Alabama Fuel & Iron Company -- Part II -- Acton Mines

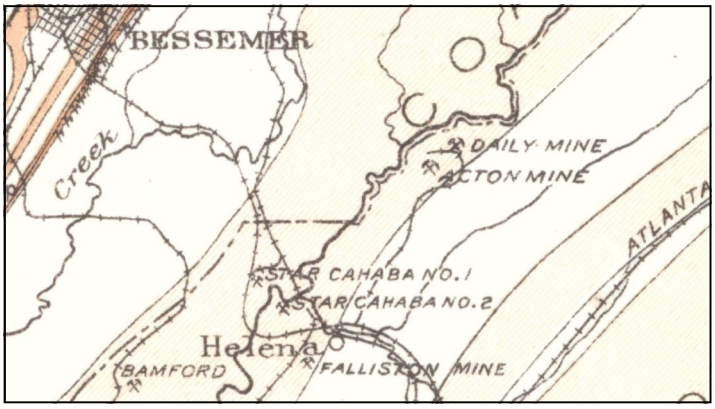
In the late 1960's John Harbert began acquisition of land for development of the Riverchase Community which would become one of the first "top end" mixed-use developments in metro Birmingham. This land had been the site of the first of Alabama Fuel & Iron's (AF&ICo) three coal operations in the Cahaba Coal Field. It was known as Acton, after the Acton family who have been in the area for generations and owned much of the land.

A number of persons and sources have supported the research for these articles. Thomas Denney has provided many documents from his extensive research online and in the Samford and Birmingham libraries. Ken Penhale has shared material with the author, as have Marv Clemons, Jeff Newman and others.

Ken Penhale and Marty Everse have authored "**Helena, Alabama**", published by Arcadia Publishing in their *Images of America Series*. In addition, Heather Jones Skaggs' "**Riverchase**", part of the same series by Arcadia, is a useful reference. Dr. James Sanders Day's "**Diamonds in the Rough**", (U of A Press, 2013) mentioned in Part I is a fine reference on the entire history of the Cahaba Coal Field and is a key reference for this area and era of Birmingham District's history.

The Hoole Library at the University of Alabama (Hoole) in Tuscaloosa holds the corporate papers of the AF&ICo. Research by Denney as well as the author have provided much information which was recorded in the annual Reports to the Stockholders of AF&ICo. These reports provide very readable narrative as well as financial and operational data on AF&ICo operations.

Development at Acton in 1906 represented a continuation of development in the Cahaba Coal Field that began in the southern limits of the coal field well before the Civil War. After the Civil War development continued south of Helena with spurs extended southward from the South & North Alabama subdivision of the L&N. As noted in Part I the Cahaba Field was mapped extensively by Joseph Squire. Henry F. DeBardeleben acquired coal property as part of the DeBardeleben Coal and Iron Company in 1890; these lands were sold to Tennessee Coal & Iron (TCI) in 1892 before much development was done.



In order to gain access to the Acton Basin coal, a rail spur was built from Helena extending for about 8 miles. From Helena it paralleled north of todays SR-261 and then curved north along Hale Bailey Branch (the line of today's US-31) toward the Cahaba River. Development on the property began in 1906, a year ahead of the AF&ICo's Henry Ellen area that became Margaret and Acmar and will be discussed in Part IV. Railway Age reported the spur line in February, 1907.

> **Louisville & Nashville.**—T. O. Harrison, assistant engineer, Birmingham, Ala., advises that grading is in progress on a branch of the South & North Alabama Railroad from Helena, Ala., to Acton Basin, eight miles, the contractors being Dunn & Lallande Bros. of Birmingham. This branch is being built for the purpose of developing the coal property of the Alabama Coal & Fuel Co. in the Acton Basin, which is the coal field lying just south of the Cahaba river and about eight miles east of Helena. W. H. Courtenay, chief engineer, Louisville, Ky.

The corporate records of AF&ICo reviewed at this point begin with the year 1916. Corporate records of the earlier years from 1906 through 1915 have not been found.

