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DIRECTORATE OF
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Intelligence Memorandum

Economic Implications of Soviet-Iranian Agreements Involving Oil and Gas

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COPY NO.

RR IM 67-29

JUNE 1967

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CENTRAL INTELLIGENCE AGENCY
Directorate of Intelligence
1 June 1967

INTELLIGENCE MEMORANDUM

Economic Implications of Soviet-Iranian Agreements Involving Oil and Gas

Summary

The USSR and Iran have entered into cooperation agreements that will have beneficial economic results for both parties. Under terms of an agreement of 16 January 1966, the USSR extended a credit of $289 million to be used for the construction in Iran of a steel mill complex, a heavy machinery plant, and a gas pipeline. In January 1967 the USSR extended a credit of $110 million to be used for the purchase by Iran of military goods. Both of these credits, with interest, are to be repaid by exporting natural gas to the USSR over a 15-year period ending in 1985.

When the principal provisions of these agreements are fulfilled, Iran will have (1) improved substantially its industrial base, (2) repaid all of its debt to the USSR and accumulated a credit of more than $500 million on its

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account with the USSR, (3) developed an export market for its natural gas, and (4) acquired an integrated gas transmission system to serve both that export market and domestic gas consumers. The gas to be exported to the USSR will have a total value of about $1 billion, and is now being produced in association with crude oil and burned as waste (flared) in volumes adequate to meet the scheduled export demand. Iran must borrow between $300 million and $400 million in foreign exchange from Western sources to complete the Soviet projects. Repayment of these loans will be made from Iran's anticipated earnings of more than $1 billion per year from oil exports by the mid-1970's.

The Soviet credits will not require the USSR to use its hard currency reserves, and the goods and services to be provided to Iran are well within Soviet capabilities. The USSR will develop a small captive market in Iran for Soviet goods and services, although the $500 million favorable balance Iran will acquire through the sale of gas will represent only a small part of Iran's total imports and will not significantly change its Western orientation.

Gas production in the USSR, about 140 billion cubic meters per year in 1966, is adequate for its overall current needs, but there are potential local markets for Iranian gas. The demand for gas in the Transcaucasus contiguous to Iran is increasing in the face of dwindling local supplies. The 10 billion cubic meters of gas imported annually from Iran would supplement local supplies, and any excess, presumably small, could be moved north in the direction of Stavropol in the North Caucasus, where gas production already has reached its peak. The import of Iranian gas into the Transcaucasus is analogous to the import of Canadian gas into the US Pacific Northwest, attractive and convenient. It is unlikely that the planned import of Iranian gas would give the USSR any important additional capability to export Soviet gas or oil.

The existing agreements almost certainly will not give either party economic leverage vis-à-vis the other, and might be a force for stability in the area. Iran, the USSR, and the Iranian Oil Participants Limited (Consortium) surely recognize the interlocking mutual interests involved in these agreements. Iran knows that under present circumstances the uninterrupted production of crude oil by the Consortium is necessary for the production and export of gas. The output of crude oil in quantities sufficient to provide the necessary gas is dependent on large sales by the Consortium of oil that neither the USSR nor Iran could sell independently. The USSR and Iran know, also, that implementation of the Soviet projects depends on Iran's ability to service its foreign exchange borrowings in the West by means of hard currency revenues from oil sales.

A communique issued following the preliminary discussion between a high-level Soviet trade delegation and Iranian officials in April 1967, described as deliberately vague and confusing, discussed possible additions to the original agreement of 1966. The USSR suggested that the delivery rate for gas now scheduled for 1974 be advanced to 1970. Iran could do this if it is willing to spend an additional $100 million four years sooner than otherwise would be necessary for expansion of the pipeline. The USSR offered to purchase an additional 10 billion cubic meters of gas, but the Soviet Union does not have a clear need for this additional gas, and its delivery would require a second pipeline, which neither the USSR nor Iran is yet willing to finance and construct. The Soviet delegation also offered to "cooperate" in the search for oil in the "free areas" of Iran, presumably the parcels recently relinquished by the Consortium. Soviet development of these areas will depend on whether Iran changes its policy and agrees to pay at least part of the cost of exploration or on whether the USSR changes its policy and bears all the risk of foreign exploration.

