column, which was similar to the closed column, but had more space between the company lines. The main advantage to the column was that it was easier to control, and the effect of mass was better on morale for troops with less training. But the columns also made great targets, and it was difficult for them to bring all their firepower to bear, since only the lead companies could effectively fire. French commanders became increasingly enamored of the column; prior to the Revolution, the superior *elan* of the French soldier was supposed to carry through with the bayonet in attack. Later, the Revolutionary ardor of the troops would make up for lack of training by fanaticism in the attack.

Ordre mixte (mixed order) was a combination of line and column — there would be one battalion in line, with two more in columns, one on each flank. The battalion in line would provide the firepower, and the ones in column would

provide the shock capability.

Finally, there was the square (or "box") formation, which was used for defense against cavalry. In a square, infantry would form in a hollow formation, facing to four sides.

There is still considerable debate as to how precisely the armies of the French Republic and early Empire fought. Some authorities believe that skirmish tactics represented a revolutionary new means of fighting; others, that skirmish tactics were resorted to simply because the French lacked the training to perform the evolutions necessary for linear and column formations. Some consider that columns were the primary tactical instrument, as they allowed Republican commanders to employ masses of troops with the bayonet for the attack. Given the wide range of leadership and training in this period, it is safe to say that different commanders on different battlefields used different tactics, and, indeed, contemporary accounts indicate that a wide variety of tactics were used in practise. The key to battlefield victory was the proper use of these tactics at the appropriate moment. For example, a commander might deploy his troops into column to get them into position, with a screen of skirmishers to the front. The skirmishers would provide security for the advance, and, along with long range artillery fire, disorder the enemy. As the skirmishers took losses, the columns would continually replenish them. Lines would be used when firepower or defense was necessary. When the enemy was sufficiently disordered, columns would then be sent forward to the attack.

French light infantry were armed the same as line troops, with the standard model 1777 smooth-bore fusil. There was some experimentation with carbines and rifled muskets, but these never were widely adopted. One of the reasons for the weapons standardization was that this allowed all French soldiers to become light infantry, not just a few specialized formations. One final note regarding training: interestingly enough, French light infantry training was fairly flexible. There was little attempt to standardize skirmish tactics on the (not unreasonable) grounds that since such tactics required flexibility, they simply could not be codified into a system of rules! The light infantryman was expected to use his own initiative to win.

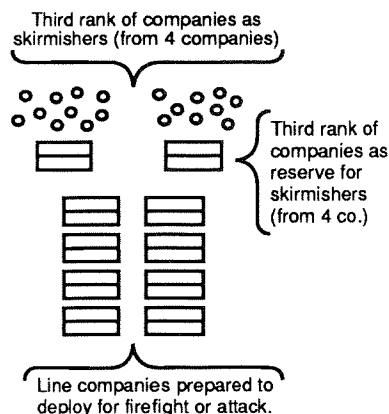
—Joseph Miranda



Prussian Concept of Light Infantry Deployment

Column of Attack

This formation would have the line companies drawn up one behind the other, each company two ranks deep. The platoons of the third rank would be kept as a reserve.



Firefight

In a firefight, the third rank of the companies would be deployed ahead of the formation as skirmishers. Additional companies would be formed up behind them in line as a reserve for the skirmishers, with the remaining line companies formed in column, prepared to deploy to join the firefight or to launch an attack.

But generally, the Prussian military hierarchy stayed away from the main shift in military tactics during the revolutionary period. Specifically, they ignored: 1) The merging of light infantry with line regiments. 2) The increasing use of open order and aimed fire instead of firing unaimed volleys. 3) Applying light infantry tactics to the battle.

Part of the problem was the disdain the Prussians had for the French. For example, in the last decade before the French Revolution (1779 to 1789), the French had organized 12 battalions of *chasseurs a pied* (light infantry soldiers). The Prussians, however, pointedly ignored this. They were still completely mired in Frederician tactics. Their approach march to the battlefield, for example, required very careful planning — as careful as the battle itself — because the army had to arrive in the form required to do battle. Once set into motion, the intricate maneuver machinery could not change gear without the risk of disastrous confusion. Discipline was still harsh because drill had to be perfect. Prussian officers could handle the relatively stereotyped orders because of the close relation battles had to parade ground drill. The problem was that the unexpected might throw the linear formations into a rabble of panicked soldiers. Maneuver was always tightly controlled from the top. Initiative on the part of junior officers and enlisted personnel simply did not fit the system. Pursuit was, as previously noted,

not possible, because of inflexibility as well as the fear of desertion. Frederick the Great was the only person who could make the system work properly, and he was not around after 1786. The result would be not only tactical debacle but strategic disaster, since tactics were driving strategy.

But the principal problem was that for the Prussians to change would have meant a revolution itself. The freedom of action required by the light infantry meant a negative impact on discipline. Mercenaries would be unreliable because there would be more opportunity to desert. This, in turn, required more nationals to be enlisted. This was dangerous because the peasants, who enjoyed little liberty at home, would gain wider freedom in the army, as well as learning the profession of arms. Once discharged, they would then want more freedom as civilians and thus pose a threat to the established social order — a revolution in the making. A change from linear to open order battle tactics meant nothing less than a modification of the whole Prussian social system with the distinct possibility of total collapse. The occasion for this was soon to come.

The Prussian Army in 1806

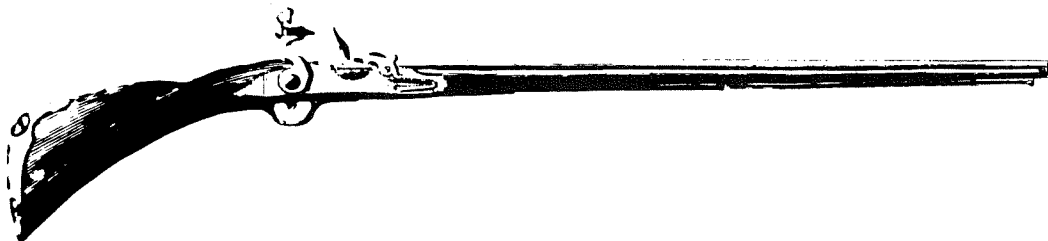
Frederick's successor was Frederick William III, who became king in 1797. He was basically a good-natured but mild man. He lacked imagination and was totally unsuited to rule in the crisis which soon overtook his kingdom. A pessimist, he was

Prussian Light Infantry Weapons

Weapon

Length (Weapon) Length (Barrel) Caliber Notes

Fusilier Musket, pattern 1787	134 cm	95 cm	18 mm	
Modification 1796	145 cm	104 cm	18 mm	
Sharpshooter Rifle, model 1787	124 cm	?	18.5 mm	Used by Schuetzen sections of the line and light batts.
Anspach-Bayreuth hunting rifle	110 cm	72 cm	15 mm	Used by Foot Jaegers.
New Corps hunting rifle, model 1810	111.9 cm	73 cm	14.65 mm	



Notes: "Length" is the length of the entire weapon; "barrel" is the length of the barrel; "caliber" is the width of the bore. Muskets are smoothbore weapons. Rifles are muskets with grooves along the inside of the barrel which increase accuracy and range. The problem with rifled muskets in the Napoleonic period was that they took considerably longer than smoothbores to fire; hence, most troops were armed with smoothbore muskets as volume of fire was preferred to accuracy. Light infantry of certain nations (notably the British) were armed with rifles. Effective range of most smoothbores was 75 meters, maximum range, 150; for rifles, effective range was generally 150 meters, and maximum, 300. Rate of fire depended upon the training of the individual, although most trained soldiers could fire two to four smoothbore rounds per minute, while riflemen could manage perhaps one a minute.

reluctant to attempt important military innovations. He refused to alter Prussian tactics and strategy. Instead, he continued to stress close-order drill and precision. Soldiers continued to be trained to advance in stiff straight lines, elbow to elbow, as if on parade.

The officer corps contained many members who should have been long since retired. These were officers who had been lieutenants under Frederick the Great. They were now senior officers. They were in a social class of their own and had little connection with the population they served. To this must be added the psyche of the officer corps. Arrogance was a defining characteristic. Ironically, discipline among the officer corps itself was lax. Dueling, though prohibited, was common. To be sure, because of the rigid close order drill, not much was really required of the Prussian Officer. Except for administering punishments to subordinates there was not much room for imagination. Attempts were made to improve the quality of education, but inertia stunted reform.

