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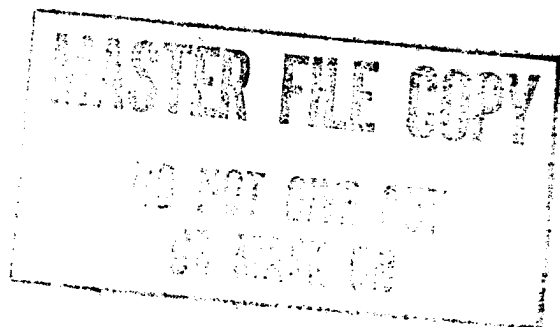
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Egypt: Oil, Energy, and the Balance of Payments



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An Intelligence Assessment



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An Intelligence Assessment

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**Egypt: Oil, Energy, and
the Balance of Payments**

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Key Judgments*Information available
as of 23 May 1984
was used in this report.*

The oil sector, which is critical to the Egyptian economy, probably will falter in the late 1980s. Petroleum is Egypt's primary export and provides about 16 percent of government revenues. Without oil, Cairo would be hard pressed to pay for politically necessary consumer subsidies and its expensive development program.

We believe that Egyptian oil revenues will increase only marginally this year, to about \$2.3 billion. Expected increases in production will be largely offset by rapidly rising domestic consumption, which is the result of heavily subsidized domestic energy prices. Because of domestic politics, the Mubarak government probably will postpone at least until early next year the policy reforms needed to reduce domestic consumption.

In our judgment, Egyptian crude oil production will increase over the next two years by over 200,000 barrels per day—from about 765,000 barrels per day—approaching 1 million barrels per day in 1986. We do not believe, however, that this level will be sustainable much beyond 1986. Even with some expected moderation in the rate of increase in domestic consumption and greater usage of natural gas for domestic use, the amount of oil available for export will shrink considerably by 1990 without substantial finds.

Egypt's energy options are limited. Nearly all of the country's hydroelectric potential has been developed. The results of current exploration suggest, and many foreign oilmen agree, that the likelihood of finding large new oil reserves is slim. Egyptian attempts to meet future energy needs with nuclear power are limited by a shortage of funds for planned projects.

If, as we expect, oil revenues decline substantially by the end of the decade, Egypt will have to find alternative revenue sources to fund its large current account deficits or risk domestic instability. The Egyptian Government will be pressed to rethink its relationship with its current key donors, especially the United States, if it perceives that those donors are not meeting its financial needs with increased aid. If so, Cairo may feel forced to pursue more vigorously full reintegration into the Arab fold. Such a move could hurt US-Egyptian bilateral agreements because the Arabs might insist that Egypt put distance between itself and the United States as a prerequisite for aid.

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Structure of the Egyptian Oil Sector

About 97 percent of Egypt's current oil production comes from fields developed and operated by foreign oil companies. In 1957, following the Egyptian take-over of the then-dominant British oil firms, the government created the Egyptian General Petroleum Corporation (EGPC) and made it responsible for overseeing all aspects of the petroleum industry. In the early 1960s Cairo acknowledged that successful oil development would depend on foreign technology and resources and established joint ventures with AMOCO, Phillips, and Italy's ENI. [redacted]

- Once production at a field begins, 20 to 40 percent of output is set aside to reimburse the foreign company for current operating expenses, exploration costs, and development costs.
- The remainder of the oil is split according to a fixed share, usually with the company receiving 10 to 15 percent and EGPC the rest.

The government recently has received between 70 and 80 percent of total output, including some production from fields that are completely state operated which EGPC uses for domestic consumption and export. [redacted]

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Sadat's economic liberalization program, launched in 1973, gave foreign firms more favorable production-sharing terms and larger areas for exploration. More than 550,000 square kilometers were put under exploration agreements, EGPC received more than \$100 million in signature bonuses, and over \$1 billion of exploration investment was guaranteed. According to Embassy reporting, investment in the Egyptian petroleum sector since 1973 is estimated at well over \$2 billion. [redacted]

