



**ASSOCIATION FOR THE  
STUDY OF  
PEAK  
OIL & GAS**

**NEWSLETTER No 57 – SEPTEMBER 2005**

ASPO is a network of scientists and others, having an interest in determining the date and impact of the peak and decline of the world's production of oil and gas, due to resource constraints. Independent national affiliates are in existence or formation in Australia, Canada, France, Ireland, Italy, Netherlands, New Zealand, Portugal, Spain and the United States.

*Missions:*

- 1. To evaluate the world's endowment and definition of oil and gas;*
- 2. To study depletion, taking due account of economics, demand, technology and politics;*
- 3. To raise awareness of the serious consequences for Mankind.*

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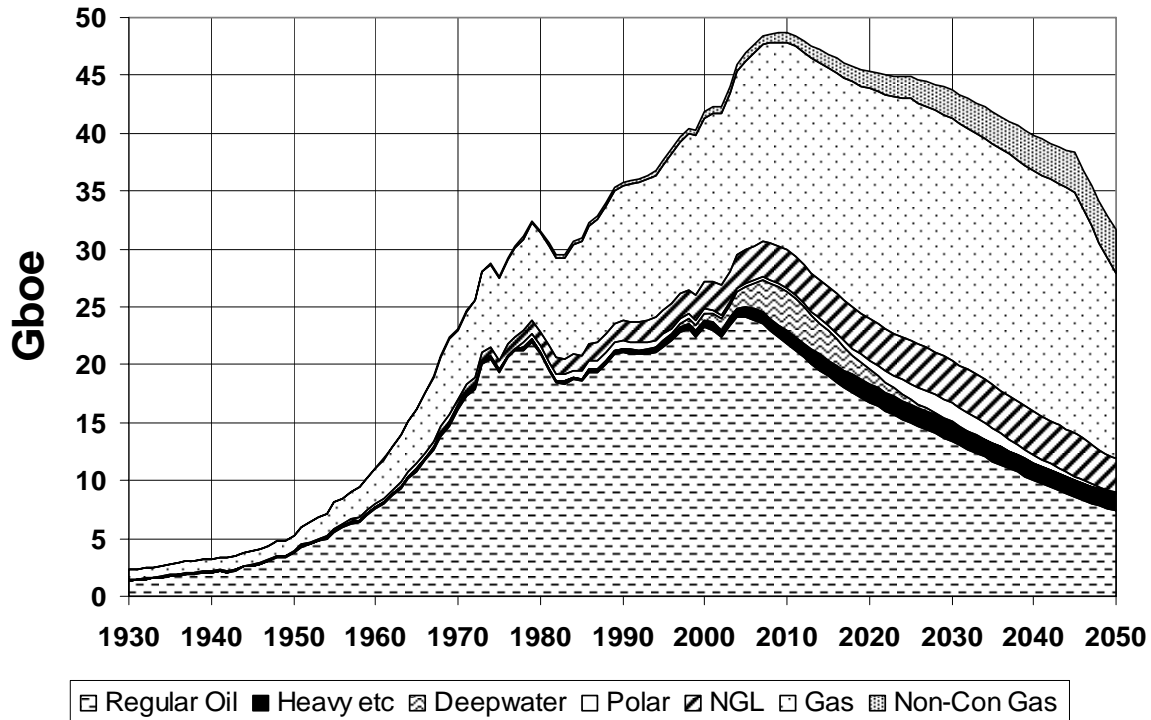
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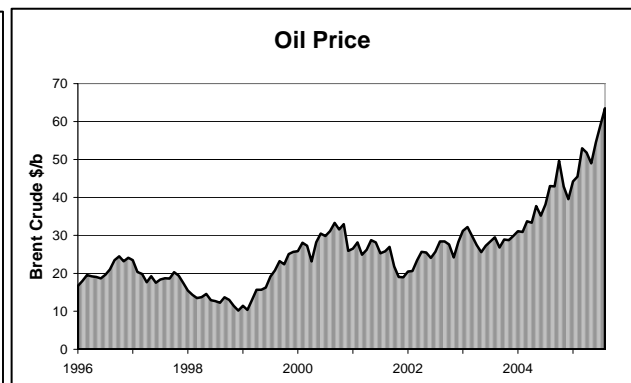
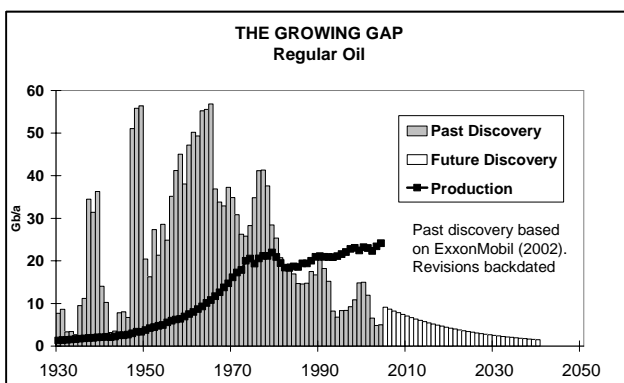
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*Calendar of Forthcoming Conferences and Meetings*  
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## OIL & GAS DEPLETION PROFILES 2004 Base Case



