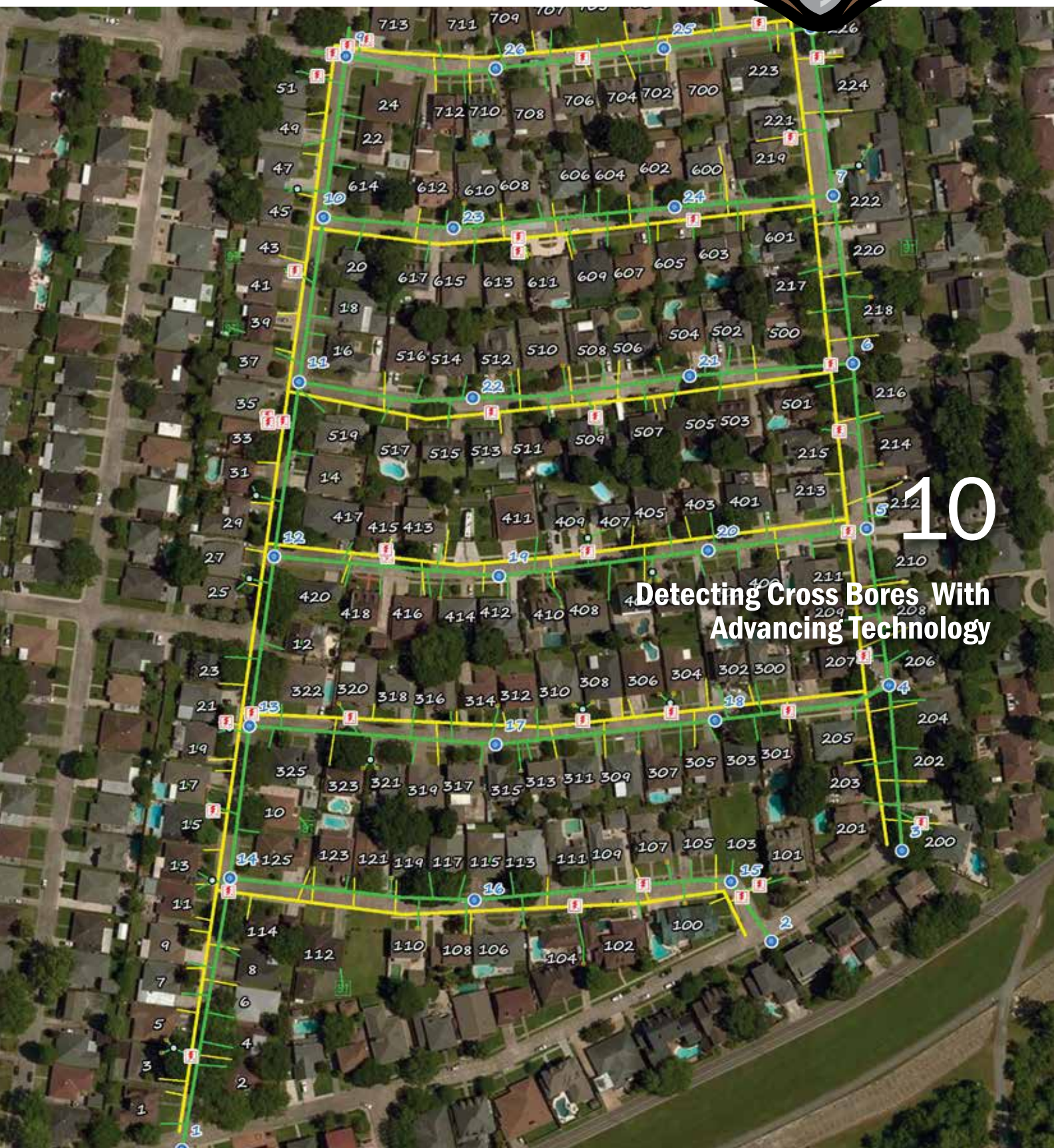
Louisiana 811

2019 Issue 4



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Detecting Cross Bores With Advancing Technology

Crimson Gulf, LLC

a division of Crimson Midstream, LLC

Crimson Gulf was established in June 2012 with the acquisition of offshore pipelines located in the Gulf of Mexico. The pipelines are operated from offices in Gray, LA. The Louisiana pipeline network, which traverses approximately 800 miles, is comprised of 10 pipeline systems connecting to more than 100 offshore oil platforms located on the outer continental shelf of the Gulf.

Safety and Regulatory Compliance are Top Priorities

- Safety and regulatory compliance is the driving force behind Crimson's operations and day-to-day business - the company consistently meets or exceeds all local, state and federal regulations.
- The oil industry is one of the United States most heavily-regulated industries. In Louisiana, Crimson's operations are regulated by:
  - Bureau of Ocean Energy Management, Regulation and Enforcement
  - Bureau of Safety and Environmental Enforcement
  - Louisiana Public Service Commission
  - PHMSA (DOT)
- Crimson Gulf's operations are monitored and controlled by a state-of-the-art control center 24 hours a day and seven days a week.
- The safety of the public and employees, the environment, and property is the company's number one priority.

24/7 In Case of an emergency contact: Crimson Control Center at 866-351-7473

from the desk of

David Frey

Louisiana 811
LAONECALL.COM

It is hard to imagine that 2019 is fast coming to an end. I'm confident that we've been busier, but I can't exactly remember when.

Our entire Louisiana One Call team works hard to provide world class service to members and users of our 811 system. On behalf of Louisiana 811 and its board of directors, I want to thank you for the many positive comments we hear regarding our customer service and member benefits.

I would point out that much of what we do by way of providing this quality service is the direct result of listening to you and your needs. If you see that there is something we can do that will better serve you and your company's needs, please share your thoughts with us. Chances are that others will benefit from your ideas as well.

Thanks to all of you who attended and/or supported our recently held Louisiana 811Connection. It was a successful event and we hope that you found value in it.

Have you already marked your calendar for January 21 - 23, 2020? This is the date of our annual Damage Prevention Summit, held again at the Crowne Plaza in Baton Rouge. This year's event promises to be the biggest and best yet. Ragin' Cajun's head baseball coach, Matt Deggs will be this year's keynote speaker. There is little doubt that Coach Deggs will challenge and inspire us to commit to excellence in 2020.

