United States Court of Appeals
FOR THE EIGHTH CIRCUIT

No. 02-2873

Gregory L. Logan,	*	
	*	
Appellant,	*	
	*	Appeal from the United States
v.	*	District Court for the
	*	Western District of Arkansas.
J & D Hauling, Inc.; David Leo Smith, Jr.; Union Pacific Railroad Company,	*	
	*	
Appellees.	*	

Submitted: January 15, 2003

Filed: May 30, 2003

Before WOLLMAN and MURPHY, Circuit Judges, and AUTREY,[1] District Judge.

WOLLMAN, Circuit Judge.

Gregory L. Logan appeals from the judgment entered on the jury verdict rendered against him and from the district court's[2] denial of his motion for new trial. We affirm.

[1]The Honorable Henry E. Autrey, United States District Judge for the Eastern District of Missouri, sitting by designation.

[2]The Honorable Harry F. Barnes, United States District Judge for the Western District of Arkansas.

On May 1, 1999, Lyle Smith was acting as the engineer on a Union Pacific Railroad Company freight train, consisting of two diesel locomotives and 118 cars, traveling from Dexter, Missouri, to Pine Bluff, Arkansas. Also in the cab with Smith were Thomas Davis, the conductor, and appellant Logan, who was acting as a pilot engineer for Smith, who was unfamiliar with the railroad territory between Dexter and Pine Bluff and who had requested that a pilot engineer accompany him to familiarize him with the territory. After slowing for the 30 mile-per-hour speed restriction through Stuttgart, Arkansas, Smith accelerated the train to 47 miles per hour, which was three miles per hour below the speed authorized for the train over that section of the track.

As the train came around a curve west of Stuggart, the three crew members saw the rear trailer of a two-trailer rice-hauling rig stopped on the track at an approach to a state highway. Engineer Smith immediately started sounding the air horn and ringing the bell on the locomotive in an attempt to alert the driver of the semi-truck tractor, defendant David Leo Smith, Jr., an employee of the owner of the truck, J & D Hauling, Inc. Upon determining that the truck was apparently not going to move, Conductor Davis told Engineer Smith to "big hole it," which is railroad parlance for making an emergency application of the brakes.[3]

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[3]The brakes on a freight train are applied by the movement of a brake cylinder piston actuated by compressed air from an air reservoir located beneath the body of each freight car. The compressed air is supplied by an air compressor and reservoir on the locomotive and is distributed by means of air pipes under each car, linked by flexible hoses and connections called "angle cocks." Together, the air pipes and hoses are referred to as the brake pipe or train line. The standard pressure in the brake pipe is 90 pounds per square inch. The compressed air is admitted into the under-car reservoirs by a device known as a "triple valve." Once the reservoir beneath each car is brought up to the required pressure (an operation referred to as "pumping up the air"), the pressure in the brake pipe causes the triple valve to move in a way that permits the compressed air within the cylinder to be vented to the atmosphere, allowing the piston to move back into the cylinder, thus releasing the

The lead engine struck the trailer, which weighed between five and six thousand pounds, knocking it off the tracks. According to the locomotive's event recorder, the train had slowed from 47 to about 36 miles per hour just before the point of impact.

Engineer Smith testified that shortly before the collision he threw himself to the floor of the cab to protect himself. When asked to rate the impact on a scale of one to ten, with one being the least severe, he described it as a one.

Conductor Davis dropped to the floor of the cab shortly before the point of impact to protect himself from possible breaking glass. He described the impact as "a lot lighter than I thought it was going to be."

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brake rigging and causing the brake shoes to move away from the wheels.

To apply the brakes, the engineer moves the brake valve on the control stand next to his seat. In a routine application, the engineer might make a ten-pound reduction in the brake pipe pressure by permitting the air to be discharged from the brake pipe through one of the smaller venting ports controlled by the brake valve. As the air pressure drops throughout the length of the brake pipe under the train, the higher pressure within the under-car reservoirs moves the triple valve to a position that allows the air within the reservoir to be applied to the brake piston, pushing the piston out and causing the brake rigging to force the brake shoes against the wheels. The greater and more sudden the reduction in the brake pipe pressure, the greater and more sudden the application of the brakes. To make an emergency application of the brakes, the engineer moves the brake valve handle to its farthest position, causing the air to be discharged through the largest venting port. Thus, to "big hole it" is to move the brake valve to its largest discharge position. See Al Krug, North American Freight Train Brakes Page, at http://www.trainweb.org/railwaytechnical/brake2.html; Air Brakes, at http://www.trainweb.org/railwaytechnical/air%20brakes.htm; see also ET Brake Equipment, Railroad Magazine, November 1950, at 58. For a more technical description of how the air brake system operates, see Boyden Power-Brake Co. v. Westinghouse, 170 U.S. 537 (1898).

