

Josh Miller, left, and Alfonso Rodríguez help Jerod Boltz jet a line through through a 6-inch cleanout at a housing complex in Bradenton, Fla. (Photography by Danielle Rappaport)

# Weapon of Mass Detection

Sleuth Plumbing Technologies takes pride in being a resource for customers in a wide range of investigation and rehabilitation services

By Mary Shafer

Justin Mizell has a unique way of thinking about customer service. “We are a tool in our customer’s toolbox,” says Mizell, who owns Sleuth Plumbing Technologies with Jerry Mixon in Sarasota, Fla.

The company has been making its plumbing contractor clients look good for more than 25 years. “Our tagline is, ‘Don’t speculate, investigate,’” says Mizell. “And that’s what we tell prospective customers. With our services, they don’t have to do guesswork that could cost them a lot of money.

“Between our array of technology and our highly trained technicians, we can get down to within a foot of pinpointing where the problem is in their customer’s system, without disturbing anything above ground.”

Sleuth performs specialized application of “any investigational or

rehabilitation tool the plumber uses,” according to Mizell. Sleuth doesn’t offer plumbing, instead referring plumbing prospects to its best customers, who in turn refer work back.

Sleuth subcontracts all directional boring, geophysical services, concrete cutting and hydrojetting work to regional specialists. Everything else is done in-house, and the whole package is represented to prospects as “the Sleuth family of companies.” Under this umbrella, Sleuth acts as a project manager, bringing in whatever specialized subcontractors are needed for each job.

## Strong backgrounds


Mixon, a former plumbing supply house operator, spun off Sleuth Plumbing when its original owner decided to focus on leak detection as Sleuth Inc. back in

1982. They remain sister companies, having no common ownership, but sharing business referrals.

Mizell joined Mixon as vice president in 2003, moving over from a plumbing company that specialized in

## PROFILE

### SLEUTH PLUMBING TECHNOLOGIES, SARASOTA, FLA.

|               |  |   |
|---------------|--|---|
| OWNERS:       | Jerry Mixon, president;<br>Justin Mizell, vice president   |  |
| FOUNDED:      | 1982   |   |
| EMPLOYEES:    | 22   |   |
| SPECIALTIES:  | Inspection, locating, odor detection, leak detection, pipe rehabilitation                            |   |
| SERVICE AREA: | Florida (entire U.S. for vapor detection)  |   |
| AFFILIATIONS: | Plumbing-Heating-Cooling Contractors Association;<br>Building Managers Institute; International Code |   |
| Council       |  |   |
| WEB SITE:     | www.sleuthpt.com   |   |





**Above, Jerod Miller locates a camera in a pipe. At the right, Josh Miller uses a mobile digital video recorder to view images from a camera deployed in a lateral.**



serving condominiums and community associations. He had used Sleuth's services and was intrigued by the firm's use of technology.

"I could see how we could use technology to build a company that not only helped plumbers solve immediate mechanical problems, but could also help them take their whole businesses to the next level," Mizell says. That has been the goal ever since.

Regardless the job, nearly every project begins with some sort of inspection, and Sleuth depends heavily on digital video cameras. Like most other technology the firm uses, the video inspection equipment has been modified to accommodate the demanding applications the company puts it through.

"CUES Inc. is the base of what we use for our camera, but we've worked back and forth with them on

Chris Graybill, customer service representative for CUES, confirms that the Sleuth people are particular about their equipment. "They like their power control units configured a bit differently to accommodate their demanding needs," he says. "We build it to a personal preference in setup for unique positioning in vehicles and on the jobsite."

#### **Taking stock**

Sleuth begins with a stock ProScout portable inspection system from CUES, a van-mounted unit with a push cable. From there, the company has it modified to proprietary specifications, which in Mizell's opinion provide an edge on competitors.

The company also uses smaller CUES Mini-Push 20/20 units with battery instead of AC power. These can maneuver easily through 2-inch,

90-degree bends and P-traps, and are operable in air or underwater.

Sleuth refers to this sophisticated video camera setup, along with specialized LED light sources and other electronic equipment, as its own

## **RIISING HIGH**

Pipe rehabilitation has been driving some high-profile business for Sleuth Plumbing Technologies. The company recently finished the initial inspection at DeSoto Towers in Bradenton, Fla. Sleuth subcontracted a job for Texas Drain Team of Houston at this high-rise of 204 independent senior living units, run by a nonprofit corporation.

The job began last spring with camera inspection and cleaning of lines, during which crews found extensive deterioration of the original iron pipe. "We televised strategic stacks, based on reported problems like kitchen sink and main line stoppages," recalls Justin Mizell, Sleuth co-owner. "They'd had

some piping fail and did conventional replacement with PVC. Camera work found problems in the main line from years of grease and scale buildup."

Sleuth proposed a four-man crew relining of some 1,200 feet of 4- to 10-inch cast iron sewers with CIPP liner from Nu Flow Technologies Inc. The Nu Flow system entails sending in a Scorpion chain flail cutter from any cleanout to remove roots, scale and other blockages.

Once a video inspection determines that the line is clear, an inflatable bladder is sent in, carrying an epoxy-saturated felt blanket. Once that is in place, the bladder is inflated, forcing the liner to conform to the pipe and bridge any voids. When the epoxy has fully cured in three to four hours, the bladder is deflated and removed, leaving a seamless pipe surface.

