

TRINIDAD AND TOBAGO



MINISTRY OF PETROLEUM AND MINES

# ANNUAL REPORT

FOR THE YEAR

1974

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## FOREWORD

The increasing trend in crude oil production which began in 1972 continued into 1974, and during October the Country's crude production exceeded 200,000 barrels of oil per day for the first time in its history. Total production consequently reached its highest level at 68.1 million barrels with off-shore production accounting for 74 per cent of that total. Land production was, however, disappointing and a decline of 7 per cent was recorded compared with 1973.

The production of natural gas showed an increase of 7 per cent over the figure for the previous year. Although refinery throughput declined marginally its effect on the total operations of the industry was not significant because of the increase in prices of petroleum products.

A major step towards greater national ownership and control of the industry was taken on 31st August, 1974, when the Shell Trinidad Limited operations were taken over by Government at a cost of \$93.6 million. A new Company, the Trinidad and Tobago Oil Company Limited (TRINTOC), which is fully owned and controlled by Government, was formed to carry on the operations. Government proposes to expand the company's operations and to up-grade the refinery plant.

The energy crisis of 1973 and the consequential increase in the price of oil in 1974 proved fortuitous for Trinidad and Tobago. In order to ensure that the country derived an equitable share in the profits which accrued to the oil companies from the price increase, Government moved swiftly to implement appropriate fiscal measures, and the Petroleum Taxes Act, 1974 was enacted. The Act provided for a separation for tax purposes of business operations into exploration and production, refining and marketing. It provided for a rate of petroleum profits tax of  $47\frac{1}{2}$  per cent of every dollar of the taxable profits of any production business, and 45 per cent of every dollar of taxable profits on marketing business; it also made provision for the imposition of Refinery Throughput Tax instead of a tax on the profits of refining which were difficult, if not impossible, to determine.

Government also sought to subsidise the prices of certain essential petroleum products on the local market and to levy on the producing companies in order to effect such subsidy. Accordingly, the Petroleum Production Levy and Subsidy Act, 1974, was enacted and appropriate price controls were enforced.

This country entered into Production Sharing Contracts for the first time during the year, and arising from the bidding under the Petroleum Regulations (Competitive Bidding) Order, 1973, four such contracts were entered into for exploration and exploitation of petroleum resources off the East Coast and in the Gulf of Paria. Government's share under these contracts will range between 60 and 80 per cent of total production.

The Prime Minister delivered several speeches on the Energy Crisis during the year, in which he projected the important role which the industry will play in the economic development of the country in the future, particularly with respect to industrial diversification.

The industry continues, therefore, to play a dominant role in the economy of the country, and I wish to express my appreciation of the fine effort made by all those employed in its operations and to those employees in my Ministry who have worked so unstintingly during the year.

*Minister of Petroleum and Mines*



## SUMMARY OF HIGHLIGHTS OF THE OIL INDUSTRY

The year 1974 was designated as Petroleum Year, and saw the continuing trend of increasing activity in the National Petroleum Industry. Government took a more active role in the participation and administration of its petroleum resources.

For the first time in its history Trinidad and Tobago exceeded a production rate of 200,000 barrels a day and attained a record production of 68.1 million barrels.

This healthy and optimistic trend goes hand in hand with offshore development which now accounts for 74 per cent of the total output and which will dominate the producing arena by an even greater margin as land production keeps falling off.

The level of drilling activity for 1974 was a fraction lower than that of 1973 in terms of the number of active drilling units and the cumulative footage drilled. The respective figures being 130.5 and 901,880 feet as compared with 133.7 and 955,185 feet in 1973.

In the refining sector of the industry, refinery throughput *decreased* by 7.66 per cent to 130.8 million barrels, mainly as a result of the shortfall in crude oil supplies from January to March, 1974, resulting from the Arab Oil Embargo which began in the latter part of 1973.

A Mission from Iran comprised of five (5) experts from the National Iran Oil Company visited Trinidad and Tobago in September, 1974, at the invitation of Government, to review existing production and laboratory facilities with the objective of improving the country's oil and gas reserves and production potential. The Mission subsequently submitted a report to Government.

During the year two experts from the United Nations also provided technical assistance in connection with a seismic survey of the Nariva Swamp, certain specific areas in the South-West peninsula, the Central Range around Tabaquite and Mahaica and the Laventille Swamp.

The Petroleum Taxes Act, 1974 was enacted to provide for a separation for tax purposes of business operations into exploration and production, refining and marketing. It also made provision for a rate of petroleum profits tax of 47½ per cent of every dollar of the taxable profits on marketing business and for the imposition of a Refinery Throughput Tax instead of the taxation of the profits of refining which was difficult to determine.

In addition, Government sought to subsidise the prices of certain essential petroleum products on the domestic market and to levy on the producing companies in order to effect the subsidy. Accordingly, the Petroleum Production Levy and Subsidy Act, 1974, was enacted and appropriate price controls were enforced.

The country entered into Production Sharing Contracts for the first time during the year, and arising from the bidding under the Petroleum Regulations (Competitive Bidding) Order, 1973, four such contracts were entered into for exploration and exploitation of petroleum resources off the East Coast and in the Gulf of Paria. Government's share under these contracts will range between 60 and 80 per cent of total production.

On August 31, 1974, government acquired the assets of Shell Trinidad Limited. These assets were vested in the Trinidad and Tobago Oil Company Limited, also known as TRINTOC, which was incorporated in Trinidad and Tobago under the Companies' Ordinance, Ch. 31. No. 1. on December 10, 1974.

Table I summarises and compares overall production and drilling activity for the years 1971, 1972, 1973 and 1974.

Figures II and III also vividly illustrate annual drilling and production statistics.

TABLE I  
Summary of Statistics for the Trinidad and Tobago Petroleum Industry, 1971-1974

	1971	1972	1973	1974
Annual Crude Oil Production (bbls) ... ..	47,147,731	51,210,809	60,669,960	68,135,818
Annual Natural Gas Production (mscf) ... ..	109,813,825	104,338,218	119,979,353	128,293,247
Average GOR (scf/bbl) ... ..	2,329	2,037	1,978	1,883
Annual CHPS (Natural Gasoline Production (bbl))	141,285	137,238	79,043	68,965
Daily Refinery Capacity (bbls/day) ... ..	436,000	450,000	450,000	456,000
Annual Refinery throughput (bbls/yr) ... ..	145,547,960	144,273,516	141,686,784	130,819,840
Total wells completed during the year ... ..	220	188	212	212
Average depth of completed wells (feet) ... ..	4,269	4,462	4,506	4,509
Total footage drilled during the year ... ..	939,259	838,842	955,185	909,980
Oil and Gas Wells completed during the year ... ..	175	165	181	187
Drilling success-ratio (per cent) ... ..	79.5	87.8	85.4	88.2
Average Rigs running ... ..	11.7	10.8	11.4	10.9

## GEOLOGICAL AND GEOPHYSICAL ACTIVITY

Geophysical activity by oil companies during 1974 was restricted to the marine areas surrounding Trinidad and Tobago.

Amoco Trinidad Oil Co. carried out an Airgun Seismic Survey over its licensed area off the East Coast of Trinidad. A total number of 708.3 line miles were shot by Geophysical Services Inc. contracted to carry out the survey.

Texaco Trinidad Inc. as operator for the South-East Coast Consortium conducted a marine seismic survey consisting of approximately 425.3 miles located in the South-East Consortium Lease block. Texaco Trinidad Inc. shot approximately 119 line miles in a survey of their Brighton area in the Gulf of Paria.

A total of 1,252.6 line miles was shot in 1.33 party months (*See Table II*).

TABLE II  
Party Months of Geological and Geophysical Exploration, 1974

<i>Company</i>						<i>Seismograph</i>	<i>Total</i>
Amoco Trinidad Oil Co. ... ..	...	...	...	...	...	.43	.43
Texaco Trinidad Inc. ... ..	...	...	...	...	...	.60	.60
Texaco for South-East Coast Consortium ... ..	...	...	...	...	...	.30	.30
TOTAL ... ..	...	...	...	...	...	1.33	1.33

### Drilling

The total footage drilled for 1974 decreased by 4.7 per cent from the 1973 figure of 955,185 feet to 909,980 feet. The rig months for the year was 130.5 as compared with 133.7 for 1973.

Onshore drilling was heightened by a 12 per cent increase over 1973's figure with 81 rig months of activity while a decrease of 19 per cent was recorded offshore as the level dropped to 49.5 rig months for the year. Similarly, the overall decrease in drilled depth for the year, directly reflected the decline suffered offshore, since the total onshore footage had increased by 12 per cent. Texaco Trinidad Inc. was the most active company in terms of drilling operations with 40.5 rig months and an accompanying 296,883 feet drilled. Next in line were Trinidad-Tesoro, Amoco Trinidad Oil company, T.N.A. and TRINTOC (formerly Shell Trinidad Limited) in that order.

A total of 212 wells was completed. These included five exploratory or wildcat wells and seven semi-appraisals while the remainder were development wells.

### Exploratory Drilling

Six exploratory wells were drilled during the year: Amoco Trinidad Oil Company drilled five of these, three of which were abandoned dry. OPR-20 was abandoned after testing and SEG-10 was drilling at the year's end. Likewise T.N.A.'s lone wildcat S-366 was also abandoned dry.

Seven semi-appraisal wells were also drilled—four by T.N.A.—two of which were successful. Trinidad-Tesoro Petroleum Company Limited was successful with two (2) of its semi-appraisal wells in the Central Los Bajos Block while Texaco Trinidad Inc.'s only semi-appraisal well in the Guayaguayare area was abandoned dry.

Amoco Trinidad Oil Company's exploratory programme was broadened to include not only the search for oil reserves but also the delineation and appraisal of gas reserves in the South-East Galeota gas field.

Table III summarises exploratory drilling activity for 1974.



TABLE III  
Summary of Wildcat Drilling in 1974

Operator	Well Name	Location	Basis for Location	Lahee Exploratory Classification	Completion Date	Total Depth (feet)	Name and/or Age of Deepest Formation	Results/Remarks
Amoco Trinidad Oil Co. Ltd. ... ..	OPR-20	E-16	S&SSG	C3	27.6.74	12,806	M.M.9	Abandoned
	SG-4	B-14	do.	C3	3.8.74	11,946	Pliocene/Miocene	Abandoned dry
	SG-5	B-14	do.	C3	23.10.74	13,000	do.	do.
	SD-1	G-18	do.	C3	19.12.74	11,970	do.	do.
	SEG-10	B-18	do.	A3	Drilling	7,520	Miocene	Drilling
Texaco Trinidad Inc. ... ..	GY-646	H-13 DB-12	do.	C2c	7.6.74	5,925	Gros Morne	Abandoned dry
Trinidad/Tesoro Petroleum Company Limited ...	CL-63	G-16 FK-4	do.	B2b	9.5.74	4,000	Cruse	Oil Producer
	CL-67	G-16 FH-11	do.	B2b	22.6.74	5,500	U. Cruse	do.
Trinidad Northern Areas ... ..	S-366	K-10 IB-1	do.	C3A	11.5.74	6,315	Lower Cruse	Abandoned Dry
	S-367	F-9 MK-3	do.	B2c	18.6.74	5,806	do.	Oil Producer
	S-368	F-9 EC-2	do.	B2c	28.7.74	4,900	do.	do.
	S-369	F-8 OB-17	do.	C2c	14.9.74	6,852	do.	Abandoned Dry
	S-369X	F-8 PD-11	do.	C2c	3.10.74	4,845	do.	do.

### Development Drilling

Two hundred development wells were drilled in 1974, one hundred and eighty-six of these were completed as oil producers, 86 per cent of which were land wells, resulting in a 3.3 per cent increase from the total of one hundred and eighty-one successful wells of 1973. There was one service well drilled while thirteen wells were abandoned.

Trinidad-Tesoro with its continuing vigorous drilling programme accounted for ninety-seven of these wells. Most of the development drilling by this company was concentrated on shallow infill wells for their thermal recovery projects in the Guapo and Central Los Bajos Fields.

Texaco Trinidad Inc. completed 65 development wells as producers. Amoco Trinidad Oil Company had 17 offshore completions on its three extension platforms—Samaan B and Samaan C in the Samaan field and from the platform Poui A in the recently discovered field—Poui.

Trinidad Northern Areas was responsible for ten successful completions in the North and East Soldado fields on Platforms 18 and 19 respectively.

Trinidad and Tobago Oil Company Limited, (TRINTOC—formerly Shell Trinidad Limited), completed nine wells by year end.

Table IV summarizes by areas the development drilling activity in Trinidad and Tobago during 1974.

TABLE IV

#### Summary of Development Drilling in 1974 by Fields, Areas or Districts

*Note: This Table covers development drilling (in contrast with wildcat or exploratory drilling which is covered in Table 3)*

Area	Producers Completed	Dry Holes Completed	Total Completions	Total Footage Drilled	Number of Rigs active at December 31, 1974
1 ... ..	10	1	11	51,884	1
2 ... ..	40	2	42	100,161	1
3 ... ..	1	—	1	3,588	—
4 ... ..	72	2	74	280,866	3
5 ... ..	19*	2	21	66,282	1
6 ... ..	—	—	—	—	—
7 ... ..	17	3	20	82,439	—
8 ... ..	2	2	4	12,544	—
9 ... ..	1	—	1	2,000	—
10 ... ..	8	1	9	28,593	—
11 ... ..	17	—	17	170,211	3
<b>TOTALS</b> ... ..	<b>187</b>	<b>13</b>	<b>200</b>	<b>797,568</b>	<b>9</b>

\*Injection Well

For definition of areas see Table IVA following.

TABLE IVA

Key to Area—Numbers on map (Figure II), on Table IV and in Text

<i>Area Number</i>	<i>Description</i>
1	Soldado, North Marine, Couva Marine
2	Point Ligoure, F.O.S., Area IV and Guapo, Point Fortin West and Central, Parrylands, Cruse
3	Brighton (Land and Marine), Vessigny, Merrimac
4	Palo Seco, Los Bajos, Erin
5	Forest Reserve, Fyzabad, Point Fortin East, New Dome, San Francique
6	Quarry, Coora, Quinam, Morne Diablo
7	Oropouche
8	Penal, Barrackpore, Wilson, Siparia
9	Moruga North and West, Rock Dome, Innis, Trinity, Catshill, Balata, Bovallius
10	Guayaguayare, Moruga East
11	Galeota, Teak, Samaan, Poui (East Coast)
12	South Marine (South Coast)
13	Tabaquite
14	Ioacos
15	North Coast

### CRUDE OIL PRODUCTION

Crude oil production for 1974 averaged 186,673 b.o.p.d., the highest ever recorded, and the cumulative of 68,135,818 barrels represented a 12 per cent increase over last year's total. In October, the average output of 200,246 b.o.p.d. was the highest ever obtained, and it was the first time in the country's production history that the 200,000 b.o.p.d. mark was exceeded.

Amoco Trinidad Oil Company not only maintains the lead as the country's largest producer, but its significant contribution has been, and may continue to be, the major source of the nation's output. The company averaged 80,846 b.o.p.d. for the year, a 43 per cent jump from last year, and overall it contributed 48 per cent of the country's 1974 output.

Trinidad Northern Areas Limited, the other major marine producer, experienced an increase of 301 b.o.p.d. (less than 1 per cent) to average 52,064 b.o.p.d. this year. This was somewhat encouraging as it demonstrated that the company was recovering from the previous setbacks during the period 1970 to 1972, and is again on the way to increasing production.

The year however was a disappointing one for the land producers, as they all suffered declines. Texaco Trinidad Inc. suffered an 11 per cent fall off from 1973, and averaged 24,382 b.o.p.d. for the year. The company seems unable to arrest this decline in spite of continued efforts in development drilling and secondary recovery techniques.

Trinidad-Tesoro experienced a 4 per cent drop in their output, averaging 21,592 b.o.p.d. for 1974. Production remained at a satisfactory level for the first few months of the year but then succumbed to a steady decline, tailing off with its lowest output of 19,776 b.o.p.d. in December.

Premier Consolidated Oilfields Ltd. and TRINTOC (formerly Shell Trinidad Limited) experienced declines of 9 per cent and 5 per cent respectively from last year. Trinidad and Tobago Oil Company Ltd. averaged 6,396 b.o.p.d. during its four months of operation, due largely to an apparent stagnation of field operations.

Generally, however, the somewhat erratic supply of electricity to pumping wells was one of the factors responsible for the continuous drop in land production. Apart from numerous sand problems, labour disputes have also affected output, particularly so during the last two months of the year.

Figure IV illustrates graphically the contribution of new and completed wells to the country's total crude oil production.

Table V gives a detailed comparison by fields of production for the years 1973 and 1974.

TABLE V  
Oil Production—Trinidad and Tobago—1974

Company/Field	Discovery Year	Total Wells Drilled	Age of Producing Formation	ANNUAL PRODUCTION		Cumulative Production through December 1974 ('000) bbls.
				1973 (bbls.)	1974 (bbls.)	
<b>SHELL TRINIDAD LTD./TRINTOC*</b>						
Balata East and West ... ..	1952	48	Miocene	29,409	26,117	2,058
Catshill ... ..	1950	117	do.	356,453	303,038	20,404
Inniss ... ..	1956	33	do.	65,293	57,187	5,549
Rook Dome ... ..	1962	3	do.	—	—	16
Penal ... ..	1936	258	do.	786,838	624,906	56,136
New Dome ... ..	1928	31	do.	7,752	3,719	3,044
Point Fortin East ... ..	1929	134	do.	660,385	611,311	21,672
San Francique ... ..	1929	27	do.	16,403	17,439	5,818
Area IV and Guapo ... ..	1913	156	do.	167,779	157,613	32,839
Parrylands 1-5 ... ..	1913-1918	348	do.	262,364	326,243	33,994
Point Fortin Central ... ..	1916	99	do.	134,063	184,416	12,088
Point Fortin West ... ..	1907	205	do.	94,439	128,756	17,931
Los Bajos ... ..	1918	29	do.	—	—	546
Erin ... ..	1963	4	do.	—	—	710
<b>TOTAL ... ..</b>		<b>1,492</b>		<b>2,581,178</b>	<b>2,440,745</b>	<b>212,805</b>
<b>TRINIDAD NORTHERN AREAS</b>						
FOS—FT ... ..	1954	30	Miocene	326,499	287,143	2,976
Soldado ... ..	1955	385	do.	18,567,149	18,716,295	272,246
<b>TOTAL ... ..</b>		<b>415</b>		<b>18,893,648</b>	<b>19,003,438</b>	<b>275,222</b>
<b>AMOCO TRINIDAD OIL COMPANY</b>						
Teak ... ..	1971	44	Miocene	14,975,557	18,805,023	42,853
Samaan ... ..	1971	22	do.	5,608,281	10,145,325	15,961
Poui ... ..	1974	3	do.	—	562,721	563
<b>TOTAL ... ..</b>		<b>69</b>		<b>20,583,838</b>	<b>29,513,069</b>	<b>59,377</b>
<b>TRICENTROL LTD.</b>						
Wilson ... ..	1936	74	Miocene	161,791	129,471	18,782
Cruse ... ..	1913	150	do.	87,704	87,005	25,318
Tabaquite ... ..	1911	225	do.	52,468	42,983	1,509
Balata Central ... ..	1949	6	do.	—	—	371
<b>TOTAL ... ..</b>		<b>455</b>		<b>301,963</b>	<b>259,459</b>	<b>45,980</b>
<b>TEXACO TRINIDAD INC.</b>						
Guayaguayare ... ..	1902	681	Miocene	2,424,205	2,103,328	74,023
Trinity ... ..	1956	94	do.	204,973	201,164	13,104
Barrackpore ... ..	1911	309	do.	673,418	564,406	23,590
Oropouche ... ..	1944	94	do.	564,008	709,995	4,267
Morne Diablo/Quinam ... ..	1926	—*	do.	57,527	63,355	7,233
Forest Reserve ... ..	1913	1,879	do.	3,030,715	2,737,501	232,236
Palo Seco ... ..	1929	—*	do.	1,642,012	1,374,029	79,111
Brighton ... ..	1908	611	do.	1,196,743	972,775	66,993
Erin ... ..	1963	21	do.	191,529	130,688	1,731
Couva Marine ... ..	1963	6	do.	577	37,507	216
<b>TOTAL ... ..</b>		<b>3,695</b>		<b>9,985,707</b>	<b>8,894,748</b>	<b>502,504</b>

\*Figures included in Forest Reserve total

TABLE V—Continued

## Oil Production—Trinidad and Tobago—1974

Company/Field	Discovery Year	Total Wells Drilled	Age of Producing Formation	ANNUAL PRODUCTION		Cumulative Production through December, 1978 (000 bbls.)
				1973 (bbls.)	1974 (bbls.)	
<b>PREMIER CONSOLIDATED OILFIELDS LTD.</b>						
Siparia ... ..	1957	5	Miocene	11,948	9,980	770
San Francique ... ..	1929	75	do.	44,145	43,059	2,790
Fyzabad ... ..	1918	252	do.	53,809	53,180	12,665
Palo Seco ... ..	1915	83	do.	8,546	8,369	1,587
Icaos ... ..	1965	13	do.	20,518	11,096	409
Barrackpore ... ..	1970	3	do.	12,572	11,732	72
Rock Dome/Bovallius ... ..	1955/1954	11/6	do.	—	—	134/189
<b>TOTAL ... ..</b>		<b>448</b>		<b>151,538</b>	<b>137,416</b>	<b>18,616</b>
<b>TRINIDAD TESORO PETROLEUM COMPANY LTD.</b>						
Fyzabad ... ..	1920/38	829	Miocene	1,566,013	1,377,577	151,858
Guapo ... ..	1922	526	do.	816,443	1,057,121	35,863
Moruga East ... ..	1953	62	do.	50,150	46,703	1,987
Moruga North ... ..	1956	20	do.	16,251	10,748	883
Moruga West ... ..	1957	129	do.	103,823	96,886	8,380
Coora/Quarry ... ..	1936	597	do.	1,185,122	1,122,999	79,500
Palo Seco/Erin ... ..	1926	1,086	do.	3,810,926	3,234,777	78,424
North Marine ... ..	1956	15	do.	45,229	32,317	1,235
Galeota ... ..	1972	19	do.	538,051	460,404	1,450
Central Los Bajos ... ..	1973	60	do.	40,080	447,411	487
<b>TOTAL ... ..</b>		<b>3,343</b>		<b>8,172,088</b>	<b>7,886,943</b>	<b>360,066</b>
<b>GRAND TOTAL ... ..</b>				<b>60,669,960</b>	<b>68,135,818</b>	<b>1,474,571</b>

\*Taken over by the Government of Trinidad and Tobago on 30th August, 1974 now known as Trinidad and Tobago Oil Co. (TRINTOC).

