PETROLEUM POSITIONS OF CHINA, INDIA, INDONESIA, MALAYSIA, AUSTRALIA
FAR EAST & OCEANIA REGION

L. F. Ivahnoff

FAR EAST AND OCEANIA

Total population of this huge region is 3.323 billion, with an increase of 427 million during the last decade. Most nations are less-developed-countries (LDCs). The region has only 4.2% of the world’s claimed oil reserves, with more than 50% of the world’s population. Total oil production in 2000 was 10.6% of global total. China’s oil consumption is now #3 in the world after the U.S. and Japan. Australia has only 19 million people and small oil consumption. Asia will soon be one of the world’s foremost oil importers.

Table 1: World Petroleum Supply and Disposition

This table is from the U.S. Department of Energy report: International Energy Annual – DOE/EIA-0219(98), Jan. 2000. This compilation combines data from several sources to present the oil Production/Consumption/Imports/Exports of each nation. The table is always a couple of years late due to the complexity of assembling the various data into one table. It allows direct comparison between the several factors for each of the nations of the table or other HC newsletters. The countries covered in this study are underlined.

Table 1 World Petroleum Supply and Disposition, 1998

<table>
<thead>
<tr>
<th>Region/Country</th>
<th>Oil Production 1</th>
<th>Crude Oil Imports</th>
<th>Total Imports of Refined Petroleum Products</th>
<th>Crude Oil Exports</th>
<th>Total Exports of Refined Petroleum Products</th>
<th>Apparent Consumption (including Bunkers) 3</th>
<th>Residual Fuel Oil</th>
<th>Distillate Fuel Oil and Other Products</th>
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<td>4,917</td>
<td>2,278</td>
<td>2,962</td>
<td>19,312</td>
<td>589</td>
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<td>75,124</td>
<td>37,761</td>
<td>15,599</td>
<td>38,831</td>
<td>15,966</td>
<td>73,642</td>
<td>2,278</td>
<td>1,381</td>
</tr>
</tbody>
</table>

1 Oil production includes crude oil, natural gas plant liquids, other liquids, and refinery processing gains.
2 Apparent consumption includes internal consumption, refinery fuel and loss, and bunkering. Also included, where available, are liquefied petroleum gases sold directly from natural gas processing plants for fuel or chemical uses.
3 (s)=Value less than 500 barrels per day.

Note: The underlined/graphed nations are the most important oil producers in the region. See Table #1 for other nations’ recent oil production/consumption.
GEOGRAPHY, HISTORY, POLITICS

Country: CHINA  Region: Far East  Figure No. 1 (scale=2K)
Independence: (1911) from Manchu Empire  Current political status: Communist People’s Republic
Major Social Turmoil: (1949) Civil War-Communists defeat non-communists to Taiwan

China is one of the world’s three largest countries (slightly larger than the US/48 + Alaska) and has the world’s largest population. China is one of the world’s oldest civilizations – since before 2000 BC. Written history begins 1766 BC with invasions from the west (Caspian Sea region), by the first “Shang Dynasty”. The Shang brought with them Western chariots and SW Asian plants (wheat, etc.). Common invaders from the NW were always gradually absorbed by the more numerous Chinese. Northern and Southern China were first united in 221 BC behind the Great Wall during the Chin Dynasty. In 1297 the Mongols gained control of China (Yuan Dynasty visited by Marco Polo). Mongols brought the bubonic plague (Black Death) back from Burma – the plague was soon spread to Europe via the “silk route”. The Mongols were expelled by the Ming Dynasty (1368-1644 AD), which was followed by the last Manchu/Qing Dynasty, which was displaced by a Republic in 1912. In 1931 Japanese seized Manchuria, which they held until end of World War II (1945). A bitter civil war followed (1945-1949) between the Communists and KMT (Chiang Kai-shek’s forces), who fled to Taiwan in 1949. China had no indigenous oil production until after the beginning of the Communist state.