With the proposal approved, Sleuth did the inspection and cleaning, then built a plan of attack starting with restoration of the main lines. This entailed lining the pipe beneath the foundation slab to the collection pipe, a run of about 400 feet. The main collection pipe, located outside, was to be rehabilitated from the cleanout through the 8- and 10-inch mains to the manhole, about 150 feet.

Restoration of 21 sanitary risers to the third floor will follow. This part of the job includes about 30 feet of pipe per riser, or just over 600 feet in all.



**Josh Miller pours mixed two-part epoxy into a felt liner held by Alfonso Rodriguez.**



**Rodriguez impregnates the liner with epoxy.**

Pipe View Technology. It allows operators to clearly see fine details in pipe walls and detect root intrusion, faults and cracks in sanitary lines and storm drains. Crews also use cameras with line-locating equipment to pinpoint problem areas.

Sleuth's digital video recorder permits permanent recording of inspections. "We've changed over to DVRs in the field, so that if something happens — such as a lost video — the data is still here," says

Mizell. The company uses Burning ROM editing and DVD compiling software from Nero Inc. that lets operators put images from before and after line rehabilitation on the same disc. "The biggest challenge is being able to format the DVD so everyone can read the format," admits Mizell. "It took about 40 hours to get to where we could do that."

As with everything else at Sleuth, it's all a matter of training and learning the technology.

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**Justin Mizell**

research and development and have modified their equipment," explains Mizell. "We don't try anything out on customers without knowing it works, so we put everything through the paces during staff training."



**Josh Miller checks the video display as he drops a camera into a 6-inch cleanout at a housing complex.**

Still, Mizell cautions that fancy gadgets are not the be-all and end-all. "Camera work is an identification tool," he says, "but the trick is knowing what to do with that information once you have it. We'll use those images to help us create a drawing of the system, trace it out, bring it back to the office and decide on the best rehab solution for the problem."

#### Training matters

Getting the best solutions means investing time, energy and money in technician training. Mixon, the firm's quality-control expert, works with Larry Mizell, Justin's brother and

operations manager, to make sure training gets done. Mixon rides along to projects with the technicians – greenhorns and veterans alike – critiquing their work with an eye to developing best practices.

New hires get two to three years of training before they can go out on their own, and all technicians are cross-trained in every facet of Sleuth's offerings except for work that gets subcontracted. "We like our technicians to be rounded in all our services," says Justin Mizell. "We have specialists in each area, but all our technicians can do each job."

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**Justin Mizell**

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In the Sleuth staff hierarchy, the Tech 1 designation connotes a greenhorn. Tech 2 indicates some experience with core services. Tech 3 means the employee is experienced and knows the ropes, and those who advance to Master Technician qualify to function as onsite project managers.

It pays off, says Mizell, in technicians' confidence in decision-making and ability to think on their feet. That



**Justin Mizell, vice president of Sleuth Plumbing Technologies, takes a business call while on a work site.**

confidence transfers to his own when he pitches new jobs and new customers.

Along with standard training, Sleuth technicians take part in weekly tailgate safety meetings. These five- to 10-minute huddles at the office cover topics chosen for relevance to current projects. Rarely, Sleuth brings in equipment and tool manufacturer representatives to train staff in the use of their products. In addition, the company's in-house mechanic performs biweekly vehicle inspections.

#### Making the tools work

There are enough vehicles in the Sleuth fleet to make those inspections a big job. The company operates 10 vehicles: eight Dodge service trucks that run on biodiesel fuel, and two Dodge Sprinter vans that carry the mainline cameras and pull jetting equipment. Jetters include two 4000 series units from US Jetting (4,000 psi/18 gpm) and a DT 100 trailer unit from Harben Inc. (4,000 psi/16 gpm).

Other equipment includes a Lafayette Wc20 pipe bursting system from TRIC Tools Inc., able to replace

2- to 8-inch lines with HDPE pipe around bends up to 45 degrees.

Likely one of the most valuable equipment setups Sleuth has is its cured-in-place-pipe (CIPP) lining system from Nu Flow Technologies Inc. The company is the exclusive Nu Flow licensee for its area.

#### Technology everywhere

Sleuth leverages technology in running its business as well as in doing its work. The office uses WinTac software from Intac International Inc. for dispatch and billing.

Networkfleet integrates GPS tracking and diagnostic monitoring, interfacing with each truck's computer to monitor engine needs, fuel usage and other items. This helps the office keep track of vehicles and manage routes. All trucks have Wright Express fuel cards to monitor fuel use and maintenance.

Overall, Sleuth believes the use of technology in every facet of business will quickly catch on as contractors realize the benefits. In service to that idea, the company focuses on its core business while following a more altruistic vision.

"My goal is to see the face of plumbing change," says Justin Mizell, co-owner. "I want to see the whole industry step up and become more green-minded. I want to assist plumbers in stepping up their image to a more professional level." ■

#### MORE INFO :

##### **CUES Inc.**

800/327-7791  
[www.cuesinc.com](http://www.cuesinc.com)

##### **TRIC Tools Inc.**

800/301-4903  
[www.trictrenchless.com](http://www.trictrenchless.com)

##### **Nu Flow Technologies Inc.**

800/834-9597  
[www.nuflowtech.com](http://www.nuflowtech.com)

##### **US Jetting**

800/538-8464  
[www.usjetting.com](http://www.usjetting.com)

##### **Intac**

800/724-7899  
[www.intacinternational.com](http://www.intacinternational.com)

##### **Harben**

800/327-5387  
[www.harben.com](http://www.harben.com)