Additionally, we have received commitment from Dr. Larry Stolarczyk (scientist and inventor) to exhibit, present and demo new technology that promises to locate underground utilities to depths of more than 50 feet. I want to hear that presentation as well.

A lot of other activities are taking place at the Summit. The Louisiana 811 Locate Rodeo will take place again, Locator of the Year winners will be announced and this year we've added an "excavator's track" to the agenda. Go to the website to learn more about the 2020 Louisiana Damage Prevention Summit. Look for more information coming your way soon.

Thanks to all of you who support our magazine. You help us reach every corner of the state with a consistent damage prevention message. I'd like to think we've placed your message in front of the right people as well. You may already know, but this magazine is mailed to our members, the excavators who utilize our service as well as our mayors and parish officials across the state. If you are trying to get in front of this audience we have the perfect vehicle.

Enjoy the holiday season that has already begun. What we do is important, but we are reminded during this time of the year what it is really all about. Our families are the reason everything we do is important. Enjoy your time with them and let's work together to make it a safe time for us all.

Merry Christmas and Happy New Year!

David Frey
Executive Director
Louisiana 811

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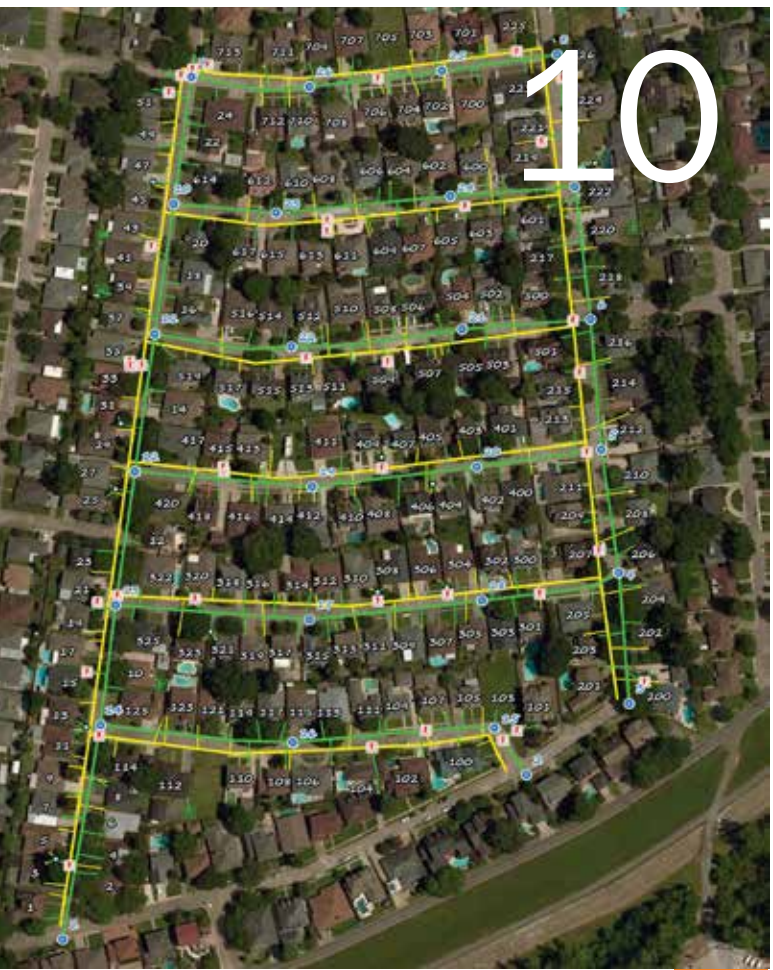

Detecting Cross Bores With Advancing Technology

2019, Issue 4
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2019 Louisiana Convention Schedule

Louisiana Ground Water Association
Annual Convention & Trade Show
01/09/20
Paragon Casino & Hotel, Marksville
www.lgwa.org

Louisiana 811 Damage Prevention Summit
01/21/20 - 01/23/20
Crowne Plaza, Baton Rouge
www.louisiana.damagepreventionsummit.com

Louisiana Police Jury Association
Annual Convention
02/12/20 - 02/14/20
Shreveport Convention Center, Shreveport
www.lpgov.org

Louisiana Conference on Water Supply, Sewerage & Industrial Wastes
Annual Conference
03/15/20 - 03/19/20
Hilton Shreveport, Shreveport
www.louisianaconference.org

Common Ground Alliance
CGA 811 Excavation Safety Conference & Expo
03/24/20 - 03/26/20
Palm Springs Convention Center, Palm Springs
www.cgaconference.com

Louisiana Society of Professional Surveyors
Annual Convention
04/01/20 - 04/03/20
Paragon Casino & Hotel, Marksville
www.lsps.net

2019 Digger's Night Out Programs

Please visit the events calendar on our website for Digger's Night Out meeting locations and dates.

www.laonecall.com/calendar.asp

Brent's observation

Louisiana 811 LAONECALL.COM

Winter is fast approaching and we've already had several nights where the temperature has dropped below freezing. It really doesn't matter whether or not you like cold weather because many of you excavators aren't going to see a slowdown in construction activity. You literally plow (pun intended) right through the cold months!

For those of you who are fortunate enough to slow down, catch your breath and take a break from your hectic routines, good for you. Either way, why not take advantage of us and schedule a safety meeting for your organization before the spring? Just give us a call and either I or my counterpart, Jeff Morrison, would be happy to schedule a meeting with you and your folks to discuss underground excavation safety.

You may have pondered the question, "How much does that cost?" The answer is it's FREE! We provide this service to you gladly at no charge. You also may ask, "How long is a safety presentation?" Quite frankly, we can make it as long as you'd like but typically a presentation takes approximately 30 minutes allowing time for questions and answers. Best of all, we can gear our presentations toward what you'd like to discuss. Whether it's a Dig Law question, enforcement issue, how to enter a ticket online or anything else relating to our program, we're here to address your concerns.