If the state of the officer corps in 1806 was deplorable, so was Prussia's ability to mobilize. There was no concept of a nation in arms. Frederick's policy of ignoring the canton system most of the time prevailed. The entire population of certain districts, such as Breslau in Silesia, was exempted from conscription. Those who were called to the colors were furloughed for the greater part of the year. Again, this was for budgetary reasons, to reduce the amount of moneys which had to be paid out as wages to soldiers. At the same time, the Army administration reflected the inflexible state of affairs. There were no fewer than five virtually equal and autonomous agencies within the Army which were constantly confronting each other. These were the Inspector-Generals; the Military Department of the General Directory; the group of royal adjutants; the governors of the garrisons; and a committee consisting of the various heads responsible for supply, personnel, mobilization, and day-to-day administration known as the *Oberkriegskollegium*.

Yet there were men in the Prussian Army who supported reform and were not afraid to look to the French. Scharnhorst, as noted, was among the foremost of these. In comparing the French light infantryman to the German soldier he identified the crux of the matter. He saw the French soldier as possessing the physical agility and intelligence which enabled him to take advantage of terrain and overall situation. On the other

Evolution of the Prussian Light Infantry Corps: 1757-1815

By the end of the Seven Years War Frederick the Great had forged the Prussian Army into one of the most feared instruments of war ever seen in Europe. But in many of his battles against the Austrian Empire, Frederick saw his plans foiled by the presence of Austrian light infantry: the famed red cloaked Border and Grenzer troops. In response, Frederick formed a new *freikorps* of three light infantry regiments in 1780 to help augment the small (six company) but elite Foot Jaeger Corps (actually, a regimental-sized unit).

By 1787 the entire Prussian light infantry had undergone a major overhaul. The three *Freikorps*, five grenadier battalions, the 3rd/3rd Liepziger Regiment, and some companies of the Garrison Regiment were formed into the "Corps of Fusiliers," a body which would remain in existence right through to the end of the Napoleonic Wars. The "Fusiliers" were initially twenty battalions strong, organized into six field brigades. By 1806 the Corps had increased to 24 battalions (three more had been projected), organized into eight field brigades. Concurrent with the formation of the Fusilier battalions, each line infantry company was allotted ten rifle-armed "schutzen" (later increased to twenty). Pre-1809 battle deployment would have these men detached under a "schutzen sergeant" to act as skirmishers. Finally, the Foot Jaeger Regiment was increased to ten companies.

By 1806, the fusiliers were well rehearsed in light infantry tactics, but they did not live up to their fierce reputation. The problem wasn't that their tactics were outdated, but rather it was that they were untested. Their last engagement in

major combat was some thirteen years earlier. Another factor, also revolving around lack of battlefield experience, was that by the early 1800's marksmanship had become such a point of pride within the Corps that the battalions preferred to fight as formed units, firing in lines of two ranks, instead of skirmishing. Their firepower at Jena-Auerstadt was tremendous; but the fusilier brigades had not been concentrated within the field armies and against superior French tactics the fusiliers were soon neutralized.

With the Prussian reforms of 1808-10, the Fusilier battalions were distributed throughout the army as the new "third" battalions of standing infantry regiments. Under the tutelage of General Yorck von Wartenburg, Prussian light infantry continued to work on marksmanship, but skirmishing was once again stressed. During the same reform period, the "third rankers" of every line, grenadier and fusilier battalion, rifle armed or not, were trained to form a company of four platoons under the command of a captain, and to act as skirmishers. Despite major growing pains, the Prussian light infantry regained much of its reputation during the wars of liberation (1813-14) and were soon equal to the vaunted French *voltigeurs* and *tirailleurs*. During the Waterloo campaign, line infantry regiments continued with their third (fusilier) battalion. At the same time, every battalion in a given brigade detached skirmishers from the third rank in order to provide themselves with an ad hoc, semi-permanent, jaeger company. Prussian light infantry performance at the battle of Ligny (1815, Waterloo campaign) was rather uninspired, but during June 17 and 18, the Prussian light infantry, considerably aided by Prussian light cavalry, was responsible for keeping Napoleon in the dark regarding Prussian movement and intentions, right up until the battle of Waterloo itself.

— Andrew Preziosi

hand, the Germans deployed on open ground and did nothing other than that which their officers directed. Heinrich von Bulow wrote a series of books which castigated all aspects of the Army. Writing from 1799 to 1806, he was vehement in his attacks on Prussian tactics and went so far as to write that skirmishing meant the restoration of a man's human dignity.

More temperate were the activities of the Military Society which increasingly discussed the employment of light troops and the integration of open and close order drill. Herman von Boyen, the future war minister, won a writing competition organized by the club in 1804, the subject of which was whether or not the line infantryman should fight as skirmishers as well as in close ranks. Boyen suggested that the third rank of the line battalion be trained to fight as light infantrymen. His concept, as it turn out, was

not new. It had been suggested to the King in 1800 and a few units had experimented with the system, but nothing ever came of it

The Impact of the French Revolution

While the Prussians stagnated, their principal antagonist had adopted the lessons that the American colonists had to teach. With the coming of the French Revolution, the character of war was fundamentally altered. The new revolutionary forces did not consist of rigidly drilled soldiers, motivated by fear of punishment. The French officer corps was not dominated by ill-educated nobles as was the Prussian. The French recruited from all classes of society. There was no class strata to be reckoned with. The French Army was composed of volunteers and conscripts who spent little time on the parade ground. Training was often in the field, and veterans

Typical Prussian Fusilier Battalion, 1806

Authorized Strength: 688

Average 1806 Field Strength: 600

A fusilier battalion was organized into four companies and commanded by a major. While the battalions were numbered in all field orders, a battalion was known by the last name of its commanding officer (i.e., Oswald Fusilier Battalion #4).

Officers: 19 (16 Company, 3 Staff)

Sergeants: 48 (4 staff, 11 per company)

Drum and Bugle Corps: 13

(Three to every company, one battalion bugler)

Corporals: 80 (20 per company)

Privates: 440 (110 per company)

Schutzen: 40 (10 per company)

Reserve: (Same)

Sappers: 8 (two per company)

Battalion Headquarters:

Major

Adjutant (Captain/1st Lieutenant)

Quartermaster/Auditor (Lieutenant)

Battalion Sergeant Major

Staff Sergeants

Battalion Surgeon

Assistant Surgeons: 3

Armourer

Civilian Staff

(Drivers, Technicians, etc.): 56

—Andrew Preziosi



more difficulty with the Prussians than the Austrians and that they would have to "move heaven and earth" to defeat them. Perhaps more important was Napoleon's comment about Frederick the Great; he said that like Frederick one should always be the first to attack. He felt it a great mistake to allow oneself to be caught on the defensive.

It is not the intent here to examine the conduct of the battle that took place at Jena-Auerstadt. Suffice it to say that Napoleon succeeded in separating the Prussian Army into two parts on the battlefield and defeated each in detail. Napoleon won against one Prussia force at Jena, while his Marshal Davout defeated the rest at Auerstadt. As a preliminary to the battles, Napoleon advanced his army on a 38 mile front and at a depth of two days march. This made it possible for him to concentrate at any point within 48 hours. He had 160,000 men in a gigantic square, able to deploy to either flank, each division ready to support the others. Napoleon quickly marched several columns to insert his units into position between the dispersed Prussian forces. He then swiftly concentrated his force to defeat the separated enemy units. On the tactical level, he employed swarms of light infantry ahead of hard-hitting line battalions to effect a breach in the Prussian dispositions. Once the Prussians were on the run, he pursued vigorously to complete the victory. The Prussians had expected to forestall Napoleon by moving rapidly and defeating the French piecemeal. But instead of concentrating their forces, they tried to cover every exposed point, which their limited manpower made impossible—they had about 120,000 available personnel. In comparing dispositions, the Prussians were spread in disjointed for-

mations over a wide front while the French were concentrated in a small area.