## SUMMARY OF FLUID INJECTION OPERATIONS DURING 1974

The number of active fluid injection projects fell from 38 in 1973 to 30 in 1974; the total volume of crude oil produced by fluid injection schemes amounted to 4.31 million barrels, which represented a 10 per cent drop from the previous year's figure. At a daily average production level of 11,817 barrels, secondary oil represented 22 per cent of the total oil produced by land fields, and 6.3 per cent of the Country's total crude oil production.

## Gas Injection

The number of gas injection schemes in operation continued on a downward trend, reflecting the unavailability of gas for use in secondary recovery projects. During 1974 the number of gas injection projects fell from 13 to 9, but in spite of this the volume of gas injected remained at an almost constant level of 17.3 mmcf/d. Oil recovered from these fell by 20 per cent from the 1973 level to 603,930 barrels.

Texaco Trinidad Incorporated continued to inject gas in Forest Reserve and Guayaguayare. The average rate of injection decreased by 30 per cent to 9 mmcf/d while the producing gas-oil ratio decreased from 7,180 scf/bbl in 1973 to 4,276 scf/bbl in 1974.

In July, Texaco began to inject water as well as gas in the Forest Reserve Upper Cruse Western Extension project. There was, consequently, a 60 per cent drop in the volume of gas injected into the reservoir.

The natural gas/water injection project in Guayaguayare was maintained throughout the year producing an average of 724 b.o.p.d.

Trinidad Tesoro Petroleum Company Limited decreased its gas injection operations by 36 per cent when it ceased injection in 4 of its projects. Average daily injection rate in its 7 remaining projects, 4.8 mmcf, was slightly higher than in the previous year, while the schemes produced an average of 506 barrels of oil per day. Gas injection in Coora was terminated.

### **Water Injection**

Water injection schemes in 1974 fell from 18 to 13 but there was a 10 per cent increase in the volume of fluid injected. The average water injection rate was 58,500 barrels per day and almost 5,000 barrels/day of oil were produced at an average water cut of 65 per cent.

Texaco operated 10 water injection projects, one of which was a hot water flood, another a mixture of carbon dioxide and water, and in two others a mixture of natural gas and water was injected. Water was injected at an average rate of 56,500 barrels/day in these projects with oil recovery averaging 4,700 barrels/day.

Trinidad-Tesoro's Coora Upper Cruse Cyclic Waterflood Project which was started in July, 1973 had an injection rate of 692 barrels/day, and the success of this project was still to be evaluated at the end of the year, since one cycle of injection to fill-up and production had not been completed. The Coora Upper Forest Project was phased out completely this year.

In July Trinidad-Tesoro introduced a polymer injection scheme in the Fyzabad area and by the end of the year 170,354 barrels of water were injected.

Shell's Catshill Waterflood Project began full scale operation in April, 1974. Oil production averaged 218 barrels per day while the rate of water injection was increased by 90 per cent to 843 barrels/day.

### **Steam Injection**

Almost 2 million barrels of crude oil were produced by the 6 steam injection projects in operation in Trinidad and Tobago. Texaco injected an average of 3,400 barrels/day in their Forest Reserve schemes while recovering 1,400 barrels of oil per day. In spite of a 25 per cent decrease in injection rates oil production increased by almost 13 per cent of 3,300 barrels per day in Trinidad-Tesoro's Fyzabad, Palo Seco and Guapo steam injection schemes.

TABLE VI

## Summary of Fluid Injection Operations in Trinidad and Tobago—1970-1974

Year	PROJECTS				INJECTION STATISTICS			CRUDE OIL PRODUCTION STATISTICS					
	Number of projects in operation at end of year				Gas (mmcf)	Water (bbls)	Steam (bbls)	Total oil recovered from wells under project influence (in bbls)					Oil expressed as a percentage of total oil production
	Gas	Water	Steam	Others				Gas Injection Projects	Water Injection Projects	Thermal recovery Projects	Other recovery Projects	All Projects	
1970 ... ..	32	8	6	—	18,293	13,563,248	1,254,454	4,126,963	2,071,061	863,174	—	1,061,198	13.8
1971 ... ..	32	8	7	—	10,826	12,123,572	1,969,720	3,568,723	2,357,145	1,367,721	—	7,293,569	15.5
1972 ... ..	22	13	4	—	8,555	15,548,166	2,432,077	2,372,841	2,447,627	1,540,530	—	6,360,198	12.4
1973 ... ..	13	18	6	1	6,573	19,063,428*	2,248,606	811,100	2,088,992*	1,593,344	304,003	4,797,439	7.9
1974 ... ..	9	13	6	2	4,986	21,347,585	1,867,416	603,930	1,803,749	1,720,680	184,805	4,313,164	6.3

\*Includes Injection and production from sodium hydroxide flood and carbon dioxide before 1973.



TABLE VII  
Fluid Injection Operations—1974

## GAS INJECTION

Company	Number of Active Projects	Gas Injected (mcf)	Oil Produced (bbls)	Water Produced (bbls)	Gas Produced (mcf)	Average G.O.R. (scf/bbl)
T.T.I. ... ..	2	3,220,297	419,377	163,291	1,793,121	4,276
T.T.P.C.L. ... ..	7	1,766,808	184,553	4,266	1,532,233	8,302
<b>TOTAL</b> ... ..	<b>9</b>	<b>4,986,905</b>	<b>603,930</b>	<b>167,557</b>	<b>3,325,354</b>	<b>5,506</b>

## WATER INJECTION

Company	Number of Active Projects	Water Injected (bbls)	Oil Produced (bbls)	Water Produced (bbls)	Gas Produced (mcf)	Percentage Water
T.T.I. ... ..	10	20,617,053	1,724,109	3,247,627	2,531,211	65.3
S.T.L. ... ..	1	307,744	79,639	41,171	5,367	6.3
T.T.P.C.L. ... ..	2	422,788	—	—	—	—
<b>TOTAL</b> ... ..	<b>13</b>	<b>21,347,585</b>	<b>1,803,748</b>	<b>3,288,798</b>	<b>2,536,578</b>	<b>64.6</b>

## STEAM INJECTION

Company	Number of Active Projects	Steam Injected (mcf)	Oil Produced (bbls)	Water Produced (bbls)	Gas Produced (mcf)	Percentage Water
T.T.I. ... ..	2	1,240,109	515,893	560,459	207,504	52.1
T.T.P.C.L. ... ..	4	627,307	1,204,787	580,898	531,326	32.5
<b>TOTAL</b> ... ..	<b>6</b>	<b>1,867,416</b>	<b>1,720,680</b>	<b>1,141,357</b>	<b>738,830</b>	<b>39.9</b>

## CARBON DIOXIDE INJECTION (listed under other)

Company	Number of Active Projects	CO <sub>2</sub> Injected (mcf)	Oil Produced (bbls)	Water Produced (bbls)	Gas Produced (mcf)	G.O.R. (scf/bbl)
T.T.I. ... ..	2	1,342,412	184,805	60,816	884,313	4,785

TABLE VIII  
Summary of Fluid Injection Schemes, 1974

## WATER INJECTION

Company	Field	Project	Water Injection (bbl)	Oil Produced (bbl)	Water Produced (bbl)	Gas Produced (mcf)	Percentage Water
T.T.I.	Forest Reserve	UCRA—	203,704	—	—	—	—
		UC, 645	1,887,282	172,640	264,853	575,229	60.5
		Bernstein:-					
		(i) UM Cruse	1,159,715	66,952	39,405	112,382	37.0
		(ii) Forest Sds	15,020	—	—	—	—
		Zone 9	80,686	65,646	12,976	19,169	18.5
		Middle Field	441,652	—	—	—	—
		Upper Cruse	122,545	—	—	—	—
		Forest Sds	68,503	—	—	—	—
		Guayaguayare	Navette 410	3,332,076	518,740	1,254,406	644,396
	410 Ext.	480,213	130,848	297,305	155,901	69.4	
	307 W.F.	3,164,441	398,635	875,603	472,609	68.7	
	307 Ext.	780,396	60,823	82,002	71,221	57.4	
	Navette 007	614,408	—	—	—	—	
Brighton	LB Nariva	4,161,127	52,452	5,897	147,186	10.1	
Trinity	Shallow Herrera	2,046,569	176,786	281,125	191,961	61.4	
Palo Seco	L.F. 234 sds	2,058,714	80,587	134,055	141,157	62.5	
All Fields	All Projects	20,617,053	1,724,109	3,247,827	2,531,211	65.5	
T.T.P.C.L.	Fyzabad	FM/VF/169/1	170,354	—	—	—	—
		Coora	252,434	—	—	—	—
		All Fields	422,788	—	—	—	—
STL All Companies	Catshill	Co. 30 Sd.	307,744	79,639	41,171	5,367	6.3
		All Fields	21,347,585	1,803,748	3,288,798	2,536,578	64.6

## CARBON DIOXIDE INJECTION

Company	Field	Project	CO <sub>2</sub> Injected (mcf)	Water Injected (bbl)	Oil Produced (bbl)	Water Produced (bbl)	Gas Produced (mcf)	GOR (scf/bbl)	Percentage Water
T.T.I.	Forest Reserve	UCRA	1,270,039	203,704	163,530	60,779	766,712	4,689	27.1

TABLE IX  
Steam Injection

Company	Field	Project	Steam Injected (bbl)	Oil Produced (bbl)	Water Produced (bbl)	Gas Produced (mcf)	Percentage Water
T.T.I.	Forest Reserve	Forest Sds					
		Zone 5+6	788,517	419,730	479,871	149,093	53.3
		Upper Cruse	427,085	96,163	80,588	58,411	46
		Zone 4	24,507	—	—	—	—
T.T.I.	All Fields	All Projects	1,240,109	515,893	560,459	207,504	52.1
T.T.P.C.L.	Fyzabad	Pilot	18,194	28,595	6,426	—	18.3
		Main Project					
	Palo Seco	UF/LMLE	235,250	512,836	255,466	7,259	33.3
		Guapo	323,422	622,456	284,061	491,988	31.3
		Other than 3	50,441	40,900	34,945	32,079	46.1
T.T.P.C.L.	All Fields	All Projects	627,307	1,204,787	580,898	531,326	32.5
All Companies	All Fields	All Projects	1,867,416	1,720,680	1,141,357	738,830	39.9

TABLE X  
Gas Injection

Company	Field	Gas Injected (mcf)	Oil Produced (bbl)	Water Produced (bbl)	Gas Produced (mcf)	GOR (scf/bbl)	
T.T.I.	Forest Reserve	(1)	1,145,055	155,188	128,281	560,857	3,614
		Guayaguayare	2,075,242	264,189	35,010	1,232,264	4,664
T.T.I.	All Fields	3,220,297	419,377	163,291	1,793,121	4,276	
T.T.P.C.L.	Quarry	(4)	750,183	85,489	2,864	364,154	4,260
		Fyzabad	838,580	81,763	303	1,088,916	13,317
		Palo Seco	177,845	17,301	1,099	79,163	4,596
		All Fields	1,766,608	184,553	4,266	1,532,233	8,302
		All Companies	All Fields	4,986,905	603,930	167,557	3,332,354

## NATURAL GAS PRODUCTION AND UTILIZATION

Natural Gas produced in Trinidad and Tobago in 1974 amounted to 128,293 mmcf an average of 351 mmcf per day. This represents an increase of 6.9 per cent over that produced in 1973. The main contributor to this increase was Amoco Trinidad Oil Co. which increased its own gas production by 68.7 per cent to 134.5 mmcf/d as a result of its increased oil production. The average G.O.R. (gas oil ratio) was 1,883 scf/bbl, a drop of 95 scf/bbl below last year's figure.

Natural gas consumed as fuel in refineries and other industries in 1974 accounted for 33.5 per cent of the gas produced, compared with 38.7 per cent in 1973. Non-oil Industries decreased their gas consumption by 4.5 per cent to 62.7 mmcf/d, while refineries utilised 54.9 mmcf/d, 10.9 per cent less than last year. The continuing decrease in gas production on land has prompted the switch from natural gas to fuel oil for use as fuel in refineries. Federation Chemicals Ltd. maintained its position among the non-oil industries of being the biggest user of natural gas with a daily average consumption rate of 44.3 mmcf, 50.1 per cent was utilised as process raw materials in the manufacture of liquid ammonia, ammonium sulphate and urea.

Natural gas injected into the formation for secondary recovery averaged 15.6 mmcf/d a decrease of 10.6 per cent below the amount injected in 1973. The increasing unavailability of gas on land is directly responsible for this situation. During the year 68,965 bbls of casing head petroleum spirits (CHPS) were produced from 10.5 mmcf of gas in the gasoline recovery plants operated by Trinidad Tesoro Petroleum Company Ltd. Most of the CHPS was blended back into crude oil.

Natural Gas vented, after use was made of its pneumatic energy, averaged 18.2 mmcf/d and accounted for 5.2 per cent of gas produced.

Corresponding figures for gas vented without use was 156.5 mmcf/d or 44.5 per cent of gas produced.

Of Amoco's offshore production 87.95 per cent was vented without utilisation.

The trend of gas production over the past five years is given in Table XI.

TABLE XI  
Annual Statistics for Natural Gas Production and Utilization 1970-1974

	1970		1971		1972		1973		1974	
	Millions of S.C.F.*	%	Millions of S.C.F.*	%	Millions of S.C.F.*	%	Millions of S.C.F.*	%	Millions of S.C.F.*	%
Production ...	121,060	100.0	109,814	100.0	104,338	100.0	119,979	100.0	128,293	100.0
G.O.R. (S.C.F./bbl.)	2,371		2,329		2,037		1,978		1,883	
Used as Fuel:										
In Refineries ...	27,403	22.6	27,117	24.7	25,776	24.7	22,506	18.7	20,034	15.6
In Fields ...	8,785	7.3	8,091	7.4	8,415	8.1	8,223	6.9	7,645	6.0
In Other Industries ...	20,302	16.8	20,658	18.8	22,940	21.9	23,970	20.0	23,029	17.9
Sub-Total used as fuel ...	56,490	46.7	55,866	50.9	57,131	54.7	54,699	45.6	50,708	39.5
Other Complete Utilization:										
Used as process gas ...	10,054	8.3	8,931	8.1	9,858	9.5	9,624	8.0	8,071	6.3
Injected into Formation ...	19,017	15.7	12,112	11.0	9,230	8.9	6,381	5.3	5,705	4.4
Converted to C.H.P.S. ...	143	0.1	112	0.1	95	0.1	61	0.1	49	0.1
Sub-Total ...	29,214	24.1	21,155	19.2	19,183	18.4	16,066	13.4	13,825	10.8
Vented:										
After use of Pneumatic Energy ...	13,253	10.9	11,033	10.1	6,345	6.1	6,439	5.4	6,635	5.2
Without Use ...	22,103	18.3	21,760	19.8	21,679	20.7	42,775	35.6	57,125	44.5
Sub-Total ...	35,356	29.2	32,793	29.9	28,024	26.8	29,214	41.0	63,760	49.7

\*Standard Cubic Feet.

% ---Per cent of Total Natural Gas Produced.

## REFINING AND PETROCHEMICAL MANUFACTURE

## Refining

Trinidad and Tobago's refinery throughput totalled 130,819,840 barrels of crude oil in 1974 corresponding to a daily average throughput of 358,410 barrels per calendar day. This represents a decrease of 7.67 per cent in the volume of crude processed compared with 1973.

The country's largest refiner, Texaco Trinidad Inc., saw its daily average refinery throughput plunge to a low of 224,682 barrels per day in March due to a short fall in crude oil supplies resulting from the Arab oil embargo which began in the latter part of 1973. The resumption of crude oil supplies in April of 1974 saw T.T.I.'s daily average throughput peak at 346,906 barrels of oil in May and remained fairly constant for the balance of the year. As a result, T.T.I.'s daily average throughput per calendar day for 1974 was 310,759 barrels of crude oil, a decrease of 6.18 per cent when compared with 1973.

The Trinidad and Tobago Oil Company's Point Fortin Refinery (formerly owned by Shell Trinidad Limited) average throughput per calendar day for 1974 was 56,613 barrels of crude oil, a 14.86 per cent decline in the volume of crude processed compared with 1973. During the first half of 1974, crude oil throughput averaged 57,088 barrels per day due mainly to limitations in availability of power supplies from the company's generation facilities. Since acquisition of the company by the Government of Trinidad and Tobago, on August 31, 1974, the refinery operated largely on indigenous crude oil supplies.

## Petrochemicals

Production of petrochemical intermediates from Texaco refinery amounted to 1,351,868 barrels in 1974 as compared with 1,344,203 barrels in 1973. The main products were:—

				<i>Per cent of Total Production</i>		
				1974	1973	<i>Per cent Change</i>
Normal Paraffin	...	...	...	44.8	47.0	—2.2
Toluene	...	...	...	27.3	25.2	+2.1
Cyclohexane	...	...	...	10.5	8.4	+2.1
Benzene	...	...	...	7.5	7.9	—0.4

**Production and Exports of Important Petrochemical Intermediates Trinidad and Tobago, 1974**  
(quantities in Barrels)

Petrochemical Intermediates	YEAR 1974		YEAR 1973	
	Production	Exports	Production	Exports
Normal Paraffins	608,225	604,132	634,735	583,164
Di-isobutylene	25,535	30,955*	36,969	43,231*
Nonene	19,802	21,887*	22,360	22,758*
Tetramer	29,975	26,971	42,429	45,096*
Benzene	101,756	92,686	106,380	81,921
Toluene	369,718	421,284*	339,920	272,748
Xylene	47,846	45,996	45,421	42,166
Cyclohexane	142,075	132,330	113,700	97,046
Unrefined Napthenic Acids	11,693	5,124	7,965	9,184

\*Excess of Exports over production made up from stocks.

## Crude Oil Balance

Availability	Million bbls.	Disposal	Million bbls.
Stock at 1st January	3.7	Exports	31.4
Production	68.1	Delivered to Refinery	130.8
Imports	95.5	Loss from Production	1.2
	167.3	Stocks at 31st December	3.9
			167.3

## Refined Products Balance

Availability				Million bbls.	Disposal				Million bbls.
Stock at 1st January	...	...	...	7.7	Shipments	...	...	...	111.9
Imports	...	...	...	0.1	Bunkers	...	...	...	9.5
Crude delivered	...	...	130.8						
Refinery Gas and Loss	...	...	3.2		Local Consumption	...	...	...	4.9
Products obtained	...	...	127.6	127.6	Stock at 31st December	...	...	...	9.1
				135.4					135.4

## Excisable Products

The volume of excisable products amounted to 2,217,618 barrels. The excisable sale of gasoline amounted to 1,716,069 barrels, an increase of 6.6 per cent compared to 1973. The excisable duty on these amounted to \$10,753,880. The excisable tax on gasoline being 27 cents for premium and 18 cents for regular.

Sales of bottled propane showed an increase of 2.6 per cent over the 1973 figure amounting to 33,350,706 pounds on which excise duty at 2 cents per pound was paid.

Details of petroleum excisable products are listed hereunder:—

Premium Gas bbls.	Regular Gas bbls.	Gas/Diesel bbls.	Propane lbs.
1,028,097	687,972	501,559	43,350,706

## Nitrogenous Fertilizers

Ammonia production totalled 244,099 short tons, corresponding to an average of 669 short tons/day. This represented a 9.80 per cent decrease in production. Production of ammonia sulphate and urea also decreased by 3.17 per cent and 0.40 per cent to 87,921 and 78,979 short tons respectively.

A total of 16,182 mmcf of natural gas was utilized, a decrease of 10.2 per cent from last year's figure. Of this amount 8,070 mmcf. were used as feedstock for ammonia and nitrogenous fertilizer and hydrogen with 8,111 mmcf. being consumed as fuel.

