Annell Bay ’77

The Search Goes On

Yellow No.2 pencils, it’s estimated, would cost $50 apiece to manufacture were it not for economies of scale, which keep pencil prices from soaring—and bubble-test forms from being banished to the theater of the absurd entirely. Likewise, instead of trying to pump petroleum from their own backyards, consumers leave it to oil companies to assume the astronomical costs of exploration, drilling, refining and distribution, and to manage the inherent uncertainties that come with retrieving hydrocarbons hidden deep within the earth.

“It’s a risky business,” says Annell Bay ’77, who joined Houston’s Marathon Oil Corporation in 2008 as senior vice president, exploration, and whose decisions about where and where not to drill can impact her company’s return on investment by millions of dollars.

Imagine something of a giant underground chess board beneath the waters of the Gulf of Mexico, then divide it into three-mile by three-mile squares, which is the size of the blocks leased to oil and gas companies for exploration by the U.S. Minerals Management Service in auctions that can command prices as high as $100 million per block, whether or not they are ever leveraged for natural resources. Not only must Bay constantly look for new blocks where big deposits of oil and natural gas might lie, she also has to keep an eye on where her competitors, the other players in the game, are searching as well.

“It’s no different than the military looking at satellite photos trying to figure out who is moving troops around and hiding things under camouflage.”

But there’s more to financial success in the oil and natural gas industry than simply chasing competitors. Bay looks at various data, such as analyses of seismic imaging from potential sites, mapping it all into a global portfolio of drillable opportunities for onshore and offshore exploration. As with any investment strategy, it’s best to spread the risk around. “You want to have a diversified portfolio and that’s partly why we are and rigs would take time to design for appropriateness and safely. And as yet, there’s really no infrastructure currently in place to take in new discoveries of oil and natural gas along the Atlantic Seaboard, nor is there an experienced army of personnel to handle it, as already exists in areas such as the Gulf.

“But the reason that I would say you want to continue to drill is, that’s where new ideas and opportunities come from,” she says. “When you open up new opportunities, it helps you see new things. It brings new ideas and solves older problems as well. It may even lead to new ideas about alternative fuel.”

Bay’s father was a Houston oil-industry geologist who didn’t hesitate to stop the car on family vacations in order to point out interesting rock formations. But Bay hadn’t planned on majoring in geology at Trinity until she heard a lecture in her environmental studies class by now emeritus professor of geosciences, Dr. Robert Freed. “He was very entertaining and very funny, so I thought I’d like to take another class with him, and I did. And as I was reading more about geology, I realized that was what I was interested in.”

Subsequently, Bay earned a master’s in geology from the University of Texas-Austin and after graduation held positions of increasing responsibility as an exploration geologist, drawn by the thrill of the hunt, which she describes as a “geologic puzzle” that is part science and part art. “You’re guessing at some things,” she explains, but you’ve got to use the data and facts that you have. And then where you don’t have facts, you interpret.”

Mark Mattox