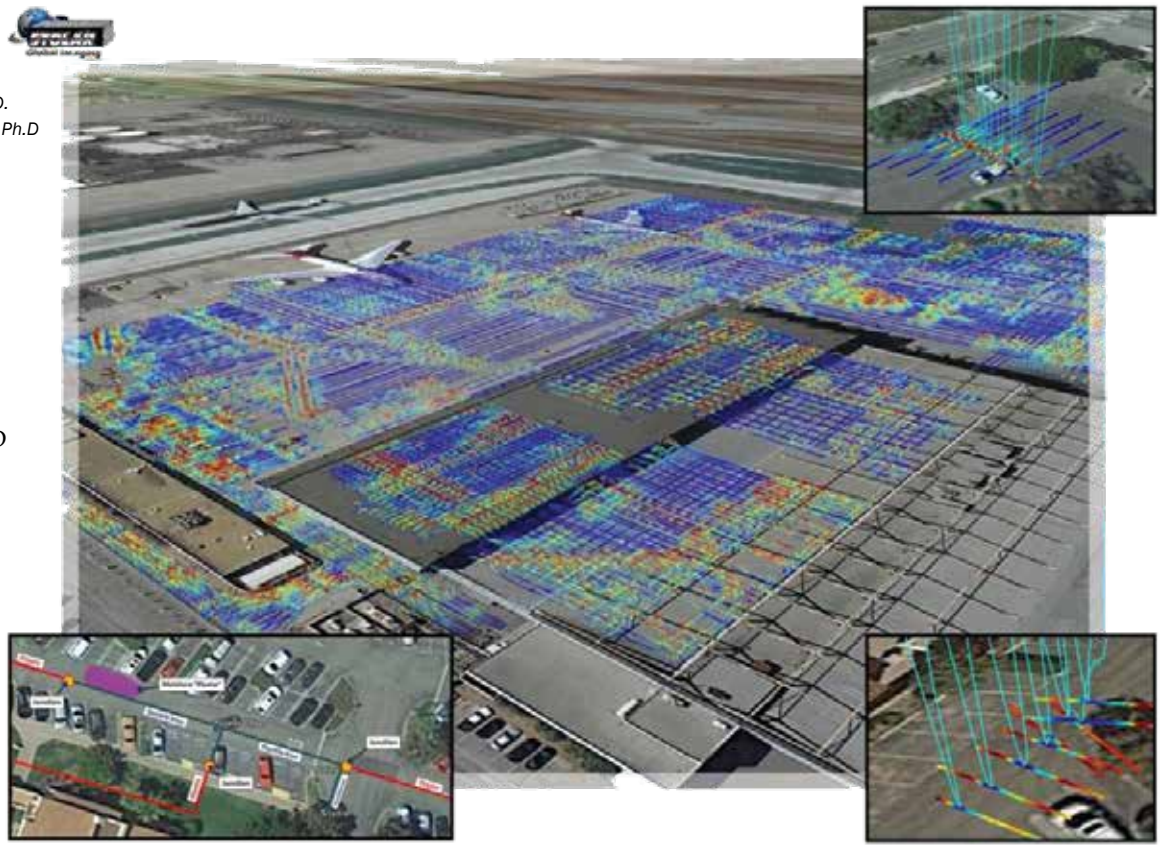
So if your employees are getting tired of hearing a safety talk from someone within your own organization, mix it up and have us talk to your group. We're here to help!

Until next time, please be safe out there and remember to do the following:

1. Call or Click 811 before you dig;
2. Wait for the mark-by time;
3. Respect the marks; and
4. Dig with care.

Next Generation Utility Locating Tool

By Larry G. Stolarczyk, Sc.D.
Frank and Marina Lemkey, Ph.D
Joseph T. Duncan, M.S.
Robert Wick, B.S.
Stolar Global Imaging, LLC



Stolar Global Imaging received the 2017 GRAND CHALLENGE trophy from the America Society of Civil Engineers for the *Los Angeles World Airport project.*

Accurate detection and mapping of underground utilities remains a limiting technology barrier for today's Common Ground Alliance (CGA) stakeholders, excavators and horizontal-drilling damage prevention objectives. The 2018 DIRT report identified 509,000+ damage incidents, up from 439,000+ in 2017. The report estimates 21% of utility damage incidents were attributed to locating errors, and 37% are related to excavation processes. The results were compiled from voluntary information; most likely, damage cost estimates exceeded $1.5 billion in 2018 as collateral damage cost incurred by near-by property owners have been omitted. Conventional locating tools include radio detectors (RD), ground penetrating radar (GPR), acoustic-based sensors, specialized cameras, and potholing equipment; often even dowsing rods are utilized. However, these conventional tools will be soon be complimented (but not replaced) by the revolutionary and evolutionary AM-Band Gradiometer (AMG) tool.

Here's what we've learned

Regular broadcast transmissions from AM-Band transmitter towers are highly efficient for electromagnetic illumination of subsurface utility lines and structures within a radius of tens of miles. The horizontal electric-field component of these transmissions penetrates the soil surrounding all metallic and non-metallic utilities and underground structures. The penetrating electric-field induces current flow in these "conductors" which generates a scattered electromagnetic field. Commonly referred to as "passive detection," the fields are readily detectable with specialized receiver antennas and a low-noise multi-channel receiver. The antennas themselves are differentially connected and operated in a vertical-magnetic-dipole configuration (VMD); this tool is referred to as an AM-Band Gradiometer (AMG) and has been developed by Stolar Global Imaging, LLC (Stolar). AMG tools are integrated on several types of platforms, including hand-held wands, push carts, low flying drones and traveling vehicles. The acquired data is available in "real-time" on a graphical user interface display and available for wireless up-link to Stolar's Processing Archiving Service Center (PASC). The PASC can augment and revise as-built maps and assist AMG locator technicians with interpretation and training. Additionally, the hand-held and push-cart tools can be used to map ahead of excavation and HDD drilling to reduce cross-bores.

AMG Development and Case Studies

During pre-construction ground clearance, a major US construction company significantly damaged active utilities at the Los Angeles World Airport (LAWA). The original militarized AMG tool was then offered for evaluation of its detection and mapping capabilities over large areas within the airport's air-side complex. The results provided detection, mapping and depth prediction of metallic and non-metallic targets beneath the 2-ft reinforced-concrete tarmac. Location results proved to

CONTINUED ON PAGE 9

Entry Deadline - January 3, 2020

www.locatoroftheyear.com

Nominations are now being accepted for the Locator of the Year (LOY) Award! Excavators and member utilities, this is your chance to recognize a locator who has done an excellent job for you. Tell us why your nominee is the best of the best! Simply complete a nomination form below and we'll take care of the rest. NOTE: Nominations must come from an excavator, contract locating company or member utility company. Nominating someone from within your company will be allowed and prior winners are not eligible.

