

Chapter 15

Oil and Natural Gas from the Cenozoic

Fossil fuels include coal, oil, and natural gas. They are the altered remains of buried marine and terrestrial organisms. Coal was analyzed in Chapter 13. This chapter will discuss the other fossil fuels from the writings of the late Roy Holt.¹ Oil and natural gas represent only about 10% of the total carbon content in all fossil fuels; coal contains the largest amount of carbon by far of any fossil fuel. Oil is believed to form when burial temperatures are about 140 to 357°F (60 to 175°C), while natural gas probably formed between temperatures of 357 to 599°F (175 and 315°C). Figure 15.1 shows the distribution of coal, oil, and natural gas by geologic period.² Most of the oil and natural gas is found in Cretaceous and Jurassic rocks, but a large amount is located in the Tertiary, which is all but the last 2.6 million years of the Cenozoic Era.

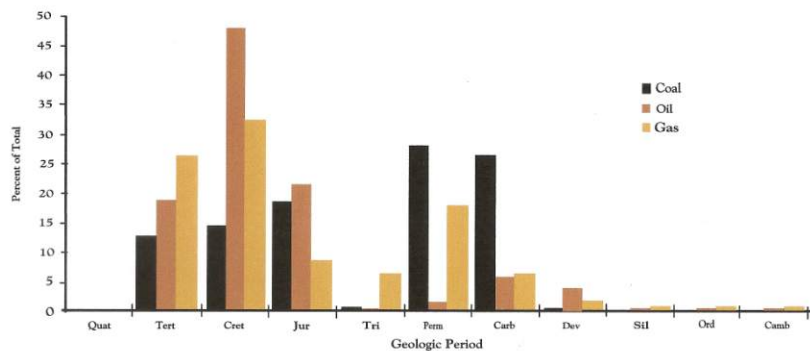


Figure 15.1. Distribution of coal, oil, and natural gas by geologic period (from Holt, 1996, and redrawn by Mrs. Melanie Richard).

Cenozoic Oil and Natural Gas

The vast quantity of fossil fuels, along with the billions of other fossils, argues for the burial of a huge amount of organisms in a large catastrophe, such as the Genesis Flood. Local or regional catastrophes could bury enough organisms to produce small quantities of oil and natural gas, but it is not likely they would produce the vast amount of oil and gas generated in just the Cenozoic.

The biological activity of microorganisms living deep within the ground has been given as a possible explanation for oil and gas formation. Microorganisms are now found deeper in the earth than previously expected, but

...the relatively minor amounts of deep-living micro-organisms discovered below a hundred metres or so, would be hard pressed to generate the world's reservoirs of oil and gas in a short creationist time-frame.³

Oil apparently is forming in a few small, localized areas today, like the Guaymas Basin in the Gulf of California⁴ or in the Bass Strait sedimentary rocks between southeast Australia and

¹ Holt, R.D., 1996. Evidence for a Late Cainozoic Flood/post-Flood boundary. *Journal of Creation* 10(1):128–167.

² Holt, Ref. 1, p. 156.

³ Holt, Ref. 1, p. 153.

Tasmania. The Bass Strait oil is probably forming from buried coal.⁵ These instances show that oil can be formed quickly instead of millions of years.

It is of course possible that oil and natural gas could be abiogenic or partly abiogenic,⁶ but this is uncertain.^{7,8} More research is required.

The question remains could local or regional post-Flood catastrophes bury enough organic matter to produce the oil and gas that is estimated from Cenozoic source rocks? Figure 15.1 represents the geological layer where fossil fuels are found, but since oil and gas can migrate, it does not give us the source rocks—the rocks where the oil and gas *originated*. Figure 15.2 shows the source rock for fossil fuels. Just like in Figure 15.1, most source rocks for oil and natural gas are in the Cretaceous and Jurassic, but there is a fair amount produced in Cenozoic (Tertiary) source rocks. Figure 15.2 is just one estimate, and these estimates can change with further exploration. Other estimates vary somewhat from Figure 15.2, but these figures are in the ballpark and are useful for making the point in the next section. Notice that there are no significant fossil fuels formed in the Quaternary, which is usually considered the time of the post-Flood rapid Ice Age while there are a huge amount that formed during the Tertiary and late Mesozoic. It is estimated that between 15.2% and 19% of crude oil originated from Cenozoic (Tertiary) source rocks.⁹

