# THE GEO-SAMPLER

TWENTY-FIVE YEARS 25
geotechnics
geotechnical & geosynthetic testing

SEPTEMBER 2009

Welcome to the second to last *GeoSampler* of this, our 25th anniversary year. The *GeoSampler* that looks around and says "where did the time go? Where did the hair go?" And that asks "where do we go from here?" Whatever it is we've accomplished, we couldn't have done it without you. And whatever the future may hold, we hope we'll continue to earn your friendship and your trust.

# WHAT'S NEXT?

With the past behind us, and with the present disappearing faster than a—whoa, there it went—it's time to take a quick look into the future. The past twenty five years have been a wild ride worldwide. And there's no reason to believe the next twenty five won't be even more remarkable.

Of course, the future is difficult to predict. But with the help of some professional futurists and with a level of accuracy somewhere between a weather forecast and a fortune cookie, we can propose some possibilities.

The future is probably going to be a significantly more crowded place. Based on statistics and trends, forecasts are for the United States population to increase by 25 percent (that's about 70 million people, we did the math) by the year 2025. By 2034, the oldest Baby Boomers will be rocking and rolling into their 80s, and Gen Xers will be hip hopping onto Social Security. If he's indeed alive somewhere, Elvis will turn 99. MTV will turn 53 and start complaining about how modern music is just a bunch of noise.


With all of those new people everywhere you look, it will be important to have a place to get away. And fortunately there will still be a place with plenty of space. Space. And getting there for your vacation may be just the thing. it's a distinct possibility that space tourism will be a viable option as early as 2013. Virgin Galactic is already planning suborbital flights within the next two years. Approximate cost to be $200,000 plus bag fees. At least one entrepreneur has plans to launch a space hotel within the next five years. A can of macadamia nuts from the minibar could set you back a grand.

For those of us planning a more traditional vacation, we may be traveling on some significantly different highways. Based on a $100,000 U.S. Department of Transportation grant, Solar Roadways is already prototyping its Solar Road Panel. Made up of solar cells and glass, the panels would replace traditional asphalt. The solar roadway could contain embedded LED lights and generate warning signs directly in the road. Projections claim a four-lane, one-mile stretch of road would produce enough electricity to power 500 homes. By 2034 we could be driving our way to electrical nirvana. Based on the aforementioned population trends, there will still be someone driving slowly in the passing lane with his turn signal on.

And when we pull off the shiny new highway to refuel we may have a few more interesting options than regular or premium. Like perhaps, unseeded. Not to be outdone by the DOD, the USDA is busy looking to the future. Their research indicates that watermelon juice is packed with high amounts of sugars that can be directly fermented into ethanol, and thus a new source of biofuel.

A little further down the road we may be flocking toward an even more exotic source of fuel. And an innovative way to store and deliver it. Chicken feathers. Scientists are exploring ways to use carbonized chicken feathers to created inexpensive storage tanks for hydrogen. In the hydrogen powered car of the future, a 20 gallon storage tank made of carbon nanotubes or metal halides would add $30,000 to the cost. The carbonized chicken feather tank: $200.

While you're refueling, you're probably going to want to grab a bite to eat. Though astronaut food never really took off as the food of the future, the food of the next 25 years may be quite interesting. Using nanotechnolgy, scientists are designing new kinds of food. They may be able to enrich products in such a way that you can get all the nutrition of a head of broccoli in something that tastes just like a twinkie. And you'll probably still be able to wash it down with a little Tang.®

***What was the best thing before sliced bread?***

## They are our future

KIDS EXPLAING SCIENCE

H2O is hot water, and CO2 is cold water.

If you smell an odorless gas, it is probably carbon monoxide.

Water is composed of two gins, oxygin and hydrogin. Oxygin is pure gin. Hydrogin is gin and water.

Artificial insemination is when the farmer does it to the cow instead of the bull.

Dew is formed on leaves when the sun shines down on them and makes them perspire.

A supersaturated solution is one that holds more than it can hold.

The skeleton is what is left after the insides have been taken out and the outsides have been taken off.

The tides are a fight between the Earth and Moon. All water tends towards the Moon, because there is no water in the Moon, and nature abhors a vacuum. I forget where the Sun joins this fight.

A fossil is an extinct animal. The older it is, the more extinct it is.

Equator: an imaginary lion running around the Earth through Africa.

Planet: a body of earth surrounded by sky.

To keep milk from turning sour, keep it in the cow.

# "640K ought to be enough for anybody."

*—Bill Gates, 1981*

## FAMOUS PREDICTIONS PROVE THAT THE CRYSTAL BALL ISN'T ALWAYS IN FOCUS.

"Everything that can be invented has been invented."
*—Charles H. Duell, an official at the US patent office, 1899.*

"It will be gone by June."
*—Variety, passing judgement on rock 'n roll in 1955.*

"They couldn't hit an elephant at this dist-"
*—Last words of Gen. John Sedgwick, spoken as he looked out over the parapet at enemy lines during the Battle of Spotsylvania in 1864.*

"The horse is here to stay but the automobile is only a novelty, a fad."
*—The president of the Michigan Savings Bank advising Henry Ford's lawyer not to invest in the Ford Motor Co., 1903.*

"There is no reason anyone would want a computer in their home."
*—Ken Olson, president, chairman and founder of Digital Equipment Corp. (DEC), maker of big business mainframe computers, arguing against the PC in 1977.*

"Space travel is bunk."
*—Sir Harold Spencer Jones, Astronomer Royal of the UK, 1957 (two weeks later, Sputnik orbited the Earth).*

"Nuclear-powered vacuum cleaners will probably be a reality in 10 years."
*—Alex Lewyt, president of vacuum cleaner company Lewyt Corp. in the New York Times in 1955.*

"Who the hell wants to hear actors talk?"
*—H. M. Warner, co-founder of Warner Brothers, 1927.*

"This 'telephone' has too many shortcomings to be seriously considered as a means of communication. The device is inherently of no value to us."
*—A memo at Western Union, 1878.*

"Television won't last because people will soon get tired of staring at a plywood box every night."
*—Darryl Zanuck, movie producer, 20th Century Fox, 1946.*

"Rail travel at high speed is not possible, because passengers, unable to breathe, would die of asphyxia."
*—Dr. Dionysys Larder (1793-1859), professor of Natural Philosophy and Astronomy, University College London.*

"X-rays will prove to be a hoax."
*—Lord Kelvin, President of the Royal Society, 1883.*

"Very interesting Whittle, my boy, but it will never work."
*—Cambridge Aeronautics Professor, when shown Frank Whittle's plan for the jet engine.*

"What, sir, would you make a ship sail against the wind and currents by lighting a bonfire under her deck? I pray you, excuse me, I have not the time to listen to such nonsense."
*—Napoleon Bonaparte, when told of Robert Fulton's steamboat, 1800s.*