"Coal Mines 1910", published by B. H. Rose (Google Books) and "The Coal Mine Statistics for the State of Alabama, 1911", published by the Alabama Mineral Map Co. (authors collection) provide helpful information. For both years Acton produced about 250,000 tons of coal. This is about 800 tons per day or 25 daily carloads at 30 tons per car. For 1911, AF&ICo is shown as the

Year	No 1	No 2	No 4	Total
1906-	1909 -- No Data			
1910	142,000	101,000	4,000	247,000
1911	167,000	83,000	3,000	253,000
--	No Data			
1915			--	113,000
1916	79,000	60,000	--	139,000
1917	90,000	64,000	--	154,000
1918	64,000	47,000	--	111,000
1919	44,000	40,000	**No. 5**	84,000
1920	--	41,000	40,000	81,000
1921	--	38,000	24,000	62,000
1922	--	53,000	4,500	57,500
1923	--	* $29,000*	--	
1924	--	* $47,000*	--	
1925	--	* $10,000*		
1926	All	Acton	Operations	Abandoned

This table summarizes the operations at Acton based on the data found to date. Note the change from No 4 Mine to No 5 in the fourth column, and tons to dollars profit in the third column.

5th largest Alabama coal producer with about 750,000 tons total production; 2/3 of this amount came from the mines at Margaret and Acmar.

In 1911 the Acton No. 1 & 2 mines worked about the full year, some 300 days, and the No. 4 less than half of that. Cost per ton for mining was listed at 50 cents for No. 1 and 2 and 65 cents for No. 4. This data indicates that 50 to 65 miners worked in each mine. All three mines were ventilated by fans, which is important as the mines were "gassy" and good ventilation was a key safety factor.

Mining was accomplished by pick and shovel, and the explosives used were black powder and Monobel. ["There are also produced the "Monobel powder" and "carbonite," which are specially designed for use in fiery coal mines, as they contain a lower proportion of nitro-glycerine than dynamite, and, in addition, cooling mixtures.", Scientific American, 1907] This is judged be typical of most mines in the District based on a review of 1911 data.

On November 18, 1913, at 3:21 pm, the Acton No.2 mine suffered a large explosion which killed 24 of the 29 men in the mine at the time. Tragedies of this scale were not common but the company, the Bureau of Mines and the explosives manufacturers and a rescue train of the TCI company were prepared and responsive by about 9 pm beginning rescue efforts and a full investigation. Special rescue suits were used to enter the mine.

Thomas Denney provided the author a copy of the accident investigation and report which he obtained in his extensive research of the mining activities in the Birmingham District.

The explosion was reported to be caused by a black powder "shot"' [to remove in place coal] which ignited coal dust in the air, methane gas and additional kegs of black powder. The Chief Mine Inspector is quoted as saying that the basic cause was the use of black powder explosives for 1 to 3 shots being "badly placed". This is understood to mean that the shots "blew out" of the coal face exposing the coal dust to the explosion -- methane gas was reported as a contributing but minor factor.

It is understood that the practice at this time was for individual minors to place and fire explosives in their particular working areas. Although the timing of the shot firings was coordinated there was no overall supervision of this work. Thus a careless or poorly trained miner might be placing and firing shots.

It is stated in the reports that the AF&ICo management was very cooperative and wanted to improve safety. It is understood that black powder was banned after this event, and that other safety and training methods were employed by the AF&ICo.

In spite of the severity of the explosion and loss of life, the mine workings themselves were not badly damaged and work was resumed within weeks after the explosion and follow up investigation.

The next view we have of the operations at Acton is for the year 1916, from the Reports to Stockholders (1916, forward, Hoole). These reports are well written narratives which puts the company's operations into perspective rather than the data of the Mine Statistics reports.

The year 1916 reflected three major issues for the company: the national economy, labor issues, and shortage of rail cars. The market was flat in the first part of the year, but improved for the second half. However, the Alabama mines were in a slow period, while the mines of the eastern region were booming. Alabama miners were being recruited to the Kentucky and West Virginia mines. AF&ICo was forced to recruit "green" farm labor and train them, resulting in a loss of production efficiency. Finally, the railroads were not providing the cars needed to ship coal that was being mined at any given time causing work stoppages.

The significant response to the labor shortage was twofold. One being a raise in wages at three points in the year. This was reported as being "district wide" rather than limited to AF&ICo. Second was an effort to provide the miners with better living conditions through the use of mules to plow gardens and fenced yards. It is not clear how much of this was done at Acton versus Margaret/Acmar. This was aimed at building loyalty.

