Bailey's Dam

Porter's Fleet passing the dam at Alexandria. From *Harper's Pictorial History of the Civil War, May 1864*. Courtesy of the Library of Cogress.

Steven D. Smith, Division of Archaeology

George J. Castille III, Coastal Environments, Inc.

Department of Culture, Recreation and Tourism
Louisiana Archaeological Survey and Antiquities Commission
Anthropological Study No. 8

I trust some future historian will treat this matter as it deserves to be treated, because it is a subject in which the whole country should feel an interest, and the noble men who succeeded so admirably in this arduous task should not lose one atom of credit so justly due them.

-Rear Admiral David Porter
May 16, 1864
Letter to Hon. Gideon Welles

State Archaeologist's Notes

Louisiana has a rich cultural heritage dating back over 12,000 years. During these 12,000 years, many different peoples have lived and worked in the state. Archaeologists, who study the remains of these long gone people, learn much about their ways of life. The Anthropological Study series published by the Department of Culture, Recreation and Tourism provides a readable account of the various activities of these different groups. *Bailey's Dam* is the eighth in this series.

The *Bailey's Dam* volume is somewhat different than its predecessors in that it highlights a relatively recent event of Louisiana's long cultural past-the building of Bailey's Dam during the Civil War. The research for this volume resulted from work initiated by the U.S. Army Corps of Engineers, Vicksburg District to record important historical resources within the Red River Waterway Project. Steven D. Smith of the Division of Archaeology and George J. Castille III of Coastal Environments, Inc., the authors of this volume, have taken the technical reports resulting from this research and have provided a very readable account of the events surrounding the construction of Bailey's Dam. The Corps of Engineers funded the publication of this volume.

We are pleased to make the *Bailey's Dam* story available and trust that you will enjoy this volume.

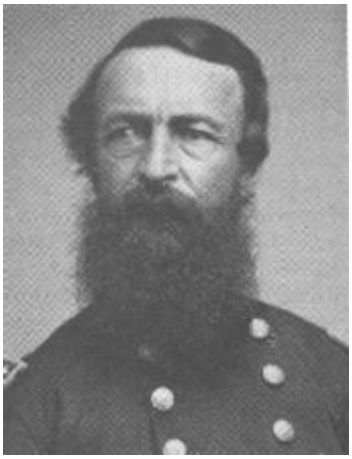
Kathleen Byrd

Acknowledgements

This booklet is a synthesis of two, more detailed and scholarly, manuscripts about the history of Bailey's Dam sponsored by the Vicksburg District, U.S. Army Corps of Engineers. These two excellently prepared documents are "Gunboats, Low Water, & Yankee Ingenuity: A History of Bailey's Dam" by Dr. Michael C. Robinson, Division

Historian, Lower Mississippi Valley Division, U.S. Army Corps of Engineers, and Archaeological Investigation and Preparation of Historic American Engineering Record Documentation for Lower Bailey's Dam (16RA90), Rapides Parish, Louisiana" by David B. Kelley and George J. Castille, archaeologists with Coastal Environments, Inc. Undoubtedly, we owe Dr. Robinson and Mr. Kelley a great deal of thanks for allowing us to use their research to complete this booklet. We also would like to thank Corps archaeologists Kate Yarbrough, Thomas Birchett, and Sheila Lewis for their help. Finally, this booklet would not have been possible without the editing skills of archaeologist Nancy W. Hawkins of the Louisiana Division of Archaeology.

Nathaniel Banks. Courtesy of the National Archives.



David Porter. Courtesy of the National Archives.

Joseph Bailey. Courtesy of the National Archives.

Introduction

Major General Nathaniel P Banks, Union commander of the Red River military expedition, found himself in a particularly tight situation in April of 1864. He had been defeated at the Battle of Mansfield while attempting to capture Shreveport, Louisiana, and now he was retreating down the Red River, harassed by Confederate troops at every turn. Throughout the campaign, the river's low water level had been a constant problem to his naval support of gunboats under the command of Rear Admiral David D. Porter. Now, Banks and Porter discovered that the river was so low that the gunboats were trapped above the rapids at Alexandria.

To save the flotilla, Lieutenant Colonel Joseph Bailey suggested that the river could be dammed to raise the water level and f1oat the gunboats over the shallow rapids. Despite the doubts and jeers of many, Banks authorized Bailey to begin construction. Through the next two weeks, troops struggled to build the dam which eventually made it possible for the fleet to escape.

In 1976 the archaeological remains of Bailey's Dam were placed on the National Register of Historic Places, and through 1986, they could be seen at times of low water. However, the U.S. Army Corps of Engineers is constructing a modern lock and dam downstream of this historic site, and the Red River will permanently cover Bailey's Dam. Recognizing the historical and archaeological importance of' the dam, the Corps sponsored archaeological excavations there in 1984.

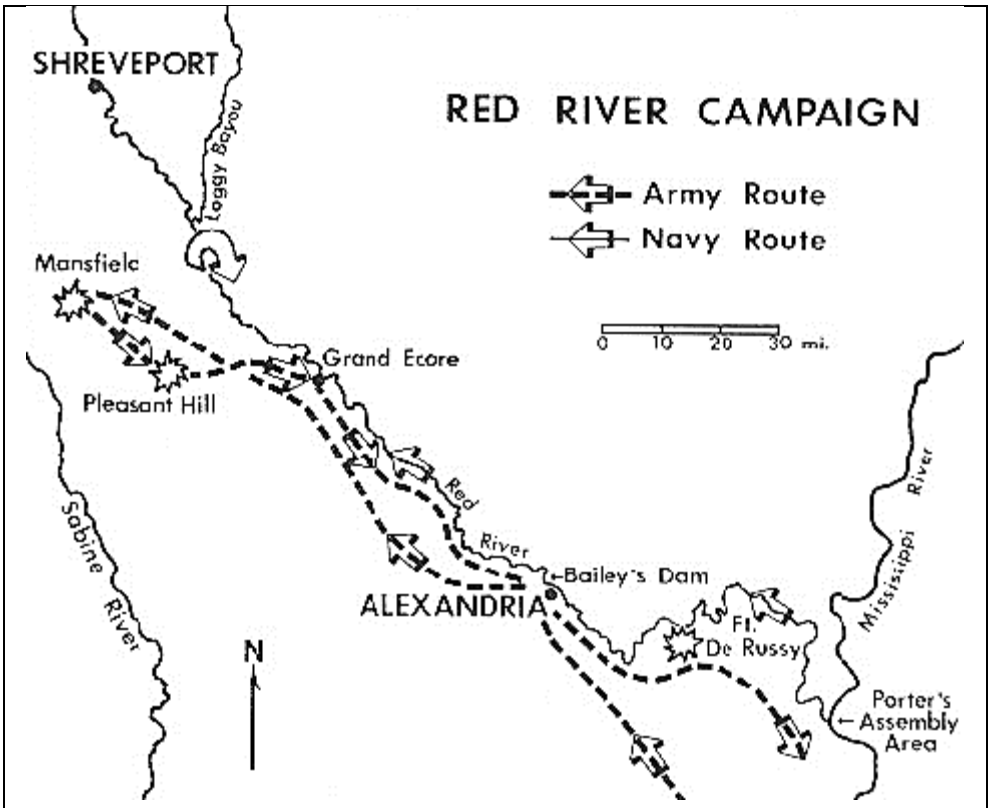
This booklet relates the history and archaeology of the dam complex, a series of different types of dams collectively called Bailey's Dam. The story combines the rich annals of the 1864 Red River Campaign with the finds of modern archaeological investigations. This combination provides a fascinating glimpse into a desperate period in Louisiana history.

