

**2009**

## Does Oil Price Have Wings?

***Predicting energy price and usage in this tumultuous era is dicey. Could even a mystical guru have foretold a 1-year oil price cycle -- \$50►140►35►70?***

An impetuous call could leave a legacy akin to that of Lord Kelvin, who in 1899 declared, “*Radio has no future. Heavier-than-air flying machines are impossible. X-rays will prove to be a hoax.*” So, we look back. If, indeed, history repeats itself, the past will throw light on the future.

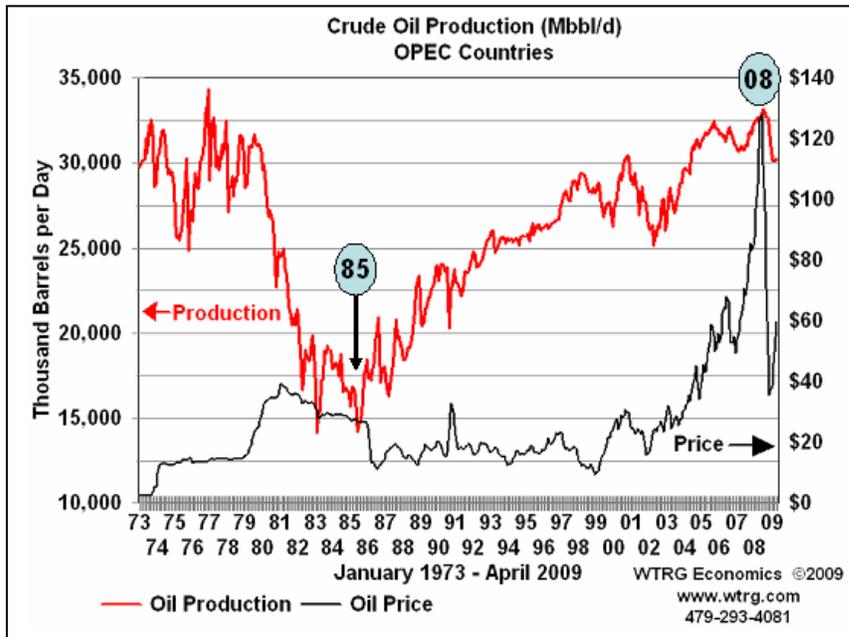
As detailed in my papers<sup>1,2,3</sup>, 31 years ago I became manager of a USC project funded by OPEC to develop a world energy model, which we appropriately named OWEM (OPEC World Energy Model). For four years, I commuted quarterly to drei und neunzig, Uber Donau Strasse, Wien. During this period the far-sighted Dr Yamani moderated OPEC’s aggressiveness by discounting Saudi crude by \$2 (~26/B). Several times OPEC meeting rooms echoed with Arabs berating the Saudi representative for not supporting his brothers. But, time would tell. Early ’81 -- when OPEC rate had fallen from 33 to 18 MMBD -- a shake-down test of OWEM predicted that if OPEC rate went from 18 to 20 MMBD, price would fall precipitously below \$20/B. Installed in Vienna in ’82, OPEC used it to make its annual forecast of oil markets at least through the late 90s. At that time, an email from an Iranian OPEC representative called my attention to an O&GJ article he had published with the latest forecast. (Unfortunately, his name is recorded in the PC a cunning pair lifted from behind my leg on the train station in Utrecht, The Netherlands.)

OWEM confirmed the premise demonstrated by the Texas Railroad Commission over 70 years ago. With military guards standing by, cutting East Texas Field’s rate in half raised price of its produced oil from 10¢ to 68¢/B. Oil price is established by controlling rate in the region with significant excess capacity. Texas, supported by its neighboring states, acted as the moderator of oil price into the late 60s. In March, 1971 the TRC set proration to 100% of capacity. The producing countries having assumed control of their producing operations, the oil price scepter passed into the hands of OPEC (read Saudi Arabia).

Let us recall that the price peak at the end of the ‘70s resulted from two plunges in OPEC exports. Fall ’73 the reduction of 5 MMBD during OPEC’s Yom Kippur War embargo jumped price from \$3 ►12/B. Then, in ’78 – ’80 the Iranian revolution followed by Iraq’s attack on Iran took 2 – 6 MMBD of oil out of the marketplace. This time price jumped up into the \$30 – 40/B range. Most of OPEC reveled from this plateau of prosperity. The oil minister, Gharazi, of the price hawk

Iran was quoted, “Iran will never agree to reduce its oil price from \$34/B.” In contradiction, Saudi Arabia established its lower tier oil price, as observed above.

