

SUPPLY

Summary

- OPEC crude oil production in April is thought to have roughly matched the March level of 24.9 mb/d. Civil unrest in Nigeria seems to have had a significant effect on West African oil supplies, but higher output from Libya and Indonesia consistent with improved demand in Mediterranean and Asian markets compensated for about two-thirds of the 75 kb/d estimated Nigerian decline. Small increases by a few other producers offset most of the rest of the decline.
- Non-OPEC supply is estimated to have decreased by about 240 kb/d in April. Weather-related problems in Canada, maintenance in the North Sea, Alaska, and at one of Canada's synthetic crude oil plants and technical problems at three UK offshore platforms during the month all limited OECD output. Increased April production levels in Latin America, Asia, and Oman are thought to have raised non-OECD crude oil output, despite an accident-related decline in Egyptian offshore output.
- Russian oil supply remained depressed in March, but may have begun to recover in April following the 1Q94 reductions caused by transportation and domestic storage problems. Government loans to farmers to fund fuel purchases for spring planting are reported to be helping to clear out the excess inventories at Russian refineries as well as giving the refiners some money to pay for additional crude oil. This is expected to reverse some of the shut-ins induced by payment problems and to avert threatened oil-field worker strikes.
- Non-OPEC supply outside the FSU is projected to show a continuation of the large first quarter year-on-year increase for the remainder of 1994, as a result of the impact of new North Sea fields brought into production in the last half of 1994 and 1Q94 and significant increases in Latin American production. OECD production for 1994 is estimated to exceed 1993 levels by more than 0.6 mb/d. The projected increase in Latin American production in 1994 is 0.3 mb/d, with several countries contributing to the gains. Production in China and Malaysia in Asia, Angola in Africa and Oman and Yemen in the Middle East are also expected to increase, leading to the gains in each of the major non-OPEC producing regions detailed in Table 1.

Non-OPEC Oil Supply

(million barrels per day)

	1990	1991	1992	1Q93	2Q93	3Q93	4Q93	1993	1994 ^e
<i>Non-OPEC Crude Oil</i>									
United States	7.36	7.42	7.17	6.98	6.83	6.70	6.85	6.84	6.63
Canada	1.34	1.32	1.36	1.39	1.42	1.47	1.44	1.43	1.38
North Sea	3.59	3.78	4.08	4.15	4.09	4.38	4.89	4.38	5.05
UK*	1.79	1.72	1.76	1.80	1.70	1.93	2.23	1.92	2.34
Norway	1.62	1.86	2.12	2.16	2.20	2.25	2.44	2.26	2.46
Other North Sea**	0.18	0.19	0.20	0.20	0.19	0.20	0.23	0.20	0.25
Other OECD	1.02	1.05	1.03	0.97	0.99	0.98	0.92	0.97	1.03
Total OECD	13.31	13.56	13.64	13.49	13.34	13.53	14.10	13.62	14.08
Latin America	4.74	4.84	4.93	4.91	4.99	4.98	5.13	5.01	5.27
Asia (incl. China)	4.38	4.44	4.54	4.65	4.66	4.61	4.71	4.66	4.73
Africa	1.80	1.82	1.87	1.87	1.87	1.83	1.87	1.86	1.87
Other Middle East	1.31	1.41	1.48	1.55	1.55	1.61	1.73	1.61	1.76
Non-OECD Europe	0.30	0.26	0.25	0.25	0.25	0.25	0.25	0.25	0.25
Total Non-OECD (ex. FSU)	12.51	12.77	13.06	13.22	13.32	13.29	13.70	13.38	13.88
Russia	10.12	9.02	7.70	6.97	6.85	6.49	6.32	6.66	5.76
Other Republics	0.93	0.92	0.88	0.81	0.81	0.80	0.80	0.80	0.76
Total FSU	11.05	9.94	8.58	7.78	7.66	7.29	7.12	7.46	6.52
<i>NGLs & Other</i>									
United States	1.64	1.75	1.83	2.00	1.96	1.95	1.94	1.96	1.98
Canada	0.62	0.66	0.70	0.70	0.77	0.77	0.79	0.76	0.77
North Sea	0.22	0.24	0.26	0.30	0.26	0.28	0.38	0.30	0.45
Russia	0.24	0.24	0.22	0.21	0.20	0.20	0.19	0.20	0.19
Other Non-OPEC	1.30	1.35	1.33	1.38	1.40	1.39	1.41	1.40	1.40
Total NGLs & Other	4.02	4.24	4.34	4.58	4.58	4.59	4.71	4.62	4.79
<i>Processing Gains</i>	1.35	1.35	1.45	1.45	1.45	1.45	1.45	1.45	1.45
Total Non-OPEC Supply	42.24	41.85	41.07	40.52	40.35	40.15	41.07	40.52	40.72