It is also clear that by 1916, the Acton mines were playing out. A review of figures provided indicates that the investment at Margaret and Acmar was close to $1 million in book value while that at Acton was about $250,000.

The statement is made that equipment is slowly being removed from Acton and to go to Margaret/Acmar. It is also stated that Acton property may have about 2 more years of production -- by 1916 it had been worked for about 10 years.

The Company engaged the miners in several ways aimed at self improvement, or mutual benefit. One was through First Aid training and competition. The miners had (mandatory) safety meetings and first aid training on a regular basis, plus the Company entered teams in Districtwide First Aid demonstration contests. It is noted that the Company had been self insured for "the last three years" against accidents.

Production at Acton totaled 113,000 tons for 1916 (all figures rounded) which was down from 132,000 tons for 1915. Profit on the other hand was somewhat higher at $47,000 (1916) vs. $42,000 (1915). This production was generated by No. 1 and 2 mines, with no mention of No. 4.

It should be noted that this profit figure is from three sources:

sale of coal, rents to miners, and sale of merchandise from the company store (commissary). Of this $47,000 profit, about $31k was from sale of coal, $11k from merchandise and $5k from rent. Thus, fully a third of profits were generated from charges to the miners themselves. No mention has been found that the miners were paid in company scrip or "clacker", but it seems that this was the general practice. Examples of AF&ICo clacker may be found online.

Coal sale contract renewals for Acton coal were being made at what were viewed as favorable terms. It is noted that sales contracts seem to have been made by coal name, i.e., "Acton" separately from another mine properties. For example, it appears that Acton coal was sold to the L&N, which served Acton, but not the Central of Georgia, which served Margaret/Acmar.

The map above is dated 1917, produced by the US Geological Survey (USGS). Their maps are generally found to be surprisingly accurate, so the village or "camp" is suggested as a reasonable representation. The blue at the top is the Cahaba River, the red dash line is the Shelby County boundary. Bailey Brook is close to the alignment of US-31 today; Bains Bridge is located near what we now call Old Montgomery Highway. Much of the area of this map is today part of the Riverchase residential development. Acton No. 1 mine would be right of the "n" in Acton, and No. 2 mine would be to the left of the "25" Section number.

The United States declared war on Germany on April 6, 1917. Soon after that the United Mine Workers entered Alabama stating (according to the shareholders report) that they wanted to organize the miners to assure that the US would get the best production for the war effort, and to assist Washington in reaching that goal. It is stated that there had been no Alabama union activity since the defeat of the unions in 1907-1908. It is stated that the AF&ICo made every effort to keep the union at bay, and to convince the miners to have nothing to do with the union. This included "discharging all who showed any desire for the union". Very few had to be discharged.

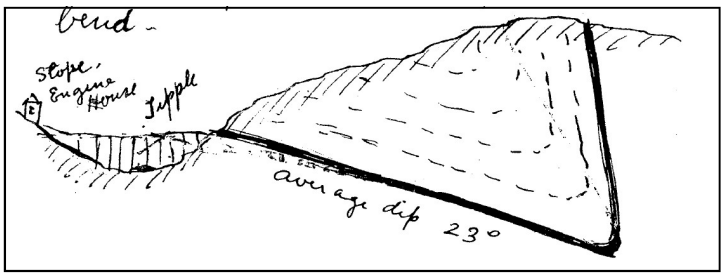
In addition the government was regulating the price of coal [and nationalizing the railroads]. It is stated that the operators in the Birmingham District were increasing wages rapidly, which impacted the cost of producing coal. The AF&ICo took an "active part in all of the hearings and negotiations in Washington with the Fuel Administration" and was "probably more responsible for the increase [in coal sale price] … than any of the other companies."

It is noted that accidents increased due to the "green" labor mentioned the previous year. The company made "settlement" payments for accidents of varying amounts depending on the severity. Apparently this considered the miner's loss of earnings, as the wage increases were felt to have increased the outlay for settlements -- some $10,000 over all properties, less than 10% being at Acton.

