

# The Origins Of Oil - by Paul V. Sheridan

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**ORIGINS OF OIL—DOES OIL REALLY COME FROM DINOSAURS?**

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OCTOBER 1999



# The Origins Of Oil

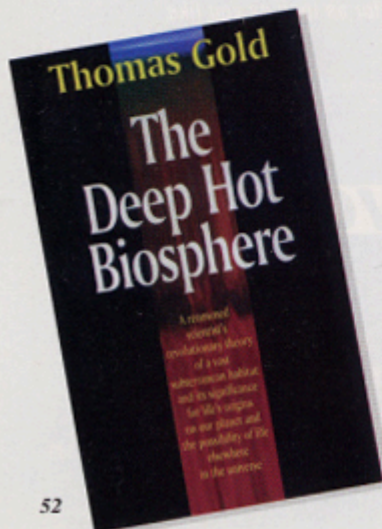
By PAUL V. SHERIDAN



As the size of SUVs increase, as evidenced by Ford's mammoth Excursion, and their fuel efficiency drops off the depletion of natural resources (namely oil) becomes an issue, Professor Gold's Abiogenic Theory offers some tantalizing data on the true origins of oil.

**Editor's Note:** Do you subscribe to the fossil fuel theory in which petroleum is created by "dinosaurs?" Have you ever wondered just how many dinosaurs there were? The industrial revolution has practically exponentially increased the volume of oil taken from the earth. Where does it end? Or more poignantly, does it end? Much of the existing beliefs are based on 120-year-old technology. I have often wondered how many dinosaurs there were and know for a fact that the

amount of petroleum pumped from the ground daily is staggering. There has to be another answer and Professor Gold seems to know what it is. This topic is under much debate in the scientific community. It hit the mainstream recently when Professor Gold's research was quoted in an April 16, 1999 article in "The Wall Street Journal." We are featuring this article, compiled by Paul Sheridan, to further expose the "Abiogenic Theory" to the mainstream.



## A REVOLUTION

in the Earth Sciences is impacting everything from the theory of life to the geopolitics of petroleum to environmental dogma. Centered on the Abiogenic Theory of hydrocarbon formation, a new book by Professor Thomas Gold of Cornell University is a must-read for anyone truly concerned about the political and scientific well-being of the human race. The science presented in "The Deep Hot Biosphere" is considered by many to be worthy of the Nobel Prize.

Professor Thomas Gold's book "The Deep Hot Biosphere" is a thought provoking look into subject matter that should interest anyone who drives a car, especially sport utility owners.



## A Movement Toward Science and a Rebuke of Myth



### To Sell Hot Air They Needed A Hard Sell

When was the last time the media or a politician reminded you of "global warming?" Probably yesterday. When was the last time you heard the term "fossil fuels?" Probably yesterday as well, while they were brainwashing you about the end of the industrial age. About 30 years ago they also proclaimed that we would run out of "fossil fuels," and the professed need for alternative sources of energy like wind power, solar power and electric cars. You probably remember being indoctrinated by your high school teachers or college professors about the "energy crisis," and that the world only had 15 years of oil remaining, assuming we were able to conserve energy, and on and on.

Although we have come to expect it from salespeople or politicians, no one likes to endure the "hard-sell" approach to any topic. Where we least expected the hard sell was from the science community. But that's just what we've been getting from scientists about the supposed relationship between "fossil fuels" and global warming. But do "fossil fuels" really exist? And if there is no such thing, what are the implications to the currently accepted doctrines regarding worldwide petroleum energy supplies? Or the highly-promoted notion that the human burning of "fossil fuels," especially in our cars and trucks, is the *causa belli* of global warming?

Review of the current environmental doctrine that purports a cause-effect relationship between "fossil fuels" and global warming will set the stage for presentation of the latest scientific evidence discovered by Professor Gold. In his new book "The Deep Hot Biosphere" Thomas Gold of Cornell University presents hard evidence that refutes this environmental myth.