Most current production is being generated by the GUPCO (AMOCO) and Petrobel/IEOC (ENI) production-sharing companies. GUPCO is the largest producer, accounting for about 70 percent of current production and over 40 percent of estimated proved reserves. Petrobel's Bala'im fields comprise about 20 percent of current output, but the company's promising reserves—estimated at about 800 million barrels—comprise nearly one-third of known Egyptian reserves. Other smaller producers include WEPCO (Phillips), BADRPETCO (Shell Winning), and OSOCO (Total). The SUCO (Deminex/BP/Shell) concession promises 500 to 800 million barrels of reserves, but production is only just beginning. Most current production is from areas in or near the Gulf of Suez. [redacted]

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Foreign companies operate in Egypt under the following terms:

- The foreign company pays a signature bonus and guarantees a minimum exploration investment. The firm pays all exploration costs and, if oil is found, also pays development and operating expenses.

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The Importance of Oil

The oil sector continues to play a primary role in the Egyptian economy despite the downturn in the world oil market and the resulting reduction in revenues. Petroleum accounted for almost two-thirds of Egypt's commodity exports and over 20 percent of total foreign exchange earnings in 1983. Moreover, earnings transferred from the government-owned Egyptian General Petroleum Corporation (EGPC) and income taxes on petroleum companies generated 16 percent of government revenues in FY 1982/83¹ (the second-largest share, after taxes on goods and services). These revenues, plus Suez Canal tolls and remittances from expatriate workers, have enabled the government to fund expensive, but politically necessary, subsidies and development projects.

The Egyptian economy boomed briefly in the early 1980s in part because of the return by Israel in 1979 of the Gulf of Suez oil exploration areas, followed by a period of rising world prices and increasing production from fields returned in 1976. Real GDP growth was 8 percent or better each year, while current account deficits remained below \$2 billion. The era of prosperity ended in mid-1981, however, as prices for oil and other exports, such as cotton, started to slide. Although Egypt has weathered the worldwide recession and the weak oil market better than most developing countries, the shortfalls in revenue have made it harder for the government to meet its foreign exchange obligations.

Current Performance of the Oil Sector

Egyptian oil production has risen over 20 percent since 1981. It averaged about 720,000 barrels per day (b/d) last year, the highest level ever. The increase was largely the result of sophisticated secondary recovery techniques in the larger offshore oilfields and the bringing into production of several discoveries. Even though domestic consumption increased 10 to 13

¹ July-30 June.

Table 1
Egypt: Major Oilfields

	Initial Production Year	1983 Production (thousand b/d)
GUPCO (AMOCO) ^a		
El Morgan	1967	158
October	1980	130
Ramadan	1975	93
July	1973	79
Shaab Aly	1978	22
Petrol/International Egyptian Oil Company (ENI) ^a		
Bala'im Marine	1962	140
Bala'im Onshore	1955	
SUCO (Deminex/BP/Shell) ^a		
Ra's Badran	1983	28

^a () Major operating company.

percent in each of the last few years, the volume of exports has risen slightly—about 23,000 b/d in the two-year period—to about 210,000 b/d last year.

We believe revenues fell slightly to \$2.2 billion last year after peaking at an estimated \$2.8 billion in 1981.² This occurred despite increases in production and government attempts to capitalize on oil market changes with frequent price adjustments. Prices for Egyptian oil declined from an average of close to \$32 per barrel in 1982 to about \$28 in 1983. The shortfall in oil earnings, however, was largely offset by increases in officially reported worker remittances, and Egypt's current account deficit probably declined from \$2.4 billion in 1982 to \$2.2 billion in 1983.

² The exact magnitude of Egyptian oil revenues is problematic. Significant differences exist between earnings reported by the Egyptian Petroleum Ministry and those reported for current account purposes by the Central Bank. The gap may reflect revenues held as investment funds by EGPC.