Fast forward now to 1985. OPEC’s rate has fallen below 15 MMBD for a 2<sup>nd</sup> time, bringing OPEC’s declining share of world oil market down to 42%. A news item in a June issue of O&GJ reported that Saudi Aramco’s oil export rate was a bit less than 2 MMBD, the result of ratcheting down volume to maintain OPEC’s target oil price – \$34 ▶ 26 – 28/B. The two major determining factors of this squeeze – captured very nicely by OWEM -- were (1) moderate suppression of



demand in North America, Europe and Japan as measured by price and income elasticities, and (2) increase in oil production rate in non-OPEC regions spawned by the oil price. (Outside the industrialized regions demand continued to grow – OWEM correctly predicted that the bulk of demand growth would occur in these countries.)

One can almost hear the echo of Yamani’s contemplating. *‘This situation is intolerable. Saudi income has fallen to a starvation level. The country’s position of eminence in controlling oil price has withered and its long run oil markets are drying up. An adjustment in price must occur to reestablish a stable level of demand for Saudi -- and OPEC oil.’* Googling up the news releases of that summer and fall, one can follow this astute man’s carefully orchestrated, insightful strategy. He berated other OPEC members for cheating on their quotas. He met with CEOs of Aramco’s ‘parent’ companies assuring there would be no price war – but emphasizing the need for market stability. He lambasted the North Sea producers for swamping the market with oil, their production rate being up nearly 10 percent. He deplored two major non-OPEC exporters, USSR and Mexico, for not reducing export rate.

Then he acted! In early August Saudi Arabia announced its intention to increase oil rate. At an OPEC ministerial meeting, it was agreed that OPEC policy would be to protect market share. This declaration opened the door for the Saudi knockout punch – netback oil export contracts to increase liftings. With a net-

back contract the price paid by the buyer for a barrel of crude is not set in advance. Rather, the price is determined after the refined products from the barrel are sold. The buyer's 'cost' of transporting and refining the barrel is subtracted from the gross income from the products and this is the price paid. In this case, the 'cost' included a processing fee whose value guaranteed a margin of profit for the buyer. ([oxfordenergy.org/pdfs/WPM10.pdf](http://oxfordenergy.org/pdfs/WPM10.pdf)).

An armada of tanker's sailed into Ras Tanura. In two – three months at 1985's end, Saudi exports increased from less than 2 to 3.5/4 MMBD. Other OPECers offered deals to pad their liftings. Non-OPEC producers offered price cuts to hold their volume. Amidst this turmoil oil price collapsed, bottoming at less than \$10/B in February 1986. This tumultuous state of affairs continued until year end, at which time OPEC returned to its normal modus operandi – quotas targeting an oil price.

As the graph above shows, except for a bounce during Iraq's occupation of Kuwait, oil price approximated the target price of \$18/B until 2003. From thence to 2007 oil price rose. What was the cause? Increased Russian production offset decline in other non-OPEC countries. In spite of fall-off in Venezuela (internal turmoil) and Iraq (invasion), OPEC total rate held steady. So, probably, the most important factor on the supply side was the psychology of future shortage – decreasing OPEC spare capacity riding a wave of queries of validity of OPEC reserves amplified by Peak Oil declamations. The burst of demand in Asia, particularly China, caused oil price to ride upward on this wave of concern. These pressures carried price to \$70/B in '06-'07, but at yearend '07 price fell back to \$50/B.

Our tour through history brings us now to the question raised at the beginning. Why did oil price rocket upward to \$140/B by June 2008? Where was the supply disruption that triggered all previous upsurges? The answer; there was none!! Propagandized by supposedly reputable financial giants (with billion\$ bonuses) - who told of visions of \$200/B oil not in the future, but now – the price levitated. After midyear the price collapsed, as the whole Alice-In-Wonderland house of cards fudged together by the world's financial moguls came tumbling down. Experts in tulip sales, chain letters, Ponzi investment schemes and African & Asian windfalls that need a correspondent to be collected are well prepared to churn butter from skim milk. Our guru wizard can stand aside.

### **My Papers:**

1. SPE 10241 "An Integrated, Computerized World Energy Planning System – OPEC" with J. Johnston, J. Nugent & B. Zagalai.
2. SPE 16290 "Free World Total Primary Energy Demand: An Econometric Approach" with M.S. Al-Blehed.
3. SPE 16850 "Oil Prices: Can We Predict Where They are Going".

Dr E. L. Dougherty  
Pres, Maraco, Inc.

*Elmer L Daugherty*