

**THE ASSOCIATION FOR THE STUDY OF PEAK
OIL
&
THE OIL DEPLETION ANALYSIS CENTRE
ASPO-ODAC**

NEWSLETTER No 17 – MAY 2002

ASPO is a network of European institutions and universities with an interest in determining the date and impact of the peak and decline of world's production of oil and gas, due to resource constraints.

It presently has members in: Austria, Finland, Germany, Ireland, Norway, Portugal, Sweden and the United Kingdom

ODAC is a charitable trust in London that is dedicated to raising awareness of peak oil and the serious consequences.

Mission:

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

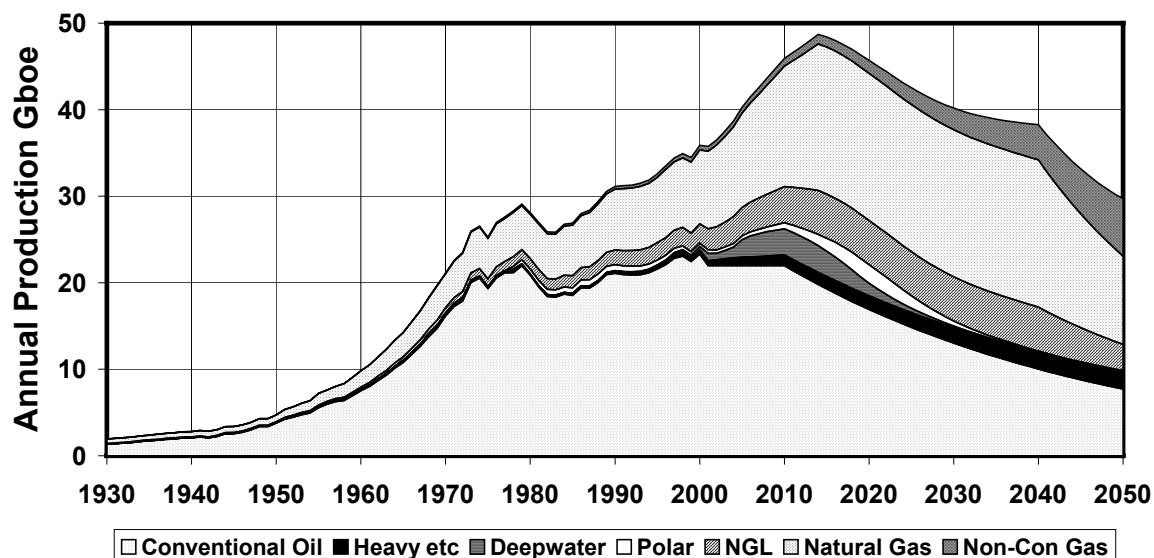
Newsletters on Website

This newsletter and past issues can be seen on the LBSystemstechnik website <http://www.energiekrise.de>
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ALL HYDROCARBONS 2002 Base Case Scenario



The General Picture

This Newsletter aims to describe the depletion of oil, as based on resource constraints, but recognising also the technical, economic and the political aspects of the subject. The above plot shows our present best estimate of the depletion of all hydrocarbons. Perhaps it is as well to treat it as the frontispiece of all future Newsletters, so as to remind ourselves that our primary mission is to refine it as well as we can. While all the boundaries are admittedly fuzzy, the general picture seems clear enough.

51. Circulation of the Newsletter

This Newsletter was initially distributed only to the members of ASPO. Recipients started copying it onwards for their own circles of interest, and as knowledge of it spread, more and more people wanted to be put on the mailing list, which now numbers 115. The Newsletter also appears on the www.energiekrise.de and the www.oilcrisis.com websites, where back-issues are archived. The readership may now be quite large.

A small storm in a tea-cup recently arose when recipients started sending comments and contributions to the full mailing-list. Some members welcomed the discussion whereas others did not wish to find their e-mails clogged. To accommodate both positions, we plan to establish two lists. The first will be sent out as a blind copy. A second open list can be sent to those who have no objection to their e-mail addresses being revealed so that they may comment and communicate as they wish. Any reader wishing to be placed on the open list should so inform, but otherwise are asked to refrain from communicating directly to the full list

Otherwise permission to copy and distribute the Newsletter is not only expressly granted but is welcomed and encouraged.

