

# Case Alumnus Travels the Earth to Study Beneath It



Case engineering alumnus Camilo Alvarez spent part of his summer living on a barge.

Alvarez, who earned his master's degree in civil engineering from Case in 2000, works for GRL Engineers Inc., a Cleveland-based firm that develops and implements methods for testing piles in deep foundations. As a field engineer and now the branch manager for the Los Angeles office, Alvarez was hired to supervise pile installation in the construction of four oil platforms in the Middle East.

For almost six weeks, he was stationed on a barge in the Persian Gulf, a kind of floating city with living quarters for some 200 people. He shared a bunk with a fellow GRL engineer and ate his meals in a mess hall. For three or four days at a time, often with only two hours of sleep a night, he worked, using stress-wave instruments to monitor the driving of massive piles through several hundred feet of water, mud, and rock.

Most people would swim fast in the other direction. But Alvarez is always up for a good challenge.

"It was exciting to deal with such a huge structure," he says. "It was also nerve-wracking and scary. But I did enjoy the challenge; those critical moments when everyone is waiting for you to figure out what to do next. That was fun."

## "TAKE A CHANCE!"

Throughout his academic and professional career, Alvarez has been guided by an appetite for new, intellectually challenging experiences.

In 1998, he was an engineering student in his native Colombia, when he learned of a professor at Case who was recruiting a graduate student with an interest in pavement design and centrifuge modeling. Alvarez, whose research fit the bill, quickly applied.

"I thought, 'Take the chance, why not?'" he recalls. "I knew it was a good

school. They had the ways and means to find people they were interested in and to invest in those people."

The professor was Ludwig Figueroa, now emeritus professor of civil engineering. Figueroa became Alvarez's advisor and, throughout the next two years, served as an indispensable source of knowledge and advice. When it came time to start looking for jobs, Figueroa put him in touch with three places: GRL and two larger companies with thousands of employees worldwide.

After two job interviews, Alvarez received two offers. He canceled the third interview and took the job at GRL, attracted by the small firm's commitment to innovation and knowledge. The company, which was founded in the mid-1970s by two Case graduate students and a Case professor, has a strong research bent found more often in academia than in traditional engineering firms. It encourages its engineers to try new and better techniques to address different client needs and the specific problems that arise in the field.

Alvarez worked in Cleveland for just three months before transferring to the Orlando office where, for the next

couple of years, he cut his teeth on major projects such as the Orlando International Airport and the Orange County Convention Center.

Then he got a call from his boss in Cleveland. The company wanted to expand into the California market, his boss told him—would he be interested in opening a new office in Los Angeles?

Alvarez said yes. Six months later, he packed up the car, made the 2,500-mile drive across the country, and set up an office in two days.

Since then, Alvarez says, it has been “a full fight.”

Starting from scratch, he has built a roster of over 20 steady clients both on the West Coast and abroad, mostly in South America, and continues to pound the pavement in search of new clients.

This client-seeking, he says, is the most challenging aspect of his job. “Honestly, I’m just a kid. The civil engineering field can be a very grey-haired environment. People take a while to come around. You need to convince them that what you’re offering works; that they can benefit from it.”

Not all of his time is spent hand-shaking and delegating, though. Because the LA branch is for now a one-man show, Alvarez has the chance to work heavily in the field. About half his time is spent on job sites, often in such far-flung places as Qatar, Bahrain, Venezuela, Puerto

for quality-assurance purposes. They call us. I definitely enjoy working on things people don’t know too much about. It’s more challenging.”

### LEARNING IN THE LAB AND IN THE FIELD

When Alvarez took that first job at GRL, he intended to work for a couple of years before heading back to school to earn a Ph.D. Now, six years, one job transfer, and one promotion later, he still feels a strong pull toward the university environment.

“I loved the program,” he says. “They give you liberties to do things. The first thing my advisor, Professor Figueroa, told me was, ‘This is your lab.’ I thought ‘My lab?’ They’re expecting you to take chances and move along.”

