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North Portal of Jenson Tunnel

1998

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The Tale of Three Tunnels

By

Richard E. Napper, MMR

Part 3

Jenson Tunnel

The Back Bone or Jenson Tunnel is located on the Central Division, Arthur Subdivision Mileposts 427.9 to 428.1. The tunnel is in the State of Oklahoma as the state line is milepost 427.2 and it is located between Station #426 Milepost 426.3, Bonanza, AR and Station #429 Milepost 429.3, Jenson, AR. The tunnel is 1,050 Ft Long.

In The Bulletin, National Railway Historical Society Volume 40, Number 5 1975 Lawrence Gibbs wrote:" " The Only RAILROAD TUNNEL in OKLAHMA Lawrence Gibbs

Oklahoma,"...where rolling wheat can sure smell sweet…"

A state of pastureland and prairie—-

And one railroad tunnel.

It isn't located out in the flatlands of the Oklahoma Panhandle where the highest point in the state, Black Mesa, tops off at 4,973 feet.

Instead, it's situated I the southeastern part where there are rolling hills and some "mountains" with elevations of less than 500 feet.

The tunnel is used daily by the St. Louis-San Francisco freights moving between Fort Smith, Ark., and Paris, Tex. Large, modern boxcars have to be routed another way because of the tunnel's limited dimensions, but up until a few years ago there wasn't anything it couldn't handle.

Because of the expense of tunneling through mountains, most railroads tired to avoid them and in Oklahoma most did. All except the Fort Smith & Southern Railway.

Until 1885 only the Missouri, Kansas & Texas (Katy) and the Atlantic and Pacific (use to be Frisco, now Santa Fe) railroads had been allowed to construct lines through what is now Oklahoma. They began operations in 1871-72.

In the surrounding states, the building of railroads flourished at a rapid pace. After about a dozen years, the lack of railroads in the Indian Territory began to cause more and more irritation because of the gap in transportation between the states adjoining Indian Territory.

During the first session of the 49th Congress ten special bills provided rights-of-way across the Indian Territory. These resulted in the construction of several major lines during the years to come.

The Fort Smith & Southern was incorporated in Arkansas on February 13, 1886. The corporation had plans to build from Fort Smith, Arkansas, across the southeastern tier of counties in Oklahoma's Choctaw country, to Hugo, and on to Paris, Texas during the next two years.

The FS&S purchased its own right-of-way and claimed no land grants along the way.

(The FS&S should not be confused with the Fort Smith & Western, which was incorporated January 25, 1899, in Arkansas to build westerly to a point east of Guthrie, Oklahoma. It reached Guthrie and leased Katy trackage

into Oklahoma City. About all that remains today of the FS&W is the nearly-collapsed depot in Prague, Oklahoma.)

As they drew up plans for their line to Texas, the Fort Smith & Southern engineers were unable to find an economical route around one particular mountain on the Oklahoma-Arkansas state line.

They had to go through it. In doing so, they constructed the only railroad tunnel in Oklahoma. Blasting began late in 1885 or early 1886. the date 1886 appears just above the keystone on the tunnel portals.

A year and ten days after the FS&S was incorporated it was sold to the St. Louis-San Francisco, which had been organized September 7, 1876, and incorporated under Missouri statues September 10, 1876. The 144.4 miles of railroad between Fort Smith and the Oklahoma-Texas state line was completed by the Frisco in 1886-7.

The Frisco calls it Jenson Tunnel today, but early-day plans drawn by the FS&S now in the Frisco files labeled it "Backbone Tunnel." it was bored through Backbone Mountain near Jenson at Mile Post 427.9.

Frisco (FS&S) blueprints show the tunnel to be 1,180 feet long and constructed through solid rock. It has an average width of 14 feet, but reaches 20 feet in some places, and an average height of approximately 20 feet above the top of rail, although it reaches 24.7 feet at one spot.

More than half of the tunnel's interior (629) feet) is unprotected rock, just about right in the center. Workmen had to put in 383.5 feet of stone walls with brick arch, 62 feet of stone walls with timber arch and 118 feet of timber plumb posts and timber arch on the remaining portions at either end.

According to Frisco Officials, Jenson Tunnel is located inside the Oklahoma state line-but just barely (about 2000feet). In Fact, at one time, Oklahoma lost its only railroad tunnel. During the dispute with Arkansas over the western boundary of the state and neighboring Choctaw lands, the area was switched to Arkansas. With Statehood, however, Oklahoma got the land—and the tunnel—back."

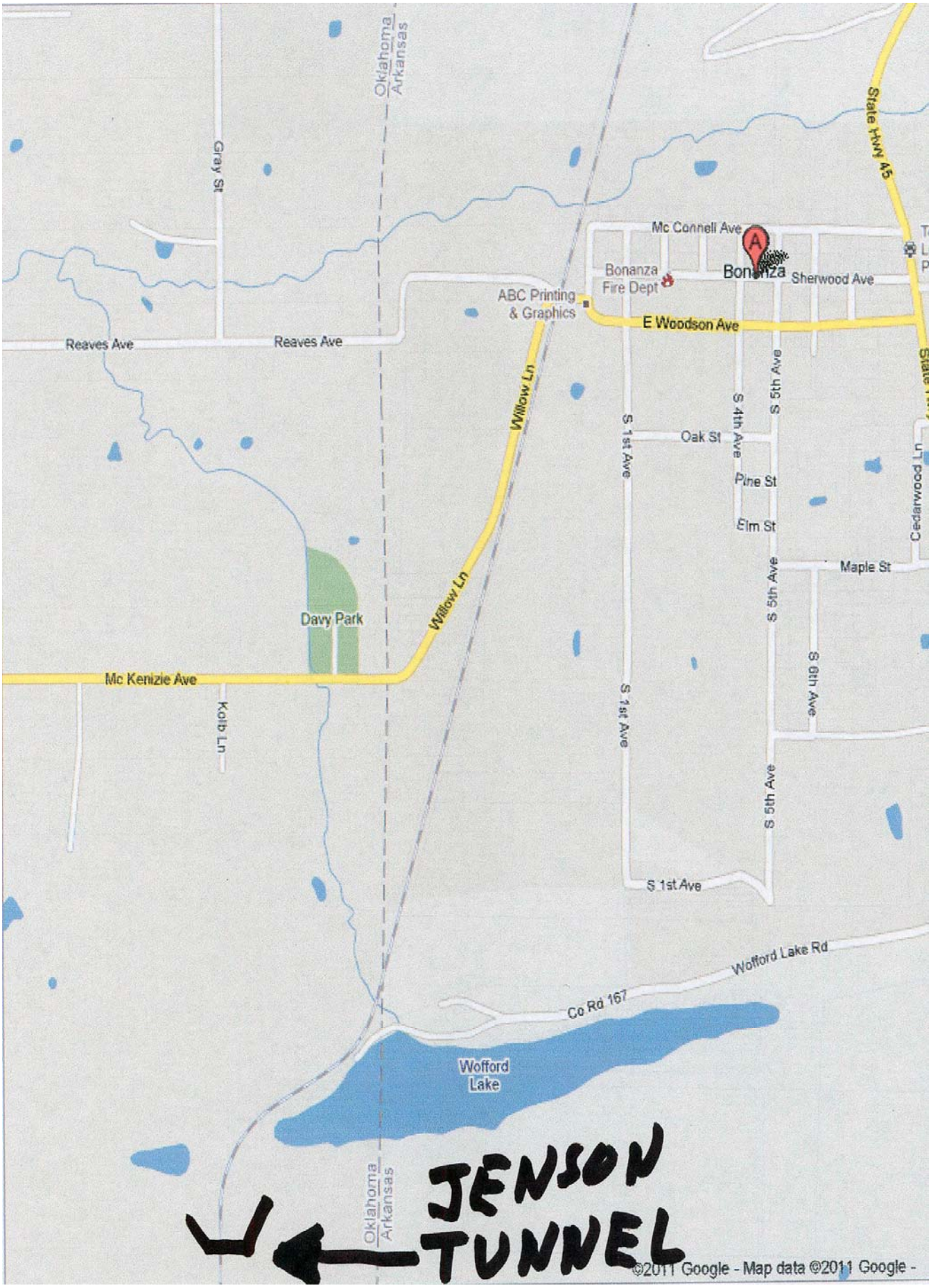
I read somewhere that the reason the Jenson Tunnel was built in Oklahoma was because convict labor was used and Arkansas would not allow it, but Oklahoma would. In no accounts that I have been able to find, do they ever mention using convict labor for building either Winslow or Jenson Tunnels. I just do not believe it.

The reason the Jenson Tunnel was built in Oklahoma is very simple, Topology. If you look at the Google map that follows, you will see there is a Lake in the way, so the railroad built around the lake , thus putting the tunnel in the state of Oklahoma by about 2000 feet.