PETROLEUM: CHINA is moderately “oily”:(with 2.3 % of world’s COR.)
First oil/gas discovery: Onshore (211BC)  Offshore: (1970)
National oil company formed: ( ); Name: CNOGEDE Oil Nationalized ( )
Joined OPEC: ( )  OAPEC: ( )
Exports: ( ) 1,595 MBD Imports: (2000) ( )
COReserves (2000) 24 BBO; CGR: 48 Tcf. Oil: R/P= 20 yrs; R/C=14 yrs
Hubbert production peak: ( )  Maximum effort peak: ( ) EUR: ___________ BBO
Non-conventional oil prod. ( )  “Other” oil prod. ( )

China became the world’s #3 oil consumer (after the U.S. & Japan) in 1997. Before 1968, China’s oil production and consumption were negligible for global considerations. China’s first significant modern oil discovery was the “Giant” Daqing oil complex in NE China’s (Manchuria) Sungliao basin in 1957. This field was drilled by China on a prospect outlined by Soviet technicians before they were called back to the USSR during one of the USSR/China communist tiffs. No other “Giant” oil fields have been found. China became self-sufficient in oil (due to the nation’s low consumption) in 1972 (when President Nixon visited China). The nation exported some oil from 1973 to 1992, but since then Chinese consumption has exceeded the nation’s production. Oil discoveries have been minor in the Chinese offshore seas and in the northwestern deserts of the Tarim basin. China is now looking for foreign sources of oil imports (Kazakhstan, etc.) to fill their skyrocketing needs.

References: (1) BP Statistical Review (annual); (2) DOE/EIA-0219 (annual); (3) CSM Hubbert Center Newsletter:
HCN# 98/3, July 1998, Petroleum Positions of Ex-USSR & China
Ref (1): Oil Production = crude oil + oil sands + natural gas liquids. BP = British Petroleum; O&GJ = Oil & Gas Journal; (year) = year; MBD = 1,000 Barrels/Day; Reserves = (end year) from BP/O&GJ; OPEC = Organization of Petroleum Exporting Countries; OAPEC = O-Arab-PeC; BBO = Billion Barrels Oil; Tcf = Trillion cubic feet gas; COR = Claimed Oil Reserves; CGR = Claimed Gas Reserves; EUR = Estimated Ultimate Recovery-BBO; e = estimated. R/P = COR/Production; R/C = COR/Consumption
GEOGRAPHY, HISTORY, POLITICS

Country: INDIA  Region: Far East  Figure No. 2 (scale=2K)

Population: (1998) 971 millions  Main Language/Religion: Hindi & English / Hindu
Independence: (1947) from Britain  Current political status: Parliamentary Republic
Major Social Turmoil: (1947-) 3 wars with Pakistan

India is a huge country (sub-continent) in SE Asia protruding into the Indian Ocean. It has the world’s second largest population after China, and is the world’s largest democracy. The northern border is bounded by the Himalayas – the highest mountains on earth. The isolated sub-continent was invaded by Indo-Aryans from Persia about 1500 BC, who pushed the original Dravidians into the southern tip of India. India has many races, religions, and customs. Buddhism was founded about 560 BC. Conquerors and invaders have been absorbed over the centuries. Great differences of wealth exist. The climate varies from temperate on the north to subtropical on the south. Monsoon winds bring heavy rains from June to September. The population has increased from about 400 MM in 1960 to 1,000 MM in 1999, (=3.7%/year av.). The British occupied India from 1774-1947. British India was split into India and Pakistan when they became independent in 1947. Since then the two countries have fought three wars. Both of them now have atomic bombs. Most Indians are members of a very strong religious caste system which sets their peoples’ economic/social status at birth.

PETROLEUM:  INDIA  is “oil poor” “oily”: (with 0.4 % of world’s COR.)

First oil/gas discovery: Onshore (1889)  Offshore: (1970)
National oil company formed: (1956); Name: ONGC  Oil Nationalized:
Joined OPEC: ( )  OAPEC: ( )

Exports: ( )  MBD  Imports: (2000) 1,285 MBD
COReserves (2000) 4.7 BBO; CGR: 23 Tcf.  Oil: R/P = 17 yrs; R/C = 6 yrs
Hubbert production peak: ( )  Maximum effort peak: ( )  EUR: BBO
Non-conventional oil prod. ( )  MBD; “Other” oil prod. ( )  MBD

Like most ex-Gondwanaland countries of the southern hemisphere, India includes large non-petroliferous “Indian Shield” basement rocks and basalt lava-covered areas (ghatts). India is petroleum-poor. Most of India’s oil production comes from offshore fields of the “Bombay High” near Bombay/Mumbai. Only minor fields of local significance have been found in northeastern India. India’s government has not been able to find large oil fields in spite of strong efforts to do so. India contracted with Soviet oil exploration advisors until the 1970s. Petroleum from the Middle East is India’s largest import. India now consumes 43% of China’s oil consumption.