Napoleon exercised unity of command, which he considered to be the "first necessity of war." The Prussians, on the other hand, were continually holding councils of war and deciding nothing. The lack of strong leadership, in fact, was apparent everywhere. Without the personal drive of a Frederick the Great, the absence of lower level initiative resulted in indecisive action. Commanders and staff officers wasted their time attending to trifles. In the meanwhile, needless marches and counter-marches exhausted the men. The action in front of Vierzeheiligen, a small hamlet near Jena, puts into focus the essence of the Prussian defeat. Through the early hours of 14 October, the Prussian grenadiers stood bravely against the murderous fire of the French light infantry (the tirailleurs). About ten o'clock, the Prussians, under the Prince of Hohenlohe, moved forward to attack the French V Corps under General Lannes. Although the French light infantry inflicted horrendous casualties, the Prussian advance did not slow, and the French themselves began to waver. But instead of charging the French positions, the Prussians halted on open ground to dress their ranks! For the next two hours they fired continuous volleys against the French who, taking advantage of the terrain, were able to avoid any serious losses. Napoleon, in the meantime, subjected the Prussians to massed artillery fire. This altered the balance of combat strength on the field as the French continually reinforced their position while the Prussians were losing men and morale. Shortly after twelve, the French had a superiority of over two to one against the Prussians in men.

passed on tactical lessons to recruits. Men were fighting for their own country, so mercenaries were not employed. Discipline was not overly harsh. A Prussian officer neatly summarized the fundamental difference between the Prussian and French conduct in battle, "In the woods, when [the French] soldiers break rank and...fire [from] under cover of the trees, they are not only equal but superior to us. Our men, accustomed to fighting shoulder to shoulder in the open field, found it more difficult to adapt that seeming disorder which was yet necessary if they were not to be targets for the enemy."

Regrettably, only the younger and less influential military intellectuals among the Prussian officers were struck by the superiority of the French Revolutionary armies.

The Defeat at Jena and Auerstadt

If the Prussians were unable to understand tactical developments before the battle at Jena, they still enjoyed a reputation for what they had done in the past. Napoleon had a high opinion of the Prussian Army. Prior to the battle he spoke well of its reputation. He felt that the French would have

Under this terrible pressure, the Prussians began to retreat. The French continued to press the Prussians, turning the retreat into a rout. The inability to be flexible at critical moments made it impossible to recover from reversals.

This was the pattern over most of the battlefield. The individual Prussian soldier demonstrated his discipline by taking a murderous punishment from French fire. But their officers were helpless to take any action outside of their limited tactics. The set-piece battle that Frederician tactics demanded was a thing of the past. The light infantry mentality of the French was just too much for an army which had spent its time preparing to fight the "last war."

Implications

Quite fortunately for Prussia, it had leaders who were able to understand the causes of its defeat and take the steps necessary to revamp the military establishment. This was accomplished in the next six years by officers like Carl von Clausewitz, August von Gneisenau, Leopold von Boyen, and Gerhard von Scharnhorst. In a perverse way, the Prussians were lucky for the defeat at Jena, because this forced them to start again from the beginning. Their leaders were able not only to revitalize the Army, but also to knock down long held shibboleths. General Ludwig von Yorck was appointed Inspector-General of the light infantry brigades in 1810. His training methods emphasized individual actions and self-discipline. The recovery bore fruit at the victories of Leipzig in 1813, and Waterloo in 1815.

[In a future issue of S&T, we will continue to march with the Prussian Army in BG Bell's follow-up article on the Prussian military reform movement. Ed.] ■

Outgoing Mail, con't.

Work in progress continued from pg 2

On To Moscow: The Great Northern War. We decided to redesign this one radically. The problem was that the game system was obsolete, being based on some mid-1970's concepts which were adequate at the time but hadn't really evolved. **On To Moscow** will simulate the way of warfare in the early 18th century, the clash between the better disciplined and organized Swedes and the emerging Russian super-state. The Swedes marched to the gates of Moscow before being stopped in the epic battle of Poltava. The idea is to recreate the underlying motivations of both Charles XII of Sweden and Peter the Great, to get players to view warfare from their perspectives, and not looking back from the 20th century. Even though the Swedes were totally defeated in the end, they left a legend which is remembered today in Scandinavia and Russia.

Cannae/Zama. This will cover the two major battles of the Second Punic War, Hannibal's greatest victory and his final defeat. The game system is a unique approach to ancient warfare, and will stress the importance of unit cohesion. Both games will be included in the same issue, with around 100 counters each, and each battle taking up one half a standard sized map. The game system's designer has an interesting approach to ancient warfare and game design, and this is an opportunity to get his ideas out before the public. Designer, Shaun Howarth.

Obscure Wars. We haven't started work on this, but will most likely do the Austro-Prussian War of 1866, and the 1877-78 Russo-Turkish War. The basic game system will be the same as **On To Moscow**, but the special rules will deal with the specific conditions of 19th century warfare, such as differences in weapons and tactics, as well as the beginnings of the general staff system.

Articles

Soviet Operational Art, 1918-1945. While the German military system receives much attention, the Soviets have been largely ignored; yet there are many lessons to be learned from them

(after all, they did win World War II). The Soviets developed extensive doctrine for deep operations prior to World War II (some of it based on study of the American Civil War!). While they were caught flatfooted by Operation Barbarossa, by the end of the war they were pretty adept at mobile operations. By James J. Schneider of the US Army Command and General Staff College.

The Macedonian Art of War in the Successor Era. This is

an excellent analysis of the nature of tactical level warfare in the era following Alexander the Great. The article has some interesting insights into the effects of cohesion on battle. Plus lots of information on the armies themselves. By Shaun Howarth.

War in the Persian Gulf. This is an analysis of the recently concluded war against Iraq. It provides an incisive analysis as to why the Allies were able to attain their stunning victory. Plus lots of hard data. By James Werbaneth (with John Burt and others providing modules).

The British in India, 1760-1810. A look at an obscure but critical period, the British conquest of the Indian subcontinent. This was really the beginning of modern colonialism, and there is lots to be learned about Western versus non-Western armies. By Andrew Preziosi.

Waterloo Revisited. This is a new analysis of French and British tactics in the Napoleonic era. I'm compiling some interesting information, especially from contemporary accounts of participants in the battle. The article promises to come up with some new conclusions about how armies fought in this era. By Joseph Miranda.

Berserk Elephants

Response to S&T #141's game, **Hannibal**, was favorable. People found the system playable and there were some good historical lessons tucked away. The one question everyone raised was, "What do Berserk elephants do?!" So here's the official answer.

Elephant units which take a hit in combat go Berserk. A Berserk Elephant unit is affected as follows:

1. It immediately attacks the nearest friendly unit in the Center zone of its tactical display; if there is no other unit in the Center zone, then it attacks the nearest unit in its friendly Reserve zone (use a die roll to resolve discrepancies). Note that this attack will take place in the middle of the enemy's Combat segment.

2. The attack is resolved as normal combat, except that the elephant unit is eliminated at the end of the combat, and the defending unit may not make any sort of defensive attack. There is no flanking advantage for Berserk elephants.

3. Elephants in an army which flees are automatically eliminated.

(Players who want the full **Hannibal** errata should send a SASE to **Hannibal Errata**, c/o Decision Games, PO Box 4049, Lancaster CA, 93539-4049.)

Speaking of elephants — **Hannibal**'s favorite weapon system — astute readers might have noted that in issue #141's table of contents we had elephants in two places: in the reproduction of the counter mix, and in the picture right above it: the photograph of the Panzerjäger Tiger (P), otherwise known as the "Elephant." ■

landships a tactical game covering the early use of tanks 1916-18.

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I give it an "A" (Afghanistan)

Mr. T. Rupert, Cleveland, Ohio



For Your Information

DID YOU KNOW . . . ?

- A U.S. armored division consumes about 600,000 gallons of fuel a day.
- During ten campaigns in the course of the War of the Spanish Succession (1700-1714) John Churchill, the Duke of Marlborough, one of the finest British soldiers in history, fought only four battles, but conducted some 30 sieges.
- It requires 180 air-to-air missile to arm a squadron of F-15 fighters.
- During the first 27 months of World War I (August 1914-December 1916), about two-thirds of all artillery shells, and one-third of all rifle and machine gun ammunition fired by Russian troops were of foreign manufacture.
- Between 2 August 1990, the date of the Iraqi invasion of Kuwait, and 28 February 1991, the date of the Allied ground offensive to liberate Kuwait, U.S. aircraft flew 14,800 air transport missions, carrying a total of 481,000 passengers and 513,000 tons of cargo, for a total lift of 3.72 billion ton-miles.
- Impressed by the lightness of aluminum, French Emperor Napoleon III proposed that regimental eagles should be made from the novel metal, rather than the much heavier bronze, only to change his mind when informed of the cost of such a measure, since aluminum at the time was more precious than gold.
- Excluding "hostile action," nearly 7000 Soviet active duty military personnel die each year, 1.5 per 1000 men and women on active service; comparable figures for the U.S. armed forces are about 2150 deaths, or 1.0 per 1000.
- The people who campaigned

for the 1989 referendum on the abolition of the Swiss armed forces took 18 months to gather the 111,000 signatures required by law, in contrast to those who worked for a 1972 referendum to require the retention of horses on active duty needed only six months to gather 430,000 signatures: both referenda failed.

