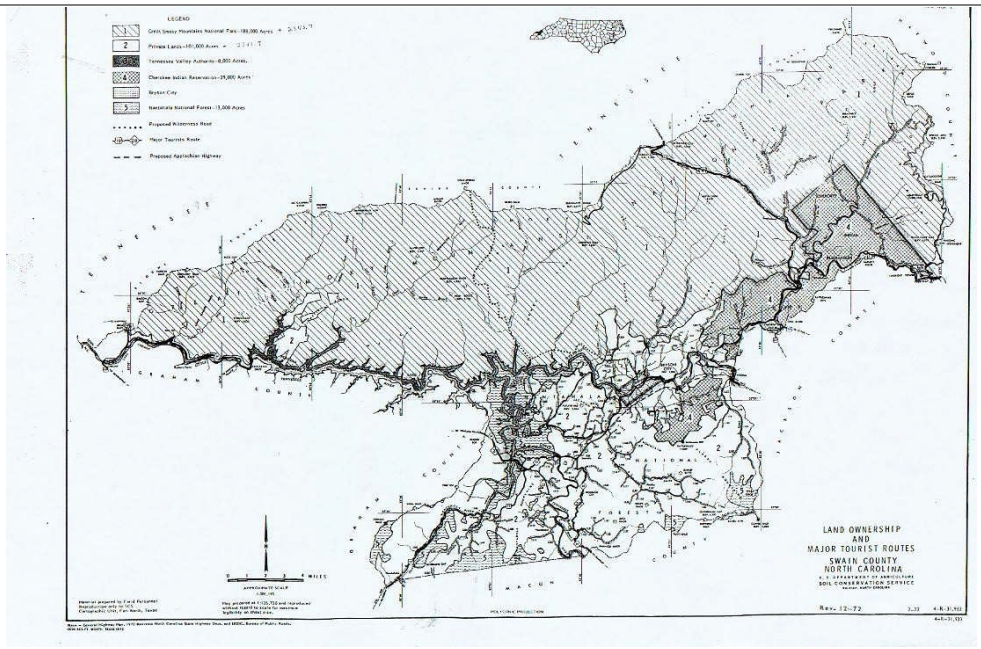
The Copper Mine at Eagle Creek

The Beginnings

Swain County is located in western North Carolina near the Tennessee border. It was created in 1871 from parts of Macon and Jackson counties. Named for Governor David L. Swain, it borders Jackson, Macon, and Graham, Cherokee, and Haywood counties as well as the state of Tennessee.

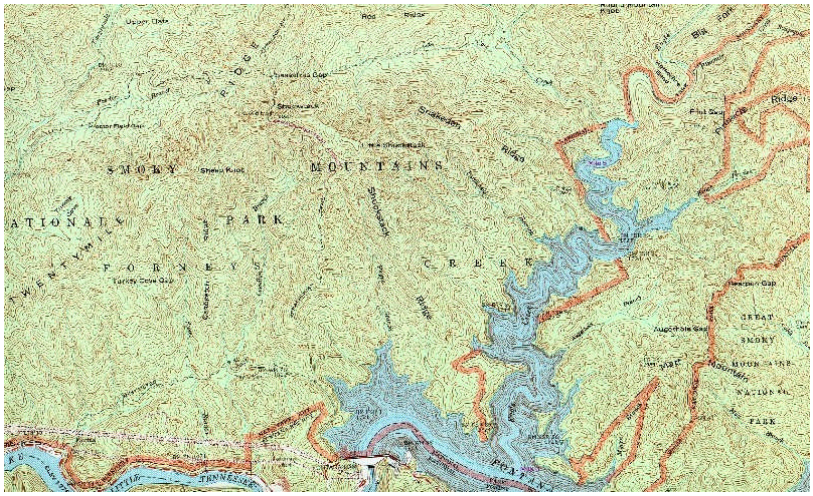


Map-Swain County Chamber of Commerce

The story begins in the late 1880's when Fonzie Hall discovers a chunk of what he thinks to be gold on Hazel Creek. He takes it to a neighbor who tells him it is copper. With copper selling for only eight and one-half cents a pound, Fonzie realizes that his find is not worth the effort of mining (Holland, Lance. A Pocket Guide to the Appalachians. 2001). Fifteen years later, the world has changed. Copper now is worth the efforts

involved in mining. Beginning in 1899, when Walter S. Adams of Boston, bought two one-hundred acre tracts from Ep Everett (Swain Co. Deeds, Book 21, p-75), for the price of $662.50. Land speculators begin to buy up large tracts of land in remote western North Carolina, where copper is rumored to be in abundance. He sold the same two tracts in March of 1901 to the North Carolina Mining Company for the sum of $25,000 (Swain Co. Register of Deeds. Book 29, p-238). In 1911, The North Carolina Mining Company, of which Walter S. Adams was president, sold the timber rights to Ritter Lumber Company. Ritter had fifteen years in which to cut timber and the North Carolina Mining Company retained the mineral rights to the property. Before this time, George Westfeldt, of New Orleans, had bought land on Hazel Creek. In 1901, he brought suit against Adams and stopped the production of copper ore. (Holland, Lance. 2001); the case was finally settled in 1927. Some of the Westfeldt holdings were sold, to wit, 1158.1 acres for $7227.65 to the state of North Carolina in March 1930 (Swain Co. Register of Deeds. Book 59, p-291). This land was a boundary line with two sides of the Great Smoky Mountains National Park and was evidently obtained to increase the size of the park. Both Adams and Westfeldt died and the mine was never developed to the extent that the mine on Eagle Creek attained (Holland, 2001) The mine was reopened sometime after April of 1940. On that date, the North Carolina Mining Company, together with the Hazel Creek Land Company, gave a right-of-way agreement to the State of North Carolina and the U.S. National Park Service in order to construct a road on their (NC Mining Company's) property (Swain Co. Register of Deeds. Book 63, p-177). This document is signed by Fred Kolb, George G. Westfeldt, and George R. Westfeldt (relations of the George Westfeldt mentioned earlier?) The mine evidently was a serious endeavor as the president, Fred Kolb, mortgaged the original tracts of land bought by Walter S. Adams (how ironic) in March 1901, to borrow $30,000 from the Reconstruction Finance Corporation, (a U.S. Government Corporation) in order to finance the operation of the mine in October, 1942 (Swain Co. Register of Deeds. Book 24, p-153 Chattel Mortgage). The loan(s) were repaid as of January 1945 and the mortgages cancelled (Swain Co. Register of Deeds, Book 69, p-231). Considering that the ore had to be trucked out in relatively small loads, it must have been of very high purity. Information obtained from the U.S. Bureau of Mines indicated the price of copper was 11.78 cents per pound during the years 1942-1945.