Logan, who was sitting on what he described as a "toadstool" seat in front of Conductor Davis, testified that just before the impact he threw his arms up to protect his head. On impact, his head went forward and then went back. He ended up on the floor between the two seats. He later complained of neck pain, and, after undergoing an MRI examination on May 19, 1999, underwent an anterior cervical discectomy with fusion at C5-6 and C6-7 on August 12, 1999.

Logan acknowledged during his direct testimony that during his nine-plus years as an aviation mechanic in the U.S. Air Force, he had experienced some back, neck, and muscle strains as a result of carrying the 100-120 pound tool boxes associated with his job duties.

Logan also acknowledged that during the summer of 1995 he flipped over in the water after diving into a neighbor's swimming pool and experienced a twinging in his neck. He was prescribed anti-inflammatory medication and missed no work as a result of the incident. The following year, however, he started experiencing soreness and stiffness in his neck, together with numbness in the two forefingers in his left hand and soreness in his left shoulder. Logan underwent an MRI examination in the summer of 1996, which revealed the presence of disc herniation at C6-7 on the left, which was consistent with the clinical presentation his physical symptoms revealed to the consulting neurosurgeon at that time. The neurosurgeon offered to Logan the availability of an anterior cervical decompression and fusion at the C6-7 interspace, the type of surgical procedure that Logan underwent in August of 1999. Logan declined to undergo surgery at that time, however, and continued in his work as an engineer.

Dr. Robert Jordan, the neurosurgeon who performed the 1999 surgery, testified that it was the pain that Logan was suffering from following the May 1, 1999, collision that brought Logan to Dr. Jordan's office. He further testified that the symptoms that Logan complained about in 1999 were essentially the same as those

he had reported to his consulting neurosurgeon in 1996 and that the 1996 MRI results were essentially the same as those revealed on the 1999 MRI.

Logan's claim against the Union Pacific was based upon his allegation that the wobbly "toadstool" seat had offered him insufficient support during the collision. He also alleged that the absence of a handle, or "grab bar," which had broken off prior to their departure from Dexter, made it impossible for him to grab on to anything prior to the collision, causing him to be thrown about violently during the impact.

Defendant J & D Hauling, Inc., called as a witness Steven Allen Batzer, who holds a Ph.D. in Mechanical Engineering/Engineering Mechanics. Dr. Batzer determined that the locomotive that the three crew members were riding in weighed at least 398,500 pounds and that the entire train weighed 5,704 tons. He calculated the "G" forces that the impact produced, testifying that "the maximum value that impulse [could] be" was "about .8G's," explaining that this impulse was "a little bit more than the force it requires to turn your head to the left."

On appeal, Logan contends that the district court erred by permitting Dr. Batzer to testify as to the forces involved in the collision, by allowing the defendants to characterize the collision as "low impact," and by admitting post-collision photographs of the train and truck to support the defendants' "low impact" argument. He argues that this evidence and argument were irrelevant and highly prejudicial and therefore were not permissible under Rules 401-403 of the Federal Rules of Evidence. We disagree.

Dr. Batzer's testimony was relevant in that it refuted one of the assumptions on which Dr. Jordan's causation opinion was based--that "Logan was thrown forward and then fell from his seat to the floor of the locomotive hitting his head." We fail to see how this testimony posed a "danger of unfair prejudice." Fed. R. Evid. 403. Accordingly, we cannot find that the district court abused its discretion by permitting

the testimony. Bonner v. ISP Techs., Inc., 259 F.3d 924, 928-29 (8th Cir. 2001) (standard of review). Nor can we find that the district court erred by permitting the defendants to characterize the collision as "low impact" or by admitting post-collision photographs to bolster this characterization. In light of Dr. Batzer's testimony, we see nothing improper about such an argument.

Logan also challenges the basis for Dr. Batzer's calculations. After reviewing the record, we are satisfied that Logan's objections go to the weight of Dr. Batzer's testimony rather than to its admissibility. Bonner, 259 F.3d at 929 ("'As a general rule, the factual basis of an expert opinion goes to the credibility of the testimony, not the admissibility, and it is up to the opposing party to examine the factual basis for the opinion in cross-examination.'" (quoting Hose v. Chicago Northwestern Transp. Co., 70 F.3d 968, 974 (8th Cir. 1995))).

It was for the jury to determine whether Logan's neck problems were caused by the May 1, 1999, collision, by the 1995 swimming pool incident, or by some other reason. Accordingly, the district court did not err in admitting the challenged testimony or in denying the motion for new trial.

The judgment is affirmed.

A true copy.

Attest:

CLERK, U.S. COURT OF APPEALS, EIGHTH CIRCUIT.