ELIGIBILITY

Locators must be employed by a Louisiana 811 member or a contract locator employed by a member company and then meet the following criteria:

- Minimum 2 years locating experience in Louisiana
- Must be in one of three LOY Award Classifications – Small (receive 4,999 locate tickets or less), Large (receive 5,000 locate tickets or more) and Contract company employees
- Must have been employed by a member company during 2019
- Must have completed the following number of locates – Small classification: minimum 500 locates in 2019, Large classification: minimum 3,500 locates in 2019 and Contractor: minimum 5,000 locates in 2019
- Did not have any "At Fault" damages in 2019
- Had Zero Safety Violations in 2019
- Established proactive relationships in damage prevention
- Eligibility criteria will be verified by locator's supervisor.

PRIZES (3 divisions: small member company, large member company and contract locator)

- Cash prizes
- LA811 promotional items
- Plaque
- Bragging rights and recognition through LA811 magazine, Facebook and newsletter. News releases across the state.
- Entrance for you and one guest to the Louisiana Damage Prevention Summit.
- Winners will also be featured in appropriate industry publications.

Is More TECHNOLOGY Necessarily the ANSWER?

By Joe Igel

Years ago, before my time in Safety, I was placed in charge of various aspects of our accounting department. We had what was, at the time, state-of-the-art computer technology. And because I believed in it, I trusted it. The problem was that my general understanding of some of the more sophisticated accounting principles as well as what really was occurring within the custom programming was lacking. It took some hard lessons and some patient people to help me through these times and often, I would rely more upon what I put on a columnar pad or kept in a separate spreadsheet for accuracy or backup. I have heard the comment that "technology is only a tool" many times, but is it the right tool and do we rely upon it too often, trusting it without understanding what it is doing? As a disclaimer though, let me note that a lot of technology truly amazes me yet in many ways, has passed me by.

Some thoughts, beyond the cost issues, proprietary software concerns and privacy worries:

If you cannot explain the results you have, how do you know they are correct? And are they of any value? I have too often seen reports that look great, but when the results are questioned, the answers leave me feeling less than confident about the data and reasoning that went into them. And frequently, this leads to those using the technology to question the results themselves, going back and reviewing the data and thus losing any efficiencies that they otherwise would have gained. And as we reason forward from our results, are we truly focused on the proper issues? Are we proceeding down the correct course?

Is the technology right for your audience? I am an extremely tactile, visual learner. I appreciate a verbal explanation or a diagram, but the learning process in me solidifies when I see it happening, when I can participate or perform. And many of the people I have encountered in the industry are the same way—that is often why they chose this industry. If the technology involved means sitting a person in front of a screen for lengthy training, you may well lose your audience.

Do we have time for the additional training? Accurately using software does not automatically happen. It requires training and usually ongoing training as new releases become available. These are not a reason to avoid the purchase, just a factor in the decision.

With all these thoughts, it would appear that I do not appreciate what technology has to offer but note my comment above—I am truly amazed. The ability to provide a concise, portable, consistent message is an immense advantage. The potential ability to have real time results is a must in our competitive world. Technology offers an avenue to these conclusions. But understand its shortcomings, what went into developing the answers and the needs of your audience. Only by doing this will the technology allow you to reach your full potential.

Mr. Igel recently retired as vice president of the George J. Igel & Co., Inc. after working there for more than 35 years.

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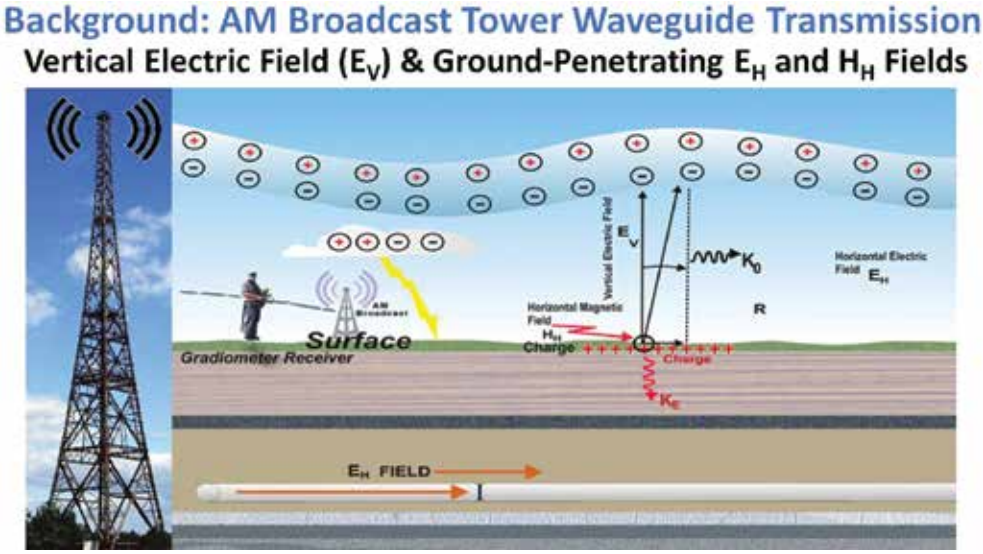


provide a lateral resolution of 2-cm and near-surface depth prediction accuracy of about ½-ft (some error increasing with depth). The AMG detection results show a total 102 utility lines detected and confirmed ahead of construction. Of these 102 lines detected, 65% were undocumented in the construction company's library of as-built maps. The deepest detection was an 8-ft concrete sewer line at nearly 60-ft depth. The use of AMG has continued through a series of additional contractors-at-risk and expansion projects throughout the LAWA complex.

The results of the LAWA evaluation project were an evolutionary step in locator technology, and AMG was awarded the 2017 GRAND CHALLENGE trophy by the America Society of Civil Engineers (ASCE). Following the award, the tool was manufactured in small batches, with a focus on continued evolutionary development and participating in science-based demonstrational projects for contractors-at-risk. Projects have including AMG scanning at the Houston International Airport, Phoenix Sky Harbor Airport, San Francisco Airport, Seattle SeaTac Airport, the Fess Parker Resort (CA), and several major municipal utility grids and waste-water treatment plants.