Background

1. For years Iranians have been annoyed by the sight of vast quantities of natural gas -- produced in association with crude oil -- being burned as waste (flared) in the oil-fields operated by the Consortium. The government of Iran, through its National Iranian Oil Company (NIOC), has pressed the Consortium unsuccessfully to find a market for this valuable natural resource. At the same time, Iran has long dreamed of developing a domestic iron and steel industry, and first attempted to obtain a steel mill in 1936. Feasibility studies by US, German, Swedish, Belgian, and French experts generally concluded that a mill, as envisaged by Iran, would be uneconomic. Thus no capital could be obtained for this project.

2. The USSR has now agreed to buy the unused Iranian gas and to supply a steel mill and other projects to Iran in exchange. In the Transcaucasus (the Republics of Azerbaydzhan, Georgia, and Armenia), an area contiguous to Iran, gas supplies produced in association with crude oil (particularly in the old Baku oilfields) are inadequate for local needs, and supplies are dwindling. Because Iran has available great quantities of gas and the USSR has the capability to provide capital and other goods which coincide with Iran's development needs, the two parties concluded what appears to be a mutually advantageous economic and technical cooperation agreement on 16 January 1966. Subsequently, in January 1967, they concluded an additional agreement whereby Iran would purchase military goods from the USSR.

Soviet-Iranian Agreements Involving Iranian Gas

3. The USSR has extended a total of $457 million in credits to Iran -- economic credits of $347 million and a military credit of $110 million. All of the military credit and $289 million of the economic credits will be repaid in Iranian gas. The latter credit will help finance a steel mill complex including coal and ore mines and water

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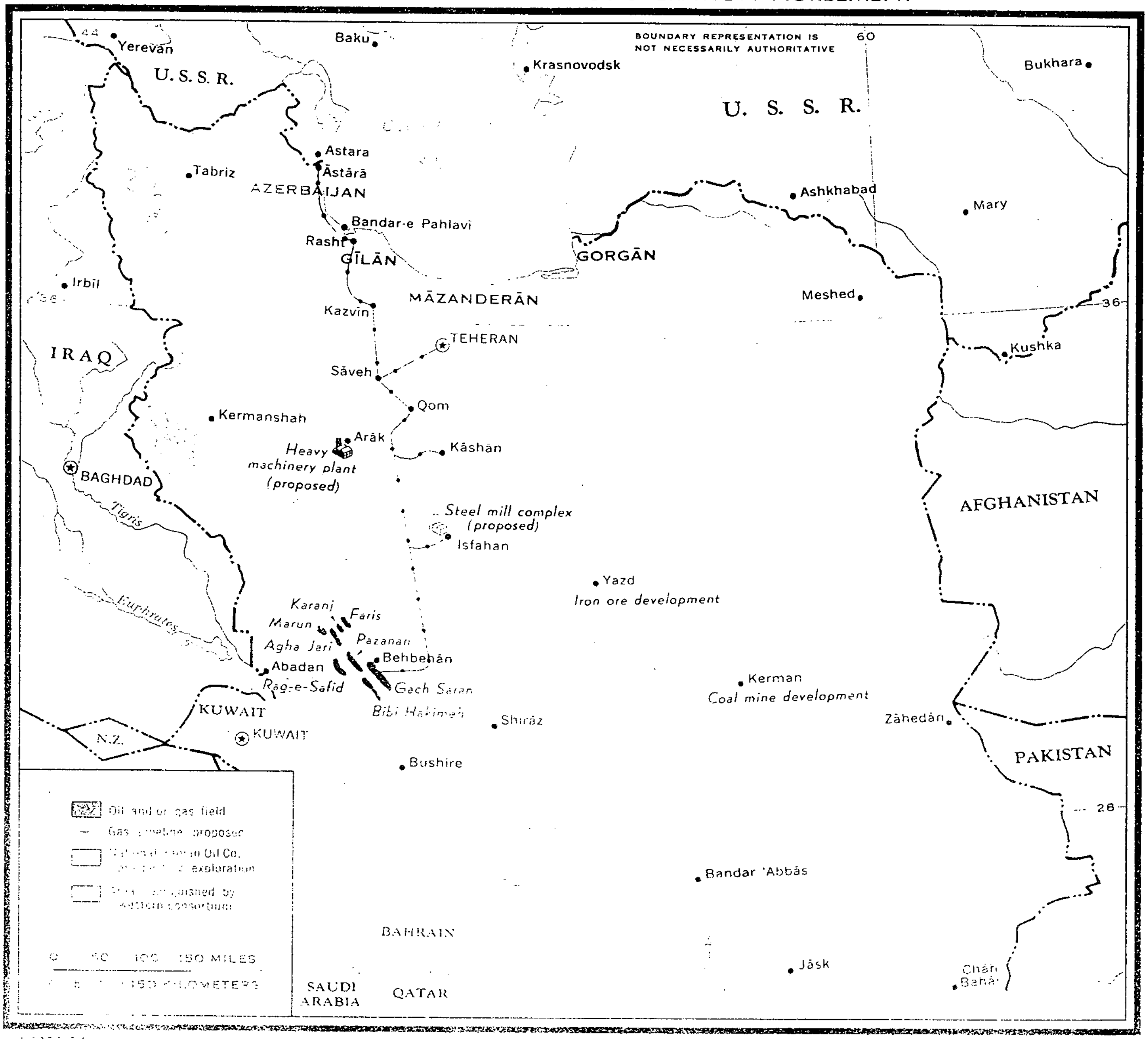
control projects, a heavy machinery plant, and a gas pipeline. (The locations of the proposed capital projects are shown on the accompanying map.) The $58 million of economic credits not scheduled to be repaid in gas are to be used for the Aras River Dam, an electric power-plant, grain silos, and tractors.