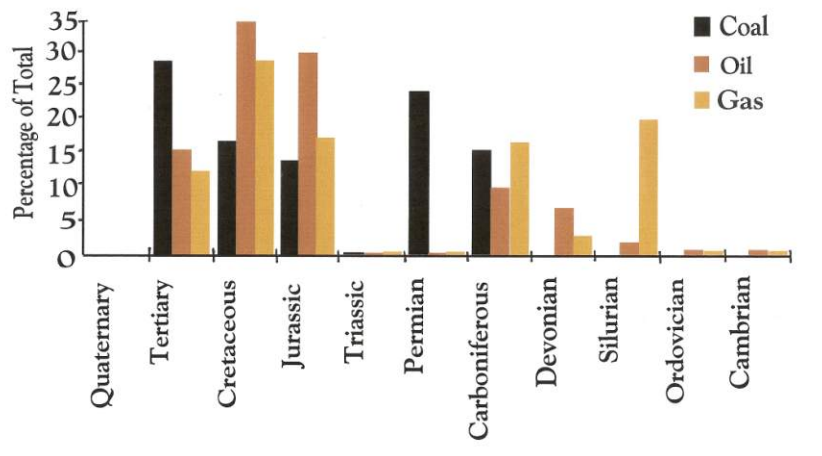


Figure 15.2. Distribution of the source rock for coal, oil, and gas (from Holt, 1996, redrawn by Mrs. Melanie Richard).

An example of gigantic oil finds from Cenozoic sedimentary rock comes from the Green River Formation of Utah, Wyoming, and Colorado (see Chapter 36).¹⁰ This formation is thought

⁴ Didyk, B.M. and Simoneit, B.R.T., 1989. Hydrothermal oil of Guaymas Basin and implications for petroleum formation mechanisms. *Nature* 342:65–69.

⁵ Snelling, A., 1982. The recent origin of Bass Strait oil and gas. *Creation* 5(2):43–46.

⁶ Kutcherov, V.G. and Krayushkin, V.A., 2010. Deep-seated abiogenic origin of petroleum: from geological assessment to physical theory. *Reviews of Geophysics* 48:1–30.

⁷ Snelling, A.A., 2009. *Earth's Catastrophic Past: Geology, Creation & the Flood*. Institute for Creation Research, Dallas, TX, pp. 965–976

⁸ Holt, Ref. 1, p. 154.

⁹ Holt, Ref. 1, p. 157.

¹⁰ Oard, M.J. and P. Klevberg, 2008. Green River Formation very likely did not form in a postdiluvial lake. *Answers Research Journal* 1:99–107.

to have been deposited in a post-Flood lake, but the vast amount of oil found within shale belies this. It is estimated that there are 1.2 to 1.8 trillion barrels of oil, only 800 billion considered recoverable. The recoverable oil is three times the proven oil reserves of Saudi Arabia and can supply the oil needs of the United States for 100 years!¹¹ Other Cenozoic sources of oil include the Orinoco oil belt of northern Venezuela and the Pear Springs, Asphalt Ridge, Hill Creek, and Sunnyside deposits in Utah.¹²

Oil and Natural Gas Indicate a Late Cenozoic Boundary

It would be challenging to account for the sheer size of the oil and natural gas deposits in the Cenozoic by only local to regional post-Flood catastrophes. This would be especially difficult if oil was mostly produced from the remains of marine algae as many petroleum geologists believe. The Cenozoic oil deposits would require catastrophes that began in the oceans and ended mostly on the continents. So far, no details on what would cause these catastrophes have been provided by advocates of post-Flood catastrophism. The burial of the unimaginable amounts of organic material needed to form the oil and natural gas in the Cenozoic would require a cataclysm, consistent with the Flood. I will let Holt summarize the argument:

If one ignores the organic content of sediments, except for fossil fuels, placing the Flood/post-Flood other than late in the Cainozoic [Cenozoic] still creates severe difficulties for post-Flood organic carbon accumulation and deposition. ... Placement of the boundary at or near the end of the Mesozoic would require post-Flood time to be more productive than the Flood at producing heavy oil and tar sands. Any placement of the boundary other than late in the Cainozoic requires post-flood catastrophes and floods of enormous proportions.¹³

¹¹ Bartis, J.T., T. LaTourrette, L. Dixon, D.J. Peterson, and G. Cecchine, 2005. *RAND Corporation oil shale development in the United States prospects and policy issues*. MG-414-NETL

¹² Holt, Ref. 1, p. 158.

¹³ Hold, Ref. 1, pp. 160–161.