

## Ambient Technologies Receives "Export Achievement Award" from the Department of Commerce

In 2008, the US Department of Commerce presented Ambient Technologies, Inc. (ATI) its U.S. Commercial Service Export Achievement Certificate, which the Department awards to small- and medium-sized enterprises that have successfully entered the international marketplace. The Department presented ATI the award in recognition of the success of its affiliate ATI Panamericana, S.A., in Panama City, Panama, which ATI established in 2006.



Carlos Lemos receives plaque from Florida Congressman Bill Young and Representatives of the Dept of Commerce

## ATI Drilling Conducts Difficult Access DPT Borings at Circle K in Palm Harbor

Do you need "drilling in tight places"? ATI can help you. An example of our capabilities in difficult site access is the environmental drilling we conducted recently during removal of underground storage tanks at a Circle K facility in Florida. ATI Drilling advanced borings and collected soil and groundwater samples in a tight, restricted area next to the open tank pit. The borings were advanced and samples collected using ATI's Geoprobe 6610 DT direct-push technology rig. This rig provides easy and safe maneuverability along with the drilling capability needed to meet the project objective.



## Ambient Technologies Receives Second "Fast 50" Award Tampa Bay Business Journal Award - Fast 50, 2008

For the second year in a row, the Tampa Bay Business Journal has recognized Ambient Technologies, Inc. as one of the Top Fifty Fastest Growing Companies in the Tampa Bay Area. This award recognizes ATI for its ability to adapt to a changing marketplace and sustain its fast-paced growth achieved through a work environment that fosters personnel growth and development along with integration of talent and wisdom.



## Ambient Technologies Companies

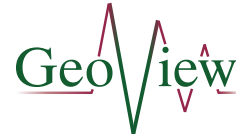
**ATI Drilling, Inc.**  
[www.atidrilling.com](http://www.atidrilling.com)  
 Environmental / Geotechnical Drilling  
  
 Tampa, FL | Vandalia, MI

**SB Drilling, Inc.**  
[www.sbdriilling.com](http://www.sbdriilling.com)  
 Geotechnical / Pre-Construction Drilling



Bartow - Inverness, FL | New Orleans, LA

**GeoView, Inc.**  
[www.geoviewinc.com](http://www.geoviewinc.com)  
 Geophysical Investigations  
 Subsurface Utilities Designation



St. Petersburg - Jacksonville, FL

### Ambient Technologies Affiliates

**ATI Panamericana S.A.**  
[www.atipanamericana.com](http://www.atipanamericana.com)  
 Subsurface Utilities Designation  
 Drilling and  
 Environmental Monitoring



**ATI Infrastructure, Inc.**  
 Infrastructure Construction Projects  
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# ATI NEWS



## CHRISTMAS 2008 ISSUE EXPANDING MARKET AND SERVICES

### HOLIDAY MESSAGE:

THE TRUST AND GOODWILL OF THOSE WE SERVE ARE THE FOUNDATION OF OUR SUCCESS.  
 WE THANK YOU AND WISH YOU A HAPPY HOLIDAY SEASON AND A NEW YEAR FILLED WITH SUCCESS AND PROSPERITY.



### In this issue:

- The GeoView Team Defies Recessionary Market Conditions in 2008
- "Selection and Application of Geophysical Test Methods in West Central Florida Karst Regions," a Mike Wightman, GeoView, Presentation at ASCE 2008 Sinkhole Conference.
- ATI Companies Launch "ATI Infrastructure", a New Subsidiary Focused on Infrastructure Construction Projects
- Ambient Technologies Receives "Export Achievement Award" from the Department of Commerce
- ATI Drilling Conducts Special Access DPT Sampling at Circle K in Palm Harbor Do you need Drilling, Sampling or Installation of Monitoring Wells in Restricted and Special Access Locations?
- Ambient Technologies Receives Second "Fast 50" Awardiew Team Defies Recessionary Market Conditions in 2008

## The GeoView Team Defies Recessionary Market Conditions in 2008

The GeoView Team has defied today's negative market conditions by showing a 30% increase in revenues and maintaining profitability in 2008.

A well-deserved Christmas Party Celebration took place at the Don Caesar on Sunday December 14th 2008 where GeoView family, colleagues, and co-workers shared in the success that was the result of great team effort, good financial management, personal commitment, and ethical standards.

The GeoView Team left from right: Dimitri Gauquier, Robert Roth, Chris Taylor, Steve Scruggs, Mike Wightman, Bill Hardy, John Mullen, Sean Malphurs, Dale Rabinek, David Gibson, Ashley Armstrong.



## Selection and Application of Geophysical Test Methods in West Central Florida Karst Regions

M.J. Wightman, P.G., E.D. Zisman, P.E., P.G.

American Society of Civil Engineers 11<sup>th</sup> Multi-Disciplinary Conference 2008, "Sinkholes and the Engineering and Environmental Impacts of Karst".

ATI's Principal Geophysicist Michael Wightman, P.G. has co-authored a paper, presented at the American Society of Civil Engineers 11<sup>th</sup> Multi-Disciplinary Conference in September 2008, concerning challenges presented to contractors when designing new buildings and remediating existing structures located in karst regions and the role a properly designed and executed geophysical subsurface study can play in obtaining subsurface information in the planning and design phase of construction projects. While the paper presents case studies based on geophysical survey projects conducted in West Central Florida, the geophysical testing concepts can be applied to other areas where similar geological conditions occur.