References: (1) BP Statistical Review (annual); (2) DOE/EIA-0219 (annual); (3) CSM Hubbert Center Newsletter:
HCN#  

Ref (1): Oil Production = crude oil + oil sands + natural gas liquids. BP = British Petroleum; O&GJ = Oil & Gas Journal; ( ) = year; MBD = 1,000 Barrels/Day; Reserves = (end year) from BP/O&GJ; OPEC = Organization of Petroleum Exporting Countries; OAPEC = O-Arab-PEC. BBO = Billion Barrels Oil; Tcf = Trillion cubic feet gas; COR = Claimed Oil Reserves; CGR = Claimed Gas Reserves; EUR = Estimated Ultimate Recovery - BBO. e = estimated.

HC#2001/4-1-4
GEOGRAPHY, HISTORY, POLITICS

Country: INDONESIA  Region: Far East  Figure No. 3 (scale=2K)
Population: (1998) 204 millions  Main Language/Religion: Indonesian/Sunni Muslim
Independence: (1949) from Dutch  Current political status: Republic
Major Social Turmoil: (1965-) Riots - removed Sukarno; (1998) Riots - removed Suharto

Indonesia is the most populous Muslim nation. Indonesia is made up of more than 13,000 islands that lie along the equator, spread over an area about the size of the U.S. Indonesia has always been a trade center on SE Asian spice trade routes. The Portuguese captured Malacca in 1511, which was taken by the Dutch in 1641. By the late 1700s the Dutch East India Company controlled commerce on most of the islands. The region became known as the Dutch East Indies. Anti-Dutch groups rebelled against the Dutch between 1825 and 1942. Japanese forces took and held the islands during WW II from 1942-1945. Local rebellions resumed after WW II, and the Dutch were forced to grant independence to Indonesia in Dec. 1949. The first president was Sukarno (1945-1966) followed by Suharto (1968-1998). A major financial/economic crisis occurred in 1997-1998, when student riots brought down Suharto. The economic/political problems continue. After the 1985 oil price collapse, the economy was diversified to be less dependent on oil & gas prices. The population increased from 172MM in 1987 to 201MM in 1997 – an increase of 17% in ten years. Many local businesses are Chinese-owned.

PETROLEUM: INDONESIA is "gasy" & "oily":(with 0.5% of world's COR.)

First oil/gas discovery: Onshore (1885) Offshore (1968)
National oil company formed: (1958); Name: Pertamina Oil Nationalized (1960)
Joined OPEC: (1962) OAPEC: (-)
Oil Production: (2000) 1,430 MBD Oil Consumption:(2000) 1,065 MBD
Exports: (2000) 365 MBD Imports:( ) - MBD
COReserves(1999) 5 BBO; CGR: 72 Tcf. Oil:R/P= 10 yrs; R/C= 13 yrs
Hubbert production peak: (1991) Maximum effort peak: ( ) EUR: BBO
Non-conventional oil prod.( ) MBD; “Other” oil prod. ( ) MBD

Indonesia is an old oil producing country, with many major fields found before WW II. Indonesia has exported Liquid Natural Gas (LNG) to Japan since 1978. Indonesian oil consumption is increasing, with its population, faster than its oil production. It is possible that Indonesia may cease exporting and resign from OPEC within another decade. Oil and Natural Gas currently account for about 25% of Indonesia’s export earnings – down from more than 80% in the early 1980s.