He credits Figueroa for making his experience in graduate school so rewarding. “I owe my life to him. He taught me well and gave me good advice. He gave me a lot of opportunities, opened my doors.”

Alvarez still entertains the possibility of returning to school someday. For now, though, his work keeps him amply busy—and content.

He says, “I like the intense involvement of my job, 20 people screaming at the same time in the cell phone. It’s fun. I’m a workaholic—what can I say?”

**“Since everything we do is below ground, everything is unknown. A lot of people want to try new things for quality-assurance purposes. They call us. I definitely enjoy working on things people don’t know too much about. It’s more challenging.”**

Rico, Trinidad and Tobago, and, as was the case this past summer, the United Arab Emirates.

The dual role of manager and engineer suits Alvarez well. He enjoys the fast pace of growing the business and managing complex projects, but relishes equally the opportunity to work hands-on.

It was, after all, an interest in research that led him to GRL in the first place.

He says, “Since everything we do is below ground, everything is unknown. A lot of people want to try new things

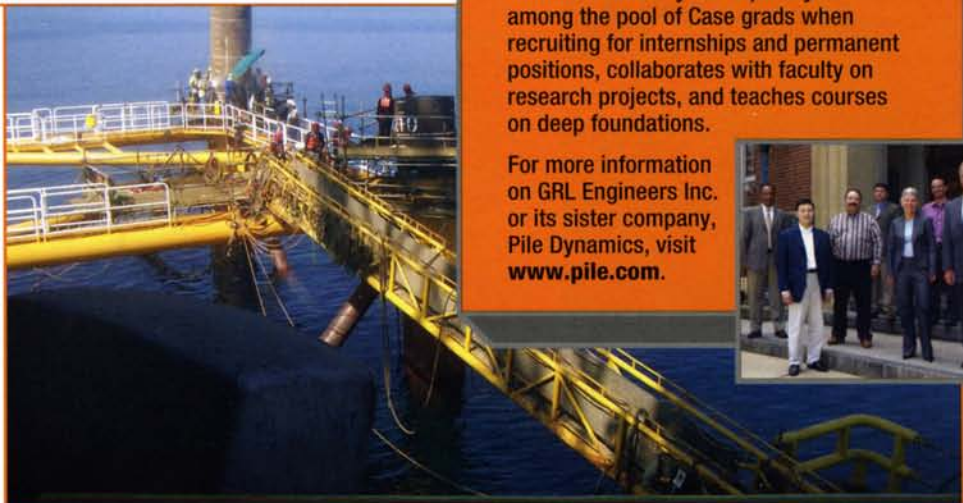


Photo by Pete Bentley, 1975

## GRL COMES HOME FOR THE BIG 3-0

This past June, Camilo Alvarez was one of more than 50 people who gathered on campus to commemorate the 30th anniversary of GRL Engineers Inc. An afternoon of talks and tours celebrated the company’s transformation from a pioneering start-up to one of the most respected authorities in the deep foundation field.

GRL grew out of research conducted at the Case Institute of Technology, the precursor of the Case School of Engineering, in the late 1960s. That research, now called the Case Method, focused on creating new systems of pile testing that supported more efficient and higher-capacity deep foundations. In 1976, Professor George Goble, along with two graduate students, Frank Rausche and Garland Likins, formed a company to provide consulting services based on these discoveries.

Since then, GRL has expanded from 3 to 22 engineers and continues to develop its methods for testing and analysis. Some remember a time when GRL had two jobs: one in Ohio and one in Alaska. In 2005 the company worked on more than 900 projects.

Although GRL has since moved its headquarters away from University Circle, the company maintains close ties with the university. It frequently looks among the pool of Case grads when recruiting for internships and permanent positions, collaborates with faculty on research projects, and teaches courses on deep foundations.

For more information on GRL Engineers Inc. or its sister company, Pile Dynamics, visit [www.pile.com](http://www.pile.com).