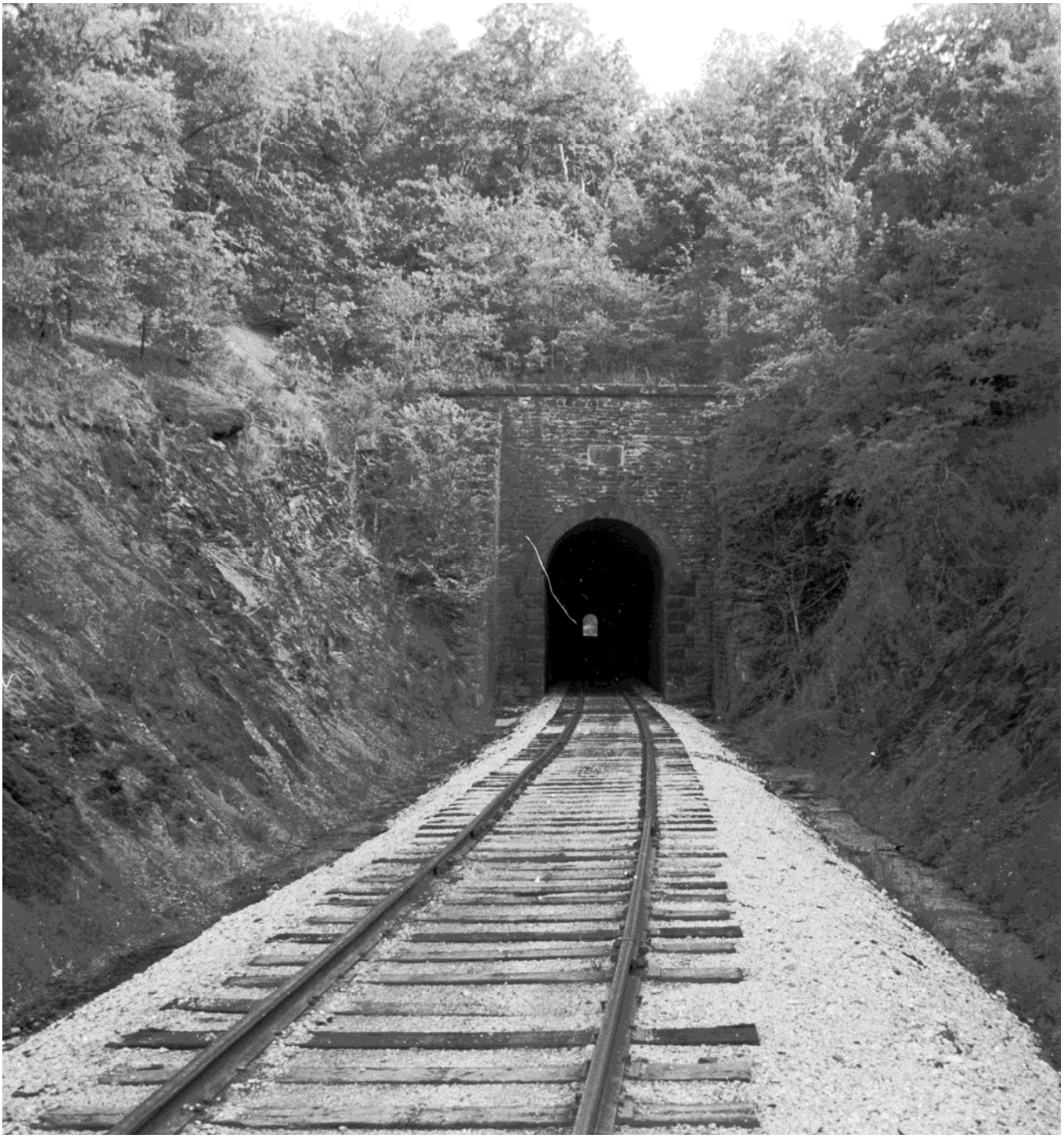
You are not going to visit the tunnel without about a mile walk to get to either portal. Back in 1988 when I and my parents visited the area, I tried to drive as close to the tunnel as possible. That would be county road 167, Wofford Road, but past that road is a gated community with no access. If you drive on Highway 45 and go over backbone mountain you can then turn west on a dirt road which will intersect the tracks about 1 1/2 miles south of the tunnel. That is a close as you can get from the south.

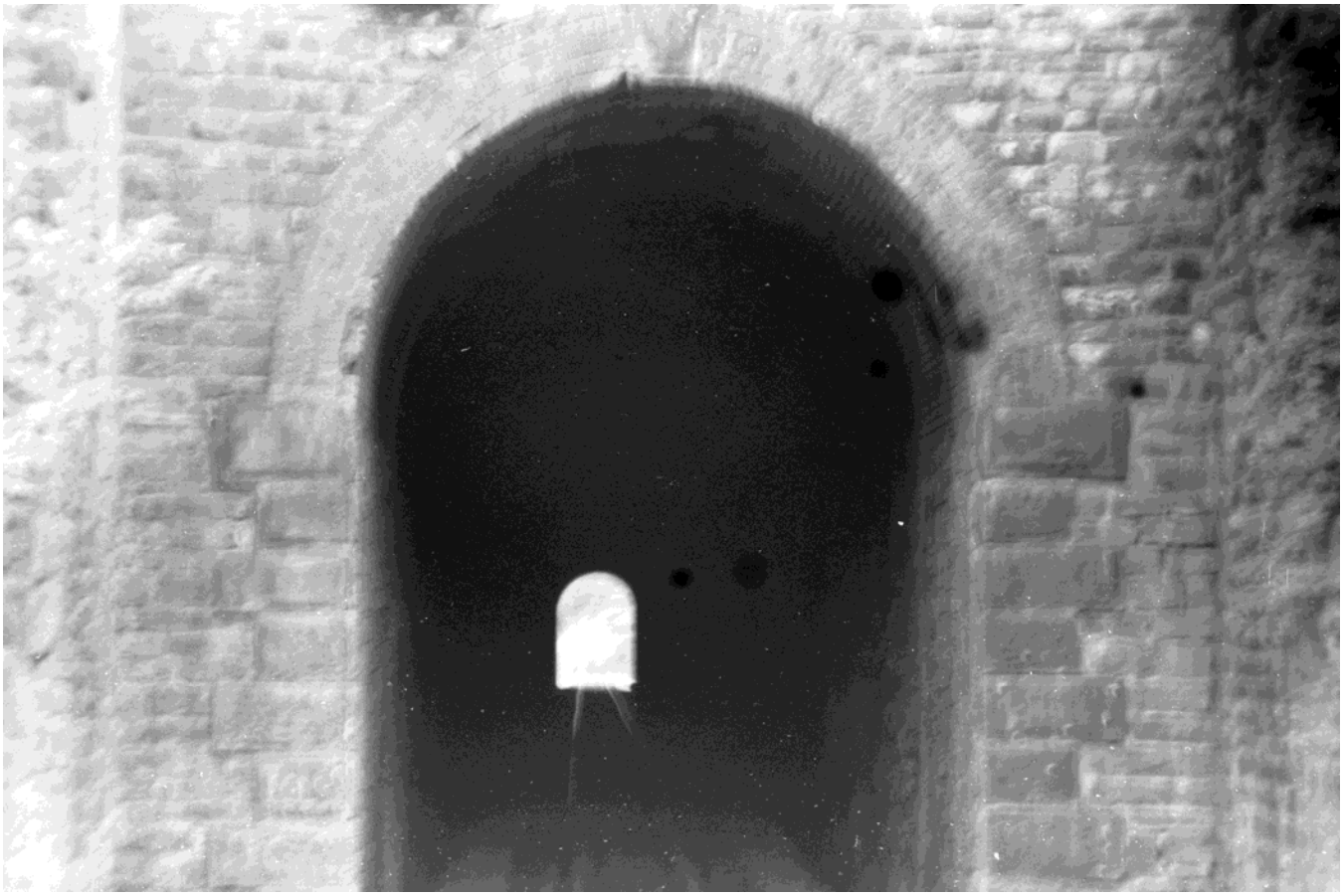
I finally ended up getting as close as I could to the North Portal and walked to and through the tunnel to get pictures of the south portal. Here is how I did it. Take East Woodson Ave west through Bonanza, AR, cross the tracks and turn south on Willow Lane. At the point where it turns west is trash dump. I parted there and walked about 1 mike to the tunnel which is across the state line and around a s-

curve.