4. Information is not available on the total cost of each of the projects to be financed from the $289 million credit. About $70 million has been earmarked for engineering services and compressors for the gas pipeline. Available information indicates that the total cost of constructing the first phase of the pipeline, to provide capacity to move the exports planned for 1970, will approach $350 million. The second phase, to provide capacity for the exports planned for 1974, will require the expansion of gas gathering facilities and an increase in the number of compressors for the line at an additional cost of $100 million.

5. The total cost of the three development projects probably will be on the order of $800 million. Deducting the Soviet credit ($289 million) and local funds to be used, Iran probably will have to obtain between $300 million and $400 million in foreign exchange from other sources, probably Western countries. Credits totaling $220 million apparently have been obtained from British ($85 million), French ($80 million), and German ($55 million) banks.

6. Under the terms of the gas supply contract, Iran will export gas through the proposed pipeline over a 15-year period beginning in 1970 at an annual rate of 6 billion cubic meters, increasing to 10 billion cubic meters in 1974, the latter rate to be maintained through 1985. The price of the gas is set at $6.60 per thousand cubic meters. (An escalator clause in the contract ties a variable portion of the price to the posted price of fuel oil at Abadan, but no significant variation in the price of fuel oil or gas is expected during the period of the contract.) By 1985, Iran

IRAN: SELECTED FEATURES OF SOVIET-IRANIAN COOPERATION AGREEMENT



will have repaid the credits with interest (2.5 percent per year) and will have accumulated a credit on its account with the USSR of more than $500 million. On an average annual basis, this amounts to less than $40 million during the period of the contract, insignificant in terms of Iran's total foreign trade and revenues from other sources. Iran could easily absorb an equivalent value of goods from the USSR including, but not limited to, maintenance and spare parts for the capital projects to be built to Soviet design.

Iran's Capability to Meet Its Obligation Under the Agreements

7. Huge quantities of gas are produced in association with the extraction of crude oil in Iran. Less than 10 percent of the current output of associated gas is used locally as a source of energy; the remainder is flared. (In January 1967, gas was flared at a daily rate corresponding to an annual rate of 18 billion cubic meters.) The following tabulation presents tentative estimates of Iran's production of oil and gas and Iran's consumption of gas for selected years:

Year	Crude Oil (Million Barrels per Day)	Associated Gas (Billion Cubic Meters per Year)	Consumption of Gas a/ (Billion Cubic Meters per Year)
1965	1.9	14.4	1.2
1970	3.2	24.0	6.0
1975	4.5	34.0	9.0
1980	5.6	42.0	10.0

a. Including the proposed Shapour petrochemical complex and the Allied Chemical Company sulfur/fertilizer plant.

These data indicate that Iran will be able to meet the requirements of the gas supply contract.

8. Iran has adequate reserves of non-associated gas to insure the continuous flow of gas through the pipeline in the event that crude oil production fluctuates or is interrupted to the point that sufficient associated gas is not available, but these reserves are not now being exploited. The Pazanan gas deposit in the vicinity of the producing oilfields in the south is a likely source of additional gas (see the map). However, payment for the cost of developing the Pazanan gasfield would have to be negotiated between the Consortium and Iran.