Advance on Shreveport

> Mississippi Squadron,
> Flagship Black Hawk, off Red River,
> March 2, 1864.
>
> SIR: I came down here anticipating a move on the part of the army up toward Shreveport, but as the river is lower than it has been known to be for years, I much fear that the combined movement can not come off, without interfering with plans formed by General Grant....
>
> The Mississippi River is very quiet, and the rebels retreated into the interior on hearing of the advance of the gunboats.
>
> I am, sir, very respectfully, your obedient servant,
>
> David D. Porter
> Rear-Admiral.
> (Porter 1914:7)

With this communication to the Secretary of the Navy, Rear Admiral David D. Porter foretold the crisis that would come close to destroying his squadron of gunboats two months later. Low water on the Red River in early March was an unexpected sight. Since 1855 the annual spring rise had appeared without fail. But now in 1864, while Porter waited at the mouth of the Red River for his fleet to assemble and for Major General Nathaniel P Banks's army to begin its march north from Franklin, Louisiana, the Red River's water level was causing Porter to have doubts about the upcoming campaign.

Doubts concerning the Red River Campaign were shared by other Federal officers, but for different reasons. The necessity of a thrust up the Red River in 1864 had been debated since the fall of Vicksburg the previous year. Generals Grant and Sherman, and even the Red River expedition's commander, General Banks, believed that the North's next logical military objective was to capture Mobile, Alabama. But Commanding General of the Army Henry W. Halleck and President Lincoln felt that control of Texas was urgently needed to keep Mexico from joining the Southern cause. The Red River presented the best route to Texas.



Map of the Red River campaign, showing the routes of the Union army and navy.

There was another underlying reason for the expedition, which may have changed Banks's mind. The Red River area was rumored to contain large stores of cotton critically needed by the North. Some historians feel that Banks's desire to secure this cotton influenced his decision to promote the campaign, and that the capture of cotton became all important to him. After the campaign, the Joint Committee on the Conduct of the War charged that the expedition failed because Banks and Porter were overly concerned about capturing cotton. How much their attention strayed is unknown, but it is true that competition between the army and navy for cotton caused great tension during the campaign. At Alexandria soldiers were angered 'to see the navy seizing the cotton for prize on land, while they did not get any" (J.C.C.W. n.d.: 1~,74).

Whatever the real motivation for the campaign, the official Military objective was Shreveport. Once Shreveport was in Union control, Texas would lay open to invasion. To capture Shreveport, Banks's army, supported by Porter's flotilla, would drive up the Red River while another force under Major General Frederic Steele would move south from Arkansas.

Opposing the Federal attack\ in Louisiana was Confederate Major General Richard Taylor, who had only around 6,000 troops scattered throughout Louisiana in Monroe, Alexandria, Marksville, and on Bayou Teche. Badly outnumbered, Taylor worked to gather his forces and then waited for reinforcements from Texas so he could eventually make a stand.

Richard Taylor. Courtesy of the State Library of Louisiana.

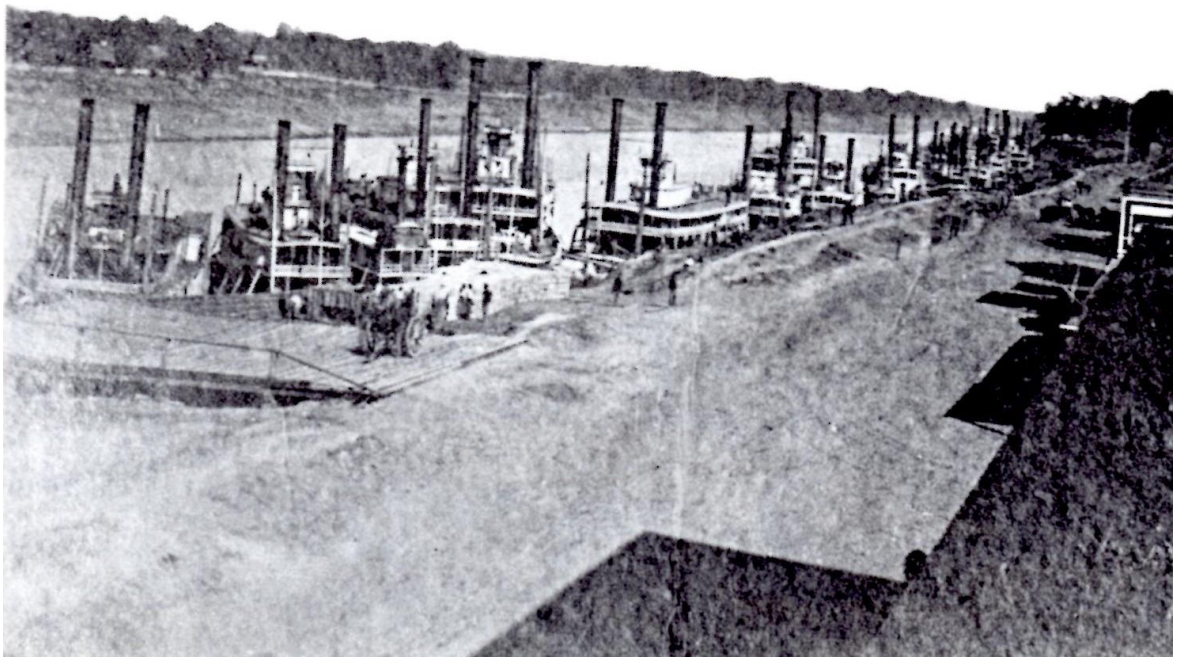
On March 12, 1864, Porter began his move up the Red River. Within three days, he captured Fort De Russy, near Marksville, with the help of a detachment of infantry. Meanwhile, Banks's main army began its march north from Franklin, Louisiana, fighting rain and muck.

The forward units of the army reached Alexandria on March 24. Arriving as a tired yet conquering army, they had already traveled 165 muddy road miles. Still, "the colors were unfurled, the band struck up, and the men marched through the streets" with Banks watching the troops pass in review from a house veranda (Beecher 1866:298-299). Once assembled, the Federal forces numbered nearly 30,000 troops, 13 gunboats, and 60 assorted transport vessels.

Here Banks and Porter had their second warning that the Red River was not going to cooperate. It quickly became obvious that the expedition would be delayed by the low water at the rapids. Although eventually the water level rose, the expedition was forced to leave many vessels behind. North of Alexandria, Porter's fleet consisted of only 12 gunboats and 30 transports. To carry all the supplies needed by the army, wagons had to be used to make up for the supply boats left in Alexandria. Banks was also forced to leave behind troops to protect the fleet and the town.

While they waited for the Red to rise, the soldiers and sailors had to use the water for washing and cooking. As one member of the 114th New York described it:

> It is a dirty, sluggish stream, about the eighth of a mile wide, flowing in an extremely crooked channel. Its bends and curves are so exaggerated that they seem almost unnatural. . .
>
> In all the water charged with mud which our men had been compelled to drink, the had never seen anything that came so near being a compromise between earth and water as the Red River (Beecher 1866:299-300).