At this rate the mine would have had to produce at least 254,669 pounds of copper just to satisfy the debt of $30,000. Even though the quality of ore produced by the Adams Mine was greater, the longevity and amount of ore produced at the Fontana (Eagle Creek) Mine was greater still.



Map - Tennessee Valley Authority

The area outlined in orange above, comprises some 2300+/- acres which became known as the Fontana Copper Mine.

The story of the Fontana Mine, or the Eagle Creek Mine, begins in 1926 when a group of investors led by Dr. J.F. Riter, C.F. Myers and others leased a tract of land from the Montvale Lumber Company. Montvale Lumber was in the process of winding down timber cutting in the Smokies and owned a large tract of land that had been deemed rich in copper ore. The Fontana Mining Company (Riter, et.al.) leased 632 acres for three years to begin their operation. One of the more interesting portions of the lease agreement is that Fontana Mining was to pay to Montvale Lumber a flat 10% royalty of the net smelter returns. Net smelter returns meaning the net amount received from the smelter after payment of freight and

treatment charges , but no other charges (Swain Co. Register of Deeds. Book 52, p-479). The smelter referred to was owned by a company affiliated with the Fontana Mining Company, Ducktown Chemical and Iron located in Isabella, Tennessee.

On May 26, 1926 another agreement was registered that gave the Fontana Mining Company an option to buy the original 632 acres plus an additional 840 acre tract that adjoined the previously leased property (Swain Co. Register of Deeds. Book 54, p-21) . This option expired on May 10, 1928. One interesting fact from this newly negotiated deal was that Fontana Mining was authorized to remove 100,000 tons (long tons,2240 pounds) of ore on which the mining company had already paid a royalty of (.15) per ton.

On September 1, 1927 another agreement was signed stating that Fontana Mining Company was to be allowed to lease and mine, for a period of two additional years, 71,517 additional tons of ore from this site. The royalty fee now jumped to fifty cents (.50) per ton (2240 pounds). Evidence from records compiled by Dr. W.H. Emmons of the University of Minnesota in 1942 lists the production of the Fontana Mine as follows :

	Dry Tons Received	% Copper	Lbs. Copper	Average E&MJ Copper Price (cents)
1926 (10 mons)	13,687	5.47	(1,496,351)	13.795
1927	39,828	7.04	(5,608,004)	12.920
1928	72,794	7.29	(10,617,466)	14.570
1929	71,641	7.33	(10,496,375)	18.107
1930	90,261	8.17	(14,743,827)	12.982
1931 (1 mon)	9,447	8.47	(1,600,322)	9.838
Total DC & I	297,658	7.485	(44,562,345)	
1931 (11 Mons)	35,118	8.02	(5,466,009)	8.116
1932	19,726	9.13	(3,600,966)	5.555
1933	22,050	8.77	(3,865,388)	7.025
1934	26,406	7.91	(4,176,242)	8.428
1935	22,750	7.39	(3,362,126)	8.649
1936	19,148	6.79	(2,601,295)	9.474
1937	22,013	6.64	(2,921,814)	13.167
1938	17,485	6.93	(2,424,306)	10.000
1939	15,310	6.32	(1,936,186)	10.965
1940	20,311	6.55	(2,659,284)	11.296
1941	19,402	7.09	(2,752,474)	11.797
1942 (6 mons)	11,503	6.01	(1,382,668)	11.775
Total T.C. thru 7/31/42	251,224	7.394	(37,148,758)	
TOTAL	548,882	7.443	(81,711,103)	
1942 (6 mons)	8,726	6.01	(1,048,858)	11.775
1943	23,067	4.69	(2,163,684)	
1944 (2 1/2Mons)	3,675	5.52	(405,720)	
	35,468	5.10	(3,618,262)	
Total Shipments Mar 1926 to Mar 15, 1944	584,350	7.30%	(85,329,365)	

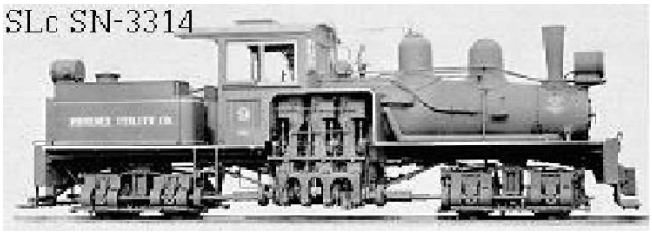
TABLE I

-Lance Holland

From this information, one can see that nearly 300,000 tons of ore were removed during the period (1926-1931) at a peak price of slightly more than 18 cents per pound of copper extracted. In January of 1928, Fontana Mining leased an adjoining tract of land for eight years totaling 146 acres, (Swain Co. Register of Deeds. Book 54, p-515), bringing the total acreage of the mine to 1,618.

The mine changed management and in December of 1928, the Fontana Mining Company purchased the optioned land and began mining in earnest. The mine was now headed by W.F. Lomareaux who also was the vice-president of Ducktown Chemical and Iron. The next phase in the development of the mine was the purchase in February of 1930 of the Montvale Lumber Company tract by the Fontana Mining Company for $150,000. Also included in this agreement was the purchase of certain equipment owned by Montvale Lumber and conveyed to Fontana Mining Company (Swain Co. Register of Deeds. Book 59, p-109).