### What Are "Fossil Fuels?"

Environmental doctrine paints a picture of prehistoric Earth where plant and animal life abounded. There is evidence that during these prehistoric times the average global temperatures were a few degrees higher. As they do today, prehistoric plants took in atmospheric carbon dioxide, and breathed out oxygen.

Carbon dioxide is part of an infamous class called greenhouse gases. These gases tend to retain a portion of the radiant energy from the sun, converting this energy into stored heat in the atmosphere. Unlike the proclama-

tions of radical environmentalists, a greenhouse gas is not, by any means, the harbinger of doomsday. Radicals will tell you that carbon dioxide (CO<sub>2</sub>) is the number one greenhouse gas, which is also blatantly untrue. Without an atmosphere filled with gases that store heat energy, life on the surface of Planet Earth would not be possible (a'la Mars). And oh, by the way, the number one greenhouse gas is water vapor!

This prehistoric plant life eventually died and was buried in the relatively shallow regions that geologists call sedimentary layers. Over time these sediments solidify, hence the term sedimentary rocks. Environmentalists claim that after eons the dead plant life buried in the sediments fossilized, but also chemically decomposed into a variety of hydrocarbons. As the name implies, hydrocarbons are composed of hydrogen and carbon. This long-term decomposition supposedly resulted in petroleum, coal and methane; the three main "fossil fuels." So herein lies the logic by which hydrocarbons came to be called "fossil fuels."

### The Biogenic Theory Of Hydrocarbon Formation

Actually, modern environmentalists cannot claim credit for the misnomer "fossil fuels." In the 1870's, geologists documented evidence of biological debris in petroleum and coal deposits. This is the historical context of where we get the modern reference to the "biogenic theory" of petroleum and coal formation. By definition, the biogenic theory dictates at least two restrictions.

First, it restricts where petroleum companies search for "fossil fuels" to only shallow levels of sedimentary rock. This is not the first time in human history that "science" has been used to define the conceptual extent of technological developments, in this instance, oil well drilling. Second, the biogenic theory limits the worldwide projections of remaining reserves: Since there were limited amounts of prehistoric plant life, there can be only limited quantities of petroleum. Likewise, this is not the first time that a mere theory has been used to convince you that a commodity is scarce. Later we will see how this second restriction backfires.

An essential premise of the biogenic theory is that these "fossil fuels" retain the CO<sub>2</sub> inhaled by prehistoric plants during millions of years. The theory claims that as a result of this "capturing" of the greenhouse gas CO<sub>2</sub>, Planet Earth underwent a global cooling to rough-



ly where it is today. They tell us that the prehistoric lowering of CO<sub>2</sub> had decreased the heat storage capacity of the atmosphere. They go on to claim that human burning of "fossil fuels," especially in our cars and trucks, is re-releasing CO<sub>2</sub>, and is the *causa belli* of global warming. For example, Stephen Schneider of the National Center for Atmospheric Research in Boulder, Colorado was making quite a name and career for himself by announcing the results of his computer climate models. In 1983 he affirmed his belief in this *causa belli* on national television: "What we're really getting back is the carbon dioxide (CO<sub>2</sub>) that was taken out of the air hundreds of millions of years ago, when plants died and sank to the bottom of swamps. And we're getting it back when we burn that coal or that oil." But now the only thing sinking to the bottom of swamps is the biogenic theory, including the nonsense of "fossil fuels" and global warming.

### **Professor Gold and the Abiogenic Theory of Hydrocarbon Formation**

The first time I heard of Professor Gold was in 1975 during my studies of astronomy at the State University of New York. At the time, Gold was founding director for the Cornell University Center for Radiophysics and Space Research. He was also chairman of Cornell's Department of Astronomy. He is a member of just about every science group from the National Academy of Sciences to the Royal Society of London. He received his doctorate from Cambridge, and has published over 280 papers on everything from neutron stars to radar to cosmology.

But what does this astronomy stuff have to do with global warming? The answer involves the abiogenic theory of hydrocarbon formation. Unlike the "fossil fuels" fantasy which supposedly began in prehistoric times, the abiogenic theory goes back to the very formation of Earth, about 4.5 billion years ago; long before life existed.