AMG was also evaluated over the course of several years by international engineering firms in the Eastern US and the United Kingdom. This "pre-introduction phase" of the developing AMG product-line included working with construction industry stakeholders, utility locator companies, environment and civil engineering firms, manufactures of HDD machines, as well as certificated construction inspectors.

CONTINUED ON PAGE 13

Detecting Cross Bores Wi

By Melissa Hancock
811 Magazines

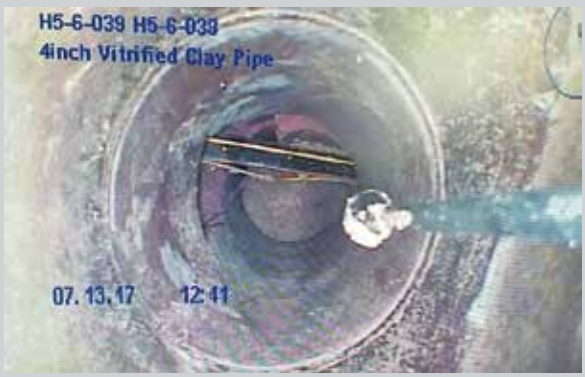
Compliance EnviroSystems is headquartered in Baton Rouge, Louisiana. CES employs more than 160 dedicated and family-oriented employees and provides comprehensive sanitary sewer and storm drain system evaluations, specializing in large and difficult-to-clean or access pipes and alternative cleaning methods. They also specialize in cross bore locating. Josh Graham works with CES and is responsible for business development in Louisiana, Texas, Arkansas and Oklahoma. "As a business development representative, I am responsible for educating our clients (municipalities, engineers, utility owners, contractors and others) on the front end about the very real threats that natural gas cross bores present," says Josh. "As well as how to efficiently and thoroughly locate and account for cross bores in sanitary sewer collection systems."

Josh has been with CES for 11 short years. After graduating from LSU with a degree in mass communication and business administration, he took a two-day vacation before he was thrust into the real world. "When I began at CES, I didn't know much about sewer collection systems or cross bores. By working hands-on with our sewer evaluation crews in the field, attending countless hours of training seminars and having in-depth discussions with thousands of our clients, I am proud to say that I have learned an enormous amount of information and we have grown CES into the premier company in the nation that specializes in cross bore locating."

"Simply put," explains Josh, "a cross bore is the intersection of one utility through another utility. Cross bores can be gas, sewer, water, drainage, electric, fiber, telecom, etc. We tend to focus on the occurrence of natural gas lines bored through sanitary sewer pipes because they present the largest risk for gas utility companies and the largest hazard to the general public." When cross bores exist in a sanitary sewer or storm drain system, it presents a tremendously hazardous situation. CES is capable of locating cross bores through a combination of CCTV inspections of mainline pipes, sewer service lines and highly accurate GPS data collection."

CES project manager and director of training, Nick Spano explains some of the changes in technology over the last decade. "CCTV inspection cameras now have higher resolution imaging, up to 4k. Camera transporter motors are stronger, and wheels are higher quality allowing us to travel farther and over obstacles. And GPS equipment now accesses more satellites than ever, making GIS data more accurate. Lateral

th Advancing Technology



cameras have also become smaller and more agile allowing us to inspect further up laterals."

CES uses late model equipment and state of the art technology and Nick shares this technology utilized by CES in cross bore inspections. "New lateral cameras, Cues Micro P&T and Ibak Nano cam, smaller outside diameter, higher torque motors and new locators that make tracking gas lines and cameras simple and more accurate, as well as cloud based data storage" make up the technology that assists in the important task of cross bore location.

Josh Graham addresses the important balance of technology and manpower. "The technology and equipment that we use on a daily basis are critical to a successful cross bore locating program. But even more important than the technology and equipment is the people who operate it. It is crucial that our employees know the ins and outs of every piece of our equipment as well as exactly what to look for while conducting cross bore inspections. Lives are at stake and it would be devastating if we affected someone's life because we missed a cross bore. All CES employees are aware of the criticality of the data we collect and strive to be 100% accurate and consistent every day."

"Tech is crucial. Everything is a computer now. Handheld GPS collection, databases for tracking production, cameras and transporters have dozens of sensors that are constantly monitored by the computer. The challenge is that tech is RAPIDLY integrating in our industry. We have to keep our employees up to speed and trained. Over the course of a decade, we have transformed our data delivery from VHS to DVD to the current cloud-based data transfer or on USB Flash drives."

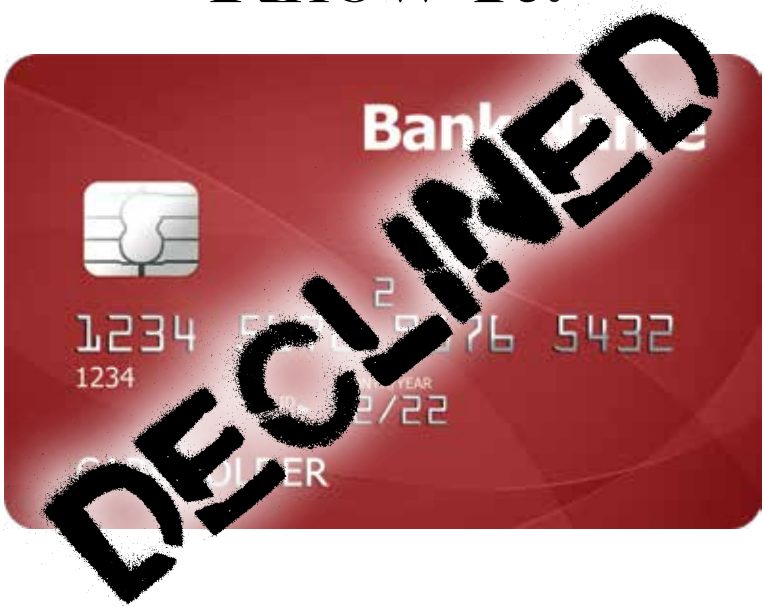
The future of technology in cross bore inspections is full of possibilities. "My guess is that all equipment will be 5G connected. Everything will go to the cloud (GPS, video, reports, etc.)" says Josh. "3-D modeling of underground utilities will reduce cross bores in the future and hopefully there will also be advances in subsurface utility locating tech to make it easier to find existing utilities. Equipment manufacturers are also hinting at artificial intelligence being incorporated into the cameras to quickly and seamlessly identify defects in pipes."