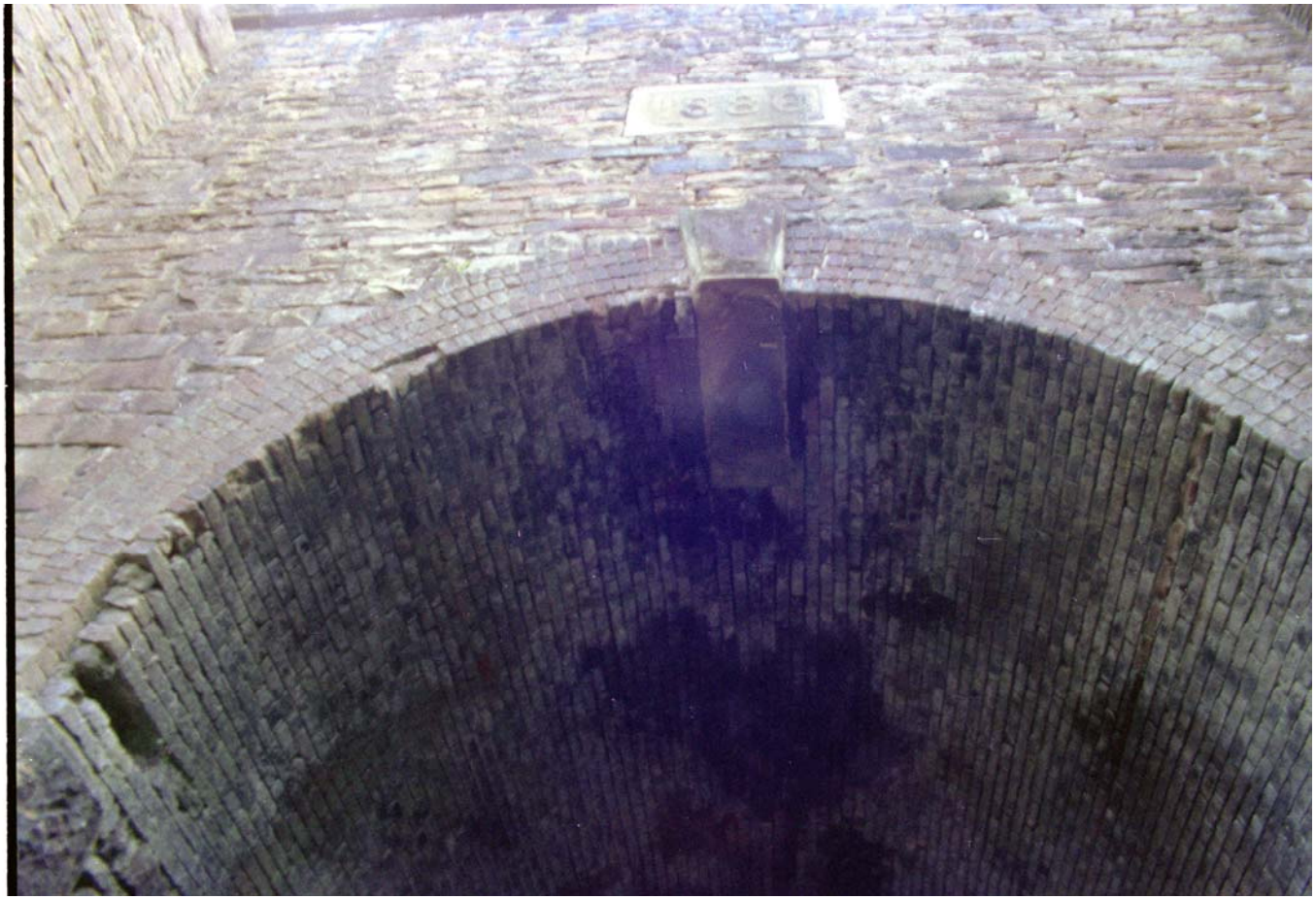

Oklahoma
Arkansas
Gray St
State Hwy 45
Mc Connell Ave
A
Bonanza
Bonanza
Fire Dept
Sherwood Ave
ABC Printing
& Graphics
E Woodson Ave
Reaves Ave
Reaves Ave
Willow Ln
S 1st Ave
S 4th Ave
S 5th Ave
Oak St
Pine St
Elm St
Cedarwood Ln
Maple St
Davy Park
Willow Ln
Mc Kenzie Ave
Kolb Ln
S 1st Ave
S 5th Ave
S 6th Ave
S 1st Ave
S 5th Ave
S 1st Ave
Wofford Lake Rd
Co Rd 167
Wofford
Lake
Oklahoma
Arkansas
JENSON
TUNNEL
©2011 Google - Map data ©2011 Google -

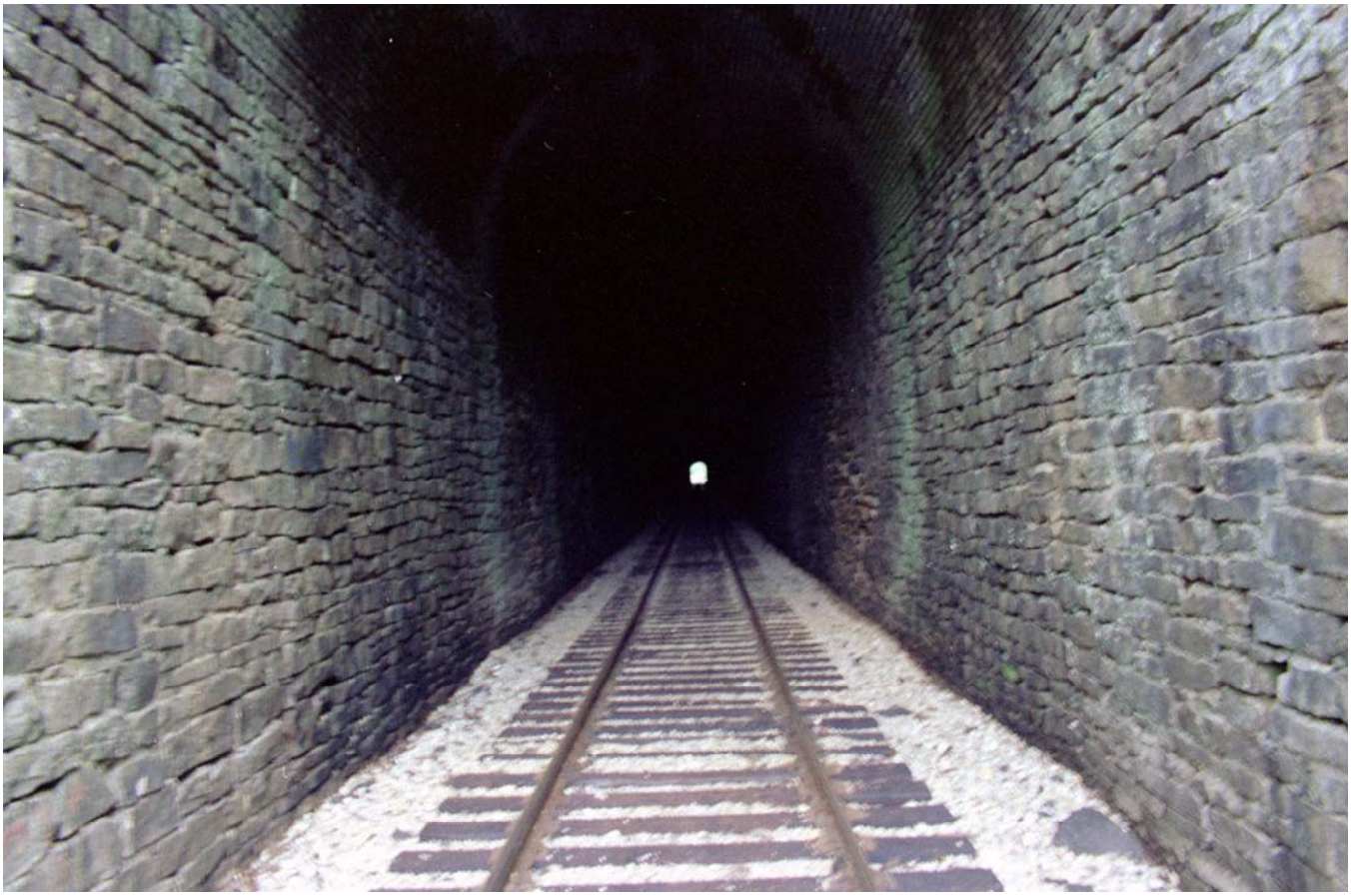
North Portal of Jenson Tunnel Richard E. Napper, 1988





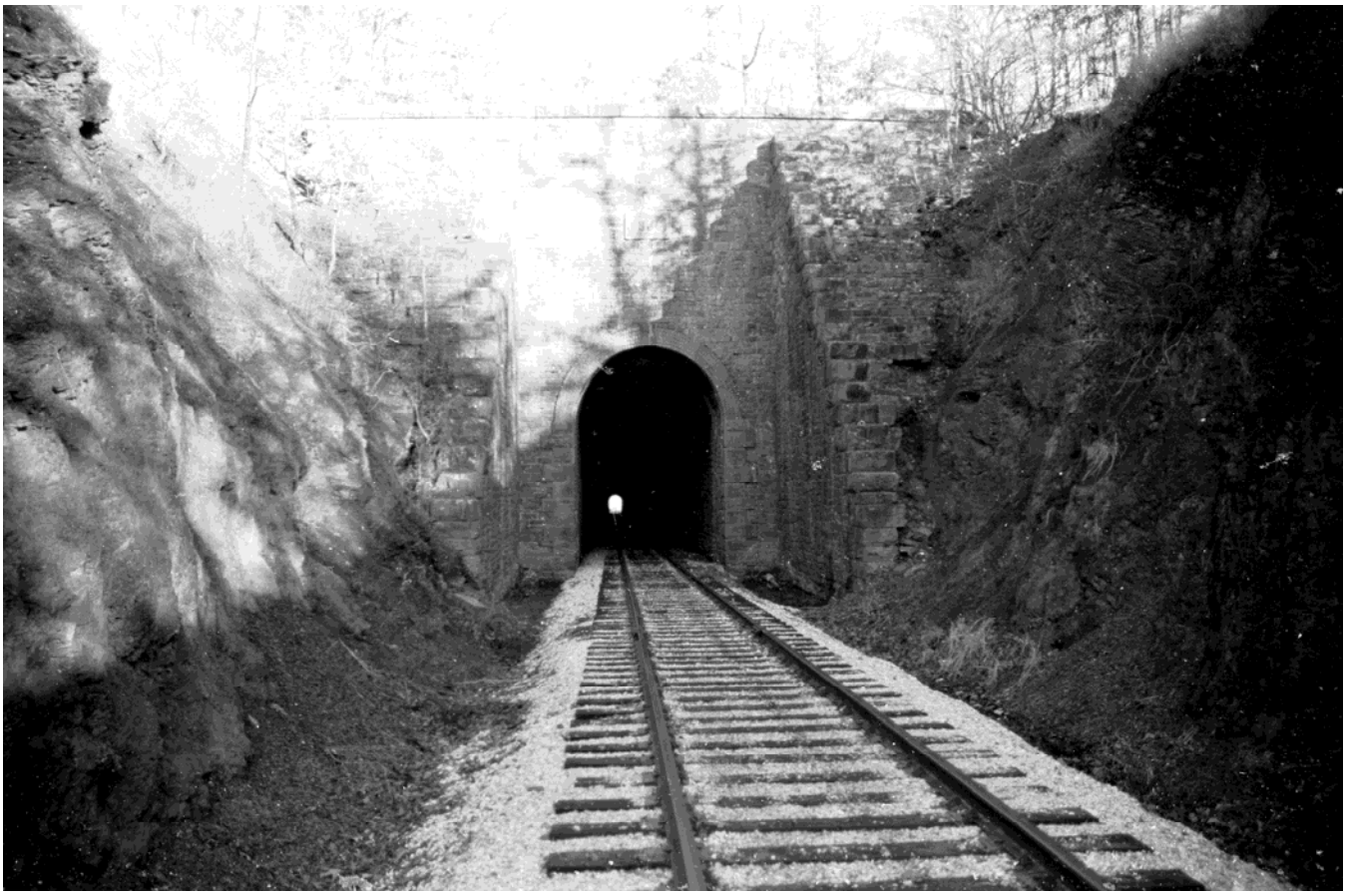
Oklahoma/Arkansas State line sign near Jenson Tunnel