Notwithstanding all of the issues mentioned above, the company profit over 1917 was over $500,000. Acton No. 1 produced about 90,000 tons while No. 2 produced about 64,000 tons. Including coal, rents and merchandise as noted above, the total profit for Acton was about $140,000 versus $47,000 for 1916.

No significant further comments are offered for Acton except to say that the mine is "gradually being exhausted". Coal being mined is "from pillars and faulty places that heretofore were considered unworkable". It is predicted that another year of operation can be expected but at "reduced tonnage over 1917".

It is noted that there are many "faults" in the coal seams. When a fault is encountered it means that the coal seam is interrupted vertically -- sometimes the seam turns vertical and cannot be mined. Thus, many mines are limited by the fault line when it is encountered. Mines may extend left or right from the main access but at some point this increase in distance can impact efficiency and cost.



At Acton, the seams were followed from the outcrop at ground surface, usually on the northern face of a ridgeline, and then sloping downward to the southeast. Mining followed the seam downhill, with entries being extended to the left and right.

This sketch from the 1913 explosion investigation at Acton No. 2 shows the way the coal seam "dips" down (here at 23 degrees,

or one foot down for 2.3 feet forward). At the end of the seam, the coal layer turns vertical. This would end the productive working of the seam. Not every fault would end the work. In some cases the seam would be displaced vertically but would continue beyond the fault with only a slight change in elevation. This enabled the miners to continue to work while adjusting their elevation to follow the faulted seam.

The report to shareholders for 1918 indicates a continuation of government regulation and union attempts to organize labor at AF&ICo -- which fought hard against unionization.

In order to resist the unions -- who were successful at organizing other Birmingham District companies -- AF&ICo was either forced by the government or by circumstances to give concessions. Many companies were operating on an 8 hour day by this time, while AF&ICo was still on a 10 hour day. Government cost accounting "justified" a lower selling price for the 10 hour day due to lower cost, and the opposite for the 8 hour competitors. This placed the company at a price disadvantage in terms of cost, but it would seem that the lower selling price might have made the coal more attractive in the market. It is understood that AF&ICo contracted much of their sales rather than being in the open market, so it is not clear how this impacted overall.

The report of 1918 shows Acton with a profit of some $67,000 from No. 1 and No. 2, including about $11,000 for commissary and about $3k for rents. Thus some 80% of profits derived from sale of coal.

The company made great efforts to have the miners work harder for the good of the war effort -- which was also good for the company. It is stated in the report that after the Armistice in November, 1918, that the miners became very lax in their efforts. In addition, the flu epidemic of 1918 hit the mining communities in October which also impacted productivity.

Acton No. 1 produced about 64,000 tons and No. 2 about 47,000 tons. All of this production is noted as being from "pillars and stumps in a retreating operation". It is interesting to note that these robbing operations and the ensuring settlement caused cracks and paths for surface water to enter the workings and slow the work, requiring extra pumping. In addition, the robbing is noted to require a systematic organized approach which reduces the number of work areas, and therefore reduces production. This work is noted as being more hazardous with a resulting increase in injuries and fatal accidents -- 90 accidents with 5 fatal.

Given the short remaining life expected, it is noted that maintenance is being reduced, and housing and structures will require maintenance costs that are being put off.

In an effort to prolong the operations at Acton, prospecting was done and successfully located a new seam (Thompson) 125 feet below the current seam being worked. A new mine (No. 5) was started beneath No. 1 mine and expected to produce 450 tons per day or about over 100,000 tons per year. It was stated that cost of development should be no more than $50,000.

The year of 1919 saw the impact of postwar production cuts, returning troops impacting the labor market and strikes. Consumer demand for Birmingham District coal was down and stockpiles of commercial customers were large. Many producers resorted to price cutting even below governments last wartime prices. In part response to this the company outsourced their sales to their former sales manager who operated on a straight 5% commission. This arrangement was found to be satisfactory, although it was ended by 1925.

In a further effort to stabilize the market, AF&ICo helped to organize a Statistical Bureau of the Birmingham Coal Operators. Any member had access to compiled market conditions rather than rumor, which was expected to improve business decisions.

Later in the year 1919, the railroads and others began renewing contracts. Many of these were at reduced rates, but the AF&ICo rail customers, Central of Georgia, L&N and Frisco, were willing to renew at government prices with wage clauses helping to protect AF&ICo from wage increases. Rail car shortage continued to be a problem particularly with the L&N which impacted Acton operations.

