ANNUAL

ADMINISTRATION

REPORT FOR

THE YEAR

"1959"

PETROLEUM DEPARTMENT



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ADMINISTRATION REPORT OF THE PETROLEUM DEPARTMENT, 1959

HONOURABLE MINISTER OF INDUSTRY, COMMERCE, TOURISM AND EXTERNAL COMMUNICATIONS:

I have the honour to submit the following report on the activities of the Oil and Asphalt Industries of the Territory for 1959.

THE OIL INDUSTRY

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THE OIL INDUSTRY

Introduction

- 1. In 1959 the Trinidad Oil Industry continued its march of progress in all phases of its operations. Drilling activity, represented by almost continuous operation of 30 rigs, resulted in a 6 per cent. increase in total footage over the 1958 figure. Production increased by 9.5 per cent. with a daily average rate of over 112,000 barrels. Marine oil accounted for the greater part of the increased volume.
 - 2. The main features of 1959 operations are as follows:-

				Percentage
		1959	1958	Charge
Total crude oil production, barrels	***	40,918,786	37,355,059	+9.5
Daily average production, barrels/day	•••	112,106	102,343	+9.5
Average number of Rigs operating	•••	30	32	6.3
Number of Wells completed		278	295	5.8
Producers completed (Oil and Gas)		247	256	3.5
Success ratio percentage		88.8	86.6	+2.5
Footage drilled, feet	•••	1,446,586	1,365,129	+6.0

PRODUCTION

- 3. The territory's crude oil production for 1959 reached the all-time high of 40.92 million barrels, an increase of 9.5 per cent. over the previous year and double that of eight years ago. The daily average production per well of 34.9 barrels, though low by International Standards, was 7 per cent. higher than in 1958. Of the total increase of 3.56 million barrels, marine oil accounted for more than half.
 - 4. Company production statistics are given in the following table:-

Company				1959	1958	Percentage Charge
Apex	•••	***		2,926,805	3,142,501	— 6.7
Jones	• • •	•••	•••	1,964		
Dominion		•••	***	46,594	1,852	+2415.9
\mathbf{Kern}	•••	***	•••	1,146,809	1,143,262	+ 0.3
Premier		•••		375,192	418,577	- 10.4
Shell 🚩	•••	•••	•••	7,435,519	7,996,730	— 7.0
Stekoll	•••	•••	***	derdangship	_	Annual An
T.C.O.	•••	•••	•••	1,468,872	1,628,107	- 9.9
T.N.A.	• • •	•••	•••	3,772,423	1,981,076	+ 90.4
Texaco 🇸		•••	•••	17,688,517	15,956,096	+ 10.9
T.P.D.	•••	•••	•••	6,056,091	5,086,858	+ 19.1
	Тот	'ALS	•••	40,918,786	37,355,059	+ 9.5

5. Apex was forced to close in production owing to the lack of a market. The decline in T.C.O's production can be accounted for by a severely curtailed drilling programme during 1959. Shell, on the other hand did not curtail drilling but directed its interest mainly towards exploration tests which were largely unsuccessful. The development drilling undertaken by this Company with one or two rigs was insufficient to offset natural production decline.

The most significant increases in production came from the Marine Soldado Field of T.N.A., the Forest Reserve and Palo Seco (Grande Ravine) fields of Texaco, the Moruga Fields of T.P.D., and the Point Fortin East Field of Shell.

6. The following table gives the principal areas from which new or additional production was obtained:—

Area	1958	1959	Volume Increase	Increase %	Principal reasons for Increase
Texaco—Forest Reserve	 7,642,529 1,981,076		193,955 1,791,347		Recompletion Outstep Drilling and Secondary Recovery Outstep and Development Drilling
T.N.A. (Total) Texaco—Palo Seco	 2,989,904				• • • • • • • • • • • • • • • • • • • •
Shell—Point Fortin East Shell—Innis	 951,263 695,249			27.0 1.3	do. Outstep Drilling
T.P.D.—Moruga Dominion—Marine	621,828 —	980,295 46,594	,		Outstep and Development Drillin and Well Stimulation New Field
T.P.D.—North Marine	 - 	15,328			do.

- 7. Marine production continued to be the highlight of new oil finding for 1959. The Soldado field alone yielded 3,472,786 barrels, an increase of 119 per cent. over 1958. Production from all oil wells entitled to "Submarine Well Allowances" during the year was 4,266,969 barrels or 10.4 per cent. of total territorial production. For December alone, this production was 515,895 barrels or 14.4 per cent. of the total. The corresponding data for December, 1958, were 280,661 barrels and 8.2 per cent.
- 8. Dominion Oil brought in South Domoil Wells 1 and 2 during the year. Both wells are close to the International Boundary line in the Gulf of Paria where the depth of water is about 90 feet.
- 9. T.P.D. completed their North Marine No. 1 as a producer in the Gulf. The well was drilled to 9,010 feet but production was derived from the shallow Morne l'Enfer formation.
 - 10. On the land areas increased production was derived from:-
 - (a) Wells drilled as (short) outsteps to known fields.
 - (b) Wells recompleted in cased-off pay zones. Often these were converted in the process from single to dual completions.
 - (c) Increasing use of the techniques of "plastic packing" for sand exclusion, "fracturing" and other well stimulation methods; and
 - (d) Secondary recovery operations.

There was only one new discovery on land in 1959. This was the Guayaguayare Well 305 drilled in the Navet area, south-east of the abandoned T.C.A. Lizard Springs Field.

11. For further details on production see Tables III and IIIA.

DRILLING

- 12. (a) General: 278 wells were drilled during the year under review of which 247 or 88.8 per cent. were completed as producers. This compares with a success ratio of 86.6 per cent. for 1958.
- 13. Total footage drilled for the year was 1,446,586 feet. Successful wells accounted for 1,222,216 feet, unsuccessful wells for 207,009 feet while 17,361 feet represented footage for wells still uncompleted at the year end. Despite the fewer completions, the total footage drilled in 1959 was 6 per cent. greater than 1958. The average depth of a completed well was 5,141 feet which was 11.7 per cent. higher than the previous year. The association of greater footage with fewer wells is indicative of the trend that new reserves are to be found only at greater depths. The era of shallow production in Trinidad is, in a general sense, now passed. The cost of finding new reserves has increased and will continue to do so in the future as operators are compelled to drill into deeper horizons.
 - 14. The pertinent statistics for 1959 are as follows:—

	1959	DRILLING			
	0.11	~	75.	m . 1	Percentage
	Oit	Gas	Dry	Total	Successful
***	12		2	14	85.7
•••	7	1	13	21	33.3
•••	19		1	20	95.0
•••	208		13	221	94.1
	246	1	29	276	89.1
		Left close	ed in	2	
		Grand To	otal	278	
	•••	12 7 19 208	12 — 1 7 1 19 — 208 —	Oil Gas Dry 12 — 2 7 1 13 19 — 1 208 — 13 246 1 29 Left closed in	$\begin{array}{c ccccccccccccccccccccccccccccccccccc$

15. (b) Exploratory Drilling: Marine exploratory tests proved to be more rewarding in 1959 than their counterparts on land. Dominion Oil discovered condensate production in the South Domoil Field. T.P.D. drilled one producer on its Marine Lease. The objective proved to be dry but production was obtained from a shallow Morne l'Enfer horizon. The wells involved were all drilled from De Long, Mobile Jack-up type barges.

Exploratory drilling on land yielded only one significant find: Guayaguayare 305, south-east of the abandoned Lizard Springs field, discovered a thick oil bearing section in the Gros Morne formation. Apart from this, no other wildcat well on land was successful. The thirty-three per cent. success ratio for land exploratory tests given in the table above pertains largely to outsteps from known fields.

- 16. Apex drilled a deep wildcat at Chatham in the Cedros area to a depth of 14,850 feet. No commercial oil was found.
- 17. Shell was very persistent with their exploratory tests in the Ortoire region where 7 wells were drilled. All were dryholes.