ESTIMATED PRODUCTION TO 2100								End 2004		
Amount			Annual Rate - Regular Oil					Gb	Peak	
			Mb/d	2000	2005	2010	2020	2050	Total	Date
<b>Regular Oil</b>										
<b>Past</b>	<b>Future</b>									
Known Fields	New	Total								
945	775	130	USA	4.5	3.4	2.7	1.7	0.4	200	1971
			Europe	6.3	5.2	3.7	1.9	0.3	75	2000
			Russia	6.3	9.1	8.4	5.4	1.5	220	1987
			ME Gulf	19	20	20	20	12	680	1974
			Other	28	28	25	17	6	675	2004
<b>All Liquids</b>			<b>World</b>	<b>64</b>	<b>66</b>	<b>60</b>	<b>46</b>	<b>20</b>	<b>1850</b>	<b>2004</b>
1040	1360	2400								
<b>2004 Base Scenario</b>			<b>Annual Rate - Other</b>							
M.East producing at capacity (anomalous reporting corrected) Regular Oil excludes oil from coal, shale, bitumen, heavy, deepwater, polar & gasfield NGL			Heavy etc.	1.7	2.3	3	4	4	151	2021
			Deepwater	1.7	4.8	7	6	0	70	2014
			Polar	1.0	0.9	1	2	0	52	2030
			Gas Liquid	6.3	8.0	9	10	8	275	2027
			Rounding				0	2	2	
Revised 17/07/2005			<b>ALL</b>	<b>74</b>	<b>82</b>	<b>80</b>	<b>70</b>	<b>35</b>	<b>2400</b>	<b>2007</b>



### **593. Economic impact of high oil prices**

The following article explains how the stockmarkets of the West appear to be shouting their last hurrahs before the crash, while the poorer countries of the world already face the impact of high oil prices. They are high because supply capacities are being breached, meaning that prices can only move higher still unless demand can be cut. By cutting their demands, the starving poor are evidently helping prop up the stockmarket for the moment.

#### **The Peak Oil Crisis : A Mid Summer Review**

[www.fcnp.com/521/peakoil.htm](http://www.fcnp.com/521/peakoil.htm)

*By Tom Whipple*

The world has never been to peak oil before so we may not immediately recognize what we are seeing. A few months back, most knowledgeable people would have said oil at \$60 a barrel would have triggered an economic tsunami by now. But surprise! Here we are and it seems to be business as usual in America with company earnings doing well, the stock market setting some new highs, and thanks to great prices, SUVs and pickups are leaping off dealers' floors and onto America's highways.

So far this summer oil prices have been jumping up and down depending on which hurricane is or isn't threatening which offshore oilfield, the weekly US oil stocks report, and a little "what is happening in China?" thrown in. The International Energy Agency (keeper of the books on the world's oil supplies and who incidentally haven't had much of a track record recently) says demand — especially from China — is not what it was supposed to be this year, so we can all relax for a while and enjoy the rest of the summer. It may not be 1914 redux after all.

Below the radar of even the most attentive newspaper readers, however, the first stirrings of peak oil reality are starting to trickle in. Not surprisingly, most of these reports come from the poorer parts of the world where \$60 oil is simply too much for fragile economies.

Here are a few of the items:

- Last week the BBC reported that dozens were killed in fuel riots across Yemen when the government withdrew subsidies resulting in dramatic price increases.
- All across Indonesia people were lining up at gas stations in response to developing fuel shortages. In one city, half the public transport was inoperable due to a lack of fuel.
- In Zimbabwe, the government has moved to deregulate fuel procurement in the face of severe shortages: waits of hours for buses, gas lines that are blocks long, and a bread shortage. The black market price for gasoline is now ten times the official rate.
- Nearly all the poorer countries make their electricity using diesel generators. Nicaragua, one of the poorest countries in Central America, recently started blacking out the poorer districts between 7 and 10 p.m., the hours of peak usage.
- Tanzania, with the highest gasoline taxes in East Africa and a chaotic oil marketing system, is seeing its plans for economic growth "suffocated" by high-priced oil. Tanzania also handles fuel for the landlocked states of Malawi, Rwanda, the Eastern Congo, Burundi and Uganda.
- And closer to home, Maxjet put off plans to offer cheap flights from Baltimore to London until spring when the company hopes fuel prices will be cheaper.

At mid-summer, the supply-demand situation remains about the same. OPEC is supposed to be increasing its daily output by some 500K barrels a day and there is evidence from increased tanker charters that this indeed may be happening. In the meantime, production in the non-OPEC countries seems to have dropped by a collective 1.2 million barrels a day below the IEA forecasts for the first half.

Thus, we have learned that \$60 oil and the ensuing \$2.30 gasoline is not much of a deterrent to American driving habits. It is not doing much to the economy, and certainly isn't stirring up any serious action in the Congress which continues to fuss around with a largely meaningless energy bill. With good economic growth, the US demand for oil continues to increase.

The Chinese continue to claim their economy is growing nicely, suggesting increased demand for oil in the near future.

OPEC and the Russians — the folks with some spare capacity left — seem to have at least squeezed out one last round of production increases in response to calls to stem growth-endangering higher prices. At the same time, many of the world's older non-OPEC oil fields are talking of dramatic drops in production.

If one puts all this together, it is hard to escape the conclusion we just may be very close to Hubbert's peak right now and, some day, 2005 will be declared the year of peak oil.

*(Reference furnished by William Tambllyn)*

### **594. Country Assessment – Netherlands**

The Netherlands is a relatively small country of 42 000 km<sup>2</sup> on the northwest coast of Europe. It lies on the delta of the River Rhine and is bordered by Germany and Belgium. A large partly reclaimed inland sea,

known as the Zuider See, extends in from the North Sea, while a string of islands runs parallel with the coast. Most of the country is low-lying, with about one-fifth being below sea-level behind a complex system of dykes, some of which have been in existence since the Middle Ages. The delta is subsiding and the sea is rising, making the country increasingly vulnerable to floods : one such flood in 1953 caused by storms and high tides claimed the lives of as many as 2000 people. The country's population has grown from about 3 M in 1850 to 16 M to-day, making it a very crowded place with a population density of 400/ km<sup>2</sup>, of whom about 5% are Muslim immigrants, many from former colonies.