- The cost and complexity of new fortifications which were commenced in 1554 were so great that the Italian city-state of Siena found, upon the outbreak of war in the following year, that not only were they incomplete but there were no funds left over to hire troops and seamen sufficient to defend the state, which shortly afterwards was annexed to Florence.

- Although about 90% of the ship's company were Britons of various stripes, at the Battle of Trafalgar (21 October 1805), the crew of *HMS Victory* included men from 17 other countries, including Russians, Africans, Americans, West Indians, and East Indians.

- At the start of the 1973 Arab-Israeli ["Yom Kippur"] War, the defending Israelis had fewer troops deployed on the Golan Heights than Syria had 122mm guns targeted against them.

- In early 1990 Capt. Anthony Crawford and Lance Corporal Keith Porter, of the Royal Engineers, were awarded the Queen's Gallantry Medal after working in a collapsed London sewer for 32 hours to disarm a 500-pound German bomb left over from Hitler's blitz. This followed by only a few months the award of the same medal to Cpt. Christopher Goddard and Cpl. Gary Fisher, also of the Royal Engineers, who spent 31 hours defusing a one-ton bomb near Tower Bridge.

"With a little help from our friends..." This issue, thanks are in order to John Haan and Stephen G. Stone, for their contributions to "Did You Know...?"

DO YOU KNOW . . . ?

What items of military equipment in use during World War II bore the model designation "P-38?"

Please submit your answers to:

FYI
c/o A.A. Nofi
732 Westminster Rd
Brooklyn, N.Y., 11230
U.S.A.

Answers must be printed or typed clearly on a postcard: submissions in any other format will no longer be considered. Be sure to include your name and return address!

Although we are still having a problem with a time lag for responses from Europe and other overseas places, for the present we will continue to announce the winner three issues hence, in *S&T* 146. The winner will receive a \$50.00 gift certificate from *Decision Games*. Ties will be resolved by lot. □

We Have A Winner!

Only a handful of readers responded to the question which appeared in *S&T* 140, "At what unusual institution did former U.S. Attorney General Nicholas Katzenbach study law?" Moreover, most of the replies were wrong. In addition to studying law at such ordinary places as Princeton and Yale, Katzenbach, received credit for courses which he attended whilst a POW in Stalag Luft III, where he was in residence after his B-25 was shot down over the Mediterranean in 1943. As of the time we went to press, five readers submitted the correct answer. As determined by lot, Doug Dery, of Franklin, Massachusetts, is declared the winner. The runners-up are: David C. Johnson, Holloman AFB, NM, Cathleen Niday,

Moorpark, CA, Joe Osentoski, Marysville, MI, and Francis L. White, Chicago.

FOOTNOTES

Changes in the Cost of Procurement Projects

This table (page 58) looks at the overall change in the dollar cost of all defense procurement projects, on a year-to-year basis from 1978 through 1983. *Net Increase* refers to the dollar increase over the previous years' estimate, with no adjustment for inflation. *Adjusted Increase* refers to the increase when inflation is taken into account, in effect, an indication of the change on a "constant dollar" basis.

Note that the increases for 1978-1980 appear extraordinarily large, precisely because those years were periods of considerable inflation. A 1980 dollar had the purchasing power of only \$0.79 in money of 1978. As a result, the *Net Increase* figures are consistently more intimidating than the *Adjusted Increase* ones. Yet in several years the overall constant dollar cost of procurement actually declined. This suggests that much of the apparent "overrun" in the cost of defense projects is attributable to a failure to look at the dollar in terms of its constant value.

An additional, and generally overlooked aspect of the question of cost overruns, is that the Department of Defense annually issues some 1.5 million procurement contracts, for everything from aircraft carriers to tooth picks. Most of these, some 99%, are fulfilled on schedule, within specifications, and at, or even below, original cost estimates. The 1% which do not—about 15,000 contracts a year—account for the irregularities which feed the

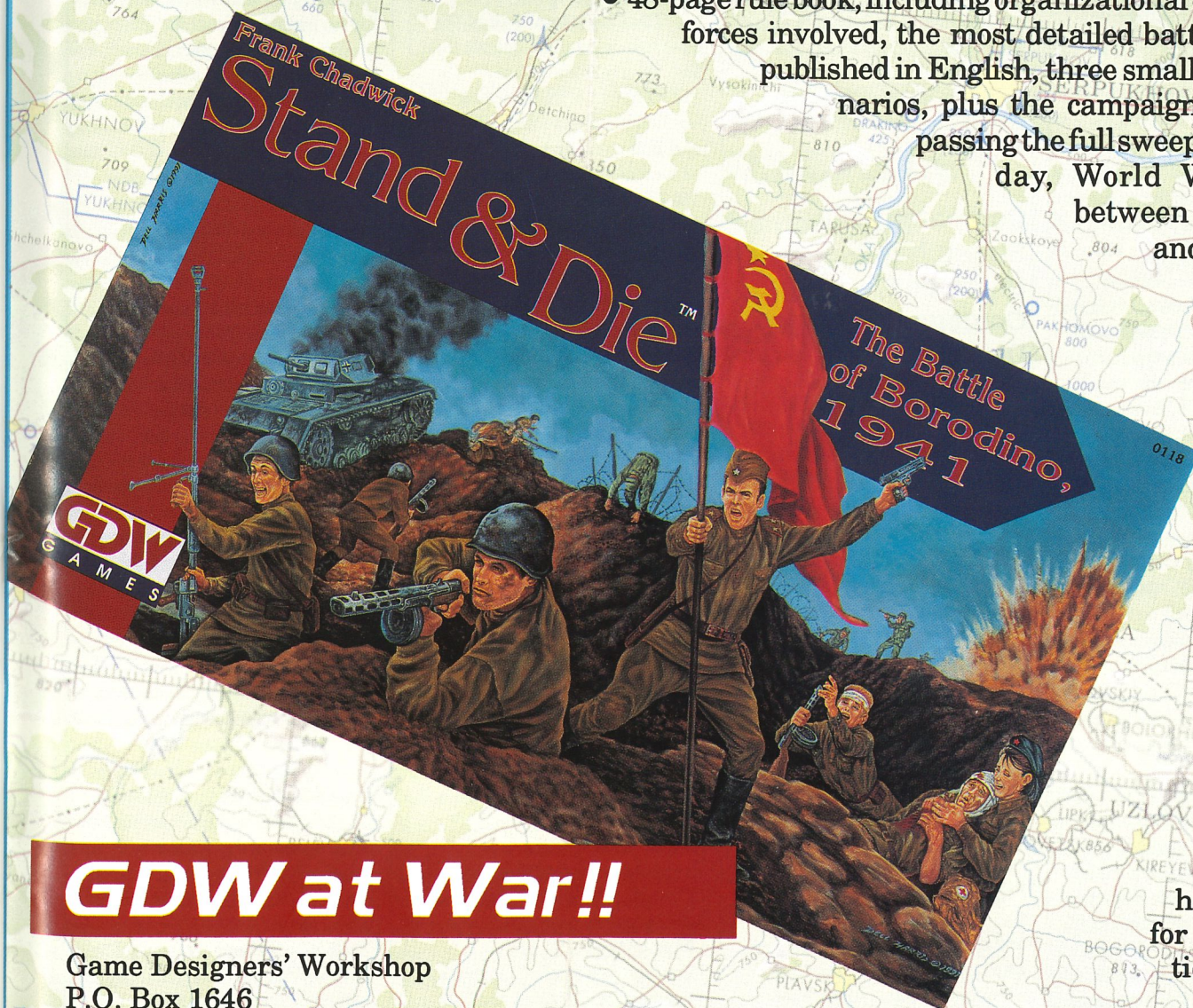
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Changes in the Cost of Procurement Projects

Year	1978	1979	1980	1981	1982	1983
Net Increase	4.2%	4.1%	10.1%	2.1%	1.8%	4.1%
Adjusted Increase	-3.1%	-10.9%	1.8%	-7.5%	-4.1%	.1%

perception of scandal which hangs over military procurement. Upon investigation, however, relatively few of these are actually found to be the result of outright fraud and corruption. Most of the problems arise as a result of ponderous contractual obligations, unrealistic technical expectations, and the desire to add this or that doo-dad to make the item even "more" effective. Of course, some instances of fraud are uncovered, and the DoD has achieved some success in prosecuting the malefactors, recovering about \$7 billion a year.