## Marketing

*Petrol Filling Stations—Sales and Marketing Position 1974.* In 1974 the number of filling stations in operation in Trinidad and Tobago was 220.

Statistics on sale and retail outlets are distributed among the three marketing companies as follows:—

			Texaco	Shell*	N.P.	Total
Number of Stations	...	...	77	86	57	220
Volume (Mogas I.G.)	...	...	18,869,467	20,440,460	16,707,568	56,017,495
Average per Station	...	...	245,058	237,680	293,115	254,625
Market Per cent of Total Sales	...	...	33.7	36.5	29.8	100.0
Per cent of Total Number of Stations	...	...	35.0	39.1	25.9	100.0

The total throughput was 6.6 per cent greater than the 1973 total of 52,546,106 I.G. For the five (5) year period 1970 to 1974 local consumption rose from 45,056,497 to 56,017,495 giving an average growth rate of 4.8 per cent.

Year	Total Consumption of Mogas I.G.
1970	45,056,497
1971	47,258,887
1972	50,490,514
1973	52,546,106
1974	56,017,495

\*On 30th August, 1974, TRINTOC took over all assets of Shell Trinidad Limited.

## ACCIDENT REPORT—1974

Accidents reported for the year 1974 numbered 219. This figure showed a slight decrease of 1.4 per cent compared with the 1973 total of 222. Accidents were classified as serious and non-serious depending on the extent of the injury.

Serious accidents comprised approximately 14.6 per cent of the total, and this was a tremendous decrease as manifested by the fall from the 33 per cent of 1973. It should be noted that although there was an increase in activity in the Amoco and Trinidad Tesoro oil fields, the number of accidents decreased considerably from the 1973 totals of 82 and 36 respectively. It appears that the influence of safety programmes that were instituted in 1973 is having a significant effect.

Accidents in the serious category consisted principally of crush injuries, amputation of fingers and toes caused in machinery operations, compound fractures, injury to ribs, back injuries affecting the spine in some instances, blows to the head and facial areas caused mainly by falls when performing usually hazardous jobs at great heights. First degree burns from steam or oil, internal injuries, lacerated wounds becoming septic, and eye injuries.

Of the accidents occurring during the year 85.4 per cent were considered non-serious or minor and included typical injuries such as sprains, superficial burns, abrasions, bruises contusions to limbs, dislocation of shoulders, strained muscles resulting from strenuous jobs, and small cuts.

There were several accidents which caused destruction to equipment and two unfortunately resulted in the loss of a life. On June 6, at a compressor house, Pointe-a-Pierre, gas in the Rexformer Unit ignited as workers were removing a compressor cylinder head. A man received first degree burns to the body and died as a result. Seven other workers assisting in the operation were also badly burnt. At Amoco on the Samaan 'C' Drilling Platform, a worker while involved in welding operations, slipped from the first deck, hitting his head on a piece of steel prior to falling into the sea. He died due to drowning.

At a gathering station—Navette—Guayaguayare, fire broke out, causing extensive damage. Fortunately, there was no loss of life.

There were numerous accidents occurring in the oilfields, apart from those accounted for on the Accidents Statistics Table. These, although not falling under jurisdiction of the Ministry of Petroleum and Mines, were brought to our attention and in some cases investigations were carried out.

TABLE XII  
Accidents Statistics—1974

Company	Field	Total	Fatalities	SERIOUS				MINOR			
				D	P	E	O	D	P	E	O
Texaco ...	Brighton ...	11	—	—	1	—	—	—	10	—	—
	Barrackpore ...	16	—	1	—	—	—	11	4	—	—
	Forest Reserve ...	41	—	1	4	—	—	6	30	—	—
	Guayaguayare ...	13	—	—	3	—	—	2	8	—	—
	Others ...	—	1*	—	—	—	—	—	—	—	—
	COMPANY TOTAL ...	81	1	2	8	—	—	19	52	—	—
Shell ...	All ...	2	—	—	—	—	—	—	2	—	—
P.C.O.L. ...	All ...	2	—	—	—	—	—	—	1	—	1
Amoco ...	All ...	64	1	11	2	—	1	49	1	—	—
Trinidad—Tesoro ...	All ...	25	—	—	4	1	—	—	20	—	—
Trinmar ...	All ...	45	—	1	1	1	—	2	31	4	5
		219	2	14	15	2	1	70	107	4	6

\*T.T.I. Pointe-a-Pierre Refinery

D=Drilling P=Production E=Engineering O=Others

## ROYALTY ASSESSMENT

Appendix VII presents a summary of Crude Oil Assessed for Crown Royalty by Company, showing average prices per barrel and analyses for the half-yearly periods ending 30th June, 1974 and 31st December, 1974.

Net Royalty production increased from 27,180,270 barrels and 30,304,816 barrels in the first and second half of 1973 to 31,157,987 barrels and 33,851,990 barrels respectively in 1974. The reason for this rise is the Amoco Trinidad Oil Co.'s production which continued its upward trend throughout 1974.

Prices of petroleum products rose steadily from January and continued rising to the end of the year. Total Royalty on Crude for the year was therefore \$160,834,354 as compared with \$74,843,071 for 1973 and \$28,148,153 for 1972 (*See* Appendix IX average price in T.T. currency per barrel).

Appendix IX presents a summary of Royalty assessed for Crude Oil, Natural Gasolene and Natural Gas produced, and Minimum Rents on Crown Oil Mining Leases/Licences for the half-yearly periods 1972, 1973 and 1974.

Total Royalty in 1974 of \$163,052,222 is higher than 1973 and 1972 respectively by \$76,941,614 and \$30,316,730. Greater production in 1974 is therefore mainly responsible for this increase as well as the higher rate of Royalty of 12½ per cent applicable to Amoco Trinidad Oil Company and TTPCL Ltd. (Galeota Field).

## LEASES AND LICENCES

Total acreage under Licence increased from 4,446,084 acres at the end of 1973 to 5,697,501 acres at the end of 1974.

During the year under the Production Sharing Licences several Companies acquired marine acreage on the North and East Coast of Trinidad; Texaco/Tenneco 260,000 acres; Deminex/Mobil 303,424 acres; Texaco Trinidad Inc./GOTT 373,142 acres and Texaco Trinidad Inc. 305,079. All these licences were granted in November and December, 1974.

The following is an outline of the situation as at 31st December, 1974:—

Crown Oilrights	Acres	Roods	Perches
Public Petroleum Rights ... ..	222,142	3	33
Private Petroleum Rights (Encroachments) ... ..	50,247	1	17
Exploration and Production Licences (Public Petroleum Rights) ...	4,613,438	0	00
Marine Licences ... ..	545,940	0	00
Total Crown Oilrights ... ..	5,317,766	0	00
<i>Private Oilrights</i>			
Private Leases ... ..	107,344	2	35
Total Acreage of all lands under Licence ... ..	5,697,501	0	05

A detailed survey of Crown and Private Leases and Licences is set out on a company basis in Table XIII.



TABLE XIII  
Oil Rights under Lease and Licence as at 31st December, 1974 in Trinidad and Tobago

Company	CROWN																					Private			Total Crown and Private		
	Land Lease									Submarine																	
	Public Petroleum Rights			Private Petroleum Rights			Total			High Seas			Territorial Waters			Exploration Licence			Total			A	R	P	A	R	P
	A	R	P	A	R	P	A	R	P	A	R	P	A	R	P	A	R	P	A	R	P						
Trinidad Northern Areas ...	32	3	33	—	—	—	32	3	33	83,434	0	00	100,213	0	00	—	—	—	183,647	0	00	—	—	—	183,679	3	33
Texaco Trinidad Inc. ...	127,482	3	35	33,495	3	32	160,978	3	27	411,806	0	00	15,344	0	00	323,759	0	00	750,909	0	00	86,197	0	07	998,084	3	34
Trinidad—Tesoro Petroleum Co. Ltd. ...	16,176	3	27	8,861	3	16	25,038	3	03	50,700	0	00	42,831	0	00	78,929	0	00	172,460	0	00	14,610	2	06	212,109	1	09
*Trintoc ...	60,734	3	18	5,239	2	24	65,974	2	02	—	—	—	—	—	—	—	—	—	—	—	—	938	0	08	66,912	2	10
Premier Consolidated Oilfields Ltd. ...	10,718	2	09	2,640	1	13	13,358	3	22	—	—	—	—	—	—	—	—	—	—	—	—	5,599	0	14	18,957	3	36
Tricentrol Ltd. ...	6,996	2	31	—	—	—	6,996	2	31	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	6,996	2	31
Estate of Timothy Roodal ...	—	—	—	9	2	12	9	2	12	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	9	2	12
Amoco Trinidad Oil Co., Ltd. ...	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1,680,097	0	00	1,680,097	0	00	—	—	—	1,680,097	0	00
Phillips Petroleum Co. Ltd. ...	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	165,840	0	00	165,840	0	00	—	—	—	165,840	0	00
Deminex/Agip. ...	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	517,767	0	00	517,767	0	00	—	—	—	517,767	0	00
Occidental ...	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	313,680	0	00	313,680	0	00	—	—	—	313,680	0	00
Amerada—Hess—565 Corp. ...	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	248,760	0	00	248,760	0	00	—	—	—	248,760	0	00
Oceanic Corp. and Santa Fe ...	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	160,640	0	00	160,640	0	00	—	—	—	160,640	0	00
Consortium (TTI/STL/TTPCL) ...	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	187,400	0	00	187,400	0	00	—	—	—	187,400	0	00
Texaco/Tenneco ...	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	260,000	0	00	260,000	0	00	—	0	00	260,000	0	00
Deminex/Mobil ...	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	303,424	0	00	303,424	0	00	—	—	—	303,424	0	00
Texaco/GOTT ...	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	373,142	0	00	373,142	0	00	—	—	—	373,142	0	00
	222,142	3	33	50,247	1	17	272,390	1	10	545,940	0	00	158,388	0	00	4,613,438	0	00	5,317,766	0	00	107,344	2	35	5,679,501	0	05

A—Acres; R—Rods; P—Perches;  
\*Formerly Shell Trinidad Ltd.

## LEGAL DEVELOPMENT 1974

The duties in the Legal Section during 1974 increased considerably over 1973 in view of the increased activities of the Ministry in that year. Apart from the voluminous routine legal duties of advising on the administration of the petroleum legislation, licences and contracts, attending meetings, and performing the miscellaneous functions connected therewith, new ground was covered in the grant of acreage for exploration and production operations for petroleum and in the field of legislation.

### Legislation

A great deal of legislation pertaining to petroleum was enacted in 1974 and the Acting Senior State Counsel was involved in the drafting of such legislation. Two amendments were made to the Petroleum Act, 1969. The first amendment to Section 30 authorised and required the Minister of Petroleum and Mines, after consultation with the Minister of Finance, to fix, by Order published in the *Gazette*, the prices or the basis of determining the prices at which petroleum products may be disposed of in transactions between refining businesses and marketing businesses as defined in the Act. The amendment also empowered the Minister by Order published in the *Gazette* to fix the price or the basis of determining the price at which petroleum products may be sold by a person carrying on "marketing business" or a "marketing licence" as defined.

The second amendment to the Act, viz; to Section 6, was passed to enable the Minister of Petroleum and Mines as an alternative to granting an Exploration and Production (Public Petroleum Rights) Licence, to enter into Productions Sharing Contracts upon such terms and conditions as the Cabinet may approve.

The Petroleum Levy and Subsidy Act, 1974 (Act No. 14 of 1974) was enacted to provide for the imposition of a levy on companies producing oil at a daily average rate in excess of three thousand barrels (and receiving the proceeds therefrom) in order to subsidize the price of certain petroleum products which must be sold at controlled prices.

The Acting Senior State Counsel was responsible for the ground-work for the aforementioned pieces of legislation and for the preparation of the Orders made thereunder, viz:

- (i) The Price of Petroleum Products Order, 1974;
- (ii) The Price of Petroleum Products (No. 2) Order, 1974;
- (iii) The Petroleum Levy and Subsidy (Gross Margin) Order, 1974; and
- (iv) The Petroleum Taxes Act, 1974.

The Petroleum Taxes Act, 1974 (Act No. 22 of 1974) provided a new basis for the taxation of oil companies operating in Trinidad and Tobago. The producing, refining and marketing functions of oil companies were separated and now liable to be taxed separately. A refinery throughput tax was imposed on the refining business of a company in lieu of corporation tax and unemployment levy and the rate of corporation tax for the production business was increased by 2½ per cent from 45 per cent to 47½ per cent. The Minister of Finance was authorised under the Act to fix the prices of petroleum after consultation with the Minister of Petroleum and Mines, and the Minister of Petroleum and Mines was authorised to fix the price on the basis for determining the price from the sale or disposal of products by the refining business to the marketing business. The Senior State Counsel attended numerous meetings at the Legal Drafting Office to assist in various orders which were made under the Act, in particular the Petroleum (Price of Products) Taxes Order, 1974.

### Production Sharing Contracts

The Minister of Petroleum and Mines granted a total of four Production Sharing Contracts to four companies in November and December, 1974.

Texaco Trinidad Inc. received a contract for over 373,142 acres in the submarine area in the Gulf of Paria and another over 305,079 acres in the submarine area in the East Coast of Trinidad.

Texaco Trinidad Inc., and Tenneco Oil Company of Trinidad were jointly granted a Production Sharing Contract over 260,000 acres in the submarine area in the East Coast of Trinidad.

Deminex and Mobil Exploration Trinidad Limited were granted a Production Sharing Contract over 303,424 acres, in the submarine area off the East Coast of Trinidad. The grant of Production Sharing Contracts (instead of Exploration and Production)(Public Petroleum Rights) Licences for carrying out Exploration and Production operations was favoured by Government because it afforded Government the means of becoming more directly involved in the physical resources of the country instead of being a mere collector of taxes. Under these contracts the Companies bear all the costs of exploration; production (if any) is apportioned at an escalating rate as production increases. The Company's share of production includes its costs and profits whereas Government's share of production includes all taxes and other payments to Government.

The expenditure obligation of the Companies vary from U.S. \$8,000,000 to U.S. \$15,000,000. Each Company is committed to drill at least two wells with one to a depth of 15,000 feet or basement. Production Bonuses are payable at an escalating rate as production increases and vary from U.S. \$1,400,000—U.S. \$2,000,000 when production is at 25,000 b.o.p.d. to U.S. \$1,400,000—\$2,250,000 when production reaches 75,000 barrels per day. The term of the contract is for six years renewable for a period of twenty-five years if commercial discovery is achieved in the Contract Area. If commercial discovery is not achieved the Contract automatically terminates in its entirety. Companies are obligated to relinquish two out of four sub-blocks within three years.

### Assignments

By deed dated 20th of September, 1974 and registered as No. 12823 of 1974, 565 Corporation assigned 50 per cent of its interest in the Exploration and Production (Public Petroleum Rights) Licence No. 10149 of 1971 over blocks HH5, LL6 and LL7 to Ashland Caribbean Inc., thereby granting Ashland a 25 per cent interest in the said Licence.

### Consent to Assignment

On 16th August, 1974 the Minister of Petroleum and Mines granted his consent to the assignment of Oil Mining Lease dated the 1st day of October, 1954 and registered as No. 10588 of 1954 from Tricentrol Limited (formerly called Trinidad Canadian Oil Limited) to Texaco Trinidad Inc. The acreage comprised in the said lease is 6,996 acres 2 roods and 31 perches.

On 9th October, 1974, the Minister of Petroleum and Mines granted his consent to the assignment of 33 1/3 per cent of interest in three Exploration and Production (Public Petroleum Rights) Licences over Block HH6, KK8, KK5, KK6, KK7, KK9, and LL9, from Deminex-Agip to Tenneco Oil Company of Trinidad.

### Miscellaneous Matters

The Senior State Counsel was involved to some extent in:—

- (1) The Project Management Agreement dated the 24th day of September, 1974 between the Government of Trinidad and Tobago and Amoco for the construction of a 24-inch pipeline of approximately 29 miles in length from Texaco's Beach Field to Picton; and
- (2) The Gas Sales Contract between Amoco and T.&T.E.C. for the sale of gas to T.&T.E.C. for public utility use.

### STAFF

Continuing the effort of 1973 led to an even heavier but better organized Training Programme in 1974. This was particularly so in regard to the Petroleum Inspectors of the Ministry. During 1974, the following courses were arranged:—

- (1) A one-week course at the Petroleum Testing Laboratory on RLE analysis, attended by all inspectors.
- (2) A one-week course by Foxboro-American on Gas Instrumentation which four of them attended.
- (3) A three-month seminar at the University of the West Indies, St. Augustine, given by Amoco on Drilling Technology, also attended by another four (4) Inspectors.

Mr. Stephen Davis, Petroleum Engineer I and Mr. Horace Williams, Senior Petroleum Inspector attended a Supervisory Management Course for two (2) weeks at the Central Training Unit. Mr. Davis also attended a one-week Seminar on Pollution at the University of the West Indies.

Mr. Joel Brown, Temporary Chemical Engineer attended a general Reservoir Engineering Course—one week-end; and one on Production Engineering—two weeks—given by H. K. Van Pollen in August and October respectively.

In addition, general seminars sponsored by Amoco Trinidad Oil Company and other oil companies, and service company seminars of short duration, were regularly attended.

Mr. Charles Elliot, Petroleum Engineer I, Ministry of Petroleum and Mines presented his thesis at the Spring Meeting 1974 of the Society of Petroleum Engineers (SPE) of the American Institute of Mining Metallurgical and Petroleum Engineers (AIME) held in Amsterdam during the period 28th–31st May, 1974.

Mr. Elliot, a former Government Scholar in Petroleum Engineering at the University of Zulia, Venezuela, wrote a thesis, as part of his petroleum engineering degree course, on "The Recovery of Viscous Oils from Stratified Reservoirs using Polymer Solutions".

He was also attached to Trinidad-Tesoro Petroleum Company Limited for a period of one month. His services were required to start up a study for a polymer flood in one of the Company's reservoirs.

Mr. McNichols Herbert, Chemical Engineer I, of the Ministry of Petroleum and Mines was assigned to Frankfurt, West Germany, from 5th August, 1974, as Trinidad and Tobago's representative during the engineering/designing of the Government of Trinidad and Tobago-Textrin Petrochemical Maleic Anhydride Plants. He also visited Houston, Texas, during the period July 10 to 14, 1974 in connection with the preliminary design of the Texaco-Trinidad and Tobago Government joint-venture projects.

Mr. Malcolm Jones and Dr. Akin Young Hoon, chemical engineers in the Ministry of Petroleum and Mines were assigned to work with Grace Co. Ltd and the contractor on the design and engineering of the Government of Trinidad and Tobago-Amoco Ammonia Joint Venture Plant.

They left on 15th February, 1974 for a three to six month attachment to the Fluor Corporation of Los Angeles to follow up the design for the implementation of the proposed liquid ammonia plant to be constructed at Point Lisas.

### Scholarships

Mr. Frank Look Kin, Petroleum Engineer II, was granted study leave to attend the Pennsylvania State University to pursue studies leading to the Master of Engineering degree in Mineral Engineering Management for the period of one year. Mr. Look Kin left on 27th August, 1974.

### Conferences

#### *Ninth World Energy Conference*

Mr. Basharat Ali, Chemical Engineering Specialist, Ministry of Petroleum and Mines, formed part of the delegation representing Trinidad and Tobago at the Ninth World Energy Conference in Detroit, U.S.A. from 20-27th September, 1974. The general theme of the Conference was *The Economic and Environmental Challenge of Future Energy Requirements* and special emphasis was devoted to the relationships that exist between energy from developed and developing countries, with contributions on a wide variety of subjects relating to the economic factors relevant to the world supply of energy resources and their depletion as well as costs of protecting the environment.

The objects of the conference were *inter alia*, to promote the development and peaceful use of energy resources to the greatest benefit of all and consideration of all aspects of energy supply, transformation, utilisation and transportation.

#### *Law of the Sea Conference*

Mr. Rodney Appleton, Senior Economist of the Ministry of Petroleum and Mines, and Mr. L. Ballah, Permanent Secretary of the Ministry of External Affairs, represented Trinidad and Tobago at the final meeting of Caribbean Countries *re* the Position of the Law of the Sea, held in Jamaica from 4th-9th February, 1974, to harmonise the region's position for the Law of the Sea Conference to be held in Caracas.

Mr. Rodney Appleton formed part of a delegation from Trinidad and Tobago to the Special Session of the U.N. General Assembly in New York from 9th April to 1st May, 1974. This session was mainly convened to discuss problems arising from the Energy Crisis, and among the matters discussed were problems in respect of raw materials and resource development as well as international economic co-operation for solution to these problems.

The Third United Nations Inter-Ministerial Committee Conference of the Law of the Sea was held in Caracas, Venezuela, during the period 20th June to 29th August, 1974, and the delegation which represented Trinidad and Tobago included the Senior Economist of the Ministry.

#### *Seventh Caribbean Geological Conference*

Mr. J. P. Scott, Geologist III, and Mr. Kenrick Haynes, Geologist I, both of the Ministry of Petroleum and Mines attended the 7th Caribbean Triennial Conference held in Guadeloupe from 30th June, 1974 to 12th July, 1974. The purpose of the conference was to facilitate the exchange of ideas and information on geological-geophysical matters pertaining to the Caribbean Region.