^e estimated

* excluding on-shore production

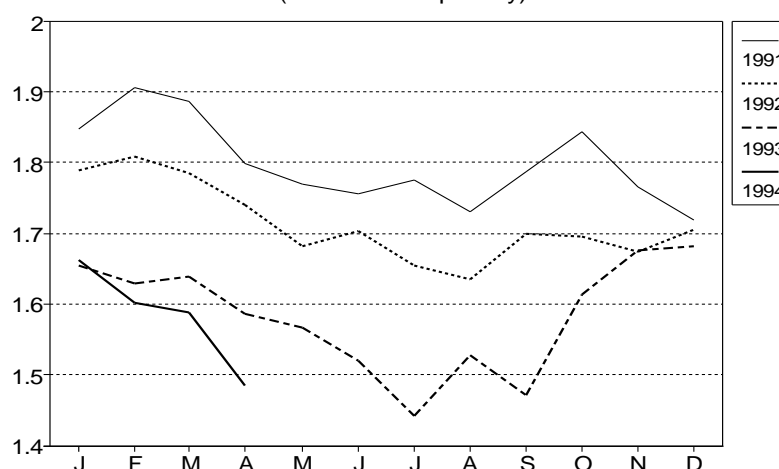
** Denmark, off-shore Netherlands and off-shore Germany

OECD

United States

US crude oil production was more than 200 kb/d below 1993 levels in February and March according to recently-released data from the US DOE and weekly data for April indicate an even larger year-on-year decline. **Alaskan** production, which had been showing year-on-year increases for several months, was lower than the prior year's month in February and March due to weather-related closures of the Valdez port. The April decline is related to mid-month maintenance work on the TAPS pipeline which reduced Alaskan output from 1.6 mb/d to 1.3 mb/d and obscured the small contribution from the new Lisburne Production System Niakuk field at the end of the month. Production in the **Lower-48** states has been constrained by transportation problems for offshore California production and some shut-in of marginal low-productivity wells in Texas, Oklahoma, Kansas and Illinois that is thought to have continued into April. On the plus side, the Augur field offshore Louisiana began production at the end of March and is projected to increase production to nearly 40 kb/d by year-end.

Alaskan Crude oil Production 1991-1994
(million barrels per day)



Reported **NGL** production data for the first two months of the year indicate a more than 100 kb/d drop from 1993 monthly levels, despite higher natural gas production. For March and April the declines are estimated to have exceeded 150 kb/d. Poor economics are causing gas processing plants to leave considerable amounts of ethane in gas streams because the high costs of extraction are not justified by the relatively low value of the ethane in competition with low-priced oil feedstocks for petrochemical processes.

