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The Oil Price Collapse and Its Consequences

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At the Hearings
"State of the Petroleum Industry"

U.S. Senate Committee
on Energy & Natural Resources

January 28, 1999

Washington, DC

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Crude oil prices in 1998 were at their lowest level since early 1986 in nominal dollars and probably the lowest in the postwar period in real, inflation-adjusted, dollars. Year-to-year, the decline was $6.25/bbl or 30%. The $12.50 bbl WTI price in January 1999 is simply more of the same.

The price reductions were fully passed through to retail customers in the U.S., reflecting the competitive nature of all segments of the oil industry. U.S. gasoline retail prices dropped 17¢/gallon or $7.14/bbl during 1998. Jet fuel, diesel and heating oil prices registered nearly comparable declines, as shown in the table below.

Thus, we have here a sustained massive global price reduction of a vital commodity, which is clearly benefiting consumers at all levels, from individual drivers and home heating to public transportation, airlines and utilities. Yet, these prices are now threatening the viability of the U.S. oil producing industry and its ancillaries, leading over time to negative secondary consequences.

Low prices have forced the reduction in company budgets and expenditures resulting in the layoffs of tens of thousands of workers. U.S. drilling is severely depressed and is not just impacting oil but gas as well. The industry is losing experienced, knowledgeable employees. Drilling rigs this past week reached an all time low and the end isn't yet in sight. Domestic oil production last year declined by perhaps 300,000 B/D, compared to a 40,000 - 100,000 B/D range in the previous three years. Oklahoma, a perfect example of an onshore mature producing region, has experienced a decline based on preliminary reported production approaching over 30% from the beginning of 1998. Decline rates in existing oil and gas fields are likely accelerating.

Marginal and stripper producers who finally make a decision to shut down are making life and death decisions for once they shut down it's highly unlikely that the wells will ever operate again even if and when prices recover - losing not only the production but the associated reserves with it.

In addition, the low oil prices have led to the delay and cancellation of projects all over the world. The negative impact of these decisions on supply will be multiplying over the next several years.

We should look at both the positive and the negative aspects of the oil price decline.

U.S. Retail Prices

	1997	1998	Change	
	----$/Bbl---		¢/gal	$/Bbl
Gasoline				
All Grades	**1.24**	**1.07**	**-17**	**7.14**
Diesel	**1.19**	**1.04**	**-15**	**6.30**
#2 Heating	**0.99**	**0.85**	**-14**	**5.88**
Crude Oil				
WTI	**20.59**	**14.38**	**15**	**6.21**

Economic Benefits

First, the positive side: while U.S. oil consumption accounts for only 4% of the U.S. GNP, the reduction in oil prices might have lowered our measured inflation rate by perhaps 0.5% in 1998 and reduced our trade deficit by $20 billion; and since oil demand is relatively inelastic – U.S. gasoline demand rose 0.6% faster in 1998 than in 1997 while gasoline prices declined by 14% -- we estimate that some $40 billion of purchasing power was transferred from oil to other sectors of the economy last year as a result of the oil price decline. Thus, last year's declining oil prices have probably played a small but not insignificant role in maintaining the U.S. economic prosperity. The same is true abroad. Countries, which import most of their oil requirement, like Japan and Continental Europe, clearly benefited from the oil price decline while their foreign suppliers carried the losses.

But while the importing countries' gains from the lower prices are numerically equal to the exporting countries' losses, the negative economic impact on the exporters is far greater than the positive impact on the importers. For the latter oil is just one of many commodities in their economies; for the major exporters oil is the primary and, often only, export commodity and the principal, and often only significant, source of foreign revenue.[1] The table shows the share of oil in the national economy of 4 major oil exporters.

Oil/GDP – 1997

	% Share
Kuwait	**46**
Nigeria	**28**
Saudi Arabia	**35**
Venezuela	**26**

The U.S. is on both sides of the issue. We are the world's largest oil consumer and oil importer and share with Saudi Arabia the top position in world oil production. Our total oil supplies are roughly evenly divided between net imports and domestic production and, of course, imports determine the price of domestic oil. Thus, while the U.S. economy is clearly benefiting from the lower oil prices, a major domestic industry and the region in which it is located is undergoing serious economic difficulties which will over time cause permanent damage to the U.S. oil industry's producing and service sectors and the regions in which they are located. This obviously raises the question whether the government could or should attempt to arrest or modify these developments. To answer this question we must first analyze what caused the present situation.

Murphy's Law - Or What Could Go Wrong - Did

The reason for the price collapse in 1998 is both on the demand and the supply side. The single most important reason was, and still is, the Asia/Pacific economic recession, which started in the

[1] The economic turmoil in Russia whose principal hard-currency revenue comes from oil and gas exports is obviously exacerbated by the collapse in oil prices.

second half of 1997 but was not recognized by international financial institutions until several months into 1998.[2]

Between 1990 and 1997 the Asia/Pacific region (including Japan) accounted for almost 80% of the annual growth in world oil demand with its economies humming along at a near 7% annual growth rate. In 1997 the Asia/Pacific oil market still grew by about 750 MB/D, (just slightly below the previous year.) However, the increase was now due partly to inventory rebuilding which obfuscated the beginning of the structural decline in demand in the second half of 1997.