In addition, a national coal strike was called for the first of November, 1919. AF&ICo was not unionized, and it is stated "we threw every safeguard possible around our operations, holding mass meetings with our men, and worked up a very strong spirit among them against the Union and the strike call". This resulted in an increase in production, but the company also had to anticipate that a wage increase was likely to be granted by Washington. In response, a 14 % wage increase was given much to the surprise and pleasure of the AF&ICo workforce. The Fuel Administration agreed that for contracts with valid wage clauses, the full wage increase could be passed on the customer. As might be expected the railroads didn't like this but eventually were expected to give in.

Overall, Acton No. 1 and 2 produced a profit of about $52,000 including over $9,000 for commissary sales or about 17% of total. No. 1 mine produced about 44,000 tons and was exhausted. No. 2 produced about 40,000 tons.

The new mine (No. 5) under No. 1 was stated to have high expectations of replacing No. 1, but the seam was only 42" thick. Production at the end of 1919 was about 150 tons per day with

equipment being relocated from No. 1 and a new No. 5 tipple being erected on the same rail spur serving No. 1.

As a result of the anticipated success of the new No. 5 mine, a general renovation was performed on the housing in Acton. Total development costs for No. 5 which were expected to be $50,000 turned out to be about $85,000. Production of No. 2 mine was expected to hold for the new year (1920).

The report for 1920 starts with an update on the National Strike. President Wilson settled the strike with the appointment of a Bituminous Coal Commission which disregarded the previous 14% increase and replaced it with a 27% increase effective April 1, 1920. Wage clauses in sales contracts protected the company although it is stated that they suffered from the inefficient production costing some 10 cents per ton.

The United Mine Workers saw all of this as an opportunity to strike again in May to force the operators to recognize the Union. The Coal Operators responded by forming a committee to fight the strike and assessing members 10 cents per ton to create a fund to assist the member operators.

The report states that by the end of the year 1920 the Operators had won a complete victory over the Union and eliminated the threat of the Mine Workers for years to come. The cost of this to the Company included the (10 cent per ton) assessment of some $39,000 as well as cost of "guns, extra deputies, etc." for "our own protection."

During the summer and fall of 1920 there was increased demand and a "runaway market" with prices skyrocketing. The company refused to sell at these high prices and struck to its contract prices realizing "these high prices would react and prove harmful to the industry" in the long run.

During 1920 Acton No. 2 produced a profit of about $30,000 including commissary sales of about $3,500. As stated above, No. 1 mine had been exhausted the previous year and the new No. 5 mine had started production but was not stated to show a profit although nearly 40,000 tons were produced. The company's bookkeeping standards would charge the development costs against production, but profits were expected in 1921. There were no fatal accidents reported for 1919 or 1920 although a total of 86 accidents were reported at Acton in 1920.

The report for 1921 indicates a poor market and strong competition for the year. It was reported to stockholders that many coal operators made no profits for the year.

The company continued to pay its assessment to the operators strike fund. It was noted that many operators, in spite of the victory over the Union, at the end of the strike lowered wages in spite of "the promise to their labor, the public and the Governor". AF&ICo made "one slight reduction" and assured employees that there would be no further reduction until April 1, 1922, agreed to in the strike settlement by the government.

It was stated to the stockholders (by DeBardeleben) that although holding wages worked a hardship as far as profits, it would go a long way to retaining loyalty of the workers. Total profits for the year were just over $400,000 on about 690,000 tons mined.

Acton No. 2 produced about 38,000 tons in 1921 and No. 5 about 24,000 tons, but these totals were based on about 150 days production or about half time.

Acton No. 5 was shut down due to the higher cost of operation and coal from old No. 1 outcrop was handled over the No. 5 tipple. No. 5 would reopen "as soon as the market takes a healthy turn."

Accident costs were being handled (since 1920) under the State Workers Compensation Act, which the company found to be very satisfactory. Acton had only 19 accidents although there was one fatality -- consider less tonnage, less work days and fewer workers in the decrease of accidents.