US oil production is projected to continue its decline in the remainder of 1994, despite the benefits to Alaskan production of the second phase of the GHX gas-handling process at Prudhoe Bay. Alaskan production is projected to increase by about 50 kb/d in 1994 versus 1993 levels that were depressed by the lower production in the summer of 1993 to facilitate the installation of the first phase of GHX. The GHX project is expected to stabilise North Slope production for a few years, before the natural decline rate begins to dominate. Elsewhere, the decline in Texas production is projected at 100 kb/d in 1994, about the same level of decline as 1993. Increasing production from a few new offshore oil fields is assumed to allow small increases in Gulf of Mexico production, but production in the remainder of the Lower-48 states is projected to decline by 150 kb/d this year due to the maturity of the fields and the limited of drilling activity.

Canada

Canadian crude oil production is giving evidence of having reversed course over the last two months after showing moderate year-on-year gains in the first two months of the year. Unusually muddy conditions related to the spring thaw have lead to restrictions on the truck traffic in Alberta used to deliver wellhead production to feeder pipelines. Conventional light and medium quality crude production in Alberta is estimated to have dropped from just over 700 kb/d reported for February to about 650 kb/d in March. Heavy oils and bitumen are likewise thought to have declined in March and April. The other major factor in recent Canadian oil supply is a longer than expected maintenance shutdown at the Syncrude plant, that

reduced output by roughly 25 kb/d in March and is estimated to have resulted in a 70 kb/d month-on-month drop in April.

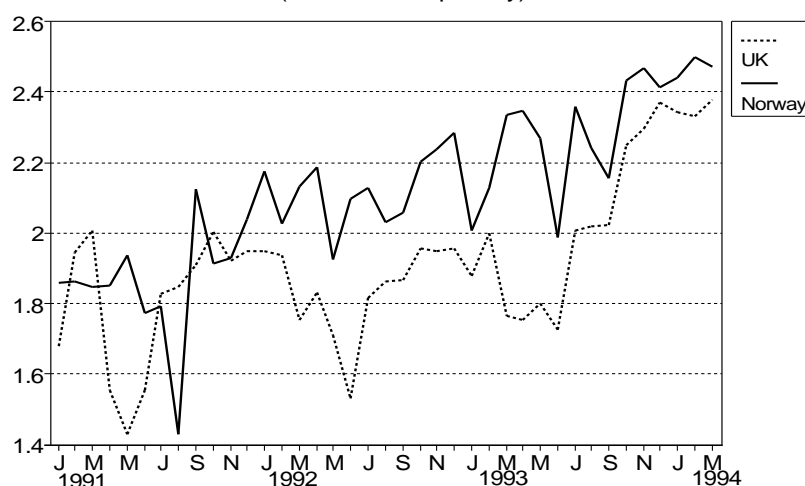
Production of conventional oil in Saskatchewan, which is approximately one-quarter of that of Alberta, was reported to be up by nearly ten per cent year-on-year in January and February, but is estimated to have roughly matched last year's levels since. Production from the other five producing provinces accounts for under 100 kb/d and also appears to have been up for the first two months and roughly even with March and April of 1993. Production from the Cohasset and Penuke fields off the Atlantic Provinces terminated for the iceberg season after January and is expected to be inactive for about three months. The production vessel for the fields is brought into port during the season of high risk from icebergs. Contrary to the experience in the US, Canadian NGL production was reported to have been up 6-8 per cent for the first two months of this year and is estimated to have stayed slightly above last year's levels in March and April. Canadian NGL production also showed strong growth in 1993.

The outlook for the remainder of 1994 is for a small decline in total oil production as continued growth in NGLs and the expectation of better operating performance at the two synthetic crude oil plants in Alberta fail to offset the natural declines in Alberta and Saskatchewan conventional oil production, especially for the heavier oils. Mature areas in Manitoba, Ontario and British Columbia are also projected to decline. Atlantic offshore production from the two existing fields will depend on weather conditions but is expected to at least match last year's levels. The Northwest Territory and Yukon areas have some potential for increases after stagnant production levels for the last few years, a majority of the new hydrocarbon supply from Canada will most likely come from development of natural gas and associated NGL production.