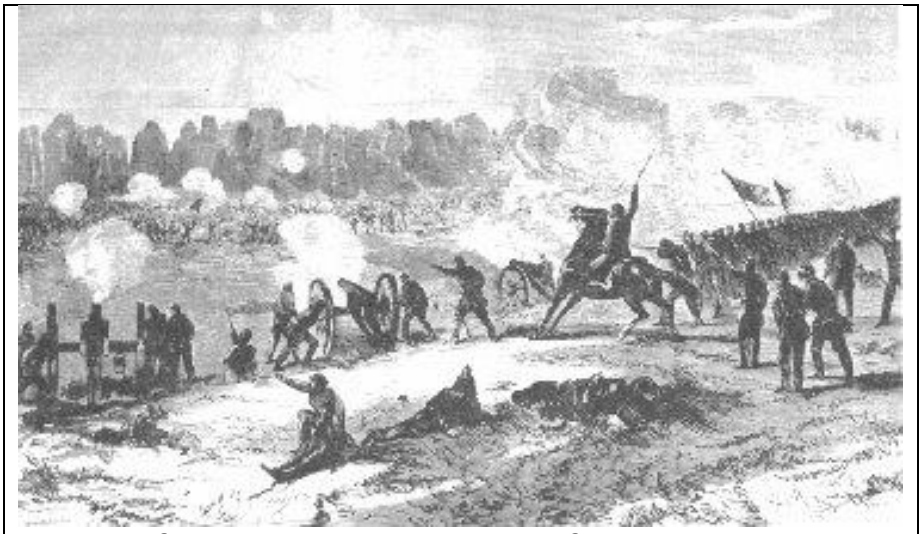


U.S. fleet in the Red River at Alexandria. Courtesy of the State Library of Louisiana.

Naturally, the delays in Alexandria were a godsend to Confederate General Taylor. Some 5,000 cavalry reinforcements arrived from Texas to help block the Yankee advance from Alexandria. Now, despite still being outnumbered, Taylor boldly looked for an opportunity to engage Banks before they reached Shreveport. As Taylor later related in his memoirs, "My confidence of success in the impending engagement was inspired by accurate knowledge of the Federal movements, as well as the character of their commander, General Banks, whose measure had been taken in the Virginia campaigns of 1862 and since" (Taylor 1879:161).

Taylor's opportunity came when Banks reached Grand Ecore, a landing north of Natchitoches. There, Banks decided that the bulk of his land forces would approach Shreveport along a narrow road, twisting away from the Red River and passing through the villages of Pleasant Hill and Mansfield. This decision prevented Banks's army and Porter's gunboats from mutually supporting each other during their advance. The army soon became strung out for some 20 miles along the slender road Banks chose. Awaiting him near Mansfield on April 8 were Taylor's smaller but better concentrated forces. In the battle, the tired Federal troops panicked and were thrown back down the road.

The next day Banks was able to pull his army together. They stood against Taylor's attack at Pleasant Hill, forcing the Confederates to withdraw. But despite this success, Banks was left with a disheartened army that was quickly losing confidence in his leadership. After the retreat to Grand Ecore, one "officer in high position" even suggested putting Banks on a steamer to New Orleans (Hoffman 1877:96-97).



A Confederate charge at the Battle of Pleasant Hill. From *Harper's Weekly*,May 7, 1864. Courtesy of Edwin Adams Davis.

Retreat to Alexandria

In spite of his army's loss of courage, Banks wanted to continue the attack. But realizing that the troops were discouraged, and that General Steele was not coming down from Arkansas to support the Union attack on Shreveport, Banks's officers convinced him to fall back to Alexandria. With this turn of events, the campaign's goal of capturing Shreveport was all but forgotten. Now the main concern of Banks and Porter was to get their troops and boats out of the Red River area while keeping their forces intact.

The tinclad gunboat *Cricket*. Courtesy of the Library of Congress.

After Porter's gunboats returned to Grand Ecore from their own advance upstream, the dispirited soldiers began their retreat. Confederate General Taylor was now in a position to do real damage to the Union expedition. Confederate cavalry constantly tormented the retreating Union forces along the road to Alexandria. Meanwhile, others ambushed the gunboats along the twisting

riverbanks. The river itself resisted the Federals as the boats continually ran aground in the shallow stream. One gunboat, the *Eastport*, was sunk by a rebel mine, refloated, towed, run aground several times, and finally blown up by the navy, to prevent her from being captured by Taylor's rebels. Frank Church, a Marine officer aboard the tinclad *Cricket*, described what must have been a typical skirmish during the retreat:

> We had not been fired upon for some time and were all sitting down not thinking of guerrillas when we were opened on by about a hundred men. My men sprang to their feet and fired back. I put two shots through the front door of the house where there were several men. After I fired three shots our boat swung around and got aground leaving us without breastwork. My men behaved splendidly standing up and firing away while they were sending a perfect shower of ball and shot over us. As we could not get any opportunity to use our rifles to advantage I ordered my men to lay down until we swung around. I sought protection behind the bell but some fellow saw me and fired at me-two bullets struck the bell and I concluded I had better get somewhere else (Jones and Keuchel 1975:48-50).

Eventually, the army and its naval support made their way back to Alexandria, where the rest of the Union forces waited. As the weary Yankees dragged into the town, an officer recorded in his diary:

> April 25-At 3 o'clock PM., to-day, we reached Alexandria, and encamped on the river, just above the town. The army presented the appearance of having seen hard service, and a long campaign. The men were dirty and ragged, some of them shoeless. Our trains were somewhat dilapidated, the snowy covers of a month ago were dust covered, and some in tatters; the horses and mules as nearly fagged out as the men. How unlike the army which a month ago marched so proudly through the streets of this town (Pellet 1866:229).

By April 28, Banks and Porter had reassembled their forces at Alexandria. Now the low water dilemma, which had teased and threatened the fleet throughout the campaign, became 3 crisis. The water in the Red had dropped so low that portions of the rocky rapids were exposed, and at some points, the water was only 3 feet deep. Even the lightest gunboats needed at least 7 feet of water to pass. Ten of Porter's gunboats were trapped above the rapids. Unless some means were found to get them below the rapids, they would have to be destroyed like the *Eastport*, otherwise they would be lost to the rebels. While many officers including the expedition's formally trained engineers, were preparing for the disastrous loss of the backbone of Porter's fleet, Lieutenant Colonel Joseph Bailey was proposing the solution - a dam.

Joseph Bailey and his Dam

Military engineer Joseph Bailey's presence with the Red River expedition was, in a sense, one of those coincidences of history that sometimes result in turning the course of events. His knowledge of engineering was not acquired through formal study at West Point. Instead, he had learned practical engineering on the Wisconsin frontier, where damming was a skill perfected by lumbermen to float logs to their sawmills.

