



A Review of "Oil 101" by Morgan Downey

Posted by [Heading Out](#) on February 17, 2009 - 10:24am

Topic: [Supply/Production](#)

Tags: [book review](#), [oil market](#), [oil production](#), [refineries](#) [[list all tags](#)]

I read a lot of books. (A quick measure comes up with more than 10 ft of shelf space filled with books relating to the topic of peak oil and alternate fuels – not counting the books that deal with drilling and other aspects of technology that relate more to my day job). Some of these are quite expensive. [Jean Grove's book](#) that I have recently [been quoting](#), is now discounted to around \$350, and several of the alternate fuels books are well [over \\$100](#). But price doesn't mean necessarily useful and of my collection only 8 books sit on my desk. Today I added another to that rather select group. It is Morgan Downey's "[Oil 101](#)". It sits on my desk, not because it gives me a lot of the in-depth detail that many of the stories that I write require, but rather it is because it has a vast reservoir of the small, but invaluable, snippets that provide that useful addenda that help in understanding a story. It is, I suppose, in the format of the book I would have written if I had tied together the [Tech Talk series](#).

It differs from them, however, both in being focused not just on oil, but also in explaining more of the financial matters that play such a significant part in the price we pay for oil and thereafter for the gas that goes into the tank. The book gives enough explanation of the overall oil production business to be highly useful, without the greater detail that would, on campus, require a second, more detailed course in any one of the component parts.

Anyone dropping into the discussions at [The Oil Drum](#) or [Bit Tooth Energy](#) arrives in the midst of a group that has, as a general observation, some underlying knowledge of oil, what it is, where it is found, how it is extracted, refined and then marketed. Because these sites have evolved, over time, as the audience has grown, so, while there are occasional explanatory pieces, in the main the knowledge becomes more and more assumed. But if you don't know, for example, the relative production rates of the OPEC nations, relative to the producers outside OPEC, or even which countries are which, it becomes more difficult to follow the discussion. For those of you who fall into this category, this is the sort of book that is really useful. Because, without going into a lot of detail, it is that level of information that fills its pages. The information is given in tables, and with lots of pictures. (Small caveat – while small pictures work well on a Web site where they can be increased in size, they don't work well at all in a book, where it is hard sometimes to make out what the picture is trying to show).

The book follows the pattern of oil starting with what types there are, how it was formed and where it is found. It explains with a couple of simple pictures the concept of the kerogen, [oil and gas windows](#) and then goes on to explain, from the rock formations in which it is found, how the oil and gas can be recovered. Given the amount of material that the book covers, the specific detail on any one process is sparse, but with the underlying knowledge that is provided, it then becomes possible for example, to follow a more detailed description of the steps that are taken in trying to improve production from a well driven into a [shale gas field](#), or why we are interested in the

relative production rates and lifetimes of [horizontal and vertical wells](#).

This is useful not just to the neophyte. Just the other day when I was writing a piece on the [future price of oil](#), I wanted to know the current percentage of world production that OPEC produced and bingo, there on Figure 5.4 was the number, 43%. The story went on to look at the demand for petroleum products as it fluctuates over the year, and there again was Figure 13.2, showing the fluctuation in vehicle miles driven, by month. (Being me, I then went back to the source he cited to get the current data, but it barely differed from what Morgan Downey had written).

The production of oil is shifting to the use of heavier, and sourer crudes. This will impact refinery use, construction and re-construction and the book provides an underlying appreciation for what we write about to explain why, for example, Saudi Arabia needs to build a new refinery to process the oil from the Manifa field. At the level of basic understanding (the role of a 101 course), there is enough information in this book to gather how a refinery works, and, again, to then be able to understand some of the more erudite parts of the discussion on [refinery use](#) or by Robert Rapier on [gas prices](#).

While providing some background to the debate on current world oil reserve calculations, he does not take a specific position within it. Given the nature of the debate, that is perhaps wise. In a perhaps more prescient mode, he ends the book with chapters on the effect of regulation (a very likely new thrust by an Administration stocked with those who look favorably on the California experience) and on oil price and how the oil market works.

If I wanted to pick a nit or two, he did miss the [recent change](#) in the SEC rules (pdf) defining proved reserves, but then if he hadn't maybe there would have been less of a role for the [rest of us to play](#). It also only happened this last month, and while this book is almost that up to date, it is not quite. Yet a lot of the information is relatively timeless. And it would, moreover, be straining to find criticism for what is meant to provide only an underlying level of knowledge to the game. As it is, there is enough information provided that it will help me remember facts and sources, and thus to explain issues in a fundamental way, so that the book will stay on my desk, and start to look as worn as some of the others.



This work is licensed under a [Creative Commons Attribution-Share Alike 3.0 United States License](#).