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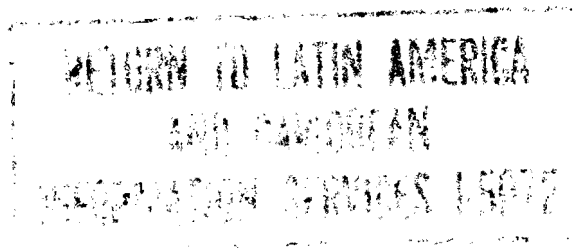
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TRINIDAD AND TOBAGO

ECONOMIC MISSION
(September 23 - October 11, 1991)

HYDROCARBON SECTOR REPORT

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MAP

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SUMMARY

(i) The economy of Trinidad and Tobago (TT) will continue to be greatly influenced by the performance of the petroleum sector in the medium to long term as a result of government revenues and foreign exchange earnings being largely derived from that sector. While petroleum prices increased and production expanded in the 70's and early 80's, the trend for the decade of the 90's points towards declining reserves and production and at best a maintenance of crude oil prices in real terms. Despite efforts made by the government of Trinidad and Tobago (GOTT) through state enterprises investments to promote oil reserves and production build up as well as natural gas use, the country faces a key challenge for the early 90's as follows : how could GOTT at least maintain revenues and foreign exchange earnings in the medium term in order to support economic growth and diversification ?

(ii) GOTT is concerned about this challenge and should seize this opportunity to review its policy and strategy in the hydrocarbon sector, its institutional framework and the state companies role and restructuring with the aim of promoting improved sector efficiency and increased private sector investments. In particular the GOTT may need to assess, clarify and make more transparent the role of the state in the hydrocarbon sector, define a strategy consistent with its macroeconomic constraints and provide incentives for the efficient growth of the petroleum and natural gas sectors.

(iii) The mission recommends that GOTT explicitly includes in its hydrocarbon policy statement (i) that the government actions in the sector should be consistent with its macroeconomic constraints and (ii) the relative importance of a direct role of the state in the future. The mission also considers there is a need to strengthen the policy, strategic and regulatory roles of the government to enable it to lead the policy dialogue, orient the strategy and monitor efficiently all activities of the sector. There are three areas where the government effort in this respect is more needed : exploration and production, natural gas, and petroleum products distribution .

(iv) In exploration and production, there is a need for a study to evaluate the different policy options in terms of the need for and the level of government participation taking into account the results of the ongoing taxation study financed by the Bank and input from an additional technical economic study of the sedimentary basins geological prospects which the mission recommends.

(v) In the natural gas sector, there is an urgent need for a coherent strategy to promote an efficient development of the sector. There are several issues that need to be addressed : expansion of reserves and utilization, incentives for users, transporter and producers to improve their cost efficiency, pricing and taxation, role of NGC and interrelationship of the natural gas sector with the power sector.

(vi) In the petroleum products distribution sector, there is a need to eliminate large subsidies to all consumers and target the socially necessary ones to those in need. There is also a need to correct major distortions in pricing structure to promote the use of Kerosene over the more valuable LPG product. Except for the assignment of excise taxes, VAT and margins to distributors, should the GOTT remain involved in the process of determination of petroleum products prices or should the GOTT provide automatic mechanisms for adjustment of petroleum products prices so that the petroleum products market could be completely deregulated? The government should also address the need for NPMC to improve its efficiency. Should GOTT achieve it through regulations or through the introduction of competition in the wholesale and distribution of petroleum products? It appears that the petroleum products distribution sector requires additional analysis for specific recommendations on regulations, pricing, taxation, subsidies and role of NPMC.

(vii) Finally the mission recommends that the state companies now being reorganized under a holding should be provided with real autonomy but also made accountable to the state through clear performance criteria, including both qualitative and quantitative. The state companies management should also be made as stable as possible by being less affected by political changes. Further restructuring of state companies to improve their efficiency would require a study to evaluate core businesses which should remain with them and those others which should either be spinned off to the private sector or managed under association or joint venture arrangements. The study that follows discusses in greater details the above findings and conclude with several recommendations.

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Evolution of the Petroleum Sector

1. Importance of oil and natural gas in the TT energy balance continuing in the future. The energy balance of TT is dominated by oil and gas. In 1988, in terms of primary energy, oil and natural gas represent 64 and 36% respectively of production with about 89% of the oil produced being exported to the USA in the form of crude oil and petroleum products. About 25% of the net supply of natural gas is used to generate power (Table 3), making the power sector of TT almost 100% dependent on natural gas. In terms of final energy consumption, natural gas constitute about 74% while electricity and petroleum products represent 7 and 19 % respectively. In this case, natural gas is mainly consumed in the industrial/agricultural sector while petroleum products are consumed mainly in the transportation sector. Electricity is consumed 60/40 by the industrial and the residential sectors. Final energy consumption per capita and per unit of output (GDP) are among the highest in the Latin American region. Given the sizable oil and natural gas resources of TT (see para. 5), the energy balance in TT will continue to be highly dependent on these two fuels well into the 21st century.

2. Importance of the petroleum and natural sectors for the GOTT revenues and foreign exchange. As shown below, the oil and natural gas sectors have contributed about 27% of GDP over the last 5 years as shown below :

	Constant 1985 Prices (Million \$TT)				
Year	1986	1987	1988	1989	1990
GDP	17,500	16627	16057	16030	16135
Out of which Petroleum	4712 (26.9%)	4378 (26.3%)	4329 (27%)	4303 (26.8%)	4414 (27.4%)

Source : Central Statistical Office , Trinidad and Tobago

3. In terms of GOTT total revenues, the oil and natural gas sectors have contributed an increasing share of revenues from 32% in 1986 to 41% in 1990 as shown below :

Year	Current Prices (Million \$TT)				
	1986	1987	1988	1989	1990
GOTT Revenues	5235	5232	4937	4973	5645
Out of which					
Petroleum	1691 (32%)	1958 (37%)	1538 (31%)	2004 (40%)	2317* (41%)

Source : Central Statistical Office, Trinidad and Tobago

* Does not include value added taxes (about \$TT 100 million) implemented by the government starting in 1990.

4. The GOTT revenues from the petroleum sector shown above comprise payments made by national and international companies operating in the sector as royalties (21%), supplemental petroleum tax and income tax (62%) and by local consumers of petroleum products as an excise tax (12%) as well as some other small levies. The US\$1.00 per barrel levy on production is not included in the above since it serves to compensate for petroleum products subsidies. (see para. 16(viii) and Table 7).

5. Oil reserves and production have been steadily falling since 1978 (Table 1), the reserves to production ratio has reached one of the lowest level in the world (about 11 years of reserves at the 1990 average rate of production) and production in 1990 was only 65% of that of 1978. It is interesting to note that on a per well oil production basis, TT is close to that of Canada, Peru and Argentina. This means very low per well productivity which has negative impact on oil development projects economics. While the country may not lack crude oil reserves to meet its small internal needs in the long term, there is a concern that a rapid decline of production and corresponding reduction in exports of oil derived products would set in unless new reserves are found soon .

