THE ASSOCIATION FOR THE STUDY OF PEAK OIL AND GAS

"ASPO"

NEWSLETTER No. 61 – JANUARY 2006

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, Egypt, France, Germany, Ireland, Italy, Netherlands, New Zealand, Portugal, South Africa, Spain, Sweden, United Kingdom 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.

Newsletter: The newsletter is currently compiled under the auspices of ASPO IRELAND, which maintains a full and searchable archive of past issues at www.peakoil.ie.

Foreign language editions are available as follows:

Spanish: www.crisisenergetica.org

French: www.oleocene.org (press "Newsletter")

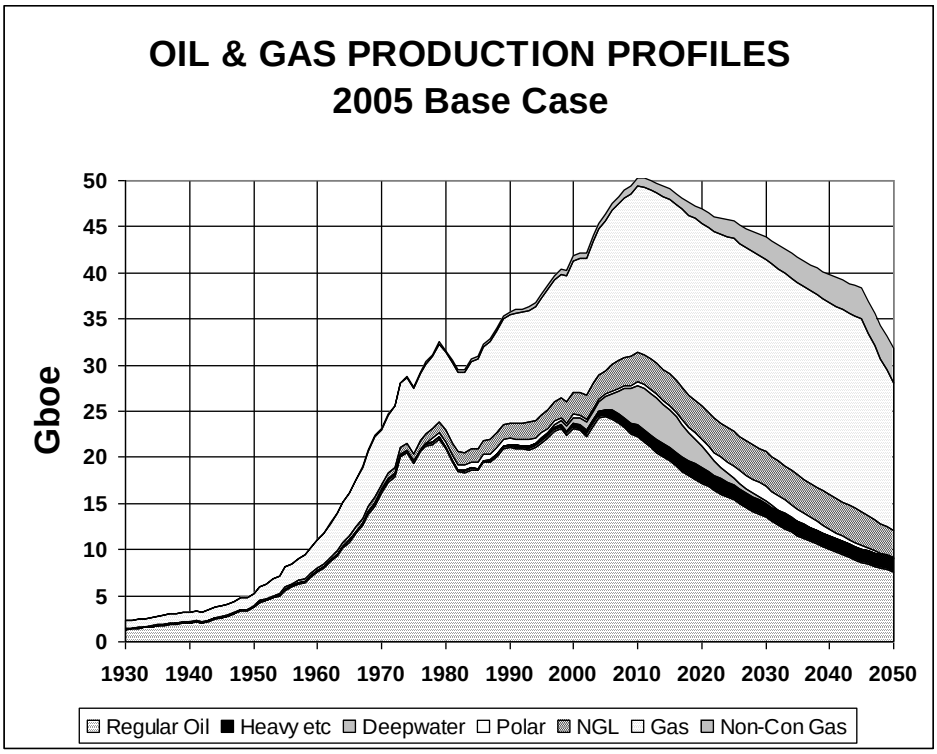
Newsletter communications should be addressed to ASPO IRELAND at www.peakoil.ie

CONTENTS

Index of Country Assessments with Newsletter Reference (revised underlined)

Abu Dhabi	42	Canada	48	Indonesia	61	Netherlands	57	S. Arabia	21
Algeria	41	Chad	59	Iran	32	Nigeria	27	Trinidad	37
Angola	36	China	40	Iraq	24	Norway	25	Turkey	46
Argentina	33	Colombia	19	Italy	43	Oman	39	UK	20
Australia	28	Denmark	47	Kazakhstan	49	Peru	45	USA	23
Azerbaijan	44	Ecuador	29	Kuwait	38	Qatar	58	Venezuela	22
Bolivia	56	Egypt	30	Libya	34	Romania	55	Vietnam	53
Brasil	26	Gabon	50	Malaysia	51	Russia	31		
Brunei	54	India	52	Mexico	35	Syria	60		