Born in Ashtabula County, Ohio on May 6, 1827, Bailey grew up in Illinois. In 1850 he moved to Wisconsin, where for the next 20 years he was involved in the construction of dams, mills, and bridges. At the beginning of the war, Bailey formed a company of lumbermen and became a captain. Soon, though, his construction genius was recognized and he was supervising various engineering projects for the North, including construction at Fort Dix in Washington D.C. and the attempts to build canals during the Vicksburg campaign.

In 1863 Bailey won distinction at the battle of Port Hudson. There, despite the scoffs of formally trained military engineers, he constructed a gun emplacement in full sight of rebel fortifications and proceeded to silence the Confederate guns. He also built a dam during the siege to refloat two grounded steamboats.

All this had been accomplished while he was, officially, an officer in the Wisconsin 4th Cavalry. Recognizing Bailey's talent, General Banks, without authority, promoted him to colonel. But this promotion was the right of the Governor of Wisconsin, and it was retracted. Instead, Bailey was made a Lieutenant Colonel of Volunteers. Bailey was infuriated at this seeming injustice, and fortunately for Porter's stranded fleet, he had applied for and received a staff position as engineer for Major General William B. Franklin, one of Banks's officers.

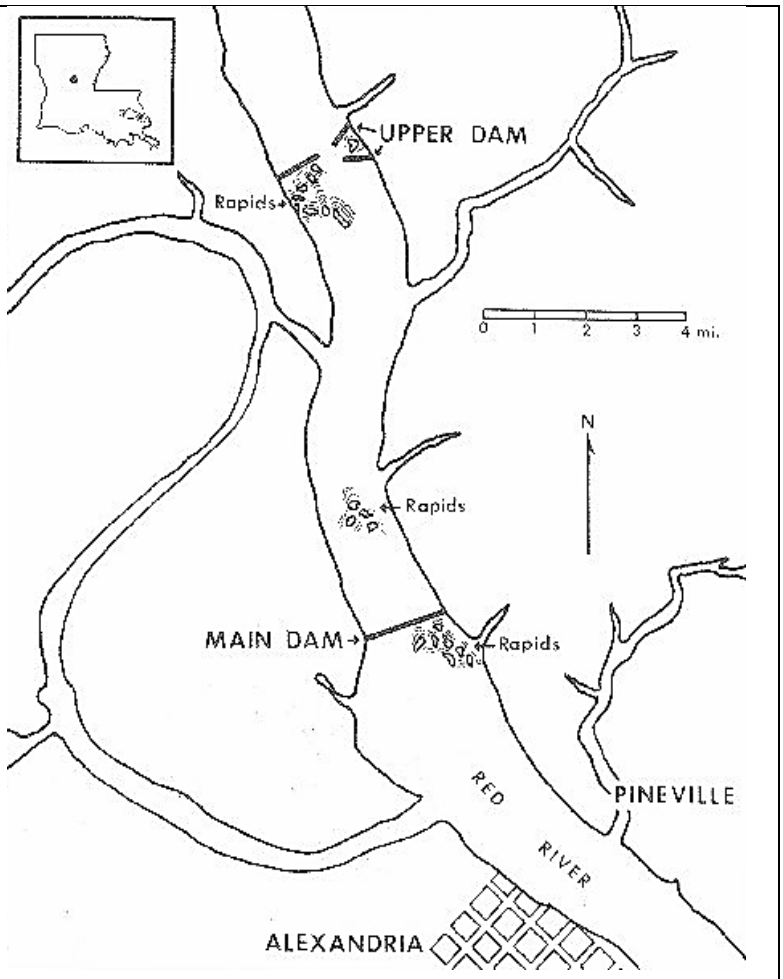
To Bailey, constructing a dam to float the gunboats over the Rapids was a challenging but not impossible task. After all, he had Undertaken similar work in Wisconsin and at Port Hudson. In fact, he had foreseen the problem as early as April 9 and offered to construct a dam at that time. But while Franklin liked the idea, the matter was not yet critical, and other more important problems needed tending.

Most of the staff officers thought Bailey's idea was outrageous. Porter had joked about an earlier proposition by Bailey to build a dam to refloat the stranded gunboat *Eastport* saying: "Well, major, if you can dam better than I can, you must be a good hand at it, for I have been d--g all night" (Hoffman 1877:99). Now, though, a major part of the fleet was about to be lost and Porter instructed a messenger, "Tell General Franklin that if he [Bailey] will build a dam or any thing else, and get me out of this

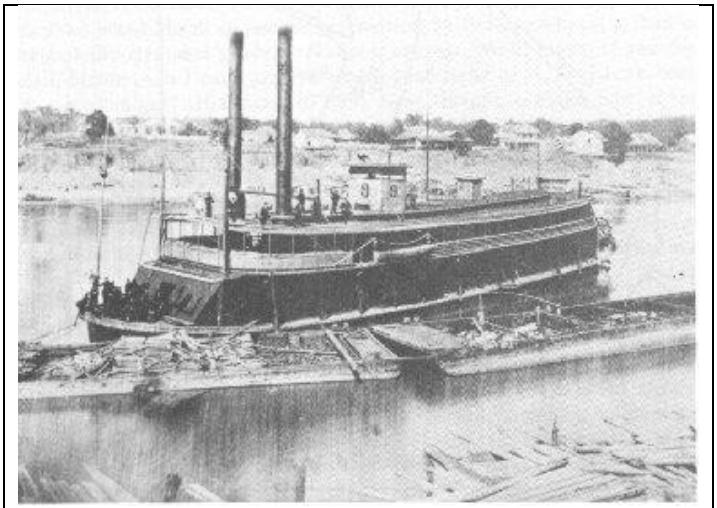
scrape, I'll be eternally grateful to him" (Hoffman 1877:101). Later, Porter would record that "the proposition looked like madness, and the best engineers ridiculed it, but Colonel Bailey was so sanguine of success that I requested General Banks to have it done, and he entered heartily in the work" (Beecher 1866:342).

Fortunately, once Franklin and Banks decided to accept Bailey's idea, they ordered everyone's cooperation. Some 3,000 troops were put to work chopping down trees, gathering stones and bricks, and dragging the raw materials down to where the dam would be constructed. On the Pineville side of the river, Maine, New York, and Wisconsin soldiers cut down trees, while on the Alexandria side, black troops were put to work gathering wood from buildings. One historical account describes the scene:

> Night and day the work was carried on without cessation, the men working willingly and cheerfully, although many were compelled to stand up to their waists in water during the damp and chilly nights, and under a burning sun by day, and notwithstanding very many had no faith in the success of the great undertaking. . . . Oak, elm, and pine trees. . . were falling to the ground under the blows of the stalwart pioneers of Maine, bearing with them in their fall trees of lesser growth; mules and oxen were dragging the trees, denuded of their branches, to the river's bank; wagons heavily loaded were moving in every direction; flat-boats carrying stone were floating with the current, while others were being drawn up the stream in the manner of canal boats. Meanwhile hundreds of men were at work at each end of the dam, moving heavy logs to the outer end of the tree-dam, . . . wheeling brick out to the cribs, carrying bars of railway iron to the barges, . . . while on each bank of the river were to be seen thousands of spectators, consisting of officers of both services, groups of sailors, soldiers, camp-followers, and citizens of Alexandria, all eagerly watching our progress and discussing the chances of success (Moore 1868:11-12).



Map showing the location of Bailey's Dam in relation to Alexandria during the Civil War.