Several archaeological sites confirm settlement since Palaeolithic times. The Rhine formed the northern limit of the Roman Empire, with the so-called Low Countries, including what are now the Netherlands, lying on the border. The shifting sand dunes, channels and swamps of the delta were settled by Germanic tribes, who were in turn subject to Viking raids and settlement. The Middle Ages saw the development of city states and principalities, often in conflict with each other as well as facing the successive external pressures of the Frankish Empire, the Holy Roman Empire, the Burgundian dukes, the Habsburg dynasties of Spain and Austria and finally Napoleon. Religious divisions contributed to the political evolution, leaving the country predominantly Protestant. The province of Flanders became a centre of weaving, securing its wool from England. Trade and banking flourished during the 17<sup>th</sup> and 18<sup>th</sup> Centuries, built partially seafaring and the country's geographical location at the mouth of the Rhine River, an important trading route. There was also a cultural flowering highlighted by such famous painters as Rembrandt and van Gogh.

The modern State effectively came into being in 1814 as a monarchy under King William 1<sup>st</sup>, following the defeat of Napoleon, although it saw the secession of what is now Belgium in 1830. Language was a divisive element: the Dutch language with its Germanic and Scandinavian roots distinguishes the coastal areas from the mainly French-speaking interior of what is now Belgium. A degree of friction continues to simmer between the two communities.

Overseas territories, notably the Dutch East Indies (now Indonesia) and South Africa, were acquired, partly settled and developed in the 19<sup>th</sup> and 20<sup>th</sup> Centuries. Amsterdam became an important financial centre.

The Netherlands was neutral during the First World War and tried to be so again in the Second, until it was invaded by Germany in 1940. Queen Wilhelmina escaped to England where she presided over a government in exile. The post-war epoch saw gradual economic recovery, with the country playing a central part in the European Union and NATO, while giving up its empire.

In physical terms, most of the country is covered by recent deltaic deposits obscuring the underlying geology, knowledge of which has relied largely on the results of petroleum exploration. The country had considerable expertise in that domain, being home to Royal Dutch, the founding member of the Shell Group, which made early discoveries in the Dutch East Indies. Interest in the homeland arose by accident in 1936, when an operating derrick, being exhibited by Shell in an Industrial Fair, unexpectedly encountered minor indications of oil. It prompted an onshore search, especially during the Second World War, which resulted in a number of small finds of oil derived from lean Lower Jurassic and (?)Permian source rocks. A second surprise came in 1957 when a weekend communications failure led to the unintended deepening of well near Groningen in the north of the country. It penetrated Permian desert sandstones, which had not been regarded as prospective, yet proved to contain a huge deposit of gas capped by layers of salt, providing the critical seal. The gas itself was derived from the underlying Coal Measures under a process of natural coking. This giant discovery stimulated the search for gas offshore in the southern North Sea where a number of major finds were made in Dutch and British waters.

NETHERLANDS		<i>Regular Oil</i>	<i>Gas Tcf</i>
<b>Population M</b>		8.8	
<b>Rates</b>		Mb/d	Tcf/a
Consumption	2004	1.0	1.5
	per capita b/a (Mcf/a)	23	0.1
Production	2004	0.044	2.4
	Forecast 2010	0.033	2.4
	Forecast 2020	0.021	2.4
Discovery 5-yr average Gb		0.001	.01
<b>Amounts</b>		<b>Gb</b>	<b>Tcf</b>
Past Production		0.87	82
Reported <i>Proved Reserves*</i>		0.11	62
Future Production - total		0.33	62
	From Known Fields	0.27	53
	From New Fields	0.06	10
Past and Future Production		1.20	145
Current Depletion Rate		4.5%	3.9%
Depletion Midpoint Date		1991	2000
Peak Discovery Date		1980	1957
Peak Production Date		1987	1976

\*Oil & Gas Journal

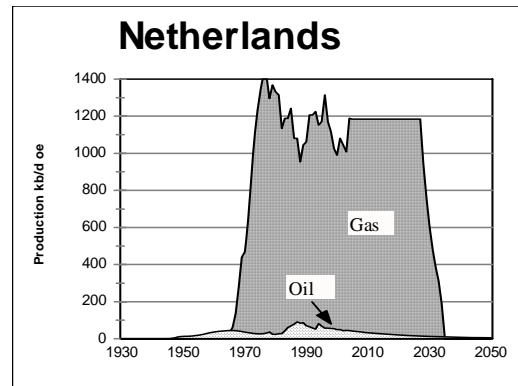
A total of some 1100 wildcats have been drilled in the Netherlands, onshore and offshore, finding about 1.1 Gb of oil and 145 Tcf of gas, of which respectively about 870 Mb and 83 Tcf have been produced. Wildcat drilling reached a peak in 1985 when as many as 45 wells were sunk, but has now fallen to about one-quarter of that level as fewer and fewer viable prospects remain. This is now a very mature area, so future discovery is not here expected to yield more than about 60 Mb of oil and 10 Tcf of gas. (Surprisingly, the oil statistics are subject to some uncertainty with widely different numbers for reserves and production being reported by BP, World Oil and the Oil & Gas Journal).

Oil production commenced in 1946. It reached an early peak of 45 kb/d in 1965, fell to a low of 24 kb/d in 1980, before recovering to a second overall peak of 91 kb/d in 1987, a few years before the midpoint of depletion in 1991. It is expected to decline from its present level of 44 kb/d at about 5% a year. Consumption stands at about 1 Mb/d at a very high per capita level of 22 b/a, to which indigenous production makes an insignificant contribution. The country also produces about 19 kb/d of gas liquids from gas plants.

Gas production rose steadily during the 1960s to reach an irregular plateau in the 1990s, averaging about 2.4 Tcf/a (1.2 Mb/d oil equivalent), which can be expected to last until

around 2025, before declining steeply to exhaustion ten years later. Gas consumption stands at about 1.5 Tcf/a, meaning that there is an export capacity of about 1 Tcf per year for another 20 years.