The list of equipment included 4 miles of narrow gauge track, two locomotives, and 10 ore cars. After some research, the writer managed locate a locomotive used by the Fontana Mining Company.



-Photo credit: George R. Kadelak Collection-Shayloco.com

This locomotive was built in 1927 for the Phoenix Utility Company in Waterville, N.C. It was purchased in December, 1929 by the Fontana Mining Company. This locomotive was of a unique class. The narrow gauge, (36 inches wide) 55,300 pound machine featured both front and rear trucks that received power from the engine, giving it the ability to haul heavy loads and negotiate sharp turns. It was perfect for the mining industry. In the haul from the mine to Fontana, a distance of some four miles, it would negotiate many bridges

and a very crooked and twisting railroad bed. On a normal run, the locomotive would pull eight ore cars with a total of some seventy-five tons of ore. At Fontana, the ore would be loaded onto two standard gauge ore cars. From Fontana it was pulled to Isabella, Tennessee and the copper smelting facilities.

After being sold to the North Carolina Exploration Company in 1931, it was acquired eventually by the New Jersey Museum of Transportation where it is currently on display. Photograph from Shay Locomotive.

By 1931, the mine was a viable commercial operation. A photograph taken during that era shows a significant group of structures erected to mine the area.

-Photo Lance Holland

The central building in this photo (ca.1929) is the steam-generating plant. Also seen is the spur line with ore cars sitting on the tracks ready to be pulled to Fontana. The four empty

cars in front are waiting to be pulled up the inclined railroad (some 1100 feet long) and be filled with ore.The structures seen in the foreground are (from right to left): Staff house for visiting engineers and others from the mining corporation, Mr. Alexander, mine superintendent(1926-1944). Mr. C.F. Seaman, civil engineer. "Skunk" Styles, miner. Lower row, from right to left. Dr. Riter, company doctor. The next building served several purposes. According to Mr. Wallace Calhoun, who grew up at the mine, this building was a storage shed for engineers' tools and core samples. It also served as a post office of sorts. Mail would be literally piled in the floor and people would sort through it and find any letters addressed to them. The building also served as a barber shop. The barber would visit once a week to give haircuts.The next house was lived in by several employees of the mine (Smith, Collins, and Ferguson).

It is also worth noting two other features in this photo. In front of the engineers' storage building/post office, the narrow gauge track running from the mine to Fontana. The other feature is just above the row of empty ore cars. This was the path to the mine that was walked twice a day by the miners to the mine entrance.

Photo-Joe Livingston

This photo, taken in March, 2002, shows approximately the same view as the previous photo. If you look closely, you can see the remains of the structure just behind the boiler house. In this photo, from right to left, Steve Claxton, Joe Livingston, Vincent Thomas (his father, Lamar Thomas was a miner), and his daughter Tara. Just across the lake, you can see the hollow leading up to the mine.

Photo-Lance Holland

This photograph, ca. 1930, shows the mine working structures. On the right, you see an elevated support for the steam line used to power the hoist. The large cylindrical object is a tank used to hold excess steam and/or hot water. The hoist is located out of sight to the left and above the large structure in the center (tipple). To the lower right is a spur line into the lower entrance of the mine. This was where the miners

entered. To get an idea of how large this was, you can make out the figures of two men right at the entrance. In the center of the photograph is the inclined railway by which empty ore cars were hauled up underneath the tipple (an empty car is just visible under the tipple). Copper ore was dumped from the tipple into the car. The car would then be lowered back down onto a spur. When a train (about 8 cars) was loaded, it would then be hitched to the locomotive and transported to Fontana via the Eagle Creek narrow gauge railroad. The buildings seen to the left are for storing equipment such as carbide for the miners' headlamps or various tools needed in mining.

Photo-Joe Livingston

This photograph taken in March, 2002 shows a view of the tipple foundation (the rectangular objects in the center). This picture shows the railroad ties for the inclined track going under the tipple in the previous photo. They are visible in the stream in the center of the photo. This water is flowing from above the mine and is about three feet wide and just a few inches deep. Also seen in the photo is the fence surrounding the lower entrance to the mine that the miners would have used.

Photo-Joe Livingston

This is a closer view of the foundations of the tipple. You can see clearly how massive these are. Even after fifty-eight years, they are still solid.

Photo-Joe Livingston

This photograph (March,2002), is taken as though you were looking from the hoist across the top of the tipple straight into the central shaft of the mine. The foundations for the tipple are seen at the bottom of the picture.

Photo- Joe Livingston

The massive hoist used to haul the ore up from the mine is shown above. First driven by steam power, later by electricity, has about 2000 feet of 1 inch thick cable wrapped around the drum. Pictured from top to bottom, Steve Claxton, Joe Livingston, Vincent Thomas, and his daughter Tara.

Photo- Joe Livingston

This block of concrete and steel, about 24 by 30 inches, is located about 20 feet behind the tipple foundations. It served as the anchor for the steam, later electric, hoist engine that was used to haul the ore cars up and down the inclined railway. By threading a cable through the eyebolt in front, attaching one end to the ore car and the other to a locomotive, the loaded ore car would be lowered down the track, onto a siding, and an empty car towed up to the tipple.

Photo-Lance Holland

This picture shows a view of the houses from the inclined railway (ca. 1932). The loaded ore cars are sitting on the spur coming down from the mine from right to left. Note the man standing in the second car. The spur in the foreground was perhaps for the lower entrance to the mine where workers entered or to shift empty or loaded ore cars to await loading or hitching to a locomotive. The tracks visible in front of Dr. Riters' house (3) led down Eagle Creek to Fontana, some four miles distant. Notice that most of the houses on the left hand side of the picture do not have chimneys. Mr. Wallace Calhoun tells me that these houses were heated with hot water from the boiler plant. Mr. Alexanders' house (to the right of 4) has steps on the left hand side. Mr. Wallace Calhoun related the story of watching Mr. Alexander walk down those steps, down the path between #3 and the engineer's storage building, then down the steps barely visible. From there, Mr. Alexander would walk up the tracks (to your left), thence up the worn path to the mine. Mr. Calhoun could remember this as though it were yesterday, not fifty years ago. Apparently Mr. Alexander was very much a

creature of habit. He was said to wear a bow tie with a dark cardigan sweater virtually every day. Notice that every photograph in this site that Mr. Alexander is seen, he is wearing that combination.