Confidential**Table 2**
Egypt: Current Account Balance ^a*Billion US \$*

	1982	1983 ^b	1984 ^c
Trade balance	-5.0	-5.5	-5.8
Exports, f.o.b.	3.6	3.5	3.6
Of which:			
Oil	2.3	2.2	2.3
Imports, c.i.f.	8.6	9.0	9.4
Net services	2.6	3.2	3.2
Receipts	5.4	6.3	6.5
Remittances	2.1	2.8	3.0
Suez Canal	0.9	1.0	1.0
Tourism	0.6	0.7	0.7
Other	1.8	1.8	1.8
Payments	2.9	3.1	3.3
Unrequited transfers	NEGL	0.1	0.1
Current account balance	-2.4	-2.2	-2.5

^a Oil data are adjusted from petroleum CERP reporting; import numbers are derived from UN trade tapes and other sources; all other data are from Egyptian Central Bank sources. Because of rounding, components may not add to totals shown.

^b Preliminary.

^c Estimated.

The rapid rise in domestic consumption continued to be a major factor in the export picture. The increases—averaging 13 percent annually in 1982 and 1983—have been due to the rapid growth of the Egyptian economy, a shift in investment toward more energy-intensive sectors, and government policies that, according to the World Bank, hold domestic prices to about one-sixth of international prices. Many industrial processes in Egypt require very low energy prices to be competitive, especially in the aluminum and fertilizer industries. [redacted]

The rise in crude oil output was accompanied by a similar increase in the production of natural gas and condensates from less than 50,000 b/d of oil equivalent (b/doe) in 1982 to about 59,000 b/doe last year. Domestic demand for natural gas, however, has not caught up with potential production because of a lack of gas distribution facilities and infrastructure for

final consumption, and current production and reserve levels cannot support the development of export facilities. [redacted]

The Outlook for 1984

Egypt's goal is to increase average oil production by almost 20 percent to 860,000 b/d in 1984. We estimate, based on assessments by oil companies and the US Embassy, that actual production probably will be between 790,000 and 815,000 b/d. Production in early 1984 averaged about 765,000 b/d, according to Embassy reporting. The continued steady increase in crude oil production this year is the result of secondary recovery methods, mainly in the GUPCO fields. Production at the SUCO fields has lagged expectations. [redacted]

Cairo's oil earnings this year, in our judgment, will increase only marginally—to about \$2.3 billion. We assume that the world oil market will remain stagnant, resulting in no increase in nominal oil prices this year unless hostilities in the Persian Gulf escalate. More important, domestic consumption will continue to rise at a pace probably approximating last year's 13-percent increase. The economic policy reforms needed to limit consumption probably will not be enacted before the end of the year. Cairo avoided major increases in consumer prices before the elections in May and probably will take no action until after the formal convening of the new People's Assembly in October or November. [redacted]

The Role of Oil in the Near Term

We believe that Egypt's current proved crude oil reserves are at least 3 billion barrels—insufficient to sustain higher production levels for more than a few years. The pace and trend of production and revenues will depend on Cairo's decisions regarding the role of foreign oil companies, rates of depletion, and policies that affect domestic consumption, such as the development of nuclear power, natural gas usage, and

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The Government's Current Relations With Foreign Companies

The Egyptian Government is emphasizing exploration in the Western Desert even though over 95 percent of current proved reserves are in the Gulf of Suez Basin. Many local oilmen are skeptical that the desert will become a major producing area, according to Embassy sources. Seven out of 11 concession permits have been relinquished because of a lack of proven potential, according to press reports quoting oil industry officials. Most new discoveries continue to be made in the Suez Basin. All those appear to be smaller fields, according to these same sources. [redacted]

Company-government relations are relatively amicable. [redacted] EGPC continues to respect and rely heavily on foreign operating partners. [redacted] Cairo has not attempted to push production beyond technically prudent levels despite the government's need for enhanced revenues. In our judgment, this will change if Egypt's foreign exchange situation tightens substantially. In the mid-1970s financial pressures caused Egypt to produce beyond prudent levels, and this resulted in sharp declines in the rate of production in some of GUPCO's larger fields. [redacted]

The major problem areas between Cairo and the operating companies have been determining where to explore. Some concessionaires have also reported trouble with Egyptian customs officials. All concession agreements provide for blanket customs exemptions for equipment and personal effects, but these exemptions are not always honored, especially when local products could be substituted. [redacted]

domestic energy prices. Revenues will also depend on conditions in the international oil market, which Egypt cannot influence because it is a relatively small producer. [redacted]