- 18. Trinidad Petroleum Development drilled a deep test to 11,961 feet, in the Gautier-Cretaceous in the Quarry Field. The objective was dry but production was obtained from upper sands.
- 19. This is the third successive year in which wildcat exploratory tests on land failed to find new fields of significance.
 - 20. For further details on drilling consult Tables II and IX.

MOVEMENT OF CRUDE OIL AND PRODUCTS

21. The composite picture of crude oil movement and products disposal is given in detail in Table V which can be summarized as follows:—

		C	RUDE OII	BALANCE			
			Million				Million
Avaib	ability		Barrels	Dis_{I}	posal		Barrels
Stock 1st Janu	ary	•••	2.16	Exports	•••	•••	3.35
Production	•••	41.14		Local consun	nption		0.05
Less Loss		0.86*	40.28	Delivered to	Refinery	•••	68.06
				Stock on 31s	t December	•••	2.33
Imports	•••	***	31.35				
			73.79				73.79
		Rwwin	ren Peon	ucts Balance			
		Torse II		CO10 DADAMOR			3 5 1171
			Million				Million

Availability		Million Barrels	Disposal		Million Barrels
Stock on 1st January	•••	4.21	Exports		54.56
Crude from Fields	68.06		Bunkers		13.45
Less Refinery Loss	0.48		Local consumption Refinery Fuel	•	2.61
	67.58		Stock on 31st Decer	mber	3.62
Products obtained	•••	67.58			
Imports	•••	2.45			
		74.24			74.24

REFINERY CAPACITY

22. The total Crude Distillation capacity of Trinidad for 1959 was 190,000 barrels/day which shows an increase of 4,000 barrels/day over the 1958 figure. There were three Refineries in operation during the year: (1) Texaco, Pointe-a-Pierre, (135,000 barrels/day); (2) Texaco, Brighton (5,000 barrels/day and (3) Shell, Point Fortin (50,000 barrels/day). The distribution of Crude and product plants throughout the territory is as follows:—

	\mathcal{D}_{m}	ocess		•		Capacity Barrels/day
_						, •
1.	Crude Distillation (To	opping)	• • •	•••	***	190,000
2.	Cracking (Visbreaking	g)		•••	***	27,000
3.	Catalytic Reforming	•••	•••	***	•••	8,000
4.	Alkylation	•••	•••	•••	***	2,500
5.	Isomerisation	•••	•••	•••	***	2,000
6.	Re-Run	•••	•••	•••		29,000
7.	Catalytic Cracking	•••	•••	•••	***	28,000
8.	Polymerization	•••	•••	•••	•••	1,400
9.	Vacuum Distillation	•••	•••	•••	•••	60,000
10.	Naphthenic Oil Resid	ue	•••	•••	• • •	50
11.	Di-Iso-Butylene	•••	•••	•••	•••	2,300
12.	Bitumen	•••	•••	•••	•••	9,500
13.	Claus Kiln (Sulphur)	•••	•••	***	***	25 (long tons/day)

Early in 1959 Texaco commenced the construction of a 100,000 barrel/day crude distillation unit; a 15,000 barrel/day Platformer; and a 20,000 barrel/day Hydrotreater.

^{*}Water Reported as Oil.

THE ASPHALT INDUSTRY

23. The following table shows the quantity of Natural Asphalt extracted from the Pitch Lake and the quantity of derived products exported or sold locally:—

			Tons	Tons
$Natural\ Asphalt$			1959	1958
Extracted by Works Department for local use		•••	59,397	56,556
Extracted by the Trinidad Lake Asphalt Co.	•••	•••	86,021	76,486
			145,418	133,042

DERIVED PRODUCTS MANUFACTURED BY THE COMPANY

				Tons	Tons
Exported:				1959	1958
Crude Asphalt	•••	•••			1
Dried Asphalt	•••	•••		50,985	46,380
Cement Asphalt	• • • •	•••	•••	16,034	14,679
				67,019	61,060
Local Sales:				hannya are described and the con-	***************************************
Crude Asphalt	•••	•••	•••	3	30
Dried Asphalt		•••	•••	144	138
Cement Asphalt	•••	•••		2,597	2,782
* *				2,744	2,950

CONTRIBUTION TO REVENUE AND LOCAL DISBURSEMENTS

24. The sum disbursed by the Oil Industry in the Territory during 1959 amounted to \$159.3 million an increase of 9.4 per cent. on the previous year. However, Government's revenue from oil decreased by 12.5 per cent. from \$58.1 million in 1958 to \$50.8 million in 1959. Despite a 9.5 per cent. increase in crude production, a fall in Gulf Coast posted prices tended to cancel out this advantage with the net result that royalty showed only a negligible increase of 0.8 per cent. Another noteworthy factor was a decrease of 19.6 per cent. on taxes on Income which arose chiefly through tax allowances permitted to companies which commenced large-scale Refinery construction during the year. The drop of 32.3 per cent. on Excise Duty on Petroleum Spirit reflected Government's withdrawal of the additional 9 cents per gallon duty on regular gasoline which was imposed on 31st December, 1957, and took effect during 1958.

The increase of 8.7 per cent. on Harbour Dues on Crude Oil and Products is indicative of the increasing trend towards the importation of crude oil for Local Refining. Details of the disbursements are given in Tables VI and VII.

25. The following tables show the contributions of the Oil Industry under each head of revenue listed in the Territory's Estimates. Contributions to the Revenue of the Port Services and also of the Railway and Telegraph are shown separately in order to conform to the present form of presenting the Territory's Estimates.

Contributions by the Oil Industry to the Revenue of the Territory in 1959

X

	Revenue He	ead in Territ	ory's Es	stim	ates		Revenue Received	Oil Industry Contribution	Percentage Contributed by Oil Industry
	(Ordinary Rev	enue			1	\$	8	%
1. Customs	and Excise	***					38,174,206	2,148,922	5.6
2. Licences	and Internal	l Revenue no	ot other	wise	classified		8,494,207	148,195	1.7
3. Taxes on	Income	•••			•••		52,978,205	29,618,807	55.9
4. Fees and	Payments for	or Specific S	ervices		•••		1,332,824	130,725	9.8
5. County (Council				•••		1,170,234	250,461	21.4
6. Reimbur	sements						3,396,302	53,625	1.6
7. Earnings	of Governm	ent Departn	nents		•••	l	1,514,173	4,068	0.3
8. Post Offi	ce	•••			•••		2,517,453	62,611	2.5
9. Rent of	Government	Property	• • •	•••	•••		505,058	11,782	2.3
10. Interest	•••	•••			• •••		1,779,585		_
11. Miscellar	eous						1,162,329	96,587	8.3
12. Forests I	Lands and Pe	etroleum	•••	•••	• • • •	• • •	17,625,380	16,504,790	93.6
Ton	AL ORDINAR	y Revenue		***		•••	130,649,956	49,030,573	37.5
	Ex	traordinary l	Revenue						
13. Premiun					•••		40,652	•	
14. Loans to			,	• • • •	***		331,364		
15. Grants u	nder C.D. &	W. Organiza	ation		•••		1,624,759		·
16. Extraord			•••	•••			4,413,432		
To	TAL AS PER T	ERRITORY'S	FINANC	IAL	Statement,	1959	137,060,163	49,030,573	35.8
A. Port					•••		9,776,724	1,683,305	17.2
B. Raily	vay and Tele	grapn	•••	•••	•••	•••	1,080,498	131,335	12.2
							147,917,385	50,845,213	34.4

EXPORTS OF PETROLEUM AND ITS PRODUCTS

- 26. The value of Petroleum exports increased by \$23.9 million in 1959 and constituted 83.6 per cent. of all territorial exports. The chief reasons for the upswing were an increase of 9.5 per cent. in indigenous crude production together with a 23.8 per cent. rise on imported crude and products. Exports of Crude Oil and Products rose 17 per cent. from 49.5 million barrels in 1958 to 57.9 million barrels in 1959.
- 27. Table I gives figures for the exports of Petroleum including re-export of products obtained from imported crude, while Table V gives a detailed breakdown of refined products exported.
- 28. The following tabulation shows the contribution to the total value of Territorial exports made by Petroleum and other products. The percentage values of these contributions have been graphed in abbreviated form for a number of years in Appendix E.