In 1998 Asia/Pacific demand finally declined visibly, drastically and unexpectedly, by some 350 MB/D, a swing of 1.1 million from the previous year's growth, most of which was absorbed by oil import reductions. The Asia/Pacific 1997/98 demand swing was equal to about 1.5% of world oil demand and nearly 4% of world oil exports in 1998. A contributory factor has been the collapse of the dollar exchange rate of most Asian currencies. Thus, oil import costs kept rising in local currencies in 1998, despite their decline in dollar nominations.

The second negative demand side factor last year was the weather. In the 1stQ 1998 heating degree-days in the principal U.S. oil heating regions (New England, Middle Atlantic) were 17% below normal.[3] This caused a 350 MB/D 1stQ decline in U.S. oil consumption and led to an excessive inventory build of middle distillates in 1998 which is still here at the end of January 1999. Warmer weather also affected other major oil markets in the 1stQ 1998. We estimate that globally the warmer-than-normal weather reduced oil demand by 300-350 MB/D vs. 1997 and up to 1 MMB/D vs. normal weather.

On the supply side there are two factors contributing to last year's and continuing price decline. OPEC's decision to raise production quotas at its semi-annual meeting in November 1997 and the U.N. Special Commission's (UNSCOM) decision to permit increased Iraqi oil exports.

The OPEC quota increase was the first official increase in 4 years. In part it was an attempt to legitimize the growth in the production level that exceeded the existing quotas and in part it was OPEC's endeavor to at least maintain its share in an apparently rapidly growing world market. By April 1998 OPEC ministers began to realize that market conditions had turned around and that the 1997 quota increase had to be reversed. In December 1998 OPEC's crude production level (excluding Iraq), was reported in the trade press at approximately 25 MMB/D or nearly 1.5 MMB/D below the December 1997 level.

However, Iraqi production, which is controlled by UNSCOM, changes the OPEC total supply level substantially. In December 1998 Iraq was reported as producing 2.4 MMB/D vs. 0.8 MB/D

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[2] The IMF projected in its Fall '97 Outlook a 5.4% GDP increase in Asia (excluding China and India) in 1998. The actual change was a 3.6% *decline*.

[3] EIA, Short-Term Energy Outlook, January 1999, page 35

in December 1997. All of the increase has gone into exports, which are currently about 1 MMB/D higher than a year ago. At the margin where prices are determined, this has been an implicit major factor in setting the current low price level.[4]

The Near Term

Now a brief speculation of the near term outlook. Most published forecasts predict only very modest price increases in 1999, usually starting in the second half. In part, this is based on the assumption that while the Asian economic crisis has reached bottom, recovery will be slow. There are also new economic crashes, such as Brazil, Latin America's largest oil importer (800 MB/D in 1997). With the decline in the dollar exchange of its currency and high domestic interest rates, Brazil will probably have to reduce its oil imports.

The industrial countries can be expected to continue their growth in oil demand. However, the global unseasonably warm January, the prime-heating month, is clearly a further negative.

On the positive side for a price increase is the fact that the agreed OPEC/Mexican/Norway production reductions during the second half of '98 have been a partial success. The current implementation rate is about 2/3 of the agreed reductions, or nearly 2 MMB/D.

On the negative side is the increase in commercial oil stocks. At year-end '98 total commercial were estimated to be 3-4% higher than a year ago. While most of these stocks must remain in their storage tanks or pipelines, the usable portion, which can be readily withdrawn for consumption, was about 13% higher at year-end.

The market in the first half of 1999 can be characterized as a market where inventories remain high but where net new supply approximates net new demand. Thus, the market is in equilibrium, but around very low level of prices. If prices are to move up appreciably in 1999 it is likely to have to come from the supply side.

A possible upward price push is OPEC's widely discussed plan to further curtail output at its March 23 semi-annual ministerial meeting. The benefits are clear. For example, a broadly distributed reduction of perhaps 1 MMB/D (about 4% of total OPEC production) would increase revenues by a multiple of the loss sustained through the volume reduction.

Temporary Remedies

Even under relatively optimistic assumptions, this year's WTI price is unlikely to exceed last year's very low average of $14.40 until the second half of '99. Thus, the domestic producers'

[4] Recent Russian oil exports have grown sharply putting further downward pressure on prices.

trouble is likely to stay for some time. Policy options to give temporary support to all domestic oil producers should therefore be seriously considered because it is in the national interest. Since the industry's current troubles are not of a permanent nature all action should be temporary, with built-in cessation as prices improve.

One measure would be to purchase oil for the Strategic Petroleum Reserve (SPR). The SPR currently has 120 million barrels of spare capacity. If part of this is filled now at a rate of say 250-300 MB/D for the next 4-6 months it would slightly raise world oil prices, would enable the government to purchase oil at probably an all-time low price and enhance our national security protection in case of another major foreign oil disruption, probably reducing our military preparedness expenditures.[5]

Another action would be to temporarily reduce or eliminate state and federal royalty and severance taxes if the price of oil falls below a designated minimum level, but automatically reinstate the taxes if it moves above the designated level.

Whatever action is taken it should be kept in mind that while the present price collapse is temporary it may last long enough to do permanent damage to the oil industry if no action is taken now.

[5] See PIRINC's paper, *Shopping in a Distressed Market: A Role for the SPR*, December 1998