The graph illustrates how oil and gas production marks a relatively short span of history, suggesting that the European Union, to which the Netherlands belongs, is operating under outdated economic principles of economic and financial hegemony appropriate to the First Half of the Age of Oil. The Second Half will call for greater devolution. The Dutch, who have already rejected the proposed EU Constitution in a referendum may lead in the direct, even rediscovering the benefits of a local currency by which the better manage their affairs. The turning point to a new realism may come if and when the Government forbids the export of gas, having belatedly come to recognise that it provides a critical asset to be preserved for local use, ameliorating the severe tensions of the transition. Perhaps the most serious threat of all comes from the growing risk of flooding: much energy being used to pump water out of the areas below sea-level



### 595. Kuwait's Reserves

There is something decidedly fishy about Kuwait's reported reserves. It will be remembered that the country announced a massive increase in 1985 from 64 to 90 Gb although nothing particular had changed in the oilfields. Cumulative production through 1984 amounted to 22 Gb, giving the total discovered to that point of 86 Gb, which is only slightly below the new reported number of 90 Gb. This suggests that the country started reporting total found (termed *Original Reserves*) not *Remaining Reserves*. But an alternative interpretation is that the earlier number reflected a conservative recovery factor of say 30%, giving an oil-in-place value of 286 Gb. Increasing recovery to 40% would yield reserves of 92 Gb ( $286 \times 0.4 = 114.4$ ), close to the new estimate reported in 1985.

Kuwait's main field, Burgan, was found as long ago as 1938, suggesting that by now it must be heavily depleted, which perhaps explains why attention turns to the smaller northern fields even to the extent of sucking a bit from across the border, as the following article suggests. Indeed, it was precisely this problem that lay behind the First Gulf War, when Saddam Hussein tried to stop Kuwait pumping from the southern end of the Rumaila Field that straddles the ill-defined border. He was encouraged by the words of the then American Ambassador, April Glaspie, when she said, a few days before the invasion, that *boundary disputes between Arab countries were of no concern to the United States*. Oil prices were then low and hurting the independent producers of Texas. So, it made sense then to try to restrict Kuwait's ability to produce, but unfortunately it seems that Saddam misunderstood the wink and nod for a border incident.

Kuwait's genuine reserves are here taken to be about 55 Gb (far below the currently claimed 99 Gb) but this still delivers a very low depletion rate of only 1.3%, suggesting that even this low estimate may not be low enough. Why would they be going to the trouble of drilling highly deviated wells across their border and trying to develop their own smaller northern fields if raising production was just a matter of opening valves in the Burgan Field?

It is a critical issue yet to be resolved, having much influence on the reporting practices of other Middle East countries, which themselves carry many far reaching political implications.

### **Iraqis Accuse Kuwait of Stealing Oil**

**By THE ASSOCIATED PRESS**

**Published: August 2, 2005**

BAGHDAD, Iraq (AP) — Iraqi legislators accused Kuwait of stealing their oil as well as chipping away at their national territory on the border — allegations similar to those used by Saddam Hussein to justify his invasion of Kuwait that began 15 years ago Tuesday.

An Iraqi delegation was scheduled to head to Kuwait on Wednesday discuss the incidents along the Kuwaiti border. "There have been violations such as digging horizontal oil wells to pump Iraq oil," legislator Jawad al-Maliki, chairman of the parliament's Security and Defense Committee, told the National Assembly on Tuesday. In such horizontal wells, instead of drilling straight down, Kuwaitis would drill at an angle either going into subterranean Iraqi territory or sucking oil out of pools from Iraqi territory. He also said Kuwaitis have taken territories up to half a mile inside Iraq.

"We believe that we have overcome the past and that we opened a new page of positive relations. These relations have to be respected by Kuwait," said al-Maliki, a member of Prime Minister Ibrahim al-Jaafari's Dawa Party.

Relations between Iraq and Kuwait resumed after the 2003 U.S.-led invasion of Iraq that toppled Saddam and border points were reopened. On Saturday, a Kuwaiti official said a number of Iraqi homes and farms have slightly "encroached" into Kuwait at the border area of Umm Qasr in southern Iraq. The officials said they want to resolve the border issue in negotiations.

Some farms that belonged to Iraqis were razed when the United Nations redrew the border in 1993, two years after a U.S.-led international coalition fought the Gulf War that ended a seven-month Iraqi occupation of this country that began with Saddam's Aug. 2, 1990 invasion. The Iraqi owners were compensated.

Legislator Hassan al-Sunneid said a four-member delegation of three legislators and deputy foreign minister Mohammed Haji Hmoud will head to Kuwait to try to find a solution. "There has been a border problem with Kuwait since the Iraqi state was established," legislator Mansour al-Basri said. "We hope that these border problems will be solved according to historical and geographical basis."

He accused Kuwaitis of even taking the deep water side of the Umm Qasr port where giant ships dock. Hundreds of Iraqis demonstrated at the frontier last week to stop Kuwait from building a metal barrier between the two countries. Shots were fired across the border into Kuwait, but no one was injured and Kuwaiti border guards did not return fire. Kuwait insists the pipeline barrier, meant to stop vehicles from illegally crossing through the desert, is on its side of the frontier. The U.N. demarcation also gave Kuwait 11 oil wells and an old naval base that used to be in Iraq.

When Saddam was still in power, Kuwait built a defensive trench along the 130-mile border to stop border infiltration from both sides. U.N. peacekeepers patrolled the frontier until just before the invasion of Iraq.

