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The Trouble with Geologists: A Primer for the Lay Investor

A Monday Morning Musing from Mickey the Mercenary Geologist

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We *dumb field geologists*, and I proudly count myself in that category, are a rather odd lot. We're not your regular eight to five white collar guys and are way too educated to be real blue collar guys. Notice I say "guys" because we outnumber the fair sex in our business by about 9:1.

We have a minimum of four, often five years of college education (most of us couldn't graduate in four years; some of the less industrious were on the nine year plan). If you got a real B.Sc. and not some watered down B.A. degree, it was steeped in calculus, chemistry, physics, and computer science for the first two years and included 35-40 hours of geology taken mostly as an upperclassman.

Sooner or later, most of us went on to graduate school for a few more semesters, took courses in the more esoteric specialties of the broader subject, and the ones who stuck it out wrote a book (called a thesis or dissertation) that gathers dust in the university library stacks and has been read by perhaps a few score or at best a few hundred other geologists.

During the summers of our university experiences, we each loaded up an overstuffed duffel bag and a rucksack with our essentials and relocated for three months to an oilfield in some redneck burg in Texas, an offshore drilling rig in the Gulf of Mexico, a series of flea bag motels in bum-f*** Nevada, a high altitude camp in the Andes of South America, or a bug-infested bog in the boreal forests of northern Canada where the sun never set and the work day never ended.

We serviced oilfield equipment or roughnecked on big oil rigs. Others sat small drill rigs, collected and logged core or cuttings samples, and yelled at drillers when they repeatedly ignored instructions. We hiked around every day and broke rocks or dug dirt and put it in little bags and carried them on our strong broad backs to the truck, helicopter, float plane, boat, mule, or wall tent. As we gained more experience, we got to carry around a masonite board to which was affixed a topographical map covered by mylar and drew lines on it and filled in the spaces with pretty pastel colored pencils.

About once every three or four weeks, we would all rendezvous and go to "town" or maybe even "the big city", whatever the spot of civilization might amount to, for a little R & R which usually consisted of a few days blowing lots of money on benders in bars and brief bouts of female companionship.

At the end of summer, we went back to college with enough spending money to survive as poor students until the next seasonal job came along. That annual trek back to a meager student lifestyle after summers of high wages and expense accounts was enough to convince us that the schoolboy routine had to end.

We realized the money in the mineral exploration business could lead to an adventurous and nomadic lifestyle for those so inclined or a comfortable upper middle class living for the more staid. Either way, an early retirement was always in the cards if we could strike it rich with the right project, promoter, and company.

So finally at some point they threw us out of the university and we found good paying jobs in the real world of mineral exploration. Most of us, though well prepared in rock collecting, pulling IP cable, claim staking, drill rig supervision, map making, and synthesizing geological, geochemical, and geophysical data, were ill-prepared for the corporate world.

We became book geologists in college and rock jocks in the field but entered the real job market with few if any business or communication skills. These requisite skills must be learned thru experience on the job.

For my generation it's now three decades later. Though most of my peers and compatriots have years of field and office experience in big and small companies, I find many are still ill-equipped and ill-prepared to succeed in the world of business. And that folks, is *the trouble with geologists*.

Why is that?

I'll try to answer in detail but first let me give you some insight: Geologists are caught in a nether world, part blue collar workers and part white collar businessmen.

Geologists are outdoorsmen at heart. We like to drive around on bad roads in big trucks, fly around dangerous and remote terrain in small planes and helicopters, and hike up, down, and around huge mountains. We wander around in the woods, swamps, and jungles, live in tent camps with no electricity or running water, go days without bathing or shaving, and supplement daily rations with fish and game. Some of us haggle over the price of gold nuggets with local illegal miners, chase loose women, drink beer in the bar after work and hang around with drillers, cat skinners, miners, and local laborers. Our language is true blue collar, interspersed with four letter expletives when women aren't around and sometimes even if they are.

It's just about the best life there is for single guys of any age, though not always for married (soon to be divorced) men.

We go to work in the great out-of-doors most every day but we are not your typical blue collar workers. Much of what we do is manual labor but we tend to be lone wolves and are fiercely independent. Can you imagine the concept of a *geologists' union*? That would be like trying to herd cats!