		Expo	rts				1959	:	1958	
							\$	%	\$	%
Crude Petroleu			***	***	•••		363,753,485	83.6	339,944,730	82.4
Sugar refined	and uni	efined		***			32,059,065	7.4	30,354,929	7.4
Cocoa Beans	• • •	***	•••	***			10,063,769	2.3	12,748,135	3.0
Cement		•••		***	•••		3,632,592	0.8	3,057,763	0.7
Asphalt and P	roducts	(excluding .	Aspha	lt Cement)			2,122,381	0.5	1,859,986	0.5
Rum		***		***			1,910,516	0.4	1,727,219	0.4
Coffee, raw				• • •	• • •		2,375,778	0.5	2,526,569	0.6
Orange Juice	• • •						801,738	0.2	1,366,804	0.3
Grapefruit Jui	ce	***					1,672,314	0.4	2,775,895	0.7
Bitters	•••	***					1,037,080	0.2	932,802	0.2
Coconut Oil re				1			210,715	0.1	667,868	0.2
Shirts		•••	•••	•••			523,438	0.1	388,158	0.1
Grapefruits		•••					503,176	0.1	1,559,202	0.4
Oranges	•••	***		***	•••		231,400	0.1	306,792	0.1
Bananas				***			521,378	0.1	534,112	0.1
All other prod				•••			13,489,891	3.2	12,021,021	2.9
villor prou			•••			•••	20,100,001	J.2		
7.	FOTAL 1	Domestic Ex	KPORT	s	• • •	•••	434,908,716	100.0	412,771,985	100.0

ROYALTY ASSESSMENT

29. The Royalty assessed on the crude oil, natural gasoline and natural gas produced on Crown Oil Mining Leases for each half-yearly royalty period during 1957, 1958 and 1959 is shown in the following table:—

			Assess	ME	NT FOR HA	LF-	YEARLY PI	CRIC	DD ENDING			
Source of Revenue	31.12.59)	30.6.59		31.12.58		30.6.58		31.12.59		30.6.57	
	8	c.	\$	c.	\$	c.	\$	c.	8	c.	\$	c.
Royalty on Natural Gas .	81,134	85	63,548	43	69,828	42	61,967	51	60,383	21	59,029	14
Royalty on Natural Gasoline .	48,646	09	46,565	79	48,745	47	53,075	55	64,694	90	71,433	53
D	y 707,239	44	709,328	54	664,052	17	696,627	49	586,919	89	582,229	63
Royalty on Crude Oil .	8,087,272	06	7,746,331	73	7,503,327	20	6,970,439	58	7,479,805	49	7,251,605	19
Half-Yearly Totals	8,924,292	44	8,565,774	49	8,285,953	26	7,782,110	13	8,191,803	49	7,964,297	49
Yearly Totals	17,4	90,	066 93		16,0	68,	063 39		16,8	368	098 98	***************************************
Assessment Totals			16,8	51,	727 75		15,9	73,	913 62		· · · · · · · · · · · · · · · · · · ·	
Drawback claimed					****							

30. The volumes upon which the above assessments were made were as follows:--

Substance As	emo área				HALF-	YEARLY PE	RIOD ENDIN	G	
FOR ROYAL			Unit	31.12.59	30.6.59	31.12.58	30.6.58	31.12.57	30.6.57
Natural Gas	•••		M.C.F.	5,408,989	4,236,228	4,600,249	4,131,167	4,025,546	3,857,937
Natural Gasoline	•••		Gals.	2,692,561	2,707,924	2,755,939	3,009,391	3,349,343	3,602,604
Crude Oil—Gross	•••		Bbls.	18,733,541	17,394,684	16,812,003	15,440,174	14,919,396	13,591,721
Crude Oil used free of	f Royalty	•	Bbls.	72,025	54,293	52,652	49,866	49,505	51,357
Crude Oil—Net	•••	٠	Bbls.	18,661,516	17,340,391	16,759,351	15,390,308	14,869,891	13,540,364
Crude Oil—Average	Royalty V	alue	\$/Bbl.	4.33	4.47	4.48	4.53	5.03	5.36

- 31. It will be observed that in 1959 a 12 per cent. increase in the volume of royalty oil was offset by a decrease of 3½ per cent. in posted prices. The high prices of 1957 are a reflection of the high demand period following the Suez crisis. Since then, the discovery of new fields, notably in the Sahara, Libya, Persian Gulf, Lake Maracaibo and Nigeria together with the advent of Soviet oil in Europe and South America has led to a softening in world prices.
- 32. The data used to evaluate crude oil for Crown Royalty for each of the last six half-yearly royalty periods together with the Royalty on Casinghead Petroleum Spirit for each of these periods is shown in the following table:—

Products			W.I. CURR S FOR THE H			
I RODGOTS	31.12,59	30.6.59	31.12,58	30.6.58	31.12.57	30.6,57
	8	s	8	8	8	8
Bunker "C" Grade Fuel	3.422,734	3.414,872	3.609,697	3.914,554	4.406,645	4.693,006
No. 2 Fuel	5.811,231	6.647,750	6.218,634	5.965,277	6.532,492	7.243,772
43 –47 D.I. Gas Oil	5.885,428	6.726,991	6.307,526	6,058,299	6.622,717	7.325,556
48-52 D.I. Gas Oil	5.976,275	6.816,631	6.307,397	6.147,857	6.712,942	7.414,320
53-57 D.I. Gas Oil	6.066,122	6.906,271	6.458,802	6.237,415	6.803,167	7.503,084
70-72 Oct. M. Leaded Gasoline	6.780,989	6.440,737	6.628,911	6.431,376	7.086,592	7.284,664
Average middle rate for sight drafts on New					·	•
York. Premium in W.I. Cents per \$1.00 U.S.	71.136,685	70.743,649	71.181,522	70.587,293	71.857,337	71.924,585
Value of Tetra-Ethyl Lead in W.I. Cents per						
Multilitre	421,770	440,115	449,219	0.443,456	0.432,255	0.429,451
Royalty in W.I. Cents per Imperial Gallon		ŕ	,	,	ŕ	,
on C.H.P.S	I LOOD DOAL	1.869,195	1.912,706	1.956,618	2.058,014	2.087,597

LOCAL SALES OF PETROLEUM PRODUCTS

- 33. In 1959, excisable sales of gasoline (all grades) increased by 6.4 per cent. and liquified refinery gas (propane) by 14.9 per cent. over 1958 figures. Total duty on gasoline and L.R.G. in 1959 amounted to \$2,763,588. Premium Gasoline constituted 4.3 per cent. by volume of total gasoline sales.
 - 34. The following table shows relative consumption statistics for the two years, 1958 and 1959:—

			Per	rcentage
	1958	1959	c	harge
Gasoline (All Grades) Gallons	 27,413,622	29,158,260	+	6.4
Liquified Propane, Barrels	 3,135,403	3,601,296	+	14.9

ACCIDENT STATISTICS, 1959

			- 1	DRILLIN	G AND PROD	UCTION	Отне	R DEPARTME	NTS*	Total
	Сомра	NY		Non- Serious	Serious	Fatal	Non- Serious	Serious	Fatal	Number of Accidents
T.P.D.	***	•••		41	5	***************************************	66	6	1	119
Shell	•••	•••		24	5		46	12	2	89
Apex.				34	4		32	6		76
P.C.O.L.				1	2	1	2			. 6
D.O.L.				40	3	w				43
T.N.A.	•••	,		3	1		18	6		28
K.T.O.		•••		9	7		5	1		22
Texaco		•••		48	24	1	30	17	1	121
	TOTAL			200	51	2	199	48	4	504

- *Excluding Refineries, Electrical, Machine and General Workshops and Power Stations.
- 35. The total number of accidents in 1959 was 504 which compares with 525 in 1958. This represents a decrease of 4 per cent. from the previous year.
 - 36. There were six fatalities during the year. A brief description of the fatal accidents follow:—
 - (1) A tractor driver was killed when the tractor which he was manoeuvering slipped off an incline and rolled over on its side.
 - (2) While painting an electric pole, the painter accidentally touched a live wire and was electrocuted.
 - (3) While climbing an electric pole the deceased was struck by a bolt of lightning.
 - (4) In an effort to retrieve a dinghy which went adrift the deceased was drowned.
 - (5) A rigman was crushed by a racking board which he was attempting to dismantle during rigging down operations.
 - (6) While anchoring a barge a winchman was fatally struck on the head by the winch handle when one of the gear teeth broke.