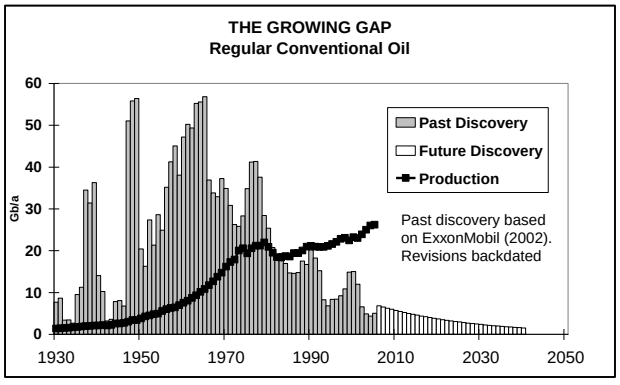
The General Depletion Picture

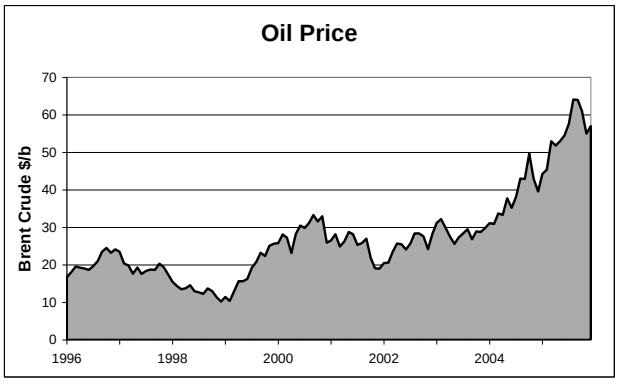


ESTIMATED PRODUCTION TO 2100				End 2005
Amount			**Gb**	
Regular Oil			
Past	**Future**		**Total**
Known Fields		New	
968	759	123	1850
	882		
All Liquids			
1074	1326		2400

2004 Base Scenario
M.East producing at capacity
(anomalous reporting corrected)
Regular Oil excludes oil from
coal, shale, bitumen, heavy,
deepwater, polar & gasfield NGL
Revised 25/12/2005

Annual Rate - Regular Oil						**Gb**	**Peak**
Mb/d	**2005**	**2010**	**2015**	**2020**	**2050**	**Total**	**Date**
US-48	3.6	2.8	2.2	1.7	0.4	200	1971
Europe	5.2	3.6	2.5	1.7	0.2	75	2000
Russia	9.2	8.4	6.8	5.5	1.5	220	1987
ME Gulf	20	20	20	20	11	680	1974
Other	29	26	22	18	7	675	2005
World	**67**	**61**	**54**	**47**	**21**	**1850**	2005
Annual Rate - Other							
Heavy etc.	2.3	3	4	4	4	151	2021
Deepwater	3.6	12	11	6	4	69	2011
Polar	0.9	1	1	2	0	52	2030
Gas Liquid	6.9	9	9	10	8	276	2035
Rounding					-2	2	
ALL	**80**	**86**	**80**	**70**	**35**	**2400**	2010





ASPO NEWS

Australia : ASPO-AUSTRALIA : see Item 652. Contact: Bruce.Robinson@csiro.au
France : ASPO-FRANCE see www.ASPOFrance.org.
Germany : moves are afoot under the initiative of Prof, Blendinger of Clausthal and Werner Zittel of Munich
Ireland: See www.peakoil.ie
Italy: ASPO-ITALY under Professor Bardi has announced the next ASPO International Workshop for July 2006 (See Item 655).
Netherlands: The Peak Oil Foundation Netherlands has issued a splendid report on depletion by Rembrandt Koppelaar – See www.peakoil.nl/images/ponlreport.pdf
United Kingdom: ODAC will henceforth represent ASPO in the UK under new management. Contact: Douglas Low at doug@douglow.wanadoo.co.uk
United States: ASPO-USA is already planning its next major conference to be held in Boston, following the highly successful Denver Conference. Contact SbAndrews@worldnet.att.net

NEW YEAR MESSAGE FROM PROFESSOR KJELL ALEKLETT

The Year 2005 was by all means a milestone for ASPO, with the workshop in Lisbon marking the peak of its activities. It attracted the attention of ten documentary film crews and many journalists, demonstrating growing attention to ASPO's message by the World's media. All credit goes to Professor Rui Rosa and his team for organising such a successful event.

No less than the International Energy Agency's new study, *Resources to Reserves*, states in the Foreword that the term *Peak Oil* has entered the general public's vocabulary. This is just one more sign confirming that ASPO's message is being heard around the world. Another indication is that the term *Peak Oil* has received over two million hits on the Internet, according to the Google Advanced Search engine, and the number is increasing at a rate of about 100,000 per month.

The Year 2005 was also the year when politicians began to address the issue. A panel of politicians took part in the Lisbon meeting, leading to other invitations. I personally was asked to address a subcommittee of the House of Representatives in Washington, as well as the Oil Commission of Sweden. The Prime Minister of Sweden is chairing the Commission which is formulating recommendations to make Sweden less dependent on oil. It is the first government to move on the *Peak Oil* issue: the Prime Minister giving full acknowledgment to the work of ASPO in Sweden.