Photo- Joe Livingston

This photo, taken from behind the tipple foundation, looking down the hollow toward the lake, gives a better idea of the steepness of the terrain. Obviously, the area has become quite overgrown in the succeeding fifty-eight years

The preceding photographs illustrate the mine as it would have appeared during most of its' working life (1926-1944).

The Miners

Photo- Vincent Thomas

This is a shift of miners taken ca. 1932. First row, Left to Right: Lamar Thomas (Vincent Thomas' father), Arthur Russell, Ernest Walker, Dolphus Ferguson (Bookkeeper), Wendell Botts, Brook Collins, Kenny Myers, Claude Dills. Second Row: Arthur Danielson, Sam Jenkins, Carl Collins, Rass Cole, Mr. James W. Alexander (Mine Superintendent), Hub Sizemore, Dillard Hall, Newton Hall, Geter Shell, Salem Collins, Roy Dills. Third Row: John Bivins, Doc Hall, Jerry Dills, Earl Smith, Frank Ammons, Haley Stiles, Jack Kirkland, Harley Calhoun, Cliff Bell, Carl Thomas, Wilburn Franklin, Rev.Garfield Fuller. Row 4: Joe Cable, Harley Pace, Jim Maynor, Lee Jones, Glen Woodard, Willie Birchfield, Spurgeon Hall, Fate Calhoun (Wallace Calhouns' father), Alva Cook, Clint Cole, Hill Proctor, Alvin Raper, Sam Wike, and Rob Mull. Mr. Wallace Calhoun believes this picture to be taken at the miners' entrance below the

tipple. The twenty-nine men shown with hard hats on would have constituted the underground workers. The remainder of the men worked aboveground. They worked on the train or in the blacksmith's shop or as helpers to other workmen. Some were the crew of the locomotive.

The work of mining the ore obviously begins underground. At its' greatest depth, the Fontana Mine was approximately 2,800 feet deep. The miners would blast a drift (tunnel) following a vein of ore.The ore would be blasted from the vein onto timbers lying on the ground, then mucked (shoveled) into a wheelbarrow or loaded in a tram car. The timbers were placed on the ground to make shoveling the ore easier. You can imagine what it would have been like to shovel the ore off of the floor of the mine. As the ore was mined out of a vein, it created a stope. A stope was a large, cavernous space supported by pillars of rock. According to Mr. Wallace Calhoun, some of these stopes were so huge that the back wall could not be illuminated by lights.

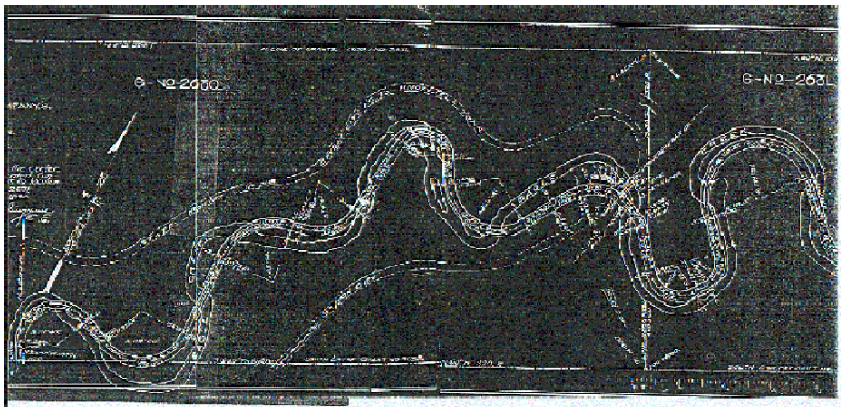
The tram car was about three feet by three feet square and about three feet tall. It rolled on a track out to the skip car. The ore would then be dumped into the skip car and raised to another level to continue filling it. The skip car was about four feet wide, four feet tall and eight feet long. It would hold about a two tons of ore. Once filled, the skip car would be hoisted to the surface. The skip car also served another function. It was the means by which a shift of workers would be lowered into the mine. It was also how they returned to the surface after their shift was over.

There were two hoists in the mine. One was down in the shaft, the other located above the tipple. There was an ingenious system of bells from the depths of the mine to the surface to notify the hoist operator when and how far to raise the skip. In the hoist house, there was an indicator dial that told the hoist operator what level the tipple car was located. As the skip car approached the point at which it would dump the ore, the front of the car would tip downward to allow the ore to fall into a hopper. The skip car was attached to the hoist by a metal bail which ran in a Y-shape down the sides of the car and was attached to two studs fixed to the rear sides of the car. Mr. Calhoun related to me that a skilled operator could raise the car, dump the ore, and allow the skip car to retreat downward

back into the mine in one smooth motion. There was a worker called the skipper who sat in the bottom of the tipple framework who interpreted the bell signals for the hoistman. He would also let the hoistman know by hand signals how close the skip car was to the tipple.

From the tipple, the ore would be loaded into one of the narrow gauge ore cars. This would then be lowered back down the inclined railway some 1100 feet to a siding. Another empty car would be raised, filled, and lowered in the same manner. When a complete train of cars (usually eight) carrying about seventy-five tons of ore was loaded, the cars would be hooked to the locomotive and pulled to Fontana some four miles distant.