52. ASPO Workshop in Uppsala

The ASPO workshop on May 22-25th in the ancient town of Uppsala proved to be a great success, thanks to the hospitality of the university and the fine organisation of Professor Aleklett and his secretary. Approximately 60 delegates attended from Australia, Byelorussia, Denmark, Finland, France, Germany, Iran, Ireland, Norway, Portugal, Russia, Sweden,

United Kingdom and the United States. Two days of meetings covered the resource base, the date of oil peak, the economic, geopolitical and environmental implications and the scope for substitution by gas, renewable and nuclear energy. Keynote speakers from the United States, Russia and Iran addressed the evolving energy situation and challenges in their countries and regions. Abstracts and details may be seen on www.isv.uu.se/iwood2002

On the final day, a meeting was held to plan ASPO's future policy. An ad hoc steering committee was appointed to implement a programme, which includes the expansion of membership, the establishment of Associate Membership, funding, the production of information packs and educational presentations, the development of a common database and depletion model, and preparations for the next annual meeting. It was decided to continue the present newsletter in broadly the same style.

The meeting attracted wide media interest. It appeared as a lead news item on Swedish television, and was covered by Associated Press with an article that was widely syndicated around the world's press (see www.oilnews.com for references).

53 Membership

The Lappeenranta University of Technology of Finland, represented by Professor Pertti Sarkomaa, becomes the latest member to join ASPO. With members now in Austria, Finland, Germany, Ireland, Norway, Portugal, Sweden, and the United Kingdom, the organisation is gaining stature in Europe, and there are further expressions of interest from other countries not yet represented.

Meanwhile Dr Roger Bentley returns to represent ASPO at Reading University, having completed his contract with ODAC.

54. Energy Mirror

Referring to Item 39 in the last issue, Paul Metz points out that the growth of renewable energy production is likely to continue

Thank you for another interesting issue. Some articles are not well spent on me :-), but I would comment the graph presented by Laherrere on 150 years primary energy sources (page 2). This is an interesting one, however, the remark on "mirroring for the next 150 years ?" would fit much better with statistics for fossil sources only. The reader will certainly understand that for renewable sources no such depletion mechanism is in place and therefore no stabilisation or decline - but strong growth - for that part needs to be expected, but and let us be happy with the promotion of renewables, even without them telling exactly why.... the security of supply. Such a graph will be more convincing for our critics - and for ourselves !

Indeed, renewables will undoubtedly grow, but energy savings, along with declining population and reduced economic activity consequent upon the depletion of oil, means that overall energy demand may decline, mirroring the past growth.

55. Nemesis Report

Another anonymous contribution is revealing

I think Shell's buying of Enterprise is the writing on the wall for the future of the mature basins. The large companies just can't be bothered any more with developing their own fields. They find it better to buy reserves and get some quick production growth. Enterprise's Italian fields *Tempa Rossa* and *Val d'Agri* are well underway now, so that should give useful production in Italy. Otherwise, I think these independent companies are either pathetic, or strategically brilliant.

I came up with the following general conclusion. Much of the refining capacity in the world is old and up for investment. Oil is peaking. Fuel cell cars are being developed. The gas station network needs overhaul. So we are talking massive investments in an ailing business if it is oil based. Growth will come from gas and other fuels. If the companies make the switch now, then before the pain starts to bite real hard, a system can be in place for hydrogen, which provides massive growth opportunities, economies of scale for the producers of fuel cells, and last but not least, the possibilities of putting out as much garbage about the future as they

please for the investment community, as nobody knows any detail anyway. So the share-prices should rise. In short, the days of oil are numbered as big oil walks away from it.-- and they walk away from it because the easy bit of it is peaking. I realise this is a very optimistic scenario and gives credit to man's ability to be both rational and long term. Yet, both ExxonMobil and Shell have been around for a while, so I guess they will take the long view, without saying so.