### **596. Revising the Database**

Some readers have sought explanations for the periodic revisions to the table at the beginning of the Newsletter. It is a summary of a depletion model and database that have been maintained for about 15 years, being subject to continual revision and refinement. It will be readily understood that public reserve and production data are grossly unreliable, and that even the industry databases show widely different estimates. Accordingly, it is necessary to look for trends and relationships, as well as apply common sense and geological knowledge, to try to come up with realistic assessments. The next revision may well see a reduction in the *Yet-to-Find*, based on extrapolating the falling trend. Furthermore, modelling depletion involves not only the calculation of natural depletion rates as imposed by the immutable physics of the reservoirs, but also relies on assessing politico-economic factors, especially in relation to critical Middle East supply. Each country is evaluated individually and then summed to give regional and world totals. It is well said that *all numbers are wrong: the challenge being to determine by how much*.

Much interest devolves on the date of peak, but this really misses the point. It is not an isolated or high peak, merely the indicated maximum on a fairly gentle production curve. Small changes in the estimates and modelling can shift it by a few years one way or the other. The Middle East Gulf is a particularly sensitive case. Production reached an historic peak in 1974 of 21.2 Mb/d. As currently modelled, production will rise from 19.4 Mb/d in 2004 to 20.5 Mb/d this year before declining gently to 19 Mb/d by 2030. It might indeed make sense to slightly modify the model and reserve estimates in, for example, Iraq, where there is a wide range of possible scenarios, so as to shift overall regional peak from 1974 to some date over the next few years. However, the importance is not so much in the date of peak itself but in recognition of the long, remorseless decline that follows.

### 597. *New books*

Six new books on the peak oil issue have appeared.

1. *The End of Fossil Energy and the Last Chance for Sustainability* by John. G. Howe (ISBN 0-9743404-0-5, from [www.mcintirepublishing.com](http://www.mcintirepublishing.com)) is an excellent, succinct work, written by an engineer, who both explains the problem and offers practical solutions.

2. *Oil Crisis* by C.J.Campbell (ISBN 0906522-39-0 from Multi-Science Publishing Co, 5, Wates Way, Brentwood, Essex CM15 9TB, UK. [www.msscience@globalnet.co.uk](mailto:www.msscience@globalnet.co.uk)) is a 397 page account covering, in a semi-autobiographical style, the nature and history of oil business, and the geological constraints to production. It describes the First Half of the Age of Oil before addressing the Second Half, which now dawns. The great tensions of the transition to a new world of reduced energy supply are evaluated, touching at times on sensitive political reactions. It ends on a hopeful note that the survivors will enjoy more benign lives in better harmony with themselves, each other and the environment in which Nature has ordained them to live. The book includes a number of interviews with other oilmen and analysts. Oil statistics and graphs, by country, region and the world as a whole, endeavour to correct grossly unreliable public data (see Item 598). An extensive bibliography is included.

3. *The Collapsing Bubble: Growth and Fossil Energy* by Lindsey Grant (ISBN 1-931643-58-X, Seven Locks Press, California) opens with a nice quotation: *Anyone who believes exponential growth can go on forever in a finite world is either a madman or an economist* – Kenneth Boulding (Economist). Its chapter headings summarise its contents: 1. The New American Century? 2. How Long the Twilight? 3. Twilight or Dawn? It concentrates on the responses to Peak Oil, particularly from a US perspective, linking the Iraq invasion with US demand for oil to maintain increasingly illusive economic growth. It expresses particular concerns about the environment and the level of sustainable population.

4. *Petrodollar Warfare: Oil, Iraq and the Future of the Dollar*: by William R.Clark (ISBN 0-86571-514-9, New Society) exposes international subterfuge and the manipulation of public opinion to explain the hidden workings of government before addressing the title subject in a convincing and penetrating manner.

5. *The New Pearl Harbor* by David Ray Griffin (Second Edition ISBN 1-84437-036-4) provides a useful background on the pretext for the War on Terror, whose oil agenda is covered in some of the other referenced works.

6. *Energy Beyond Oil* by Paul Mobbs (ISBN 1-905237-00-6) addresses particularly the reaction to Peak Oil, examining how societies will have to react and prepare, pointing out that Noah started building the Ark long before the waters rose.

It is noteworthy that Books 2 and 4 commend the Rimini Protocol, which is in a sense an ASPO initiative, now being publicized on ASPO websites including [www.peakoil.ie](http://www.peakoil.ie) as a practical mechanism by which governments and others could react and plan to meet the evolving situation.

### 598. *International Energy Agency: 2005 Outlook*

The International Energy Agency's latest report is well up to the past standards expected from this organization. The report includes in Table 4 a listing of World Resources 1995-2025. Reserves are reproduced from the Oil & Gas Journal (which with a broad definition of *Conventional* includes for example 178.8 Gb for Canada compared with World Oil's report of 5.0 Gb). "Reserve Growth" and "Undiscovered" estimates are taken from the USGS Mean values, discredited as they are by the actual results of the first ten-years of the study-period. The report has however managed to notice that oil prices are more than double that forecast in the organisation's last study, but this is seen as little cause for concern as they are shown in Fig 11 to fall again and still be below current levels in 2025.

The OECD Governments, who fund the organization, will be well pleased with the new study, which spares them responsibility for having to address the consequences of the actual unfolding supply situation. Nature for her part does not lie.

### **599. Oil and Food**

The critical relationship between oil and food supply is discussed in a comprehensive and perceptive paper by R.A.Leng, a Professor at a School of Rural Science and Agriculture in Australia, as summarised below:

#### **Implications of the decline in world oil reserves for future world livestock production**

In the near future, a reduced availability of primary resources as well as environmental, ecological, social and political issues will have major effects on rural development. Escalating costs of fossil fuel will precipitate a cascade of environmental, economic, political and cultural changes for which society is unprepared. The energy supply–demand deficit has the potential to eclipse climate change as the driving force for sustainable development. In the future, fuel and other costs of crop production will be included in the sale price of products and agricultural land use patterns will move to towards cropping for alcohol, biomass and bio–fuel production, particularly in the industrialized world. Competition for grain between food for humans, feed for livestock, feedstock for fermentation industries will intensify and the use of more expensive cereal grains for livestock production will need to be substantially reduced. Accordingly, meat protein will be derived less from industrialized pig, poultry and feedlot cattle enterprises and more from ruminants nourished by forages and by–products of crop production. Developing countries will require a non–fossil–fuel dependent development strategy, which will mean that their societies will be organized very differently. Food production will come increasingly from smaller, more localized and decentralized communities with mixed farms (producing multiple crops, animals, birds and fish) rather than specialized farms producing only a few products. (rleng@ozemail.com.au)

### **600. The Investment Community's Response to Peak Oil**

The Financial Times of August 16<sup>th</sup> carried a prominent article by George Magnus of the UBS Investment Bank, which reviews the impact of declining oil production on the world economy, ending with the advice that we must “*keep a wary eye out for the economic side effects when the current spate of economic momentum weakens as it must*”.