Source: Selected Acquisition Reports, 1978-1983.

"Gawd, Birdie!"

Field Marshal Lord Birdwood had a distinguished career in the British Army, culminating in high command during World War I. But his long and varied services in uniform perhaps did not fully prepare him for command of the informal, rough, and ready men of the ANZAC—Australian-New Zealand Army Corps—during the Gallipoli Campaign in 1915.

On his very first day ashore, an Australian private approached him.

"Are you Birdie?" he asked, without so much as a hint of formality.

Somewhat taken aback, Birdwood replied, "I am."

"Good," responded the Aussie. Then, saying "I want to complain about inferior bloody material," the man held up a grenade, yanked out the pin, and threw it on the ground near the general. The resulting explosion sent pieces of metal and stone

whizzing past Birdwood's ears and tearing through his leggings. Although fortunately unharmed, the general was stunned by the outrage, and uncertain as to what to do about it.

As for the Aussie, he just pushed his hat back on his head, put his hands on his hips, and said, "Gawd, Birdie, that's the first bastard that has gone off this month!"

It was at that moment, Birdwood later remarked, that he first realized how much Australian and New Zealand troops differed from British soldiers.

—Peter Black

Comparative Strength of the Union and Confederate Armies During the Civil War

Attempting to compare the strengths of the armies at various periods during the Civil War is rather difficult. While the total number of men enrolled at any given time is relatively easy to ascertain, the number available for operations is much less so. Both armies suffered a great deal from desertion. By some estimates 300,000 Yanks and 200,000 Rebs went over the hill during the war, and possibly far more: in the Confederate Army it was not unheard of for troops to desert during the winter and return to duty with the coming of spring. In addition, in both armies many men were often on detached duty.

The rolls of both armies—and notably the Union Army—also counted great numbers of non-combatants. There were, in fact, several different ways

which the troops could be counted. The Union Army used three categories:

"Present," including all personnel for whom rations had to be issued;

"Present for Duty," excluding personnel on sick call or under arrest, but including musicians, and teamsters, hospital personnel, and other non-combatants;

"Present for Duty Equipped," including only combat-ready enlisted men and their officers: the number of men armed and ready to fight, but excluding field musicians.

The Confederates used the first two categories, but not this last, referring instead to "Effectives," a figure which applied to enlisted men only, and thus excluded officers and as well as field musicians, about 7% of the total enrolled, as well as troops on temporary duty elsewhere.

As a result, the number of men present for duty was always less than the number enrolled. For example, on 1 May 1865, at the very end of the war, when Union Army manpower was officially 1,000,516, fully 202,709 men—20.2%!—were listed as "absent," whether as deserters, in hospital, on leave, or on detached duty.

Further complicating any attempt to assess the effective strengths of the two armies is the fact that forces on garrison and occupation duty might be relatively far from where the serious fighting was going on, but would nevertheless have been included in the figures of those present for duty. For example, in January of 1863 about 190,000 Union troops were committed to holding Washington and securing lines of communication in Maryland, West Virginia, Virginia, Kentucky, Western Tennessee, Northern Mississippi, and Missouri, so that over 25% of

the Union troops available for service were rendered non-effective by perhaps 25,000 Confederate guerrillas and partisans. This was one reason why the Confederacy was able to muster 75%-80% of Union strength in most battles, despite the considerably greater overall Union manpower superiority.

The differing bases of calculating the strength of the armies are the principal reason for disputes over the numbers which each side had in a battle. In the Civil War, as in most wars, accounts of battles rarely agree as to the strengths of the opposing forces. Of course, it is by no means unusual for the participants to exaggerate the strength of their foes, since in this way the victor can show how great were the odds which he overcame, while the vanquished can argue that the odds against him were overwhelming. However, surprisingly, outright falsification of numbers is less common than might be expected, given the often wide divergence which can be found in many accounts of various battles and campaigns. Mostly, the differences are the result of comparing numbers which are not actually comparable, such as the inadvertent using the total of men "Present" for one side, and the total of those "Present for Duty" for the other. A good case in point is question of the number of men at the Battle of Gettysburg.

Estimates for the strength of the two armies at Gettysburg vary widely. Figures for the *Army of Northern Virginia* range from a low of about 65,000 men of all arms to a high of about 75,000, while those for the *Army of the Potomac* vary between 80,000 and 95,000. On paper the total strength of the both armies was enormous: The *Army of Northern Virginia* officially numbered over 100,000 men, the *Army of the*

Potomac around 150,000. However, omitting men who were absent without leave, prisoners, performing details away from the army, on leave, under arrest, or in hospital, the numbers are much less. When all of these people are accounted for, it seems that at the beginning of June of 1863, the *Army of Northern Virginia* numbered about 77,000 men, while the Army of the Potomac had about 115,000, live bodies all, equipped and ready to march. These are the strengths with which the armies went north into Pennsylvania. But while en route, both armies, but especially the Army of the Potomac, lost men to straggling, so that actually present on the field at Gettysburg there were probably about 70,000 Rebels and 85,000 Yankees.

It is easy to make use of the wrong set of figures when discussing combat strength during the Civil War. Even when using the Union "Present for Duty Equipped" figures and the Confederate "Effectives" there are difficulties. The morning reports of individual units contain the most accurate figures which can be secured. But even a perusal of these can only give an general notion of the number of men who actually enter combat, as men might straggle, be told off for special duty, or desert right up to the moment of contact with the enemy, while in both armies there were often present "unofficial" combatants, such as black servants, who on occasion pitched in to lend a hand, informal civilian volunteers with a hankering to get in a shot or two against the foe, such as old John Burns at Gettysburg, and so forth. Although hardly likely to amount to enormous numbers, the existence of such people does complicate calculations of strength.

As a result, it is at best only possible to get an approximation

Date	Union Armies			Confederate Armies			CS:US Ratio	
	Enrolled	Present	Pres %	Enrolled	Present	Pres %	Enrolled	Present
1 Jan '61	16,367	14,663	89.6%	7,000	7,000	100.0%	42.8%	47.7%
1 Apr	16,028	14,324	89.4%	45,000	45,000	100.0%	280.8%	314.2%
1 Jul	186,751	183,588	98.3%	116,000	112,040	96.6%	62.1%	61.0%
1 Jan '62	575,917	527,204	91.5%	326,768	235,273	72.0%	56.7%	44.6%
1 Apr	637,126	533,984	83.8%	401,395	301,046	75.0%	63.0%	56.4%
1 Jan '63	918,191	698,802	76.1%	449,439	305,619	68.0%	48.9%	43.7%
1 Jan '64	860,737	611,250	71.0%	464,646	278,788	60.0%	54.0%	45.6%
1 Jan '65	959,460	620,924	64.7%	445,203	218,149	49.0%	46.4%	35.1%
1 Apr	980,086	657,747	67.1%	358,692	160,198	44.7%	36.6%	24.4%

Key: *Enrolled* includes everyone who was carried on the rolls of the armies on the indicated date, adjusting for the difference between Union and Confederate modes of calculation. *Present* excludes deserters and men in hospitals. *Pres %* shows forces under *Present* as a percentage of those *Enrolled*. *CS:US Ratio* gives Confederate forces as a percentage of Union forces, in each category. Rounded figures are estimates based on incomplete data.

of the number of men available at the time an army went into action.

The Confederate strength figure for 1 January 1861 is for the South Carolina militia and volunteers; that for the following 1 April is for troops already mustered into Confederate Service, including some 5,000 at Charleston and about 2,000 at Pensacola, but omits some troops still under state jurisdiction: perhaps another 5,000 in South Carolina alone. Union figures for these two dates are for the Regular Army only, the call for volunteers not being made until 15 April.