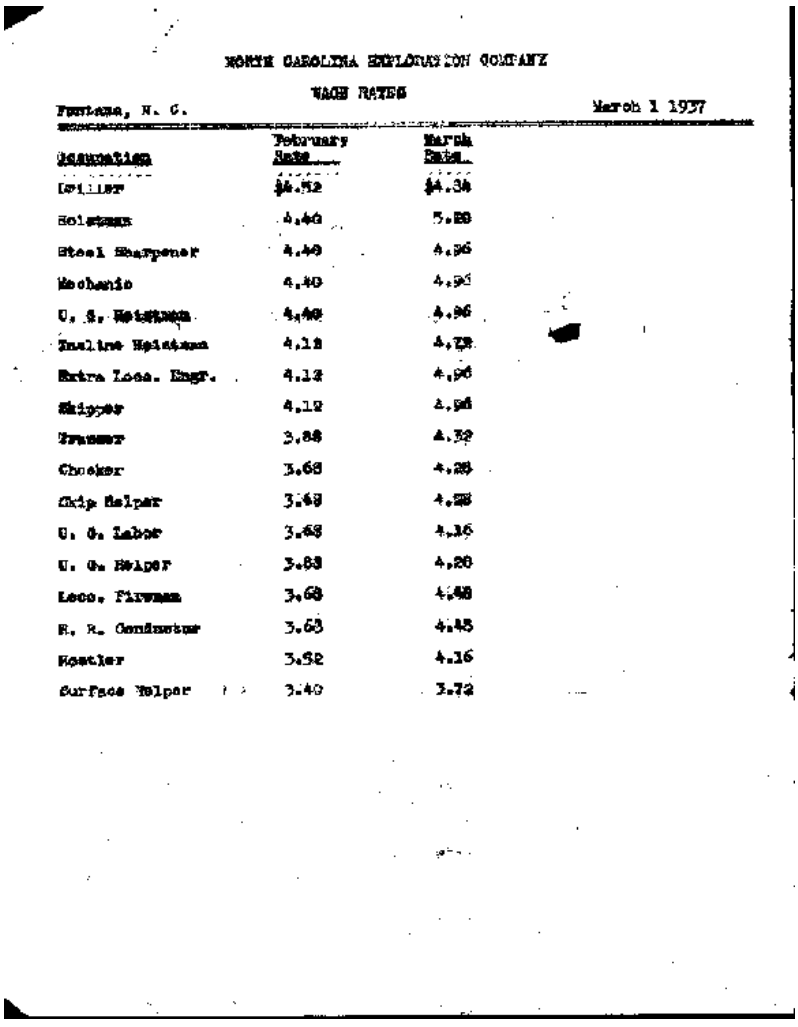
The following illustration is a map drawn by a civil engineer for the North Carolina Exploration Company in August of 1930 showing a portion of the railroad. Notice how many twists the railroad must take going down Eagle Creek. This was necessary because the floor of the valley was so narrow that the railroad was forced to follow the creek. Notice also the number of bridges. This is a portion of the railroad that borders three land grants. Namely, 2630,2631, and 3630 which bordered the land owned by the North Carolina Exploration Company.



Map-Courtesy of Swain County Register of Deeds

Notice the large arrow on the right. Just to the left of this arrow are four rectangular blocks. These were garages where people stored their automobiles. This point on the railroad was about one mile from the mine. The highway did not extend to the mine, these were built for people to garage their cars.

The miners made a good wage for the time. The list below, published in March of 1937, shows the wages before and after a projected raise. The raise was to be based on the price of copper at that date, which was 14 cents per pound. For each one cent change per month, wages would change 32 cents per eight hour shift during the succeeding months.



NORTH CAROLINA EXPLORATION COMPANY

WAGE RATES

Fentress, N. C. March 1 1937

Classification	February Rate	March Rate
Driller	$4.52	$4.84
Helesman	4.40	5.20
Steel Sharpener	4.40	4.96
Mechanic	4.40	4.96
U. S. Helesman	4.40	4.96
Trailing Helesman	4.12	4.78
Extra Loco. Engr.	4.12	4.96
Shipper	4.12	4.96
Trammer	3.84	4.32
Checker	3.68	4.28
Skip Helper	3.68	4.28
U. G. Labor	3.68	4.16
U. G. Helper	3.84	4.20
Loco. Fireman	3.68	4.48
R. R. Conductor	3.68	4.48
Hoister	3.52	4.16
Surface Helper	3.40	3.72

Courtesy Mr. Wallace Calhoun

This copy is difficult to read. The writer has retyped this list for clarityNotice that even though seventeen occupations are of the word miner.listed, there is no mentionSafety in this dangerous place was a concern. Drills were held, Mr. Fate Calhoun (felt hat in foreground) is shown in this photograph rendering first aid (ca. 1934).

North Carolina Exploration Company		
Fontana, N.C.	Wage Rates	March 1,1937
Occupation	February Rate	March Rate
==========	==========	==========
Driller	$4.52	$4.84
Hoistman	4.40	5.20
Steel Sharpener	4.40	4.96
Mechanic	4.40	4.96
Underground Hoistman	4.40	4.96
Incline Hoistman	4.12	4.72
Extra Loco. Engr.	4.12	4.96
Skipper	4.12	4.96
Trammer	3.88	4.32
Chucker	3.68	4.28
Skip Helper	3.68	4.28
Underground Labor	3.68	4.28
Underground Helper	3.88	4.28
Locomotive Fireman	3.68	4.48
R.R. Conductor	3.68	4.48
Hostler	3.52	4.16
Surface Helper	3.40	3.72

