

THE GEO-SAMPLER

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Every year around this time, good boys and girls all over the world put pen to paper and craft letters to a white-haired man who lives among elfen craftspeople. They extoll their virtues, and make pleas for "Tickle-me Elmo." But what really happens at the North Pole? And is it all fun and reindeer games? We here at the *GeoSampler* think you'll be surprised.

THE NORTH POLE: ON SANTA, SEASONS AND WHY IT'S NOT AS NORTH AS IT USED TO BE.

Turns out, the biggest shock about the North Pole is that there isn't really one North Pole, but rather two. Unlike the South Pole, which can be found on the continent of Antarctica, there's no land beneath the North Pole. It's more like a floating ice rink that expands and contracts with the temperature of the season. This North Pole is also known as the terrestrial North Pole, the geographic reference to the top of the earth. There's also the magnetic north pole, which is a magnetic phenomenon that changes daily depending on what's happening underneath the Earth's crust. We'll get to that later.

Actually, there's been quite a bit of controversy since the terrestrial North Pole was discovered by Robert E. Peary, Matthew Henson, and four Eskimo companions back in 1909, after many attempts by scores of others, including some that ended quite disastrously. The 1909 discovery is controversial in itself, as many have questioned Peary's navigation and sloppy reporting. In 2005, a British team set out to defend Peary's conquest and although they developed great admiration for Peary et al, they concluded he couldn't have actually discovered the North Pole. Even as recently as 2009, E. Myles Standish of the California Institute of Technology, an experienced referee of scientific claims, reported numerous inconsistencies. (That's one of many reasons we strive to be so ac-

curate in our own data collection and reporting, but enough about us.)

No matter how it came to be known, there are a few things you'll want to know if you plan to discover the north pole yourself.

First, plan your visit during the summer months, when the North Pole is the warmest. By warm, we're talking freezing, as the average temperature then hovers around 32 degrees. Which is significantly warmer than a February trip, when temperatures drop to -32 degrees.

Another reason for a summer visit is that, well, you'll actually be able to see it. Like other places in that general neighborhood, the North Pole faces six months of broad daylight and then six months of near darkness as a result of the angle of the Earth.

Technically, though, there's not a bad time to visit, since there actually is no time zone in the North Pole. In most other places on earth, the time zone is determined by longitude, and synchronized with the position of the sun. This line of reasoning fails at the North Pole, where all time zones converge. Since there's no permanent human presence there, and hence no meetings to be late to, explorers may use any time zone that is convenient, whether Greenwich Mean Time or that of the home country from which they departed.

continued on reverse

I'll do the stupid thing first and then you shy people follow.

—Frank Zappa



Her vocabulary was as bad as, like, whatever.

She grew on him like she was a colony of E. coli and he was room-temperature Canadian beef.

Even in his last years, Granddad had a mind like a steel trap, only one that had been left out so long it had rusted shut. She was as unhappy as when someone puts your cake out in the rain, and all the sweet green icing flows down and then you lose the recipe, and on top of that you can't sing worth a damn.

The plan was simple, like my brother-in-law Phil. But unlike Phil, this plan just might work.

The little boat gently drifted across the pond exactly the way a bowling ball wouldn't.

John and Mary had never met. They were like two hummingbirds who had also never met.

He was as lame as a duck. Not the metaphorical lame duck, either, but a real duck that was actually lame. Maybe from stepping on a land mine or something.



Looking for a vacation bargain? This is definitely not your trip. Cruises can take you in and around the North Pole, including an ultimate adventure that costs more than \$20,000 a passenger. You better believe with that price tag, you'd want to be there in daylight.

You could also venture up there in April for what's billed as the World's Coolest Marathon. The grueling North Pole Marathon features runners from around the world battling ice, dangerous temperatures and even threats of polar bears for the opportunity to traverse 26.2 miles of a polar ice shelf and an entry fee of about \$15,000. By the way, 2013's event began at 3:00, though no one is sure how racers managed to figure out how to arrive on time.

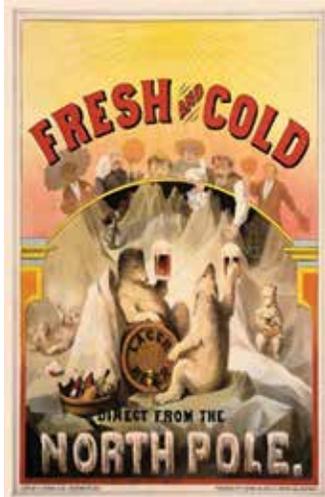
For most people, though, the North Pole is home to Santa's Workshop. And while the round guy does allegedly fabricate toys for children at his OSHA-approved facility, it's not actually located at the North Pole. You can visit Santa's Workshop at Santa Claus Village in the Finnish Lapland, including a tour of the onsite reindeer farm. Or you can visit North Pole, Alaska, where the streets have names like Donner and Blitzen. You can also send a letter to the North Pole, which became a tad bit easier when Canada designed a new zip code for the occasion: HOH OHO. And not surprisingly, you can even 'like' emailsanta.com on Facebook.

But controversy rages at the North Pole today for yet other reasons. For one thing, it's reported that 30 percent of

the world's untapped oil reserves are located in the Arctic Circle. And according to the U.S. Geological Survey, that amount could actually be higher, since much of the region hasn't yet been explored. Further complicating matters is the fact that several countries lay claim to the Arctic Circle - Russia, Canada, Norway, Denmark and the U.S. - and are allowed to explore potential oil reserves within 200 miles of their coastline. The U.N. threw the flag at Russia in 2007, interestingly enough, when they used a mini-submarine to plant the Russian flag on the ocean floor in attempt to claim the region and its rich resources. Nobody fell for that trick.

We promised we'd get back to the magnetic North Pole which, from what we've gathered, has received no fan mail from the world's children though if it had a refrigerator door, it'd ostensibly have enough room and magnetic pull for posting. Seems the magnetic North Pole moves constantly, in loops of up to 80 kilometers or 50 miles a day. However, scientists report that it is shifting at a record pace, clocked between 25 to 40 miles a year, toward Russia. Some report that at this pace, the magnetic North Pole could be in Siberia in just two year's time.

The magnetic field can have a significant impact on things like weather, natural disasters, and notably GPS systems. So if you're using one to travel to the geographic North Pole, you may want to double-check for fear of being late. Whatever time that is.



ASHES, ASHES

What do you get when you burn coal? Ashes, of course. And here at Geotechnics, we test a lot of Coal Combustion Products during the course of a week. Fly ash. Gypsum. Bottom Ash. And we're happy to help our clients determine the unique qualities of each variety. To learn more about testing CCP's or ask a question to stump the expert, give Randy O'Rourke a shout at (412) 823-7600.



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Pittsburgh – 544 Braddock Avenue • East Pittsburgh, PA 15112 • Phone (412) 823-7600 • dbackstrom@geotechnics.net or jpkline@geotechnics.net
Raleigh – 2200 Westinghouse Boulevard • Raleigh, NC 27604 • Phone (919) 876-0405 • msmith@geotechnics.net