At the Lisbon meeting, it was decided to encourage the formation of national committees to develop a worldwide ASPO Organisation, and the response has been very promising with one country after another taking up the challenge.

ASPO-ITALIA, under Professor Bardi, is organising the next international workshop to be held in July in Italy, giving an opportunity to meet and discuss the future work of the group.

With these words I would like to with you all A Happy New Year

653. The Scope for Renewable Energies under-stated

Mr Rudi Rechsteiner, a member of the Swiss Parliament, confirms that the World Energy Outlook 2005 by the IEA fails to give sufficient credit to the contribution that Renewable Energy can make, as already pointed out in Item 650 in the last Newsletter. His presentation can be seen on

Presentation http://www.rechsteiner-basel.ch/download.cfm?id=150
Speech only http://www.rechsteiner-basel.ch/download.cfm?id=151

654. New Film on Peak Oil

A major documentary on Peak Oil is being produced by the Swiss Company, Lava Productions, for early release see www.oilcrashmovie.com

655 The Fifth ASPO International Workshop on Oil Depletion

Professor Bardi of ASPO-ITALIA reports that he now has raised sufficient sponsorship to organise the next annual ASPO International Workshop, which will be held at San Rossore, in Italy on 12th and 13th July, 2006. It will follow in the tradition of the earlier annual conferences at Uppsala, Paris, Berlin and Lisbon, offering not only presentations on subjects related to Peak Oil and its impact, but a valuable meeting place for the exchange of views. San Rossore is not far from Pisa, the birthplace of Galileo, whose observations

showed that the Earth revolved around the Sun offending the flat-earth community of his day. It is accordingly a very appropriate location for observing Peak Oil.

656. Country Re-Assessment – Indonesia

Indonesia is an archipelago, stretching for about 3000 km from Asia to Australasia, and including the large islands of Java and Sumatra, as well as much of Borneo. It has a diverse ethnic population of some 220 million, which has doubled over the past Century. It is a predominantly Muslim country, but about 3% are Chinese, who have traded and settled in the area for centuries.

INDONESIA		*Regular Oil*
Population M		219
Rates Mb/d		
Consumption	2005	1.15
per capita b/a		1.9
Production	2005	0.95
	Forecast 2010	0.78
	Forecast 2020	0.54
Discovery 5-yr average Gb		0.07
Amounts Gb		
Past Production		20.9
Reported *Proved Reserves**		4.3
Future Production - total		9.1
From Known Fields		7.6
From New Fields		1.5
Past and Future Production		30
Current Depletion Rate		3.6%
Depletion Midpoint Date		1992
Peak Discovery Date		1945
Peak Production Date		1977

*Oil & Gas Journal

It has had a long history being settled by peoples from Malaya and Oceania, and was also influenced by Arab traders in the Middle Ages. From 1602 until 1798, most of the territory was controlled by the Dutch East India Company, before it passed into Dutch colonial rule. It was occupied in the Second World War by Japan, whose motive for going to war was partly to secure access to oil.

A move to independence followed under the leadership of Sukarno, being finally granted in 1949 under less than amicable terms. The western end of New Guinea, with its very different ethnic people, was added to the new republic in 1963, later being renamed Irian Jaya. The former Portuguese territory of East Timor, with its predominantly Catholic population, was annexed in 1976, but has recently successfully seceded.

Sukarno, who had Communist leanings, ruled in an authoritarian style until 1965 when he was ousted by General Suharto in a bloody conflict costing 500 000 lives. His rule was endorsed by popular elections in 1968, having adopted more Western-oriented policies, seeking overseas investment. Since his departure, the country has lurched from one political crisis to another under somewhat uncertain administrations.

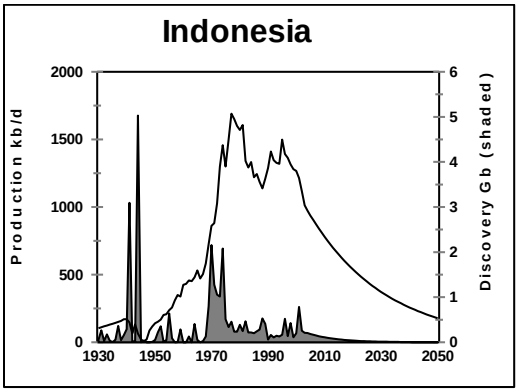
Indonesia has had a long oil history, being the birthplace of Royal Dutch/Shell, with its early fields in Borneo. Sumatra, however, has the largest fields, Duri and Minas, which were found in the 1940s but not developed until after the Second World War. Duri contains heavy oil (20^{o} API), being produced with low net energy yield by steam injection, putting it on the borderline of *Non-conventional*.