Mr. John Scott also attended the Marine Geology Workshop at the invitation of the Inter-Governmental Oceanic Commission of UNESCO held on June 28th, and 29th, 1974 in Guadeloupe prior to the above-mentioned Conference and in preparation for the Marine Geology symposium which was held in conjunction with the conference.

### Visits

Mr. Hugh Hinds, Chief Petroleum Engineer and Mr. Trevor Boopsingh attended the Offshore Technology Conference held in May, 1974 in Houston, Texas. They proceeded later on a visit to the Gulf Coast installation of Amoco's offshore operations.

**Middle East Oil Mission**

Mr. George H. Legall, Permanent Secretary in the Ministry of Petroleum and Mines was a member of the Trinidad and Tobago delegation which visited the oil producing countries of the Middle East, Africa and the Mediterranean. The Mission which left on February 24, 1974, was headed by the Ambassador of the European Economic Community in Brussels Mr. J. O'Neil Lewis. The objectives of the Mission included an investigation of the future developments of the oil industry in the producing countries *vis-a-vis* investment in downstream operations, refining and petrochemicals; joint venture operations between Trinidad and Tobago and the Middle East and North African countries for refining based upon imported crudes and petrochemicals, and measures to assist developing Third World Countries *re* effect of higher oil prices on their balance of payments (a matter of special importance to Trinidad and Tobago in terms of the Caribbean countries).

**Latin American Oil Mission**

Mr. O. O. Fernandes, Special Adviser to the Minister of Petroleum and Mines and Mr. Frank Look Kin, Petroleum Engineer II, were present at the Mission to certain Latin American Countries. The Latin American Mission was headed by Mr. Frank Rampersad, Permanent Secretary of the Ministry of Finance. The purpose of the mission was to monitor the developments in the Petroleum and other industries, in those countries, and exploring the possibilities of future trade and investment with them. The Mission was scheduled to last from 27th February, 1974 to 29th March, 1974. The countries visited were Venezuela, Colombia, Ecuador, Peru, Surinam, Brazil, Argentina, Bolivia and Mexico.

## APPENDIX 1

## Annual Statistics of Production, Drilling, Refining - Exports and Imports, 1964-1974

ITEM	Unit	% Difference 1974-1973	1974	1973	1972	1971	1970	1969	1968	1967	1966	1965	1964
1. Crude Oil	'000 bbls	+ 12.3	68,136	60,670	51,211	47,148	51,047	57,418	66,904	64,995	55,603	48,859	49,731
2. Casting Head Gasoline (C.H.P.S.)	'000 bbls	- 12.6	69	79	137	141	168	150	164	192	188	197	200
3. Total Crude Oil and Natural Gasoline (1 + 2)	'000 bbls	+ 12.3	68,205	60,749	51,348	47,289	51,215	57,668	67,068	65,187	55,791	49,056	49,931
4. Crude Oil Production - Crown Oil Rights	'000 bbls	+ 12.7	65,078	57,736	48,246	43,929	47,594	54,014	63,345	60,961	51,648	45,274	46,100
5. Crude Oil Production - Private Oil Rights	'000 bbls	+ 4.2	3,058	2,934	2,965	3,219	3,452	3,405	3,559	4,034	3,955	3,585	3,631
6. Total Imports	'000 bbls	- 8.0	95,636	103,977	107,662	107,567	115,445	105,418	93,380	84,146	93,508	94,050	83,682
7. Imports of Refined Products	'000 bbls	+119.0	46	21	76	75	69	43	49	43	-	2	54
8. Imports of Crude Oil for Refining	'000 bbls	- 7.9	95,472	103,624	107,150	106,867	113,275	103,762	91,447	80,437	93,228	93,398	83,223
9. Imports of Other Oils for Refining and Blending	'000 bbls	- 64.4	118	332	436	625	2,101	1,613	1,884	3,666	280	650	405
10. Total Exports	'000 bbls	- 1.7	153,297	155,998	149,992	146,663	154,974	147,878	142,076	141,779	135,678	132,440	118,596
11. Exports of Crude Oil	'000 bbls	+ 34.9	31,870	23,614	14,005	6,998	8,669	6,139	6,983	5,801	4,705	4,452	3,442
12. Exports of Refined Products	'000 bbls	- 8.3	121,427	132,384	135,972	139,665	146,305	141,648	135,093	135,978	130,973	127,988	155,154
13. Runs to Still	'000 bbls	- 7.7	130,819	141,687	144,274	145,547	154,860	154,077	151,282	138,825	144,193	137,165	127,548
14. Number of Wells Started	As stated	+ 6.8	219	205	191	248	146	127	176	213	273	225	192
15. Total Number of Wells Completed	As stated	0	212	212	195	220	134	138	176	221	275	224	194
16. Number of Drilling Wells Completed as Oil Wells	As stated	- 2.8	176	181	166	175	101	98	151	197	244	201	170
17. Number of Drilling Wells Abandoned, & c	As stated	- 32.2	21	31	30	45	28	31	25	24	31	23	24
18. Total Footage Drilled (All Wells)	Feet	- 4.7	909,980	955,185	841,742	839,259	662,977	690,671	942,686	928,210	1,187,202	1,058,736	1,056,337
19. Footage Drilled on Crown Oil Rights	Feet	- 12.3	766,787	874,867	760,769	743,784	566,078	637,974	928,915	880,839	1,078,133	1,012,922	1,006,636
20. Footage Drilled on Private Oil Rights	Feet	+ 78.3	143,193	80,318	80,973	195,475	96,899	152,697	13,771	47,371	109,069	45,814	49,701
21. Average Depth of Completed Drilling Wells (15)	Feet	+ 0.1	4,509	4,506	4,294	4,269	4,911	5,313	5,356	4,328	4,318	4,823	5,513
22. Total Number of Wells Producing (Average during year)	As stated	+ 3.0	2,981	2,894	2,932	3,035	3,121	3,257	3,381	3,427	3,377	3,227	3,206
23. Number of Wells Produced by Flowing (Average during year)	As stated	- 1.6	498	506	525	559	626	708	795	891	934	920	1,010
24. Number of Wells Produced Artificial Lift (Average during year)	As stated	+ 4.0	2,483	2,388	2,407	2,476	2,497	2,548	2,586	2,536	2,443	2,307	2,196
25. Average Daily Production per Producing Well	Barrel	+ 9.0	62.6	57.4	47.7	42.6	44.8	48.3	54.1	52.0	45.1	41.5	42.4
26. Average Daily Production Flowing Well	Barrel	+ 21.3	248.0	204.4	146.8	114.4	119.9	125.2	137.3	117.6	96.3	88.9	92.3
27. Average Daily Production per Artificial Lift Well	Barrel	- 3.4	25.4	26.3	26.1	26.4	26.0	26.9	28.5	28.9	25.6	22.6	19.4
28. Total Value of Domestic Exports	\$'000	+ 273.8	3,934,151	1,052,476	1,050,023	1,000,940	944,131	934,658	970,636	755,100	717,170	678,313	686,254
29. Total Value of Petroleum Products (Item 28)	\$'000	+ 204.5	2,532,081	831,496	830,993	804,831	668,439	644,676	725,430	593,653	580,947	563,319	573,903
30. Total Value of Lake Asphalt Products	\$'000	+ 20.1	4,657	3,876	3,299	3,561	3,991	2,764	3,209	3,368	3,570	3,139	4,086
31. Total Natural Gas Produced	MBCF	+ 6.9	128,293	119,979	104,338	109,814	121,060	137,508	151,445	140,338	118,927	111,503	110,732
32. Used as Fuel	MBCF	- 7.5	50,599	54,700	57,131	55,866	56,490	58,348	56,410	53,846	48,692	44,517	37,892
33. Replaced in Formation	MBCF	- 10.6	5,706	6,381	9,230	12,112	19,818	24,728	21,324	22,625	19,841	13,866	14,688
34. Losses, Not Collected	MBCF	+ 29.5	63,760	49,213	28,016	32,783	35,386	43,464	62,916	54,355	50,394	56,120	58,152

APPENDIX 11  
MONTHLY ANALYSIS OF DRILLING AND WORKOVER WELLS, 1974

MONTH	RIG/ MONTH	NEW WELLS STARTED	DRILLING WELLS COMPLETED											CLOSED IN		MONTHLY FOOTAGE DRILLED			AVERAGE FOOTAGE DRILLED		OLD WELLS			
			OIL & GAS PRODUCERS		INJECTION & OBSERVATION WELLS		ABANDONED				TOTAL	AGGREGATE DEPTH	AVERAGE DEPTH	NO.	AGGREGATE DEPTH	CROWN	PRIVATE	TOTAL	/DAY	/RIG /DAY	RECOMPLETED	ABANDONED		
			NO.	AGGREGATE DEPTH	NO.	AGGREGATE DEPTH	AFTER TESTING		DRY HOLES														TECHNICAL CAUSES	
							NO.	AGGREGATE DEPTH	NO.	AGGREGATE DEPTH													NO.	AGGREGATE DEPTH
JANUARY	10.9	12	13	50,965	-	-	-	-	1	5,370	-	-	14	56,335	4,024	-	-	76,581		76,581	2,470.4	226.6	20	3
FEBRUARY	10.4	14	20	103,683	-	-	-	-	-	-	-	-	20	103,683	5,184	-	-	58,225	5,950	64,175	2,292.0	226.4	12	-
MARCH	10.2	19	9	37,840	-	-	-	-	-	-	2	9,967	11	47,807	4,346	-	-	59,745	6,203	65,948	2,127.4	208.6	18	4
APRIL	9.2	16	10	27,711	-	-	-	-	2	9,450	-	-	12	37,161	3,097	-	-	52,577	5,728	58,305	1,943.5	211.3	15	4
MAY	12.1	18	15	53,700	-	-	-	-	2	9,870	-	-	17	63,570	3,742	-	-	70,750	7,172	77,922	2,513.6	207.7	18	2
JUNE	14.7	20	18	52,776	-	-	1	12,806	2	9,625	1	7,313	22	82,520	3,751	-	-	58,771	12,485	71,256	2,375.2	173.4	11	-
JULY	13.5	22	25	88,405	-	-	-	-	-	-	-	-	25	88,405	3,536	-	-	70,611	11,766	82,377	2,657.3	196.6	16	2
AUGUST	11.5	25	18	52,526	-	-	1	11,946	1	2,150	-	-	20	66,622	3,331	-	-	55,177	13,729	68,906	2,222.8	177.8	17	1
SEPTEMBER	11.4	22	1	81,911	-	-	-	-	2	10,352	-	-	20	92,263	4,618	-	-	78,374	21,100	99,474	3,315.8	247.4	15	-
OCTOBER	10.2	18	15	52,909	1	5,150	1	13,000	3	9,215	-	-	20	80,274	4,014	-	-	80,072	16,469	96,541	3,114.2	235.9	8	6
NOVEMBER	11.3	16	9	28,806	-	-	-	-	1	6,000	-	-	10	44,806	4,481	-	-	32,360	26,877	59,237	1,974.6	191.7	12	1
DECEMBER	10.1	17	20	103,872	-	-	1	11,970	-	-	-	-	21	115,842	5,516	-	-	73,544	15,714	89,258	2,879.3	211.7	15	2
TOTAL 1974	14.0	219	190	745,104	1	5,150	4	49,722	14	62,080	3	17,280	212	879,336	4,148	-	-	766,787	143,193	909,980	2,493.1	209.5	174	28
TOTAL 1973	13.7	205	178	799,198	3	12,064	6	72,235	20	118,279	5	15,174	212	1,016,950	4,797	-	-	874,867	80,318	955,185	2,616.9	272.6	237	9
INCREASE 1974 - 1973	0.3	14	12	-54,094	-2	-6,914	-2	-22,513	-6	-56,199	-2	2,106	-	-137,614	-648	-	-	-108,080	62,875	-45,205	-123.8	-63.1	-63	19
AVERAGES 1974	11.9	18.3	15.8	3921.6	0.1	5150.0	0.3	12,430.5	1.2	4,434.3	0.3	5,760.0	17.7	4,147.8	--	--	--	63,899	11,933	75,832	--	--	14.5	2.3
AVERAGES 1973	11.4	17.1	14.8	4489.9	0.2	4021.3	0.5	12,039.2	1.7	5,913.9	0.4	3,034.8	17.7	4,796.9	--	--	--	72,905	6,693	79,598	--	--	19.8	0.7



APPENDIX 11A

LAND AND MARINE FOOTAGE DRILLED, 1974

	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER	TOTAL
LAND	46,240	47,620	52,413	51,805	53,036	56,782	54,136	50,882	54,363	57,886	42,905	45,388	601,925
MARINE	39,341	16,868	13,636	6,410	24,887	25,874	38,241	18,864	48,771	28,576	16,382	44,888	388,885
TOTAL	76,581	64,488	66,049	58,215	77,922	71,256	92,377	69,746	103,134	86,461	59,287	90,276	990,810
DAILY AVERAGE FEET	2,479.4	2,282.9	2,127.4	1,943.8	2,513.8	2,376.2	2,687.3	2,222.8	2,578.8	2,716.3	1,874.8	2,879.3	2,463.1
DAILY AVERAGE RIG	226.6	238.4	288.6	211.3	287.7	173.4	186.8	177.8	282.4	236.8	191.7	211.7	209.5
MARINE % TOTAL	39.6	29.3	30.8	11.8	31.9	30.2	34.3	26.2	46.3	32.9	27.5	48.4	33.9

APPENDIX III

Analysis of Monthly Production for the year ending 31st December 1974.

Month	FLOWING				GAS/AIR LIFT				PUMPING				PLUMBER LIFT				OTHER METHODS				SALT WATER				No. of Wells Produced	No. of Idle Wells	No. of Wells Abd.	No. of Wells drilling at month end.	Total No. of Wells Started	Daily Average Per Producing Well	Total Oil Production	BREAKDOWN OF TOTAL PRODUCTION						C. H. P. S.		
	No. of wells	Quantity bbls.	% of Total oil	Daily Av. per Well bbls	No. of Wells	Quantity bbls.	% of Total Oil	Daily Av. per Well bbls	No. of Wells	Quantity bbls.	% of Total oil	Daily Av. per Well bbls	No. of wells	Quantity bbls	% of Total oil	Daily Av. per well bbls	No. of Wells	Quantity bbls	% of Total oil	Daily Av. per Well bbls.	No. of Wells	Quantity Produced bbls	Daily Av. per Well	No. of Wells								Quantity Produced bbls	Daily Av. per Well	No. of Wells	Quantity Produced bbls	Daily Av. per Well	Average B.O.P.D.	CUMULATIVE	TOTAL	
																																								CR. A
JANUARY	531	3,606,064	65.2	210.7	751	872,389	15.7	37.5	1,608	1,039,944	18.8	20.8	12,430	0.2	12.9	3	41	0.1	0.4	1,697	1,486,950	21.2	28.2	2,924	7,265	2	10	10,201	61.0	5,530,868	70.8	2,395	5,261,577	15.4	529	269,341	178,415	3,617	114	3,731
FEBRUARY	512	3,272,514	64.8	228.3	737	817,000	16.2	39.6	1,620	946,847	18.7	20.9	10,615	0.2	12.6	3	41	0.1	0.5	1,650	1,354,997	21.1	29.3	2,902	7,305	-	8	10,215	62.1	5,047,017	72.4	2,367	4,797,988	16.6	535	449,329	180,150	3,120	133	3,247
MARCH	519	3,624,108	64.5	225.2	767	891,128	15.9	37.5	1,641	1,084,341	19.3	21.0	12,780	0.2	13.3	4	26	0.1	0.2	1,709	1,494,588	26.6	28.2	2,982	7,238	2	11	10,233	60.7	5,612,383	70.8	2,426	5,324,659	16.7	556	281,724	161,044	3,098	110	3,214
APRIL	512	3,514,935	64.6	229.8	757	853,043	15.7	37.5	1,668	1,059,327	19.4	21.1	15,334	0.2	14.6	5	41	0.1	0.3	1,683	1,417,714	20.6	28.1	2,977	7,258	2	12	10,249	60.9	5,442,680	71.4	2,414	5,173,518	15.9	560	264,162	161,423	3,370	164	3,464
MAY	517	3,733,768	65.2	232.9	741	878,212	15.3	38.2	1,692	1,094,191	19.1	20.8	16,858	0.2	14.8	5	61	0.1	0.4	1,730	1,515,777	20.9	28.2	2,990	7,263	2	12	10,267	61.7	5,722,291	72.2	2,435	5,454,044	15.5	561	268,247	164,590	3,004	127	3,261
JUNE	511	3,558,562	65.3	221.1	745	825,219	15.1	36.9	1,692	1,052,882	19.3	20.7	14,327	0.2	13.2	3	41	0.1	0.4	1,709	1,475,222	21.3	28.8	2,987	7,284	4	13	10,288	60.8	5,451,031	68.7	2,441	5,199,669	14.8	546	251,162	161,701	3,116	111	3,180
PRODUCTION TOTAL 1st JULY-30th June	517	21,369,851	64.9	227.7	749	5,136,991	15.7	37.9	1,657	6,277,532	19.1	20.9	81,545	0.2	13.6	4	251	0.1	0.3	1,643	8,746,248	21.0	28.5	2,960	-	-	-	10,288	61.2	32,806,270	71.4	2,413	31,211,405	16.1	547	1,524,865	181,250	22,195	510	3,217
JULY	474	3,727,407	65.1	240.2	748	876,906	15.3	37.4	1,728	1,096,271	19.2	20.4	17,009	0.2	15.7	4	30	0.1	0.1	1,724	1,572,321	21.6	29.4	3,015	7,292	2	10	10,309	61.1	5,713,623	71.6	2,458	5,456,630	14.9	557	256,990	164,516	3,119	113	3,212
AUGUST	474	3,654,654	64.9	240.2	748	876,906	15.3	37.4	1,728	1,096,271	19.2	20.4	17,009	0.2	15.7	4	30	0.1	0.1	1,724	1,572,321	21.6	29.4	3,015	7,292	2	10	10,309	61.1	5,713,623	71.6	2,458	5,456,630	14.9	557	256,990	164,516	3,119	113	3,212
SEPTEMBER	475	3,840,981	67.1	269.5	763	957,190	14.9	37.4	1,753	1,018,203	17.8	19.3	12,208	0.2	12.3	4	41	0.1	0.3	1,761	1,509,770	20.8	28.6	3,028	7,315	1	14	10,358	63.0	5,728,623	74.2	2,465	5,485,114	14.2	561	239,500	190,954	4,136	111	3,217
OCTOBER	468	4,237,417	68.2	292.0	741	870,145	14.0	37.9	1,773	1,086,018	17.5	19.7	13,023	0.2	13.5	4	45	0.1	0.3	1,770	1,568,367	20.2	28.6	3,017	7,344	4	12	10,377	66.3	6,206,643	78.6	2,446	5,959,499	13.9	571	217,140	200,214	4,525	96	3,461
NOVEMBER	480	4,091,874	68.7	284.1	750	843,742	14.1	37.5	1,747	1,007,950	16.9	19.2	10,800	0.2	12.0	4	48	0.1	0.4	1,790	1,550,619	20.6	28.9	3,011	7,370	1	11	10,393	65.9	5,954,514	75.6	2,419	5,717,397	13.8	572	237,117	198,484	4,172	88	3,360
DECEMBER	479	4,154,843	69.0	286.2	702	838,518	13.6	38.5	1,718	1,052,369	17.9	19.7	11,851	0.2	13.6	3	43	0.1	0.4	1,723	1,596,329	20.6	29.9	2,930	7,469	1	11	10,411	67.7	6,153,630	80.3	2,372	5,907,344	14.2	558	246,266	198,704	4,111	111	3,314
PRODUCTION TOTAL 1st JULY-31st Dec.	480	23,769,083	67.3	269.1	744	5,180,337	14.6	37.8	1,741	6,301,442	17.8	19.7	78,439	0.2	13.7	4	247	0.1	0.3	1,751	9,305,931	20.8	28.9	3,001	-	-	-	10,411	64.0	35,329,548	75.4	2,439	33,866,735	14.1	562	1,462,813	19,000	250	3,217	
YEAR'S Production Total	498	45,371,031	66.1	248.4	748	10,317,328	15.1	37.8	1,699	12,578,975	14.5	20.3	159,984	0.2	13.7	4	498	0.1	0.3	1,722	18,051,179	20.9	28.7	2,981	-	-	-	10,411	62.6	58,135,818	73.5	2,426	65,78,140	15.1	555	3,257,678	173	450	3,500	
DAILY AVERAGES	-	123,504	-	-	-	28,266	-	-	-	34,463	-	-	438	-	-	-	1	-	-	49,455	-	-	-	-	-	-	-	-	186,673	-	-	178,296	-	-	8,377	-	120	4	136	
WELL PRODUCTION	498	-	-	248.4	748	-	-	37.8	1,699	-	-	20.3	32	-	-	13.7	4	-	0.3	1,722	-	-	28.7	2,981	-	-	-	-	62.6	-	73.5	2,426	-	15.1	555	-	-	-	-	-