Extensive investigations were conducted by this Department into each of the fatal accidents and appropriate recommendations made for future practice.

CROWN OIL MINING LEASES AND LICENCES

- 37. There was little leasing activity during the year, only two new leases being issued. The total acreage of crown oil rights under lease decreased from 1,364,584 acres at the 31st December, 1958, to 1,288,822 acres at the 31st December, 1959. Of the total acreage under lease marine licences accounted for 66.8 per cent. The drop in acreage was almost wholly accounted for by areas surrendered by Dominion Oil Ltd. in the northern half of the island.
- 38. A summary of leasing activity during the year is shown in the following paragraph and is followed by details of individual leases and licences issued and surrendered. Changes in Company holdings are shown in Table VIII.

TABLE VIII
SUMMARY OF LEASING ACTIVITY DUBING 1959

	Number of	Cı	BOWN (on Ri	GHTS—ACRE	A.GE	
	Lease or Licence	Private	e Surfa	ce	Crown	Surfac	зе
Dringing I aggregation of in 1050	 118 2 —	A. 103,300 302	B. 0 1	P. 31 04	335,718 2,821	в. 0 0	P. 27 01
Areas surrendered in 1959	 120 6	103,602 4,870	1 3	35 29	338,539 9,861	- 0 2	28 12
Leases as at 1st January, 1960	 114	98,731	2	06	328,677	2	16
Submarine Licences as at 31st December, 1958 Submarine Licences issued during 1959 Submarine Licences surrendered in 1959	 (part)				925,573 64,160	$\frac{0}{0}$	00
Submarine Licences as at 1st January, 1960	 6		*****		861,413	0	00
Total Acreage Leased	 	98,731	2	06	1,190,090	2	16

- 39. No exploration licences are now held or were surrendered during the year.
- 40. Details of the leasing summary in the preceding paragraph are given in the following tables:—

Crown Oil Mining Leases Granted and Surrendered during 1959

			Св	own Oı	L RIGHTS		·	Acr	REAGE	V
MINING LEASE	No.	Privat	e Surfa	се	Crown	Surfa	се	т	otal	
(A) Principal Leases:		Α.	R.	P.	Α.	R.	Р.	Δ.	R.	Р.
D.O.L. 10750/ Stekoll 13977/		302	1	04	$\frac{406}{2,414}$	2 1	08 33	406 2,716	2 2	0 8 37
	2	302	1	04	2,821	0	1	3,123	1	05
(B) SURRENDERED LEASES: D.O.L. Req. No. 8580/9114/8581/10656/6961/3379/379/378/378/378/378/378/378/378/378/378/378	548 — 5585 — 5545 — 5575 — 557 — 557 — 557 — 557 — 557 — 557 — 557 — 557 — 557 — 557 — 557 — 557 — 557 — 557	14 -12 9 16 19 146 15 151 - 4,311 - 9 -136 - 27 - 4,870	1 2 2 3 1 3 0 1 — 1 — 1 — 0 3 — 3 3	23 34 10 00 35 28 00 12 — 15 — 33 — 22 17 — 29	75	3 	36 00 	15 75 12 9 16 110 146 15 161 80 2,125 4,311 100 4,872 9 173 136 9 27 2,324	1 0 2 2 3 1 3 0 3 0 0 1 0 2 1 0 2 2 3 0 2 0 0 2 0 0 0 0 0 0 0 0 0 0 0	19 00 34 10 00 05 28 00 02 22 00 15 00 07 33 07 22 20 17 00
(C) SURRENDERED MARINE LICENCES										
D.O.L. 500/ 4056/		_			33,680 30,480	0	00 00	33,680 30,480	0	00 00
					64,160	0	00	64,160	0	00

TABLE I X

ANNUAL STATISTICS OF PRODUCTION, DRILLING, EXPORTS AND IMPORTS

	1	1	1	7	7	1	ī		1	1	1	1
ITEM	1959	Unit	1958	Difference 1959/1958	1957	1956	1955	1954	1953	1952	1951	1950
PRODUCTION												
1. Crude Oil 2. Natural Gasoline 3. TOTAL CRUDE OIL AND NATURAL GASOLINE 4. From Crown Oil Rights 5. From Private Oil Rights	218 41,137	1,000's bbls. do. do. do. do.	37,355 231 37,586 32,252 5,103	$\begin{array}{c cccc} + & 9.5 \\ \hline - & 5.6 \\ + & 9.4 \\ + & 2.0 \\ \hline - & 6.1 \\ \end{array}$	34,064 265 34,329 28,309 5,553	28,929 258 29,187 23,462 5,725	24,896 274 25,170 20,119 5,051	23,629 290 23,919 18,902 5,017	22,346 264 22,610 17,899 4,711	21,258 204 21,462 16,782 4,680	20,843 201 21,044 16 397 4,647	20,632 185 20,817 16,300 4,517
6. TOTAL IMPORTS 7. Imports of Refined Products (Total of Lub. Oil) 8. Imports of Crude Oil for Refining 9. Imports of Other Oils for Refining and Blending	1 10	1,000's bbls. do. do. do.	27,294 34 25,529 1,731	+ <u>23.8</u> + <u>22.8</u>	20,155 29 19,509 617	21,041 32 20,251 758	18,754 35 17,780 939	17,071 36 16,670 365	16,860 21 16,696 143	17,028 32 16,722 274	16,347 36 15,855 456	11,258 23 11,214 21
10. TOTAL EXPORTS	57,918 3,354 54,564	1,000's bbls. do. do.	49,490 2,100 47,390	+ 17.0 + 6.0 + 15.1	50,254 3,273 46,981	47,697 4,002 43,695	39,824 2,866 36,958	36,954 3,398 33,556	36,220 1,999 34,221	34,778 1,844 32,984	34,359 1,918 32,441	29,150 2,194 26,956
13. Runs to Stills	68,061	1,000's bbls.	60,256	+ 12.9	50,467	44,825	40,147	36,918	37,446	36,041	35,160	29,813
14. Number of Wells started	290	As stated	298	- 2.7	321	263	225	202	223	187	144	149
15. TOTAL NUMBER OF DRILLING 16. Number of Driling Wells completed as Oil Wells 17. Number of Drilling Wells abandoned while drilling, &c. 18. TOTAL FOOTAGE DRILLED (All Wells) 19. Footage drilled on Crown Oil Rights 20. Footage drilled on Private Oil Rights	278 247 29 1,446,586 1,357,416 89,170	As stated do. do. Feet do. do.	295 256 35 1,865,129 1,233,834 131,295	$\begin{array}{c c} - & 5.6 \\ - & 3.5 \\ - & 17.1 \\ + & 6.0 \\ - & 9.1 \\ - & 32.1 \end{array}$	314 282 22 1,322,483 1,071,207 251,276	262 224 38 1,110,745 801,716 309,029	215 191 24 987,567 783,788 203,779	202 189 13 911,242 684,128 227,114	224 211 13 917,894 733,401 164,493	182 177 5 786,535 578,031 158,504	140 131 9 664,887 521,751 143,136	144 136 8 659,565 524,374 135,191
21. Average depth of completed Drilling Wells (Item 15)	5,141	Feet	4,604	+ 11.7	4,151	4,237	4,372	4,544	4,026	4,286	4,480	4,436
22. TOTAL NUMBER OF WELLS PRODUCING (Average during year)	3,210 951 2,259	As stated do. do.	3,141 922 2,219	+ 2.2 + 3.1 + 1.8	3,048 882 2,166	2,858 797 2,061	2,745 718 2,027	2,674 692 1,982	2,336 639 1,897	2,407 594 1,813	2,280 584 1,696	2,197 594 1,603
25. Average Daily Production during Year per Producing Well	34.9	Barrels	32.6	+ 7.1	30,6	27.7	24.8	24.2	24.1	24.1	25.1	25.7
26. Average daily production during year per Flowing Well 27. Average daily production during year per Artificial Lift Well	80.2 15.8	Barrels do.	73.6 15.5	+ 9.0 + 1.9	69.0 15.0	60.7 14.9	55.2 14.1	51.0 14.8	49.8 15.5	47.3 16.6	48.5 17.0	50.2 16.6
28. TOTAL VALUE OF DOMESTIC EXPORTS		000 \$ do. do.	380,933 304,930 2,838		380,622 311,741 2,698	322,049 261,792 2,504	278,985 212,584 3,044	257,178 193,240 3,769	251,258 194,359 4,103	223,331 175,490 5,981	207,584 161,859 3,989	167,562 129,183 2,669
31. TOTAL NATURAL GAS PRODUCED	91,963 21,876 12,500 57,587	M. Cub. Ft. do. do. do.	79,191 23,403 11,187 44,801	$\begin{array}{ccc} + & 16.1 \\ - & 6.5 \\ + & 11.7 \\ + & 28.5 \end{array}$	65,418 21,211 9,490 84,717	51,743 21,586 7,406 22,750	40,860 17,590 5,412 17,828	38,494 18,179 3,227 17,089	34,597 17,677 2,532 14,388	\$1,503 16,870 2,786 11,647	31,725 16,616 2,690 12,519	32,312 16,771 2,674 12,867