North Sea

March crude oil production in the **UK** sector increased approximately 50 kb/d according to data from company and trade sources, as increases from the new Alba and Nelson fields and a recovery in the Tiffany and Toni fields compensated for an unexpected 25 kb/d decline from February levels at the Hudson field and maintenance at Flotta system fields. There were also small declines reported for a number of other fields. A small Fulmar satellite field, Medwin, began production on the last day of March and the Scott field, which began production last August, reached its peak level of 180 kb/d for the first time in March.

UK/Norwegian Crude Oil Production 1991-1994
(million barrels per day)



April production is believed to have declined by over 100 kb/d from March due to a combination of scheduled maintenance and technical problems at the Brent Alpha platform and the Nelson field, as well as bad weather at the Sullom Voe loading port late in the month. There is likely to be a brief recovery in production in May before a significant number of scheduled maintenance outages in June. Another small satellite field in the Forties system will probably come on in May and will be the last new field in the UK sector in 1994, unless the Dunbar field comes on-stream just before the end of the year. Nonetheless, the growing contribution from the 19 fields that commenced production in 1993 and early 1994, particularly the Nelson field, is expected to keep total UK oil production 0.4-0.6 mb/d above 1993

quarterly levels during the rest of 1994. An NGL production increase of over 60 kb/d is projected to contribute to the total as wet gas production, particularly from the Central North Sea Transport System (CATS), increases.

Norwegian output in March is reported to have dropped by nearly 30 kb/d due to lower production volumes from the Oseberg, Ula and Brage fields. Draugen production increased marginally after extensive work in February and early March to facilitate higher sustained production levels through the remainder of the year. Snorre output reached a new high of 220 kb/d, up about 20 kb/d from February. Production in the first half of the year is projected to remain 300-400 kb/d above the respective 1993 quarters, but extensive maintenance concentrated in August is likely to hold the third quarter year-on-year gain to under 150 kb/d, despite the commencement of production from the Tordis field in late July. With Tordis production reaching 90 kb/d in 4Q94, total Norwegian output is expected to top 2.75 mb/d, 0.23 mb/d above 4Q93.

Both **Denmark** and the **Netherlands** appear to have produced about 5 kb/d more in March than in February. The Dan and Tyra fields in the Danish sector and the F3-FB field in the Dutch sector recovered from unexpected declines in February and the new Dutch Horizon field recorded a new high of 15 kb/d in March. For the first and second quarters of 1994, crude oil output from Denmark and the Netherlands appears to be exceeding 1993 quarterly levels by a combined 70 kb/d, with the increase split equally between the two countries. The year-on-year increases are projected to remain at about those levels in 3Q94, but will likely be only half as large in 4Q94 due to the higher 4Q93 base levels.