References: (1) BP Statistical Review (annual); (2) DOE/EIA-0219 (annual); (3) CSM Hubbert Center Newsletter: 

HCN#  

Ref (1): Oil Production = crude oil + oil sands + natural gas liquids. BP = British Petroleum; O&GJ = Oil & Gas Journal; ( ) = year; MBD = 1,000 Barrels/Day; Reserves = (end year) from BP/O&GJ; OPEC = Organization of Petroleum Exporting Countries; OAPEC = O-Arab-PEC. BBO = Billion Barrels Oil; Tcf = Trillion cubic feet gas; COR = Claimed Oil Reserves; CGR = Claimed Gas Reserves; EUR = Estimated Ultimate Recovery-BBO. e = estimated. R/P = COR/Production; R/C=COR/Consumption
GEOGRAPHY, HISTORY, POLITICS

Country: MALAYSIA Region: Far East Figure No. 4 (scale=2K)
Population: (1999) 21 millions Main Language/Religion: Malay & English / Sunni Muslim
Independence: (1957) from British Current political status: Constitutional Monarchy
Major Social Turmoil: ( ) WW II Japan occupation

Malaysia includes the former British Malay Peninsula and the British northern Borneo states of Sarawak and Sabah (=Straits Settlements.)

Europeans arrived in what is now Malaysia during the 1500s. In 1511 the Portuguese seized the kingdom of Melaka. In 1641 the Dutch took over Melaka from the Portuguese. In the late 1700s the British arrived and in 1824 took over the Malay Peninsula. But total British control was not established until the early 1900s. The Japanese invaded and occupied the peninsula during WW II 1941-1945.
The Malaysia Peninsula has the world’s largest reserves of alluvial tin.

PETROLEUM:

MALAYSIA is “gasy” & “low” “oily”:(with 0.4 % of world’s COR.)
National oil company formed: (1974); Name: Petronas Oil Nationalized ( )
Joined OPEC: ( - ) OAPEC: ( - )
Oil Production: (2000) 805 MBD Oil Consumption:(2000) 445 MBD
Exports:(2000) 360 MBD Imports:(2000) - MBD
COReserves(2000) 4 BBO; CGR: 82 Tcf. Oil:R/P= 14 yrs;R/C= 25 yrs
Hubbert production peak: ( ) Maximum effort peak: ( ) EUR: _______ BBO
Non-conventional oil prod. ( ) MBD; “Other” oil prod. ( ) MBD

Most of Malaysia’s oil and gas fields were discovered in the 1970s offshore in the South China Sea and the Gulf of Thailand

References: (1) BP Statistical Review (annual); (2) DOE/EIA-0219 (annual); (3) CSM Hubbert Center Newsletter:
HCN# 2000/3, July 2000, Oil & Australia
Ref (1): Oil Production = crude oil + oil sands + natural gas liquids. BP = British Petroleum; O&GJ = Oil & Gas Journal; ( ) = year; MBD = 1,000 Barrels/Day; Reserves = (end year) from BP/O&GJ; OPEC = Organization of Petroleum Exporting Countries; OAPEC = O-Arab-PEC. BBO = Billion Barrels Oil; Tcf = Trillion cubic feet gas; COR = Claimed Oil Reserves; CGR = Claimed Gas Reserves; EUR = Estimated Ultimate Recovery-BBO. e = estimated. 
R/P = COR/Production; R/C=COR/Consumption

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### GEOGRAPHY, HISTORY, POLITICS

**Country:** AUSTRALIA  
**Region:** Oceania  
**Population:** (1998) 19 millions  
**Main Language/Religion:** English / Protestant Christian  
**Independence:** (1901) from British Colony  
**Current political status:** Constitutional Monarchy (British)  
**Major Social Turmoil:** (WW I (1914-18) & WW II (1939-45); Great Depression 1930s)

Australia is a great “island-continent”, about the size of the U.S./48. It is very thinly populated, most people living in six coastal cities. The Great Australian Desert covers the interior of the continent. Australia was discovered by Dutch seamen in the early 1600s. A great deal of the continent’s animal and plant life is unique, with very distinctive animals and plants found nowhere else.

In 1770 Captain Cook explored the fertile SE coast and claimed the region for Britain. After U.S. independence British courts shipped convicts to Australia from 1788 to 1868 to relieve overcrowding in English jails. The Australian gold rush (1851-1860) brought thousands of prospectors who stayed on after the gold rush fizzled out. In 1901 Britain approved the formation of the Commonwealth of Australia, keeping the British monarch as the head of state. The discoveries of offshore oil and gas during the 1960s and 1970s helped the national balance of payments.