The country joined OPEC in 1962, and effectively nationalised the oil industry in 1965 with the creation of a state company, Pertamina. It, in turn, entered into production-sharing contracts with foreign companies, bringing about a successful and active co-operation.

In geological terms, much of the country is strongly deformed and volcanic, so that its petroleum prospects are confined to a few well-known Tertiary sedimentary basins in Sumatra, the Java Sea, S.E. Borneo and locally in Irian Jaya, as well as on an extensive continental shelf.

Exploration is at a mature stage having commenced in the 19th Century. Some 3500 wildcats have been drilled. Peak exploration drilling was in 1974 when 145 wildcats were drilled, and the number has now fallen to about 40 as fewer and fewer prospects remain to be tested. Even so, it is here estimated that about 1.5 Gb await discovery, coming mainly from ever smaller fields in the established producing areas. The country has some *Non-conventional* deepwater oil potential, as already confirmed by Unocal's work off Borneo, but generally the source-rock conditions for such are adverse. Whereas the prolific deepwater tracts of West Africa and the Gulf of Mexico are underlain rifts containing rich source-rocks, the possibilities in Indonesia are confined to the delta-fronts themselves that are likely to be lean and gas prone.

The production profile exhibits two cycles partly reflecting the typical OPEC saddle, due to quota restrictions, and partly the move offshore. Overall, production peaked in 1977, fifteen years before the midpoint of depletion in 1992, but a secondary lower peak was passed in 1995. Production stands at 945 kb/d having now commenced its terminal decline at a Depletion Rate of about 4 percent a year, meaning that it will be down to about 785 kb/d by 2010 and 540 kb/d by 2020. Consumption is running at 1.17 Mb/d making the country a net importer on a rising trend.



Approximately 165 Tcf of gas have been found, of which 125 Tcf have been produced, and there is good potential for new discovery, here estimated at about 50 Tcf. Production stands at 1.9 Tcf/a compared with consumption at 1.7 Tcf/a, the balance being exported in the form of Liquefied Natural Gas, with current production running at 80 kb/d. Approximately 670 Mb of LNG have been produced.

Indonesia has no good reason to remain in OPEC as it has no spare capacity to manage having become a net importer on a rising trend, and the government has already appointed a commission to address the issue.

It would not be surprising if the many islands of Indonesia progressively secede from the central administration during the Second Half of the Age of Oil as the people, some of differing ethnic backgrounds, find benefits in a new regionalism. But the moves may lead to various local conflicts.

657. Correction to Item 640

The first line of the second paragraph of Item 640 on Syria should read. *It is an ancient land that has been populated for some six thousand years.* (not million) (*Error pointed out by Gvosden Rovina)*

658. Investment in Kuwait

Having stated that the Burgan Field is now in decline (see Item 642), Kuwait now announces that it is to invest 44 billion dollars in its oil industry over the next 15 years. Significantly, much of it is to be spent on new refining and petrochemical capacity, which sounds credible. It also speaks plausibly of increasing production from four northern fields from 530 to 900 kb/d, but much less credence attaches to the hope of expanding overall production from 2.7 Mb/d to 4 Mb/d by 2020. It is well to apply caution to statements about capacity : some reports list the additions from new projects without properly subtracting the declines of existing facilities due to depletion. (see www.middle-east-online.com/id 15177)

By contrast, it has been reported that the Emir of Qatar is slowing the pace of expansion in his country, putting a dampener on some of the massive LNG plants that have been proposed. He speaks of a 100-year programme, evidently becoming aware of the need to conserve his assets in the face of depletion. (See Item 608) *(References furnished by Robert Hirsch and Mark Griffiths)*

659. Peak Oil in Washington

The following article from CNN reports on the recent Peak Oil hearings in Washington

Lawmakers: Will we run out of oil?

December 7, 2005: 6:00 PM EST By Katie Benner, CNN/Money staff writer

NEW YORK (CNN/Money.com) - The world's oil supply won't run out tomorrow, but lawmakers worry so much about the possibility that they're dealing with it today.

A House energy subcommittee met Wednesday morning to learn more about the so-called peak oil movement, which claims that by 2008 humans will have extracted half the earth's oil. In other words, we're using oil faster than we can ever hope to retrieve it.