Production Forecast

Output will probably increase steadily in 1985 and 1986. This judgment is based on current reserve levels and on the need for operating companies to meet

**Table 3
Egypt: Near-Term Production
Targets for Major Operators**

Thousand barrels
per day

	Average Production 1983	Incremental Production		
		1984	1985	1986
GUPCO	530	50-75		75
Petrobrel/IEOC	140			20-60
SUCO	28	22	70-130	
Total cumulative production	720	790-815	860-945	955-1,080

exploration and production deadlines specified in their contracts with EGPC. The increases will be largely accomplished by three operating companies—GUPCO, Petrobel/IEOC, and SUCO. These three have made more than two-thirds of the new discoveries since 1981. Where smaller, unassociated discoveries have been made, high development costs and low production and reserve projections have rendered them uneconomic. Standard EGPC contracts are attractive to foreign oil companies only if production is at least about 50,000 b/d, according to US Embassy reporting. [redacted] 25X1

Projections for output vary widely among participating companies. Moreover, representatives of major operating companies believe that whatever level of peak production is attained by 1986 cannot be sustained much beyond that year, and output will probably fall steadily thereafter without new reserves. [redacted]

GUPCO. Company officials forecast that their production will increase to over 600,000 b/d during 1984, largely as a result of workovers on existing fields and some smaller new fields being brought onstream, according to Embassy sources. According to press interviews with company officials, by 1986 GUPCO output should be close to 700,000 b/d as production from two new blocks in the Gulf of Suez increases. GUPCO has shut in some smaller fields that it plans

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to bring on line in 1986. These fields are to be used largely to offset expected production declines from older fields. [redacted]

Petrobel/IEOC. The Petrobel consortium produces about 140,000 b/d, largely from its Bala'im offshore fields. Petrobel hopes to complete construction of a water injection plant in 1985. The company expects total production in 1986 to reach 160,000 to 200,000 b/d, according to Embassy reporting. [redacted]

SUCO. According to company discussions with Embassy officers, SUCO plans to raise production from its Ra's Badran field to 60,000 to 70,000 b/d by the end of this year after gas lift and water injection facilities are installed. SUCO representatives report that the Zeit Bay concession, which would be SUCO's largest producing area, is also on schedule and must begin producing by March 1985 to satisfy the company's contract with EGPC. Production facilities there are being designed to accommodate 100,000 b/d, but it is too early to predict how the reservoir will behave and whether the production goal will be met. [redacted]

Using company projections and assuming that enough smaller wells will be developed to offset declines from older fields, we estimate that Egypt's peak production will probably settle near 950,000 b/d in 1986, and it might even surpass the elusive goal of 1 million b/d.³ Although we disagree with the projections of some industry analysts that Egypt will become a net oil importer by the end of the decade, we believe revenues will drop sharply in the late 1980s. The amount of decline will depend mostly on the pace and direction of both international prices and domestic consumption [redacted]

Outlook for Domestic Consumption

We believe that Egypt's demand for energy will continue to be skewed because of government energy subsidy policies. These policies, unless drastically altered, will continue to spur industrial development based on cheap energy. [redacted]

Demand will drop significantly in the longer run only if serious reforms occur in energy management. Egypt has few options for energy development. With the

³ The Egyptians have been predicting production levels of 1 million b/d since the mid-1970s [redacted]

scheduled completion of Aswan II in 1985 or 1986, at least 80 percent of Egypt's hydroelectric potential will have been exploited, according to the World Bank. The absence of large new petroleum finds in the last two years suggests there will be no significant additions to oil reserves in the near term. Finally, the government's plan to develop a nuclear program probably will not be fulfilled because of a lack of financing [redacted]