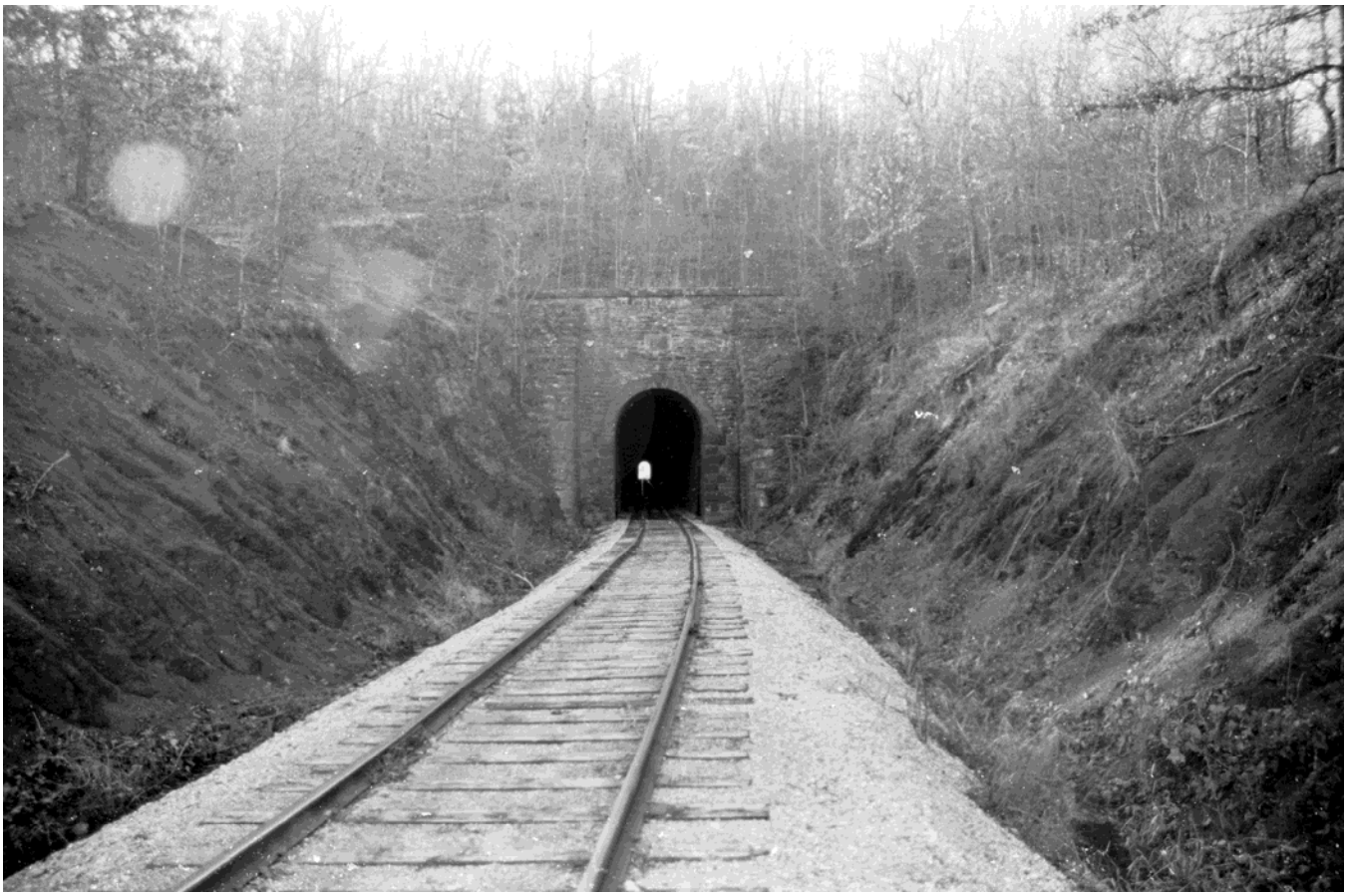


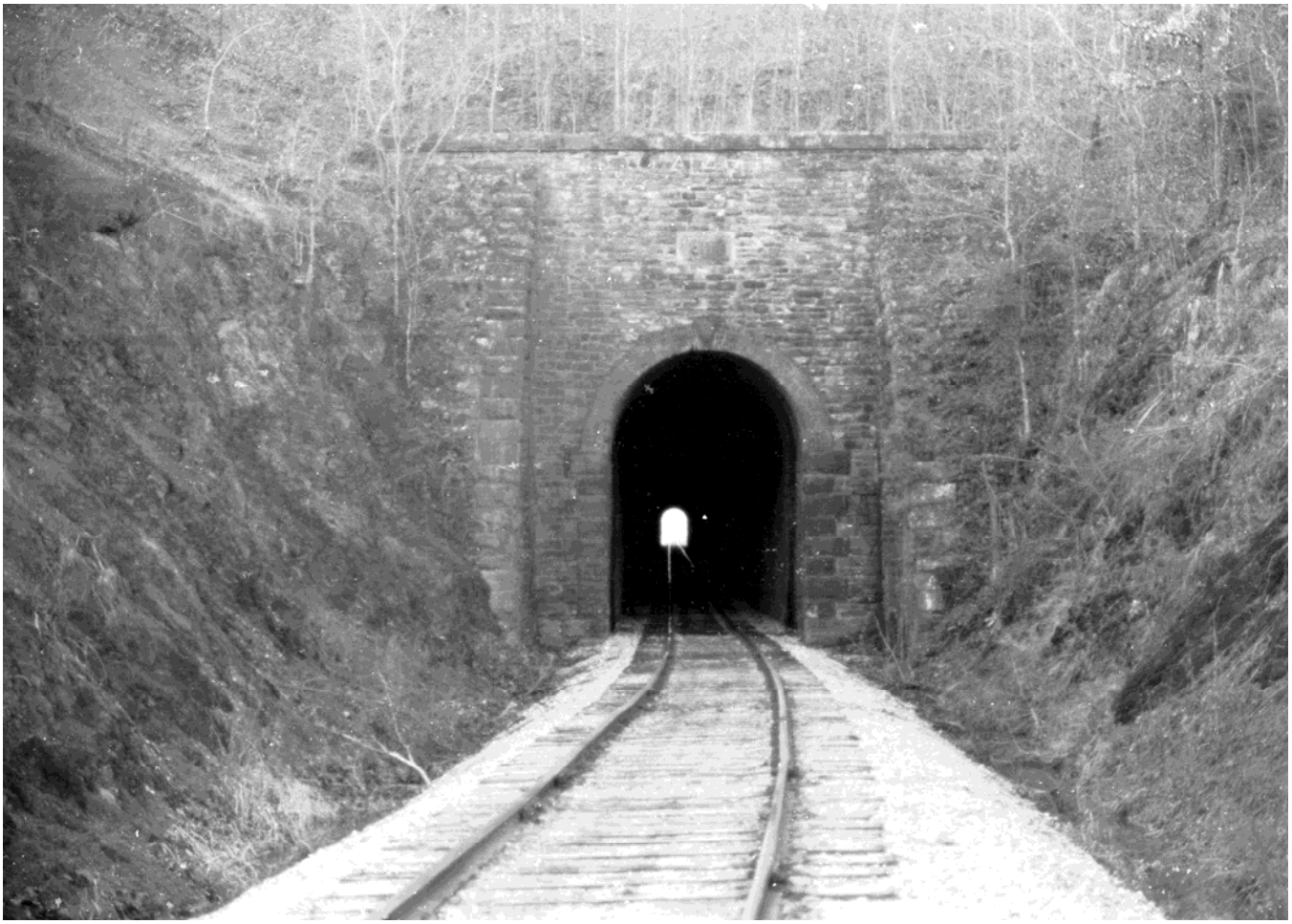


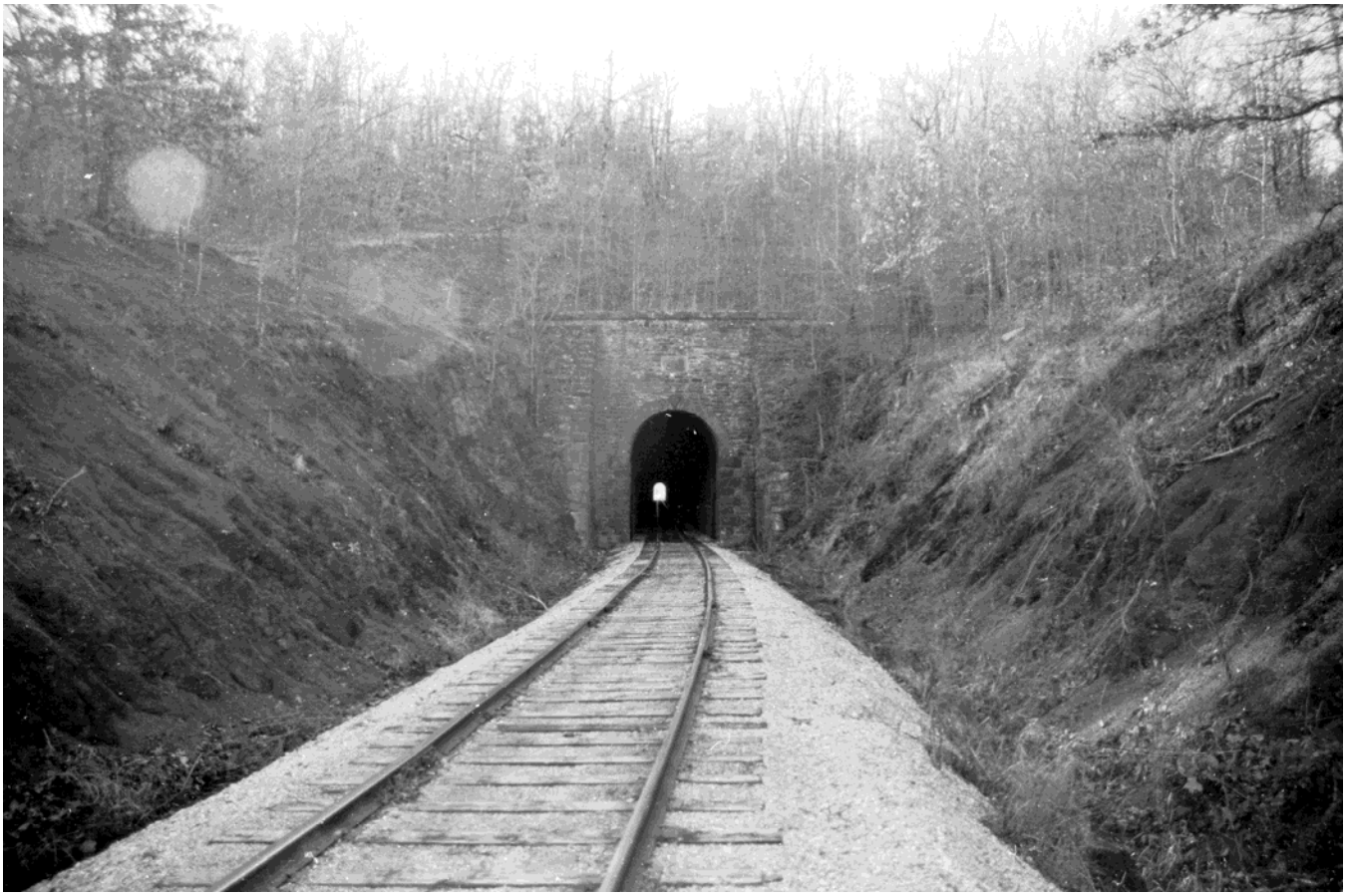
Photos by Chuck Buckner

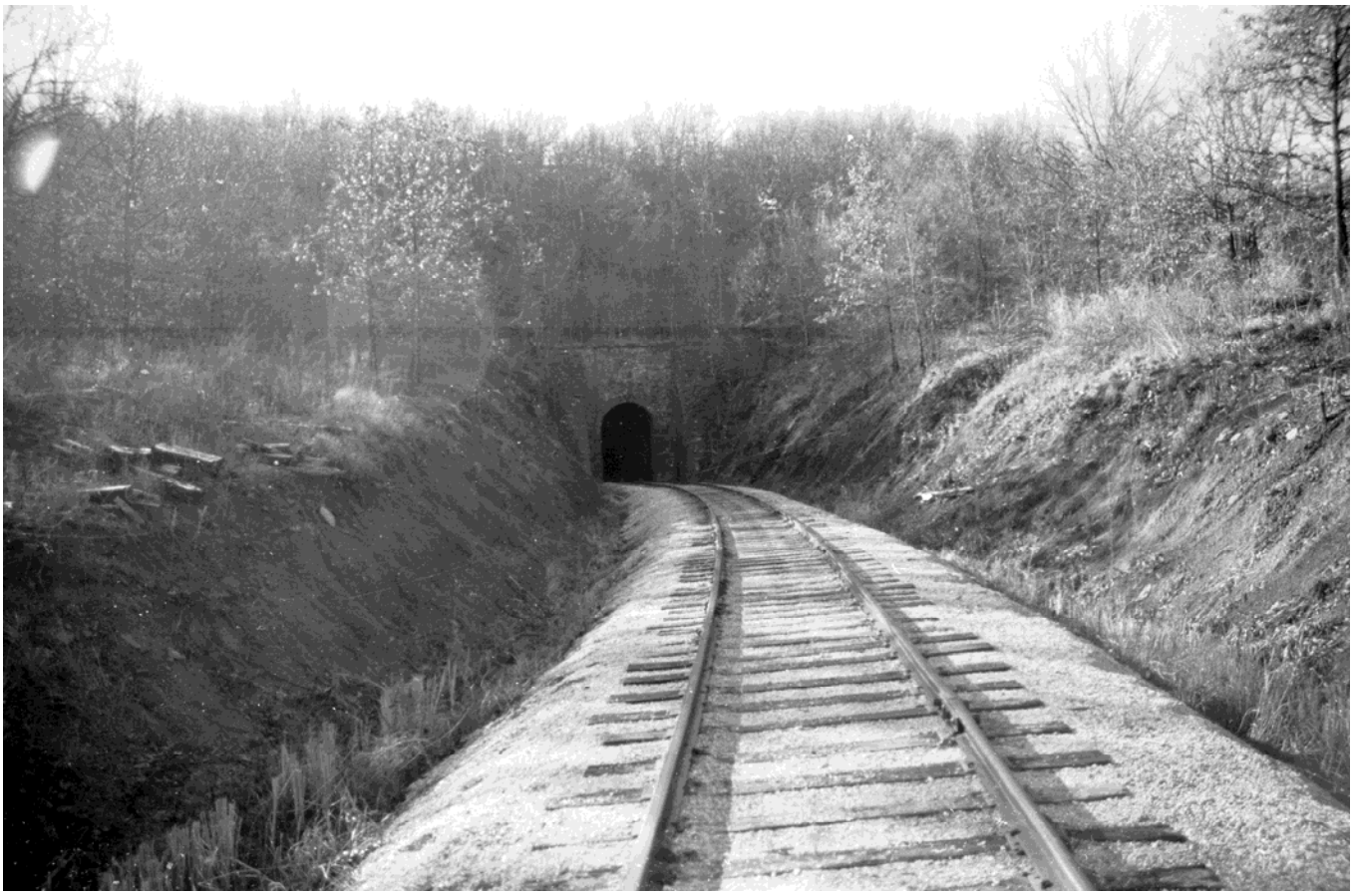
Now the South Portal of Jenson Tunnel





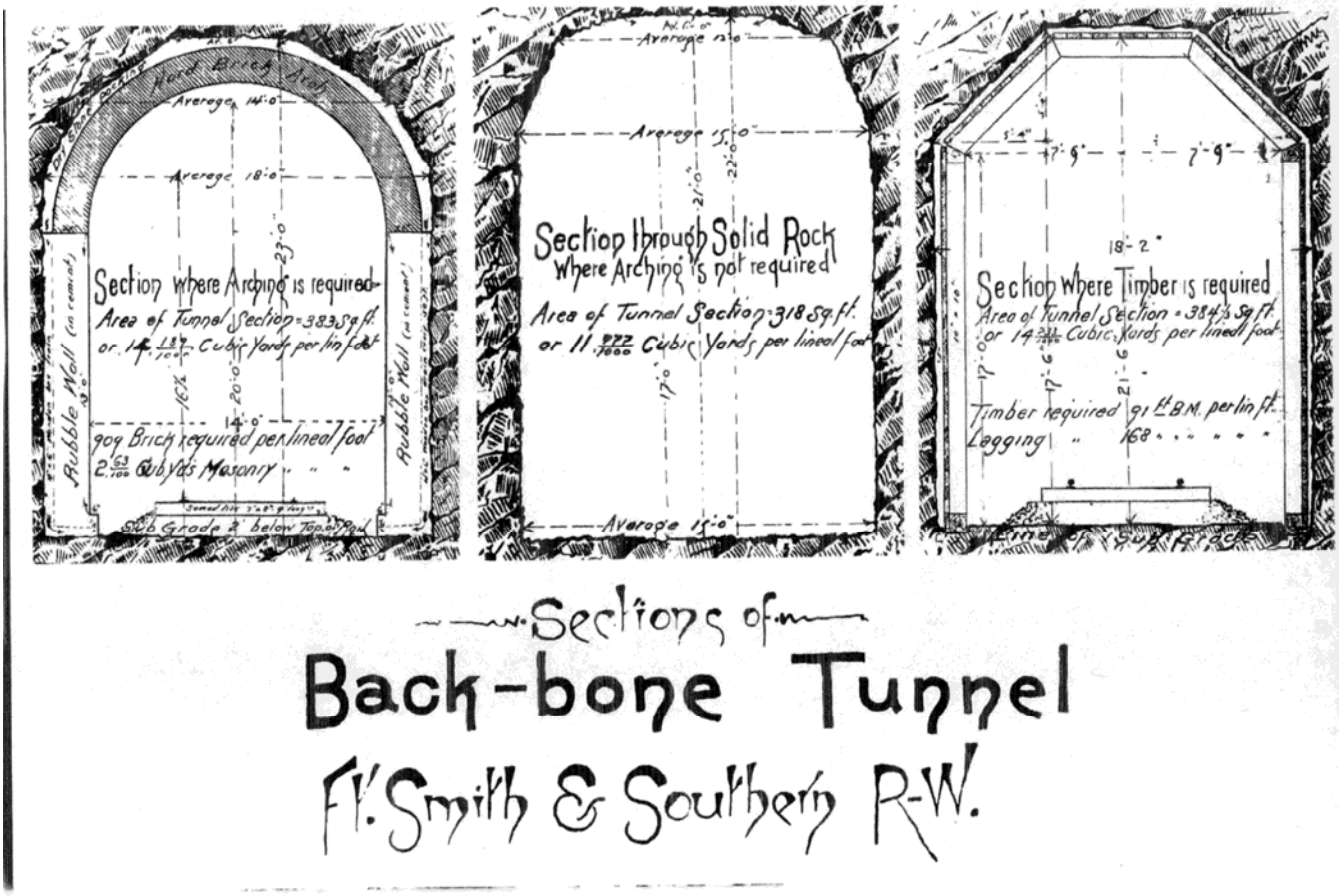




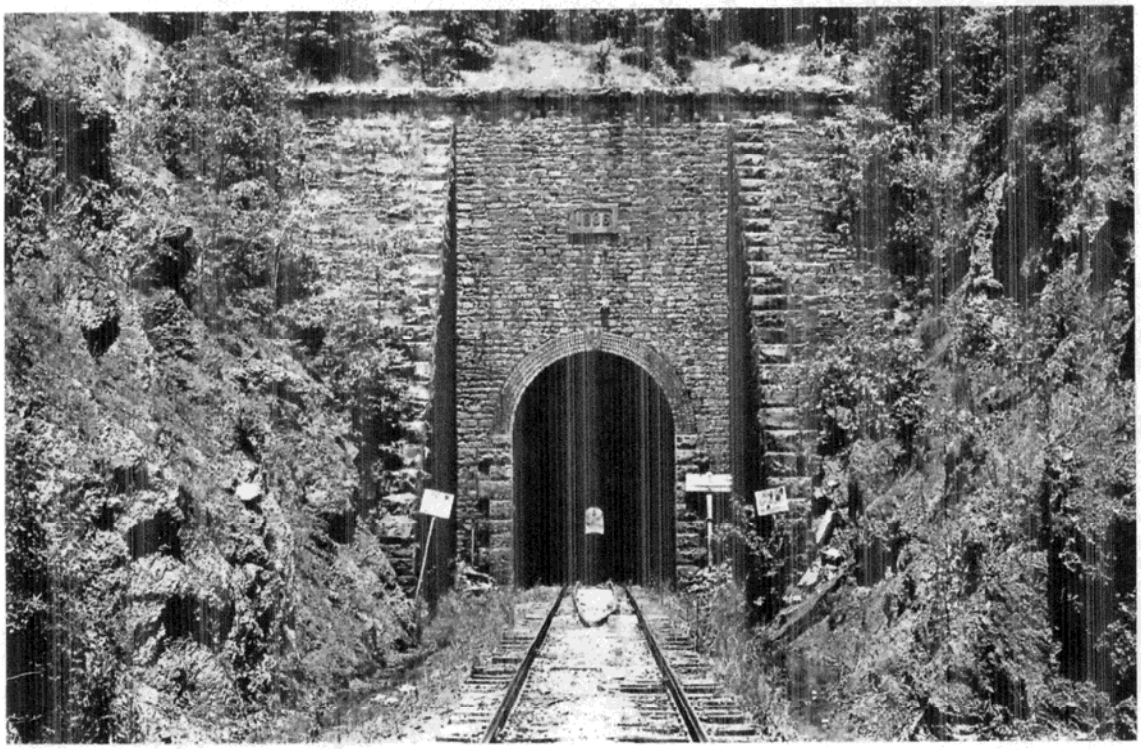


South Portal by John Dill


1866



From the NRHS Bulletin Article



Collection: Lawrence Gibbs

The only railroad tunnel in Oklahoma shows its age (1886) and gives an indication of its 1180 foot length through a stately stone portal.

Here is some correspondence I have had with John Dill

I have just finished reading the article on the Boston Mountain Tunnel in the Meteor. Great Job.

Am I correct in assuming that the next issue will include an article on the Frisco's Central Division Backbone Mountain Tunnel in Oklahoma (just south of Fort Smith)? If so, is this article finished or would additional information be useful? I

don't have a lot of information about the tunnel, certainly not enough to write anything about it, but I do have a few tidbits that someone might wish to incorporate into an article about the tunnel including copies of a few contemporary Fort Smith newspaper articles which were printed before and during the construction. This is probably the least understood and most controversial of all the Frisco tunnels. The most important, unanswered (to the best of my knowledge) question is probably " why (at literally almost the last minute) was it relocated from Arkansas into the Indian Territory?" I have searched and searched but found no printed explanation, anywhere. The newspapers merely mention the event without explaining it. A local, oral history is that the tunnel was moved, at least in part, to take advantage of convict labor from the Indian Territory. I believe this is probably true, although it has been disputed by others and there may have been a combination of political and engineering considerations at play in the move (this section of the railroad – Fort Smith to Hackett -- seems to have initially been surveyed to lay entirely within Arkansas) since politics was keeping FRISCO out of the Choctaw Nation in the early/mid 1880's.