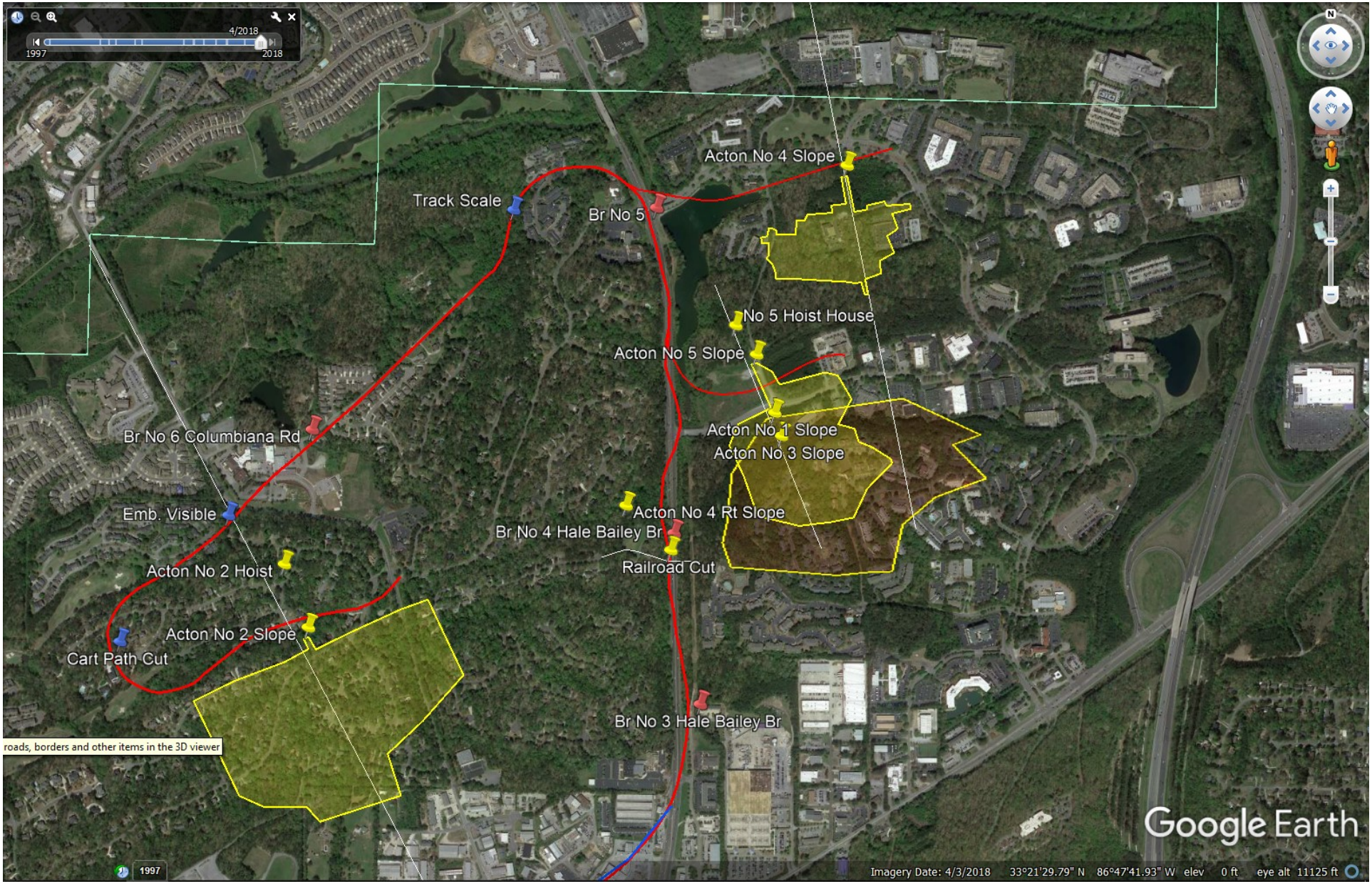
The report for 1922 states that the company was on partial time operation through the month of May, due to limited market. However, due to a strike in the "central competitive field" [not clear but assumed to be KY/WVa], beginning in June, business increased dramatically. The rest of the year was on full time operation except at Acton where L&N rail car shortages reduced workdays. Apparently coal mined was never stockpiled on site.