Hells Bells, I've had mild disagreements over what kind of beer to drink lead to vehement arguments and degrade to highly personal insults. Once that is settled with a fresh Bud in a bottle versus a stale IPA on draft, we scribble away on bar napkins trying to show our fellow drunken geo-mates why that next drill hole is *guaranteed* to discover the Mother Lode.

Many geologists would prefer that their professional duties be restricted to these roles.

But the junior exploration and mining business is entrepreneurial and driven by Type A personalities. It runs on high risk venture capital and the best geologists are the ones that can span the bridge between a bush camp and the corporate boardroom.

However, many of my ilk are not as comfortable in a suit and tie 100 days a year as they are in hiking boots with a rock hammer 150 days a year. Unfortunately, it takes both to prosper in this business.

Whether they are prospectors, mappers, speculators, managers, promoters, Vice-Presidents, or CEO's, the geologists that understand both rocks and money become the successful men. These are the *economic* geologists.

The trouble with geologists is many have little knowledge of economics or business and they do not care to learn.

The problem begins with our college educations. We are trained as scientists in the university geology department and take math, science, computers, and geology and not much else. If you choose the liberal arts route, you don't get enough science to be a good geologist. In seven years of college and two degrees, I never took a course in economics, English, or technical writing. Yet my profession is economic geologist and I read and write every day. These are disciplines I learned from personal motivation and experience.

Unfortunately many of my professional peers never understand the *economics* end of this business. That's because they have no clue what constitutes an *ore body* (Mercenary Musing, August 25, 2008).

Many field geologists are only interested in that red and white outcrop plastered on the side of a mountain, what's on the back side of the hill, venturing into old decrepit mines and prospects, or moving the drill rig to the next location. They prefer pounding a bunch of rocks into little pieces and putting them in a bag, or inventing a new geological model or target concept after their last three ideas were tested by the drill and failed. And they may never question if the project they are working on has a snowball's chance in hell of making a profitable mine.

The average exploration geologist's lack of connection to the world of economics, equities, marketing, finance, ore bodies, mines, IRR, and NPV was brought home to me at the annual Prospectors and Developers Association Convention (PDAC) last March.

As per usual, I was on the hunt for undervalued companies. I spoke with many geologists of varying experience levels. Most of them had worked for both major mining and junior resource companies. Some had at least as many if not more years on the job as me. But I soon realized that many of my peers haven't seriously considered what makes a good flagship property (Mercenary Musing, February 23, 2009).

I had geologists try to convince me that their respective flagship projects consisting of hard rock lithium in eastern Canada, metallic nickel in B.C., and a beryllium occurrence in the western US that was rejected as a strategic source by the USGS during World War II are *mines in the making*.

But they were not mines in the past, are not now, and will not be during their lifetimes. They might be interesting research topics at the university but they won't make ore bodies. Unfortunately these guys have found some lay investors to throw their hard earned money away on geological curiosities.

Yeah, they are geologists but they are not *economic* geologists.

In resource exploration, we are faced with very impressive odds against success. Note I said that in an optimistic way. A pessimist might say "overwhelming odds of failure". One of every ten thousand prospects, one of every thousand drill targets, one of every one hundred resources, and one of every ten deposits with a positive feasibility study will make a profitable mine.

By a profitable mine, I mean one that pays back capital in less than five years, returns dividends or earnings per share to its investors consistently from year to year, and is reclaimed at a fraction of the profits delivered during its productive life. Mines that bankrupt companies and are acquired by other companies, have capital costs written down, or end up with massive environmental liabilities borne by shareholders do not count as profitable mines in my book. I can name a score or more mines that have failed in the past year.

Four of every five mines will fail; another four of five simply trade dollars, and two out of ten will generate windfall profits.

That means that two of every ten mines put in production is an *ore body*, i.e., it is mined *at a profit*.

But since there are over 1700 active TSX companies with multiple projects and innumerable chances, resource exploration and development becomes an industry-wide statistical exercise that ensures a few successful mines will generate windfall profits, return huge dividends, or get bought by a major mining company.