6. The natural gas reserves of TT remain very high despite a marked steady decline from the level reached in 1985 (Table 1). Most of the natural gas is being produced by AMOCO (about 80%) mainly in the form of non associated gas. The reserves to production ratio has reached 38 (38 years of reserves at the 1990 average rate of natural gas production). This ratio is however not comfortable since consumption of natural gas by the industrial and the power sectors will increase in the future. A recent study^{1/} has shown that the reserves to production ratio of natural gas may decline to only about 23 years

^{1/} C. Khelil. Natural Gas in Latin America - Market Structure and Future Outlook - ARPEL Meeting - La Paz, Bolivia - May 1990

by the year 2000 based on optimistic assumption of additional discoveries of natural gas in the future and a normal growth in consumption by the industrial and the power sectors. As a result, it is important that GOTT should have a strategy encouraging expansion of reserves and a more rational use of natural gas through appropriate pricing policy and other measures.

7. It is important also to note that TT has made a considerable effort to use natural gas and avoid its flaring (Table 2). This is reflected in the ratio of natural gas use to gross production which has steadily increased from 38% in 1982 to 72% in 1991. There still remains much effort to be done to reach an acceptable industry level of about 85%. This would mean avoiding flaring of an estimated 30 MMMCF (billion cubic feet) per year of natural gas which is the energy equivalent of about 5 MMBLS (million barrels) of oil a year (just slightly less than the country's internal consumption of oil products in 1990, Table 8). In order to achieve the industry standard, companies should strive to close their gas lift system to make minimum use of gas. Due to the high cost of avoiding flaring of associated gas, it would be convenient for GOTT to consider requesting the assistance of the Bank Global Environmental Facility (GEF) to partially finance these projects on the basis that they would help avoid global warming. For example, financing for similar projects is being considered now for natural gas flaring projects in China.

8. Exploration efforts, expressed in terms of footage drilled to test whether there is an oil or gas find, have constituted a small percentage (on average 10% over the 1986-1990 period) of the total drilling effort as shown below :

Footage Drilled in Trinidad & Tobago

Year	1986	1987	1988	1989	1990
Total(1)	729712	622488	582775	446871	503602
Exploration	73500	37465	60139	82662	53014
Percent	10	6	10	18	11

Source : Ministry of Energy, Trinidad and Tobago, October 1991

(1) Includes Exploration and Development Footage Drilled.

This ratio means that more effort has been put in the past in developing existing reserves than finding new ones. As mentioned above this strategy has led to a decline in reserves and production of oil. Consequently GOTT policy should focus more on attracting new investments in exploration.

9. Impact on future production. While there are several exploration investments that are planned by international oil companies in the medium term, these investments in addition to those planned by the national oil companies (TRINTOC, TRINTOPEC and TRINMAR) (See Table 5 for meaning of company logos) will have little impact on the medium term production level since 3 to 4 years are generally needed for finding and developing successful discoveries of oil. On the other hand, while there are several projects for heavy oil recovery, secondary recovery and liquid extraction from natural gas, the impact of these investments on oil production will also be marginal because

their contribution to oil production is rather small. Oil production forecasts made recently by the Ministry of Energy and reviewed by the Bank mission (Table 4) appear to be realistic. They show a steady decline of oil production during the first half of the 1990's. It is doubtful that new discoveries during this period would have any impact on this forecast.

10. Based on an optimistic forecast of US\$20-30 million/year^{2/} exploration drilling investments by both foreign and national oil companies (see Table 9 for list) over the first half of the 1990's, the mission estimates that production level decline may see a reversal during the second half of the 1990's. It is important to note that, while AMOCO's contribution to production was 47% in 1991, it would represent only 36% by 1996. The national oil companies would control about 50% of the production by 1996 as compared to only 43% in 1991. This only serves to reinforce the important role GOTT allocated to state oil companies in the recent past.

11. The policy followed in the recent past by the GOTT has primarily relied on state enterprises to carry out both high risk investments in exploration as well as low/medium risk investments in development and production (such as higher cost secondary recovery/liquid extraction projects), infrastructure projects (such as gas pipelines) and petrochemicals such as Methanol, Urea and Ammonia plants. In addition, GOTT is committed to higher risk investments in the Pointe-a-Pierre refinery conversion.

12. The GOTT policy relied also on a national oil company monopoly, the National Petroleum Marketing Company (NPMC), for the wholesale of petroleum products and their distribution without at the same time putting in place a regulatory framework to improve efficiency of the state monopoly. The same policy also relied on the National Gas Company (NGC) de-facto monopoly to process, purchase, transport and distribute natural gas without a regulatory framework clarifying its role and giving it an incentive to improve its efficiency.

13. This policy has led to an ever important role of the state companies in the hydrocarbon sector as shown by (i) the increasing debt service payments as a percent of the total debt payments of all state companies, statutory boards and public utilities, from 39% in 1984 to 54% in 1991 (Table 5); and (ii) the ever increasing investments of state companies of the hydrocarbon as a percent of investments made by all state companies, statutory boards and public utilities, from 44% in 1984 to 79 in 1991 (Table 6). This policy cannot be sustained in an environment where more and more resources would be required by the GOTT to address socio-economic problems.

14. Since GOTT objective is to at least maintain or increase government revenues and the country's foreign exchange earnings, this could only be achieved through an increase in reserves and production of hydrocarbons in the medium to long term, assuming that crude oil prices remain stable at their present level in real terms. This objective could be achieved through (i) an improvement in efficiency (in terms of costs) of both the state and the

^{2/} Ministry of Energy, Trinidad and Tobago

private sector companies; and (iii) an increase in investments, primarily by the private sector.

Major Issues in the Hydrocarbon Sector

15. **Need for a clear hydrocarbon policy.** While the official GOTT policy, as stated in section XV -Petroleum Policy- of the government four year macroeconomic program, is a step in the right direction because it defines the objectives and the investments requirements, both the policy and the strategy are not very clear. In terms of the hydrocarbon policy, it should fit within the country's economic constraints, i.e., in terms of limits on public sector investments, fiscal deficit and debt; this in turn has implications for allocation of resources to state enterprises and the efficiency of their resource uses;

16. **In terms of strategy, there is a need to define:**

(i) the role of the state; should the state oil companies (SOCs) continue to participate in risk investments in exploration or only in the development and production stages? Would the SOC's have the resources to contribute in both the exploration and development efforts of their private partners? Is the policy of having the national oil companies carried by the foreign companies in the exploration phase a good policy in terms of cost to the country? Is the policy to continue to have the state participate as owner and manager of higher risk (in terms of the country risk) ventures such as the refinery conversion and the petrochemical projects? Why not isolate the economy from negative shocks deriving from a possible bad performance of these projects through non recourse financing of these projects and reducing GOTT participation?

(ii) a well thought out government (from the government point of view rather than that of state enterprises) strategy in the exploration, production, refining, local distribution and export marketing of petroleum products.

(iii) a badly needed government strategy in the natural gas sector. Should the government continue to participate in all aspects of the natural gas business chain or should it strive to create the appropriate environment so that the private sector takes on a more active role in a very capital intensive activity? Should not this strategy be based on an assessment of the demand in the various sectors: power, industry (steel, petrochemicals, refining) and residential users, a corresponding assessment of the supply of gas and costs associated with exploration, production, transport, and distribution, an assessment of the netback value of gas use in various sectors and guidelines on pricing policy that takes into account the legitimate needs of the government in terms of taxation (non-existent now), the need of users to take advantage of a plentiful and cheap energy resource and the need of various operators for an adequate return on their investments? The natural gas pricing level and structure should be transparent such that the GOTT is very clear on revenues that are foregone or the subsidies the GOTT is providing to the petrochemical industries or the foreign consumer.