Memo: The Sea Services

Compared to the numbers of men in the armies, the manpower of the sea services — navy, marines, revenue service — was relatively insignificant. Officially there were 132,544 enlistments in Union forces afloat. The United States Navy peaked at some 50,100 men at the end of the war, including about 3,500 Marines. Total enlistments in the Confederate sea services were probably between 12,000 and 15,000 men, although the peak strength of the Confederate Navy appears to have been about

5,000, plus about 1,000 Marines, figures attained in early 1864. ■

DATAFILE

Montecuccoli: Forgotten Military Genius

Count Raimondo Montecuccoli is relatively unknown as a military leader and philosopher. Yet, he was one of the greatest captains of his day and he was perhaps the greatest administrator and military writer of his century. In such high esteem was he held, that by the end of his life he had accumulated such honors was to rank second only to the Hapsburg Emperor himself: his records bears the inscription, "Raimondo, Prince Montecuccoli, Lieutenant-General of the Hapsburg Empire, Field Marshal, Commander-in-Chief, President of the Supreme War Council, Secret Counselor to the Emperor, High Master of Artillery, Ordnance, and Fortifications, Governor of the Hungarian Borderlands, Chamberlain and Knight of the Order of the Golden Fleece, Special Imperial Ambassador and Envoy to Queen Christina of Sweden, to Sir Oliver Cromwell, Lord Protector of England, to the United Provinces, the Pope, the King of France." As

one admirer put it, Montecuccoli was the Empire.

Although this judgment is somewhat of an exaggeration, he is certainly a commander who deserves more serious consideration than has generally been the case.

Count Raimondo Montecuccoli was born on 21 February 1609, in Modena, Italy. In 1627, at the age of 16 he began serving as a private soldier in a cavalry regiment which belonged to his uncle, Count Ernesto Montecuccoli, a general in the service of the Austrian Hapsburgs. Young Montecuccoli was soon involved in some of the most important operations of the brutal and protracted Thirty Years War (1618-1648). By the time he was 20, he had seen four years of active service in Germany and the Low Countries. Then, at the Battle of Breitenfeld (17 September 1631), at which Gustavus Adolphus of Sweden resoundingly defeated Imperial forces, he was taken prisoner. Ransomed by his own efforts, he returned to the Emperor's service in time to be wounded at Lutzen (16 November 1632), at which Gustavus once again trounced the Imperials, though at the cost of his own life. Upon his recovery, Montecuccoli, barely 25, was made a lieutenant-colonel of cavalry.

Then, in June of 1634,

"We're going to go around, over, through, on top, underneath, and any other way it takes to beat them."

— H. Norman Schwartzkopf

Montecuccoli's cousin Ernesto died. He raced to Vienna in order to secure command of Ernesto's regiment. Although the military authorities promised that he would get the command, by the time he returned to the regiment he found it split in two. Half of the regiment was given to a fellow Italian, Ottavio Piccolomini, yet another scion of an ancient military family, while command of the other half was to be rewarded to one of several officers on a competitive basis.

Montecuccoli was with the rump of his old regiment at the battle of Nordlingen (6 September 1634), when Spanish and Imperial forces smashed a Swedish and German army. As Colonel Pietro Aldrobrandini, who commanded a cavalry regiment, had been killed in the battle, Montecuccoli immediately headed for Vienna in the hopes of being given command. Once again, the military authorities promised him the regiment. And once again, he found the promise was broken. Unfortunately, in order to press his claim on Aldrobrandini's regiment, Montecuccoli had resigned from his cousin's sold outfit. So he now no longer had a command, and had to seek a position where he could find it. This time he had given up his old position and now found himself unemployed. By good luck, he was finally given the rank of lieutenant-colonel in Don Annibale Gonzaga's cavalry regiment. The dash Montecuccoli exhibited from this point onward was certainly linked to his desire to show that he was worthy of independent command. There followed a series of hard campaigns, during which Montecuccoli repeatedly distinguished himself. Among notable feats of arms, he led a cavalry charge across a negotiable breach at the storming of Kaiserslautern, for which he was awarded a colonelcy, and he covered the Imperial retreat after the battle of Melnik, during which he was again wounded.

Montecuccoli was soon afterwards captured once more by the Swedes, and spent the next

three years as a prisoner of war at Stettin. It was during this period that Montecuccoli, already a seasoned campaigner, developed a broader understanding of the art of war. He read widely in history, including the classics, such as Tacitus, and also in the arts and sciences, reading Euclid on geometry and Vitruvius on architecture. So intense was his devotion to the academic side of his profession, that he produced two books, *Sulle Battaglie* [On Battle] and *Trattato della guerra* [Treatise on War]. Subsequently released during the latter years of the Thirty Years War, he further distinguished himself as a cavalry commander and won himself the rank of *General der kavalierie* [lieutenant general].

Montecuccoli's style of leadership changed after the Thirty Years War. During the war he was a brave, dashing cavalry commander, a follower of the examples set by the distinguished Swedish troopers Johan Baner and Lennart Torstensson. After all, an ambitious young Italian had to work hard to get an independent command in the Hapsburg Empire. However, as he grew older and more powerful, and, presumably, wiser and less in need of drawing attention to himself, he became more careful. This caution has led to much criticism of his methods, but it should be remembered that the general had far different concerns than the colonel. There were several factors which seriously restricted military operations in the period, including severe personnel and logistical problems. Manpower required increasingly greater training, which was expensive. And the horrors of the Thirty Years War had imposed significant political restraints on the discredited practice of living off the land. So generals had to be wary of risking their precious manpower unnecessarily, and their lengthy supply columns under any circumstances.

After the Peace of Westphalia (1648), Montecuccoli served as envoy to Sweden and representative

of the Emperor to Flanders and England. He then participated in the Nordic War (1656-1658) as a corps commander whose job it was to help the Poles against the Swedes. During this period, Montecuccoli wrote *Del' art militare* [On the Art of War] and revised *Sulle Battaglie*. Montecuccoli soon became a Field Marshal of the imperial army and in 1660, defeated George Rakoczy, the Prince of Transylvania.

Then in 1663 Montecuccoli took command of a combined Imperial and French army for a campaign against the Ottoman Turks. The Turks were driving through Hungary, wreaking havoc as they went. Montecuccoli decided that the Turkish invasion of Hungary should be stopped at the strategically important Raab River. On 1 August, 1664, Montecuccoli, with about 25,000 men — less than half the allied force — won a stunning victory over some 100,000 Turks, a success so complete that within ten days the Turks concluded a 20 years' truce with the Empire. The Hapsburgs gained little territory by this treaty, but did not press the Turks. The Emperor Leopold I felt that peace with the Turks was desperately needed due to events on the Rhine, where French King Louis XIV had enormous ambitions. The war with France was long in coming. Meanwhile, there was much to do to prepare for it. Montecuccoli played an important role in reorganizing the Imperial armies, so much so that in 1668 he was made Lieutenant-General of the Realm and President of the Council of War. As a military reformer, Montecuccoli made important changes in the Hapsburg armies. His greatest accomplishment was the creation of an Austrian standing army. Montecuccoli changed the organization and equipment of army, created the battalion and reduced the size of the infantry regiment. He lowered the proportion of pikemen — still needed to repel cavalry — to musketeers — whose lack of a bayonet made them vulnerable to cavalry. He also

introduced an experimental musket, half matchlock, half flintlock. The true flintlock did not begin to be regularly manufactured until 1686. Montecuccoli also defined the cavalry squadrons so that it comprised two companies; a five squadron regiment consisted of 800-1000 riders. This allowed for greater mobility. These reforms were no mean feat considering the state of the Austrian bureaucracy. As Montecuccoli himself once said "It took these men a year for what should and could have been done in one hour."

During this period, Montecuccoli also found time to write his most famous work, *Della guerra col Turco in Ungheria* [On War against the Turks in Hungary], also known as *Aforismi dell' arte bellica* [Aphorisms on the art of war].

War with France came in 1672, when Louis XIV invaded the Spanish Netherlands and the Dutch Republic with the intention of annexing them. Montecuccoli took the field twice, in 1673 and 1675, both times against Henri de Turenne, the *Marechal-General* of France, the finest commander Louis XIV had. These two experts of maneuver warfare combined to create what Clausewitz called among the "the most brilliant examples of this form."