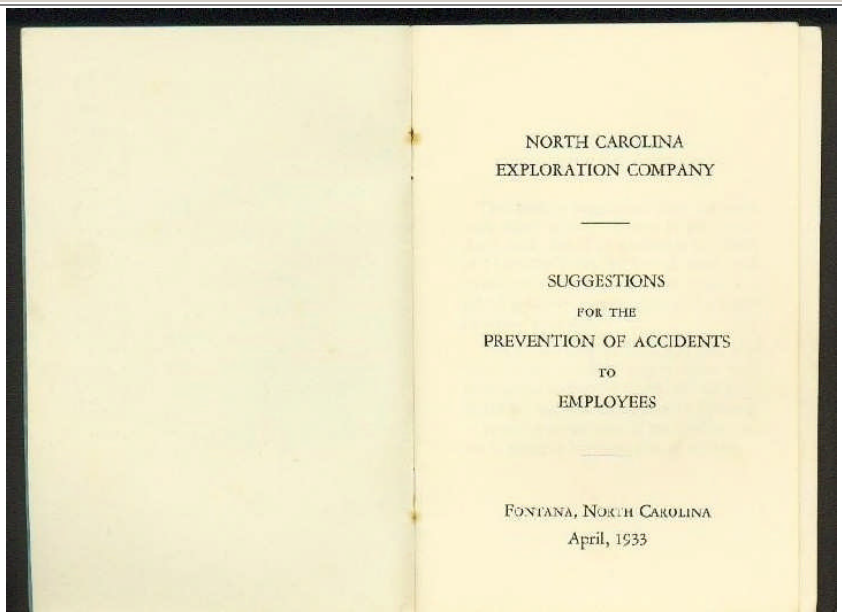
Photo- Wallace Calhoun

Persons in the photograph, from left to right: Adolphus Ferguson (Bookkeeper) Dr. J.F. Riter, Rob Mull,unidentified, George Erastus, Arthur Danielson, unidentified, Jerry Dills, Lamar Thomas, Arthur Russell, Bill Proctor, unidentified, Earl Smith, Wilburn Franklin, Clint Cole, unidentified, Wendell Botts, Carl Collins, James W. Alexander (Mine Superintendent), Nester Hall, Harley Calhoun (Fate's brother), Roy Dills and Fate Calhoun (both kneeling). Workers posing as injured on the ground are unable to be identified.

In this picture we see some things not evident today. The white building in the upper left is the hoist house. To the right and below is the tipple. If you look closely, you can see the cables stretching across the top of the tipple down into the mine, below and to the right of the hoist house, the large cylindrical object is the compressed air line leading from the compressor house into the mine. The tracks in the center were for the ore cars to be lowered down the incline to the spurs located there. The buildings from background to foreground are the oil/grease house, compressor house, and the carbide house (carbide provided the illumination for the miners). The building against which the people are leaning contained three separate rooms, The first was the machine shop, second was the

bookkeeper's room, and third was a changing house. The changing house was where the workers stored their underground clothes. It also had a shower facility. The hot water was at first heated with steam from the steam plant; later it was heated with a coal-burning stove. The water was stored in a tank still at the site today.

Mr. Calhoun relates some information about the changing house. The men had a unique way of storing their working clothes in the changing house. The clothes were stored in wire baskets suspended from the ceiling. These baskets were raised and lowered by means of a chain loop. Each person also had their own space to hang their jackets and hardhats around the room. If a worker forgot to raise his basket, he would find his overalls and shirt tied in knots the next shift! It seems that these men had their own sense of humor even in this tough working environment. Mr. Calhoun also spoke of the smell of the mine. It was a rich, earthy smell that could not be washed away. He tells of that smell being around anything that had been in or near the mine. As a boy about the ages of eight to fifteen, Mr. Calhoun spent countless hours watching and being around the workers and their equipment. His father (Fate Calhoun), worked at the mine from about 1928 until the closing in 1944. Many of those years he was a shift foreman.



NORTH CAROLINA
EXPLORATION COMPANY

SUGGESTIONS
FOR THE
PREVENTION OF ACCIDENTS
TO
EMPLOYEES

FONTANA, NORTH CAROLINA
April, 1933

Courtesy-Wallace Calhoun

This small book is a safety handbook for the workers. It contains ten pages of safety reminders. As if the workers needed any reminding how dangerous the mines were.

The company also held a Safety Celebration on August 16,1933. The bulletin from that program is shown below. The first view is of the inside of the bulletin. Note the topics of some of the speeches. Also note the times shown on the right that the train would depart and leave. At that time trains ran on Central Standard Time. Remember, this train only traveled four miles from Fontana to the Eagle Creek terminus. The second scanned image is of the back of the program. Mr. L.B. Calhoun (Wallaces' father) and Mar Thomas (Vincents' father) were involved in making the program a success.

SAFETY CELEBRATION

10:00 O'Clock C. S. T.

AUGUST 16, 1933

Song—America.

Salutation ..... J. W. Alexander

Work on a No Accident Job ..... W. M. Cable

Home Life on a No Accident Job ..... Mrs. H. C. Collins

Safety Secrets ..... S. E. Sharp

You and I ..... H. T. Harper

Presentation of Awards ..... J. N. Houser

Prayer ..... Rev. B. L. Shope

DINNER

1:00 O'Clock

Flag Raising ..... E. G. Padgette

EAGLE CREEK R. R.

TRAIN SCHEDULE

CENTRAL STANDARD TIME

TO FONTANA MINE

Lv. Fontana	7:50 A. M.	9:10 A. M.
Lv. Eagle Creek Bridge	8:20 A. M.	9:40 A. M.
Ar. Fontana Mine	8:30 A. M.	9:50 A. M.

FROM FONTANA MINE

Lv. Fontana Mine	2:00 P. M.	3:30 P. M.
Lv. Eagle Creek Bridge	2:30 P. M.	4:00 P. M.
Ar. Fontana	2:50 P. M.	4:20 P. M.

Train service for Employees and their families and Invited Guests of the Company only.