"We have all been enjoying the greatest party the world has ever seen: the great oil party," said Kjell Aleklett, president of the Association for the Study of Peak Oil, or ASPO, and a physics professor at Uppsala University in Sweden. Aleklett appeared as a key witness at the hearing.

The professor said in a paper last year, "After the climax comes the decline, when we have to sober up and face the fact that the party is coming to an end."

The hangover would mean not only the end of low oil prices but also a slowdown in world economic growth. The morning after could also lead to social and political unrest as many countries try to keep the party going even as oil disappears.

While there is debate over when this peak will occur, said Rep. Wayne Gilchrest, R-Md., everyone can agree on one thing.

"At some point in this century, oil production will peak and then decline," Gilchrest testified. "But more uncertainty calls for more caution, not less. And in this case, caution means finding alternatives."

Witnesses, including Robert Hirsch, senior energy program advisor at Science Applications International Corp., and Robert Esser, a director and senior consultant at Cambridge Energy Research Associates, also testified before the Subcommittee on Energy and Air Quality in an attempt to quantify the true threat of peak oil.

Reason for concern

People have predicted the end of the oil age since the first oil well was drilled in the mid-19th century, but as oil production increased in the 1960s the theory was ridiculed.

But recent events -- especially light crude's recent jump to a record intraday high at $70.85 a barrel in the wake of Hurricane Katrina -- have brought ASPO's 24 geologists, physicists and former oil-sector employees into the spotlight.

U.S. government analysts also say that the amount of oil that can be pulled from the planet is finite. But they estimate that global oil production will likely peak in 2037, rather than in 2008.

"All or nearly all of the largest oil fields have already been discovered and are being produced. Production is, indeed, clearly past its peak in some of the most prolific basins," the federal Energy Information Administration said in a recent report on peak oil.

"Over the last 20 years, the size of oil discoveries has fallen off dramatically. We are finding more fields than in the '60s and '70s, but they're much smaller," said Michael Rodgers, ex-oil geologist who is now senior director of PFC Energy, a nonpartisan energy consulting firm. "We're producing three barrels of oil for every one barrel of oil that we find."

Technology to the rescue?

Many peak oil critics say it won't happen because technology will keep petroleum depletion at bay.

Anxieties about running out of oil "are not frivolous, given the stark realities evident in many areas of the world," Alan Greenspan said in a speech in Washington, D.C., last October.

But Greenspan ultimately rejected the specter of oil reaching its peak, saying that technology will prevail to ensure the necessary oil supplies as long as technology has a "more supportive environment" -- meaning more money and government support.

"The industry is not standing in place. It's not sitting idle," Fadel Gheit, an oil analyst with Oppenheimer, told CNN. "It is improving exploration, production, development and delivery of oil."

Despite political turmoil, "countries are always drilling and exploring for oil, because there is power in having oil," ASPO's Aleklett said in an interview with CNN/Money.

However, this takes us to the heart of a security issue, said PFC's Rodgers. "It is likely that OPEC can step in and meet demand if a peak in non-OPEC regions happens. But then we'll be even more dependent on parts of the world that aren't stable and reliable."

Beating the peak

Even if we don't run out of oil, the federal government admits it may become phenomenally expensive. "Will the world ever physically run out of crude oil? No, but only because it will eventually become very expensive in the absence of lower-cost alternatives," the EIA report said.

Echoing Rep. Gilchrest, analysts said the nation and its lawmakers must turn its focus to conservation. Several witnesses dismissed things like drilling in Alaska, saying such small stopgap measures won't put off the inevitable for long.

However, while politicians may agree that more drilling won't save us, analysts said they are loath to reflect the need for conservation in domestic energy policy because it could have serious ramifications for energy producers, utilities and even automakers.

660. Running short of Gas.

It seems that China is running short of gas as the following article explains. One can imagine that switching gas supply on and off might be dangerous, leading to the risk of explosions, some of which have been reported. Britain too announces a 40% increase in gas prices for next year, while the politicians bleat about the failure of the "open market". It is the depletion of gas in the rocks that is responsible, not the failure of a market. Ireland's situation becomes even more desperate being very much at the end of the line. As much as 45% of its electricity is generated from gas, relying on what Britain may be willing to re-export, having become a net importer on a steeply rising trend, as her North Sea fields decline from depletion.

BEIJING, Dec. 14 -- Gas supplies are being cut to households and catering outlets in some Chinese regions because of the huge leap in demand in winter.

More than seven cities in Central China's Henan Province have reduced the natural gas supply to urban dwellers because of a shortage, the Shanghai-based China Business News reported yesterday.