In the course of researching a book about Sebastian County Arkansas coal mining a few years ago I chanced to meet an elderly Hackett resident named Lyndell Biazo. Lyndell is a treasure store of local historical information. He grew up with a lifelong passion for local history and is truly a storehouse of information. While taking advantage of his coal mining information I discussed the Backbone Tunnel with him. Lyndell told me that as a youth in Hackett he spent almost all his free time sitting on the downtown benches and talking to the old men that hung out there. The last time I spoke with him, Lyndell's memory was still extremely sharp. Although he represents second hand information, he is one of very few (if there are any others) living people who can recite what the people who actually lived at the time the tunnel was built had to say about it. He told me that he was also told that part of the labor was supplied by (Indian Territory) convicts.

On some of the older Google Earth historical photos, the switchback roadbed over the (Backbone) mountain can still be clearly seen (looking south from Fort Smith, the first leg climbs the mountain to the west, beginning almost at the point the tunnel enters the mountain).

John Dill

Attached is a partial list of dated newspaper articles from Fort Smith newspapers. You probably (hopefully) have much better source material but this, at least, provides a rough time-line for the construction progress of the tunnel. Even though it is a fairly large tunnel, the construction time was only a fraction of that for the Boston Mountain, Tunnel. If the newspaper accounts are accepted, work on the tunnel began late March/early April 1886.

I have never <u>personally</u> seen any <u>old, original</u> photo of the Backbone Mountain Tunnel. You know how difficult the location still is to reach, perhaps relatively few old photos were ever made? The Frisco section of *Rails West* (George Abdill) has two SL&SF tunnel photos. Both of them are from the Dr. S. R. Wood collection. One of them is identified as the "slicker" (Fort Smith to Mansfield accommodation train)at the tunnel in 1890. I'm sure this is correct, I believe it is the south portal. The second photo, also equally old (or even older), is identified as the Winslow Tunnel, but I am unconvinced about this. To me this looks much more like a Backbone Mountain portal because of the width and height of the stonework.