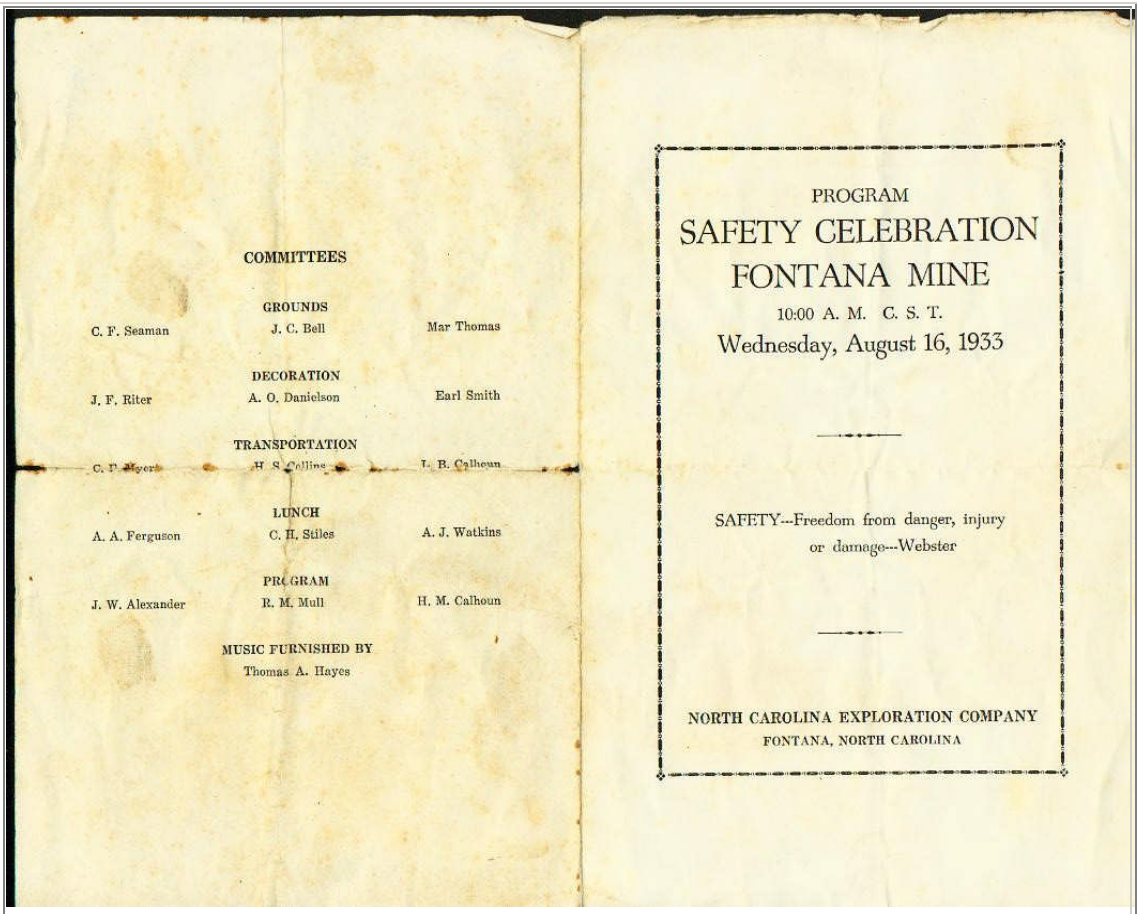
AMERICA

My country, tis of thee,
Sweet land of liberty
Of thee I sing:
Land where my fathers died
Land of the pilgrims pride,
From every mountain side
Let freedom ring.

My native country, thee,
Land of the noble, free,
Thy name I love:
I love thy rocks and rills,
Thy woods and templed hills;
My heart with rapture thrills
Like that above.

Let music swell the breeze,
And ring from all the trees
Sweet freedom's song:
Let mortal tongues awake;
Let all that breathe partake,
Let rocks their silence break,
The sound prolong.

Our fathers God to Thee,
Author of liberty,
To Thee we sing:
Long may our land be bright
With freedom's holy light;
Protect us by Thy might,
Great God, our King.



COMMITTEES

GROUNDS
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DECORATION
J. F. Riter — A. O. Danielson — Earl Smith

TRANSPORTATION
C. T. Myers — H. S. Collins — L. B. Calhoun

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A. A. Ferguson — C. H. Stiles — A. J. Watkins

PROGRAM
J. W. Alexander — R. M. Mull — H. M. Calhoun

MUSIC FURNISHED BY
Thomas A. Hayes

PROGRAM
SAFETY CELEBRATION
FONTANA MINE
10:00 A. M. C. S. T.
Wednesday, August 16, 1933

SAFETY--Freedom from danger, injury or damage---Webster

NORTH CAROLINA EXPLORATION COMPANY
FONTANA, NORTH CAROLINA

This document and the safety manual are both courtesy of Mr. Wallace Calhoun of Bryson City.

Final Years of the Mine

Again in August of 1930, the company changed hands. This time known as the North Carolina Exploration Company, the mining enterprise was acquired from the Fontana Mining Company for the price of $282,000. Some 2090 acres of land and all of the equipment previously purchased from the Montvale Lumber Company (Swain Co. Register of Deeds. Book 59, p-304). A search of records located in Asheville, NC at the North Carolina Geological Survey office turned up a a TVA document written in 1943 which listed the total cost of the Fontana Mining property. This document lists the cost of the property at $282,000; but the monies paid to other individuals

owning land around the mine and attorney's fees added another $66.894.25 to the cost. Also added to the purchase price of $282,000 was the cost of machinery and equipment which totaled $105,871.17. This brought the total purchase price of the mine to $419,990.68. According to the TVA at this time (1943) the mine had lost money for six of the eleven years operated. What, then, would have justified the North Carolina Exploration Company to spend almost a half-million dollars to work a mine that the TVA felt was a losing proposition? Perhaps the answer lies in part of the same document. In that document, Dr. W.H. Emmons calculated the amount of copper produced from the tonnage of ore mined. Using the mines' figures, he came up with a total value of copper produced of $6,450,100. This was only for the years 1926-1931. At the same time, the Fontana Mining Company reported a total sales value of $1,233,231.17 on their income tax returns for the same years. Why the discrepancy? Did the company hide almost $5.2 million in revenue? Perhaps the Ducktown Chemical and Iron Company charges for transporting and refining the copper rose and fell more rapidly than expected. I have not been able to locate records of the Ducktown Company to attempt to verify the numbers. It certainly makes for interesting speculation.