In the provincial capital of Zhengzhou, the supply can only meet two-thirds of the daily demand of its 600,000 users, it added.

The cities of Puyang, Anyang, Kaifeng, Hebi, Jiaozuo and Luohe in the energy-rich province are also suffering similar problems, the paper said.

It quoted Yan Guoqi, president of Zhengzhou Gas Co Ltd, as saying that the gas need in the provincial capital has jumped to 1.6 million cubic metres a day in winter tripling the consumption in summer.

He said his firm could only provide 1.1 million cubic metres each day.

Since the start of winter more than a month ago, some people in Zhengzhou a city with more than 2 million residents have not been able to cook meals on their gas cookers, said Guo Jun, a professor at the

Henan University of Finance and Economics told China Daily yesterday.

Guo said it was because of the failure of Zhengzhou Gas Co Ltd in predicting and meeting the real need of its users, and also the government's incompetence in dealing with emergencies.

"They just did not pay much attention to the lives of the people, and the government has not offered proper solutions," said a furious Guo.

He added that the gas company and the government have failed to respond to the growing demands of residents in Zhengzhou since 2001, when the 10th Five-Year Plan (2001-05) started.

Yan said he expected the city to face a shortage of 60 million cubic metres out of the total gas consumption of 300 million cubic metres during winter.

In accordance to relevant contracts, PetroChina Co Ltd plans to supply 154 million cubic metres of gas while the Zhongyuan Oilfield of China Petroleum & Chemical Corp promises to offer 94 million cubic metres to the city, he added.

According to Zhengzhou-based Dahe Daily, Song Jinhui, general manager of Zhengzhou Gas Co Ltd, said his company had been forced to buy in gas at a higher price from Zhengzhou Henran Co of the PetroChina Co Ltd and the Jincheng Coal Co in North China's Shanxi Province to ease the shortage.

In Puyang County, under the city of Puyang, where the Zhongyuan Oilfield is located, gas supplies have struggled to reach cookers in 13,000 households since December 5.

It means users cannot ignite their cookers, or supplies only last for about one hour at a time, the China Business News said.

An official from Zhongyuan Oilfield has promised to increase production to meet the increasing demand, the paper said.

Meanwhile, Chengdu, capital of Sichuan Province, and Chongqing Municipality, bordering Sichuan are facing gas shortages, local media reported. (Source: China Daily)

(Reference furnished by Julian Darley)

661. The questionable contribution of enhanced recovery

Preliminary estimates suggest that the long decline in new discovery continued into 2005 when about 7 Gb, were found, of which 2 Gb were in the deepwater last frontier. In other words, we found about one barrel of *Regular Conventional* oil for every five consumed. In the face of declining discovery, hopes are widely expressed for extracting more from known fields, but it will come as no surprise that many of the claims lack validity or credibility. It is hard enough to obtain valid reserve data, but information on oil-in-place, on which the recovery factor is based, is still more difficult. Technically it is more difficult to estimate, and it is rarely subject to official or financial reporting. The time factor is an important, but often ignored, issue. No one disputes the amazing technological achievements that have been made by the industry, but the main impact has been to hold production higher for longer without materially increasing the size of the field itself. Indeed, new techniques, such as horizontal drilled may actually reduce ultimate recovery, as Shell's experiences in the Oman and Gabon seem to confirm.

Jean Laherrère offers the following evaluation of the Statfjord Field, the largest in the North Sea. In geological terms, it has an easily mapped west flank, on which the early estimates of oil-in-place were based, but a structurally complex east flank that may hold a large amount of ill-defined oil-in-place. Indeed, it is possible that oil is still seeping out of the flanking source-rocks

Oil recovery growth and the Statfjord Oilfield

23 December 2005

Jean Laherrère.

In the December, 2004 issue of World Oil, Dr. Overvik, a Vice-President of Statoil wrote:

After 25 years of Statfjord production, this Norwegian Continental Shelf (NCS) field has exceeded all expectations. When it went onstream, we thought that just under half ***the 6 billion bbl of stock tank oil originally in place (STOOIP)*** *could be recovered, and that output would cease in the mid-1990s. However, we have recovered 63% of STOOIP, and Statfjord is still online.*

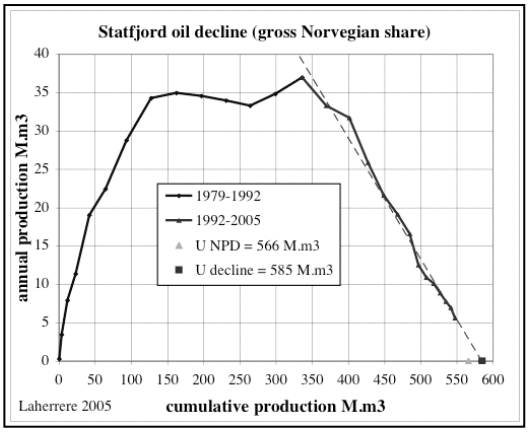
We are now planning the field's late-life phase. What recovery factor can be achieved remains uncertain, but we believe it is possible to produce 70% of STOOIP from these prolific Jurassic sands. In my view, the secret behind this field's results is a combination of knowledge and technology development.