56 The not so Hidden Agenda

The Newsletter has speculated about a hidden oil agenda in the “war on terror” which seems to dominate US foreign policy. It is not alone in doing so. A new book by Michael Klare, professor of Peace and World Security Studies at Hampshire College, Amherst, Mass., entitled *Resource Wars: The new Landscape of Global Conflict*. (see Bush’s Master Oil Plan www.AlterNet.org of April 29 2002), explicitly documents statements from the administration that the US will use its military power to access oil as the need arises, on the grounds that its vital interests are threatened. This is confirmed by the analysis by a former CIA official, reproduced below.

It would be a sad irony if the grand military strategy turns out to have been built on weak premises, thanks the unseen iron grip of depletion. It would be doubly sad if millions of innocent lives are to be sacrificed for an illusive pot of black gold that fails to materialise. What lies in the reservoir may not be evident to those whose expertise is limited to the parade ground. The need to evaluate and explain the resource base in Nature assumes an ever-greater urgency.

Oil and The Middle East: Why U.S. Foreign Policy Has To Change By Bill Christison

(Background :Back in March CounterPunch published Christison's devastating critique of the strategies and conduct of the US war of terrorism. (See our archive by scrolling down to "Search CounterPunch.) These new remarks, which he has made available to CounterPunch were delivered to various peace groups in Santa Fe, New Mexico in early April. Bill Christison joined the CIA in 1950, and served on the analysis side of the Agency for 28 years. From the early 1970s, he served as National Intelligence Officer (principal adviser to the Director of Central Intelligence on certain areas) for, at various times, Southeast Asia, South Asia and Africa. Before he retired in 1979 he was Director of the CIA's Office of Regional and Political Analysis, a 250-person unit. His wife Kathy also worked in the CIA, retiring in 1979. Since then she has been mainly preoccupied by the issue of Palestine.)

U.S.Oil Policy as a Juggernaut in U.S. Foreign Policy.

That's a great title. When you hear the word "juggernaut," what you think of--at least what I think of--is a monster machine of some sort, maybe the heaviest heavy tank you can imagine, rumbling down a city street, unstoppable, crushing everything in its way, and even destroying the paving of the street as it goes. Well, that comes pretty close to describing what I believe about the long-term effects of our oil, and other, foreign policies in the Middle East. But if we look ahead, rather than at the past or the present, my hope is that, by changing some of our own foreign policies, U.S. oil policy will in the future no longer be a destructive juggernaut.

It's worth spending a minute to talk about why oil is so important to the United States. The world's total use of energy from all sources--from petroleum, natural gas, coal, wood, hydropower, nuclear, geothermal, solar, and wind power--has increased in recent years roughly as the global population has also increased. Petroleum contributes the greatest single amount--about two-fifths of the world's total energy output, and natural gas (which is in some ways related to oil) more than another one-fifth. The United States alone uses about one-quarter of the world's total energy output, but has less than five percent of the world's population. The U.S. itself does not produce anywhere near the amount of energy that it consumes. According to statistics of the U.S. Department of Energy, the United States used in the year 2000 almost 100 quadrillion Btu's--or British Thermal Units--of energy. But of those 100 quadrillion Btu's, the U.S. had to import close to 30 percent. The United States is, hands down, the most profligate user of energy, by far, on this whole globe. With respect to oil alone, the U.S. imported in the year 2000 almost two-thirds of the oil that it used. The importance of Saudi Arabia as a supplier of the U.S., needs to be emphasized, but not just because the Saudis hold the largest known but still untapped