TABLE II

Monthly Analysis of Drilling Wells for the year 1959

			}				:	DRILLING W	ELLS C	OMPLETED D	URING	1959				MONTHL	y Footage	DRILLED		
	Average No. of	No. of new	No. of old	No. of Oil		pleted as		pleted as	A	Abandoned v	while dr	illing		Closed in	Total No. of				Average Footage	Average Footage
Month	Rigs Running	Wells Started	Wells Aban-	Wells Recom-	Oil	Producers	Injec	tion Wells	Dı	ry Holes	Techni	ical Causes	After	r Drilling	com- pletions	Crown Oilrights Feet	Private Oilrights Feet	Total Feet	drilled per day	drilled per day
		! !	doned	pleted	No.	Aggregate Depth in Feet	No.	Aggregate Depth in Feet	No.	Aggregate Depth in Feet	No.	Aggregate Depth in Feet	No,	Aggregate Depth in Feet		1 1000				
	Ì	<u></u>		<u> </u>	İ	1												1		
January	. 29	17	2	26	13	53,624		-	3	16,140					16	100,708	7,812	108,520	3 ,5 0 1	121
FEBRUARY	30	18	3	20	16	82,735		-		_	-	_	-	_	16	79,794	7,813	87,607	3,129	104
March	32	21	2	21	20	105,582	-	-	2	13,986	-	_			22	105,982	6,013	111,995	3,613	113
April	30	32	2	30	24	113,105	_	-	4	23,606	-	-			28	122,563	14,769	137,332	4,578	153
May	31	29	1	36	21	95,358	_	_	3	24,494	_			-	24	126,509	7,372	133,881	4,319	139
June	90	22	_	18	19	99,916	_	_	1	10,487	1	1,880	_		21	94,444	8,287	102,731	3,424	118
7	91	26	4	27	24	114,416	_	_	1	9,251	1	4,063	{		26	141,518	874	142,392	4,593	148
A	91	24	2	18	20	106,133	_	_	5	47.595	_		,		25	124,393		124,393	4,004	129
	31	29	2	16	21	98,284			3	18,166	1	5,000	_		25	127,485		127,485	4,250	187
SEPTEMBER		29	_	19	25	120,753	_		_		1	660			26	123,910	8.028	131,933	4,256	142
Остовив	30		_	}		1 1		1		19.893			2	11,788	24	96,971	18,000	114,971	3,832	128
NOVEMBER	30	24	1	16	19	108,518	_	_	3	19,893	_		1					123,346	3.979	137
DECEMBER	29	27	2	19	25	123,792	_	-	_	-	-		_		25	113,139	10,207	123,340	3,919	107
Totals and Averages 1959	30	290	21	268	_	1,222,216		_	25	183,618	4	11,603	. 2	11,788	278	1,857,414	89,170	1,446,586	3,983	131
FOTALS AND AVERAGES 1958	32	298	62	244	256	1,128,634	1	1,950	32	185,805	3	23,379	₿,/.	18,444	295	1,283,834	131,295	1,265,129	3,740	117
DIFFERENCE 1958/1959	—6.3	2.7	—66.1	+9.0	-3.5	+8.3		_	—21.9	-1.2	+33.3	50.4	_33.3	-36.1	5.8	+10.0	—32.1	+6.0	+6.5	+12.0

TABLE IIIA

Analysis of Production for 1959 by Operating Companies

(All Crude Oil Figures are for Dry Oil)

	FLO	OWING	GAS/A	Air Lift	Pur	MPING	PLUNC	GER LIFT	OTHER 1	Methods		SALT W	VATER		Average	Daily		PRODUCTIO	n from Crow	N OIL RIGHTS	PRODUCTION	FROM PRIVA	TE OIL RIGHTS
COMPANY	Average No. of Wells	Quantity (Barrels)	Average No. of Wells (Wet)	Quantity (Barrels)	% of Total Fluid Production	Daily Average per Wet Well	No. of Wells Produced	Average per Producing Well	Total Oil Produced (Barrels)	Daily Average per Producing Well	Average No. of Wells	Production (Barrels)	Daily Average per Producing Well	Average No. of Wells	Production (Barrels)								
Apex (Trinidad) Oilfields Limited	63	1,174,544	44	250,673	266	1,256,820	29	244,768	_	_	159	727,502	_	12.5	402	20.0	2,926,805	27.5	154	1,533,711	15.4	248	1,393,094
Jones Petroleum Company, Limited	1	135	-			193	_		_	1,636		_			1	5.4	1,964	_	_		5.4	1	1,964
Dominion Oil Limited	1	46,594			_	-					-	186	_		1	127.7	46,594	127.7	1	46,594		_	_
Kern Trinidad Oilfields Limited	101	902,170	_	_	106	244,639					23	147,454		17.6	207	15.2	1,146,809	19.5	61	434,725	13.4	146	712,084
Premier Consolidated Oilfield Limited .	6	59,449		_	167	314,896	_		6	847	50	305,834	_	16.8	179	5.7	375,192	4.7	61	104,941	6.3	118	270,251
Shell Trinidad Limited	178	4,766,839	59	570,027	309	2,094,958		_	5	3,695	264	1,884,868	_	19.6	551	37.0	7,435,519	41.5	429	6,503,771	20.9	122	931,748
Stekoll Panam, Petrolera	–					-		_		_	-		_				_				_		
Trinidad Central Oilfields	. 29	979,923	_		119	488,929	_	_	_	20	80	329,945		11.3	148	27.2	1,468,872	27.2	148	1,468,872		_	
Trinidad Northern Areas	28	3,766,085	-	_	1	6,338	, —	_	-		4	76,978		52.7	29	356.4	3,772,423	356.4	29	3,792,423	_		_
Texaco Trinidad Incorporated	375	12,684,819	92	1,850,354	658	3,152,784	_		_	560	692	3,028,737		12.0	1,125	43.1	17,688,517	46.9	953	16,316,009	21.9	172	1,372,508
Trinidad Petroleum Development Company Limited	171	3,472,194	126	1,257,127	36	178,254	235	1,148,516			134	1,384,780		28.3	568	29,2	6,056,091	29.9	545	5,947,179	13.0	23	108,912
TOTAL	953	27,852,752	321	3,928,181	1,662	7,737,811	264	1,390,284	11	6,758	1,406	7,886,284	16.2	15.4	3,211	34.9	40,918,786	41.6	2,381	36,128,225	15.8	830	4,790,561