Price reforms will be an important aspect of more rational energy management. Cairo is under heavy pressure from the IMF and World Bank to reduce explicit and hidden oil subsidies—estimated by the Bank to be about \$3-4 billion in 1983—and to raise domestic fuel prices to world market levels. Although the Bank had earlier insisted that prices reach world levels in five years, both the Bank and the Fund now seem willing to accept a 10-year adjustment program because of the extent of the pricing gap. Fund officials state, however, that they will accept such a plan only if it includes substantial price increases at the beginning of the program. Cairo appears to accept the idea of price adjustments, and its need for continued outside assistance probably will cause it to impose some reforms beginning in 1985. We doubt, however, that government price reforms will be as severe as the Fund and Bank are advocating because of the negative political consequences. [redacted]

Planned increases in the production and usage of Egypt's natural gas reserves will strongly influence the pace of oil consumption. Estimates of proved gas reserves vary from 720 million barrels of oil equivalent (boe) to 1.8 billion boe, according to oil industry sources. The Egyptian Government, with some funding from the World Bank, is encouraging growth in household and industrial use of gas. According to press reports, the government plans to increase gas production and use from 80,000 b/doe to 114,000 b/doe by 1985. Further increases to 194,000 b/doe are planned by 1990. These increases, if realized, would restrain somewhat the fast pace of domestic oil use. [redacted]

Development of nuclear power as a substitute for thermal power generation is more problematic. Cairo's plan to finance part of its nuclear power program

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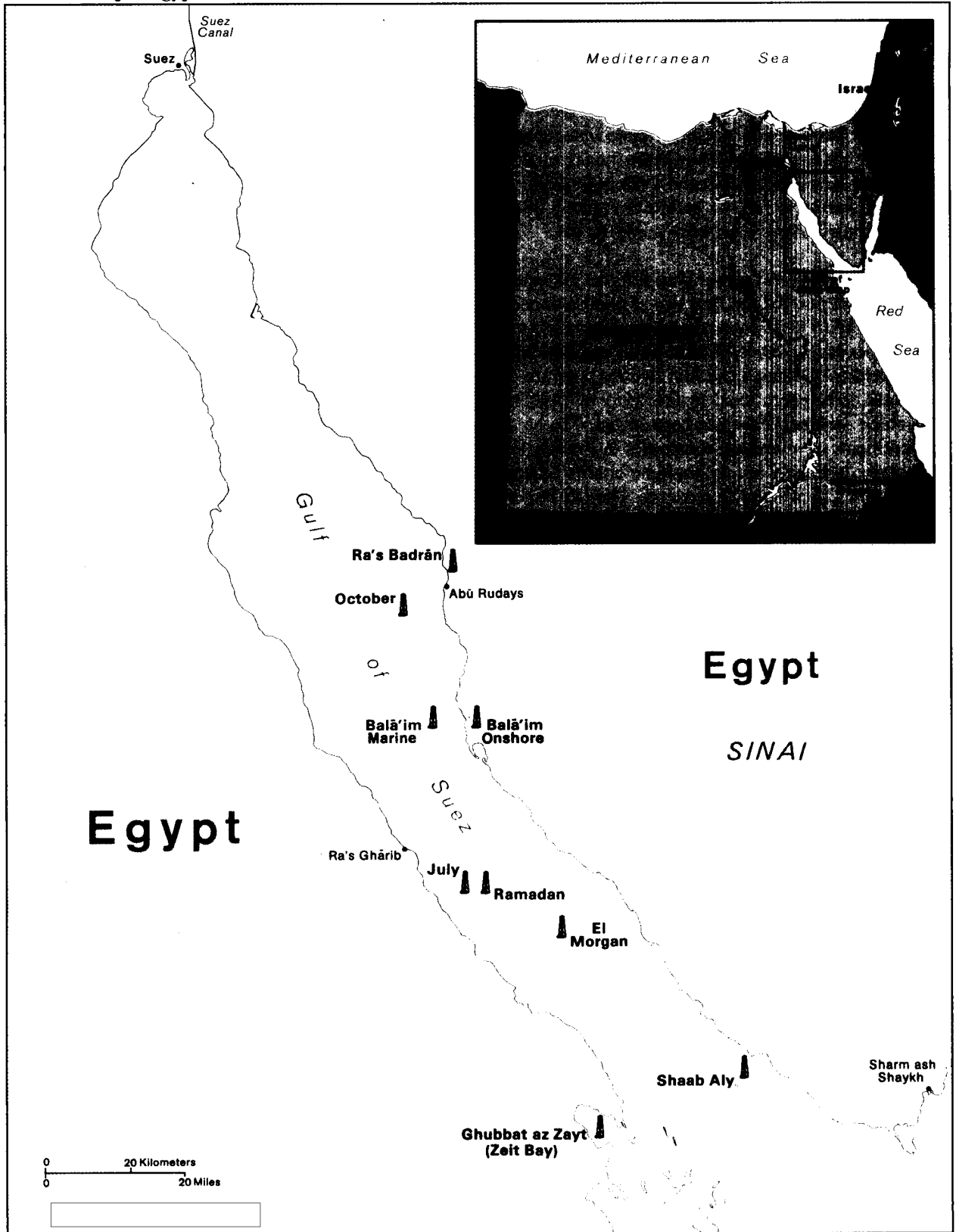
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Selected Major Egyptian Oilfields