Montecuccoli's method of maneuver was born of necessity. He understood the logistical difficulties of creating and maintaining an army in the seventeenth century. He was therefore a careful planner, who tried to fully stock his magazines before a campaign. His campaigns were marked by an economy of force. He used fortifications and natural obstacles not as static barriers but as "pivots of movement." Montecuccoli stressed flexibility: there was a time to strike, and a time to wait and let an enemy wear himself down. His experience in political affairs helped provide him with an opportunity to understand the other factors that affect war. He understood the tactical relationship between battle and attrition: "One

ought to study the [Roman] dictator Fabius to learn that after a series of defeats it is necessary to change one's fighting methods and meanwhile to adopt a strategy of attrition." He further understood, that there was a time for battle. "There are those who deceive themselves that war can be waged without battle. But conquests and decisions can only be achieved by combat and battle and to believe otherwise is a delusion."

Despite these views, Montecuccoli generally been pegged as a proponent of a strategy of attrition, especially by those with an axe to grind. The Hungarians, in particular, were angry with him for not bringing the Turks to battle earlier, and for suppressing their national aspirations. Since it was their land being plundered, some anger is understandable. Yet Montecuccoli's successes in securing Hapsburg objectives, and his writings, should be evidence enough to historical understanding. Nonetheless, many historians, not just Hungarian ones, have cited the alleged comments of Zrinyi Miklos, a very successful Hungarian military leader and theoretician of the period, to raise cast aspersions on Montecuccoli and his ideas. Yet the record does not bear this out. Indeed, Zrinyi appears to have agreed with Montecuccoli on most issues. He, too, recognized the severe limitations of century warfare in the period, and even advocated a strategy similar to that adopted by Montecuccoli. In addition, both men believed that a well trained army of about 50,000 men, with an infantry to cavalry ratio of 2-to-1, was the most practical model for general operations. Most importantly, both advocated a decisive battle, if necessary, but preferred to defeat the enemy by starvation. Their differences were political. One was a loyal servant of the Empire who preferred the imperial system of recruitment. The other was a Hungarian patriot who was in support of a more national army.

In the 1673 campaign along

the Rhine, Montecuccoli got the better of the brilliant Turenne. Montecuccoli had two possible objectives. He could go south and invade Alsace, or go north and join his Dutch allies. He chose to do the latter, while attempting to make Turenne think that he would invade Alsace. Montecuccoli marched west from Nuremberg, forcing Turenne to cross the Mainz so in order to occupy a defensive line along the Tauber river, so as to prevent Montecuccoli from crossing the Rhine. In consequence, Turenne was campaigning in a foreign country, namely Germany. As a result, he had certain disadvantages. He had to negotiate to use the one bridge over the Mainz that was available to him, at Ascaffenburg. In addition, the hostility of the local population compounded his supply difficulties. Turenne was therefore anxious for a battle. When he saw Montecuccoli deploying his army for battle at Windsheim, he quickly began to get ready to meet him. However, Montecuccoli cleverly slipped away with his army and raced northwards towards the Mainz crossing at Marktbreit. Turenne pursued, and managed to reach Marktbreit first. There he waited for Montecuccoli to split his forces in order to cross the Mainz. However, Montecuccoli did not attempt to force the crossing in the presence of the enemy. The standoff at Marktbreit lasted a week. Then Montecuccoli now took advantage of the fact that he controlled all but one of the bridges over the Mainz. He could now threaten to do one of two things:

- 1) He could march directly on the lone French bridge, forcing Turenne to move south, and isolating him south of the Mainz; or,

- 2) He could attempt to cross to the north side of the Mainz and continue on his way to Bonn and his Dutch allies.

Montecuccoli chose the second option, daring Turenne to stop him while he was still in a position to exercise the first. Turenne, uncertain as to Montecuccoli's true objective, and burdened with supply

difficulties, withdrew to the Tauber. In the end, Montecuccoli marched on Bonn, where he joined with his allies. The campaigning year ended before Turenne's army could again take an active part in operations.

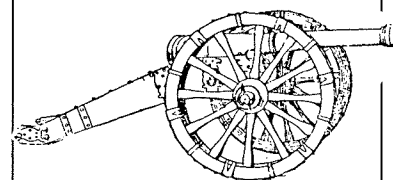
In the campaign of 1675, it was Turenne who managed to hold the upper hand. Despite several weeks of complex maneuvers in Alsace, Turenne kept the advantage and Strassburg. On the 27 July, he deployed his army for battle near Salzbach. On observing his own dispositions, Turenne said "Good enough; it seems to me that this isn't all bad, and I think Montecuccoli would approve of what we have done." However, Turenne was shot before the battle began. As a result, Montecuccoli was able to win the day with some ease, and drove the French back. After this campaign, Montecuccoli spent the rest of his life doing military administration, literary, and scientific work in Vienna. He died in Linz on 16 October 1680, the result of an accident.

Despite his distinguished accomplishments as a commander and administrator, it was as a military intellectual that Montecuccoli is most remembered. He used the experience he gained in campaigning against the Swedes, French, and Turks to speak to the phenomenon of war in all its tactical, strategic, administrative, political, and social aspects. Montecuccoli, like Machiavelli, saw the world realistically. He saw war as part of the human condition. He differentiated between the various types of war, including foreign, civil, aggressive, and defensive. He defined war as "the use of force or arms against a foreign prince or people." He urged states that engage in war to "give their commanders the necessary latitude to act rapidly and to exploit opportunities," a comment which reveals to us some of the exasperation Montecuccoli must have felt with bungling imperial bureaucrats. Although he was a humanist seeking to find the scientific basis of war, Montecuccoli

believed it was impossible to consider everything and something "should be left to chance," since "he who worries about everything achieves nothing; he who worries about too little deceives himself."

Montecuccoli's study of the basic factors of war—preparations, planning, operations—made a deep impression on those who followed him. One distinguished eighteenth century military theoretician included him in a list of five authors whose books he suggested be studied by a young noble interested in a military career. This advice seems to have been taken to heart, as a Montecuccoli is mentioned in the writings of many notable generals of the period: there was even a copy of his memoirs in George Washington's library. In short, Montecuccoli's works were one of the principal means by which the military experience of the Dutch, Swedish, Italian and Austrian wars were transmitted to Eugene, Marlborough, Frederick the Great [who said that a general should have Montecuccoli's foresight], and even Napoleon, who was an admirer of Turenne. As such, Raimondo Montecuccoli deserves the honor of being called the greatest strategic thinker between Machiavelli and Clausewitz.

—Dani Shanske



Incoming Mail

Gaming

Dear Mr. Miranda:

Please don't make *S&T* an "over-stuffed chair, library styled journal." The hobby will always be just a small, sophisticated group of good friends, who drive their wives crazy on Saturday afternoons. So let's see more professionalism with the games and fun in the magazine.

Stephen Clark
Whitehall, Ohio

Dear Mr Miranda,

RE: "Ideal Game Characteristics." There has been much discussion about what the game industry should be doing to revitalize the hobby, and bring back the excitement of old. Perhaps what is needed is not games on old subjects, or new games on untouched subjects, but a new concept in the game itself. It is vital to have a series of games on one subject, (say WW2, Korea, or Vietnam etc.) with the same rules! Therefore, my first suggestion is that magazines publish more on-going series of games, so that reading new rules doesn't become a form of aversion therapy. We should be able to receive a new game and start playing immediately while the enthusiasm level is high.

There is another problem, however. Some of us simply have biases for or against certain scales. I generally much prefer company/battalion level play, because each unit has more of a unique "personality" and function. (I know that others prefer strategic/operational.) How about making a series of games which are acceptable to everyone? So, here's my second suggestion... A series of games on a single subject, but using different scales. All of the games could, purely on an optional basis, be linked together.

One could start to play a Strategic/Operational game... If a situation became sufficiently interesting or critical, you could, if both players desired, switch to a Tactical scale map and play the situation out possibly with lower level units, but with basically the same rules. The second advantage would be that if you wanted to play a short, simple game you could do that by choosing the appropriate scenario and/or scale. If you had time for a campaign, you could increase the complexity to your own desired level by playing situations out on a more complex Tactical Level map. In this way you create a versatile game system which conforms to the players' needs.