As technology advances, safety increases—which is the ultimate goal of both the utility and digging communities. Be it artificial intelligence or well-trained workers, the end goal is to create a world safe from the dangers associated with cross bores.

Technology

You Can Be Robbed & Never Know It!

BY Virginia Reames
The Policy Center
Jackson, MS



One day on your way to work, you stop at the gas station, slide your card through and, uh-oh "Card Declined!"

"Not possible," you think. "This is the company account."

You get into the office and place a call to your bank. Your account has been raided, and all the money is gone. Yes, the bank will make it right. But not today, and you still need gas!

Not tomorrow, either.

It will take a while, believe me. First thing they must do is make sure you're not the one running the scam!

Meanwhile you still need gas and by now, so does your crew. What are you going to do?

Have you seen the recent stories about how 23 Texas towns have been hit with something called "Ransomware" whereby the hacker gained control of each of the 23 towns' entire computer systems and demanded money to release it back to the towns? Meanwhile, none of the towns involved are able to accept tax or utility payments, no car tags, no water bills, etc., not to mention that all sorts of confidential data, such as Social Security numbers, phone numbers of residents are probably vulnerable now. And these 23 towns were hit simultaneously—just to show how clever the hackers are, and how much damage they can do to our communities.

That's an example of how vulnerable we all are and how we need to take steps NOW to protect ourselves and our property.

One example is personal, one person's account got hacked and money drained; the other is a frightening example of what they can do if they take over 23 towns' systems at one time.

First thing you are gonna do when you get your money back is keep it in the office safe until you feel more comfortable about everything. (Very bad idea; criminals steal safes, too!)

Well, okay, what can you do? Cyber Insurance!

Nothing else covers the various ways hackers- both here and abroad-can worm their way into our online accounts. No matter how much you want to stash your money into a safe, you know you are gonna have to put it back in the bank eventually—to meet payroll, for example. Just like life won't let us live and do well without computers anymore, you simply can't run around paying cash for everything- especially since there is an affordable option like Cyber Insurance.

CONTINUED FROM PAGE 9

As a member of the CGA Technology and Best Practices Committees for the past 3-years, Stolar has met with CGA stakeholders focused on gathering information that could be applied in optimizing AMG tool design to best serve the underground utility locating market.

AMG Technology and Practices

It is important to understand that detection-depth capability of AMG is only limited by the practical separation of its widely spaced electrostatic-shielded magnetic dipole antennas, and not geology. Deep-looking AMG configurations will have multiple antennas, with at least one pair at wide-spacing. This is required when deeper utilities, foundations, karsts or tunneling activity may be of interest.

Through potholing and excavation, AMG has proven to be accurate and deep-searching. AMG surveys have prevented construction-related damage to assets and infrastructure. In general, AMG has been proven to detect the following buried utility types: electrical conductors (any type), metal pipes regardless of contents, non-metallic conduits, natural gas or fuel lines, polymer pipes, brick or concrete sewer lines, shielded fiber-optic cables, utility duct banks, contamination or leakage plumes and natural or man-made voids.

AMG configurations

Unlike most conventional geophysical scanning tools, AMG is able to "see through" near-surface clutter such as rebar, thin water layers and moist landscaping, as well as built-up surface layers such as concrete, asphalt, gravel, grass or multiple layering.

Creating an Advanced SUE Toolbox

AMG is combined with differential GPS to provide centimeter-accuracy for location along the surface. AMG's unique gradiometric detection allows prediction of depth for most linear utilities (± 0.5ft accuracy). Unlike reflection GPR technology, AMG depth measurements are independent of soil electrical characteristics, and AM-band attenuation rates are typically less than 1 dB/m, depth-of-detection exceeding 20 meters in most soil-types and is not affected by the presence of a water table. Unlike RD technology, AMG detects all utilities, at any depth, and eliminates the cross-coupled false detection issue of RD. In practical use, AMG has made confirmation pot-holing more effective and less costly. AMG imagery can be processed for integration into design and engineering plans, and AMG technology brings rapid and comprehensive 3-D GIS mapping to SUE, and to its project-owners and contractors-at-risk.

CGA Excavation SAFETY 811 Conference & Expo

Gathering professionals from around the world since 2004.

Palm Springs, California
March 24-26, 2020

"There [are] just so many things to see, so many people to visit with, so many great sessions. I would totally recommend this conference to anybody."

-Andrea Stainback, CenturyLink

- 80+ Education Sessions
- Over 120 exhibits

91.9%
of past attendees would recommend the Conference to an industry peer.

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Owned and Produced by Infrastructure Resources LLC

Utility Locator Does More Than Locate

The vLoc3-Pro utility locator introduces new innovative tools for locating buried utilities assuring damage prevention while gathering information for analysis.

With two sets of screened 3D antennas signal distortion is easily detected and displayed on the bright full color display. Along with classic locate screens the vLoc3 series locators offer new locate perspective screens of Vector Locate for fully automatic non-walk over locating, Transverse Graph showing both peak and null simultaneously providing immediate measurement of signal distortion, Plan View showing the relative orientation of the cable at any angle, and a new graphical Sonde screen with guidance arrows leading to the sonde location even when it is vertical.

The highly user configurable vLoc3 series contains eight passive locate modes, fault-find mode, SD (showing direction of outgoing current), and a range of configurable frequencies from 16Hz to 200 kHz. Audio and mechanical vibration alerts can also be configured by the user providing warnings for shallow depth, overload, overhead cables, and excessive swinging. Plug-in-play options for the receiver include optional Bluetooth module useable with external GPS devices and EMS foot to locate buried markers.

For more information on this new product by Vivax-Metrotech go to www.vivax-metrotech.com or contact your local dealer.

the Jacobi PERSPECTIVE

by John Jacobi

Better Services Through Technology

Technology is a wonderful thing. Do you remember when there were no such things as cell phones or personal computers? Or, for that matter, seat belts in cars, car seats for infants or even bicycle helmets?