The tinclad *Signal* towing material for Bailey's Dam. Courtesy of the Library of Congress.

In the midst of this furious activity, Bailey was constantly on Hand directing the construction. On site, the soldiers toiled through the day and night; the slightest disobedience was harshly corrected. Two officers were even arrested for allowing a barge, which was to be part of the dam, to sink in the wrong place.

Meanwhile, on shore, the dam and Bailey were the main source of amusement. To most of the navy, half the army, and much of the townspeople,

the dam was a great joke. Word of Bailey's dam quickly spread to the rebels, who would taunt their enemy with "How's your big dam progressing?" (Moore 1868:12). But Bailey ignored the wisecracks and concentrated on his plan.

Engineering and Archaeology

During the Civil War, the rapids at Alexandria were composed of rocky outcroppings of sandstone and siltstone forming shoals along a mile stretch of the Red River, even at times of high water. At low water, the upper and lower ends of the rapids were exposed. Long before the war, the rapids had been a problem to river traffic. When the water was low, goods being transported by steamboat up and down the river had to be unloaded, carried past the rapids by wagon, and reloaded on different boats.

Numerous ideas had been proposed to improve the river passage; even the famous Henry Miller Shreve proposed a solution, but no action was taken. By 1864 the only navigational aid at the rapids was a small channel cut out of the rocky river bottom. While this was an improvement, the water was still too low to navigate the rapids during the campaign.

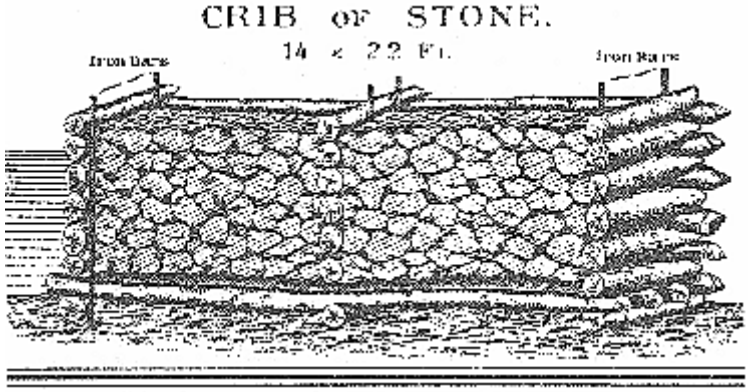
It is a strange twist of history, but we can say that today we know more about some details of Bailey's dam construction than did the soldiers who built it. Those men were laboring day and night to build the dam as quickly as possible. In the confusion and fury of activity, there was little time for anyone but Bailey to fully comprehend the plan. Today, historians have studied the many reports and eyewitness accounts of the dam construction to piece together what happened. In addition, careful archaeological excavation of the actual dam remains provided undeniable evidence of the techniques used. In 1984 a combined historical and archaeological study was undertaken by a historian from the Corps of Engineers and archaeologists from Coastal Environments, Inc. The results of their studies provide a detailed view of the activities at Bailey's Dam and testify to the magnitude of Bailey's engineering feat.

Historical documents indicate that Bailey first built his dam just above the lower, downstream rapids. There, the river was around 758 feet wide, and a 10-mile-per-hour current rushed over the shoals. By constructing the dam at that particular location, he hoped the water would rise enough behind the dam to allow the gunboats to float over the upper rapids. Then, with the built-up water pressure, the dam could be broken through at the proper time and the gunboats could rush over the lower rapids, carried by the force of the released water.

Following Bailey's practical nature, the dam was built with any locally available material readily at hand. To do so, he used different methods of construction for each

riverbank. On the west (Alexandria) bank, he built the dam of large wooden boxes called cribs. Bailey constructed a number of cribs which were placed side by side from the bank out into the river.

Archaeologists investigated these structures during a low water period by carefully digging two small excavation units around partially exposed crib remains. These units were 4 feet wide and 8 feet long. As the archaeologists removed the surrounding mud and dirt and exposed the cribs, they painstakingly recorded the position of each timber and beam. Afterward they studied their photographs and notes, comparing their findings with the historical records.

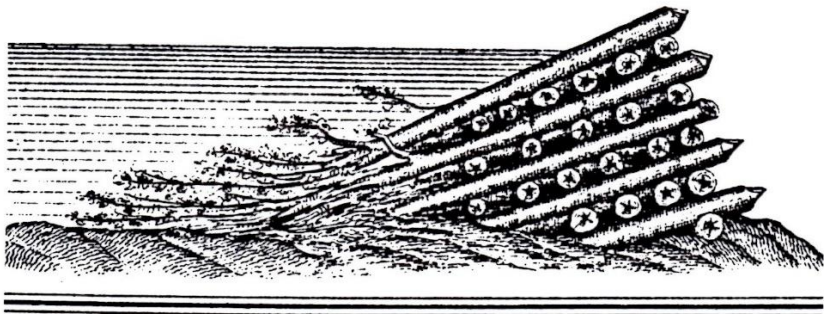


Sketch of crib dam which accompanied Colonel Bailey's report (U.S. War Department 1891-1895:Plate 53-3).

Historical accounts indicate that lumber from Alexandria mills, homes, and barns was quickly stripped for use in building the cribs. Bricks, stone, and even machinery were used to fill and anchor the cribs. Additionally, historical illustrations show that iron bars were placed vertically in the four corners of each crib, to provide a supporting framework.

The evidence from modern archaeological excavations generally supports the historical accounts with some interesting variations. Both lines of evidence testify to the ingenuity of Lieutenant Colonel Bailey. The excavations revealed that the crib framework was constructed of hand hewn 4-by-lO-inch timbers, which is strong evidence that the lumber was from nearby buildings. The ends of these timbers were notched so that they fit tightly together at the corners of the cribs. The corners were supported by smaller vertical wood posts. However, in the cribs excavated by the archaeologists, there was no evidence of the iron support bars. Furthermore, there was no evidence of machinery parts in the cribs. Instead, they found that the cribs were filled mostly with sand and mud and only capped with a layer of loose brick and stone. A metal fragment of a large sugar kettle was also found among this brick and stone. A sugar kettle was just the kind of loose hut heavy object that could be quickly transported to the cribs for anchoring material.

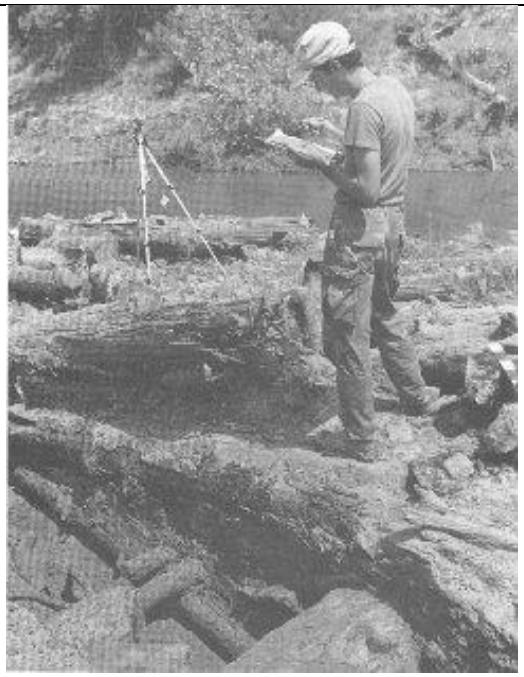
On the east (Pineville) bank, there were no town buildings to strip for lumber but there was, quite conveniently, a forest. With abundant trees available, Bailey constructed a



Sketch of tree dam which accompanied Colonel Bailey's report (U.S. War Department 1891-1895:Plate 53-3).