Natural Gasoline Production, 1959

COMPANY	Crown Oil Rights	PRIVATE OIL RIGHTS	Total Barrels
Apex (Trinidad) Oilfields Limited	39,343	57,844	97,187
Texaco Trinidad Incorporated			_
Trinidad Petroleum Development Company Limited	119,021	1,997	121,018

TABLE III

Monthly Production for the year ending 31st December, 1959

		Flow	ING			GAS/AI	n Lift			PUMPIN	4G			PLUNGER	LIFT			OTHER MET	THODS			SALT W	ATER					No. of		Daily			Bri	AKDOWN OF T	OTAL PRO	DUCTION	
				Daily		1		Daily	-	1		Daily			[]	Daily			1	Daily]	% of	Daily	No. of	No. of Idle	No. of Wells	Wells Drilling	Total No. of	Average	Total Oil		Crow	a		Private	9
MONTH	No. of Wells	Quantity Bbls.	% of Total Oil	Average per Well Bbls.	No. of Wells	Quantity Bbls.	% of Tota Oil	Average per d Well	No. of Wells	Quantity Bbls.	% of Total Oil	Average	No. of Wells	Quantity Bbls.	% of Total Oil	Average	No. of Wells	Quantity Bbls.	% of Total Oil	Average per Wet Well	No. of Wet Wells	Quantity Bbls.	Total Fluid Pro- duced	Average per Wet Well	Wells Pro- duced	Idle Wells	Aban- doned (Total)	at end of month	Wells Started	Pro- ducing Well Bbls.	Produced Bbls.	Daily Average per Prod. Well	No. of Wells	Quantity Produced Bbls.	Daily Average per Prod. Well	No. of Wells	Quantity Produced Bbls.
January 31 February 28 March 31 April 30 May 31 June 30	940 942 955 942 947 933	2,279,516 2,108,351 2,311,991 2,232,672 2,302,488 2,297,551	68.6 68.2 68.2 68.1	78.2 79.9 78.1 79.0 78.4 82.1	293 293 301 305	289,16 268,24 296,75 298,81 300,34 314,06	7 8.7 9 8.8 0 8.9 5 8.9	32.7 32.7 32.1 31.8	1,652 1,646	672,127 602,953 665,046 635,571 656,879 653,318	20.1 19.6 19.6 19.4 19.4 19.3	12.9 13.1 13.0 12.8 12.9 13.1	258 254 260 263 264 264	106,910 95,268 116,611 114,292 120,527 114,819	3.2 3.1 3.4 3.5 3.6 3.4	13.4 13.4 14.5 14.5 14.7 14.5	10 16 19 21 8 9	852 580 825 663 262 406	11111	1.3 1.4 1.1 1.1	1,424	647,216 565,400 638,319 626,498 695,968 638,353	15.5 15.8 16.1 17.1	15.1 15.1 15.0 15.2 15.8 15.5	3,176 3,147 3,177 3,179 3,170 3,185	2,063 2,105 2,093 2,112 2,145 2,149	1,584 1,587 1,591 1,597 1,600 1,602	29 31 30 35 37 38	6,852 6,870 6,891 6,923 6,952 6,974	34.0 34.9 34.4 34.3 34.4 35.4	3,348,568 3,075,399 3,391,232 3,273,008 3,380,501 3,380,158	40.8	2,337 2,313 2,332 2,335 2,342 2,353	2,933,561 2,690,206 2,951,601 2,860,334 2,967,092 2,991,890	16.0 16.5 16.8 16.3 16.1 15.6	839 834 845 844 828 832	415,007 385,193 439,631 412,674 413,409 388,268
Production Total lst January to 30th June		13,532,569	68.2	_	_	1,758,38	8.9			3,885,894	19.6	-	_	668,427	3.3	_		3,588	0.0		_	3,811,753	16.1								19,848,866	_		17,394,684		-	2,454,182
July 31 August 31 September 30 October 31 November 30 December 31	956 956 954 963 961 969	2,354,455 2,387,243 2,324,065 2,412,238 2,375,666 2,466,516	67.5 67.6 68.1 68.4	79.4 80.6 81.2 80.8 82.4 82.1	339 342 350 345	342,62 357,54 350,24	7 10.0 2 10.1 0 10.1	33.0 33.4 33.0 33.8	1,650 1,677 1,672	680,611 680,010 647,983 648,596 629,810 564,907	19.5 19.2 18.8 18.3 18.1 15.7	13.2 13.3 12.9 12.5 12.4 11.0	270 269 274 261 261 265	118,060 123,837 124,280 122,323 118,830 117,527	3.5 3.6 3.6 3.5 3.4 3.3	14.1 14.9 15.1 15.1 15.1	9 10 7 13 7 13	295 772 505 596 575 427	0.0 0.0 0.0 0.0 0.0	2.5 2.4 1.5 2.7	1,377 1,414 1,469	680,712 655,739 668,340 704,914 677,452 687,374	16.3 15.6 16.3 16.6 16.3 16.1	15.8 15.4 15.8 15.5 15.2 15.0	3,221 3,224 3,254 3,259 3,261 3,261	2,133 2,148 2,138 2,158 2,175 2,199	1,608 1,615 1,621 1,622 1,626 1,627	38 37 40 35 36 38	7,000 7,024 7,053 7,074 7,098 7,125	34.9 35.4 35.2 35.1 35.5 35.5	3,485,734 3,538,827 3,439,460 3,541,295 3,475,121 3,589,483	41.7 42.2 42.2 41.7 42.3 42.2	2,392 2,403 2,424 2,421 2,435 2,452	3,090,458 3,144,592 3,065,827 3,130,806 3,091,341 3,210,517	15.4 15.5 15.0 15.8 15.5 15.1	829 821 830 838 826 809	395,276 394,235 373,633 410,489 383,780 378,966
Production Total lst July to 31st December		14,320,183	68.0		_	2,169,79	3 10.3	-	_	3,851,917	18.3			724,857	3.4		_	3,170	0.0		_	4,074,531	16.2			_			_	_	21,069,920	_		18,733,541		_	2,336,379
Year's Production Total		27,852,752	-		_	3,928,18	ı			7,737,811			_	1,393,284				6,758				7,886,284									40,918,786	_		36,128,225	_		4,790,561
Daily Averages		76,309		80.2		10,76	2	33.5		21,199		12.8	_	3,817	_	14.5		19	_	1.7		21,606	_	15.4						34.9	112,106	41.6		98,981	15.8		13,125
Average during year	951	_	68.1	_	321	_	9.6	-	1,662	_	18.9	_	264	 i	3.4	_	12		0.0	_	1,406	<u> </u>	16.1	-	3,210		_	_	_	_		_	2,378		_	831	

TABLE IV

PRODUCTION AND DISPOSAL OF NATURAL GAS

(All figures of gas production in thousands of cubic feet)

