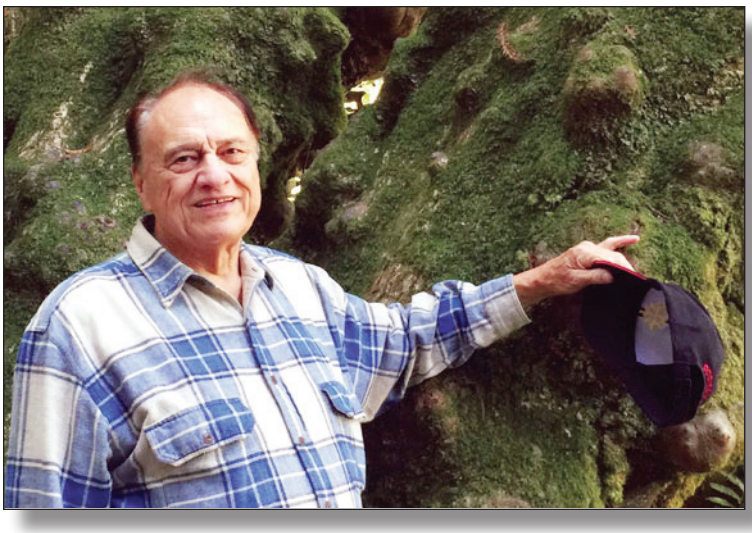
By Thomas E. Cochrane, Geologist



An "unexpected" wildcatter reminisces…

I am an old fart, an Oklahoma oil man—now retired and living in Northern California. Imagine the conversations that are sparked hereabouts when I mention I am (or was) an oil and gas geologist. Northern Californians all say they are highly committed to saving the environment and to using "green energy." After all, I now live in the "Land of the Prius" — which is rapidly becoming the "Home of the Tesla."

However, contrast this image with the realities of the daily commute in the San Francisco Bay Area, or the Los Angeles area in Southern California. Our freeways here are clogged with SUVs and oversized V-8 pickup trucks, most occupied by just one lone driver—so much for the environment! A frequent complaint regionally is about our gasoline prices, which are the highest in the country.

In spite of advances in alternatives, oil and natural gas will be major fuel sources for a long time into the future. However, that does not mean we should give up on green energy, or that we should not produce vehicles or engines which are less polluting.

Amidst changes both politically and technologically, our grandchildren now live in a much different world than we did when their age. Given all these striking shifts, I thought I would like to capture on paper some of my yesteryear experiences in the oil and gas business which resulted in the publication of my second book, ***Tornados, Rattlesnakes & Oil, A Wildcatter's memories of Hunting for Black Gold.*** It begins with my introduction to the oil business as a petroleum geologist for Pan American Petroleum in 1964 in Oklahoma, as well as working in the oil patch later on in Texas too.

My story is one of how a rural New York State farm boy, with no links to the oil industry nor education in petroleum geology, was plunked smack into a major oil company right out of the gate — I didn't even speak the oil and gas language or have the proper local accent. As a result, I received quite an education in my early introduction to the oil business: "Ah was told that ah wouldn't last long here in the oil biz!" I guess I actually took that early remark by a new boss as a personal challenge. I never before expressed the following, but perhaps my philosophy at the time was: "Either join me in the venture, or get out of the way, for I AM coming through!"

Pan Am was a good training company in that they encouraged interaction both with others in the firm as well as those working elsewhere in the industry. There was always another company, or even several, involved in the drilling of wildcats especially. Once a project was over, there were plenty of farmouts encouraged. In my time with them, I recommended six wildcats, a couple of development wells, and many farmouts. The wildcats discovered two significant gas fields.

After toiling away for four years, I decided to leave the major companies to others and threw my fortunes in with two other ex-Pan Am geologists, so we three officially partnered in forming our own company. In the book, I relate a lot of good stories from those years. That was a great time — boom or bust — accompanied by a lot of hard drinking and hard selling, long hours of research in developing prospects, a few wild women, some successes…and a few dry holes.

But by 1972 we had burned out and all decided to go our separate ways. I went on to new ventures, new partners, and new clients in many deals. Looking back, I count 47 partners over the years, most of which were just for a specific deal or two. All were done with a handshake and a one sentence contract. (Talk about a different era!)

As the geologic originator of the deals, I wanted to personally do the wellsite work. Often I was able to accomplish that, or I simply showed up on location as the well drilled the expected pay zones. I wanted to see the electric logs or recommend a test before a marginal well was plugged. Those days were well before both the Internet as well as iPhones. We didn't have the luxury of sitting in our offices and having everything instantly printed. Instead, back then, a rig had a radio-telephone to their offices. We might have to drive to the closest town for a land line (what are those?). Electric logs were printed on location and driven to the office to be hand delivered.

Deals were made in the local bars and coffee shops, often with a quick scribbled letter of agreement. More than once, we moved a spudder drilling rig onto a property to save an expiring lease, cutting it close indeed. The deal and partners were then put together in the following days. One deal of mine was drilling at 14,000' depth and all the contracts had not yet been signed. One client dropped out of the deal. Where to find another participant? I was stuck with a $330,000 interest in the well and had pledged and mortgaged everything that I owned at the time.

Yup, you could say it was high $takes!