Karst regions typically have highly variable geological conditions. A well-designed geophysical study can provide early information on subsurface conditions that will allow optimization of site use and foundation design, improve cost predictions, and reduce site development costs, both during and after construction. Information obtained by a properly designed and executed geophysical study can significantly improve accuracy and completeness of geotechnical investigations and provide optimal locations for geotechnical test borings. Integration of geophysical and geotechnical studies is being driven by both regulatory requirements and an increasing appreciation by the technical community of the advantages of geophysical testing.

Five major parameters must be considered when designing geophysical surveys for karst studies:

- Required depth of investigation
- Minimum size of feature to be identified
- Objectives of the survey (e.g., reconnaissance vs. comprehensive investigation)
- Site accessibility
- Budget

The most common geophysical method for karst studies in west-central Florida is ground penetrating radar (GPR) followed by electrical resistivity imaging (ERI) and then other seismic methods that include seismic reflection, seismic refraction tomography, multiple channel analysis of surface waves (MASW) and spectral analysis of surface waves (SASW). Productivity rates and costs of these different geophysical methods are highly variable depending upon the conditions and survey parameters. When deciding which geophysical method(s) to use, consider the following:

- Appropriately selected, multiple methods will usually provide superior results in comparison to the use of a single method.
- While most conditions that typify karst activity can be identified by one or more geophysical methods, applicability of a particular method is dependent upon site-specific conditions.

- The selection of a method must take into account the required depth to which karst conditions are of a concern.
- As the depth of the investigation increases, the cost per linear foot typically increases.
- Productivity rates and cost per linear foot of geophysical data vary greatly. GPR is the most cost effective but sometimes the most limited of the methods.
- Selection of transect spacing is controlled by the objectives of a survey. The question that must be asked in the planning phase is: What size feature are you willing to have missed as a result of survey design?
- GPR typically provides the most accurate information in karst delineation and other methods such as seismics and ERI are more susceptible to effects caused by off-line subsurface features.
- Conducting a geophysical survey prior to planning and design can reduce engineering costs and avoid or minimize expensive soil stabilization.

**Table 1. Selection of Geophysical Methods for Karst Investigations**

Target	Method
Vertically displaced or discontinuous soil	GPR, ERI, Seismic Refraction, MASW, Frequency Domain, EM, TDEM
In-filled (wet) voids within limestone	GPR, ERI, Seismic Reflection, MASW, EM, TDEM, Gravity
Voids within limestone (dry)	GPR, ERI, Seismic Reflection, MASW, EM, TDEM, Gravity
Fracture zones	GPR, ERI, Seismic Reflection, MASW, EM, TDEM

GPR = Ground Penetrating Radar  
 MASW = Multichannel Analysis of Surface Waves  
 EM = Electromagnetics  
 TDEM = Time Domain Electromagnetics  
 ERI = Electrical Resistivity Imaging



For the complete version of this paper please contact us at [info@ambienttech.com](mailto:info@ambienttech.com) or visit our website at [www.ambienttech.com](http://www.ambienttech.com) and go to the download tab.

## ATI Companies Launch "ATI Infrastructure", a New Subsidiary Focused on Infrastructure Construction Projects

ATI Companies have access to construction equipment, which includes dozers, earth pan/scrapers, excavators, graders, and hauling trucks, along with equipment operators, for our clients' earthmoving projects. Our staff of licensed operators are well skilled at running these and other types of construction equipment. ATI's equipment and mechanic shop is located near Bartow, Florida.

ATI provides the following construction support services:

### Earth Moving and Construction

- Excavation and Hauling (cut and fill onsite and from off-site sources)
- Demolition
- Dewatering (well installation and pumping)
- Pump Station and Flow Control Structures Construction
- Finish Grading and Hydro-Seeding
- Stilling Wells and Staff Gauges
- Platforms and Weed Barriers
- Sheet Piling, Culvert, and Weirs Construction
- Power Lines and Electric Panels Installation
- Erosion Control and Monitoring
- Steel Catwalks and Railings
- Temporary Road Access Construction

### Construction Monitoring

- Environmental Impact
- Vibrations
- Surveying during Construction

### DRILLING SERVICES

ATI Companies' licensed drillers have a broad range of drilling capabilities. Our fleet of direct-push technology drill rigs and truck-, track-, and barge-mounted auger and mud rotary drill rigs allows us to access locales and terrains with difficult site conditions. With our experienced staff and diversity of equipment, we have acquired recognition in the industry for completing drilling projects in a variety of environments that have included land, water, coastal marshes, levees, and dikes.

ATI provides the following construction-related drilling services:

- Dewatering Wells and Systems Installation
- Grouting/Injection Wells
- Groundwater Dewatering
- Concrete or Rock Drilling and Coring
- Well Abandonment
- Rock Anchors and Micro Piles

### NON-DESTRUCTIVE TESTING AND UTILITY LOCATING SERVICES

ATI Companies' experienced personnel and diversity of geophysical tools and applications provide high-quality and accurate geophysical data that are valuable when applied to and integrated with subsurface engineering, environmental, geological, and construction projects.

ATI provides the following construction-related geophysical services:

### Locating Rebar and Cables in Concrete

- Underground and In-Slab Utilities Locating
- Rebar/Post-Tensioning Cables Locating
- Identifying Voids under Slabs or Pavement
- Concrete/Pavement Thickness Evaluations
- Blast/Vibration Monitoring

### Utility Locating

- Level B and Modified Level A Subsurface Utility Designation Studies
- Vacuum Excavation Services
- Graphic Presentations in AutoCAD or ArcView Formats