									Naturai	GAS DISPOSA	L			NATURAL GAS	RECOVERY	Natural	
			Crude Oil Production (Barrels)	Average G.O.R. (c.ft./bbl.)	Natural Gas Production	Sales to Other Companies	Replaced in Formation	Converted to C.H.P.S.	Used In Fields	As FUEL At Refineries	Vented as Surplus	Pipeline Losses and unaccounted for	Not Collected	Natural Gas treated	Plant Produced Recovery (Bbls.)	Gasoline Produced	Inter-Oil Company Sales†
January			3,348,568	2,134	7,147,152	242,065	890,702	19,401	678,495	1,297,135	2,175,165	197,122	1,647,067	774,850	0.83	18,477	587,092
February		•••	3,075,399	2,141	6,585,658	220,417	838,558	17,542	576,170	1,155,583	1,674,286	499,564	1,603,538	692,395	0.84	16,707	530,634
March	•••		3,391,232	2,208	7,487,546	241,843	1,003,710	20,234	645,120	1,278,178	2,223,960	280,883	1,793,618	818,270	0.82	19,270	539,618
April			3,273,008	2,250	7,363,868	222,359	1,012,538	20,153	645,047	1,179,418	2,318,779	239,751	1,725,723	825,140	0.81	19,193	586,015
May		•••	3,380,501	2,266	7,660,228	192,959	1,064,369	20,125	717,720	1,196,457	2,398,437	231,637	1,838,524	829,150	0.81	19,157	491,309
June	•••	**.	3,380,158	2,228	7,531,609	186,934	994,503	18,890	606,235	1,109,797	2,740,925	204,164	1,670,161	821,330	0.77	17,990	446,383
1st Half-Yes	ar Tota	ls	19,848,866	2,205	43,776,061	1,306,577	5,804,480	116,345	3,868,787	7,216,568	13,531,552	1,653,121	10,278,631	4,761,135	0.81	110,804	3,111,051
July			3,485,734	2,258	7,872,354	253,935	1,120,504	19,954	666,561	1,163,729	2,782,147	101,044	1,764,480	851,975	0.78	19,004	579,974
August			3,538,827	2,254	7,973,507	289,931	1,208,466	17,719	666,026	1,193,185	2,761,673	129,888	1,706,619	757,360	0.78	16,875	591,427
September	•••		3,439,469	2,250	7,737,854	308,304	1,146,221	18,783	684,529	1,113,396	2,629,520	278,604	1,558,497	819,195	0.76	17,889	623,096
October			3,541,295	2,281	8,077,276	355,931	1,160,676	18,494	695,980	1,040,932	2,890,412	292,098	1,622,753	824,255	0.75	17,613	690,962
November	•••		3,475,121	2,314	8,042,465	390,466	1,048,470	18,512	631,471	1,085,463	2,981,530	305,084	1,581,469	807,960	0.76	17,630	694,800
December			3,589,483	2,363	8,483,749	424,462	1,011,108	19,310	657,365	1,192,316	3,364,089	309,416	1,505,683	822,145	0.78	18,390	709,665
2nd Half-Ye	ear Tot	als	21,069,920	2,287	48,187,205	2,023,029	6,695,445	112,772	4,001,932	6,789,021	17,409,371	1,416,134	9,739,501	4,442,890	0.77	107,401	3,889,864
YEAR'S	TOTAL	s	40,913,786	2,247	91,963,266	3,329,606	12,499,925	229,117	7,870,719	14,005,589	30,940,923	3,069,255	20,018,132	9,644,025	0.79	218,205	7,000,915
PERCENTAGE FOR YEAR		SAL			100.0%	3.6%	13.6%	0.3%	8.6%	15.2%	33.6%	3.3%	21.8%				

21,876,308

^{*}Sales to T.T.E.C., Trinidad Cement Limited and Trinidad Oilfields Service Limited, for use as fuel; plus sales to Federation Chemicals Limited for use partly as a raw material in the manufacture of fertilizer and partly as fuel.

[†]These sales are included under the several heads of Natural Gas Disposal.

TABLE V

RETURN OF PRODUCTION STOCKS AND DISPOSAL OF PETROLEUM DURING THE YEAR ENDED 1959

(All figures in barrels)

									REF	INED F	roduc	тѕ					Feed or	
				Crude and Process Oil	AVIATIO	N SPIRIT	Motor Spirit	White Spirit	Burning Oil	Vapour- ising Oil	Gas and Diesel Oil	Fuel Oil (All Grades)	Lub. Oil and Greases	Bitumen	Other Finished Products		Blending Stocks for Transfer	TOTAL (All Products)
					Octane	Grades	Spirit	Spirit	On	Ising On	On	(Clades)	(CICASOS	1	Troudets	Gas		
1. Opening Stocks 1st January,	1959	•••		2,164,545	41,372	183,790	1,009,875	10,463	95,205	125,469	1,131,170	1,177,292	474	25,050	76,939	286	335,601	4,212,956
2. CRUDE OIL PRODUCTION INCLU PETROLEUM SPIRIT	DING C	Casing H	EAD 	41,136,991	_						_	· <u>-</u>	_	_		_		
Colombia	•••		•••	24,129,105 1,521,824 5,699,624	_	 	<u> </u>		_ _ _		_ 1,610,930	 101,942	— —		 17,731	<u> </u>	<u> </u>	
TOTAL IMPORTS				31,350,553		_	561,704	774			1,610,930	101,942	_		17,731		161,822	2,454,903
4. Run to Stills		•••		68,061,131		_	_	_				_	_		_	-	_	
5. Production Obtained		•••			450,266	3,442,632	11,032,567	61,252	1,143,635	1,639,418	12,956,861	35,255,694	2,041	255,777	1,504,629	34,554		67,585,535
Bunkers	•••	•••		47,348 —	257 55,766 —	34 104,826 —	828,984 — —	762 —	315,487 313 —	<u></u>	362,856 3,134,954 —		706 —	2,756 	595,511 —	21,145 — —	6,785 — —	2,603,860 13,453,597 10,741
Total Consumption		•••		47,348	57,023	104,860	828,984	762	315,800	_	3,497,810	10,636,056	706	2,756	595,511	21,145	6,785	16,068,198
North America Other American Countries Western Hemisphere O.E.E. Countries	 s 			3,353,666 — — — —	57,322 	2,864,627 ————————————————————————————————————	5,742,392 3,587,049 557,609 68,372 988,584 9,131	66,992	305,593 	1,329,671 — — — 329,419	835,940 940,542 48,452	8,943,148 8,021,606 1,237,943 335,664 5,683,188 943,595	1,183 — — — 89	189,734 	368,668 6,316 62,665	 13,619		23,726,264 12,813,263 3,519,435 555,550 11,937,124 2,012,128
Total Shipment	•••	•••		3,353,666	392,448	3,450,145	10,953,137	66,992	828,627	1,659,090	11,084,116	25,165,144	1,272	241,647	707,527	13,619		54,563,764
8. Closing Stocks 31st December	в, 1959)	•••	2,334,906	42,167	71,417	822,025	4,735	94,413	105,797	1,117,035	733,728	537	36,394	296,261	76	296,847	3,621,432

Imports of Tucupita Fuel Oil for Transhipment amount to 2,066,733 barrels and are not included in the above return. These figures do not include movements of petroleum from the distributing companies.

TABLE VI
STATEMENT SHOWING CONTRIBUTIONS BY THE OIL INDUSTRY TO TERRITORIAL REVENUE AND GOVERNMENT OPERATED SERVICES, 1959

(Marketing Companies not included)