Tom and I once discussed convict labor at the Boston Mountain tunnel and if it was used at Backbone, and he seemed convinced that it was <u>not</u> used there. I can offer no proof, but as I said in the first email, the local, oral tradition is that convicts were used for "grunt work" there.

John

Newspaper accounts of the construction of the SL&SF branch from Fort Smith to Paris, Texas were all taken from (poor quality) microfilm at Fort Smith, Arkansas library.

Wheeler's Independent (23 Nov 1881): Small article about the Choctaw Nation granting the SLSF right of way across the Indian Nation to Paris, Texas.

Wheeler's Independent (11 Jan 1882): Small article about Jay Gould's fighting the ratification of the right of way grant by the Choctaws in the U.S. Congress.

FORT SMITH ELEVATOR (7 Jul 1882): "The Fayetteville Democrat learns from chief engineer Van Sa_t of the above road (Frisco), who passed through that city last week in route to St. Louis from Paris, Texas, that the length of the line on the surveyed route from Fort Smith to Paris, Texas was 174 miles, that the proposed route was quite feasible, and that the 'Frisco would in all probability be pushed over the line as soon as the grant of the right of way by the Choctaw Nation was ratified by act of Congress, which may be soon as the ratification bill has already passed the Senate."

FORT SMITH ELEVATOR (1 Jan 1886): "The bridge over the Arkansas River will be finished this month and the surveys commenced Monday last to locate permanently the rest of the road south to Paris, Texas ... will finish at once, we believe, the part laying in this county and by that time Congress will extend their limit to go on through the Choctaw Nation. This St. Louis & San Francisco railroad company has 40 acres in town for machine shops car houses etc. and they will soon give employment to many hands."

FORT SMITH ELEVATOR (26 Feb 1886): "Railroad surveyors are at Backbone Mountain surveying over and around the mountain... Laborers have arrived but no actual operation commenced on the railroad to Hackett."

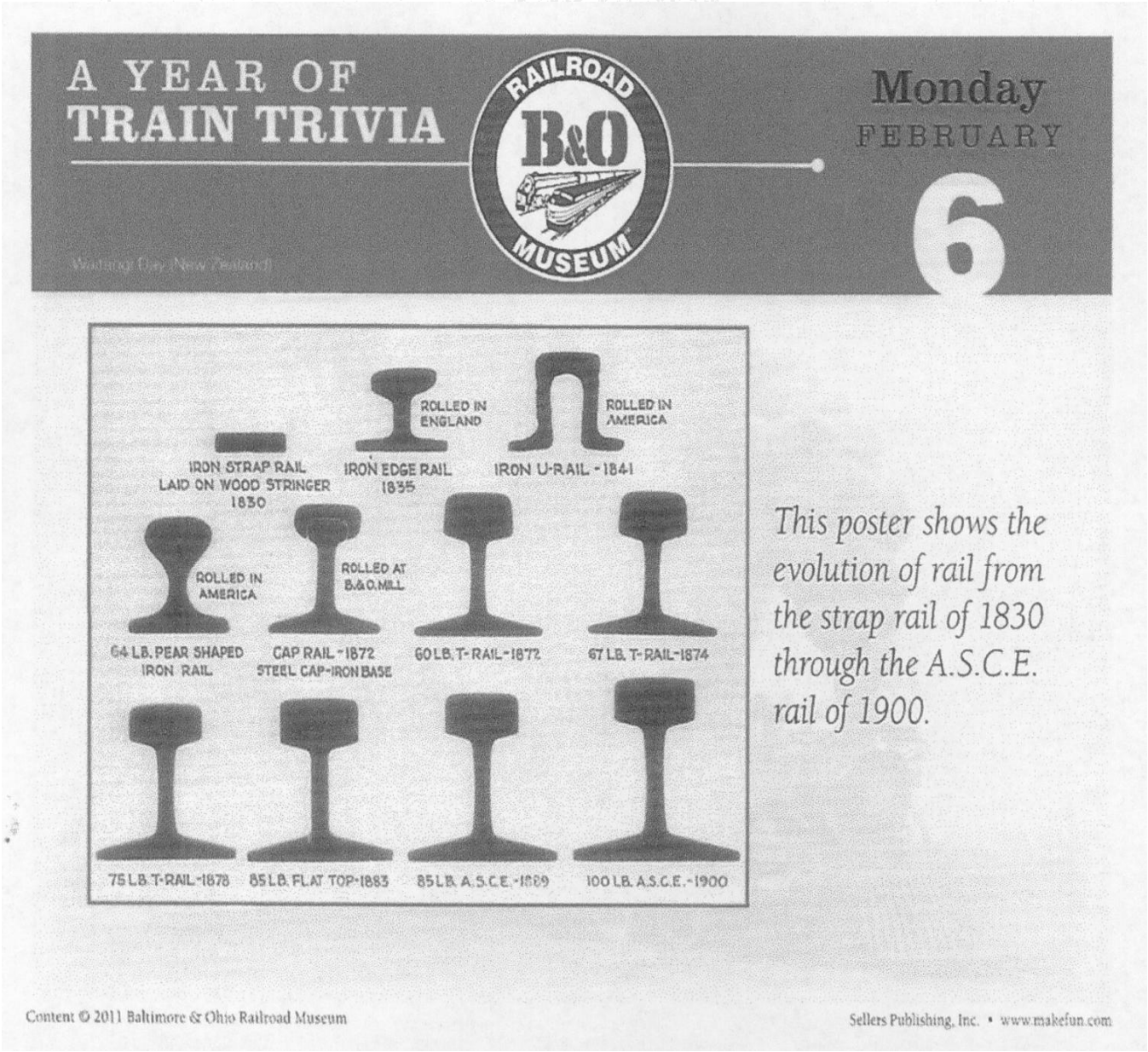
FORT SMITH ELEVATOR (26 Mar 1886): "The contract for grading and for the tunnel also, we understand, has been let to McDonald & Cameron..."