The investment community itself cannot be expected to have any real knowledge of the businesses in which its members invest. In the past, they worked on the basis of trust and close relationship, with the primary objective of receiving dividends and interest on loans, but those days are long over, as both the investment community and the managers of the companies themselves work only to deliver satisfactory share prices as judged by the market. Accordingly, the role of the investment community has reduced to speculative buying and selling to deliver a return from such market fluctuations. Their skill is less in identifying promising investments as such and more in tracking what each other are doing which itself dictates the market and, hence, the changing value of the holdings. They work at two levels: first, protecting their own fortunes and those of their privileged clients, and second managing massive institutional money that continuously flows over them. Naturally, they try to make sure that the first level is always ahead of the second, but to avoid any accusation of insider trading, they publish their recommendations for the “flavour of the month” before making placements at the second level. The consequential rise of the latter provides income for the former.

Reading between the lines, we may suppose that the current strength of the market is designed to allow first level investors to unload at a profit, before the second level sails down with a general crash. That will be triggered by the admission that declining oil supply removes the possibility of economic growth, which in turn means both that most present debt has lost its collateral and that most companies quoted on the market are over-valued by tacitly assuming business-as-usual energy costs.

The primary concern of the investment community is to avoid losing clients, which in turn means that it does whatever is possible to close ranks and provide each other with the same mindset and viewpoint by which to react to unfolding events. It is significant in this connection that Goldman Sachs, who shares a Chairman with BP, forecasts in the Financial Times of 19<sup>th</sup> August that oil prices will remain above \$60 to 2010 contrasting with the IEA (see Item 598).

In the past, the task of the investment community has been relatively easy in an epoch of overall expansion and prosperity, albeit subject to superimposed periodic cycles which themselves were useful mechanisms for profiteering. That was how they climbed one side of the economic mountain over the past century but now they may now find it more difficult as they slither down the other side, which is more precipitous. Some wake up to this (see [www.sprott.com/pdf/marketsataglance/08-22-2005.pdf](http://www.sprott.com/pdf/marketsataglance/08-22-2005.pdf))

Superimposed on the investment environment is the fiscal environment, which has been progressively constructed to facilitate the former by introducing many useful and often hidden distortions and benefits. Capital gains are taxed less than dividends. The facility for companies to treat operating costs, including



energy charges and managerial remuneration, as a charge against taxable income has been a huge benefit, being in effect a form of subsidy. Furthermore, capital gains taxes have helped lock investors into the market. Indeed, an entire profession wearing the hat of the tax advisor has arisen to help people exploit to the maximum the anomalies. How all this unravels on the downward side of the mountain remains to be seen, but it is useful to track the words of the investment community to divine their unfolding reaction to the new world of decline that Nature imposes.

### ***601. Conserving Europe's Oil***

Western Europe produces almost 5.4 Mb/d of oil and consumes 10.6 Mb/d making it a net importer of 5.2 Mb/d. Of the three North Sea countries which still export, Norway is by far the most prominent, exporting 2.7 Mb/d whereas Britain becomes a net importer next year and Denmark follows ten years later. The United States imports 11 Mb/d, making increasing purchases on the Rotterdam spot market, which has brought the price of Brent crude almost to parity with West Texas Intermediate. The Europeans may come to question the wisdom of exporting their precious resources which they will so desperately need as global supply constraints deepen in the years ahead. To ask, or pay, Norway to store it in the ground would offend all the rules of flat-earth globalism, but it would be in Norway's own best interest. Its four million inhabitants can't begin to spend the huge revenues they receive, leading the government to establish an oil fund of \$120 billion, the largest single investment in the world. It is placed on world markets by international banks where no doubt it will shortly be lost. If they did but know it, the best investment Norway could make would indeed be to conserve its oil and gas.

### ***602. An impending attack on Iran?***

There have been several hints and suggestions that the United States was planning to execute the next phase of its Middle East policy with an attack on Iran in July, but it did not happen, perhaps because the heat of the summer is not ideal for campaigning. However, new pressures on the country are building on the pretext of its decision to resume the production of nuclear energy. Iraq, with its population of 26 million, has proved very difficult to conquer, although showing signs of disintegrating into its Kurdish, Shia and Sunni factions, while the daily death toll continues to mount. Iran, with its predominantly Shia population of 67 million, may be even more difficult. Meanwhile, Mrs Cindy Sheehan, the grieving mother of a soldier killed in Baghdad, has camped close to Mr Bush's summer retreat in Texas, calling for his impeachment.

### ***603. The World begins to wake up***

Every day, new articles appear explaining the reality of the unfolding situation, many written by learned professors. Here is a typical example:

**Fears about diminishing supplies could push the United States and other great powers to secure oil supplies in ways that would ignite a broader conflict with the Muslim world.**

[http://onlineathens.com/stories/082005/opi\\_20050820018.shtml](http://onlineathens.com/stories/082005/opi_20050820018.shtml)

**'Peak oil' is on the way, and we are not ready for it**

**By Steve A. Yetiv**

Budget deficits explode. Inflation rules. Stock markets plunge. Houses foreclose. Great powers clash. This might be our future if we do not take more serious steps on energy than those offered in the energy bill President Bush recently signed. With oil prices hitting all-time highs and war raging in Iraq, serious concerns about "peak oil" slowly have appeared on the public radar screen. Simply put, peak oil refers to a key turning point when global oil production peaks and then begins to decline, signaling a future of dwindling supplies.