APPENDIX III A  
Analysis of Production by Operating Companies 1974

	FLOWING				GAS LIFT				PUMPING				PLUNGER LIFT				SALT WATER				AV. NO. OF WELLS PRODUCED	DAILY AV. PER PRODUCING WELL	TOTAL OIL PRODUCE. bbls.	COMPY'S PRD'N AS % OF TOTAL PRD'N	OIL RIGHTS		GIL RIGHTS	
	NO. OF WELLS	QUANTITY bbls	% OF TOTAL OIL	DAILY AV. PER WELL bbls.	NO. OF WELLS	QUANTITY bbls.	% OF TOTAL OIL	DAILY AV. PER WELL bbls.	NO. OF WELLS	QUANTITY bbls.	% OF TOTAL OIL	DAILY AV. PER WELL bbls.	NO. OF WELLS	QUANTITY bbls.	% OF TOTAL OIL	DAILY AV. PER WELL bbls.	NO. OF WELLS	QUANTITY bbls.	% OF TOTAL OIL	DAILY AV. PER WELL bbls.					CROWN PROD'N bbls.	% OF TOTAL	PRIVATE PROD'N bbls.	% OF TOTAL
TRINIDAD TESORO PETROLEUM COMPANY LTD	129	1,489,538	18.9	31.6	182	1,534,744	19.5	23.1	740	4,702,677	59.6	17.4	32	159,984	2.0	13.7	641	1,959,053	19.9	8.4	1083	20.0	7,886,943	11.6	6,357,062	80.6	1,533,881	19.4
TEXACO TRINIDAD	110	1,574,981	17.7	39.2	451	3,662,313	41.2	22.2	519	3,657,454	41.1	19.3	-	-	-	-	646	7,202,904	44.7	30.5	1080	22.6	8,894,748	13.0	7,754,190	87.2	1,140,558	12.8
SHELL TRINIDAD LTD.	7	599,188	24.5	23.5	21	202,909	8.3	26.5	261	1,638,648	67.2	17.2	-	-	-	-	176	1,029,844	29.7	16.0	352	19.0	2,440,745	3.6	2,163,842	88.7	276,903	11.3
FORBES & WARD LTD.	4	10,083	7.3	6.9	1	1,351	1.0	3.7	98	125,982	91.7	3.5	-	-	-	-	38	54,857	28.5	4.0	103	3.7	137,416	0.2	32,937	24.0	104,479	76.0
F. I. ENGINE LTD.	6	33,968	13.0	15.5	4	34,766	13.2	23.8	59	193,544	73.8	9.0	-	-	-	-	32	138,687	34.6	11.8	69	10.4	262,278	0.4	262,278	100.0	-	-
ENERGIA NORTHERN AREA	110	11,857,722	62.4	240.6	89	4,884,549	25.7	150.4	26	2,261,167	11.9	238.3	-	-	-	-	171	4,647,379	19.7	74.5	250	208.3	19,003,438	27.9	19,003,438	100.0	-	-
AMCO TRINIDAD CO. LD.	44	29,513,069	100.0	1837.7	-	-	-	-	-	-	-	-	-	-	-	-	18	3,031,339	9.3	461.4	44	1837.7	29,513,069	43.3	29,513,069	100.0	-	-
TOTAL	498	45,079,034	66.2	248.0	748	10,317,328	15.1	37.8	1703	12,579,472	18.5	20.2	32	159,984	0.2	13.7	1722	18,051,179	20.9	28.7	2981	62.6	68,135,818	100.0	65,078,140	95.5	3,057,678	4.5
TOTAL 1973	106	37,754,170	62.2	204.4	783	10,544,580	17.4	36.9	1554	12,070,070	19.9	21.6	50	301,140	0.5	16.5	1623	15,823,934	20.7	26.7	2893	57.4	60,669,960	100.0	57,735,874	95.2	2,934,086	4.8

NATURAL GASOLINE CHPS PRODUCTION

COMPANY	CROWN OIL RIGHTS bbls.	PRIVATE OIL RIGHTS bbls.	TOTAL bbls.
TRINIDAD TESORO PETROLEUM CO. LTD.	48,802	1,502	50,304
TOTAL 1973	57,120	1,895	59,015

APPENDIX III B

DAILY AVERAGE PRODUCTION BY MONTHS FOR ALL COMPANIES - 1974

(ALL QUANTITIES IN BARRELS)

COMPANY	31 JANUARY	28 FEBRUARY	31 MARCH	30 APRIL	31 MAY	30 JUNE	31 JULY	31 AUGUST	30 SEPTEMBER	31 OCTOBER	30 NOVEMBER	31 DECEMBER	365 TOTAL CRUDE	TOTAL B.O.P.D.
T.T.P.C.L. B.O.P.D.	784,820 22,710	633,474 22,624	788,348 22,850	680,423 22,681	699,968 22,590	654,103 21,803	676,623 21,827	665,873 21,131	634,182 21,138	631,968 20,388	595,196 19,848	613,565 19,792	7,886,943	21,608
* S.T.L. B.O.P.D.	211,866 6,834	197,135 7,848	217,983 7,816	210,165 7,886	209,658 6,763	285,461 6,848	286,512 6,662	195,765 6,318	- -	- -	- -	- -	1,684,065	4,531
TRINTOC B.O.P.D.	- -	- -	- -	- -	- -	- -	- -	- -	197,788 6,588	282,847 6,518	193,538 6,451	193,386 6,238	786,680	2,155
													2,448,745	6,687
T.T.I. B.O.P.D.	763,986 24,645	708,268 25,810	783,977 25,298	741,167 24,786	755,898 24,358	738,644 24,655	762,787 24,685	726,244 23,427	716,793 23,892	753,846 24,318	728,983 24,033	738,833 23,688	8,894,748	24,368
TRICENTROL B.O.P.D.	23,587 761	18,278 653	20,580 664	23,943 788	25,853 834	21,138 704	23,281 751	21,986 684	20,892 670	21,567 686	19,653 665	19,969 644	259,468	711
P.C.O.L. B.O.P.D.	12,269 396	11,317 404	11,889 387	11,524 384	11,252 363	10,799 360	11,685 374	10,256 331	11,007 367	12,097 390	11,357 379	11,944 385	137,416	376
T.N.A. B.O.P.D.	1,611,474 51,883	1,444,822 51,601	1,688,195 51,877	1,583,986 53,130	1,633,219 52,684	1,544,580 51,486	1,686,295 51,816	1,619,683 52,245	1,569,480 52,316	1,616,666 52,150	1,545,412 51,514	1,609,786 51,929	19,003,438	52,064
AMOCO B.O.P.D.	2,203,656 71,886	2,841,723 72,919	2,251,781 72,961	2,181,852 72,718	2,387,251 77,088	2,275,314 75,844	2,426,550 78,276	2,344,868 75,615	2,579,400 85,980	2,968,452 95,756	2,868,375 96,612	2,974,947 95,966	29,513,069	88,858
TOTAL 1974 B.O.P.D.	5,530,868 178,415	5,847,817 188,251	5,612,383 181,845	5,442,680 181,423	5,722,291 184,588	5,461,831 181,781	5,713,623 184,311	5,572,515 179,758	5,728,623 188,854	6,206,643 200,214	5,954,514 198,484	6,153,638 198,504	68,135,818	186,673
TOTAL 1973 B.O.P.D.	4,888,166 155,182	4,277,668 152,774	4,773,383 153,888	4,743,833 158,128	5,157,188 166,358	4,882,567 166,086	5,276,127 170,198	5,548,746 178,734	5,167,699 172,257	5,312,596 171,374	5,177,150 172,572	5,452,916 175,900	60,668,968	166,218

\* Shell Trinidad Limited taken over by the Trinidad and Tobago Oil Company Limited on the 31st August 1974.

APPENDIX IIIIC  
MARINE OFFSHORE AND LAND PRODUCTION - 1974  
(All quantities in Barrels)

TYPE OF WELL	JANUARY		FEBRUARY		MARCH		APRIL		MAY		JUNE		January - June Sub-Totals		JULY		AUGUST		SEPTEMBER		OCTOBER		NOVEMBER		DECEMBER		July-December Sub-Totals		GRAND TOTAL		
	Wells	Production	Wells	Production	Wells	Production	Wells	Production	Wells	Production	Wells	Production	Av. No. of Wells	Production	Wells	Production	Wells	Production	Wells	Production	Wells	Production	Wells	Production	Wells	Production	Av. No. of Wells	Production	Av. No. of Wells	Production	
<b>Marine</b>																															
T.N.A. Soldado	237	1,587,655	234	1,422,544	242	1,583,775	244	1,568,252	242	1,606,482	242	1,520,783	240	9,289,491	237	1,581,960	237	1,597,036	235	1,546,831	236	1,592,531	237	1,521,885	234	1,586,561	236	9,426,804	238	18,716,295	
TEXACO A.B.M.	72	50,242	64	44,095	69	49,059	72	45,441	58	46,817	65	46,274	66	281,928	67	47,946	64	43,521	67	42,108	68	42,987	67	46,006	59	42,170	65	264,738	65	546,666	
A.L.M.	1	3,623	1	3,227	1	3,735	1	3,369	1	4,350	1	3,501	1	21,805	1	4,771	1	3,501	1	3,578	1	2,196	1	3,830	1	3,830	1	21,706	1	43,511	
TEXACO Couva Marine	-	-	-	-	-	-	-	-	-	-	1	4,066	1	4,066	2	4,704	2	4,411	-	1,580	2	6,176	2	7,950	2	8,620	2	33,441	2	37,507	
TESORO North Marine	1	3,950	1	3,609	1	584	3	1,009	1	4,245	1	3,029	1	16,426	1	2,201	1	4,020	1	2,897	1	3,736	1	267	1	1,145	1	14,266	1	30,692	
TESORO Galeota	16	37,847	16	34,564	16	48,838	14	44,946	14	40,971	14	34,279	15	241,445	14	36,055	13	37,654	13	41,090	13	36,280	14	34,864	14	33,016	14	218,959	15	460,404	
TEXACO G.B. Wells	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
AMOCO	40	2,203,656	41	2,041,723	42	2,251,781	42	2,181,552	42	2,387,251	42	2,275,314	41	13,351,277	45	2,426,550	46	2,344,068	46	2,579,400	48	2,868,452	47	2,868,375	52	2,874,947	47	16,161,792	44	29,513,069	
SUB TOTAL		367	3,886,973	357	3,549,762	370	3,947,772	376	3,844,569	358	4,090,116	366	3,887,246	365	23,206,438	367	4,104,187	364	4,034,211	363	4,217,484	369	4,652,358	369	4,483,177	363	4,650,289	366	26,141,706	366	49,348,144
<b>Deviated from Shore</b>																															
T.N.A. F.O.S.	13	23,819	13	22,278	13	24,420	13	25,654	13	26,737	12	23,797	14	146,705	12	24,335	12	22,567	12	22,648	12	24,135	12	23,527	13	23,225	12	140,438	13	287,143	
TEXACO A.S.	35	11,755	28	13,974	30	13,992	33	18,724	30	17,934	30	15,603	31	91,982	31	14,854	38	13,164	37	11,805	36	21,550	30	17,127	30	15,516	34	94,016	32	185,958	
TEXACO A.L.S.	3	6,750	4	5,682	4	3,251	3	1,708	3	1,934	3	3,035	3	22,360	3	2,944	3	3,573	3	3,695	3	3,215	3	2,392	4	3,123	3	18,942	3	41,302	
TESORO H.Wells (11551/53)	6	803	4	859	5	891	4	1,156	5	1,925	7	1,876	5	7,610	5	1,584	5	1,189	4	819	4	982	5	1,243	5	1,280	5	7,117	5	14,727	
SUB TOTAL		57	43,127	49	42,793	52	42,554	49	47,242	51	48,530	52	44,411	51	268,657	51	43,727	58	40,493	56	38,968	55	49,882	50	44,289	52	43,154	54	260,513	53	529,170
Marine and Deviated		424	3,930,100	406	3,592,555	422	3,990,326	425	3,891,811	409	4,138,646	418	3,931,657	417	23,475,095	418	4,147,914	422	4,074,704	419	4,256,452	424	4,702,240	419	4,527,466	415	4,693,443	420	26,402,219	419	49,877,314
LAND		2,500	1,600,768	2,496	1,454,462	2,560	1,622,057	2,552	1,550,869	2,581	1,983,645	2,569	1,519,374	2,543	9,331,175	2,597	1,565,709	2,584	1,487,811	2,609	1,472,171	2,593	1,504,403	2,592	1,427,048	2,515	1,460,187	2,581	8,927,329	2,562	18,258,504
TOTAL PRODUCTION		2,924	5,530,868	2,902	5,047,017	2,982	5,612,383	2,977	5,442,680	2,990	6,122,291	2,987	5,451,031	2,960	32,806,270	3,015	5,713,623	3,006	5,572,515	3,028	5,728,623	3,017	6,206,643	3,011	5,954,514	2,930	6,153,630	3,001	35,329,548	2,981	68,135,818

Appendix IV

Production - & Disposal of Natural Gas - 1974  
 (All figures of Gas Production in BSCF)

Half Yearly Totals	Crude Oil Production (bbls)	Average S.O.R. (Cu. ft/bbls)	Natural Gas Production	N - 1,000 Standard Cubic Feet NATURAL GAS DISPOSAL								NATURAL GAS RECOVERY				Inter Oil Company Sales	Used for the Manufacture of Petrochemicals	
				Sales to Other Companies	Replaced into formation	Converted into G.M.P.L.	USED FUEL VENTED TO ATMOSPHERE				Pipeline losses & Unaccounted for	Not Collected	Natural Gas Trained	Average Plant Recovery (lb/MCF)	Natural Gasoline Produced (bbls)			
							In Fields	In Refineries	After Utilization	Without Utilization								Total
January	5,530,868	1,847	10,760,818	2,383,468	432,408	3,456	689,948	1,811,861	700,006	3,882,286	4,582,292	172,888	883,684	1,884,426	.182	7,658	2,145,689	565,270
February	5,847,817	1,866	9,871,432	2,350,308	388,824	3,218	881,852	1,588,301	956,067	3,667,755	4,223,822	182,367	488,847	1,262,368	.184	7,021	2,034,063	613,288
March	5,612,383	1,888	10,715,268	2,402,588	687,448	3,382	822,476	1,738,485	482,888	3,851,336	4,444,224	178,436	647,887	1,297,388	.172	6,381	2,183,877	666,684
April	5,442,688	1,838	10,548,238	2,484,831	666,884	3,488	863,916	1,687,262	538,627	3,911,621	4,488,248	125,885	838,417	1,224,666	.181	6,348	2,132,838	748,984
May	5,722,281	1,861	11,163,378	2,484,588	543,836	4,286	862,786	1,727,813	885,314	4,428,888	4,936,173	228,883	578,188	1,878,484	.288	6,416	2,167,588	742,822
June	5,461,831	1,878	10,783,271	2,348,268	646,734	5,436	838,838	1,648,194	474,884	4,286,317	4,771,381	188,122	888,877	1,161,888	.218	7,258	2,824,182	645,883
Half-yr. Total	32,886,278	1,846	63,881,388	14,466,254	3,346,236	23,278	3,878,886	18,243,276	3,267,886	26,188,174	27,487,888	1,838,883	3,878,257	7,528,121	.284	41,878	12,688,337	3,964,142
July	5,713,623	1,887	10,887,716	2,454,562	682,878	4,482	861,333	1,687,343	542,666	3,882,662	4,538,218	218,138	862,861	724,688	.287	6,328	2,346,446	622,367
August	5,572,515	1,816	10,118,212	2,536,188	512,482	4,883	884,716	1,821,777	884,188	3,352,788	3,886,867	188,288	823,888	488,684	.336	4,728	2,236,411	486,864
September	5,728,623	1,768	10,888,334	2,886,876	338,174	4,788	811,262	1,881,873	544,731	3,382,525	3,847,256	188,176	648,288	483,868	.328	4,546	2,271,866	688,462
October	6,286,643	1,884	11,188,884	2,822,838	338,686	4,823	844,377	1,638,841	888,888	4,123,817	4,722,186	181,293	783,482	437,182	.367	4,684	2,272,426	766,888
November	5,854,514	1,828	10,838,438	2,838,213	298,838	3,783	887,666	1,448,148	882,866	4,256,883	4,838,868	184,882	786,786	488,873	.311	4,368	2,876,886	738,186
December	6,153,638	1,837	11,382,586	3,886,788	283,757	4,542	882,228	1,886,888	884,358	4,328,583	4,822,862	288,827	887,482	488,832	.314	4,328	2,188,418	886,272
Half-yr. Total	35,328,548	1,824	64,441,848	16,643,548	2,388,886	25,388	3,661,871	8,883,763	3,267,828	23,355,388	26,722,378	1,112,576	4,112,838	3,187,318	.314	27,887	13,381,862	4,186,741
Year Total	68,138,818	1,883	128,293,247	31,888,882	5,788,838	18,666	7,631,887	28,847,838	6,634,886	47,484,532	54,128,438	2,143,528	7,487,286	18,827,448	.228	88,965	26,878,199	8,878,883
% Disposal for Year	-	-	-	24.2	4.5	8.1	6.8	15.6	5.2	37.8	42.2	1.7	6.8	8.2	-	0.1	28.3	6.3

APPENDIX V

DESTINATION OF EXPORTS OF CRUDE AND REFINED PRODUCTS FROM TRINIDAD AND TOBAGO - 1974

(All Quantities in barrels)

COUNTRY	TOTAL	% of Total Exports	Crude Oil Exports	Liquid Petroleum Gases	Aviation Gasoline	Motor Gasoline	Kerosene	Aviation Turbine Fuel	Gas Oil and Marine Diesel	Fuel Oil	Lubes/Greases	Petrochemicals and other Refined (1) Products	Asphaltic Products
<b>North America</b>													
U.S.A.	95,113,743	63.488	24,185,587	-	-	9,188,579	4,542,137	4,887,279	5,776,725	47,814,980	39,692	358,844	-
Canada	1,481,857	0.996	-	-	-	-	-	-	-	1,151,522	348,335	-	-
<b>TOTAL N.A.</b>	<b>96,605,600</b>	<b>64.484</b>	<b>24,185,587</b>	<b>-</b>	<b>-</b>	<b>9,188,579</b>	<b>4,542,137</b>	<b>4,887,279</b>	<b>5,776,725</b>	<b>48,966,422</b>	<b>380,027</b>	<b>358,844</b>	<b>-</b>
<b>Central America</b>													
Costa Rica	198,424	0.132	-	-	19,844	-	-	128,127	-	59,253	-	-	-
Guatemala	155,416	0.104	-	-	38,432	-	104,898	-	-	-	28,086	-	-
Panama	594,461	0.397	-	-	25,987	281,187	38,397	-	243,978	-	5,088	-	-
Other C.A. <sup>2</sup>	767,988	0.513	-	5,248	4,950	-	-	131,878	74,269	544,571	7,000	-	-
<b>TOTAL C.A.</b>	<b>1,883,559</b>	<b>1.258</b>	<b>-</b>	<b>5,248</b>	<b>90,773</b>	<b>297,294</b>	<b>145,102</b>	<b>251,997</b>	<b>391,385</b>	<b>603,824</b>	<b>85,568</b>	<b>12,366</b>	<b>-</b>
<b>South America</b>													
Brazil	1,833,336	0.698	-	-	-	644,818	-	-	-	-	388,526	-	-
Ecuador	518,518	0.341	-	-	39,478	348,278	36,537	-	57,371	36,862	-	-	-
French Guiana	437,241	0.292	-	16,583	6,736	90,947	13,073	-	304,308	5,365	229	-	-
Guyana	2,361,504	1.576	-	19,541	28,339	381,332	192,696	8,417	1,188,970	524,577	16,274	1,346	-12
Suriname	2,566,382	1.713	-	3,988	14,868	274,911	111,355	1,088	1,012,744	1,140,639	2,266	579	4,032
Other S.A. <sup>3</sup>	152,401	0.102	-	-	9,436	-	-	-	-	131,168	11,796	-	-
<b>TOTAL S.A.</b>	<b>7,861,362</b>	<b>4.714</b>	<b>-</b>	<b>40,112</b>	<b>98,849</b>	<b>1,732,278</b>	<b>353,661</b>	<b>9,417</b>	<b>2,563,393</b>	<b>1,838,612</b>	<b>419,091</b>	<b>1,925</b>	<b>4,044</b>
<b>West Indian Islands</b>													
British <sup>4</sup>	6,309,596	4.212	583,421	88,841	70,121	753,755	679,381	222,251	535,463	3,270,558	94,835	1,115	10,655
French <sup>5</sup>	557,372	0.372	-	8,020	33,879	284,021	178,917	-	110,484	7,224	13,228	797	792
Netherlands <sup>6</sup>	2,183,244	1.457	-	-	-	1,419,616	800	-	83,216	679,612	-	-	-
Puerto Rico	5,188,793	3.411	2,381,812	1,250	-	2,205,320	520,411	-	-	-	-	-	-
Virgin Islands	5,913,447	3.948	4,357,654	1,773	43,412	278,883	73,382	-	113,104	1,045,072	361	6	-
Other West Indian Islands <sup>7</sup>	41,572	0.028	-	-	41,572	-	-	-	-	-	-	-	-
<b>TOTAL West Indies</b>	<b>20,114,024</b>	<b>13.428</b>	<b>7,322,887</b>	<b>99,864</b>	<b>188,984</b>	<b>4,861,595</b>	<b>1,452,691</b>	<b>222,251</b>	<b>842,277</b>	<b>5,002,566</b>	<b>107,624</b>	<b>1,918</b>	<b>11,947</b>
<b>Europe</b>													
Belgium	286,938	0.138	-	-	-	-	-	204,938	-	-	-	1,992	-
Denmark	770,344	0.514	-	-	-	-	-	-	-	770,344	-	-	-
France	441,082	0.295	-	-	-	-	-	441,082	-	-	-	-	-
Fed. Republic of Germany	460,211	0.307	-	-	-	-	-	-	460,211	-	-	-	-
Italy	438,876	0.293	-	-	-	-	-	196,648	-	-	-	243,236	-
Netherlands	1,318,266	0.880	-	-	-	-	-	-	136,490	514,261	-	668,515	-
Spain	687,768	0.459	-	-	-	-	-	646,817	41,952	-	-	-	-
Sweden	651,884	0.435	-	-	-	-	-	-	-	651,884	-	-	-
Switzerland	194,483	0.130	-	-	-	-	-	-	-	194,483	-	-	-
United Kingdom	1,552,838	1.037	-	-	56,374	-	-	563,225	622,324	247,880	-	63,815	-
<b>TOTAL Europe</b>	<b>6,722,613</b>	<b>4.488</b>	<b>-</b>	<b>-</b>	<b>56,374</b>	<b>-</b>	<b>-</b>	<b>2,898,782</b>	<b>1,258,977</b>	<b>2,378,882</b>	<b>-</b>	<b>976,758</b>	<b>-</b>
<b>Others</b>													
Africa <sup>8</sup>	1,525,383	1.018	-	-	-	238,737	89,076	-	362,621	748,305	85,644	-	-
Canary Island	959,117	0.640	-	-	-	-	-	-	352,674	606,443	-	-	-
Greenland	88,088	0.059	-	-	-	-	-	88,088	-	-	-	-	-
Japan	1,334,501	0.891	-	-	-	-	-	608,268	189,938	541,541	-	2,793	-
High Seas <sup>9</sup>	4,762,811	3.180	-	-	-	1,029,279	111,262	177,603	1,437,871	1,846,450	123,558	37,586	-
<b>TOTAL Others</b>	<b>8,668,820</b>	<b>5.788</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>1,268,016</b>	<b>200,338</b>	<b>865,889</b>	<b>2,342,304</b>	<b>3,743,739</b>	<b>289,194</b>	<b>40,349</b>	<b>-</b>
<b>TOTAL Cargo</b>	<b>141,886,989</b>	<b>94.178</b>	<b>31,428,474</b>	<b>146,236</b>	<b>378,606</b>	<b>17,404,136</b>	<b>6,693,929</b>	<b>7,487,526</b>	<b>13,176,861</b>	<b>51,733,865</b>	<b>1,201,505</b>	<b>1,392,168</b>	<b>15,481</b>
Foreign Bunkers	8,733,429	5.830	-	676	2,994	-	-	107,942	817,429	7,782,885	21,272	-	131
<b>TOTAL Exports</b>	<b>148,798,418</b>	<b>100.000</b>	<b>31,428,474</b>	<b>146,912</b>	<b>381,600</b>	<b>17,404,136</b>	<b>6,693,929</b>	<b>7,595,468</b>	<b>13,993,490</b>	<b>59,516,890</b>	<b>1,222,777</b>	<b>1,392,168</b>	<b>15,622</b>