### PETROLEUM

**First oil/gas discovery:** Onshore (1953)  
**National oil company formed:** (1965)  
**Offshore:** (1965)  
**Oil Nationalized:** ( )  
**Joined OPEC:** (1973)  
**Oil Production:** (2000) 815 MBD  
**Oil Consumption:** (1999) 870 MBD  
**Exports:** (1999) - MBD  
**Imports:** (1999) 55 MBD  
**COReserves (2000):** 2.9 BBO; **CGR:** 44.6 Tcf  
**Oil:R/P = 15 yrs; R/C = 10 yrs**  
**Hubbert production peak:** ( )  
**Maximum effort peak:** ( )  
**EUR:** BBO  
**Non-conventional oil prod.:** ( ) MBD  
**“Other” oil prod.:** ( ) MBD

Mining has always been important to Australia. Coal is a major export. Like most southern Gondwanaland countries, this huge nation is underlain by extensive non-petroliferous “Australian Shield” basement rocks. Virtually all oil and gas production is from offshore fields. Australia has always been a net oil importer. The small onshore Moonie field was discovered west of Brisbane in 1961. The prolific offshore fields of the Gippsland Basin/Bass Straits area east of Melbourne were discovered in the mid-1960s. Important oil and gas fields were discovered on the Northwest Shelf during the 1970s. Liquid Natural Gas (LNG) from these offshore fields is now being exported to Japan. Oil fields were discovered in the Timor Sea during the 1980s & 1990s.

References:  
(1) BP Statistical Review (annual);  
(2) DOE/EIA-0219 (annual);  
(3) CSM Hubbert Center Newsletter: HCN# 2000/3, July 2000, Oil & Australia

Ref (1): Oil Production = crude oil + oil sands + natural gas liquids. BP = British Petroleum; O&GJ = Oil & Gas Journal; D = year; MBD = 1,000 Barrels/Day; Reserves = (end year) from BP/O&GJ; OPEC = Organization of Petroleum Exporting Countries; OAPEC = O-Arab-PEC. BBO = Billion Barrels Oil; Tcf = Trillion cubic feet gas; COR = Claimed Oil Reserves; CGR = Claimed Gas Reserves; EUR = Estimated Ultimate Recovery-BBO. e = estimated. R/P = COR/Production; R/C = COR/Consumption

Ivanhoe  
Date: 7/7/01  
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A) CSM / HCN OIL SUPPLY GRAPHS

The OIL SUPPLY GRAPHS of the CSM/HCN PETROLEUM POSITION papers are designed/standardized to facilitate comparisons between oil supply factors (production/consumption/exports/imports) of selected nations (eg China vs Egypt, etc.) The OIL SUPPLY graphs also summarize trends/facts to help recognize any nation’s HUBBERT PRODUCTION PEAK (HPP). (See HCN#2001/3 p. 10 for a discussion of problems in recognizing the HPP.)

B) ASSUMPTIONS ARE NOT FACTS

PETROLEUM RESOURCES ARE ASSUMPTIONS-NOT FACTS

Measurements are FACTS. Assumptions, forecasts, and projections are not. Assumptions can be 1% to 100% WRONG. Analyses of ASSUMPTIONS are still ASSUMPTIONS – even after they are run through sophisticated computer programs/models. All “models” include assumptions, regardless of how logical they may be to the designer. Any analyses of USGS undiscovered RESOURCES produce ASSUMPTIONS - not FACTS.

As the computer programmers say: “GIGO” (Garbage in = Garbage out.)

C) “Our problem is that much of what we know – just ain’t so” (Will Rogers).

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The Hubbert Center has been established as a non-profit organization for the purpose of assembling and studying data concerning global petroleum supplies and disseminating such information to the public.

The question of WHEN worldwide oil demand will exceed global oil supply is stubbornly ignored. The world’s oil problems, timing and ramifications can be debated and realistic plans made only if the question is publicly addressed. A growing number of informed US and European evaluations put this crisis as close as now to 2014. The formation of this center is to encourage a multi-field research approach to this subject.

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