Acton No. 2 produced about 53,000 tons, but No. 5 only about 4,500 tons. No. 2 operated less than 180 days and No. 5 less than 50 days. Nevertheless, the company overall shipped over 1 million tons of coal in 1922. The Acton division showed a total profit of only about $21,000 with about 60% coming from coal, about 29% from commissary and 11% from rents. No profit was reported for No. 5 and the cost per ton was about $4 per ton versus about $2.60 for No. 2. No. 5 was not performing well.

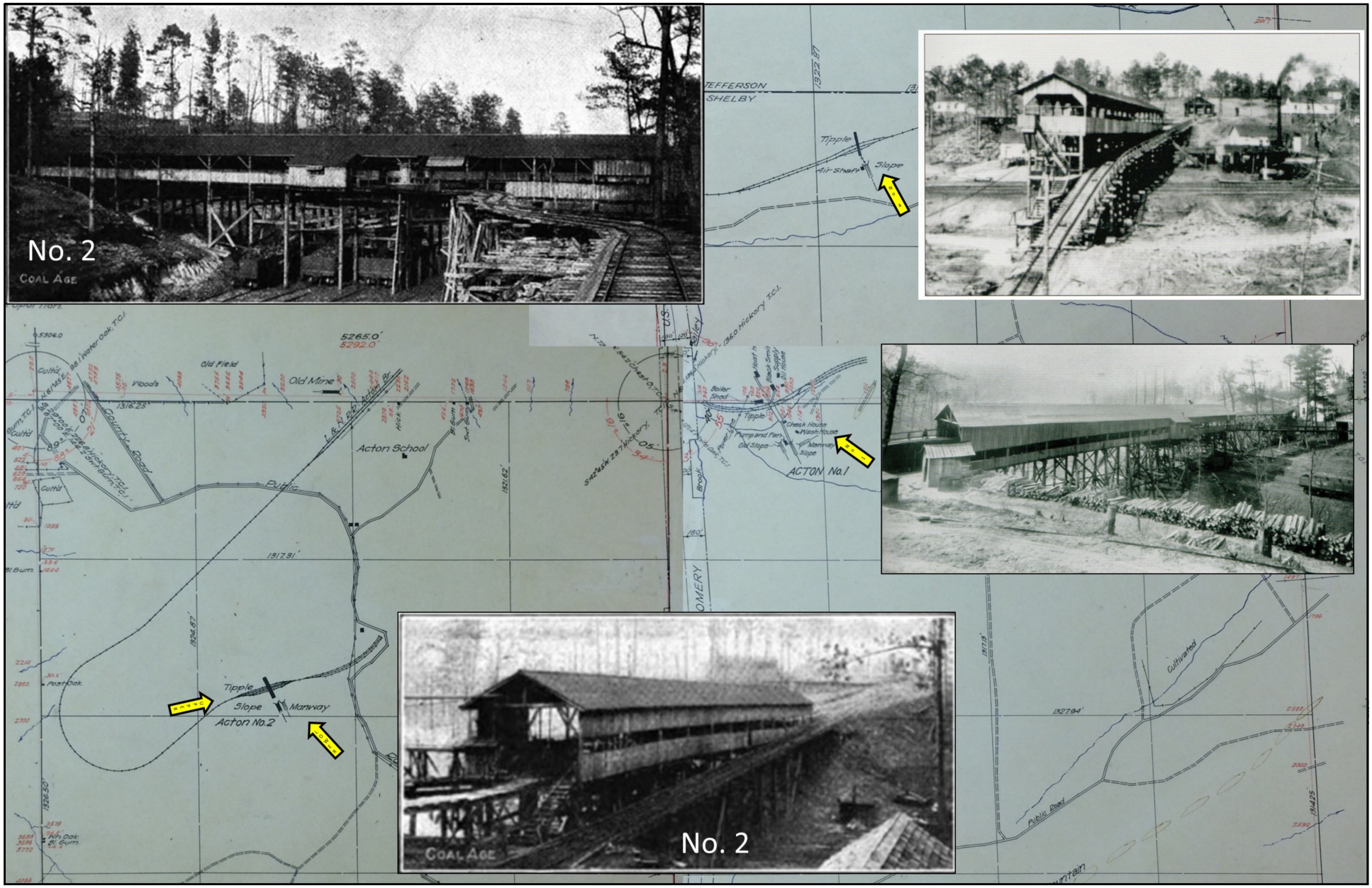
Acton's 1922 accident experience was less than 1921 with no fatalities. A severe gas explosion at Acmar resulted in a decision to abandon open lights for the miners in favor of battery operated lights. Each miner was charged 10 cents per day for the company to maintain and charge the batteries.