### **From Scientific Theory To Practical Applications**

In December 1985 the Wall Street Journal interviewed Gold for the article "Astronomer Believes Oil, Gas Deposits as Old as the Earth." This was followed by another Wall Street article, "What If Methane is Inexhaustible?". (Methane is the primary component of natural gas.)

At the time of these WSJ articles I was employed at Ford in their Powertrain Planning group. I was assigned to engine/transmission production, Corporate Average Fuel Economy (CAFE), emissions compliance; to name a few. In 1984 I moved to Chrysler. By 1987 I was an Engineering Programs Manager, responsible for products such as the Dodge-Cummins diesel pickup. It was during the diesel program that I gained technical expertise in the

area of natural gas as a transportation fuel.

When I was transferred to the minivan group in early 1991 they were grappling with a more stringent Clean Air Act, especially in California. Since a majority of Chrysler sales in California are the minivan, it was effectively targeted by Sacramento's new rules. I wrote a paper summarizing the emissions issues, including the necessity and marketability of natural gas. I later called the initial meetings which raised management awareness of the specific issues. My meetings led to the development of Chrysler's natural gas minivan. Prior to this time no such product or plans existed.

The overt context of my efforts on the natural gas minivan was a genuine concern for the environment as a human being and a Chrysler professional. But the esoteric context was my knowledge of Gold's work on the abiogenic origins of hydrocarbons, especially their abundance. A large part of this knowledge came from his 1987 book "Power From the Earth: Deep Earth Gas as Energy for the Future."

### **From Astrophysics To Automobiles**

Gold's new book, "The Deep Hot Biosphere" is extremely comprehensive in scope. With a basis in astrophysics, "The Deep Hot Biosphere" should have implications from environmental policy to geopolitics to fuel prices and the automobile industry. Admittedly it takes effort to overcome the momentum of the "fossil fuel" ideas which have been highly promoted for decades. However, once you understand Gold's concepts, you'll have a renewed suspicion of our politicians, and disappointment with the science community.

Gold contends that you will find hydrocarbon sources at great depths below the surface; not a few miles, but a few hundred miles. The deep-earth sources of hydrocarbons are still at it to this day, pumping tons of petroleum and methane gas up through the cracks and porosity to the shallow sedimentary levels. It is here that drilling rigs access the upwelling that has been vertically dammed into reservoirs. Hydrocarbons did not come from rotting prehistoric plants; hydrocarbons were here a few billion years before life occurred. The hydrocarbons we humans use for energy are abiogenic or not of biogenic origin.

Chapter 3 summarizes five fundamental assumptions regarding the deep-earth abiogenic sourcing of hydrocarbons. All five are supported by currently accepted science. Gold also discusses the latest space research information; much of which he discovered or proposed. This information confirms that hydrocarbons are present on lifeless heavenly bodies such as moons, asteroids, comets, and of course the "Gas Giants" such as Jupiter, Saturn, Uranus and Neptune. In fact, the blue coloration of planet Uranus is due to methane, a so-called "fossil fuel."



Gold explains, "I am sure there are no big stagnant swamps on Titan or Pluto."

Chapter 4, "Evidence for Deep-Earth Gas," presents seven empirical facts that strongly support the abiogenic theory. The first four are somewhat related.

1) The geographical patterns that emerge from the oil fields, whether in the Middle East or Indonesia, all exhibit a correspondence to deep Earth geological structure. This is in stark contrast to the haphazard deposition we find with surface life, and their subsequent fossils, which have never exhibited such patterns.

2) Hydrocarbons from a particular oil field do not exhibit chemical changes as the depth of their extraction increases. But the fossils above them do have constantly changing biological "signatures" which relate to each of their particular paleontologies (i.e. epochs of time). Russian petroleum geologists have currently productive oil wells that

have been drilled into the basement rock, far below the sedimentary strata. Here, where fossils have never penetrated, hydrocarbons are in abundance. Later we'll see that Gold's famous Siljan Experiment of 1985 is what the Russians have relied on as a scientific basis for their basement rock prospecting (they're part of the minority that understand the abiogenic theory!).