9. Some gas deposits in Iran occur in a "dome" between the oil and the surface of the ground. Exploiting gas in these domes poses tricky technical problems, and exploitation might adversely affect the production of oil from the reservoirs beneath. However, production of gas in association with crude oil and from Pazanan can be accomplished without these difficulties.

Recent Proposals by the USSR

10. The joint communiqué issued on 13 April 1967 following completion of preliminary discussions in Teheran between the high-level Soviet delegation and the Iranians has been described as deliberately vague and confusing. It appears that the Russians made grandiose proposals to the Iranians to expand the existing technical and economic cooperation agreements between the two countries. The communiqué, while it did not explicitly mention acceptance or rejection of any of the proposals, did indicate a willingness by Iran to examine the Soviet proposals.

(a) To Speed Up Gas Deliveries

11. The USSR suggested that the delivery of gas at the rate of 10 billion cubic meters now planned for 1974 be moved up to 1970. Gas production now forecast for

Iran would support the revised delivery schedule. However, in order to provide sufficient transmission capacity for the pipeline to carry 10 billion cubic meters by 1970 rather than by 1974, Iran would have to provide an additional $100 million by 1970, four years sooner than would otherwise be necessary. The requisite foreign exchange probably could be obtained, through borrowing, but there is no evidence that Iran is willing to seek it. There are no short-term advantages to Iran from speeding up gas deliveries. In the long run, under the accelerated schedule of gas deliveries, Iran would accumulate by 1985 a credit balance equivalent to about $600 million, rather than the more than $500 million foreseen under the original agreement.

(b) To Increase Gas Deliveries

12. The Soviet delegation proposed that gas deliveries be doubled to 20 billion cubic meters per year at some unspecified period between 1970 and 1985. Although the gas pipeline as now engineered could be operated in excess of the designed capacity of about 10 billion cubic meters, industry experts agree that the movement of 20 billion cubic meters would require a second pipeline of essentially the same design and capacity as the first.

13. The Iranians have indicated that they would not finance the construction of a second pipeline. The USSR has given no indication that it would finance such a line. The program for pipeline construction within the USSR itself probably cannot proceed without substantial assistance from outside sources, and it is highly improbable that the USSR would, or could, construct the second line in Iran.

14. Forecasts of crude oil production suggest that associated gas output will be sufficient to provide 20 billion cubic meters for the USSR sometime after 1970.

Although the output of gas in Iran would be ample to support domestic demand and to export 20 billion cubic meters after 1970, the unwillingness of Iran, and the inability of the USSR to construct the necessary second pipeline in the near future, suggest that this proposal may be doomed.

(c) <u>To Explore the "Free Areas"</u>

15. The Soviet delegation offered to "cooperate in activities concerning exploration and exploitation" of oil resources in the "free areas" of Iran. The "free areas" were not identified, but the USSR probably meant the three parcels of land -- a total of about 25,000 square miles -- in southern Iran recently relinquished to the government of Iran by the Consortium from its "Agreement Area" (see the map). The USSR probably intended to include the offshore areas of Iran in the Caspian Sea, where Soviet technicians, acting as contractors for the NIOC, currently are conducting seismographic tests. It is estimated that such tests may continue until late 1967. If exploratory drilling is justified, as seems likely, NIOC must negotiate an agreement for exploration and marketing.

16. Soviet assistance to other countries in the search for petroleum traditionally involves no risk of Soviet capital. The host country must insure payment of exploration costs, whether or not petroleum is found, and the USSR is repaid for its costs of exploration from established credits or in petroleum. Western oil operators, on the other hand, accept the financial risks involved in exploration, and the host country has no obligation to reimburse the operator if petroleum is not found.

17. The areas in the south relinquished by the Consortium are parcels that were the least promising of the Agreement Area; otherwise the Consortium would have exploited them or have relinquished other land. The USSR, recognizing this, probably would not be willing to provide risk capital in a venture in these areas, which are remote from the principal Soviet domestic and export markets.

18. The Soviet position with respect to the costs of exploration offshore in the Caspian, and repeated in connection with its offer to explore the "free areas," follows the traditional Soviet pattern of requiring reimbursement even if oil is not found. Iran, guided by its experience with Western operators, insists that the USSR accept the risks of exploration.