<sup>9</sup> High Seas - Countries not detailed

- (1) Total Exports of "Other Refined Products" was 3843 bbls. 1346 Guyana: 579 Suriname: 6 Virgin Islands  
1115 British West Indies: 797 French West Indies: Foreign Bunkers - - -
- (2) Other Central America: El Salvador (26,844) Mexico (8,816) Nicaragua (99,010) Honduras (32,679)
- (3) Other South America: Colombia (21,232) Peru (131,168)
- (4) British: Antigua, Anguilla, Bahamas, Barbados, Bermuda, Dominica, Grand Cayman, Grenada, Jamaica, Montserrat, Nevis, St. Kitts, St. Lucia, St. Vincent
- (5) French: Guadeloupe, Martinique, St. Barthelemy, St. Martin
- (6) Netherlands: Curacao, Saba, Aruba.
- (7) Other West Indian Islands: Dominican Republic (41,572)
- (8) Africa, Azores, Congo, Gambia, Ivory Coast, Nigeria, Republic of Guinea, Republic of Senegal, Sierra Leone, West Africa.



**APPENDIX III**

**MOVEMENT OF REFINERY PRODUCTS - 1974**

(Quantities in Barrels)

Inventory Name	Opening Inventory	Production	Imports	Other Receipts	Total	Purchases from other Petroleum Markets	Sales to other Petroleum Markets	Local Consumption				Exports		Time & Losses	Closing Inventory	Totals
								Own Use	Retailer	Local Banker	Total	Cargoes	Foreign Bankers			
Liquefied Gases	21,650	400,124	42,522	4,826	469,122	276,485	273,356	613	235,152	820	236,585	202,985	676	13,748	18,228	472,222
Aviation Gasolines	11,876	420,702	-	-	432,578	83,766	101,488	1	4,380	16,483	20,794	354,702	2,994	26	36,330	414,846
Motor Gasolines	1,414,193	18,483,851	31,783	5,776	19,945,603	2,410,070	2,516,404	13,470	1,680,779	-	1,694,248	16,195,132	-	(6,340)	1,956,228	19,839,268
Domestic Gasolines	32	2,516	-	-	2,548	7,028	2,502	21	6,988	-	7,019	-	-	55	0	7,074
Aviation Turbine Fuels	468,186	8,478,584	4,346	7,958	8,959,085	723,627	1,386,690	36	138,121	238,908	377,065	7,425,287	122,937	384	360,348	8,286,022
Kerosine	241,130	5,999,184	-	130,464	6,370,688	758,723	217,596	2,164	231,027	91	233,282	6,424,281	-	12,687	241,645	6,911,825
White Spirits	3,541	9,366	276	-	13,123	9,885	8,885	2,562	4,726	-	7,288	3,386	4	68	3,376	14,123
Vapouring Oil	3	-	-	-	3	-	-	-	-	-	-	-	-	-	3	3
Gas Oil	693,629	13,449,637	-	88,312	14,231,578	2,173,867	2,587,674	71,094	428,873	288,489	707,666	11,543,266	357,634	376	1,288,829	13,897,771
Marine Diesel	71,130	803,587	-	9,646	884,363	796,963	816,029	-	8,020	13,680	21,620	59,868	710,879	2,011	70,927	865,297
Fuel Oils	2,089,220	74,683,866	-	1,287,917	78,371,183	6,487,188	6,642,572	2,176,825	982,982	33,568	2,792,896	63,775,258	8,536,792	94,760	3,016,324	78,215,711
Lubricants and Greases	229,679	1,206,853	70,775	26,982	1,534,289	55,167	61,232	14,875	48,862	725	63,862	1,196,360	22,913	3,139	241,870	1,528,144
Asphaltic Products	13,329	78,568	55,763	-	147,660	129,446	128,336	102	121,562	-	121,664	12,689	-	(1,817)	16,234	148,778
Petrochemicals	287,210	1,352,148	9,786	-	1,649,144	5,295	5,220	67	6,488	-	6,475	1,383,446	-	9	259,290	1,649,219
Other finished Products	2,948	2,971	8,791	230	14,940	4,730	10,738	514	3,401	-	3,915	2,448	131	782	1,655	8,931
Unfinished Oils	2,275,584	1,147,923	-	-	3,363,427	-	-	2,839	-	-	2,539	-	-	-	3,360,888	3,363,427
<b>TOTAL</b>	<b>7,763,260</b>	<b>126,539,918</b>	<b>223,982</b>	<b>1,862,032</b>	<b>136,389,184</b>	<b>13,922,202</b>	<b>14,688,732</b>	<b>2,283,283</b>	<b>3,500,611</b>	<b>812,785</b>	<b>6,296,589</b>	<b>108,579,820</b>	<b>9,754,960</b>	<b>119,899</b>	<b>10,872,176</b>	<b>135,622,654</b>

NOTE (1) Total Receipts and Purchases 150,311,386 bbls.

All figures for the year 1974 are subject to change.

Total Dispatch and Sales 150,311,386 bbls.

Appendix VII

Movement of Crude and C.M.P.S. Year Ended 31st December, 1974

(all quantities in barrels)

MONTH	Production	Imports	Decrease in Inventories	Totals		Purchases and Exchanges from other Companies	Sales and exchanges to other Companies	Own Use	To Refinery	Exports	Gain and Losses	Total
January	5,534,590	6,590,291	(1,150,682)	10,974,199		2,811,744	2,811,744	1,987	9,241,814	1,687,728	33,870	10,974,199
February	5,050,254	5,302,200	1,123,435	11,475,889		2,745,232	2,745,232	898	8,875,888	2,408,730	118,562	11,475,889
March	5,615,600	7,681,535	(1,484,748)	11,722,387		2,781,558	2,781,558	434	8,541,783	2,281,294	(21,124)	11,722,387
April	5,446,144	8,059,313	104,408	13,609,865		2,705,952	2,705,952	613	9,718,614	3,738,486	188,152	13,609,865
May	5,728,138	10,682,566	316,243	16,736,947		2,782,891	2,782,881	10,856	12,934,778	3,983,883	(111,778)	16,736,947
June	5,456,199	12,015,285	(1,388,381)	16,081,883		2,991,323	2,991,323	10,895	11,983,353	3,959,940	126,885	16,081,883
July	5,745,457	10,103,162	1,065,776	16,914,385		2,888,312	2,888,312	972	12,318,775	4,582,972	99,676	16,914,385
August	5,570,107	9,487,386	398,662	15,376,155		2,448,675	2,448,675	14,518	12,278,885	3,838,889	98,963	15,376,155
September	5,760,890	7,781,001	847,339	12,694,552		2,622,321	2,622,321	9,866	11,814,818	1,778,926	(101,858)	12,694,552
October	6,218,743	7,641,333	828,637	14,688,713		2,887,487	2,887,487	10,238	11,232,775	3,278,138	158,562	14,688,713
November	5,964,888	9,630,509	(413,036)	15,182,361		2,368,572	2,368,572	8,838	11,214,865	3,838,265	128,383	15,182,361
December	6,163,709	7,378,281	1,273,833	14,815,823		2,612,801 <sup>(1)</sup>	2,613,841	9,794	11,484,816	3,205,886	116,287	14,815,823
Total	68,254,719	102,282,862	(193,202)	178,264,379		32,271,878	32,272,118	78,789	138,816,148	38,688,986	788,536	178,264,379

Note (1) - 240 bbls difference taken up under Gain & Losses

APPENDIX V - III

Summary of Crude Oil Assessed for Crown Royalty with Prices and Analysis, 1974

(For half-yearly Assessment Periods Ending 30th June and 31st December)

Barrel = 36.9726 l.B.

COMPANY	Net Royalty Production barrels	Royalty		Average Price barrels \$/bbl	Sub-Division of (Royalty) Crude into Products on R. L. E. L. Analysis										
		10% assessed bbls	Value		LIGHT FRACTIONS		GAS OIL				FUEL OIL				
					Quantity bbls	Percentage	Tetra-Ethyl lead to blend to 70/70 Oct. lbs./S	55-57 D.I. barrels	48-52 D.I. barrels	43-47 D.I. barrels	No 2. fuel barrels	Total Gas oils barrels	Percentage	Quantity bbls	Percentage
T.T.P.C.L.	3,031,682	303,168	6,622,056	21.85	38,273	9.98	2,293,308.97	29	48	-	75,222	75,300	24.84	197,595	65.18
T.T.P.C.L. (Galena)	241,445	30,181	764,027	24.98	2,711	12.30	-	-	-	-	14,524	14,524	48.12	11,946	39.58
P.C.C.L.	16,423	1,642	38,691	23.56	38	28.88	69,052.88	-	146	-	338	476	28.98	828	50.43
Estate of Timothy Road	287	29	606	20.98	1	3.46	-	-	-	-	9	9	31.03	19	65.52
S.T.L.	1,104,591	110,459	2,531,873	22.91	21,847	19.87	6,622,563.88	11,811	-	7,346	2,205	20,562	18.61	67,880	61.52
Tricentral Ltd	138,327	13,339	303,233	22.73	2,482	16.88	354,678.88	-	1,867	-	1,881	3,448	25.86	7,639	57.27
T.N.A.	9,436,196	943,620	20,743,065	21.98	141,817	18.88	88,394,228.88	-	135,926	-	-	135,926	14.40	665,877	70.57
T.T.L.	3,876,672	387,667	8,969,379	23.14	55,122	14.29	18,643,715.17	46,748	25,543	-	56,991	129,282	33.35	202,973	52.36
AMCO	13,317,304	1,664,663	42,962,561	25.81	146,873	8.74	3,174,094.35	-	-	1,338,194	-	1,338,194	88.45	179,956	10.81
<b>Total and Averages</b>	<b>31,157,987</b>	<b>3,464,768</b>	<b>82,825,691</b>	<b>24.80</b>	<b>481,354</b>	<b>11.61</b>	<b>82,851,623.86</b>	<b>57,788</b>	<b>163,831</b>	<b>1,346,548</b>	<b>188,962</b>	<b>1,718,721</b>	<b>48.75</b>	<b>1,334,783</b>	<b>38.64</b>
T.T.P.C.L.	2,823,540	282,344	5,250,163	18.58	25,288	8.38	2,171,688.88	-	47	7,172	68,293	67,512	23.91	188,583	66.79
T.T.P.C.L. - Galena	218,959	27,370	571,906	26.18	3,475	12.78	-	-	-	-	12,968	12,968	47.35	10,935	39.95
P.C.C.L.	16,003	1,600	25,948	16.22	33	19.86	65,448.88	-	142	-	385	468	29.25	818	51.18
Estate of Timothy Road	253	25	463	18.34	1	4.88	-	-	-	-	7	7	28.08	17	68.08
S.T.L.	535,800	53,580	997,317	18.61	7,382	13.88	2,802,288.57	5,338	-	5,488	48	18,866	20.28	35,382	66.04
T-intec	518,253	51,825	964,326	18.61	8,779	16.84	2,683,775.88	5,837	3,461	-	885	9,383	18.18	33,663	64.96
Tricentral Ltd	126,070	12,607	248,072	19.64	2,898	16.81	384,818.72	-	1,737	-	1,887	3,344	25.52	7,246	57.47
T.N.A.	9,567,242	956,724	17,803,947	18.58	138,447	14.88	88,388,362.18	-	135,946	-	-	135,946	14.22	681,232	71.20
T.T.L.	3,861,752	386,176	7,462,763	19.32	51,811	13.42	12,759,096.82	46,267	25,214	-	58,838	128,514	33.28	205,851	53.30
AMCO	16,184,108	2,023,014	44,881,752	22.18	181,782	8.48	8,374,218.88	-	-	1,641,375	-	1,641,375	81.13	189,876	9.38
<b>Total and Averages</b>	<b>33,851,930</b>	<b>3,785,275</b>	<b>77,888,643</b>	<b>23.53</b>	<b>431,187</b>	<b>11.36</b>	<b>83,271,181.88</b>	<b>86,642</b>	<b>166,646</b>	<b>1,864,836</b>	<b>134,191</b>	<b>2,018,475</b>	<b>52.87</b>	<b>1,353,603</b>	<b>35.67</b>
<b>Years totals and Averages</b>	<b>65,008,977</b>	<b>7,250,014</b>	<b>160,834,354</b>	<b>22.18</b>	<b>832,481</b>	<b>11.48</b>	<b>166,711,804.84</b>	<b>113,430</b>	<b>338,177</b>	<b>3,888,575</b>	<b>286,813</b>	<b>3,728,196</b>	<b>51.44</b>	<b>2,688,386</b>	<b>37.08</b>

APPENDIX IX - ROYALTY ASSESSMENT.

The Royalty assessed on the crude oil, natural Gasoline and Natural gas produced on Crown Oil Mining Leases for each half yearly period during 1972, 1973 and 1974 is shown in the following Table:-

Source of Revenue	Assessment For Half Yearly Periods Ending					
	31.12.74		30.6.74		31.12.73	
	\$	£	\$	£	\$	£
Royalty on Natural Gas ... ..	344,318	340,562	382,378.46	376,706.46	377,864.00	382,087.00
Royalty on Natural Gasoline ... ..	61,298	77,887	10,588.83	32,844.31	30,299.00	26,038.00
Minimum Rent not Off set by Royalty on Crude Oil.	700,000	694,182	642,188.83	688,828.24	671,136.00	671,134.00
Royalty on Crude Oil ... ..	77,888,663	82,825,681	81,554,388.88	23,288,671.62	75,880,086.00	12,248,067.00
Half Yearly Total ... ..	79,014,288	84,837,912	82,630,466.31	24,382,382.63	16,979,485.00	13,337,246.00
YEARLY TOTALS. ... ..	163,852,222		76,941,614.84		30,316,730.80	

The Volumes upon which the above assessments were made are as follows:-

Substance assessed for Royalty Unit.	HALF - YEARLY PERIOD ENDING					
	31.12.74		30.6.74		31.12.73	
	\$	£	\$	£	\$	£
Natural Gas ... .. R.C.F.	22,864,578	22,784,111	26,184,364	25,113,784	25,187,118	26,133,816
Natural Gasoline ... .. I.B.	888,687	736,768	811,078	1,886,246	1,107,888	1,216,731
Crude Oil - Gross ... .. bb1			33,382,638	28,488,842	26,518,873	24,888,388
Crude Oil Used Free of Royalty ... .. bb1			1,886	18,862	19,886	22,888
Crude Oil - Net. ... .. bb1	37,862,750	34,847,680	33,384,478	28,431,888	26,488,287	24,878,386
Crude Oil Average Royalty Value ... \$T.	24.88	20.83	16.47	7.81	6.88	5.88

Net Royalty Production barrels shown at Appendix VIII totals 31,187,887 and 33,851,888 in the first and second half yearly totals. The difference is the additional 2% royalty paid by Assoc 13,317,384 barrels in the first half year and 16,184,188 in the second.

The data used to evaluate crude oil for Crown Royalty Assessment for each of the last six half-yearly periods together with the royalty rates on. Costing, Road Petroleum Spirit for each of these periods are shown in the following Tables:-

Product.	AVERAGE PRICE IN U. S. I. CURRENCY FOR BARREL OF 34.9726 I.G. FOR HALF YEAR ENDING.					
	31.12.74		30.6.74		31.12.73	
	\$	£	\$	£	\$	£
Bunker C, Grade Fuel ... ..	18.482983	21.884678	8.188234	6.381321	4.166318	3.734406
No.2. Fuel ... ..	24.428881	27.372846	24.888889	11.823784	8.629488	7.738546
43-47 D.I. Gas Oil ... ..	24.728786	28.887668	24.788887	11.881888	8.788888	7.738546
48-52 D.I. Gas Oil ... ..	24.818818	28.812642	24.838888	11.881888	8.788888	7.738546
53-57 D.I. Gas Oil ... ..	25.882242	28.848438	25.138383	11.283373	8.782321	7.836888
70-72 Oct N. Loaded Motor Gas ... ..	23.882686	35.182461	18.875788	11.388673	8.834864	7.263886
Average Middle rate for sight draft on N.Y. T. & T. currency for U.S. \$1.88	2.688335	2.888888	1.882766	1.848888	2.883266	1.884476
Value of Tetra-Ethyl Lead in T.T. cents per millilitre.	0.717342	0.538878	0.448242	0.434732	0.46357	0.46314
Royalty in T.T. cents per gallon on natural Gasoline (C.R.P.S.) ... ..	6.888883	10.565791	5.883888	3.228888	2.518888	2.841251

The half-yearly volume of products to which the above prices for 1974 were applied respectively in calculating royalty on Crude Oil will be found in Appendix VIII.