There should be no debate that technology and the application of technology are two of the things that differentiate between developed nations and third-world nations. Do you want to go back to the "good old days" of heating homes by burning wood, traveling on foot, outdoor plumbing and pre-20th century medicine? I doubt it.

We are in the political season. PHMSA is up for reauthorization next year. There has already been at least one Congressional hearing and there is at least one proposed reauthorization. (See *https://www.phmsa.dot.gov/news/protecting-our-infrastructure-pipelines-and-enhancing-safety-act-2019-section-section-analysis*). My guess is that there will be many changes before it goes "final." One proposed section caught my eye. It would require PHMSA to "review any new industry standards relating to pipeline safety proposed to be incorporated by reference through a petition for rulemaking." PHMSA's words – not mine. The Federal Administrative Procedures Act (5 U.S.Code Chapter 5) has been in effect since 1946. What does this new proposed section add? How is this consistent with Executive Order 13777 Enforcing the Regulatory Agenda?

Liquefied Natural Gas has been in the news a lot lately. 49 CFR Part 193 contains the regulations for LNG facilities. Part 193 incorporates by reference NFPA-59A (2001), "Standard for the Production, Storage, and Handling of Liquefied Natural Gas (LNG)." There have been five revisions to NFPA 59A since 2001. The current version is dated 2019. There are reasons that the newer versions have not been incorporated by reference. However, to be compliant with the regulations, an LNG operator has only to comply with a standard that is almost 20 years old and could, from a purely regulatory standpoint, ignore all the improvements that have been published since then. By the way, many of the newer standards address technology that PHMSA refuses to recognize with respect to the design, construction, operation and maintenance of pipelines and pipeline facilities. The asserted venue is a "Special Permit" under 49 CFR §190.341 Special permits. Good luck with meeting the requirements for a special permit the way PHMSA is applying §190.341.

Another problem is that PHMSA has yet to solve the problem of providing copies of industry standards incorporated by reference to the public, to public officials, and to pipeline operators. Industry standards cost money to develop. The developers of such standards are entitled to the benefit of creating those standards, but every organization requires resources to continue to exist. Who gets to pay? Ultimately the public (consumers of services provided by pipeline operators). If something is the law of the land it should be available to all.

One last comment – according to the latest (June 2019) Report on DOT Significant Rulemakings, the pending Hazardous Liquid rulemaking began 8/13/2010, the Gas "Mega Rule" process started 1/04/2011, and the Underground Storage Regulations process started 2/17/16. Each of these "final rules" is supposed to be published by the end of this year. We shall see. In the words of Will Rogers, "Thank goodness we are not getting all the government we are paying for."

As to new technology, if the new technology has a valid application, has a reasonable scientific justification and is arguably compliant with the regulations (as-safe-as simply won't do it. New technology apparently must be SAFER or more conservative from the PHMSA perspective), I would encourage you to contact your local pipeline safety regulator and run it by them. Please don't be surprised if their support is less than encouraging. Your idea of safe and effective may be entirely different than their idea of safe and effective – but they interpret the rules!

Until next time, be safe out there! 811

John Jacobi retired from PHMSA.
For questions or comments, email:
jjacobi@sbcglobal.net

sudoku puzzle solution

4	2	5	1	3	7	8	6	9
9	3	6	2	5	8	1	4	7
1	8	7	6	4	9	3	2	5
3	1	8	7	2	6	5	9	4
7	4	2	3	9	5	6	8	1
6	5	9	4	8	1	2	7	3
8	7	3	9	1	2	4	5	6
5	9	4	8	6	3	7	1	2
2	6	1	5	7	4	9	3	8

Louisiana 811

The Mission

The mission of Louisiana 811 is to protect our members' facilities, the public, and the environment by providing excellent damage prevention services to all stakeholders in an effective manner.

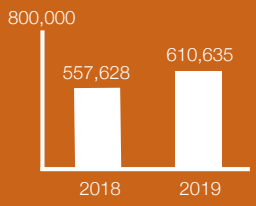
The Vision

The vision of the leadership of Louisiana 811 is to be a pre-eminent one call center by staying on the leading edge of damage prevention technology through innovation and customer service.

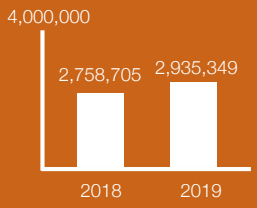
Call Center Operations

October 2019

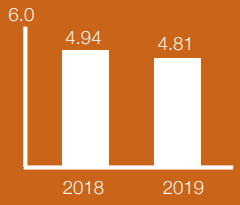
Tickets Processed



Messages Sent



Call Ratio



Call ratio is the number of utilities notified per incoming call.

To schedule a damage prevention safety meeting for your company contact:

Brent Saltzman

Manager, Damage Prevention Louisiana One Call

800-584-4274

225-275-3700

Extension 404

sudoku puzzle

		5		3	7	8		9
9	3		2	5			4	
1								5
3		8		2			9	
7	4		3		5	6	8	1
				8				
8	7		9					6
5		4	8		3		1	
			5			9		8

Fill in the grid with the numbers 1 through 9 so every row, every column and every 3x3 box contains the numbers 1 through 9 without repeating any of the numbers. Solution is on page 16.

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Can't get a good ground? Now what?

By Steve Benzie

Locating is not all short grass and pavement. Everything you hook to (if you can hook to it at all) doesn't always locate like it says it will in the book. So, we've found an old locator who has been called on many times for help. He wasn't involved in building the first locating device, but he probably used it once or twice before he upgraded! We welcome Steve Benzie to our family of subject matter experts. His series of articles in the upcoming 811 Magazines are written with you, the utility locator, in mind. If he doesn't cover your question, just contact him and let him respond to your specific situation. I know he'll be more than glad to help you get it right. Publisher

Anyone who has been cable locating for any time will be quick to point out a few useful facts that help to locate a cable or pipe. These may include:

- Always try to use a low frequency
- Make sure the line has good continuity
- Make sure that both ends are well grounded
- Make sure you make a good ground connection

These are all good suggestions, but we know that life is not always so simple. Take, for instance, the third suggestion "make sure both ends are well grounded." Many cables will not be grounded at the far end (or the beginning for that matter). Applying a low frequency signal locate tone in these circumstances can be fruitless. For example, short telephone drops to a premise will probably not be grounded, pot ended cables that have been terminated because they are no longer required or because they have been laid in anticipation of being used later are also not likely to be grounded.