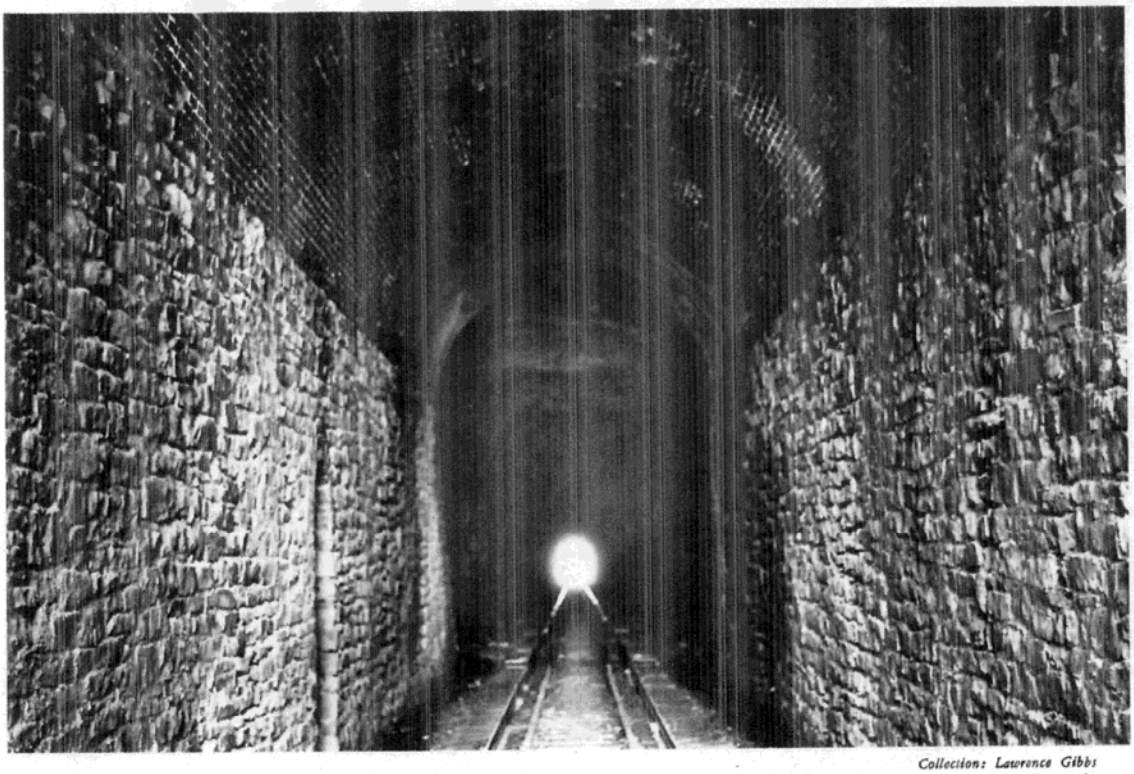
FORT SMITH ELEVATOR (2 Apr 1886): (Speculation about whither the railroad was actually going to run through Hackett as originally believed). "...original tunnel location in Arkansas was changed. Contractors were about to start when they were notified to pull up and move about two miles west, as the route had been changed. Accordingly on Monday last they pulled up stakes and are now located about ¼ of a mile inside the line of the Choctaw Nation where they will at once begin the work of tunneling."

FORT SMITH ELEVATOR (30 Jul 1886): "Work is in progress on the St. Louis and San Francisco line from this place (Fort Smith) to Paris, Texas... tunnel is being driven through the Devil's Backbone Mountain. .. grade between here and the tunnel is about completed and track laying will soon begin... road will be completed in less than a year..."

St Louis & San Francisco Railway Company Tenth Annual Report (for 1886) "The line from Fort Smith, Arkansas to Paris, Texas, covers the following distances: Fort Smith & Southern (in Arkansas) 8.68 miles; St. Louis & San Francisco (in Ind. Ter.) 144.35 miles; Paris & Great Northern (in Texas) 16.10 miles – total 169.11 miles. (Upper segment of line) "This line begins at Fort Smith, running in a southerly direction in Sebastian Co., Ark., 5.82 miles; then in Indian Territory, near boundary line, for 3.38 miles; then back in Sebastian Co., Ark., for 2.67 miles; then back in Indian Territory for 1.81 miles; then again in Arkansas for 0.17 miles; then re-enters the Territory and continues therein to the south bank of Red River, a distance of 139.16 miles... One tunnel, 1187 feet long, was required, and is completed."

FORT SMITH ELEVATOR (1 Feb 1887): (Hackett City Branch of Frisco – 2.42 miles) "The main line of the Frisco runs about two miles from the place but a branch of the road has already been completed to the coal mine now being opened in the suburbs and regular trains will begin running as soon as coal shipments commence, or perhaps sooner."





Collection: Lawrence Gibbs

This interior view shows some of the 383.5 feet of stonewalls with brick arch in the Frisco's Jenson Tunnel. The single bore is located at milepost 427.9 on the St. Louis-San Francisco between Fort Smith, Ark. and Paris, Texas.

27

That's all folks.

Where are your articles for me to publish?

FRISCO LINES

ST. LOUIS-SAN FRANCISCO RY.