APPENDIX I

The following table shows for the years 1972, 1973, and 1974 the quantity of Asphalt extracted from the Pitch Lake and the quantities of derived products which were exported and consumed locally

		TONS		
		1972	1973	1974
<b>Natural Asphalt</b>				
Extracted by the Ministry of Works for Local use		2,200	37,900	23,723
Extracted by the Pitch Lake Asphalt Co.		71,427	68,820	57,851
<b>TOTAL</b>		<b>113,627</b>	<b>107, 800</b>	<b>81,574</b>
<b>Derived Products Manufactured by the Company</b>				
Exported	Crude Asphalt	-	-	-
	Bried Asphalt	59,643	51,868	42,893
	Cement Asphalt	941	488	566
	<b>TOTAL</b>	<b>51,884</b>	<b>52,340</b>	<b>43,459</b>
Local Sales	Crude Asphalt	922	393	146
	Bried Asphalt	241	142	255
	Cement Asphalt	182	181	898
	<b>TOTAL</b>	<b>935</b>	<b>636</b>	<b>1,300</b>

Note: The above tabulations include ton -2,240 lbs



MINISTRY OF PETROLEUM & MINES  
**AREAS UNDER OIL EXPLORATION IN TRINIDAD & TOBAGO**

FIG. 11

(UNFIELDED AND IMPORTANT WELLS DRILLED)

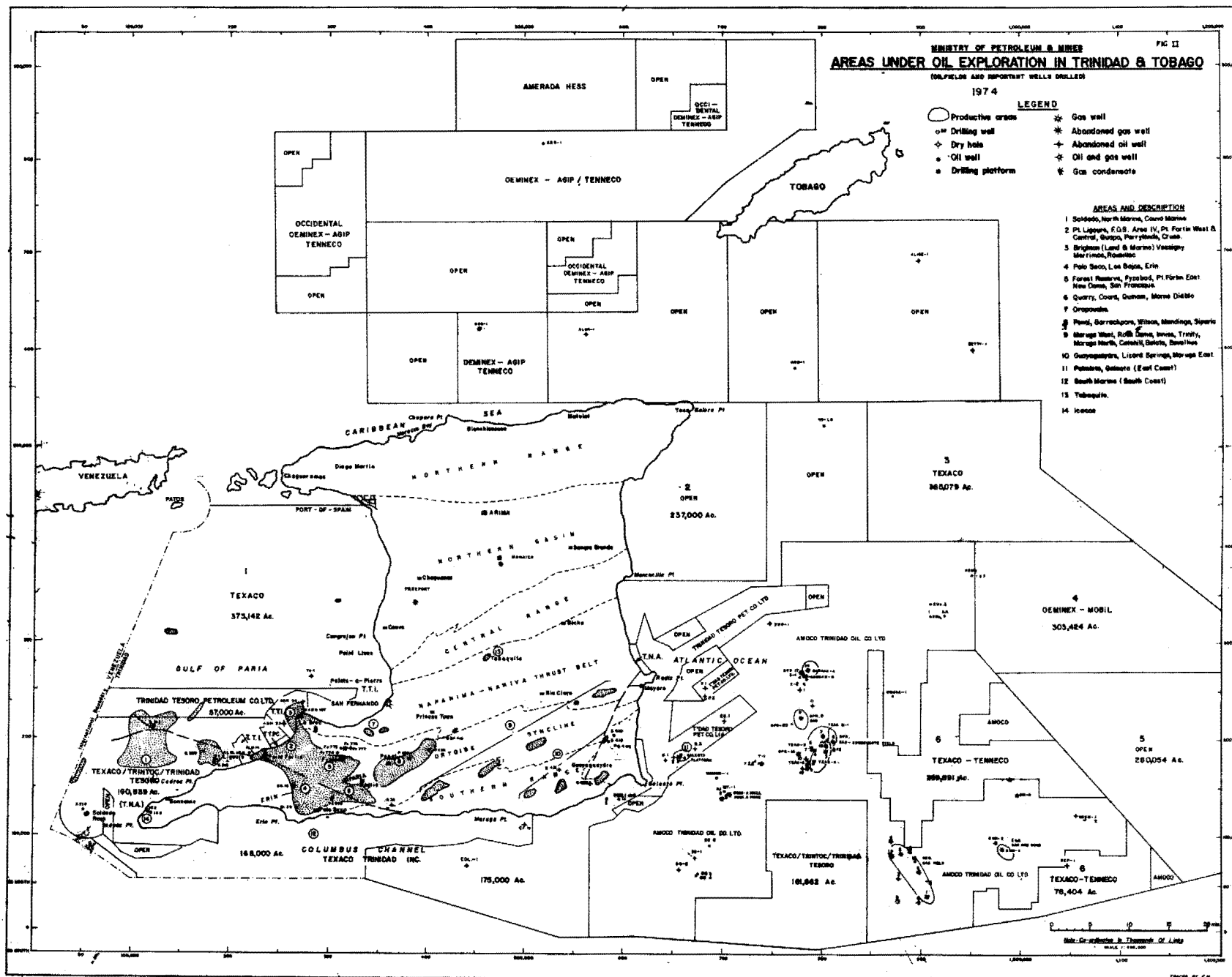
1974

**LEGEND**

- Productive areas
- Drilling well
- ◇ Dry hole
- Oil well
- Drilling platform
- \* Gas well
- \* Abandoned gas well
- + Abandoned oil well
- \* Oil and gas well
- \* Gas condensate

**AREAS AND DESCRIPTION**

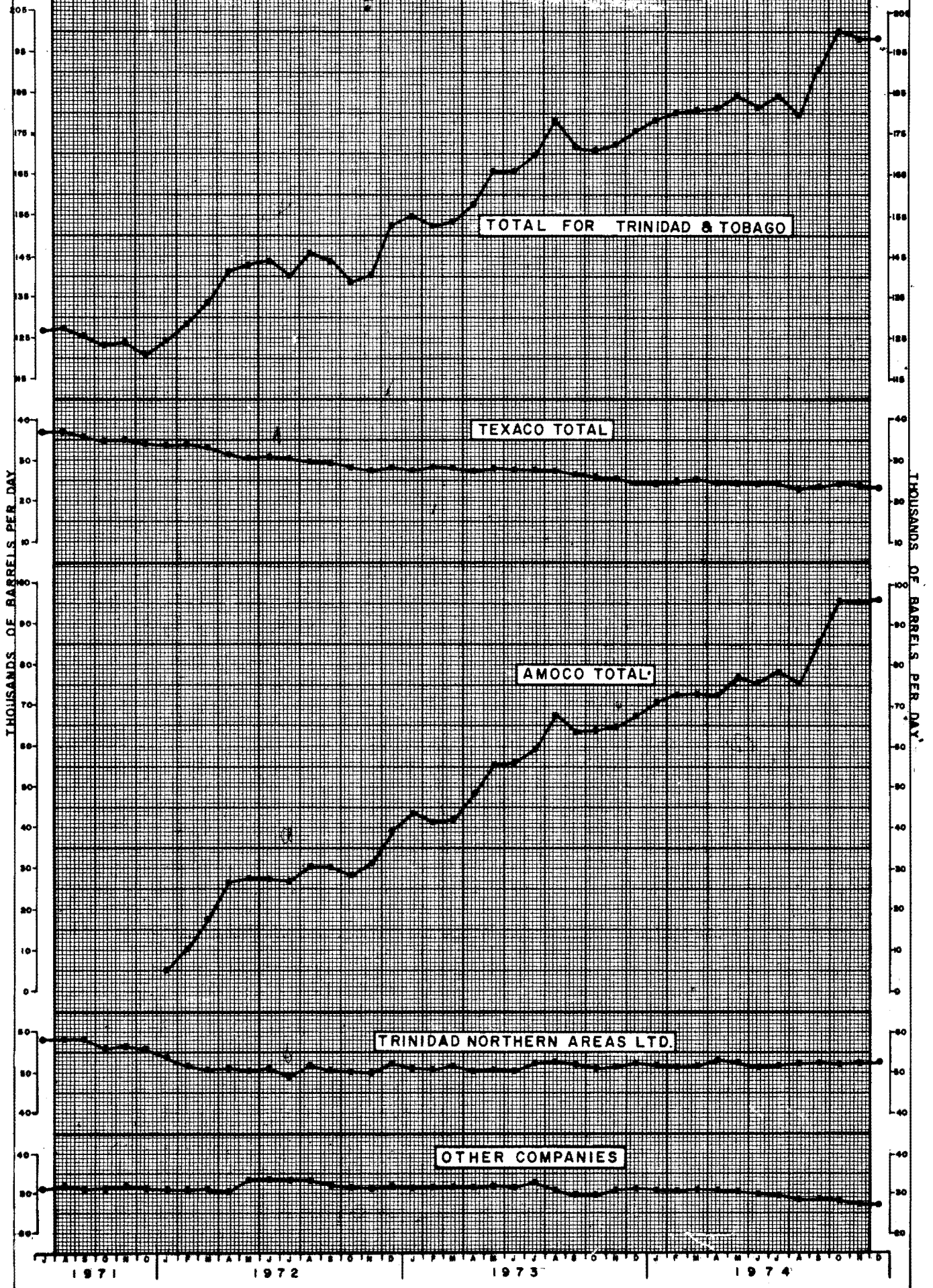
- 1 Solitudo, North Marine, Grand Marais
- 2 Pt. Ligona, F.O.S. Area IV, Pt. Fortin West & Central, Guaya, Parrylands, Cruise
- 3 Brimley (Land & Marine) Vessigny Marimac, Rosette
- 4 Palo Seco, Los Bajos, Erin
- 5 Forest Reserve, Fyzabad, Pt. Fortin East, New Dams, San Francisco
- 6 Quarry, Coast, Guaman, Morne Diabolo
- 7 Orapouaha
- 8 Point, Gorrachopora, Wilica, Mandinga, Siparia
- 9 Moraga West, Roff, Dams, Innes, Treaty, Moraga North, Consett, Dakota, Davelina
- 10 Guayaguayare, Lionel Springs, Moraga East
- 11 Patana, Oatley (East Coast)
- 12 South Marine (South Coast)
- 13 Taboufou
- 14 Jonico



Scale: 1:100,000  
 Date: 1/1/74

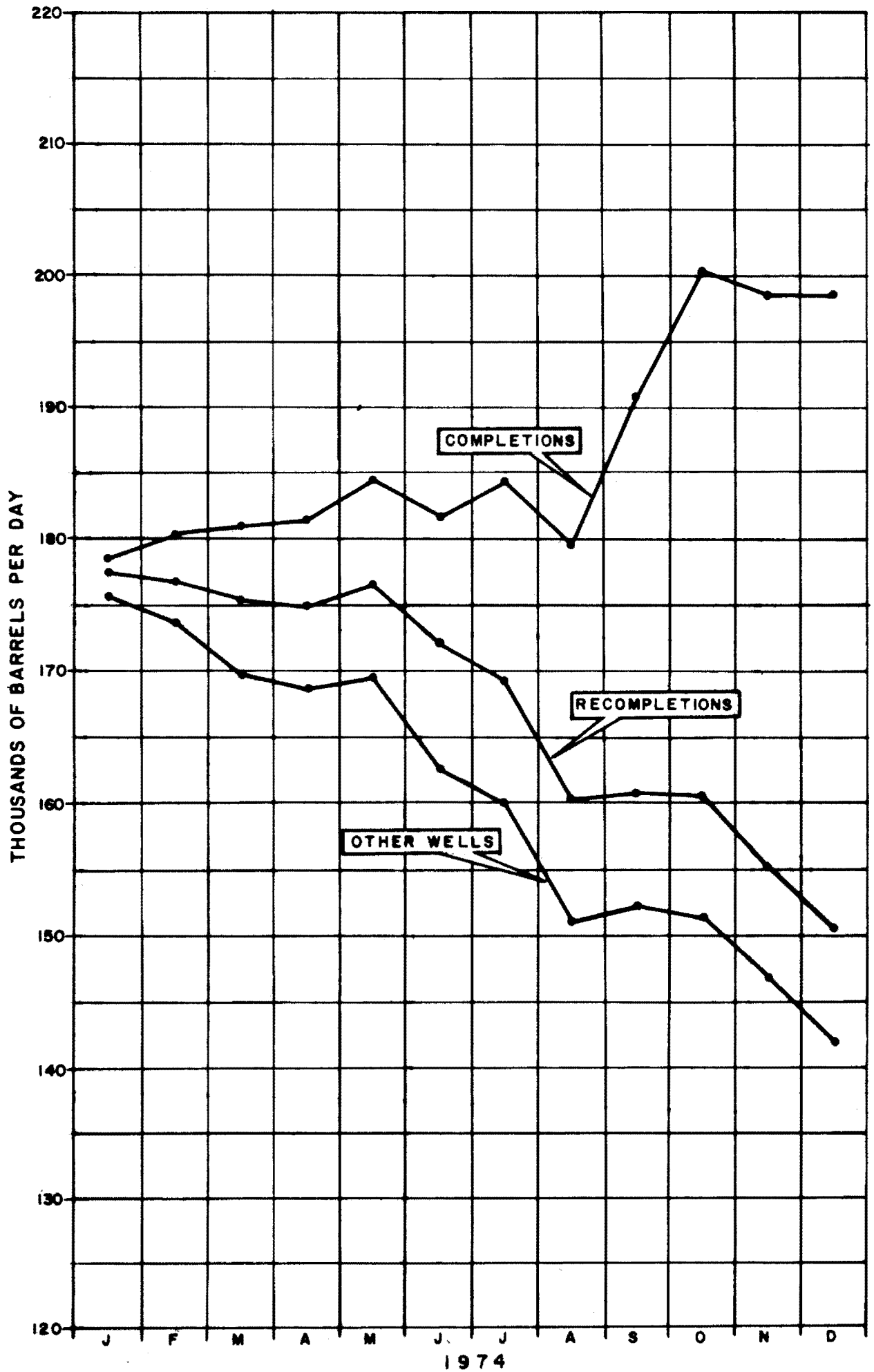
FIG. III

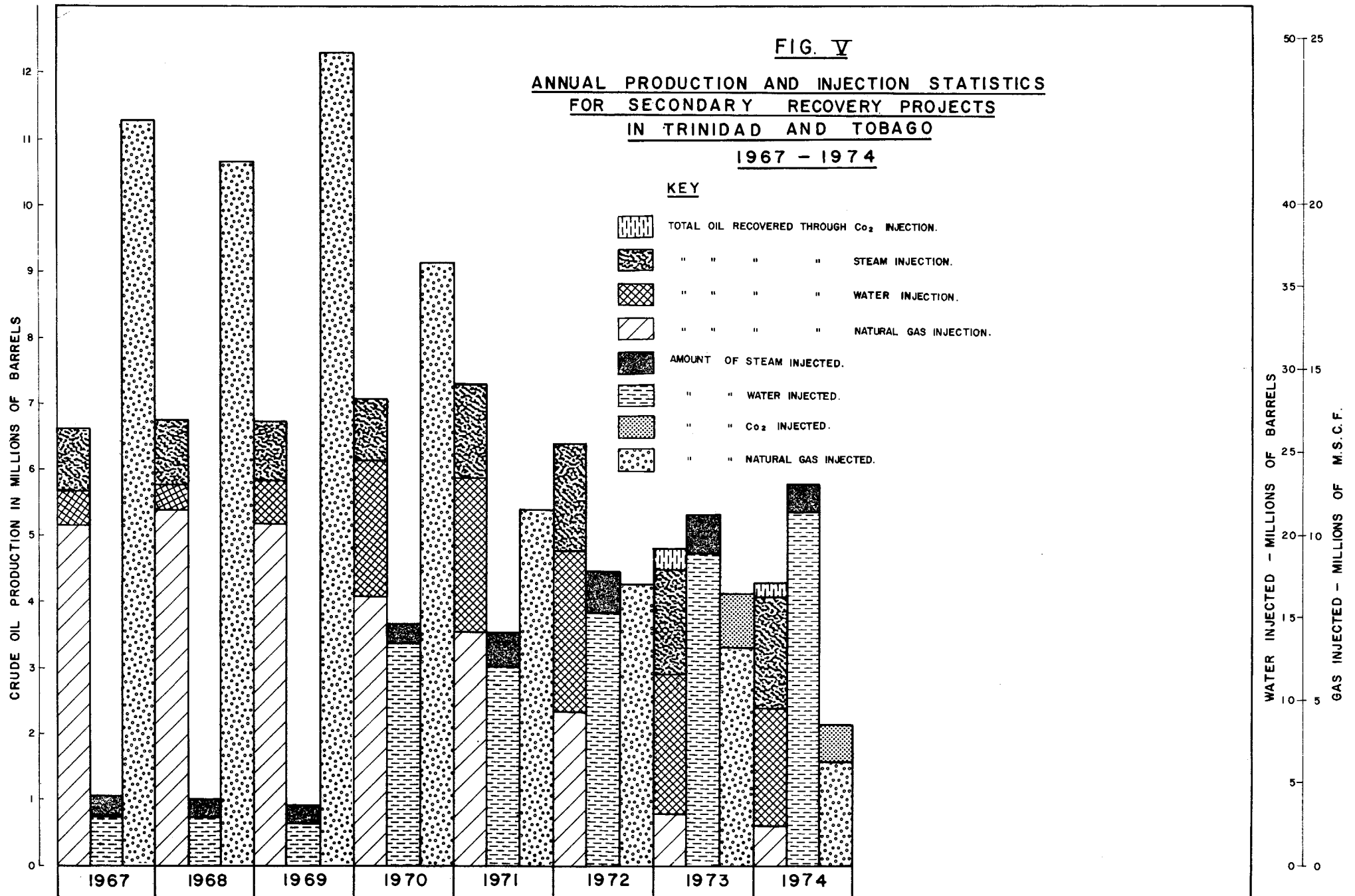
MINISTRY OF PETROLEUM AND MINES  
CRUDE OIL PRODUCTION RATE BY MONTHS  
JULY 1971 - DECEMBER 1974  
(BARRELS PER DAY)



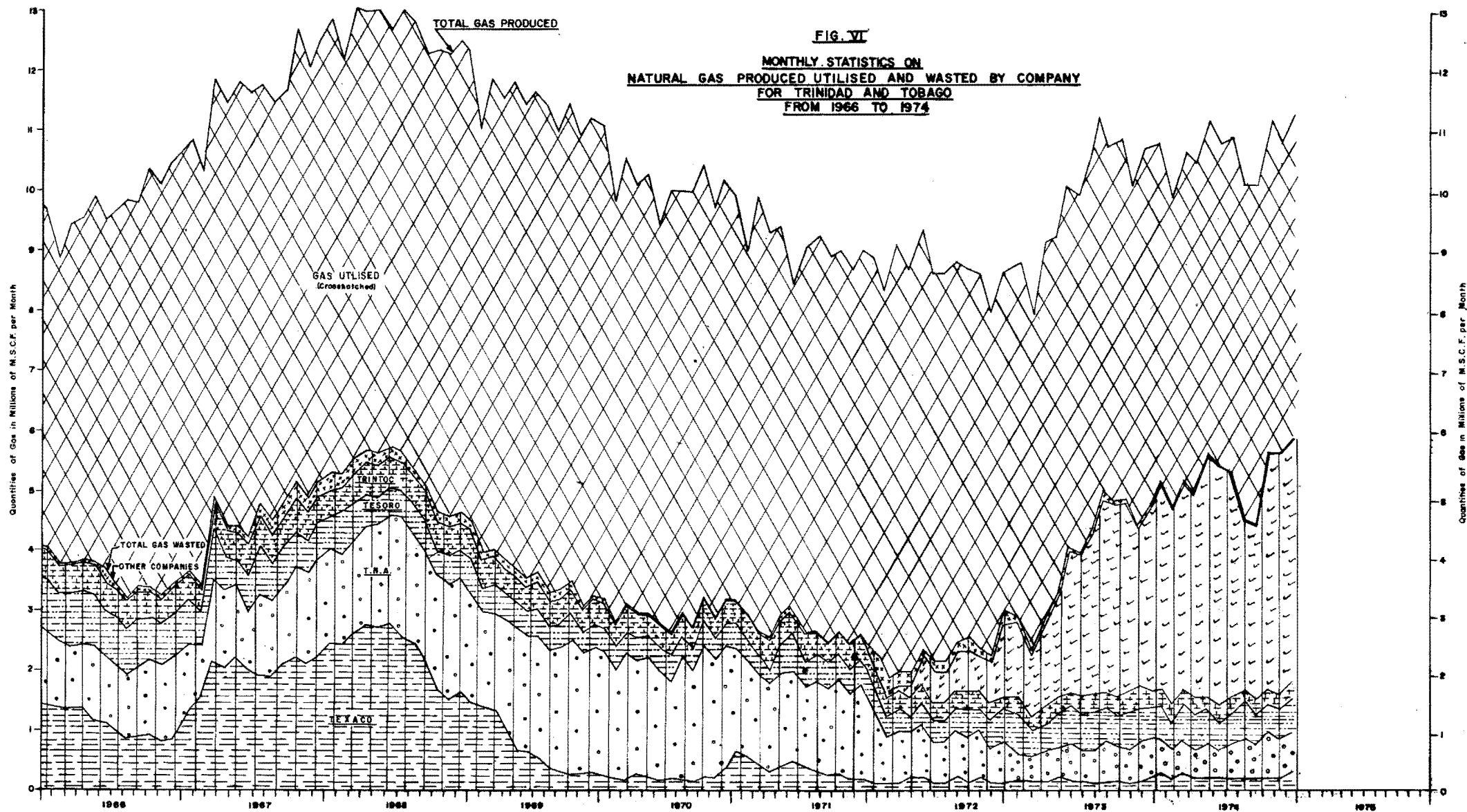


MINISTRY OF PETROLEUM AND MINES  
TRINIDAD AND TOBAGO CRUDE OIL PRODUCTION, 1974  
DAILY AVERAGE BY MONTHS  
COMPLETIONS, RECOMPLETIONS AND OTHER WELLS





**FIG. VI**  
**MONTHLY STATISTICS ON**  
**NATURAL GAS PRODUCED UTILISED AND WASTED BY COMPANY**  
**FOR TRINIDAD AND TOBAGO**  
**FROM 1966 TO 1974**