(iv) the role for the National Gas Company(NGC). Should the government then review the role of NGC in light of the findings of the study recommended above and review the status of NGC as a company that has a de-facto monopoly over the purchase, processing and distribution of natural gas ? Should not the regulations make it very clear that any legitimate operator can produce, process, transport and sell natural gas either locally or in the international market? Perceptions by the private sector as to real intentions of GOTT in this sector are important because they condition private sector companies willingness to invest in the hydrocarbon sector.

(v) the role for the National Petroleum Market Company (NPMC). Should NPMC continue as a monopoly? If so what regulations should the GOTT put in place to improve its efficiency? While the future sales of NPMC shares within the framework of the setting up of the national investment company will bring with it closer supervision by the public, introduction of competition in wholesale transport and distribution may prove to be necessary to improve efficiency as an alternative to government regulations. Possible subsidies to areas of the country that may not economically justify the construction of new retail stations should be transparent and handled through direct treasury transfers.

(vi) the reorganization of the petroleum sector state enterprises to include their corporatization and commercialization. The ongoing reorganization (see Annex) offers an opportunity to the government to reflect on what it should do next. While the enterprises have enjoyed a large autonomy in the past, there is a need to ensure they are accountable for their performance. Clear performance criteria should be spelled out. These could consist of quantitative (physical and financial) and qualitative (information systems, planning, environment etc.). The members of the board should provide continuity through succeeding political administrations by making their nominations staggered and limited in time.

(vii) how the policy and regulatory roles of the GOTT should be strengthened. The Ministry of Energy need additional resources and expertise to analyze and develop policy options in the sector and prepare studies and the required regulations that may be needed in the natural gas and petroleum products distribution subsectors. While the power sector is outside the scope of this work, it is difficult not to address similar issues that concern the power utilities in TT. These power sector specific issues could eventually be handled through the planned Oil and Energy Commission. In this respect, it is important to note in this respect that the future of the power sector is tied to the restructuring of the gas sector since the latter provides a unique opportunity for private sector investments in the power sector with the possibility of being remunerated in hard currency through gas liquids produced and exported in the process.

(viii) petroleum products and natural gas pricing. The hydrocarbon policy statement of GOTT is also silent on the role of petroleum products and natural gas pricing. In a country which consumes 50% of its production of gasoline and LPG originating from local crude (Table 8), is the pricing level and structure reasonable to effect the best allocation of the country's resources ? Do the prices recover all costs to the economy including damage to

the environment and the roads. Should the GOTT continue to subsidize the power sector through low gas prices to that sector, at the rate of about US\$40 million a year^{3/}? Should the GOTT continue to subsidize all petroleum products, at the rate of 20% of all revenues from sales of these products (Table 7), along with all those products that are deemed being used by needy consumers?

While those subsidies are compensated by a levy (US\$1/bbl) on production, this is equivalent to an additional royalty (equivalent to 5 to 7 % of companies gross income) on oil producers. This levy has a negative impact, though not easily quantifiable, on exploration and production project economics and resulting efforts. On the other hand, the levy provides the wrong message to the industry that the GOTT policy is not predictable. The GOTT should analyze carefully the need for subsidies and what category of the population deserves the subsidy. In addition it should analyze whether Kerosene should not be encouraged so that the LPG thus saved could be exported. Subsidies should be preferably targeted to those consumers who need them most. Subsidies, just like taxes, should be transparent in the pricing structure so that both the consumers and the GOTT are aware of the costs and benefits received.

As concern natural gas prices, NGC purchases non associated natural gas at the wellhead from various operators, but mainly from AMOCO which produces about 80% of the total. NGC also receives free of charge (as per the petroleum legislation) associated natural gas at the wellhead. As mentioned previously (para. 7) this is the most expensive gas to process and recompress before transporting it. Associated natural gas volumes however constitute only a small percentage of the total volumes of natural gas produced in the country. NGC however invests in the processing facilities to extract the liquids from the natural gas which is then transported to the various users (Table 3) such as the fertilizer, methanol, steel, cement and power plants. The TRINTOC refinery gets its natural gas directly from TRINMAR where TRINTOC and TRINTOPEC own about 2/3 and TEXACO about 1/3 of the shares.

An existing contract due to expire in 1994 provides that AMOCO delivers the gas at about US\$0.20 per MCF to NGC for the power sector. Another contract due to expire in 1999 provides that AMOCO delivers gas at about US\$0.80 per MCF to NGC for the industrial and petrochemical sectors. On the other hand, TEXACO receives about US\$1.00 per MCF for the gas it delivers to NGC. Prices are directly negotiated between NGC and the operators with sometimes the involvement of the staff of the MOE. NGC then adds to the negotiated price its margin for transporting and distributing to arrive at the price of gas to users. There is no methodological basis for gas sale/purchase price to users and producers taking into account, for example, as an upper limit the price of alternative fuels for which gas is substituting or as a floor price the long run marginal cost of gas. Moreover there are no transparent taxes (excise or other) or subsidies that are applied to prices of natural gas sold to users. As a result there are no incentives for improvement

^{3/} Based on 1990 consumption (Table 3) and US\$0.80 per MCF price differential with the industrial sector.

of cost efficiency of either the producers, NGC or the users. The latter are confiscating for themselves a share of the economic rent (could be as much as the difference between the ex-tax price of the substitute fuel and the price now paid for the gas) which could have gone to the state in the form of excise taxes. As a result, there is an urgent need for a gas utilization study which should look at these particular issues in addition to regulatory issues and the role of NGC.

Petroleum Legislation and Taxation in Upstream Operations

17. **New petroleum taxation arrangements.** The ongoing work by consultants (R. Pleasant & Associates) soon to be submitted to the GOTT, will propose specific recommendations on the possible new taxation arrangements that could improve petroleum contracts terms in order to attract more interest on the part of international oil companies. The study is very complex and requires the simulation of possible scenarios of oil reserves discoveries under different taxation conditions. While awaiting the consultants specific proposals, the mission recommendations will be limited meanwhile to other conditions (other than specific tax and incentives assessments) which are needed to attract more interest on the part of international oil companies.

18. **Attractiveness of Trinidad to Petroleum Investors.** There are several reasons why TT is attractive to petroleum investors. These include:

- small local market consumption of petroleum products which provides opportunity for investors to export crude. As a result, there is less risk for the company to be required by the GOTT to supply the local market and be dependent on the treasury for payments in foreign exchange;

- good geological prospects in tested basins, though possibly discoveries may be small. There is a reasonable success ratio since one in four wells found oil. AMOCO now exports all its crude production, including the share of the GOTT in the form of royalty.

- closeness to major markets of the USA. Crude oil and petroleum products are now exported to the USA.

- good expertise in petroleum exploration/production developed through almost a century of tradition in oil production;.

- by reviewing the role of the state companies and the regulatory agency, the GOTT would make the state companies commercially oriented, better coordinated and more constrained by the country's economic strategy. The MOE would strengthen the regulatory role to expedite negotiations and eliminate existing (both explicit and implicit) bottlenecks in the petroleum legislation/contractual framework and management of the sector. This would lead to a better management by GOTT of the policy and regulatory issues and more efficiency oriented state companies.