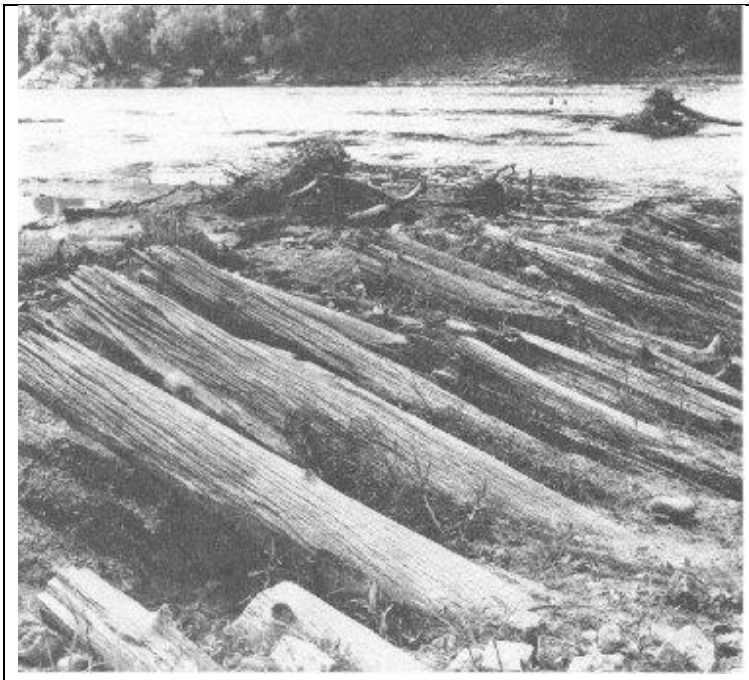
'self-loading" tree dam. According to historical diagrams, trees were stacked lengthwise with the flow of the stream. The upstream treetops were anchored to the river bottom with stones. The downstream trunks were raised higher than the upstream tops by alternating layers of other logs running perpendicular to, or across, the stream. This technique presented a dam face of logs angled upward with the stream flow. As the river was held back by the log face, the water pressure actually made the dam stronger or "self-loading."

The archaeological investigation of the tree dam was completed in a manner similar to the excavations at the crib structures. But here a trench excavation unit was dug. This trench was 22 feet long and 5 feet wide, and it was positioned parallel to the flow of the river. During these investigations, the river began to rise, and when the excavation unit was finally abandoned, the archaeologists were working about 2 feet below the water level. The field crew was successful in reaching that depth only with the aid of a water pump. Archaeologists had hoped to excavate a slice of the dam completely down to its base, but attempts to excavate deeper were halted when the pump could not keep out the incoming water.



Archaeologist David Kelley drawing a map of logs uncovered during the tree dam excavation.

The tree dam excavations revealed that both pine and hardwood logs were used and that the tree bark was left intact. The tree limbs had been cut off, but by observing the knots on the tree trunks, archaeologists were able to note the direction in which the trees were positioned. They found that many of the trees were positioned with their tops downstream, exactly opposite of that shown in historical illustrations. Also, all of



Portion of the tree dam exposed during the low water in August 1984.

the upstream ends of the trees had been trimmed of their branches, and their tips had been pointed with an axe. Spaces between the logs were filled with sand and mud, and the entire structure was covered with brick and stone. Interestingly, the archaeologists also found a hewn, octagonal, wood column among the logs. The upstream end of the column had been rough cut, seemingly to fit into that particular spot in the tree dam. The column was most likely a mast from a riverboat.

Together the crib and tree dam sections did not cross the entire 758-foot riverbed. A 150-foot gap existed between the two dams. To close this gap, four coal barges were used. While the remains of these barges were not found in the archaeological excavations, historical photographs provide a fairly detailed picture of their appearance. These 24-hy-170-foot barges were sunk in the gap, lying lengthwise with the current, and more stones, brick, and iron rails were used to anchor them. Braces and ropes, anchored to the riverbanks, were also needed to secure the barges against the rising water pressure.

Building the Red River Dam. Courtesy of the Library of Congress

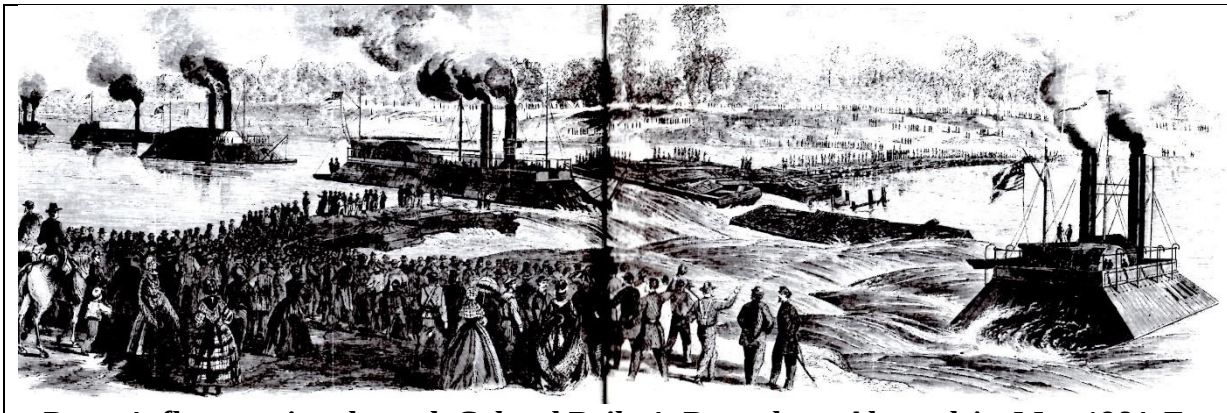
Bailey directed that the second barge from the Alexandria side be only partially filled with anchoring materials. This was the barge that he hoped either to ram or blast out of the way, creating a flood that the gunboats would ride like kayaks. As it turned out. Bailey's idea worked, but not exactly as he would have liked.

The Dam Works

To the amazement of practically everybody except Bailey, the dam complex was working. By May 6, the water held by the dam had risen 4 feet. By May 8, the water level was up 5 feet 4 inches. Three of the lighter vessels even crossed the upper rapids and now waited behind the dam for the heavier gunboats. As the soldiers worked to finish the dam, the water continued to build until the pressure against the dam became tremendous. General Banks feared the pressure would soon burst the dam, and the next day, at around 5:30 in the morning, one officer "heard a great crashing in the direction of the dam. Jumping out of the blankets and slipping on my coat, cap, and boots, I ran down to the bank. The water was rushing through at a great rate" (Tyson May 9, 1864).