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by setting aside excess oil revenues has been stymied by the slump in oil prices. Egyptian officials claim that about \$700 million has been allocated to an "Alternative Energy Fund" from petroleum revenues since 1981. The US Embassy has been unable to verify Egyptian claims. If the fund exists, the government may have tapped it to meet more immediate foreign exchange needs. While some money might have been set aside in 1980 and 1981 before oil revenues started to fall, we believe it unlikely that further contributions have been made. [redacted]

The Egyptian nuclear power plan calls for an expenditure of \$2 billion for the first two of eight planned facilities. With little domestic financing available, the plan depends heavily on outside trade and development credits. Although the first two reactors are supposed to be operational by late 1989 or 1990, the financing problems have not been solved. The home governments of interested companies in France, West Germany, and Italy are withholding credits because they doubt Egypt's ability to repay. The US Export-Import Bank turned down a financing proposal by two US companies last August. [redacted]

We believe the Egyptian Government will find it hard to reduce domestic oil consumption in the near term even with increases in domestic prices and use of natural gas. At best, we foresee a decline in the annual growth of consumption to about 8 percent in 1985 and possibly 5 percent in 1988. [redacted]

Export and Revenue Scenarios

We believe that Egyptian oil production will peak at about 950,000 b/d in 1986, provided company projections and our assumptions about pricing are close to the mark. Egypt would earn peak annual revenues of about \$3 billion at that level of production. This peak level is not sustainable, however, without substantial new finds or sharply increased prices. According to Embassy reporting, foreign oil company interest in exploration has leveled off in the past two years. The likelihood of new finds and their exploitation before the end of the decade is therefore low. Our judgment is that export revenues will fall well below \$1 billion by the end of the decade, given probable production slowdowns and our assumptions about domestic consumption growth. [redacted]

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Oil Price Assumptions

The outlook for international oil prices bodes ill for Egyptian oil earnings. Our energy projections assume declining real oil prices to 1985 and flat or moderately increasing real oil prices to 1990. These assumptions could be overturned by a major supply disruption, such as an interruption of shipments through the Strait of Hormuz. Conversely, a cease-fire between Iran and Iraq or a surge in production by another major supplier, such as Nigeria, would further dampen the outlook for prices. [redacted]

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Under the more optimistic production scenario of nearly 1.1 million b/d for 1986, revenues would improve for the peak year but would still fall substantially by 1990. Assuming that the Egyptian Government did not let higher production hinder oil conservation efforts, revenues would peak at just over \$4 billion in 1986 and probably fall thereafter. Earnings in 1990 would probably be a little over \$1 billion. The fall in revenues to about half of current levels would deal a major blow to the current account and government budget, even under this optimistic scenario. Unless new sources of earnings—such as more worker remittances—or higher levels of nonoil exports were found or imports were drastically cut, current account deficits over \$4 billion annually would be likely toward the close of the decade. [redacted]