19. It is unlikely that any Western oil operator would risk capital in a search for oil offshore, or even onshore, in the Caspian area because of the difficulty of moving oil from that remote area to Western markets. The USSR, however, if convinced on the basis of its reportedly favorable seismographic test results that exploration did not represent a risk, might retreat from its current position and agree to provide risk capital for the venture. The Caspian area is much closer to Soviet than to Western markets.

20. From the Iranian point of view, there are arguments against accepting the Soviet terms for exploration in the south. Proved oil reserves in Iran are adequate for foreseeable needs, and it is questionable whether Iran should provide risk capital for exploration where prospects are less favorable than elsewhere. Furthermore, if Iran should open the relinquished areas to bids, there probably are Western oil interests not included in the Consortium that would be willing to risk capital and, possibly, to pay Iran a bonus for the opportunity to explore for oil.

Economic Advantages to Iran

21. Examination of the terms of existing agreements between the USSR and Iran involving oil and gas suggests that significant economic gains will accrue to both parties, and that the net economic advantage probably lies with Iran. During the 15 years of the gas supply contract with the USSR, Iran will realize a return of almost $1 billion on the export of gas. It is unlikely that the Consortium

or Iran could have provided any other market for an equivalent high level of production and the gas would have been flared. In exchange for this "windfall," Iran will have repaid the loans obtained from the USSR to finance the steel mill complex, the heavy machinery plant, the military goods, and the gas pipeline, and will have accumulated over $500 million in credits with the USSR. The completed facilities will provide a strong base for Iran's industrialization program, particularly in the central provinces; will facilitate exploitation of Iran's natural resources -- coal, iron ore, lime, hydro-power, and natural gas; and will provide employment for an unspecified, but presumably large, number of persons during the construction period and indefinitely beyond. Moreover, Iran will have diversified its markets for exports in much the same way that Western oil operators have diversified their sources of supply.

22. Iran will have to obtain between $300 million and $400 million to supplement the Soviet credit and local financial resources in order to construct the steel mill complex, the heavy machinery plant, and the gas pipeline. However, if the steel mill complex operates at its designed annual capacity of about 600,000 tons and produces steel products to meet all of Iran's needs, as claimed, foreign exchange savings up to $100 million per year may be effected. In three or four years these savings would equal the foreign exchange borrowings for all of these capital expansion projects. Iran's foreign exchange borrowings to support the existing agreements appear to be insignificant, also, in terms of its anticipated earnings from oil exports. In 1967, Iran will earn the equivalent of between $600 million and $700 million from oil sales; by the mid-1970's, earnings probably will exceed $1 billion per year.

23. Iran's exports of oil might be competing in world markets against oil or gas released for export from the USSR by Soviet access to gas from Iran. In the unlikely event that Soviet gas or oil equal to the Soviet imports of

10 billion cubic meters of Iranian gas should find its way into Western European markets, the maximum amount of oil that might be displaced (based on energy content of oil and gas) would be the equivalent of about 200,000 barrels per day (bpd). By 1970, Western Europe's demand for oil imports will be about 12 million bpd, and the additional Soviet gas or oil would represent less than 2 percent of Western Europe's total oil import demand. Should the gas deliveries to the USSR be doubled (20 billion cubic meters per year), the share would still be insignificant in terms of Western Europe's import demand. To the extent that any oil would be displaced in Western Europe, all oil suppliers, not only Iran, would presumably be affected.

24. Existing agreements may form the basis for a long period of amicable relations between Iran and the Consortium. The USSR, Iran, and the Consortium recognize one another's importance. Iran's credit in world money markets is dependent on its continued export of oil through the marketing apparatus of the members of the Consortium. The USSR knows that the successful completion of the capital projects to which it is a party is dependent on Iran's ability to obtain supplementary foreign exchange. Both the USSR and Iran know, moreover, that the successful fulfillment of the gas supply contract under present circumstances depends on the uninterrupted production of oil -- a precondition of gas production. For these reasons the Iranian-Soviet agreement could represent security for the Consortium.

Economic Advantages to the USSR

25. The economic advantages to the USSR of the cooperation agreement appear not to be as great as the advantages to Iran. It is not possible to assess the extent of Soviet political motivation, but the historical pattern of Soviet activities of this type indicates that they are rarely, if ever, negotiated solely for political purposes. There is clear evidence that the USSR does not ignore hard-headed economic considerations in its foreign

trade activities. For example, during recent negotiations involving the possible sale of Soviet gas to Italy, the USSR departed from an earlier offer to accept Italian goods in exchange for gas and indicated that part of the payment for the gas must be made in hard currencies.