However, this is a very expensive proposition with much more capital invested than is ever returned to the average *retail* shareholder.

The very best geologists are driven to find ore. Because geologists are faced with overwhelming odds of failure, they often develop an unrealistic optimism for the geological potential of their favorite prospects.

With failure lurking at every turn of the drill, our mindsets project a positive spin: The next big mine is to be found in this newly discovered outcrop, those old prospects, or over that huge mountain and into the valley. Bonanza will be struck in our next drill hole beneath the gravel cover, with the new conceptual target based on re-interpreted cross-sections, or a novel geological model developed from a similar deposit in another far flung part of the world.

And that folks is *the trouble with geologists.* Most of us are legally blind eternal optimists.

Employing their overly-optimistic viewpoints, geologists easily convince the non-technical speculators, promoters, and scam artists who finance startup investment vehicles to acquire parcels of ground and make them flagship projects for public companies. Marginal prospects are spun into elephantine opportunities, commodities and deposits that have no future become a speculative bubble (e.g., moly mania or hardrock lithium), and projects that are way too big or way too small for a junior company remain on the books after negative or mediocre results. It's hard for the geologist to admit the company should walk if not run away.

Many a junior fails because the merit of its flagship project is merely a figment of the top geo's (often the CEO's) imagination. He may not understand what constitutes a good flagship project, he doesn't savvy when it's time to fish or cut bait, and/or he has a vested interest, i.e., *skin in the game,* both financially and intellectually. Simply put, the geologist is biased.

In a typical scenario, the unholy trinity of an overzealous geologist, a slick promoter (or *"con"ologist*) and a sophisticated broker or investment fund raise a million dollars with a cheap private placement financing for a new project. They place all their "friends and family". A few months later the drill turns to the right, and a single or a few gaudy drill hole intercepts interspersed among many failures generates a speculative market run. All the brokers jump in with their retail clients. And the lay investor, who has a penchant for gambling and greed and an even bigger fear of missing that *next big thing,* belatedly throws his money at the offer on the uptick. The wily insiders take their profits, the bids dry up, trading volume drops, and the stock plummets with the next drill hole failure.

So how can the Mercenary Geologist or the lay investor fairly assess the irrational exuberance of the average geologist for his pet project and the speculative risk inherent in junior resource stocks? How can we skew the gambling odds in our favor?

It's simple: You must research stocks before investing. Look at the track record of the geologists that manage the company. Read informed opinions from the few geologists-analysts who have the experience to tell good projects from bad. In other words, you do your own due diligence. It's not easy; it takes dedication and hard work.

A company must have a tight share structure, experienced and honest people, a good flagship project, well-stocked treasury, and be undervalued compared to its peers before I will consider investing my Mercenary moolah (Mercenary Musing, December 15, 2008).

I've told you of my investing philosophy (Mercenary Musing, May 19, 2008) and gladly will provide my subscribers with an evaluation template that I use to rate stocks for investment. Sign up as a *free* email subscriber on the banner below, forward the notice you receive from my webmaster, and I will send the template to you.

My desire is to make you, the lay investor, a better investor with a higher rate of success. By making good investment choices you will make money in the junior resource market, continue to invest, liquidity will increase, volumes will be high, and our microcap stock market will thrive.

And that is a good thing for all concerned.

Ciao for now,

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The **Mercenary Geologist Michael S. "Mickey" Fulp** is a Certified Professional Geologist with a B.Sc. Earth Sciences with honor from the University of Tulsa, and M.Sc. Geology from the University of New Mexico. Mickey has 30 years experience as an exploration geologist searching for economic deposits of base and precious metals, industrial minerals, uranium, coal, oil and gas, and water in North and South America, Europe, and Asia.

Mickey has worked for junior explorers, major mining companies, private companies, and investors as a consulting economic geologist for the past 22 years, specializing in geological mapping, property evaluation, and business development. In addition to Mickey's professional credentials and experience, he is high-altitude proficient, and is bilingual in English and Spanish. From 2003 to 2006, he made four outcrop ore discoveries in Peru, Nevada, Chile, and British Columbia.

Mickey is well-known throughout the mining and exploration community due to his ongoing work as an analyst, newsletter writer, and speaker.

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