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Implications

For Egypt

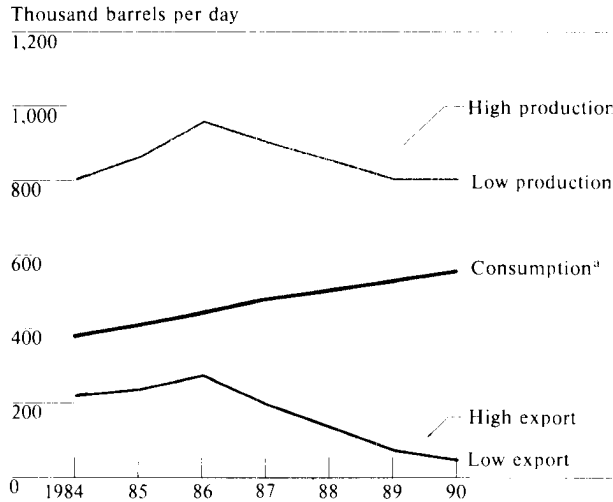
Growing and unmanageable current account deficits would threaten the stability of the Egyptian Government. The Mubarak regime already is under domestic political pressure to maintain a higher standard of living through subsidies while preparing for the future by underwriting an ambitious development scheme. To fulfill these expectations without substantially increasing the debt burden, the Egyptian Government will need either rapidly rising revenues or increased foreign aid. Failure to secure more aid would probably mean less stability in Egypt. [redacted]

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Figure 2
Egypt: Alternate Oil Sector Scenarios,
High and Low Projections, 1984-90



⁴ Assumes growth in domestic oil consumption slows to 8 percent per year in 1985 because of government disincentives and increased gas usage; and further to 5 percent per year in 1988. Failure to achieve these consumption cuts will result in lower export levels.

[Redacted]

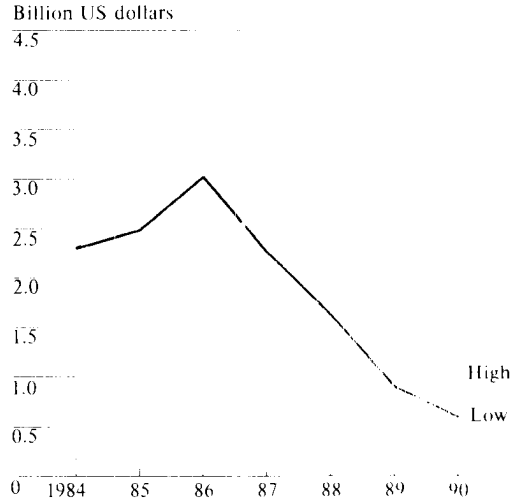
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There are few alternatives to aid if, as we expect, oil revenues decline substantially. Suez Canal earnings or worker remittances probably will not replace falling oil revenues. Canal earnings will be constrained by capacity even if oil trade picks up because expansion of the Canal to accommodate larger ships has been put on hold. Officially recorded worker remittances may rise somewhat if exchange rates are aligned to capture funds that are now remitted through the parallel "own" exchange market and are not available to the Central Bank. This would be a one-time increase, however, and economic conditions in the Gulf states do not augur well for continually rising earnings. [Redacted]

For the United States

A widening financial gap would cause Cairo to press traditional donors—especially the United States—even harder to increase aid or provide debt relief.

Figure 3
Egypt: Oil Revenues, 1984-90 Projections



[Redacted]

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There is already widespread criticism within Egypt that debt repayments to the United States are putting undue strain on Egyptian finances and that project aid is serving only the USAID bureaucracy and private contractors. This perception would be reinforced if, as expected, petroleum revenues decline while repayments on military debts to the United States rise. Should Washington refuse to give more aid or grant debt relief, Cairo would probably feel forced to explore other aid options. [Redacted]

A whole range of US strategic interests could be hurt if Cairo were forced to seek aid from other donors, particularly Saudi Arabia and Iraq. The quest for Arab aid could induce Cairo to put distance between itself and the United States. Such a move, in turn, could impair such bilateral initiatives as the preliminary agreement to allow US use of the airbase at Ras Banas. A press for full reintegration into the Arab fold could also undermine Egyptian support for future US Middle East peace initiatives and could hurt Egyptian-Israeli relations, which have already cooled as Egypt has developed its unofficial ties with the moderate Arab states. [Redacted]

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