GAS UTILISED	TEXACO	TESORO	TRINTOC
GAS WASTED	T.N.A.	OTHER COMPANIES	AMOCO

# STATISTICS ON THE PETROLEUM INDUSTRY OF TRINIDAD & TOBAGO

FIG. VII

## DRILLING

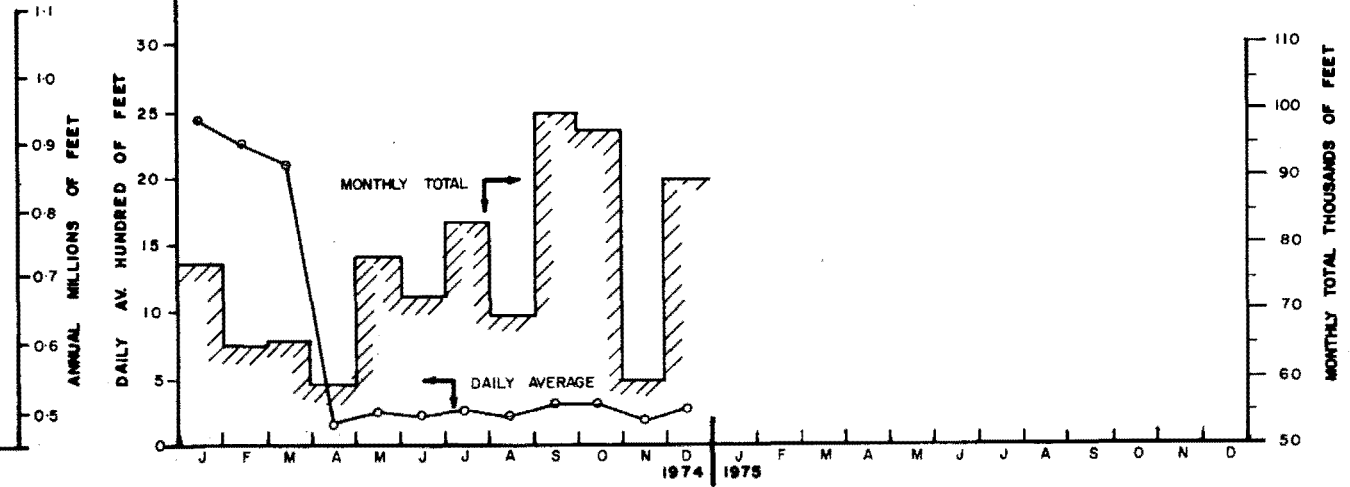
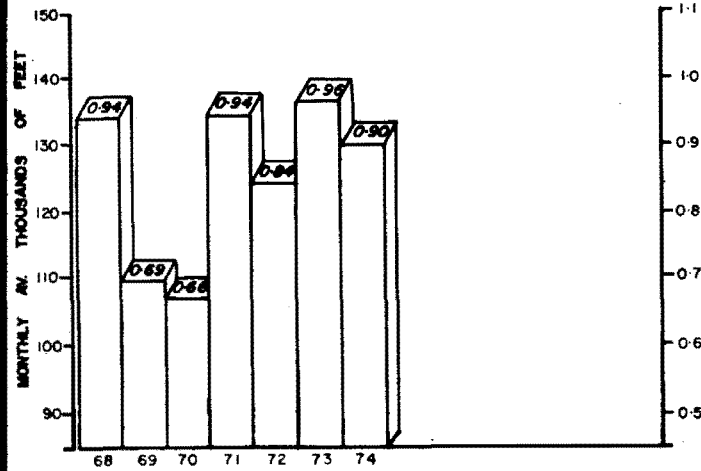
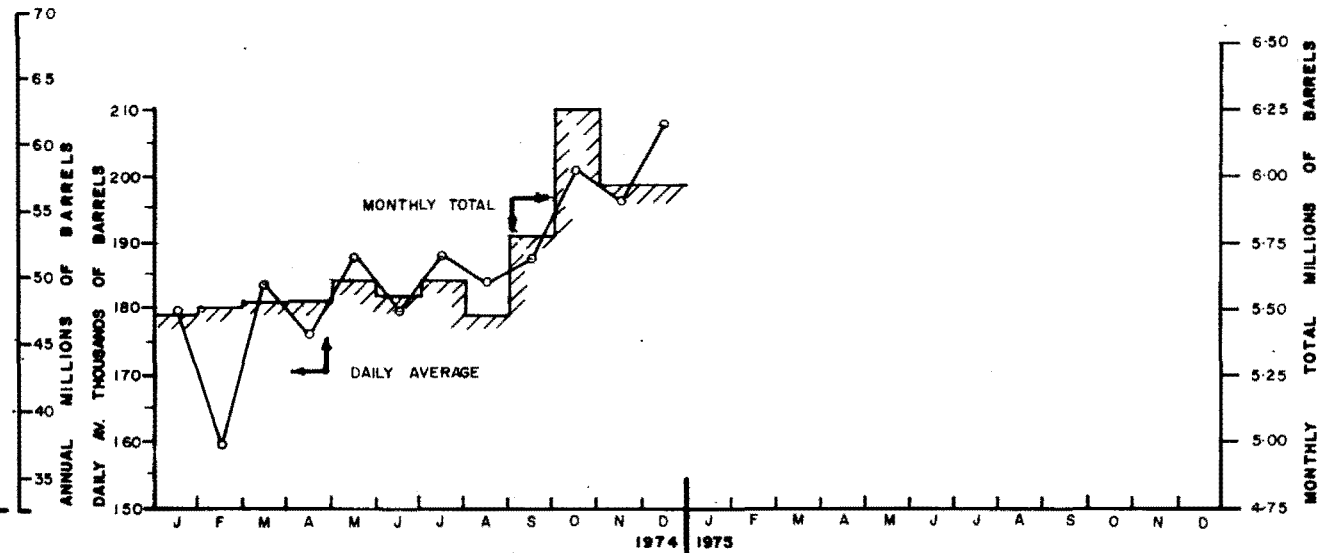
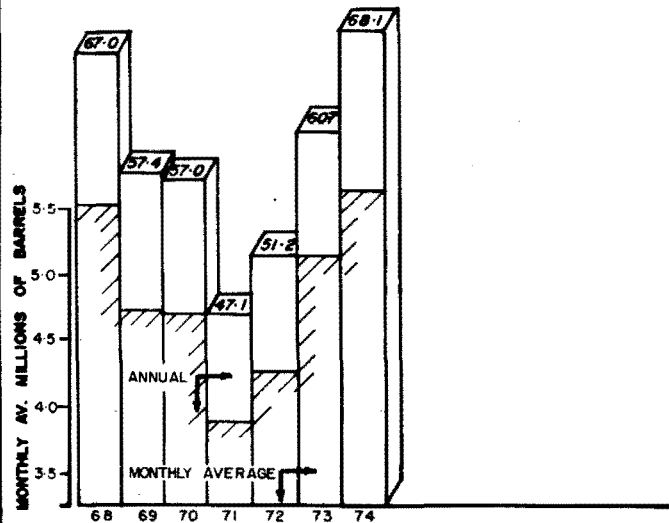


FIG. VIII

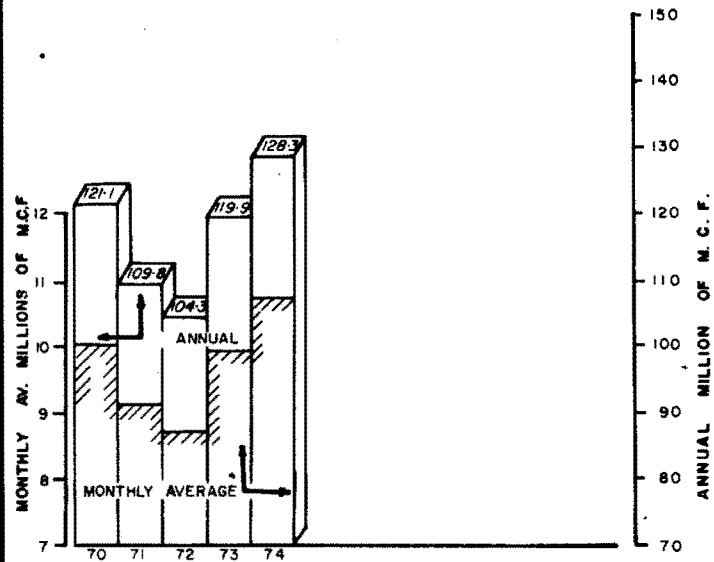
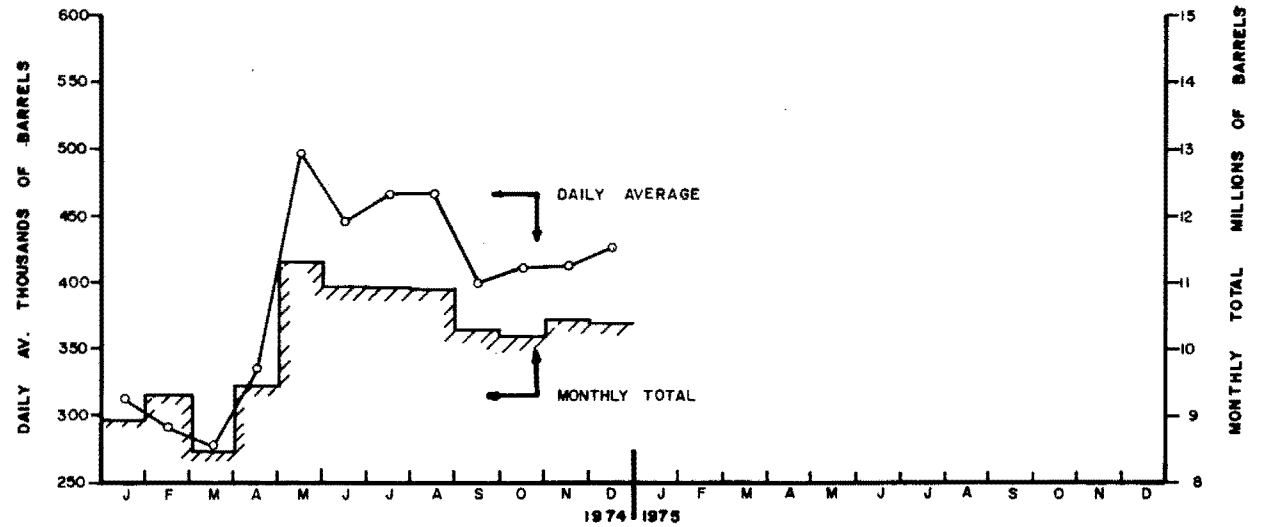
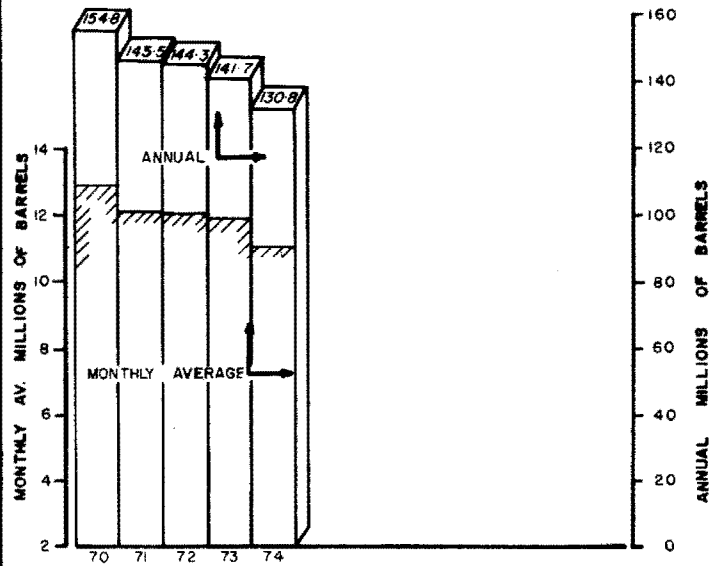
## CRUDE OIL PRODUCTION



# STATISTICS ON THE PETROLEUM INDUSTRY OF TRINIDAD AND TOBAGO

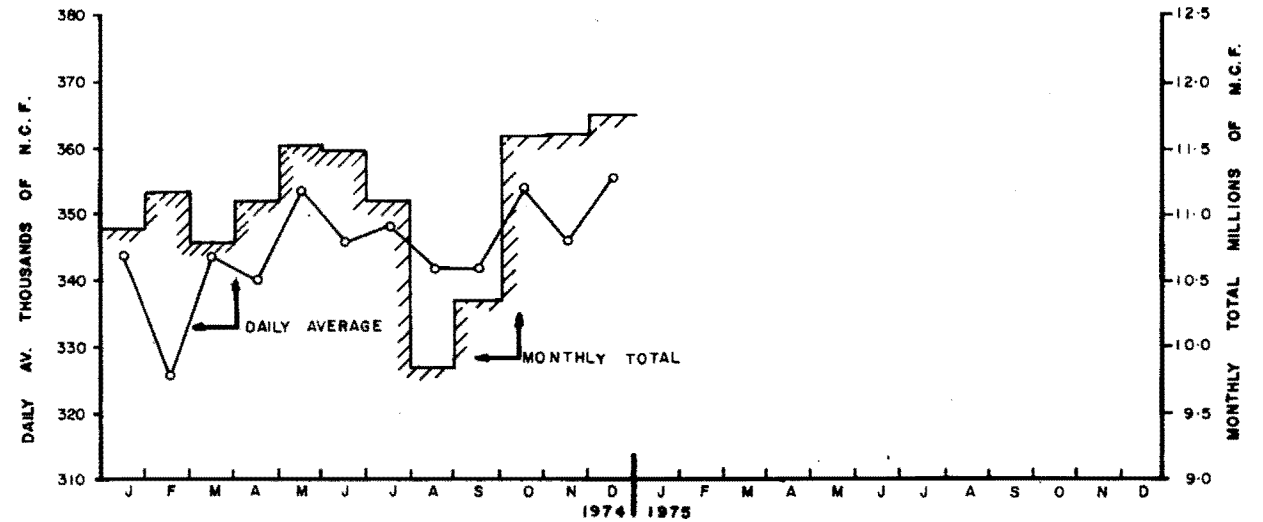
FIG. IX

## REFINERY THROUGHPUT



## NATURAL GAS PRODUCTION

FIG. X



# STATISTICS ON THE PETROLEUM INDUSTRY OF TRINIDAD & TOBAGO

## CRUDE OIL IMPORTS

FIG:XI

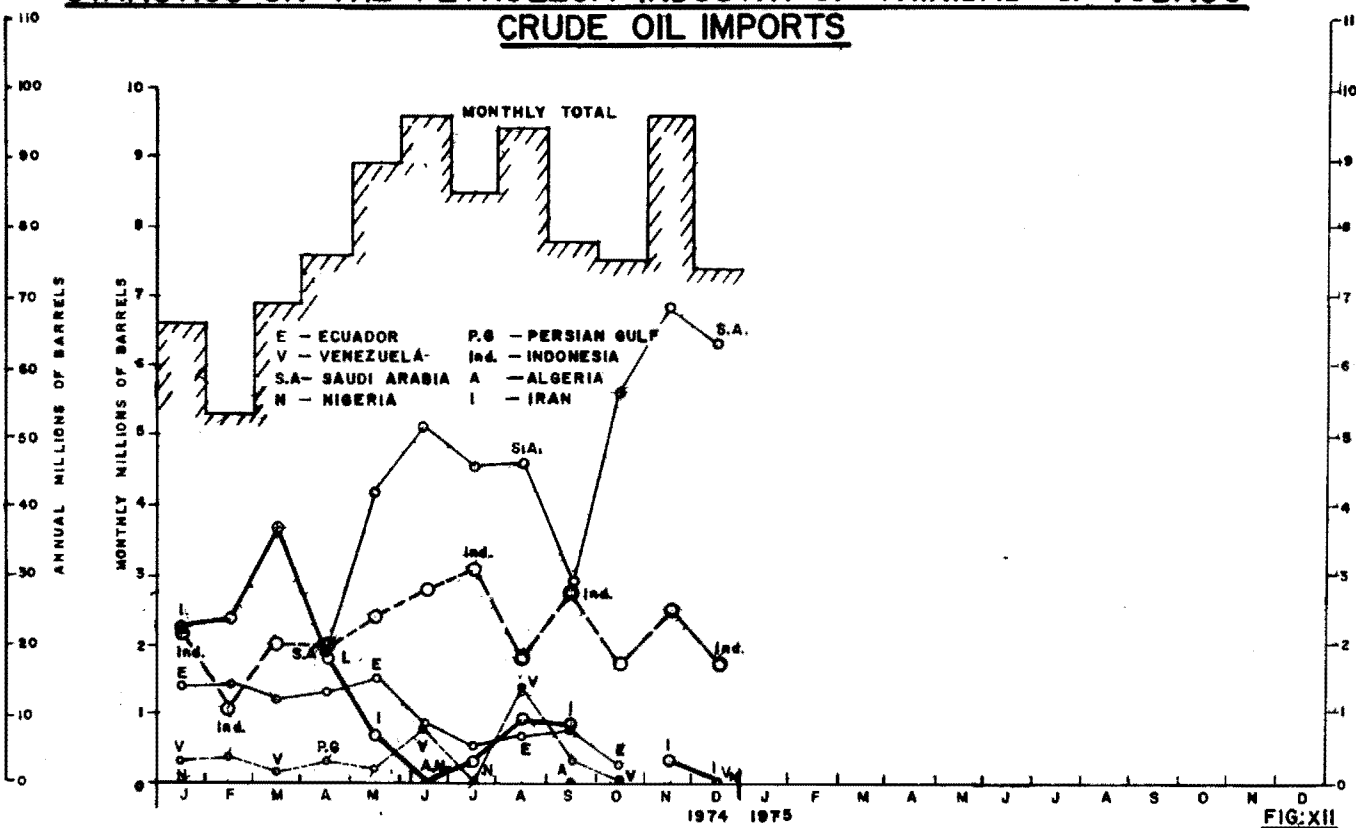
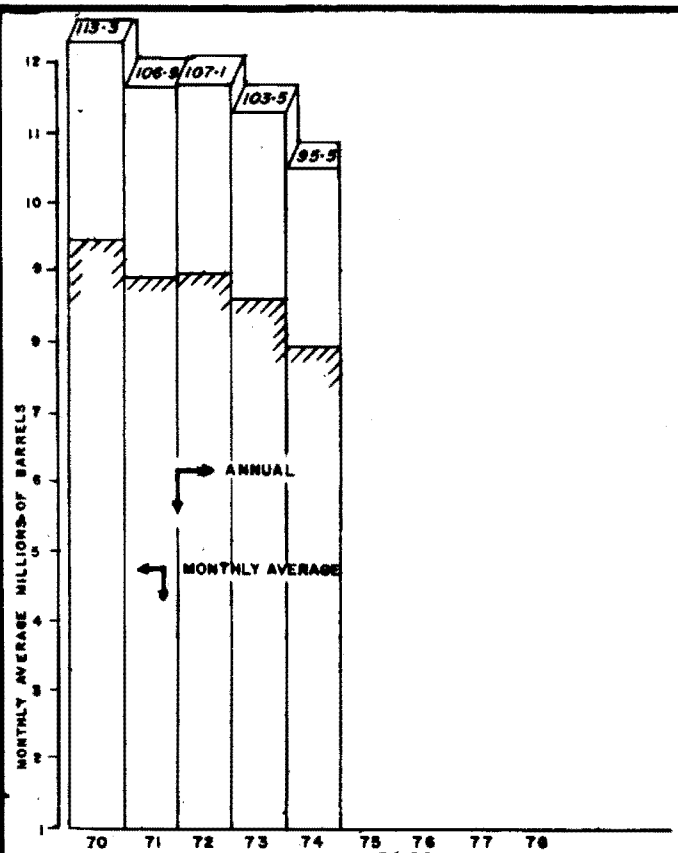
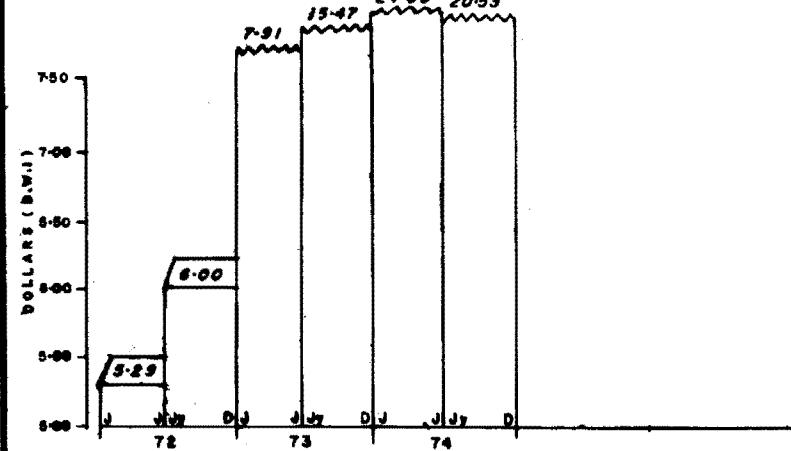


FIG:XII

## AVERAGE VALUE\* (For Royalty Evaluation) OF A BARREL OF CRUDE OIL



\* AS DETERMINED BY THE METHOD OUTLINED IN THE LAND (OIL MINING) (AMENDMENT) REGULATIONS, 1953.