oil reserves in the world. What is even more important to the U.S. at the moment is that Saudi Arabia has the largest installed but unused rapid production capacity--that is, oil wells, pumping equipment and so forth already there but not used to meet current, or "normal," production needs. In any emergency that cut off oil supplies from anywhere else in the world, Saudi Arabia would be one of very few, and maybe the only, nation that could easily and quickly increase its oil production without a waiting period measured in months rather than a few days. This obviously adds to what any general or admiral would call the strategic value of Saudi Arabia to the United States. There is another characteristic of the global oil industry that we should all understand. It is an industry dominated by a half-dozen extremely large, global corporations--including ExxonMobil (these two firms merged in 1999), British Petroleum, Shell, Texaco, Gulf and Socal. Fifty to 75 years ago these companies might have been swashbuckling, unregulated corporations seeking to maximize profits and avoid the controls of any governments by all means fair or foul. Today, however, these companies by no means have the same personalities that they had years ago. In the Middle East, at least, the governments of the area have nationalized practically all oil production, and the companies or their subsidiaries have gradually worked out mutually supportive relationships with the local governments, under which the companies continue to manage most of the oil production and global oil trade, while the governments, and OPEC, make the basic decisions on how much oil to produce. The companies continue to make large profits, which keep them happy enough.

In their relations with the U.S. and other advanced nations, the companies no longer shun government regulation, because most of the regulations imposed on them are supportive of, and increase the profits of, the companies themselves. The regulations fall more into the area of corporate welfare than into the area of inducing the corporations to become better citizens. In the U.S., the ties of the oil companies with both of the major political parties are close and mutually profitable. Up to a few months ago, these same comments would have applied to Enron, which was clearly one of the world's largest energy companies, even though it was not one of the largest global oil companies.

I started out by comparing the long-term effects of U.S. oil policies to a juggernaut. To show you why, I want to go back almost 60 years, to February 1945. In that month, President Franklin D. Roosevelt, while returning from the Yalta Conference, met with King Ibn Saud of Saudi Arabia on a U.S. warship in the middle of the Suez Canal. Two months later, Roosevelt was dead, but this meeting was probably one of his most important acts as a world leader. The actual records of the conversations between these two men have never been released by either of their governments, but it is quite clear that an agreement was reached under which the United States guaranteed for the indefinite future the security and stability of the Saudi monarchy. In return, the Saudi King guaranteed U.S. access to, and joint development of, the massive Saudi oil reserves, also for the indefinite future. These mutual guarantees were later, implicitly at least, extended to apply to the other, and smaller, Gulf state monarchies, from the Arab Emirates to Bahrain and Kuwait. All of these guarantees were reinforced by the U.S. war against Iraq in 1990-1991, and these guarantees still today form the basis of U.S. oil policies in the Middle East. So for close to 60 years now, the U.S. has continued to prop up and support these authoritarian governments. I'd like to give you an example of how this has worked in the case of Saudi Arabia. This is from an article that appeared in *The Nation* magazine last November, written by a British expert on world security affairs. Here are a few lines from this article.

"To protect the Saudi regime against its external enemies, the United States has steadily expanded its military presence in the region. To protect the royal family against its internal enemies, US personnel have become deeply involved in the regime's internal security apparatus. At the same time, the vast and highly conspicuous accumulation of wealth by the royal family has alienated it from the larger Saudi population and led to charges of systemic corruption. In response, the regime has outlawed all forms of political debate in the kingdom (there is no parliament, no free speech, no political party, no right of assembly) and used its US-trained security forces to quash overt expressions of dissent. All these effects have generated covert opposition to the regime and occasional acts of violence"

The United States pursued policies like these not only in Saudi Arabia and the smaller Gulf States, but elsewhere in the Middle East as well. When the U.S. overthrew Mossadegh in Iran in 1953, and reinstalled the Shah in power, Washington began carrying out precisely the same policies in Iran as it employed in Saudi Arabia. The Shah's secret police, known as SAVAK, and the Iranian military forces both grew markedly stronger. For 26 years, the Shah's repressive regime succeeded in smothering internal dissent. In 1979, however, major internal dissent did erupt, supported by radical Islamic clerics who wanted all U.S. influence out of their land. The Shah was quickly overthrown. U.S. experiences in Iran since that date should have suggested to people in Washington that just perhaps the strong U.S. support for repressive regimes in the Middle East was not the ideal long-term policy for us to pursue. No reexamination of U.S. foreign policy ever got started, however, because the United States was

immediately consumed by the horrible insult Iranians imposed on us when they held over 50 Americans from the U.S. Embassy hostage for more than a year.