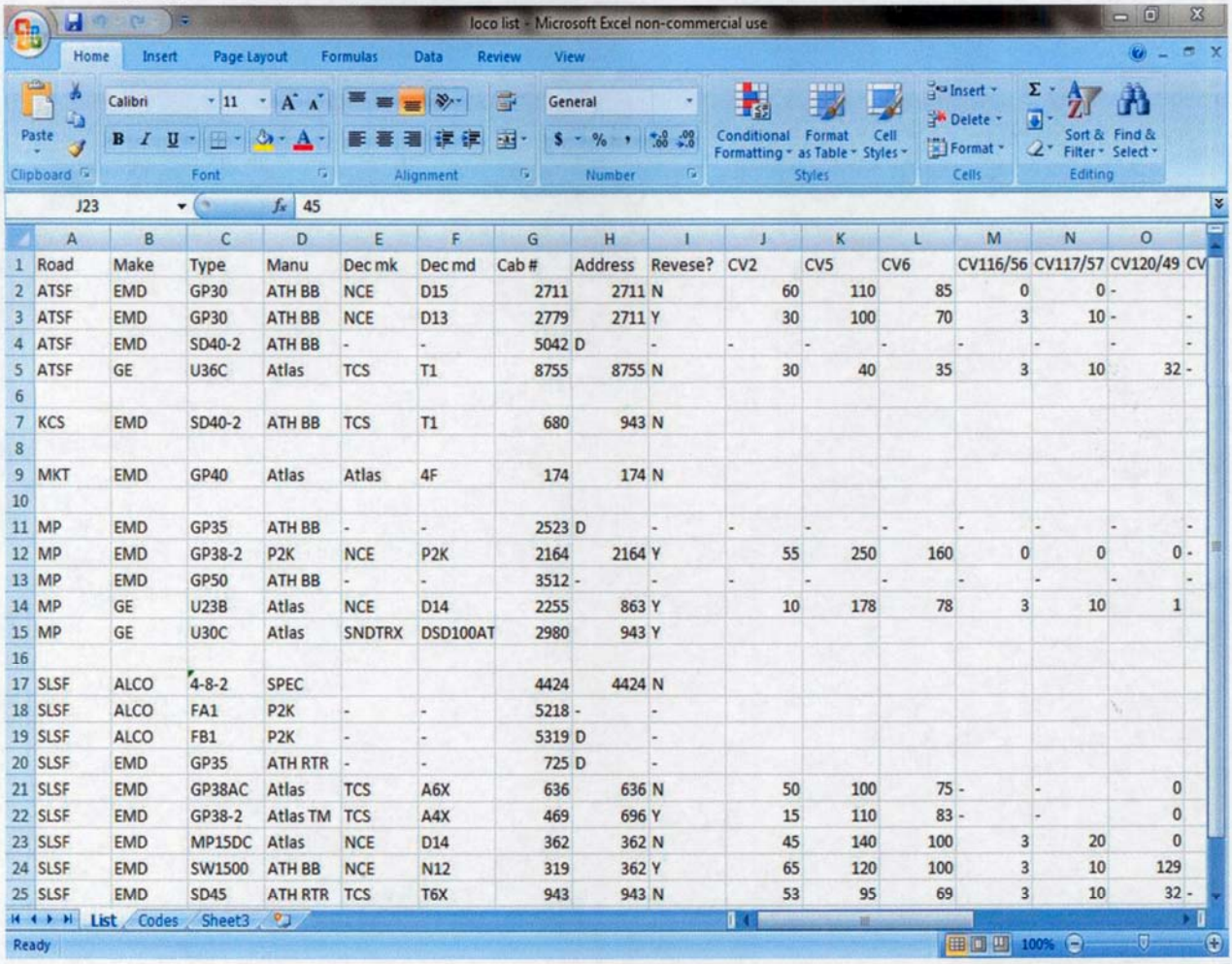
Organizing your locomotives and CV's

By

Ethan Lawrence

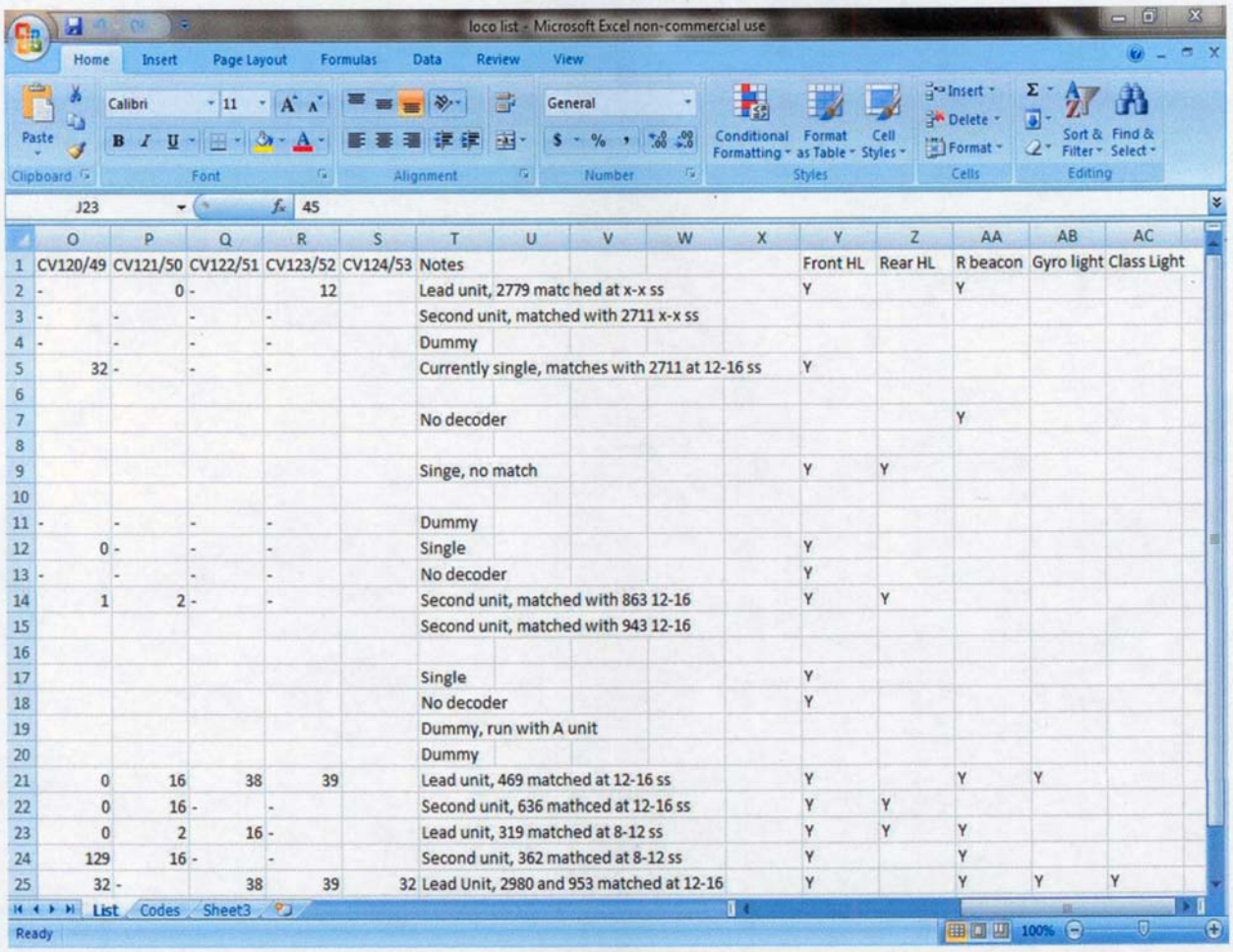
Ever wondered what a certain CV was set to on a locomotive? Ever had a decoder wig out and have to reset it and have to go back through all the trial and error for speed settings, or recalculate a light setting? Well it's always a good idea to write things down (I'm bad about not doing that.) Well earlier this fall I took the time to catalog all my locomotives and their CV's.

As you can see in figure 1.1 (which is not 100% up to date) I started by listing all my locomotives, then alphabetized by road name by make, model, manufacturer, the decoder maker and model. Then I began listing all the CV's, starting with the number on the cab, then the number it's programmed to, and then all the CV's.



	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	
1	Road	Make	Type	Manu	Dec mk	Dec md	Cab #	Address	Revese?	CV2	CV5	CV6	CV116/56	CV117/57	CV120/49	CV
2	ATSF	EMD	GP30	ATH BB	NCE	D15	2711	2711	N	60	110	85	0	0	-	
3	ATSF	EMD	GP30	ATH BB	NCE	D13	2779	2711	Y	30	100	70	3	10	-	-
4	ATSF	EMD	SD40-2	ATH BB	-	-	5042	D	-	-	-	-	-	-	-	-
5	ATSF	GE	U36C	Atlas	TCS	T1	8755	8755	N	30	40	35	3	10	32	-
6																
7	KCS	EMD	SD40-2	ATH BB	TCS	T1	680	943	N							
8																
9	MKT	EMD	GP40	Atlas	Atlas	4F	174	174	N							
10																
11	MP	EMD	GP35	ATH BB	-	-	2523	D	-	-	-	-	-	-	-	-
12	MP	EMD	GP38-2	P2K	NCE	P2K	2164	2164	Y	55	250	160	0	0	0	-
13	MP	EMD	GP50	ATH BB	-	-	3512	-	-	-	-	-	-	-	-	-
14	MP	GE	U23B	Atlas	NCE	D14	2255	863	Y	10	178	78	3	10	1	
15	MP	GE	U30C	Atlas	SNDTRX	DSD100AT	2980	943	Y							
16																
17	SLSF	ALCO	4-8-2	SPEC			4424	4424	N							
18	SLSF	ALCO	FA1	P2K	-	-	5218	-	-							
19	SLSF	ALCO	FB1	P2K	-	-	5319	D	-							
20	SLSF	EMD	GP35	ATH RTR	-	-	725	D	-							
21	SLSF	EMD	GP38AC	Atlas	TCS	A6X	636	636	N	50	100	75	-	-	0	
22	SLSF	EMD	GP38-2	Atlas TM	TCS	A4X	469	696	Y	15	110	83	-	-	0	
23	SLSF	EMD	MP15DC	Atlas	NCE	D14	362	362	N	45	140	100	3	20	0	
24	SLSF	EMD	SW1500	ATH BB	NCE	N12	319	362	Y	65	120	100	3	10	129	
25	SLSF	EMD	SD45	ATH RTR	TCS	T6X	943	943	N	53	95	69	3	10	32	-

Figure 1.1 This is the first half of the spread sheet. This half has the road name, (prototype) builder, type, manufacturer and basic decoder info. There is one loco that got cut off out of the picture.



	O	P	Q	R	S	T	U	V	W	X	Y	Z	AA	AB	AC
1	CV120/49	CV121/50	CV122/51	CV123/52	CV124/53	Notes					Front HL	Rear HL	R beacon	Gyro light	Class Light
2	-	0	-	12		Lead unit, 2779 matc hed at x-x ss					Y		Y		
3	-	-	-	-		Second unit, matched with 2711 x-x ss									
4	-	-	-	-		Dummy									
5	32	-	-	-		Currently single, matches with 2711 at 12-16 ss					Y				
6															
7						No decoder							Y		
8															
9						Singe, no match					Y	Y			
10															
11	-	-	-	-		Dummy									
12	0	-	-	-		Single					Y				
13	-	-	-	-		No decoder					Y				
14	1	2	-	-		Second unit, matched with 863 12-16					Y	Y			
15						Second unit, matched with 943 12-16									
16															
17						Single					Y				
18						No decoder					Y				
19						Dummy, run with A unit									
20						Dummy									
21	0	16	38	39		Lead unit, 469 matched at 12-16 ss					Y		Y	Y	
22	0	16	-	-		Second unit, 636 mathced at 12-16 ss					Y	Y			
23	0	2	16	-		Lead unit, 319 matched at 8-12 ss					Y	Y	Y		
24	129	16	-	-		Second unit, 362 mathced at 8-12 ss					Y		Y		
25	32	-	38	39	32	Lead Unit, 2980 and 953 matched at 12-16					Y		Y	Y	Y

Figure 1.2 This shows the other half of the spread sheet.

Figure 1.2 shows the other CV's and notes. Basically all the CV's I listed are the three used to speed match (2, 5 & 6) then the ones used for controlling lighting functions, which the CV number and setting depends on the decoder manufacturer. I use NCE and TCS decoders. I also have a couple locos with tsunami decoders and they are a little different. I also noted what lights have been installed and work on which locos.

Hope you found this of interest or use. It takes a while to put together, but if your decoder messes up its well worth it.

Ethan Lawrence "Iantha Branch"

Figure 1.3 shows the page where I put in what all the abbreviations mean. I may not have all of them there, but it gets most of it covered.

I know there are other methods out there, like writing down settings in the decoder manual, but this method is easier to save, and harder to lose.

	A	B	C	D	E	F
1	Code		Meaning			
2	D		Dummy			
3	-		not used			
4	ss		speed steps			
5	CV numbers seperated by slash: NCE first, TCS second					
6						

Figure 1.3

I have done the same thing as Ethan for years but I have not recorded the CV settings, I highly recommend Ethan's approach. Thanks Ethan for sharing this with the group. Editor.