26. The credits extended to Iran by the USSR will not require the use of any Soviet hard currency reserves, and the technical services and equipment to be provided to Iran are well within Soviet capabilities. The industrial projects now planned for Iran will create a market for future Soviet exports of maintenance and replacement parts. Moreover, Iran will represent a captive market for Soviet exports to the extent of the credits that Iran accumulates as a result of the gas sales.

27. The USSR has a legitimate but not essential need for Iranian gas. Production of gas in the USSR exceeded 140 billion cubic meters in 1966, and the planned imports of 10 billion cubic meters will represent only a small part of the total gas supply of the Soviet Union. However, growing demands and dwindling local supplies of gas in the Transcaucasus make the imports from Iran attractive and convenient for that area* in much the same way that Canadian gas imported into the United States is attractive to the Pacific Northwest. Supplemental supplies of gas would otherwise be moved south from Stavropol where local production probably also will decline in the foreseeable future. Imported Iranian gas in excess of local demand could enter the Soviet gas net at Stavropol and be used elsewhere in the USSR, thus providing greater flexibility to the Soviet distribution system.

28. It is not known why the USSR would need an additional 10 billion cubic meters of gas from Iran. Unless

* Gas transmission facilities in the Transcaucasus and north to Stavropol now are inadequate to handle 10 billion cubic meters per year, but probably will be expanded as necessary.

the demand for gas increases inordinately in the next few years, the USSR probably does not have a domestic need for the 20 billion cubic meters it has offered to accept. However, having access to that gas, the USSR might be able to export additional gas to Eastern Europe and to initiate gas deliveries to Western Europe. Whether or not Iranian gas is available, the USSR will have the capability of supplying those two markets by 1975. A multibillion dollar gas supply system with an ultimate annual capacity of 130 billion cubic meters is now under construction. The system is designed primarily to distribute gas from Western Siberia to domestic gas consumers in the European USSR but has sufficient additional capacity to serve export needs.

29. The Soviet offer to explore and exploit oil resources in the "free areas" of Iran may have been motivated by a desire to have access to foreign crude oil, which if consumed in the USSR would free Soviet oil for export to Eastern Europe and to Free World markets. The USSR now provides about three-quarters of the total oil supplies of the Eastern European Communist countries. Expansion of the capacity of the Friendship Pipeline from the USSR to Eastern Europe and the supply of capital goods by Poland and Czechoslovakia for use in support of the Soviet oil industry indicate that the USSR will continue to supply oil to the Communist countries of Eastern Europe. There is evidence, however, that these countries plan to supplement their supplies of petroleum with imports from Free World sources. Some of this supplemental petroleum could be supplied by Iran.

30. Iran has an option to take part of its royalty payments from the Consortium in crude oil in accordance with the following schedule:

1967	40,000 bpd	(maximum)
1968	[illegible]	"
1969	[illegible] bpd	"
1970	100,000 bpd	"
1971	120,000 bpd	"

Iran stipulated that sales of this oil would be made only to Bulgaria, Czechoslovakia, Hungary, Poland, and Rumania. (Iran indicated subsequently that it wanted to add East Germany to the agreed list of export markets.) Oil that the USSR could acquire from Iran might indirectly compete with oil that Iran could itself market in Eastern Europe.

31. The growth of Soviet oil exports to Free World countries has leveled off in recent years for a variety of reasons including competition and reluctance of many Western consumers to buy Soviet oil. In 1966, such exports represented about 5 percent of the total demand of Free World countries other than the United States and corresponded to about 15 percent of gross crude oil production in the USSR. To maintain its share of that market in 1971, the USSR would have to export the equivalent of about 17 percent of its anticipated crude oil production. The USSR probably could import and use moderate quantities of Iranian oil to maintain the Soviet position in Western markets and could do so without displacing Iranian oil from its established markets.

32. The USSR may find it advantageous to explore for oil in Iran. Costs of oil production in the USSR have increased in recent years as exploitation of less favorable deposits has become necessary. Access to oil from new producing areas in Iran would give the USSR greater bargaining flexibility in world markets. This would be especially true if the oil could be obtained at low cost and without risk of Soviet capital.