Then, in the 1980s, the U.S. spent the decade quietly cozying up to Saddam Hussein, the dictatorial ruler of Iraq, which was and is another big oil producer of the Middle East. Since Iran was now a U.S. enemy, the U.S. supported Iraq in its war against Iran. The U.S. did not criticize Saddam Hussein even when he employed chemical warfare to gas sizable numbers of Kurdish people in his own country. The United States only abandoned him in 1990, when he crossed the U.S. over Kuwait. Even here, the diplomatic signals Saddam received from the U.S. until shortly before he invaded Kuwait were very unclear. Once again, when the break finally came, the U.S. administration gave no thought to reappraising its own policies throughout the region. A decision was made in favor of going to war to end this threat to U.S. hegemony and U.S. access to oil, and that was that.

Now, in the year 2002, this almost-60-year-old Middle East oil policy of the United States is showing signs of even more fraying at the edges. Beyond any question in my opinion, one of the root causes behind the terrorism of September 11 was this very U.S. policy of supporting for the past half-century and more these authoritarian and often corrupt Arab and Muslim governments. There exists a high degree of anger among many Muslims with their own governments, which have for so long been supported by the U.S. Osama bin Laden is a good example of this particular root cause behind the September 11 terrorism. His wrath was directed as much against the Saudi government, for example, as it was against the United States. His opposition to what used to be his own government was probably the main reason why he had the support of a majority of the young men under 25 in Saudi Arabia. He received similar support from many young men in other Arab and Muslim states as well. Right now these groups of angry young men obviously no longer have a viable leader in Osama bin Laden, but other extremist leaders are almost sure to arise. In addition, the next generation of leaders in at least some of these states may well emerge from among these young men. If any of them do come into power, their future governments will likely be more anti-American than the present governments, which Washington likes to call "moderate," but which are really nothing of the sort. If we have not reduced our energy dependence on oil in the meantime, we may face serious trouble.

The U.S. should therefore adopt quite draconian measures immediately to reduce its overall energy usage, including its dependence on Mideast oil. It is unlikely, for the near future at least, that the U.S. will solve a future energy crunch through alternative power sources or by "clean" coal, nuclear power, or Alaskan oil usage. The U.S. also should not count on oil supplies from Central Asia as a way to ignore the need for conservation.

The U.S. should also, over time and gradually, reduce its ties with the present governments in many Muslim states, and try to develop improved relations with opposition elements there, actively seeking out democratically inclined groups. Such steps will be necessary if there is to be any hope of reducing support for future Osama bin Ladens that arises from the anger of Arabs and Muslims with their own governments.

I want to turn now to another foreign policy problem that the U.S. faces in the Middle East, one that has become more tightly intertwined with U.S. oil policies since September 11. Ever since shortly after World War II, the U.S. has had not one but two fundamental foreign policies in the Middle East. The first policy, which I've already talked about, has been to support authoritarian and undemocratic governments in the oil nations in an effort to guarantee the long-term easy access to Middle East oil at "reasonable" prices. The other policy, equally important, has been to provide strong support to Israel and to guarantee the security of Israel as a Jewish state, also for the long term. Over the last fifty-plus years, there has been a fair amount of tension and conflict between these two policies. The United States under President Harry Truman was, as I'm sure you all know, instrumental in helping to establish the state of Israel in 1948. But even then, one of the reasons for the opposition to Truman's desires by many other U.S. officials, including the Secretary of State, General George Marshall, was that it might endanger the west's access to oil from the Arab nations.