- probability of finding natural gas in the different sedimentary basins is high. Natural gas has many advantages. It could be used for fuel, maintenance of oil production through gas-lift or reinjection in oil

reservoirs or sold through an existing pipeline system. With the appropriate amendments recommended above, natural gas could be further developed to provide added revenues to the GOTT.

19. **Requirements for an Attractive Petroleum Contract.** There are several basic requirements which are sought by the oil sector investors :

- stability of the tax and fiscal package;
- predictability of the role of the state oil companies as participants in the contract.
- need to attract as many companies as possible because of the importance of new technology and ideas for finding new reserves and developing in a cost effective manner secondary and heavy oil reserves;
- clarify more the role of private companies in natural gas development, transportation, marketing and export and make it explicit that oil companies are not required (though this has not been implemented in the past) to build a refinery whenever a 100,000 BPD oil field is found. On the other hand, if this leverage is used to force companies to invest in the country in other lines of businesses it may be counterproductive, as shown by experience in other countries. Cooperation with the private sector should be built on constant dialogue to seek its views and its cooperation in mutually beneficial projects.
- help promote a local private oil sector that is not dependent on the state sector to guarantee prices (ex: service contracts). Rather, the local private sector should take the risks and rewards that come with oil exploration and development;
- role of the state companies in exploration/production should be clarified; the private companies should know beforehand on what basis state companies would participate in exploration and development in joint venture or other type of arrangements;
- need to provide an option of a new production sharing model contract; this could be an alternative to licensing and the existing production sharing contract, providing the flexibility to adjust to production levels and oil prices uncertainties so that government share of revenues would not have to be adjusted whenever there is an upheaval in the crude oil price market or a large discovery is made.
- reduce the impact of the Supplemental Tax(SPT) on companies revenues to the minimum (as planned in 1992); SPT has to be paid now even when the operation is making a loss and as such is a disincentive to companies producing from heavy oil/small reserves/high cost fields; the consultants (R. Pleasant & Associates) are addressing this particular issue and will make specific recommendations.

- pricing of crude produced should be fixed in the contract in relation to market prices and should not necessitate a pricing committee for its determination as is now the case for the AMOCO contract;

- reduce time of negotiations by having a program and adequate staff to negotiate with the international oil companies; if no sufficient local expertise is available, the GOTT should get assistance from specialized consultants;

- levy on production (used by GOTT to compensate for petroleum products subsidies) is a disincentive, more so for heavy oil recovery and secondary recovery oil fields. Subsidies should be handled directly out of treasury funds and targeted to specific group of consumers who are in need.

Findings

1. **Importance of the oil and gas sector to the Trinidad and Tobago economy**

- Oil and natural gas represent 64 and 36% respectively of production of primary energy of TT. 89 % of the oil is exported to the USA market. In terms of final energy consumption, natural gas constitute about 74% while electricity and petroleum products represent 7 and 19% respectively. The power sector is almost entirely dependent on natural gas.

- The oil and gas sector has contributed about 27% of GDP on average over the last 5 years and 41% of GOTT total revenues for the year 1990.

- Oil reserves and production have been steadily falling since 1978. Oil reserves represent only 11 years (one of the lowest in the world) of 1990 production equivalent to 65% of that of 1978. While the country may not lack crude oil to meet its internal needs in the long term, the declining production will affect exports and consequently government revenues .

- Natural gas reserves are large, representing 38 years at the 1990 rate of production. Even assuming normal rates of new gas reserves discoveries, the reserves may decline to only about 23 years life (barely acceptable by international standards) by the year 2000 mainly due to an increase in consumption by the power and petrochemical sectors.

- While TT has made an important effort in reducing flaring of natural gas, the country still continue to flare about 30 billions cubic feet, i.e., 5 million barrels of oil a year which is slightly less than the country's internal consumption of petroleum products in 1990.

- Exploration investments have represented a small percentage of total investments including development, i.e. about 10% over the 1986-1990 period. This means that more effort has been put by the industry in developing existing reserves than adding new ones. This unbalanced strategy has led to the decline in reserves and production.

- Despite the exploration investments that are planned by both private and state companies in the early 1990's, the decline in production will not be reversed until the mid 1990's, assuming the level of investments is maintained year after year.

2. Government policy, strategy and regulations in the hydrocarbon sector.

- During the last 5 years, GOTT has relied on state enterprises to carry out some high risk investments in exploration and secondary recovery projects, reconversion of a refinery and petrochemicals. In the case of petrochemicals the risk was mitigated though by the association of state companies with private foreign partners. It is estimated that the state companies would control 50 % of the production in 1996 compared to only 43% in 1991.

- GOTT relied on the monopoly of NPMC and the de-facto monopoly of NGC in the petroleum products distribution and natural gas purchase/sale businesses, respectively.

- The share of petroleum sector state companies, including the petrochemical companies, in the public enterprises debt and investments have increased by 1.5 times over the period 1984-1991.

- The GOTT hydrocarbon policy does not appear to have been limited by macroeconomic constraints on debt and public sector investments. This policy has important implications in terms of priority and level of allocation of resources and their efficient use by state enterprises.

- There is a large subsidy (about US\$32 million in 1991) to all consumers of petroleum products, equivalent to about 20% of revenues from sales of these products. This subsidy is compensated through a levy on oil producers which is equivalent to an additional 5 to 7% royalty on the companies gross income. The subsidy cannot be justified for all consumers. The levy is a strong disincentive for exploration and production investments .

- There are no regulations governing the petroleum products distribution business which is handled by NPMC as a monopoly.

- GOTT policy in the natural gas sector is not clear. There is a large subsidy to the power sector not easily quantifiable but possibly in the US\$40 million per year range. Industrial users seem to enjoy an implicit subsidy also because natural gas prices do not even include government taxes. There are volumes of gas still being flared that are equivalent to the petroleum products consumption of the country while at the same time TRINTOMAR is investing large amounts in developing new gas reserves.

- There are no regulations governing the natural gas sector defining, for example, the duties and responsibilities of the various operators and the pricing mechanisms and methodology, including taxation and possible subsidies.

- Given the importance of natural gas reserves for power generation (about 25% of all uses) , the power sector pricing issues cannot be neglected within the framework of the government strategy in the natural gas sector. At the same time, the potential for power cogeneration in petrochemical and industrial plants cannot be neglected by the government power sector strategy.

MAJOR RECOMMENDATIONS

Policy, Strategy and Regulatory Framework

- The hydrocarbon policy should fit within the macroeconomic constraints in terms of reduction of the fiscal deficit, public sector expenditures and debt. As a result, the role of the state through the hydrocarbon sector companies should be redefined to take into account those constraints. The major policy objective in the hydrocarbon sector should strive to (i) improve the efficiency (in terms of costs) of both the state and the private sector companies; and (ii) increase investments, primarily by the private sector.

- The establishment of the Oil and Energy Council as a hydrocarbon policy coordinating committee is a step in the right direction to coordinate government policy and give advice to the MOE.