Analysts predict the peak will occur between 2006 and 2011, that global oil reserves are far more limited than once thought, partly because leading producers such as Saudi Arabia overestimate or obfuscate oil reserves, and that we are headed for an energy crunch.

Such concerns might be exaggerated, but we still need to plan ahead more zealously. This is because whenever peak oil does arrive, it will likely produce three effects for which we are not prepared.

First, in the absence of serious alternatives to oil, oil prices will spike possibly to more than \$100 a barrel in anticipation that demand for oil will slowly outrun supply. That could trigger a global recession or worse. Even if rising prices spur research into affordable alternatives, it will take many years, perhaps decades, for the global economy to shift to them because oil penetrates all walks of life. We can't switch away from it overnight. Even if peak oil comes in 2020 or 2025, we still are behind in the race.

Second, the Middle East will become increasingly important as a supplier, making the world more vulnerable to its vagaries. It now accounts for about one-third of global production. Yet it holds two-

thirds of the world's oil reserves. They will be the last left as oil dries up around the world.

Third, fears about peak oil might trigger conflicts among great powers. China-controlled CNOOC Ltd. withdrew its bid for the American oil company Unocal, but this case is a harbinger for the future. It underscores China's obsessive concern about energy and Washington's growing concern about China. Imagine how tense Sino-American relations could become against the backdrop of dwindling oil supplies.

Such conflicts will not be limited to great powers. Osama bin Laden repeatedly and mistakenly has claimed Americans have been stealing Arab oil. Oil is seen as an Arab resource by millions of Muslims who view America's invasion of Iraq as an oil grab. Fears about diminishing supplies could push the United States and other great powers to secure oil supplies in ways that would ignite a broader conflict with the Muslim world.

Studies show we can take three actions of particular importance to try to avoid this future.

First, we must view the current energy plan as a starting point rather than a finished product. It makes some advances, but fails to address a key fact: 70 percent of oil is used in the transportation sector. To deal with that reality, we will need to increase taxes on oil consumption. A study by the Organization for Economic Cooperation and Development has suggested that doing so would reduce oil use and carbon emissions by more than 10 percent.

We must also pass rigorous fuel standards, which the current energy bill fails to do. A recent report from the Environmental Protection Agency said cars and trucks sold today are much less fuel-efficient than they were in the late 1980s.

The energy bill makes available \$14.6 billion in subsidies and tax credits, but \$9.2 billion goes toward electricity generation, where only 3 percent of oil is used, and an additional \$2.6 billion goes to oil and gas companies. Very little goes to decreasing oil consumption in transportation or creating and employing alternative energies.

Second, we must publicize the possibility the United States and the world economy are woefully unprepared for peak oil. This is vital because Americans, in particular, still see oil as an entitlement. America uses 25 percent of the world's energy and has only 5 percent of its population.

Third, we need to establish a set of norms that can help great powers avoid conflicts over oil. Otherwise, we will increasingly see oil as a zero-sum game as we anticipate dwindling supplies.

Technology might still save us from our oil addiction. But just as we buy insurance to protect our lives, we should have an insurance policy to protect the energy security of future generations.

(•Prof. Yetiv is professor of political science and international studies at Old Dominion University and author of "Explaining Foreign Policy" published in the Athens Banner-Herald on Saturday, August 20, 2005).

#### ***604. The New York Times speaks of Peak Oil***

The New York Times Magazine of 21<sup>st</sup> August carried a long article, entitled *The Breaking Point* by Peter Maass, which addresses the issue of Peak Oil, with particular reference to Saudi Arabia. It contrasts the official view as conveyed by al-Naimi, the present chief executive of Aramco, with the more realistic statements by al-Husseini, his predecessor who is freer to speak, being out of office. The following is a brief extract referring to the particularly telling remarks of the latter.

We spoke for several hours. The message he delivered was clear: the world is heading for an oil shortage. His warning is quite different from the calming speeches that Naimi and other Saudis, along with senior American officials, deliver on an almost daily basis. Husseini explained that the need to produce more oil is coming from two directions. Most obviously, demand is rising; in recent years, global demand has increased by two million barrels a day. (Current daily consumption, remember, is about 84 million barrels a day.) Less obviously, oil producers deplete their reserves every time they pump out a barrel of oil. This means that merely to maintain their reserve base, they have to replace the oil they extract from declining fields. It's the geological equivalent of running to stay in place. Husseini acknowledged that new fields are coming online, like offshore West Africa and the Caspian basin, but he said that their output isn't big enough to offset this growing need.

"You look at the globe and ask, 'Where are the big increments?' and there's hardly anything but Saudi Arabia," he said. "The kingdom and Ghawar field are not the problem. That misses the whole point. The problem is that you go from 79 million barrels a day in 2002 to 82.5 in 2003 to 84.5 in 2004. You're leaping by two million to three million a year, and if you have to cover declines, that's another four to five million." In other words, if demand and depletion patterns continue, every year the world will need to open enough fields or wells to pump an additional six to eight million barrels a day -- at least two million new barrels a day to meet the rising demand and at least four million to compensate for the declining production of existing fields. "That's like a whole new Saudi Arabia every couple of years," Husseini said. "It can't be done indefinitely. It's not sustainable."