Tony Zalewski
West Hollywood, California

Dear Sir,

You will never get a policy of innovation to work unless you can break out of the chains of the feedback system which will always tend to work against the unfamiliar. No real alternatives in subject, scale or systems will be possible if you feel yourself bound in every issue by the cards, and you will certainly never be able to push the appeal of the magazine on to a possible new generation of gamers whom you might have to start by selling the magazine as an impulse purchase in stores. The feedback by its nature will always tend to produce a clone like result in subject treatment. Similarly, you will have more problems scrapping a dull tedious "simulation" at an early stage because it got a percentage point or two more than the others in the responses. For these reasons I hope you will ignore the feedback for at least certain issues and do some radical and lively things.

S. Robertson
Cleveland, United Kingdom

Dear Sirs:

When playing a game, I stress playability over realism, but my preferences go beyond that age-old dilemma. I am quite willing to play a moderately-complex game if I get a feeling of historical accomplishment. In other words, I will be far more willing to go through 20 pages of rules in a game that simulates Napoleon's invasion of Russia than read 10 pages of rules to a game that re-creates the Battle of Wagram. I feel this sense of historical satisfaction is missing from too many wargames today. What made some of the so-called "classics" popular was not only their playability, but also the fact that they dealt with subjects prospective players were at least somewhat familiar with. Far more people know (and care) who won World War II than who won the Battle of Monte Casino. I design wargames as a hobby. The simulations I write are those I want to play, and all reach a definite "historical" conclusion. I feel the lack of such clean, clear endings is one thing discouraging prospective new gamers from investigating our fascinating hobby.

Thomas P. Honsa

Looks Could Kill

Dear Mr. Miranda,

Having spent some debating time on the same subject [of *S&T* #141 *If Looks Could Kill, Revolution in the Gulf*] during my rapidly closing matriculation at the Naval War College, I would offer some counter-arguments. I feel that your proposition that all wars are revolutions both oversimplifies the issue and fails to take the long view of history. Examining the Twen-

tieth Century, U.S. foreign policy can be illustrated as a series of cycles between interventionist and isolationist activities. The wars that you list represent high politico-military interventionist periods which were separated by isolationist ones. Before World Wars I and II, our foreign involvement reached a low ebb on almost all counts. After World War II, demobilization and reliance on A-bombs resulted in at least a militarily inactive period until Korea demonstrated the wide range of conflict that exists between peace and nuclear war. The post Vietnam era resulted in an American withdrawal, in a military sense, from the foreign scene. All the post war periods of this century saw massive military demobilizations. The Gulf War promises the same. The real change here stems from the end of the Cold War. Saddam Hussein's biggest miscalculation was his expectation that the Soviets would block American moves in the UN Security Council. That probably would not have stopped the U.S. from becoming involved but it could possibly have scaled down the effort.

Since comparisons with Vietnam seem unavoidable, consider this. American policy makers and military men have discovered the meaning of Clausewitz's view of limited war. While we tried to fight a limited war in Vietnam, the North Vietnamese fought a total war. We failed to define real, achievable goals and fought with limited commitment. The North Vietnamese never lost sight of their ultimate goal and survived numerous battlefield losses while emerging triumphant. Desert Storm showed how limited wars should be fought. Clean-cut, limited objectives were chosen early and adhered to, as evidenced by the fact that French troops were not sitting in Baghdad on day three. Commitment to achieving these goals, however, was not limited. Should the goals have changed, the forces and command structure were flexible enough to handle it. This brings me to another point from Clausewitz. The civilian control of the operation worked smoothly but there was no micro-management from the White House. The civilian-military interface happened at the cabinet level, where Clausewitz said it should, but the on-scene commander remained free to prosecute the war within guidelines rather than, as the Navy would put it, with "rudder orders from the beach."

On the overall goals of Desert Storm, I disagree the United States was merely making a world power grab. The bipolar world of the post World War II era is gone. The real issue in Desert Storm was not our supremacy but the threat to the geo-economic balance in the world. Saddam Hussein could conceivably have controlled a large enough percentage of the world's oil reserve to threaten the economic structure of international commerce. While I agree that the price at the pumps had little to do with fighting

the war, oil played a very significant part in the coalition's commitment (though some coalition partners were obviously pursuing their own agenda, i.e., Syria). Any stage [of a possible further Iraqi offensive into the Gulf states] after the one we became involved in would have resulted in a lot more blood and treasure lost. Good thing we were awake this time.

Mark Perry
Middletown, Rhode Island

Dear Joseph,

That was a thought-provoking editorial on the political role of the war in *If Looks Could Kill* [S&T #141]. You want to hear another difference between the 1990s and the 1960s? During the Vietnam War, somebody who wrote that the United States was fighting an overseas war to rid itself of defeatism and dissent at home would have sounded like a far-left and anti-establishment agitator. Today, it's the conservatives who say it with pride.

Thomas Kane
Farmington, Maine

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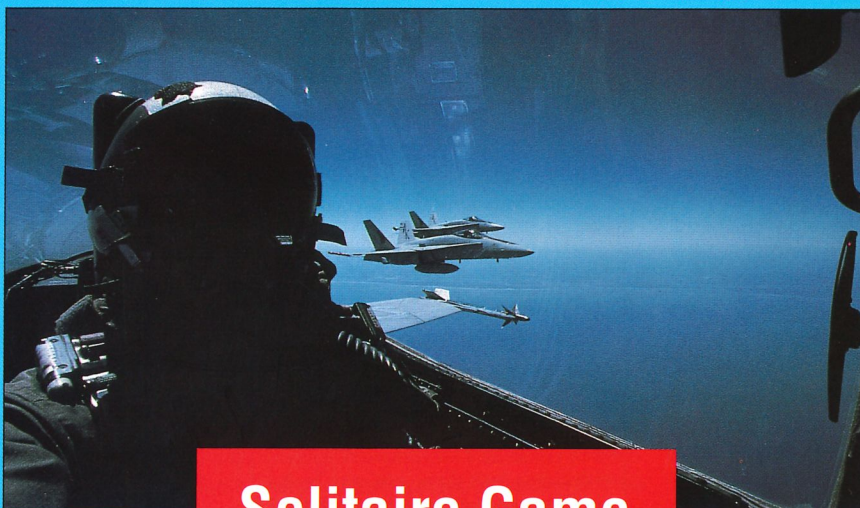
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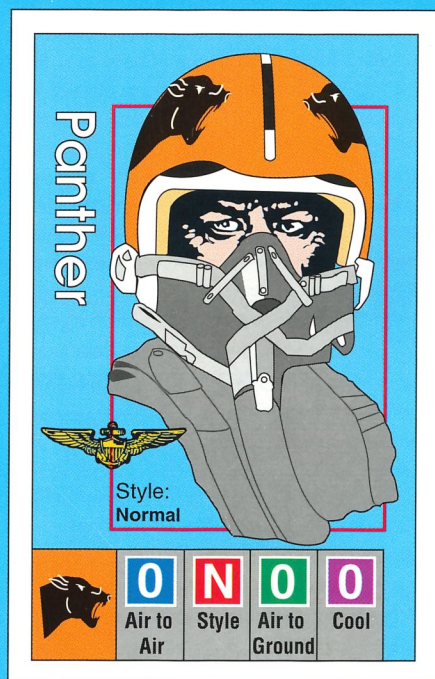
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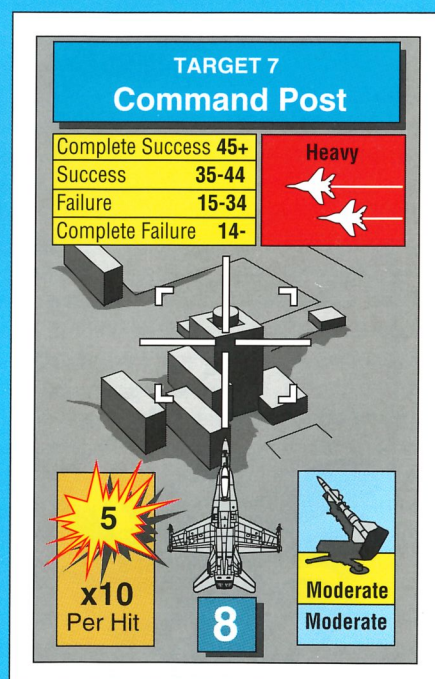
Game Designer:
Dan Verssen
Game Developers:
Gene Billingsley
Dan Verssen
Art Director:
Rodger B. MacGowan



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Game Features:

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