As it has turned out, for most of the period since World War II, the U.S. has managed to keep its two basic policies in the Middle East pretty much apart from each other--in separate boxes so to speak--and to keep the tensions between them in check. The very existence of the Cold War, which provided the bogey-man of a common enemy, helped in this regard. The one obvious time when the U.S. proved unable to keep the tensions between its two policies under control was the OPEC oil embargo against the west in late 1973 and early 1974. The Arab-Israeli war of 1973, and specifically the U.S. response of resupplying Israel with large amounts of new military equipment, precipitated the embargo, and many of us here can remember the gas lines that resulted in this country. But the gas lines only lasted a few

months, and then we all went back to normal. But we should remember those months as a perfect example of the fact that there are indeed real conflicting interests involved in the two basic U.S. foreign policies in the Middle East.

Overall, though, because the United States has been able to hold these conflicting interests in check for most of the past half century, I think that Washington has allowed the tensions to grow, more or less ignored by U.S. policymakers, to a point where they are going to be exceedingly difficult to deal with in the future. Since September 11, a number of things have happened that make it more impossible than ever to separate the effects of the Israel-Palestine problem from the effects of the continuing U.S. support for most authoritarian governments of the oil nations in the area. In Saudi Arabia and most of the small Gulf States, the position of the monarchies has become more precarious, as these monarchies have been subjected to more criticism since September 11 from public opinion in the United States than has been the case for years. In normal circumstances, when these monarchies are confident that the U.S. guarantee of their security is strong and unbreakable, most of them will not worry too much about other issues that might further weaken their domestic position. The George W. Bush administration is undoubtedly reassuring them that the U.S. security guarantee is still in effect, but they cannot help but be worried about its permanence when they see public opinion in this country changing. This puts pressure on the monarchies to pay more attention to the opinion of their own Arab "street." And the opinion of this Arab "street" is today more intensely critical than ever of Israel's policies on Palestine and the continued occupation of the West Bank and Gaza.

The U.S. government, from September 11 right up to the present, has made it clearer than ever to the world at large that it will unilaterally decide what actions around the world constitute "terrorism," and what actions do not. Specifically, in the minds of Arabs and Muslims everywhere, the U.S. seems to have accepted all actions by Palestinians against Israelis, including acts against Israeli soldiers as well as those against innocent civilians, as being terrorism. At the same time, however, the U.S. appears to believe that no acts by Israelis against Palestinians constitute terrorism. Arabs see this as a double standard. When, also at the same time, Arabs see their own rulers expressing support for the "war on terrorism" as it is defined by the U.S., their antagonism toward their own rulers intensifies. And the rulers themselves, recognizing this antagonism, feel greater concern for their own positions. I'd like to express a note of caution here. I certainly do not know for sure whether any, or some, or all of the governments in Arab oil nations—the dictatorial governments whose stability and security the U.S. has guaranteed for almost 60 years—will collapse in the near future. Of course change can happen rapidly and without warning. The best minds in the U.S. government had no inkling that the Shah of Iran was going to be ousted a week before it happened in 1979. But even governments that seem to be falling apart can sometimes last for years, until some totally unforeseen shove comes along that pushes them over the edge.

What I am more sure of is that these Arab oil governments are now under greater pressure to change than they have been for years, because of developments since September 11. Therefore the U.S. should be actively encouraging—though never using military force to do so—a gradual movement toward greater political democracy in these nations. And in order to reduce the importance of one major factor leading to greater instability in the region, the U.S. should immediately begin to play a far more active role than it has recently in pressing for a solution to the Israel-Palestine problem based on two truly sovereign nations, with strong treaty guarantees from the United States of the future security of both of these nations.

57. Monthly Country Assessments

It is proposed to cover a particular country's depletion situation each month, starting for no particular reason with Syria. A standard format will be adopted as follows. ASPO members are invited to audit the findings. Comments and better information from any source will be greatly appreciated.