Somehow inside this process, the lust to find oil gets mixed right into your blood. How does this "wildcat bug" happen to a person? (I took a whimsical approach to this question in the chapter which recounts "my fantasy" of how I became a wildcatter via the urgings of an in-the-know leprechaun!). Some people are just natural gamblers, but I never thought that described yours truly. In fact, I rarely bet on anything, not even on a Texas/Oklahoma University game — too unpredictable! Give me a wildcat based on good geology and I will bet on that though.

One of my secrets of success was to always be willing to take a piece of the working interest, so I would roll all of my front-end profit into the well. The client figured it must be a good one — as he wants part of the action for himself. Over all these years, then and since, I have promoted, put together, joined, or invested in over 150 wells. A few of these are still producing, and several are in sections being re-drilled with horizontal drilling and the big fracks. I have also joined in four of these ventures to date.

My time working actively in the industry was during the 1960s through the 1980s. We had secretaries with typewriters, draftsmen without computers, in fact we had no computers. I was able to participate in some of the first computer mapping that Pan Am did. Today, my guess is that it's instead very rare for a map to be drawn by hand. Some of these which our era produced were beautiful and also highly interpretive. A geologist can draw by hand whatever his imagination tells him between two data points. By contrast, the machine carefully spaces the distance between two points and blends the contours to the different space between two adjoining points of control. Only the drill can ultimately tell us which interpretation is correct.

Certainly, the oil industry is different today than it was during my time in the oil patch all those decades ago. However, you still need a lease to drill on, you need a drill rig, casing, tanks, and surface equipment, and of course the money to pay for it all. The title and legal work become more complicated each year it seems. The result is that it takes longer to get a well deal ready to be drilled. Big Oil is putting their money in offshore leases and drilling, in spite of the cost. Leasing and title work are much simpler. Their current offshore plays are off Africa, South America (especially Brazil), Australia, and Asia. The Russians are pushing for offshore drilling in the Arctic Ocean. North America has some activity off eastern Canada. There is noise about the East Coast and the West Coast, but that appears to be stalled into the future.

Independent oil companies have discovered the shale oil and gas production in North Dakota, Oklahoma, and West Texas. Shale basin reserves are located in at least 22 States. Lots of oil and gas are being produced, propelling the U.S. back into the ranks of major producer as it once was. If the price can be maintained at over $50 per barrel, then our local oil and gas industry can continue to be profitable.

The environmentalists are strongly against fracking. We must continue to develop fracking procedures which accomplish their goals more safely, protecting the ground water table, recycling the water, and not allowing that water to be put back, over-pressuring shallow disposal formations. This process should not be causing earthquakes. We must flare less gas and put it back in the reservoir if we do not have a current market for it. Gas is worth money so why burn it?

Pipelines are a significant concern as many of them are very old at this point. The statistics indicate as many as 80% of them are not tested, and the majority are not tested on a regular basis. A big explosion like the one in San Bruno, California — just minutes from San Francisco International Airport — has made some cities re-think having natural gas piped to their homes.

Writing the book gave me a chance to look at the industry, relive some of my adventures, and provide an historical account of my own development inside it. The quest for oil and gas changed my life. As a result of my chosen profession, my family not

only grew up in Oklahoma and Texas, but most of them still live there.

I made a recent trip to see my kids and grandkids and to promote my new book. Having lived in Oklahoma City for close to a quarter century, I spent a good portion of my time there and was able to reconnect with many people thereabouts who or still in the oil and gas business, or are now retired. While in town, I attended a Oklahoma City Geological Society (OCGS) luncheon meeting. I was startled to hear of the loss of Society membership and the reduction in membership in the OCGS Library, apparently due to the downturn in the oil and gas business.

The business has indeed changed and is changing faster than I had previously predicted. However, we geologists are optimists and continue to explore opportunities and promote new prospects. Only a geologist has the expertise to understand what is actually happening under the ground. A computer algorithm cannot interpret what kind of an environment generated deposits of oil and gas, nor what the trapping mechanism is.

In the July 2019 edition of AAPG's *Explorer Magazine,* David Curtiss addresses these changes the industry is experiencing. Companies are reducing staff and moving toward "on-demand labor." If a job is required for a specific need, then a consultant can be hired for a short time to accomplish the task. Technology is taking over most of the roles that we geologists and engineers once filled. Very few following in our professional footsteps will now ever retire from a company for whom they work for many, many years…as used to be so commonplace.

I guess I worry about these companies not having a seasoned staff with lengthy historic memories and longtime expertise in specific specialty areas. History repeats itself, and do we want to fall into the same mistakes we made in the past? Can modern technology and all our digital resources find all the oil and gas our society needs? Can our increasing reliance on it save us from repeating the mistakes of the past?

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Thomas E. Cochrane is a California Professional Geologist (License #6124), and was previously the editor of the *Shale Shaker.* He was recently profiled in *The Oklahoman*, the state's largest newspaper, and also featured on PBS-TV's Oklahoma News Report (ONR) when returning to the state to promote his second book, ***Tornados, Rattlesnakes & Oil – A Wildcatter's Memories of Hunting for "Black Gold"*** (available on Amazon, and can be ordered by any bookstore nationwide). Following the publication of his first book, ***Shaping the Sonoma-Mendocino Coast – Exploring the Coastal Geology of Northern California***, Cochrane became a popular regional guest speaker for clubs and organizations, most often speaking on local geology and plate tectonics. To learn more, please visit www.RiverBeachPress.com.