## The existing petroleum reservoirs are refilling themselves...

...from the bottom!

3) Hydrocarbons are found in geographic areas where the amount of prehistoric life at that location could never provide the quantities of hydrocarbons involved. When you think about it, most surface life is comprised of 90 percent water and 10 percent other stuff. So even if the "10 percent other stuff" were con-

verted completely to "fossil fuels," it would not even come close to the mass of hydrocarbons already extracted during the last 130 years.

4) This is similar to #2 but points out that because hydrocarbons are so consistent, analysis of distinct trace metals can be used to identify their geographic origin.

5) The existing petroleum reservoirs are refilling themselves... from the bottom! Yes, you read that correctly. Gold explains, "The phenomenon of petroleum reservoirs that seem to refill themselves is widely reported, notably in the Middle East and along the U.S. Gulf Coast. I regard these occurrences as strong evidence for the deep-earth gas theory."

Numbers 6) and 7) involve some concepts from astrophysics, biophysics and nuclear physics. The science behind these points is too complex to review here, but let's list them.

6) Science tells us that life as we know it is based on the chemical properties of carbon. Although there

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is discussion that silicon is another element that could provide a basis for life, carbon-based life is all that we have observed thus far. The origin, quantity, and duty cycle of carbon is fundamental to a complete understanding of Planet Earth, the only planet known to possess life. As it turns out, certain chemical forms of carbon are also crucial to the preservation of life.

The land and ocean areas contain sedimentary rocks which have great quantities of carbon-based chemical materials called carbonaceous compounds. A full 80-percent of this material contains oxygen. An example of this oxygenated material is calcium carbonate, better known as limestone. The other 20 percent is not oxygenated. The latter 20 percent is comprised of oil, coal and methane; the hydrocarbons. Since we are talking about the carbon content of the sedimentary layer we also mention the tiny fraction of not-yet-decomposed biological debris.

Carbonaceous compounds are also found in the atmosphere, mostly as carbon dioxide or methane. The atmosphere plus the sedimentary layers of the land and ocean, comprise what is called the Atmospheric-Ocean Pool. The total amount of car-

**You can confirm that there never was an "energy crisis"—at least not one that was in any way related to physical reality, as opposed to geopolitics.**

bon in this pool is enormous. A overwhelming majority this "near surface enrichment" of carbon is in the sediments, not the atmosphere.

Environmentalists argue that this near-surface enrichment of carbon originated from the prehistoric atmosphere. They promote the notion that our early atmosphere was very similar to Venus. Earth's carbon,

they say, was "precipitated out" from atmospheric carbon dioxide into the atmospheric-ocean pool. Absorption by prehistoric plants also occurred. To hard-sell their global warming agenda, they emphasize that Venus has vast quantities of this greenhouse gas carbon dioxide, and as a result the temperatures on its surface are about 700 degrees. (They fail to mention that Venus is 26 million miles closer to the Sun, or that its orbit is a near-perfect circle, or that its north pole is where our south pole is, etc.)

But unlike computer climate modelers or politicians with degrees in theology, Gold is an astrophysicist who has spent decades deciphering the details of how planetary bodies form. The general cosmic conditions that formed Earth and Venus were similar, but the devil is in the details. The early Earth was not characterized by the capture of gases from space, as was Venus. An indication of this is Earth's very low quantities of atmospheric krypton and xenon, compared with the solar system. Gold also points out that if the carbonate rocks got their carbon from an early atmosphere, then the deeper sedimentary layers should possess higher densities of carbonaceous compounds. If the carbon was "precipitated out" from an early atmosphere that was originally rich in carbon dioxide, then as you examine shallower carbonate rock specimens the records should show a successive decline of carbonaceous compounds. The records say otherwise. There is no successive decline, but a steady density throughout geologic time. Gold explains, "The only sound explanation is that atmospheric gases have derived mainly from outgassing of volatiles derived at depth from buried solid materials, not from an initial large atmosphere acquired at the earth's formation or by later capture of gases from space."