A year later in December,2005, he added

Increasing recovery factors

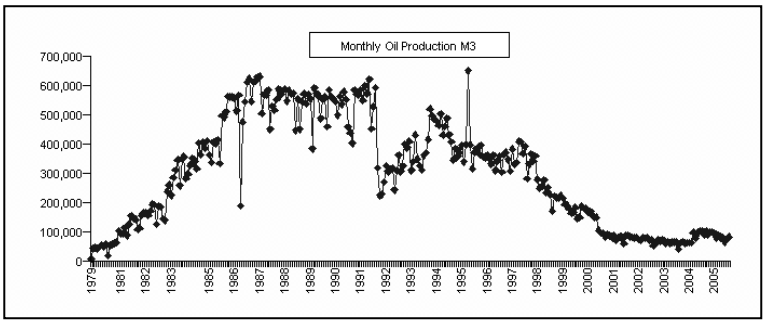
In an article for World Oil a year ago, I covered the results of success stories on Statfjord field over 25 years. When this massive field went onstream in 1979, we expected to recover about 48% of its ***8 billion bbls of stock tank oil originally in place****. After a quarter-century of production, we can see that 64% of these resources have been recovered. Our goal now is to raise that recovery factor to 70%.*

The Oil-in-Place reported in these World Oil articles has inexplicably changed from 6 Gb to 8 Gb over one year, while the claimed recovery factor has risen from 63% to 64%. There should accordingly be a substantial corresponding increase in the reserves. But the following data, given by the Norwegian Petroleum Directorate on its website, indicate that the estimated Ultimate Recovery of the field has increased from 556 M.m^3 (3.497 Gb) in 1997 to 566 (3.56 Gb) in 2004. One of the main industry databases reported oil-in-place at 6.3 Gb in 1998 with the estimated recovery factor declining from 70% in that year to 65% in 2004.



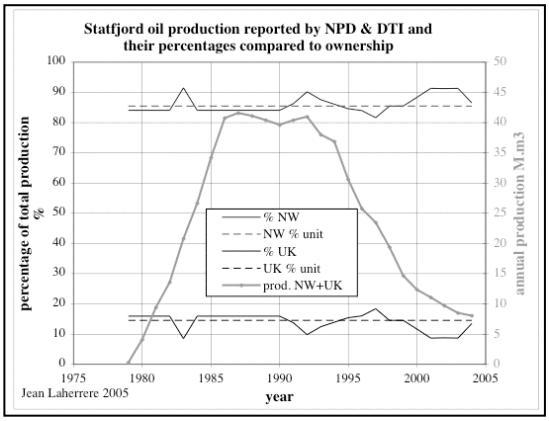
The field straddles the median line between Britain and Norway, meaning that there are two national datasets. The agreed split of ownership, based on oil-in-place, is: 85.47 % to Norway and 14.53 % to the United Kingdom.

One of the best ways to estimate reserves is to extrapolate annual production against cumulative production. We can compare the results from the two datasets on this basis. The Norway dataset shows an almost straight decline since 1994, which implies no recent improvement in recovery. Extrapolation suggests an Ultimate Recovery of 585 M.m^3, compared with the NPD value of 566 M.m^3. The straight-line decline indicates that the difference is due to conservative reporting rather than any operational factors.



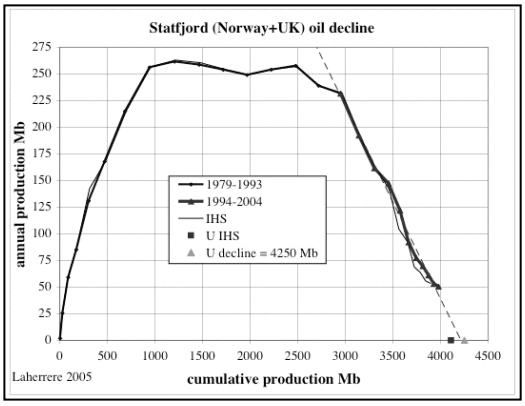
The UK Department of Trade & Industry provides the above graph, showing less of a straight line decline, and a small recent increase. Its estimate of original reserves of 81 Mt (98 M.m^3) is consistent with the decline.