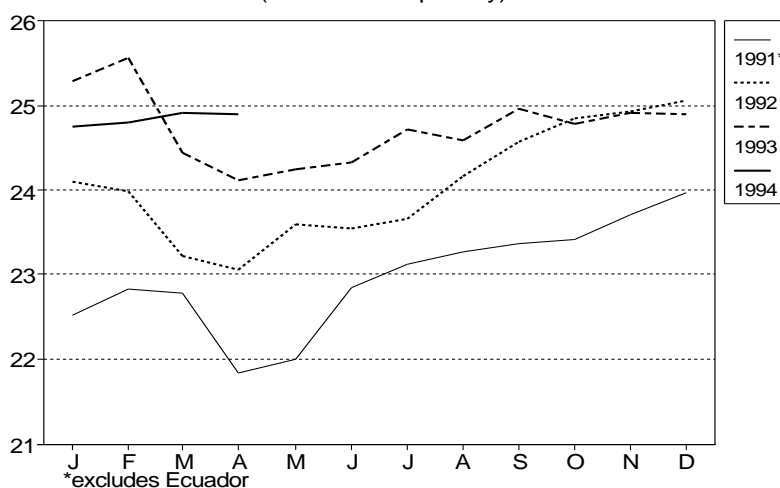
Australasia

Australian crude oil production in February and March is estimated to have increased by about 10 kb/d in each month to 510 kb/d and 520 kb/d, respectively. Full month production from Jabiru and Griffen in February and, in March, the absence of the start-up problems that limited initial Griffen production are thought to have accounted for the bulk of the production increases. Based on these estimates, Australian production for the first quarter appears to have been up by about 35 kb/d from 1Q93. The year-on-year increase is expected to nearly double in the 2Q94 because of increased output from the Bonaparte and Carnarvon Basins on the Northwest Shelf. With continued increases from new Thevenard Island fields and higher output from the Griffen field, Australian output for the year is projected to increase by 45 kb/d.

OPEC

OPEC production appears to have remained at roughly 24.9 mb/d again in April, as higher output from Indonesia and **Libya** and small gains from OPEC's two smallest producers, **Gabon** and **Qatar**, kept aggregate output at March's levels, despite declines in Nigeria resulting from civil unrest. A maintenance-related decline in the **Neutral Zone's** offshore Hout and Khafji fields is thought to have been fully compensated for by increases in Saudi Arabian and **Kuwaiti** production. **Saudi** officials are reported to have confirmed a move towards increasing higher value light crude production at the expense of lower value heavy crude production as a way to increase revenues. Saudi Arabia has also announced its intention to begin producing and marketing their new ultra-light crude oil late this year or early next year.

OPEC Crude Oil Production 1991-1994
(million barrels per day)



Indonesian production appears to have benefitted from higher Asian demand, with Indian imports increasing and additional cargoes going into China following the sharp curtailment of Chinese imports in the first quarter. In addition, the building of inventories in anticipation of the start-up of the EXOR N^o.1 refinery in West Java later this year is thought to have raised the demand for Duri and Minas crudes.

The civil disturbances in **Nigeria** intensified during the last month, leading to the shut-down of facilities feeding the Forcados terminal in western Nigeria. There is some uncertainty about the incremental impact of the disruptions on oil supply, since the unrest has been sporadically affecting production in Nigeria for some time, and because of the uncertain impact of increased government attention to company production allocations. The net effect on April output is estimated to have been a reduction of about 75 kb/d, from March's 2050 kb/d.

Former Soviet Union (FSU)

Production

Russian production in March remained depressed by payments problems and export difficulties related to the Bosphorus tanker accident and bad weather in the Black Sea. Crude oil producers have shut-in production because refiners do not have the money to pay for crude oil, since the refiners have not been paid for product sold earlier. Refiners cut throughputs early this year due to the absence of paying customers and relatively full storage tanks.

Total FSU production in March is preliminarily estimated at 6.93 mb/d, roughly equal to the depressed February level. Russian production may have begun to improve somewhat in April as loading problems in the Black Sea eased and some additional crude oil is reported to have moved to domestic refineries late in the month to meet demand for tractor fuel. Government agricultural loans are thought to be putting needed cash into the Russian supply system, allowing refiners to reduce inventories and use the cash to purchase additional crude oil. To the extent that depressed production levels reported for February and March were more a result of the payments and export logistics problems rather than physical problems in the fields, production levels would be expected to improve somewhat in the next few months.

Year-on-year Russian production declines of over 1 mb/d in the first half of 1994 are projected to be about 0.2 mb/d less in the second half of the year, resulting in an annual decline for 1994 of around 0.9 mb/d versus a 1.1 mb/d drop in Russian output between 1992 and 1993. Crude oil and NGL production in the non-Russian republics is expected to decline by roughly 50 kb/d in 1994.

Exports

More complete trade and tanker tracking data imply FSU net exports of 1.8 mb/d in 1Q94, up 0.1 mb/d from last month's estimate. Seaborne exports of crude from Black Sea ports rose considerably in April, in line with normal seasonal patterns, as reflected in the deterioration in the price of prompt Urals crude in the Mediterranean late in the month. The recent indications emanating from Russian government sources of a possible significant relaxation of the elaborate system of export quotas, licenses and tariffs in the foreseeable future means that there is some upward sensitivity to current FSU export projections over the remaining months of the year.