- The MOE should be strengthened, through hiring of competent and experienced staff and technical assistance, to enable it to analyze and recommend hydrocarbon policy and strategy options in the hydrocarbon sector. In particular, the MOE should be able to address important policy and strategy issues in exploration and production, natural gas, petroleum products distribution as well as in the restructuring of the state hydrocarbon sector.

Restructuring of the State Hydrocarbon Sector

- The new holding of the state hydrocarbon sector state companies should be put in place as soon as possible, but only as a first step towards further evaluation of improving the efficiency of the business units comprising the holding. GOTT should analyze further what core businesses should stay with the state entities and what others should be spinned off to the private sector (for example those of high costs or marginally important to the objectives of the holding).

Exploration and Development Strategy

- The ongoing exploration/production tax evaluation study by consultants will lead to important specific recommendations but should also be complemented with measures (see para. 19) to clarify the petroleum legislation, in order to attract more investments by the private sector.

- While all these recommendations should be implemented in the near future by GOTT, there is still a need for the government, through the MOE, to formulate an exploration/production strategy based on an exhaustive technical/economic appraisal of the geological sedimentary basins in the country based on data obtained by the various companies operating in the country.

- Once this study is completed, it would be convenient to proceed with an aggressive exploration promotion campaign to attract more interest of the private sector based on the country's hydrocarbon sector

legal, contractual, technical and economic advantages vis-a-vis the region competitors.

Natural Gas Sector

- The natural gas sector appears to require special attention on the part of the government. There is an urgent need for a coherent long term strategy study which would address the following issues : expansion of gas reserves and production, development of gas utilization (including new export oriented industries), efficiency of producers, transporters and users, pricing, taxation and subsidies, possible need for a regulatory framework and agency, role of NGC and various operators and importance of appropriate regulations in the power sector (pricing, private generation and cogeneration in industry and petrochemicals).

Petroleum Products Distribution Sector

- The petroleum products distribution sector need to be reevaluated in order to promote the least cost supply of products to the consumers and provide the government with adequate revenues in the future. There is a large subsidy (about US\$32 million in 1991) to consumers of all products which is equivalent to about 20% of revenues from sales of these products. This subsidy is financed by a levy of US\$1.00 per barrel of oil produced which is equivalent to about 5% additional royalty paid by producers. This is a strong disincentive for private investors investments. There is a need to evaluate which consumers need to be subsidized and how they should be provided with a subsidy (direct government transfers or a direct tax rebate on the product most commonly used). There is also a need to review the pricing structure of petroleum products to encourage least cost Kerosene to substitute for LPG which is a higher value product that could be exported.

- Moreover NPMC needs to be provided with incentives to become more efficient. It is not apparent whether this could be achieved better by means of regulations of the petroleum products market where NPMC has a monopoly or through the introduction of competition in the wholesale and distribution businesses through complete deregulation of the petroleum products distribution sector.

TRINIDAD AND TOBAGO
ECONOMIC MISSION
HYDROCARBON SECTOR

TABLE 1. OIL AND GAS RESERVES AND PRODUCTION

YEAR	OIL			GAS		
	RESERVES MMBLS	PRODUCTION MMBLS	RATIO	RESERVES MMCF	PRODUCTION MMCF	RATIO Years
1980	655	77.2	8	12000	244*	49
1985	610	63.9	10	10300	266	39
1989	619	56.3	11	9421	253	37
1990	602	55.2	11	8747	228	38
1991**	N.A.	53.3est.		N.A.	240	

Source : Twentieth Century Petroleum Statistics, 1990
Ministry of Energy , Trinidad and Tobago

* 1982

**Based on data up to September 23, 1991

TABLE 2. NATURAL GAS USES

YEAR	USES, MMCF	RATIO : USE/PRODUCTION %
1982	93.4	38
1985	116.1	44
1989	157.3	62
1990	163.2	72
1991**	173.4	72

** Based on data up to September 23, 1991

Note : Uses of gas represent all volumes not vented to the atmosphere.

TRINIDAD AND TOBAGO
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TABLE 3. NATURAL GAS USE BY CONSUMER GROUPS (1)
(Million Cubic Meters/Day)

Year	1985	1986	1987	1988	1989	1990
Consumers						
1. Refinery	1.21	1.24	1.40	1.18	1.09	0.82
2. Fertilizers*	4.72	4.94	4.90	5.97	6.05	7.75
3. Power Generation	3.00	2.95	3.08	3.29	3.30	4.20
4. Cement	0.14	0.20	0.20	0.20	0.21	0.32
5. Methanol	0.91	0.84	1.06	0.99	1.02	1.27
6. Caribbean Ispat**	0.26	0.41	0.52	0.62	0.71	0.91
7. Others	0.22	0.23	0.24	0.26	0.22	0.31
TOTAL	10.46	10.81	11.40	12.51	12.60	15.58(2)

(1) Excludes volumes used in the field, vented to the atmosphere and shrinkage

(2) There is some inconsistency in data furnished by MOE for 1990

* Includes consumption by FERTRIN, TRINGEN I and II, FEDCHEM and UREA Plants

**Steel making company

Source : Ministry of Energy, Trinidad and Tobago

TRINIDAD AND TOBAGO
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TABLE 4. Oil Production (Thousand barrels per Day)

CompanyForecast.....										
	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996
Total	169	155	151	149	151	146	140	137	135	132	
AMOCO1/	88	74	71	73	75	69	63	58	54	51	48
TRINMAR2/	37	38	38	37	34	34	33	32	33	35	36
Marine	37	38	38	37	34	34	33	32	31	30	29
Waterflood Project									2	5	7
TRINTOPEC3/	23	23	22	20	19	19	18	17	16	16	15
TRINTOC4/	20	20	20	19	19	17	17	17	17	17	18
Base Oil	20	20	20	19	19	17	17	17	16	15	14
Heavy Oil Recovery						-	-	-	1	2	4
PREMIUM5/	1	1	1	1	1	1	1	1	1	1	1
TRINTOMAR6/											
SECC Condensate					2	4	5	6	6	5	5
PHOENIX PARK GAS PROCESSORS LTD7/						2	10	10	10	10	10
Natural Gasoline						1	2	2	2	2	2
LPG						1	8	8	8	8	8
Total (Millions62 Barrels /Year)	57	55	55	55	55	53	53	51	50	49	48

- 1/ AMOCO produces offshore on the east coast. Includes condensate.
 2/ TRINMAR is a consortium formed in 1985. 1/3 TRINTOC, 1/3 TRINTOPEC and 1/3 TEXACO. Produces oil only in marine areas.
 3/ TRINTOPEC is one of the two primary state owned oil companies. Produces crude oil, onshore and offshore. Before 1985, produced under TRINIDAD-TESORO and TEXACO.
 4/ TRINTOC is the second state owned company. Produces crude primarily on land, and runs both refineries, buying output from TRINMAR and TRINTOPEC.
 5/ PREMIER CONSOLIDATED is a consortium of 100 percent foreign owned companies which produces oil on land only.
 6/ TRINTOMAR produces gas and natural gas condensates offshore (in the south east coast (SECC) consortium field). Owned by TRINTOC (40%), TRINTOPEC (40%) and the National Gas Company, NGC (20%)
 7/ PHOENIX PARK produces gas liquids from natural gas offtake by SECC and AMOCO. The plant will be managed by CONOCO (40%), PAN WEST (20%) and NGC (40%).