Two of the barges used in the dam had broken loose, and the water was gushing through. Porter, seeing the crisis, quickly ordered the gunboat *Lexington* to run the gap:

> The Lexington succeeded in getting over the falls and then steered directly for the opening in the dam, through which the water was dashing so furiously that it seemed as if certain destruction would be her fate. Ten thousand spectators breathlessly awaited the result. She entered the gap with a full head of steam; passed down the roaring, rushing torrent; made several spasmodic rolls; hung for a moment, with a harsh, grating sound, on the rocks below; was then swept into deep water and rounded to by the bank of the river. Such a cheer arose from that vast multitude of sailors and soldiers, when the noble vessel was seen in safety below the falls, as we had never heard before, and certainly have not heard since (Moore 1868:12).



Porter's fleet passing through Colonel Bailey's Dam above Alexandria, May 1864. From *Frank Leslie's Illustrated Newspaper*, July 16, 1864. Courtesy of Library of Congress.

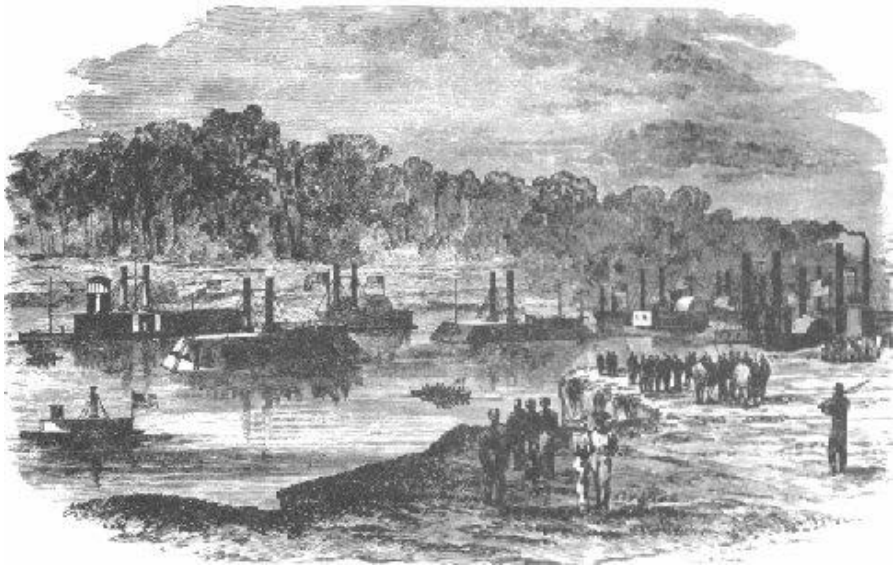
The *Lexington's* run was followed by the three gunboats waiting behind the dam. Had the rest of the fleet been prepared, all of the boats might have escaped at that time. However, the navy's lack of confidence in the dam had given way to apathy, and as the released water rushed through the break, valuable time was wasted as the fleet gathered steam to attempt the run. Eventually, the water behind the dam fell and six gunboats still remained trapped.

But the *Lexington's* adventure had proven that the dam could work, and troops confidently went back to work. Bailey worried that the dam would break again and decided to leave the 70-foot gap in the dam as it was. But this time he added smaller, lighter dams near the upper rapids. Like the dam sections at the lower rapids, both crib and tree dam methods were employed. These dams helped channel the water while reducing the pressure on the main dam. Thus, instead of relying on one dam to hold back the water until another run could be made, a series of dams were built to create a deep channel of water along the whole course of the shoals in that part of the Red River.

Unfortunately, during Coastal Environments's archaeological excavations, this dam complex at the upper rapids was believed to be destroyed by modern development. Later, the U.S. Army Corps of Engineers conducted an underwater survey, locating what clearly appear to be parts of these upper works. If so, these submerged dam sections are preserved so that perhaps someday archaeologists may have an opportunity to investigate more of Bailey's engineering feat.

While the army labored to build the upper dam, the navy, more confident of rescue, worked to lighten the loads on the trapped gunboats. From May 10 through 12, the remaining gunboats above the rapids struggled through the upper shoals to the pool behind the main dam. Yet another dam had to be built to refloat a gunboat that got stuck during this passage. Then on the twelfth of May, the *Mound City*, the largest gunboat of the fleet, ran for the gap in the main dam. The previous scene was repeated, with thousands lining the banks to watch the excitement. Marching bands played the "Star Spangled Banner" and the 'Battle Cry for Freedom" Like the *Lexington* before it, as the *Mound City* hit the gap, it ground against the rocky river bottom, and then shot through. The next day all of the trapped vessels lay safely below the rapids.

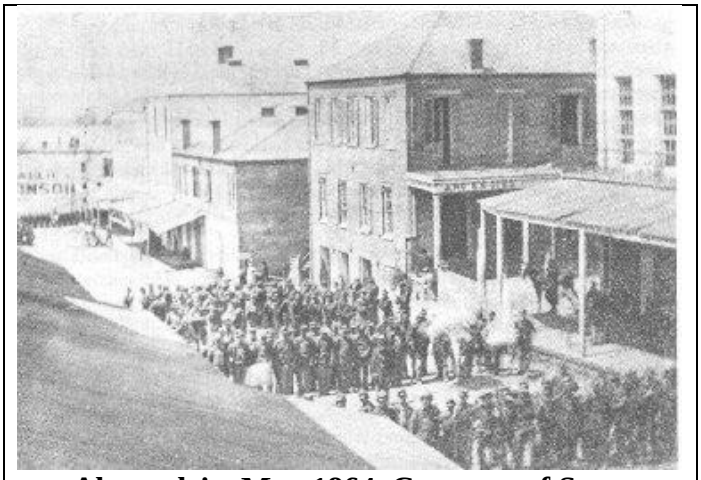
The Campaign Ends



Admiral Porter's fleet on the Red River. From \ *Harper's Pictorial History of the Civil War*, March 1864. Courtesy of Library of Congress.

While Federal troops labored to build the dam, Taylor's Confederate army was not idle. Some rebels continued to harass the outposts around Alexandria, while others destroyed bridges and blocked roads in an attempt to entrap the Union forces. Federal boats already below the rapids were constantly ambushed along the lower Red River as they attempted to supply the army. In fact, the Confederate soldiers were able to cut off all navigation on the river for a while, isolating the Yankees.

On May 13, with all the gunboats now safely below the rapids, Union forces moved out of Alexandria. The Union soldiers left with mixed feelings. They had been beaten in battle, harassed, and almost completely destroyed. They were exhausted. Still, they had accomplished a magnificent feat in building the dam and rescuing the fleet, and some had even made friends among the townsfolk.



Alexandria, May 1864. Courtesy of State Library of Louisiana.

But for the local population this was a critical time. Rumors spread that the town would be torched when the army left. Banks ordered a detail of 500 men to be left behind to protect the town from arson. But fires quickly broke out as soon as the main army was out of town. It is unclear who started the fires, as some accounts describe soldiers looting and setting fires, while other

accounts note that army guards shot looters. Probably, both Union troops and local looters were involved. One detachment, the 92nd Colored Infantry who also helped build the dams, was known to have fought a fire for many hours, until the building was doomed and the troops were forced to continue their retreat. One Yankee soldier described the scene:

> Cows ran bellowing through the streets. Chickens flew out from yards and fell in the streets with their feathers scorching them.... Crowds of people, men, women, children and soldiers, were running with all they could carry, when the heat would become unbearable and dropping all, they would flee for their lives, leaving everything but their bodies to burn. Over the levee the sights and sounds were harrowing. Thousands of people, mostly women, children and old men, were wringing their hands as they stood by the little piles of what was left of all their worldly possessions (Van Alstyne 1910:320-321).

