

FEATURE PROPOSAL: Douglas Fox

How do you take the temperature of a sleeping giant? Or navigate a million square miles of empty ice? This November, I will learn how.

I will accompany a research expedition to the remote West Antarctic Ice Sheet. At 700,000 cubic miles, it weighs in as the second-largest hunk of ice on Earth. It has lain dormant for a million years, but scientists fear, due to warming, that it could awaken this century, and sweat off enough melt water to turn Madison Avenue into beachfront.

We will spend 5 weeks in Antarctica—3 of them camping on the ice. I will discover the rugged nitty-gritty of one of the world's strangest jobs: I'll observe first-hand the obsession of the glaciologist—that stubble-faced disciple of the Scientific Method who is drawn back to the ice year after year.

Our 4-person expedition will visit several locations in Antarctica. At McMurdo Station, the main U.S. outpost in Antarctica, I will undergo 11 days of survival and crevasse rescue training. I will also mix with other research teams and blue collar rank-and-file over beer at McMurdo's two bars—*The Southern Exposure* and *Gallagher's*. A Hercules military plane will then ferry expedition members to a remote airstrip on the WAIS. From there, a ski-mounted Twin Otter aircraft will transport the 4 of us to our final destination on the WAIS, where we will camp in tents for 3 weeks.

Our campsite lies on the Whillans Ice Stream, a 50 mile wide, 2,500 foot thick conveyor belt of ice that oozes into the ocean from the WAIS's vast interior. The team will plant a network of sensors to monitor its movement to the nearest centimeter. It will be the first experiment of its kind, with sensors newly designed to withstand the sunless, battery-killing cold of winter. The team will also map a network of rivers and lakes half a mile below the surface using ice-penetrating radar. These rivers sometimes flow uphill, driven not by gravity, but by mind-bending pressures below the ice. This water could determine the WAIS's future fate—and ours. It lubricates the ice over rocky Antarctica; changes in lubrication could send large slabs of ice sliding into the ocean. The radar will also provide a window thousands of years into the ice sheet's past, mapping networks of cracks that document its past movement.

We will travel 100-200 miles per day on snowmobiles as we place instruments. Radar units mounted on our snowmobiles will help us avoid crevasses in our path (at 300 feet deep, some could swallow a small skyscraper). We will navigate over the featureless white using GPS. On clear days, we will see the Transantarctic Mountains.

Weather at our field site should be perfectly mild—or perhaps that depends on your perspective. “It is the banana belt of Antarctica,” says Slawek Tulaczyk, the glaciologist leading the expedition. By that he means that we'll still spend our days wearing down parkas, and at night we'll sleep embracing our laptop computers—to make sure they stay warm enough to boot in the morning.

I will distill the best and worst moments of the expedition into a feature for *Men's Journal*. I will narrate the team's activities, and briefly visit the debate regarding risk of ice sheet collapse. I will describe the rigors of working in a place nearly as isolated as the Moon, where the transport of every single AA battery is planned a year in advance. And I will chronicle the scene at McMurdo—consummate blue-collar frontier town of Antarctica.

I will also follow the back-story of how glaciologists pursue their obsession to study the WAIS through any means possible. In order to study how the WAIS has changed over decades, Robert Bindshadler resorted to searching through spy satellite photos from the Cold War. He eventually found 2 images, taken by the CIA's Corona satellites on October 29 and 30, 1963. These satellites monitored the Soviet military; they captured photographs on mammoth spools of film, which were parachuted back to Earth and recovered mid-air by aircraft. Those photos serendipitously revealed surprising changes in the Ice Sheet—in just the area that we'll visit this November.