TRINIDAD AND TOBAGO
ECONOMIC MISSION
HYDROCARBON SECTOR

TABLE 5. Interest Payments of State Petroleum
Sector Companies
(Millions TT Dollars)

	1984	1985	1986	1987	1988	1989	1990	1991
	(Jan/Jun)							
<u>Total 1/</u>	300	405	468	531	628	594	474	222
GROUP #1								
TRINTOC*	0	0	30	23	27	26	21	20
TRINTOPEC	9	8	10	8	7	12	7	4
NGC	40	50	53	48	43	37	20	11
NP	-	-	-	1	0	0	0	0
TRINTOMAR	-	-	-	-	-	0	0	18
NEC	-	-	-	-	-	21	17	3
Subtotal 1.	49	58	93	80	77	96	65	56
Subtotal(%)	16	14	20	15	12	16	14	25
GROUP #2								
TTMC	-	19	19	18	20	13	17	7
TTUREA	20	20	32	30	30	23	19	9
FERTRIN	48	37	39	41	36	38	28	5
TRINGEN	-	-	-	20	58	114	93	43
Subtotal 2.	68	76	90	109	144	188	157	63
Subtotal(%)	23	19	19	21	23	32	33	29
Subtotal(1.+2.)	117	134	183	189	221	284	222	119
Subtotal(%)	39	33	39	36	35	48	47	54

1. Total of interest payments of State Enterprises, Statutory Boards and Public Utilities as reported by the Monetary, Fiscal and Trade Division of the Ministry of Finance.

* Trinidad and Tobago Oil Company (TRINTOC); Trinidad and Tobago Petroleum Company (TRINTOPEC); National Gas Company (NGC); National Petroleum Marketing Company (NP); Trinidad and Tobago Marine Petroleum Company (TRINTOMAR); National Energy Company (NEC); Trinidad and Tobago Methanol Company (TTMC); Trinidad and Tobago Urea Company (TTUREA); Fertilizers of Trinidad and Tobago (FERTRIN).

** Figures rounded to the nearest decimal.

TRINIDAD AND TOBAGO
ECONOMIC MISSION
HYDROCARBON SECTOR

TABLE 6. Capital Expenditures of State
Petroleum Sector Companies

Companies	1984	1985	1986	1987	1988	1989	1990	(Jan/Jun) 1991
<u>Total 1/</u>	<u>923</u>	<u>1373</u>	<u>646</u>	<u>835</u>	<u>508</u>	<u>816</u>	<u>692</u>	<u>422</u>
GROUP #1								
TRINTOC	102	147	159	148	153	188	166	105
TRINTOPEC	131	170	139	137	144	185	161	122
NGC	116	9	0	49	10	7	5	4
NP	-	-	-	9	7	4	12	9
TRINTOMAR	-	-	-	-	-	306	193	76
NEC	-	-	-	-	-	0	0	0
<u>Subtotal 1.</u>	<u>349</u>	<u>326</u>	<u>298</u>	<u>343</u>	<u>313</u>	<u>690</u>	<u>537</u>	<u>315</u>
Subtotal (%)	38	24	46	41	62	85	78	75
GROUP #2								
TTMC	-	432	12	0	3	30	27	13
TTUREA	54	1	1	3	0	0	23	0
FERTRIN	6	8	4	4	2	7	5	6
TRINGEN	-	-	-	233	47	4	0	0
<u>Subtotal 2.</u>	<u>60</u>	<u>441</u>	<u>17</u>	<u>240</u>	<u>52</u>	<u>41</u>	<u>56</u>	<u>19</u>
Subtotal (%)	6	31	3	29	10	5	8	4
Subtotal (1.+2.)	409	767	315	583	366	731	593	334
Subtotal(%)	44	55	49	70	72	90	86	79

Source : Ministry of Finance. Monetary, fiscal and Trade Division.

1/ Total of capital expenditures for State enterprises, Statutory Boards and public Utilities.

* See Table 5 for explicit names of companies.

Note : Figures are rounded off to nearest decimal.

Trinidad and Tobago
Table 7. Petroleum Products Pricing, Taxation and Subsidies (Month of August 1991)

TT Cents/Liter	Premium	Regular	Domestic Kerosene	Kerosene	Marine Diesel	Auto Diesel	LPG	National	Fisheries	Company Diesel		Contractor	TOTAL	Percentage, %		
										Auto Local	Foreign					
Cents/Pound																
Wholesale Price	80.888	72.741	72.741	72.012	81.830	88.328	40.000	88.328	88.328	88.328	88.328	88.328	88.328	88.328	88.328	Wholesale Price
Excise Tax	55.000	55.000	20.000	7.000	10.000	10.000	10.000	10.000	10.000	10.000	10.000	10.000	10.000	10.000	10.000	Excise Tax
Filling & Handlg.	0.440	0.440	0.440	0.440	0.440	0.440	0.440	0.440	0.440	0.440	0.440	0.440	0.440	0.440	0.440	Filling & Handlg.
NMPC Margin	8.000	8.000	8.000	8.000	8.000	8.000	28.000	8.000	8.000	8.000	8.000	8.000	8.000	8.000	8.000	NMPC Margin
Reference Price	144.108	138.181	101.181	87.452	80.270	88.788	88.000	88.788	88.788	88.788	88.788	88.788	88.788	88.788	88.788	Reference Price
Retailers Sales																
Selling Price	121.500	117.500	82.500	70.500	0.000	71.500	51.000									Retailers Sales
Subsidy	22.808	18.881	18.881	18.852	0.000	15.288	15.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	Selling Price Subsidy
Subsidy/Trinidad*																
Volume(Liter)	34900087.000	1191734.000	38841.000	503154.000	0.000	5817124.000	7818855.000	0.000	0.000	0.000	0.000	0.000	50287575.000	88.388	88.388	Volume(Liter)
Subsidy(\$TT)	7880207.147	222827.828	7218.525	85284.868	0.000	888218.684	1172528.250	0.000	0.000	0.000	0.000	0.000	10288083.081	88.103	88.103	Subsidy(\$TT)
Subsidy/Tobago*																
Volume(Liter)	1174487.000	338357.000	0.000	15228.000	0.000	85013.000	347858.000	0.000	0.000	0.000	0.000	0.000	1881841.000	3.488	3.488	Volume(Liter)
Subsidy(\$TT)	285528.021	83385.281	0.000	2581.451	0.000	12880.835	52178.400	0.000	0.000	0.000	0.000	0.000	398883.788	3.443	3.443	Subsidy(\$TT)
RET. SALES(\$TT)	43830583.110	1789031.825	31878.825	385458.310	0.000	4220027.855	4184002.810	0.000	0.000	0.000	0.000	0.000	54410883.735	84.813	84.813	RET. SALES(\$TT)
NMPC Sales																
Selling Price	130.500	125.300	80.500	77.400	73.100	78.300	0.000	38.000	38.000	38.000	38.000	38.000	38.000	38.000	38.000	NMPC Sales
Subsidy	13.808	10.881	10.881	10.052	7.170	8.488	0.000	50.788	50.788	50.788	50.788	50.788	50.788	50.788	50.788	Selling Price Subsidy
Subsidy/Trinidad*																
Volume (Liter)	575372.000	0.000	815.000	127887.000	10810.000	1905033.000	0.000	380898.000	507483.000	258003.000	3787588.000	3787588.000	8.700	8.700	8.700	Volume(Liter)
Subsidy(\$TT)	78286.822	0.000	85.688	12853.181	782.247	181337.245	0.000	183427.858	257848.121	131845.540	838057.513	838057.513	7.258	7.258	7.258	Subsidy(\$TT)
Subsidy/Tobago*																
Volume(Liter)	48558.000	0.000	0.000	0.000	0.000	188758.000	0.000	0.000	0.000	0.000	0.000	0.000	238312.000	0.428	0.428	Volume(Liter)
Subsidy(\$TT)	8743.560	0.000	0.000	0.000	0.000	18070.438	0.000	0.000	0.000	0.000	0.000	0.000	22814.018	0.188	0.188	Subsidy(\$TT)
NMPC SALES(\$TT)	815531.040	0.000	558.575	88988.058	7875.210	1840218.787	0.000	137158.580	182887.480	83348.080	2878458.780	2878458.780	5.187	5.187	5.187	NMPC SALES(\$TT)
TOTAL																
TOT. SALES (\$TT)	44848114.150	1789031.825	32435.400	484428.388	7875.210	5880247.742	4184002.810	137158.580	182887.480	83348.080	57387440.525	57387440.525	100.000	100.000	100.000	TOT. SALES (\$TT)
EXCIS. TAX REV(\$TT)	20184715.100	842100.050	7851.200	45237.430	1081.000	788682.800	0.000	380898.800	50748.300	25800.300	21885488.580	21885488.580	44.720	44.720	44.720	EXCIS. TAX REV(\$TT)
TOT. SUBSIDY(\$TT)	8240775.371	288023.110	7284.213	100728.307	782.247	1078804.878	1224708.850	183427.858	257848.121	131845.540	11521628.388	11521628.388	23.620	23.620	23.620	TOT. SUBSIDY(\$TT)
Subsidy/Sales (%)	18.458	15.888	22.458	21.888	9.808	18.405	29.412	141.025	141.025	141.025	20.077	20.077	20.077	20.077	20.077	Subsidy/Sales (%)
Excise Tax/Sales (%)	45.210	48.808	24.208	9.740	13.880	13.848	0.000	27.778	27.778	27.778	38.328	38.328	38.328	38.328	38.328	Excise Tax/Sales (%)