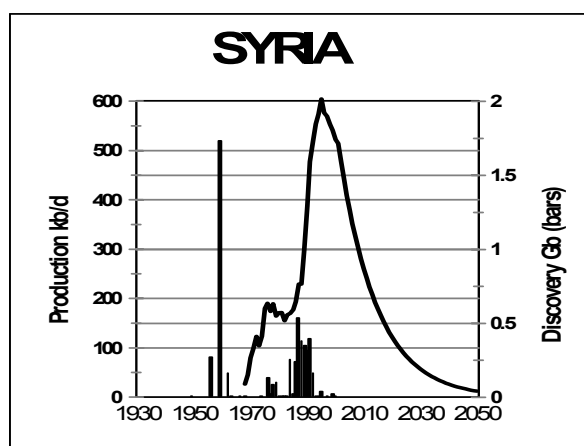
SYRIA

Syria, which covers an area of 186 000 km² and supports a population of 14 M, lies on the northern margin of the Arabian Peninsula bordering Turkey and Iraq. In geological terms, most of the country falls on a shallow platform where prospects are confined to possible Palaeozoic plays, likely to be, if anything, gas prone, but its northeast extremity extends into the prolific Mesozoic Middle East oil belt. The first significant oil find was made in 1940, to be followed, after the War, by several others, including Suwaidiyah in 1959, which is ranked as a giant field with an ultimate recovery of about 1.5 Gb. Shell has had a long-standing presence in the country, but exploration and production have been inhibited by an uncertain political climate. The geology is well known. As many as 270 wildcats have been drilled, suggesting that most of the large promising structures have been tested. Wildcat drilling peaked in 1992, falling to an average of no more than five a year over the past five years. On this basis, exploration is set

to end around 2020, with a total of about 380 wildcats. There remains some potential for the deep Palaeozoic play, sourced by the Silurian, but it is likely to be gas-, rather than oil-bearing. The country has no obvious *non-conventional* potential.

Production started in 1968, peaked in 1995 and is now declining at about 7% a year. Reported reserves of 2.5 Gb have been unchanged for nine years and are clearly unreliable. Important, currently closed, pipelines run through the country from Kirkuk in Iraq to the Mediterranean. They are likely to resume importance both for Syria and the West if and when the embargo is lifted or the country invaded, giving Syria the role of a transit country, which carries political implications for the region. No information on Syria's consumption has been located, but it is probably a net importer, mainly from Iraq. One may also imagine that Iraqi oil is smuggled out through Syria. The country will be ever more dependent on Iraqi oil in the future, as its own production declines.

SYRIA		
Rates Mb/d		
Consumption	2001	?
Production	2001	0.515
	Forecast 2010	0.261
	Forecast 2020	0.123
Discovery 5-year average (Gb)		0.006
Amounts Gb		
Past Production		3.60
Reported <i>Proved Reserves</i>		2.50
Estimated Future Production to 2060		
From Known Fields		2.01
From New Fields		0.39
Future Total		2.40
Total Production to 2060		6.00
Current Depletion Rate		7.3%
Depletion Midpoint Date		1998
Peak Discovery Date		1966
Peak Production Date		1995



58. Colombian Lecture

Professor Alvarez made a presentation entitled *La Política Petrolera Colombiana frente a la próxima Crisis Petrolera Mundial* on behalf of C.J.Campbell. It pointed out that Colombia's production had peaked, and that even with flat demand it would be a net importer within 20 years. It was suggested that the national interest would be served by strengthening the State Company, and conserving the resource for domestic usage. It was proposed that a new currency for oil transactions be introduced, based on the new economic principles of Slessor and King (see Newsletter 15).

59 Shell's implausible Scenarios

Shell has been asked some penetrating questions about its scenarios, as reported on www.gurasonline.tv. It evidently had difficulty in explaining the gross inconsistencies of the material it publishes, especially as it admits that discovery peaked in the 1960s, which says it all. Since insight into the future gives a huge competitive advantage, it is hard to understand why Shell would publish these scenarios if they made any real use of them in their own business. In all probability, they are nothing more than public relations exercises, aimed to confuse governments and others, while the company plans and implements its own strategies, based on more realistic forecasts.

The Newsletter very much welcomes contributions from members and other readers, who may wish to draw attention to items of interest or comment on the progress of their own research.