But a comparison between NPD and DTI data gives an interesting result. It is evident that actual production has not exactly matched the agreed share under the unitization agreement. As of end 2004, Norway had produced 85.65 %, slightly above its agreed share of 85.47 %.



The combined production from the UK and Norwegian parts of the field can be extrapolated to indicate an Ultimate Recovery of 4.25 Gb. It compares with the current industry estimate of 4.1 Gb in 2005, which has in fact declined from 4.4 Gb. in 1998. On this basis, far from improving, the recovery has actually deteriorated.

We may therefore conclude that the statements published in World Oil in 2004 and 2005, claiming improved recovery on the Statfjord Field, are not confirmed by the production data. This conclusion seems to be confirmed by G. Morris in an article entitled *Norway study finds CO2 EOR too expensive, risky* in the Oil and Gas Journal Aug. 8, 2005, which states that water injection (combined with gas injection) works so well in the North Sea that very little movable oil is left behind, greatly reducing the scope for Enhanced Oil Recovery.



662. 2005 Update of the Depletion Model

A first pass at updating the oil and gas database and depletion model has been made, based in part on the 2005 production data published by the Oil & Gas Journal. The published Reserves data remain unreliable with as many as 66 countries reporting unchanged estimates, several for several years on end. Production eats into Reserves unless matched by new discovery or revision, so in the absence of information to the contrary it is reasonable to reduce reserves by the production of the unchanged periods As much as 59 Gb was produced in 2005 in such countries. Another cause of confusion is the definition of what is being reported: notably in Canada where the Oil & Gas Journal evidently

includes *Non-conventional* oil, reporting Reserves of 179 Gb, compared with the 4.7 Gb reported by World Oil.

The chart and table on Page 2 have been revised accordingly, but the model will no doubt evolve in the months ahead as more information and insight are gathered. Any input is welcomed.

663. Peak Oil Debate

The prominent Spanish language journal, Vanguardia Dossier, devotes an impressive Spring issue to *Peak Oil*. It includes articles by Michael Klare, Richard Heinberg,, Matt Simmons, Colin Campbell and Mariano Marzo, all of whom have participated in ASPO meetings. By contrast, Michael Economides and Peter Odell provide their views based on traditional economic thinking that the market reigns supreme: physical limits being seen as the fantasy of ecologists and anti-capitalists.

The issue of Peak attracts a mounting debate. Some see a collapse of the present economic and financial system; while others assume that solutions will be found. *The Economist* publishes an annual review of the year ahead. The editorial even goes so far as to comment : *The risks are many : a house-price bust; higher oil prices: a dollar collapse…."*. While on the following page comes the remarkably frank statement from the Chief Executive of Chevron, who almost admits to an imminent peak of oil with far reaching consequences. *Fortune Magazine* carries an article about a prominent investor who accepts the long decline of oil.

Meanwhile Professor Smil, writing in *World Watch* (Jan 2006) ridicules those who draw attention to the issue, dismissing it *ex-cathedra* on the grounds that some early estimates proved wrong (ignoring that knowledge has improved greatly since); that unspecified technological progress will resolve all; and that Mankind's well known adaptability, along with economic forces, will allow him to take all in his stride. It is a statement of faith, not supported by any assessment of the resource limits or depletion patterns that can be observed, at least by those with eyes to see. Nothing wrong with *faith* of course : perhaps we should spend more time on our knees praying for deliverance.

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 for inclusion in future newsletters is welcomed.

January 19	Ireland in the Second Half of the Age of Oil, Inst. Transport, **Dublin** [Campbell]
February 15	EU Advisory Group on Energy, **Brussels** [Gilbert]
March 10	City of Huntington Beach, California [Gilbert]
March 29	Business & Environment Seminar, **Cambridge**, England [Campbell]
April 2-4	Ireland's Response to Peak Oil, **Dublin [**Campbell],
April 20-24	Peak Oil, Limerick University, **Limerick**, Ireland [Campbell]
June 21-22	Global Commodity Markets, **Zurich** [Campbell]
July 12-13	ASPO-5 International Conference, **San Rossore**, Italy

Compiled by C.J.Campbell, Staball Hill, Ballydehob, Co. Cork, Ireland