Note: All volumes in liter except for LPG in Pounds.
A value added tax of 15% of retail price is paid by consumers on all products.
Wholesale price is the price charged by Trinloc to NPMC. In addition Trinloc charges a filling and handling charge to NPMC.
NPMC does not distribute LPG. This is carried out by private distributors subcontracted by NPMC. These receive fees for bottling (8.5 cents/#), distributing (10.0 cents/#) and retailing (7.5 cents/#).
NPMC distributes a small volume of petroleum products directly to large consumers.

Source : National Marketing Petroleum Company- Data for August 1991.

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TRINIDAD AND TOBAGO
Economic Mission
Hydrocarbon Sector

Table 8. Production and Utilization of
Crude Oil and Refined Products

	1986	1987	1988	1989	1990
	(in thousands of barrels)				
Crude oil					
Production	81.840	56.840	55.057	54.509	55.042
AMOCO	32.038	27.001	25.581	26.478	27.406
Other	29.803	29.84	29.476	28.031	27.636
Imports	1.58	3.412	2.58	1.021	5.821
Under processing arrangement	778	3.294	2.58	1.021	5.821
Other	784	118	-	-	-
Exports	32.887	28.37	27.074	28.722	27.5
Refinery input 1/	30.062	31.495	31.848	30.828	33.412
Supply to stocks (opening stocks)	271	187	-1.103	-2.018	-249
	2.663	2.934	3.121	2.018	2.249
Refined products					
Refinery output 2/	30.029	31.979	30.599	28.957	32.697
LPG	740	781	598	708	788
Mogas	6.259	8.511	5.874	4.731	6.128
Avgas	58	85	18	4	90
Av turbine	2.408	2.295	3.574	2.777	3.268
Kerosene	688	887	-	-	-
Gas oil	3.704	4.808	4.74	4.289	4.886
Diesel oil	150	-	55	-	-
Fuel oil	18.001	19.235	18.098	14.423	18.412
Lubes/greases	39	77	14	-	-
Bitumen	179	125	215	248	138
Petrochemicals	38	13	38	138	71
Unfinished 3/	-213	-4.598	-425	-357	938
Refinery loss (-), adjustment 4/	-33	484	-1.047	-3.869	-715
Supply to stocks (opening stocks)	218	-650	-300	-414	332
	4.814	5.032	4.382	4.082	3.668
Imports	5.742	2.115	1.794	1.02	1.013
Exports	25.308	25.379	27.284	23.184	25.774
Under processing arrangement	753	3.198	3.482	1.25	5.452
Other	24.555	22.183	23.802	21.934	20.322
Domestic consumption	5.457	5.164	5.042	5.061	5.532
LPG	545	548	548	544	548
Mogas	3.458	3.407	3.23	3.078	2.938
Avgas	-	3	3	3	3
Av turbine	104	83	147	257	562
Kerosene	83	82	-	81	58
Gas oil	1.121	911	928	982	1.117
Diesel oil	3	1	-	4	35
Fuel oil	14	21	47	40	42
Lubes/greases	78	71	81	83	95
Bitumen	71	57	60	31	83
Discrepancies/losses (-) 4/	-4.788	-4.201	-387	-148	-2.072
Memorandum items					
Installed refinery capacity (in thousands of barrels per day)	305	305	305	305	305
Capacity utilization (in percent)	27	28.8	27.5	24.2	29.4
Production of fuel oils (in percent of total refined products)	53.3	60.1	52.8	53.5	50.2
Motor gasolines	20.8	28.8	18.5	17.8	18.7
Gas/diesel oil	12.8	14.4	15.7	15.9	14.9
Meters drilled (in thousands)	222.3	189.7	176.8	135.3	153

Source: Ministry of Energy; Central Statistical Office.

1/ Crude supply (production plus imports) minus use (crude exports plus supplies to stock).

2/ Unfinished products subtracted to prevent double counting.

3/ Refinery output minus refinery input

4/ Product use (supply to stock plus exports plus domestic consumption)
minus product supply (refinery output plus imports).