If there is no ground, or the grounding is poor, making a good ground connection at the application point and checking for continuity is not going to help matters as there is nowhere for the signal to travel to if there is no ground at the far end. We should use a different technique to get the signal to travel to the end of the cable. It may be that you need a device that has even a higher frequency that you typically use to help you on this one. Typical locate frequencies tend to be in the range of 512Hz to 32kHz. These frequencies offer good signal to noise locates where good grounding is present. Have you considered using something in the range of 480kHz for poor grounding situations?

So why 480kHz? Well the answer is that at 480kHz the signal will "bleed off" the cable due to the distributed capacitance of the cable to ground. There's no need to go into explanations of what this is, but suffice it to say—the higher the frequency, the greater these effects. Now this helps with ungrounded cables because the capacitance creates a sort of pseudo ground that allows the signal to pass from the conductor into the ground and so completes the circuit back to the transmitter. Using the 480kHz mode helps detect these short, unearthed cable drops.

This is not the end of the story as 480kHz can also be a great help in detecting older cast iron pipelines. Many of these pipelines will have insulated joints. This electrical insulation may be a result of corroding joints and nuts and bolts, or because the sealing material used to join the pipes can create an insulated joint. Either way, this is bad news for someone trying to detect the position of the pipeline. Capacitive effects help here also. The jointed ends, although possibly insulated, will have some capacitance across the joint. Using low frequency pipe detecting techniques does not get a good signal path but switching to 480kHz allows the signal to use the capacitance of the joint to jump over the insulated section.

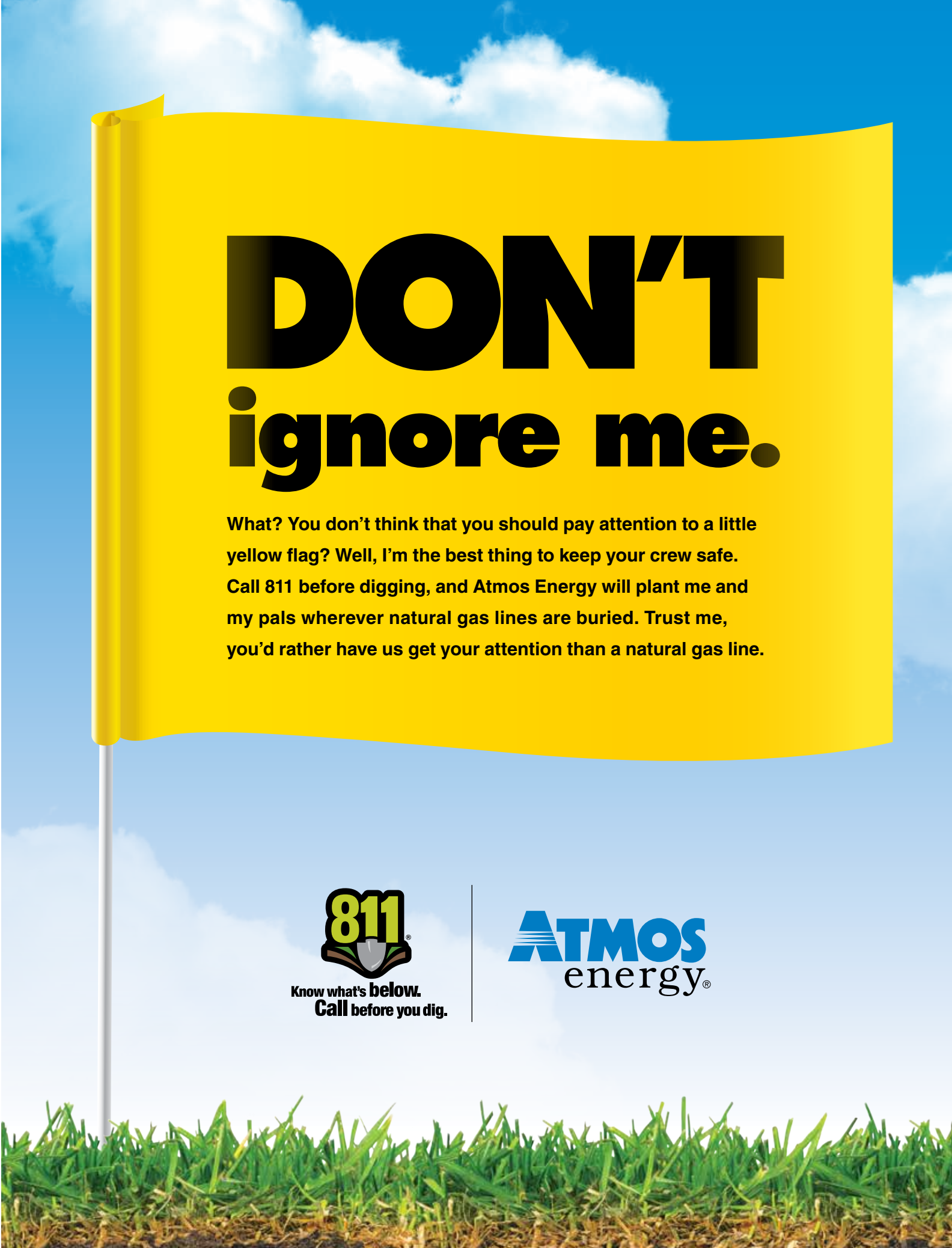
A word of warning: As we have seen, the use of high frequencies such 480kHz can be beneficial in many circumstances, but like all good things there is a downside. Understanding these limitations can still allow the user to appreciate the benefits of high frequency locate tones. The two main downsides are:

1) If there are any utilities nearby, there is a danger that the "bleed off" effect can also result in a "bleed on" effect. So retuning signal currents traveling through the ground may hitch a ride on other utilities, resulting in multiple signal paths. These tend to be smaller signals so careful locating techniques can help to identify the correct one.

2) As the signal will "bleed off" over the entire length of the cable, the distance the signal will travel along the cable or pipe will be less than that of a low frequency signal. It should be noted that using low frequency locate tones is always best where good grounds are present.

If you have questions or comments about this article or related topics, feel free to contact Steve at:

steve.benzie@vxmt.com.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