Other Non-OPEC

Latin America

Mexican crude oil production increased slightly in March to 2.73 mb/d and is thought to have held at that level during April. Mexican officials reiterated their intentions to raise production levels in line with demand increases, so as to keep crude oil export volumes at 1.35 mb/d. **Brazil's** new fields and enhanced production levels from older fields in the deep-water Campos Basin are maintaining production at over 700 kb/d, with further increases expected later in the year. **Ecuador** has begun producing from fields in the Amazon region of eastern Ecuador and is expected to add about 40 kb/d to the current 340 kb/d production level by the end of 1994.

Total Latin American oil production is projected to increase by nearly 0.3 mb/d in 1994 to just over 6.0 mb/d, with Mexican and Brazilian projected annual increases of about 70 kb/d and gains of 50 kb/d in **Argentina** and **Colombia**. Production gains are expected to be centred in the Cuisiana/Cupiagua fields in Colombia and the rich Mexican offshore Gulf of Campeche area. Ecuador will add a projected 30 kb/d to the Latin American increase this year, with continued field development in the upper Amazon to take advantage of infrastructure recently put in place.

China

Chinese production in January and February was unexpectedly high, topping 2.9 mb/d in both months with some reports suggesting a level of over 3.0 mb/d. For the first quarter, output is projected to have exceeded 1Q93 levels by a full 100 kb/d. Combined production from three major East Coast fields which account for roughly 70 per cent of Chinese crude production, Daqing, Shengli and Liaohe, was reported to have been down slightly, as Shengli declines overshadowed small gains in the other two fields. However, reported production increases in January in smaller onshore fields and especially from the offshore in February were sufficient to generate the year-on-year gains. There also appears to have been a small contribution from the western Tarim Basin. These data indicate that Chinese production was not much affected by the surge in imports of crude oil and product late last year.

Asia

Elsewhere in Asia, production gains in 1994 are expected to be somewhat more modest, amounting to a total of about 40 kb/d. Relatively static **Malaysian** production and an increase of 15 kb/d in **Vietnamese** production are projected for 1994. The Vietnamese increase is somewhat lower than previously thought and below Vietnamese government targets. Based on recent drilling experience, the offshore Vietnamese waters now appear to be much more gas-prone than oil-prone. Similarly, **Indian** government optimism about significant oil production gains from the Bombay High Neelam field have met with scepticism from most industry observers. The current assumption is for the Bombay High developments to merely stabilise total Indian crude oil production at around 525 kb/d. **Papua, New Guinea** which saw a production increase of over 70 kb/d in 1993, is projected to average about 135 kb/d in 1994.

Africa

African production could improve in the latter half of the year, if Egyptian production can be restored and the situation with the Angola guerrillas stabilises. Annual average production for Africa in 1994 is projected to remain at roughly 2.05 mb/d. The damage to an offshore Gulf of Suez platform in late April may limit **Egyptian** output and a recent government policy announcement of an 860 kb/d ceiling on crude oil production are expected to constrain Egyptian output for much of 1994. **Angolan** production is projected to increase by about 20 kb/d this year and the **Congo** is expected to add around 10 kb/d.

Non-OPEC Middle East

Omani production is expected to increase to over 800 kb/d in the second quarter, following the voluntary reduction to 775 kb/d in 1Q94. Full year 1994 production is projected to average just over 800 kb/d, with 4Q94 reaching 825 kb/d or about 10 kb/d above 4Q93. The recent rapid increase in **Yemeni** production is expected to moderate later this year, but could still lead to a projected gain of over 100 kb/d in 1994, to about 325 kb/d, while **Syrian** output is forecasted to remain near the 600 kb/d level. The total increase in Non-OPEC Middle Eastern production in 1994 is projected to be about 150 kb/d.