TRINIDAD AND TOBAGO
ECONOMIC MISSION
HYDROCARBON SECTOR

TABLE 9. List of Companies and their Activities

Enterprise	Owners	Principal Activities
1. Trinidad and Tobago Oil Company Ltd. 100% (Trintoc)	Government of Trinidad and Tobago	(i) Expl. & Prod. of oil and gas (ii) Refining
2. Trinidad and Tobago Petroleum Company Ltd. (Trintopec)	Government of Trinidad and Tobago 100%	Explor. & Prod. of oil and gas.
3. National Gas Company of Trinidad and Tobago (NGC)	Government of Trinidad and Tobago 100%	Purchase, Processing, Transportation & Sale of Natural Gas.
4. Trinidad and Tobago Marine Petroleum Company (Tintomar)	Trintoc (40%) Trintopec (40%) NGC (20%)	Marine Exploration & Production Company.
5. Trinidad & Tobago National Petroleum Marketing Company (NPMC)	Trinidad and Tobago 100%	Wholesale Purchase, Transport and Distribution of petroleum products (Monopoly)
6. Trinidad Northern Marine Areas Company (Trinmar)	Trincot (33 1/3%)	Expl. & Prod. of oil and gas.
7. AMOCO Trinidad Oil Company (AMOCO)	AMOCO International Oil Company, USA	Expl. & Prod. of oil and gas.
8. Premier Consolidated Oil company (PCOL)	Consortium of foreign interests.	Expl. & Prod. of oil and gas.
9. DAT Consortium (not producing oil)	Deminex (Germany) Agip (Italy) British Gas (BG)	Expl. & Prod. of oil and gas.
10. DATO Consortium (not producing oil)	Deminex (Germany) Agip (Italy) Occidental (USA) British Gas (BG)	Expl. & Prod. of oil and gas.
11. Southern Basin Consortium (SBC)	Exxon (USA) Total (France) Chevron (USA) Trintoc	Expl. & Prod. of oil and gas.
12. Lower Reverse "L" Joint Venture	Shell Pecten (USA) Trintoc	Expl. & Prod. of oil and gas.
13. Block S11 Joint Venture	Mobil Trinidad (30%) Trintopec (70%)	Expl. & Prod. of oil and gas.
14. UNOCAL Block 89/3	UNOCAL (USA)	Expl. & Prod. of oil and gas.
15. Broken Hill Petroleum (BHP) Block 89/3	BHP (Australia)	Expl. & Prod. of oil and gas.

TRINIDAD AND TOBAGO
ECONOMIC MISSION
HYDROCARBON SECTOR

REORGANIZATION OF THE PETROLEUM SECTOR

INSTITUTIONAL FRAMEWORK

1. There are five ministries having different responsibilities for energy matters: (i) the Ministry of Energy (MOE) responsible for administration and regulation of oil and gas operations and for energy planning; (ii) Ministry of Finance (MF), responsible for national economic policy and for petroleum fiscal and pricing matters; (iii) Ministry of Planning and Mobilization (MPM), responsible for macroeconomic planning and for project evaluation and for consistency of sector plans with those of the national economy; (iv) Ministry of Industry, Enterprise and Tourism's State Enterprise Division (MIET), responsible for broad corporate matters but leaving detailed operations to the management of these enterprises; and (v) the Ministry of Public Utilities (MPU), responsible for electricity operations. Other government departments are responsible for worker safety and the environment, while the Institute of Marine Affairs (IMA) is mandated to oversee the marine environment.

2. There are eleven separate government-owned oil, gas and petrochemical enterprises (Table 9). TRINTOC was formed in 1974 when the government purchased the assets of Shell Trinidad Ltd., i.e. exploration and production operations and the Point Fortrin refinery. Trinidad and Tobago Petroleum Company Limited (TRINTOPEC) was the government's first investment in the sector, 50.1% being acquired from BP Trinidad in 1969 and 49.9% from Tesoro in 1985. TRINTOC and TRINTOPEC are partners in the TRINMAR and TRINTOMAR offshore operating companies. TRINMAR was formed in 1962 as an operating company owned equally by Texaco, Shell and BP and, after the government acquired BP's interest in 1969 and Shell's in 1974, is now owned one third each by TRINTOC, TRINTOPEC and Texaco. TRINTOMAR was formed in 1988 as a joint operating company by TRINTOC (40%), TRINTOPEC (40%) and NATIONAL GAS COMPANY (GNC) (20%) specifically to develop the Pelican and Kiskadee gas fields. In 1990, TRINTOC and TRINTOPEC established a joint venture, the South Basin Consortium (SBC), 51:49 with Exxon, Chevron and Total to explore the onshore Southern Basin. Other joint exploration ventures include those of Mobil/TRINTOPEC (S-11 Block), South East Coast Consortium (SECC), PECTENTRINTOC (Lower Reverse-L Block), and Total/Private Company 80:20 with TRINTOC/TRINTOPEC (U Block).

3. The National Petroleum Marketing Company (NPMC), markets and distributes petroleum products in TT and blends lubricants for the domestic and export markets. The NGC is active in natural gas purchase, processing, pipelining and selling to consumers in Trinidad, mainly industrial and petrochemical as well as electricity generation consumers .

4. The National Energy Corporation (NEC), established in 1979, was intended to be the holding company for the government's interests in the oil and gas sector. This mandate was never fully realized, and its role was restricted to the technical and financial evaluation of certain gas-based methanol and urea projects at Point Lisas and to management of the marine operation of the Point

Lisas Industrial Port Development Corporation Limited. The company is no longer functioning, and staff are to be transferred to other government-owned companies.

5. The government has two 51:49 petrochemical joint ventures: (i) Trinidad Nitrogen Company (Tringen) with the Norwegian firm Norsk Hydro, to produce ammonia; and (ii) Fertilizers of Trinidad (Fertrin) with AMOCO, to produce ammonia. It has also two wholly-owned petrochemical companies: (i) Trinidad and Tobago Methanol Company (TTMC), which was spun out of NEC in August 1988 to run the methanol plant commissioned in 1984; and (ii) Trinidad and Tobago Urea Company (TT Urea), whose urea plant was once owned by NEC and is now operated by Fertrin. There is a new methanol plant scheduled to be wholly owned by private investors (Colonial Life Insurance).

REORGANIZATION AND RATIONALIZATION OF THE SECTOR

6. In February 1988, the GOTT began a process aimed at the rationalization and reorganization of the petroleum and petrochemical sector with the objective of improving the government's efficiency in the overall management of the sector. It was recognized then that this exercise would require not only corporate institutional changes but also current government institutional arrangements.

7. A steering committee which was established for this purpose identified the specific objectives and made reorganization proposals to meet them. The objectives were to (i) improve efficiency of the state holdings through greater specialization of function and elimination of unnecessary duplication, greater coordination among entities, achieving economies of scope and scale and ensuring a more rational allocation of resources; (ii) improve planning and strategy formulation in the state holdings; and (iii) improve the government's planning for the sector.

8. Before recommending a holding company structure, the steering committee analyzed three corporate organization alternatives: (i) a single monolithic business operating company; (ii) a management company with a single board of directors and a managing director to manage several operating units; and (iii) a holding company with a holding company board of directors, and a managing director, with corporate staff, who coordinate self sufficient operating business units, each of these units having its own board of directors.

9. The steering committee recommended the holding company concept to the GOTT on the bases of the following advantages of this organization: (i) ease of transition from the present organization to this structure; (ii) flexibility in the transition since the companies would continue to operate without major changes in management; (iii) financing autonomy of each affiliate; (iv) each affiliate will have its own area of specialization and could react flexibly to external changes; and (v) decision making would be decentralized. The holding company would comprise 6 subsidiaries: an exploration and production company, a refinery and international marketing company, a petrochemicals company, a domestic petroleum marketing company, a gas transmission and distribution company and a research and development company.

10. The steering committee also proposed that government reorganize and strengthen its institutional framework for dealing with the sector to ensure (i) government's responsibility in policy making and monitoring state companies performance; and (ii) the state companies corporate autonomy. The committee proposed to establish an Oil and Energy Council to assist the Minister of Energy in the development of sector objectives and in charting policy directions for the sector overall.

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