Husseini speaks patiently, like a teacher who hopes someone is listening. He is in the enviable position of knowing what he talks about while having the freedom to speak openly about it. He worries

that the rising global demand for oil will lead to the petroleum equivalent of running an engine at ever-increasing speeds without stopping to cool it down or change the oil. Hussein does not want to see the fragile and irreplaceable reservoirs of the Middle East become damaged through wanton overproduction. "If you are ramping up production so fast and jump from high to higher to highest, and you're not having enough time to do what needs to be done, to understand what needs to be done, then you can damage reservoirs," he said. "Systematic development is not just a matter of money. It's a matter of reservoir dynamics, understanding what's there, analyzing and understanding information. That's where people come in, experience comes in. These are not universally available resources."

### ***605. Light Oil may have passed its peak***

The OPEC Market Report for August presents some curious statistics comparing the gravity of oil production for 2000 and 2004 between OPEC and NON-OPEC. It recognizes three classes: Light, Medium (26-35° API) and Heavy (the cutoff for Heavy Oil at 26° API is high compared with ASPO at 17.5°, Venezuela at 22° and Canada at 25°). According to the numbers and percentages reported, world production of Light oil (>36°API) has fallen from 27.1 to 23.8 Mb/d between 2000 and 2004, suggesting that it has passed its peak. But the credibility of the estimates is put into doubt when, by summing OPEC and NON-OPEC, we find World totals of 93.8 and 99 Mb/d for 2000 and 2004 respectively, compared with for example the 74.95 and 80.26 Mb/d reported in the BP Statistical Review.

It just underlines how grossly unreliable oil statistics are. Apparently, some databases rely on no more than ships' agents with binoculars counting the tankers going by and noting how low they are in the water.

*(Reference furnished by Hans Jud*

### ***606. National Academy of Sciences Meeting***

The National Academy of Sciences is having a meeting on October 20-21<sup>st</sup> in Washington to address oil supply and demand. The USGS and IEA will be represented, no doubt presenting their well-known views, while Aleklett and Simmons provide the evidence for an imminent peak in production. Hirsch will advocate planning for decline while several oil companies will cover the production on non-conventional oils.

It is common for the organizers of conferences and the media to give equal weight to opposing views, allowing the audience to dismiss the issue on the grounds that no action is called for if the experts cannot agree. But the debate may open the doors for more research funding.

### ***607. The Mayor of Denver takes Peak Oil seriously***

On November 10-11, 2005, the City of Denver will be co-hosting a high-level conference with ASPO-USA to discuss the global challenge of, and intelligent local responses to, a potential peak in world oil production.

An extract from the Mayor's invitation follows:

As described in the New York Times Sunday magazine cover story on August 21, many credible geologists, scientists and analysts project that worldwide oil production will peak and subsequently decline sometime during the next 10 to 15 years. Thereafter oil would be available, but in declining amounts.

As you may know, I started my career as a petroleum geologist. In my much more recent role as Mayor of Denver, I have spoken with a number of national experts based in Denver, including Tom Petrie of Petrie Parkman and Peter Dea of Western Gas Resources, about this projection and have concluded that it warrants more in-depth understanding and consideration in terms of possible impacts on the city's economic health and future. An authoritative report funded by the U.S. Department of Energy speaks of significant economic risk tied to a possible peaking of world oil production. Given the potentially powerful financial impact on the Denver area, we will need proactive responses and we'll need them soon.

My job is to balance our budget today and to chart a future direction that preserves positive choices for tomorrow's leaders and residents. Many of the policy decisions we make today will not only affect the City's fuel tab, but the fuel consumption of our local businesses and residents as well. All municipalities will be affected by Peak Oil.

I am co-hosting the Denver World Oil Forum because I believe that deliberation and action now will not only smooth the path ahead but also create compelling new choices and opportunities for Denver. I invite you as a leader in this community to join with me. Please mark your calendar to attend.

If you have any questions, please do not hesitate to contact either the director of my Sustainable

Development Initiative, Beth Conover, at 720 865 5429 or ASPO-USA's conference co-chair Steve Andrews at 303-759-1998 or sbandrews@att.net. More details can be found at [www.aspo-usa.org](http://www.aspo-usa.org).

### ***Calendar - Forthcoming Conferences and Meetings***

ASPO members and associates [shown in parenthesis] will be addressing the subject of Peak Oil at the following conferences and meetings. Information on future events for inclusion is welcomed.

September 23-25	2nd U.S. Conference on Peak Oil and Community Solutions, <b>Yellow Springs</b> , Ohio
September 26-30	Green Power Markets; The Reform Group, <b>Salzburg</b> , Austria [Alekklett]
October 10-12	Peak Oil II, Alexander Oil & Gas, <b>Koblenz</b> , Germany [Campbell]
October 11	Peak Oil, Food and the Environment, <b>London</b> ( <a href="http://www.eafl.org.uk">www.eafl.org.uk</a> )
October 20-21	Peak Oil, US National Academies, <b>Washington</b> [Alekklett]
October 27-28	Baltic Sustainable Development. <b>Kaliningrad</b> , Russia [Alekklett]
October 28-30	Pio Manzu Energy Conference, <b>Rimini, Italy</b> [Campbell, Zagar]
November 5-6	Energy Futures, <b>Lausanne</b> , Switzerland [Alekklett]
November 8-10	Clean Vehicles & Fuels, <b>Stockholm</b> , Sweden [Alekklett]
November 10-11	Peak Oil Conference, <b>Denver USA</b> (ASPO-USA) [Gilbert]
November 14-16	Safety & Security of Energy Infrastructures, EU Commission, <b>Brussels</b> [Alekklett]
November 28-30	Solar Energy conference, <b>Dunedin</b> , New Zealand [Alekklett]
December 14	Ireland in the Second Half of the Age of Oil, ICA, <b>Schull</b> , Ireland [Campbell]
<b>2006</b>	
April 12-13	Ireland's Response to Peak Oil, <b>Dublin</b> [Campbell, Skrebowski]

### **Country Assessments (by newsletter number)**

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#### **Note**

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