The next document concerning the mine appears in May of 1944. The Tennessee Valley Authority had constructed Fontana Dam and the majority of the mine area was soon to be below water. TVA agrees to pay the North Carolina Exploration Company $250,000 for 389 acres that will be flooded. There is a mention of the fact that mining may continue so long as refuse from the process is not introduced into the pool of water which will soon be known as Fontana Lake (Swain Co. Register of Deeds. Book 59, p-319).

Obviously, after the lake was impounded, access via the railroad was ended and mining activity ceased. On January 31, 1944, the last ore was taken from the earth. The mining rights remained in effect. Cities Service Company bought the property (2,324 acres) from the North Carolina Exploration Company in May, 1970 (Swain Co. Register of Deeds. Book 93, p-203).

Was there enough ore left in the mine to make it a viable enterprise? Even after access was cut off by the creation of Fontana Lake, road access was a possibility. Plans were even

drawn up to truck the ore to a bluff about one and one-half miles away then float it by barge across the lake, thence to Tennessee. The fact that copper remained underground is not disputed. Dr. Emmons reported in August of 1942 that there were 67,600 tons of shipping grade ore (more than 6% copper). This ore he estimated to be worth $874,838 (at 1943 prices). Unfortunately, the estimated price of extraction, shipping, and refining would only leave a profit of $49,800. The value of the mine would be in the by-products and the value of future discoveries. In this report he also stated "The past production I estimate to be $10,000,000 (ten million dollars) and present reserves are considerable. I have no idea as to past profit, but considering the grade of the ore, it probably was substantial." This report, done for the TVA, also leads him to make the following conclusion about the future worth of the mine "...yet when the value of total production is compared with prospecting expenditures, one should conclude that further exploration is warranted."

None of the documents uncovered by the writer contained answers to many questions.

1. Why did the mining operation cease?

2. The North Carolina Exploration Company held title to the land even after the lake was impounded. Why did they not continue mining operations?

3. Why did some documents show considerable profit; while others showed a loss for most of the mines' operating days?

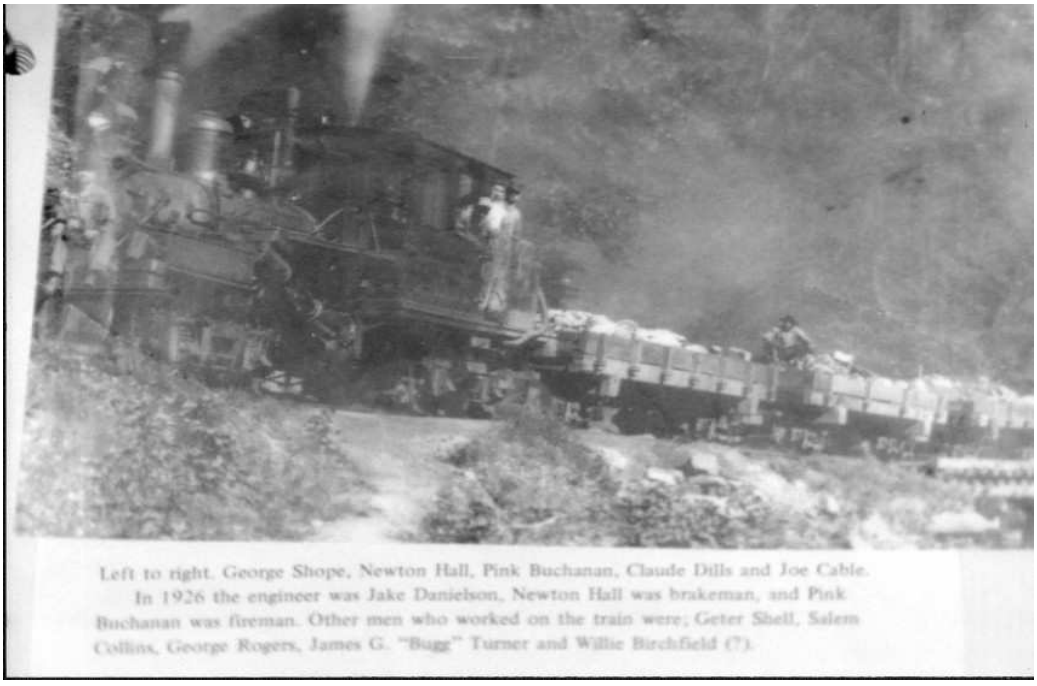
4. Why were several plans drawn up by the TVA to continue production and transportation of copper ore, then suddenly abandoned?

Hopefully, a continued study of the documents will shed some light on these questions.

A memo by B.F. Hyde, a Cities Service executive, dated September 29,1975 (Holland,2001) speaks to the value of ore left. Hyde based his valuation on a report by James W. Alexander, Superintendent of Fontana Mine, dated January 31, 1944. Hyde places the value of the minerals in place at approximately $11.0 million (based on 1976 forecasted

prices),on the total mineable ore of 11.972 million pounds.

Regardless of these facts, the mine was never reopened. In 1983, the National Park Service finally purchased the last privately owned land within the park boundary. From Cities Service Realty Company, the government purchased 2,324 acres for $1,074,300. On June 9, 1983 at 9:56 a.m.; Cities Service Company, the North Carolina Exploration Company, and Fontana Mining Company, ghosts of a bygone era, disappeared into the mists of an almost forgotten era of Swain County history.



Left to right. George Shope, Newton Hall, Pink Buchanan, Claude Dills and Joe Cable. In 1926 the engineer was Jake Danielson, Newton Hall was brakeman, and Pink Buchanan was fireman. Other men who worked on the train were; Geter Shell, Salem Collins, George Rogers, James G. "Bugg" Turner and Willie Birchfield (?).

Photo- David Monteith

Research and Publication: Joe Livingston, May, 2002

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