Acton was reported as being on a "robbing basis, producing from 250 to 300 tons per day" expected to continue on this basis for about another year. Based on the shortage of rail cars it was recommended to idle the No. 5 mine.

In 1923 Acton produced a profit of about $35,000 with 83%



This map shows the current development at Riverchase with the Acton Spur overlaid in red. There were spurs built, likely by the AF&ICo, to serve the No 4 mine and the Mines at No 1, No. 3 and No. 5. The shaded areas indicate the coverage of the mine headings. Mine maps used are courtesy of Thomas Denney. No 1 is estimated from the No. 5 map. Note that No. 1 mine was in a seam above the later developed No. 5 Mine, which as about 125 feet lower than No. 1. No information has been found for the No. 3 mine to date. The coverage of No. 2 mine is most likely only partial as the information is taken from a 1913 map relating to the explosion in that year which killed 24 miners. It is expected that the coverage of the No. 2 mine is larger in area.



This map reflects the same coverage as the one on the previous page. The utilizes Tennessee Coal & Iron plat maps for the Acton property. The plat sheets show detail for the plant layout mines at No. 1, No. 2 and No. 4. This enables the determination point of view, indicated by the yellow arrows. The tipple structure images for No. 2 come from Coal Age magazine, provided by Thomas Denney from local library research. The No. 4 image are published in both Penhale and Skaggs books, and No. 1 images are published in Skaggs.

coming from coal, 11% from commissary and 6% from rents. Acton accounted for only 6% of the total profit of the company.

The first half of 1923 was reported to have all locations at full time work and good profits. The market slumped in July and "mines were forced on partial time". This increased cost of production in the face of falling prices. Earnings for the second half of 1923 were only about half of the first half.

In 1924 Acton No. 2 produced a profit of about $56,000, with 85% from coal, 8% commissary, and 7% rents. Acton accounted for about 8% of company profits. Acton No. 5 did not operate. Depreciation for both of the Acton mines was charged against the operations of No. 2.

Market conditions were reported as being "extremely bad for the first six or seven months" -- competitors are noted as being in the same circumstances. Demand for coal improved however throughout the second half with heavy demand by year end.

A new practice implemented in 1924 was presentation of 5 Year (increment) Service pins to hourly employees. Over 600 employees company wide were noted as qualifying for these pins for which the company spent $2,650.

In 1925, Acton accounted for about $23,000 in profit with 44% from coal, 39% from commissary merchandise and 17% from rents. Capital expense at Acton was about $25,000 which is assumed to have been charged to the operation and reduced the profits. Total output of the company was over 1.2 million tons which was a new record.

In 1926 it was noted that "we have permanently abandoned our Acton operation, having exhausted the original seam of coal". Further, the effort to establish a new No. 5 mine, "one of the smaller under-seams proved to be not only unprofitable but we could not establish this coal on the market" due to poor quality.

It is noted in the report that not only equipment but 39 houses were moved to other locations, the houses divided between Acmar and Overton.

The right to mine remaining coal at Acton was leased to an operator who paid a royalty of 30 cents per ton, operating a "wagon mine" (no railroad). It was stated that this would likely produced about $200 per month income for about a year or more.

As noted in Part I the L&N RR received permission from the ICC to close the Acton spur line in September, 1927. (ICC FD 6463). It is assumed that track would have been removed at this time.

It's been 90 years since the Acton Spur of the L&N was abandoned and removed. Today several areas of roadbed are visible -- one roadbed cut is used as a golf cart path. An embankment is visible next to the entrance to Chase Plantation. A track scale pit has been located, as well as a bridge abutment. A roadbed cut is located adjacent to US-31. The track chart below covers the Acton end of the spur and was provided by Thomas Denney, courtesy of the University of Louisville. The track scale pit image is by the author with location help from Bill Dixon of Riverchase.