As the expedition retreated south down the Red River, Confederate cavalry did what it could to badger the Union forces at every opportunity. However, no matter how courageously the men fought, the rebel army was too small to seriously oppose the retreat of the entire expedition. At Mansura, Louisiana, Taylor attempted to stand against the Federals, but after a four-hour artillery duel, he had to withdraw.

Though the campaign seemed about at an end, Banks found that he had to call on the services of Lieutenant Colonel Bailey once more. At the Atchafalaya River, Bailey directed the construction of a bridge which he promptly fashioned out of transport vessels. Around 24 transports were placed across the river and held together with large timbers. Then, long planks were laid across the prows of the transports to form a temporary bridge. Banks's army was able to cross the river quickly and safely and continue the retreat south to Baton Rouge. By that time, every soldier knew and appreciated the frontier engineer from Wisconsin.

Epilogue

Measured against the backdrop of the entire Civil War, the results of the Red River Campaign cannot be considered critical to either side. Overall, the end of the war simply had been delayed. Some of the Federal troops on the expedition were from Sherman's army and could have been of great help to him. Furthermore, an attack against Mobile, Alabama, which General Grant wanted, was postponed for 10 months by the Red River escapade.

The campaign had also cost the Union army 5,200 men and 21 artillery pieces. The navy lost some 320 men, two pump boats, one ironclad, two tinclads, and four transports. Yet Banks still had his army relatively intact, and just as importantly, the fleet was saved, thanks to Lieutenant Colonel Joseph Bailey.

On the other hand, the campaign was of tremendous significance to Louisiana. The invasion brought the war home to thousands of Red River settlers, destroying their property, economy, and lives. Beyond civilian casualties, 4,000 Confederate troops were lost. On the positive side, victory at Mansfield and the failure of the Union expedition must have helped to strengthen Southern resolve.

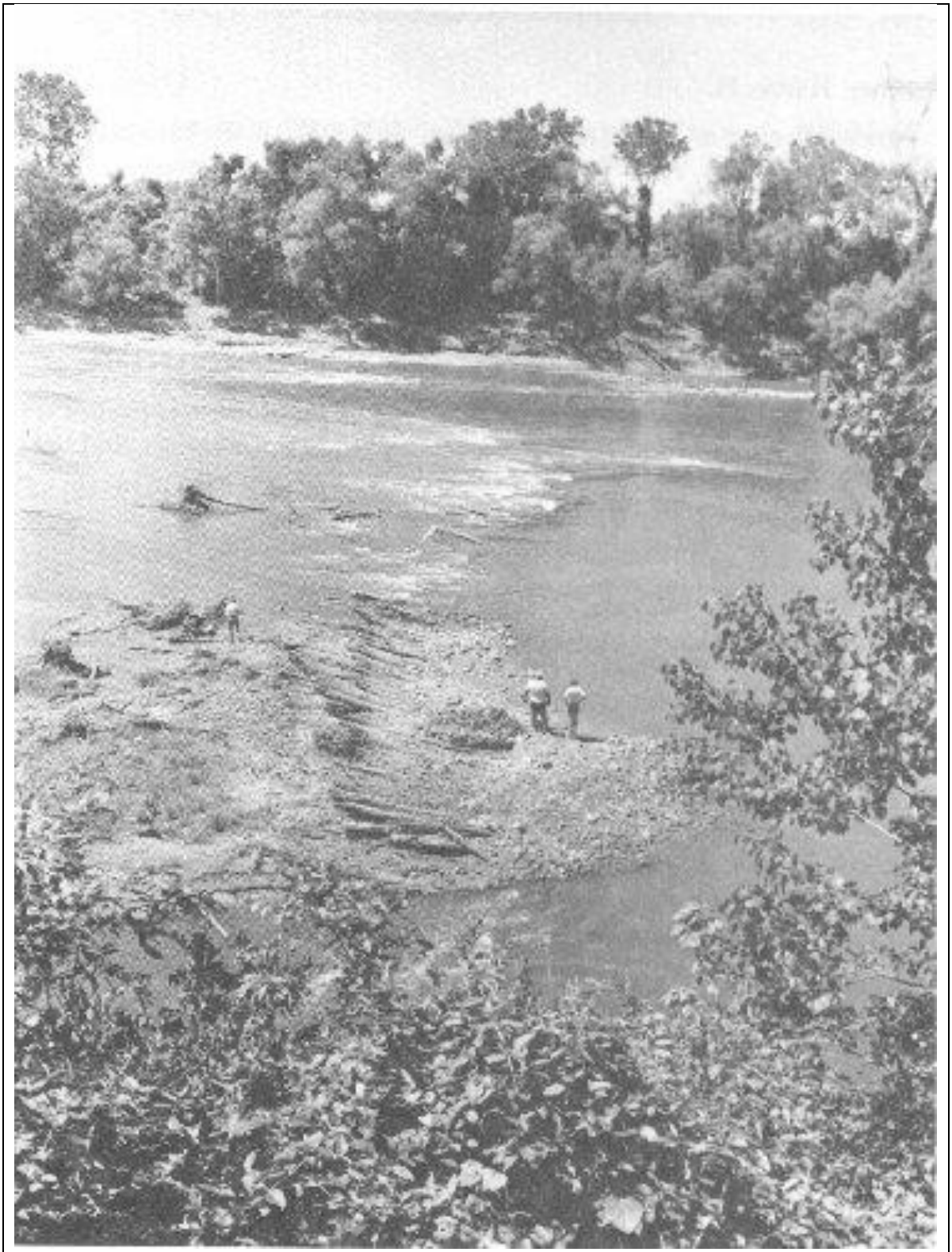
For Lieutenant Colonel Joseph Bailey, the campaign brought fame. Porter praised Bailey in newspapers and wrote letters of thanks and approval. Congress gave Bailey a gold medal, Porter personally gave him a gold inlaid sword, and other naval officers gave him a silver punch bowl.

Eventually, Bailey's distinguished military career earned him a promotion to brigadier general. But after the war, the hero of the Red River campaign met a tragic end. On March 21, 1867, Sheriff Joseph Bailey, of Vernon County, Missouri, was murdered by two prisoners he was taking to jail. Today, Joseph Bailey is buried in Evergreen Cemetery, at Fort Scott, Kansas.

Historian Michael Robinson best summed up the significance of Bailey's Dam when he wrote:

> Perhaps the most remarkable aspect of Bailey's Dam was the toil expended by the Union soldiers.... Through the hot days and chilly nights they labored diligently despite harassment from the enemy; the depression and fatigue of a long, failed campaign. . . . In many respects, their efforts offer some basis for Porter's claim that Bailey's Dam was "without doubt the greatest engineering feat ever performed" (Robinson 1985:66- 67).

Today, "the dam still remains intact as we left it, and bids fair, if undisturbed, to stand a hundred years-an imperishable monument of American energy, ingenuity, and skill" (Moore 1868:13-14).



View west across the Red River at Bailey's Dam during low water in 1984.

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