7) Permeating every oil find throughout the history of the world, is the presence of outgassing helium. In fact, it is so plentiful at the well

sites that petroleum companies now use helium detectors as one of their oil prospecting tools. It is also so plentiful at the well sites that commercial quantities are piped and repackaged for sale. Gold exclaims, "The association of helium with hydrocarbons is probably the most striking fact that the biogenic theory (i.e. "fossil fuels") fails to account for, and therefore it has been for me of greatest interest."

Helium is inert, it does not react. Plant life does not use it for anything. It is not a "fossil fuel" or derived from life. However it is a fundamental product of stellar nucleosynthesis. It is also a known byproduct of the radioactive decay of uranium and thorium. Both of these heavy nuclides are known to exist at great depth—about 200 miles down. Curiously, helium is not found in meaningful quantities in areas that are not producing oil or methane. When the constituents of oil wells are examined for mixing ratios of helium, the data patterns are consistent throughout the world. Alone, helium does not possess the fluid pressures required to reach the surface in the manner observed. Gold explains that the only way that such quantities and consistencies of helium mixing are possible is by virtue of a deep source "carrier gas" such as methane. The depth of these sources is far below the penetration depths of surface life or their fossils.

### **The Siljan Ring Experiment**

In the central part of Sweden, near the city of Rattvik, is a meteor impact structure called the Siljan Ring. Being this far north, it is not considered a location where one would find an abundance of "fossil fuels." The interior of the impact structure has very little sedimentary rocks due to the impact explosion. The interior also has a basement rock that is extremely thin. In 1986 Gold and his Swedish and American teams drilled holes nearly five miles down.



The thought was to penetrate the lower crust and possibly the upper mantle. At these depths, and in this location, no surface life that had decomposed over time could possibly have existed. It is an excellent choice for the science research intended to test the abiogenic theory of hydrocarbon formation. I emphasize "research" since the intention was not the large scale production of natural gas or crude oil. Despite this format, by 1991 the Siljan Ring experiment was producing 80 barrels a day. Not commercial quantities, but that was not the intention. Science was the intention.

**You can consider yourself "informed" by clinging to the 19th century myth that dead plants, called "fossil fuel," are what you burn in your modern car.**

The Russians took note of Gold's science; the major American petroleum companies have not yet done so. As of 1998, the Russians have over 300 wells drilled into the basement rock on the basis of the Siljan Ring experiment; all of which are producing commercial quantities of crude oil and natural gas. Using the knowledge and experience gained from Gold, the Russians have transferred their drilling technology to their former allies in Viet Nam. So far, in what is called White Tiger Field, they have drilled 20 wells into the basement rock. The Vietnamese are producing in excess of 6000 barrels per day per well, in an area that the biogenic theory maintains will have no hydrocarbons. It appears that the debate is over. . . A) You can consider yourself "informed" by clinging to the 19th century myth that dead plants, called "fossil fuel," are what you burn in your modern car. You can also cling to the related notion that the millions of tons of carbon

dioxide that have continued to pour from Earth's volcanos have had no effect on the weather. But you should also develop an environmentalist type of guilt complex because the trace amounts of carbon dioxide that are emitted from your tailpipe are the causa belli of a supposed global warming. B) Or you can move forward in your understanding of science as presented by Gold in *The Deep Hot Biosphere*. You can investigate further, and confirm for yourself the validity of the abiogenic theory of hydrocarbon formation. You can confirm that there never was an "energy crisis"—at least not one that was in any way related to physical reality, as opposed to geopolitics. Gold explains, "In 1977, I presented the deep-earth gas theory during the time of the so-called energy crisis . . . Now, over 30 years later, the world is awash in oil and has more than it requires."

You can also conclude that there is no such thing as "fossil fuels," and therefore there is even less validity to the environmentalist proclamations of human-based global warming.

## About the Author

**Paul Sheridan** has degrees in mathematics and physics, and a graduate business degree from Cornell University. He spent five years at Ford, including membership on the original Ford Taurus product team. He worked at Chrysler for 11 years where he managed everything from the Dodge-Cummins diesel engine program to minivan safety. He is one of only three recipients of the Lee A. Iacocca Chairman's Award.

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