Item	Head or Sub-Head	1959	% Difference 1959/58	1958	1957	1956	1955	1954	1953	1952	1951	1950
	Crown Royalties, Taxation, Etc.	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$
1 2 3 4 5 6 7 8 9 10 11 12 13	Customs Excise Duty on Petroleum Spirit Lands and Buildings Taxes Vehicles, Licences and Registration Taxes on Income Reimbursements—Petroleum Department Earnings of Government Departments Sundries Royalty on Oil Royalty on Gas Forests—Sale of Timber Exploration Licences Harbour Dues on Crude Oil and Products Sub-Totals—Items 1-13	2,024,876 124,046 250,461 148,195 29,618,807 53,625 4,068 96,587 16,236,712 135,602 132,476 1,509,693 50,335,148	$\begin{array}{c ccccc} - & 14.0 \\ - & 32.3 \\ - & 0.1 \\ - & 13.2 \\ - & 19.6 \\ - & 34.6 \\ - & 80.7 \\ + & 21.7 \\ + & 0.8 \\ + & 21.3 \\ - & 3.9 \\ - & & & & \\ + & & & & \\ + & & & & \\ - & & & & \\ + & & & & \\ - & & & & \\ + & & & & \\ - & & & & \\ - & & & & \\ + & & & & \\ - & & & & \\ - & & & & \\ - & & & &$	2,354,974 183,331 250,815 170,721 36,818,288 82,042 21,077 79,365 16,101,883 111,748 137,835 — 1,389,087 57,701,166	$\begin{array}{c} 2,267,204 \\ 129,093 \\ 209,973 \\ 130,267 \\ 27,666,940 \\ 11,525 \\ 50,726 \\ 61,241 \\ 13,945,903 \\ 111,394 \\ 157,505 \\ 1,273 \\ 1,016,102 \\ 45,759,146 \\ \end{array}$	1,371,241 122,243 203,086 134,227 19,630,291 50,025 61,466 38,857 10,227,905 94,016 156,295 5,549 1,136,310 33,231,511	$1,097,527\\124,304\\200,413\\137,441\\18,827,104\\50,546\\33,013\\32,456\\8,706,169\\91,096\\140,206\\3,437\\953,586\\30,397,298$	$\substack{1,270,440\\136,257\\199,263\\85,439\\14,692,510\\40,613\\11,470\\30,797\\8,231,840\\72,417\\138,594\\5,687\\872,334\\25,787,661}$	$\substack{1,191,346\\141,361\\228,180\\118,741}\\15,091,972\\32,644\\9,436\\39,592\\7,011,584\\68,255\\68,174\\4,356\\809,507\\25,298,148}$	$\substack{1,204,736\\132,817\\113,301\\107,868\\27,750\\17,784\\43,365\\6,592,399\\85,031\\61,174\\14,192\\753,598\\26,244,636}$	697,095 90,291 100,526 90,885 13,715,292 30,287 10,804 28,177 6,508,520 99,189 42,594 3,366 732,802 22,149,828	974,118 115,637 101,203 107,647 8,704,846 32,151 10,504 31,917 5,823,226 81,233 68,899 9,797 587,516 16,648,694
15 16 17 18 19 20 21	VARIOUS SERVICES Wharves and Harbours (Rentals, &c.)	173,612 62,611 11,782 131,335 130,725 510,065 50,845,213	- 12.9 + 18.1 + 5.8 + 1.5 + 238.4 + 18.2 - 12.5	199,263 53,011 11,141 129,403 38,631 431,449 58,132,615	93,102 58,509 17,774 140,469 44,988 354,842 46,113,988	74,846 48,496 15,287 112,900 47,215 298,744 33,530,255	58,347 52,490 16,811 104,698 23,742 256,088 30,653,386	92,493 47,559 12,175 125,726 29,578 305,531 26,093,192	82,279 45,613 10,320 119,097 35,258 292,567 25,590,715	74,499 50,154 10,732 165,312 29,609 330,306 26,574,942	37,029 43,140 9,523 151,930 22,600 264,222 22,414,050	27,182 30,529 5,588 137,501 26,146 226,946 16,875,640
	A—Total Revenue of Territory and Government Operated Services B—Percentage of 'A' contributed by the Oil Industry C—Percentage of 'A' less Items 13, 15 and 18 contri-		+ 5.4	139,934,076	110,954,729	96,931,614 34.6	89,991,040 34.1	80,154,136 32.6	74,535,864 34.3	73,013,672 36.4	65,215,814 34.4	56,038,019 30.1 31.9
	buted by the Oil Industry D—Excise collected on Gasoline and Propane (including duty shown under Item 2 above)	35.8 2,763,588	— 17.5 — 44.3	43.4 4,959,941	42.0 2,381,018	36.1 2,186,203	36,0 1,985,082	34.0 1,891,322	36.1 1,714,221	38.3 1,560,225	36.3 1,454,567	1,367,860

TABLE VII

STATEMENT SHOWING THE AMOUNT OF MONEY DISBURSED IN THE TERRITORY AND ON OVERSEAS PURCHASES OF MATERIALS BY THE OIL INDUSTRY, 1959

Item	Head and Sub-Head	1959	% Differenc 1959/58	1958	1957	1956	1955	1954	1953	1952	1951	1950
	Moneys Earned and Payable in the Territory	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$
1	Total contribution to Government Revenues (Item 21, Table VI)	50,845,213	12.8	58,132,165	46,113,988	33,530,255	30,653,386	26,093,192	25,590,715	26,574,942	22,414,050	16,875,640
2	Payments to Employees*	42,147,355	+ 1.3	41,450,305	37,552,026	35,700,911	34,557,926	31,040,008	29,164,141	24,743,598	20,918,670	18,839,945
3	Payments to Contractors*	33,666,818	+ 40.9	23,898,821	17,069,310	13,042,638	10,643,977	9,465,908	7,439,632	7,604,548	7,527,758	6,125,164
. 4	Local Purchases of Materials	14,589,697	+ 61.4	9,040,923	9,210,891	8,116,298	7,217,873	7,026,657	5,862,292	5,662,114	4,837,764	3,946,065
5	All other Local Expenditure (Rents, Private Royalties, &c.)	19,204,677	+ 47.5	13,049,813	20,655,539	15,470,566	13,819,910	13,220,262	11,527,727	13,095,125	10,361,590	8,456,079
6	Sub-Total	160,453,760	+ 10.5	145,572,477	130,601,755	105,860,668	96,893,072	86,846,027	79,584,507	77,680,327	66,059,832	54,242,893
	Overseas Purchases of Materials (C.I.F. Valuation)											
7	Importations from (a) United Kingdom	37,577,311	+ 3.1	36,231,825	37,197,160	23,994,740	24,760,317	23,833,618	23,439,951	22,888,622	17,208,825	14,690,902
	(b) Canada	_	_	861,020	1,065,175	1,275,812	930,113	1,143,337	1,065,818	927,095	944,464	724,216
	(c) United States of America	7,096,192	+ 14.0	6,201,404	5,859,427	5,394,161	5,184,603	3,651,034	4,329,034	4,329,858	3,401,644	5,469,200
	(d) Other Sources	1,317,423	79	6,383,844	3,090,064	2,008,580	425,181	1,594,177	2,032,287	1,432,977	773,214	947,512
8	Sub-Total	45,990,926	7	49,678,093	47,211,826	32,673,293	31,300,214	30,222,166	30,867,914	31,465,871	22,327,947	21,831,730
9	Grand Total	205,308,463	+ 5.5	195,250,570	177,813,581	138,533,961	128,193,286	117,068,193	110,452,421	109,146,198	88,387,779	76,074,623

^{*}These amounts include hidden contributions to the direct revenue of the Territory in the form of Customs Duties, Income Tax, Licences, &c.

TABLE VIII

LIST OF OIL OPERATORS IN TRINIDAD, SHOWING THE AREA HELD UNDER MINING LEASE AND EXPLORATION LICENCES DURING 1959

		Lands held under Exploration Licence		Oilrights held under Registered Mining Lease or Marine Licence												
Item	Companies	Crown Surface Crown Oilrights	Crown Surface Crown Oilrights	Private Surface Crown Oilrights	Private Surface Private Oilrights	Territorial Waters	High Seas Areas	TOTAL								
		A. R. P.	A. R. P.	A. R. P.	A. R. P.	A. R. P.	A. R. P.	A. R. P.								
1	APEX TRINIDAD OILFIELDS Holdings as at 1.1.59 Holdings acquired during 1959 Holdings surrendered during 1959 Holdings assigned to Stekoll during 1959 Holdings as at 31.12.59		58,050 2 21 2,825 2 29 9,861 2 12 7,210 2 04 43,784 0 34	16,116 1 03 307 2 00 4,870 3 29 3,428 0 36 8,124 2 18	55,632 <u>0</u> <u>00</u> 8,808 <u>0</u> <u>00</u> 46,824 <u>0</u> <u>00</u>	155,690 <u>0</u> <u>00</u> <u>00</u> <u>2,160 <u>0</u> <u>00</u> <u>153,530 <u>0</u> <u>00</u></u></u>	292,622 <u>0</u> <u>00</u> 62,000 <u>0</u> <u>00</u> 230,622 <u>0</u> <u>00</u>	578,090 3 24 3,133 0 29 87,700 2 01 10,638 3 00 482,884 3 12								
2	DOMINION OIL LIMITED Holdings as at 1.1.59 Holdings acquired during 1959 Holdings surrendered during 1959 Holdings as at 31.12.59		31,324 2 10 31,324 2 10	22,313	10,495 0 25 54 0 25 3 0 32 10,546 0 18			64,133 0 35 54 0 25 3 0 32 64,184 0 28								
3	JADE PETROLEUM COMPANY Holdings as at 1.1.59 Holdings acquired during 1959 Holdings surrendered during 1959 Holdings as at 31.12.59			$\begin{array}{cccccccccccccccccccccccccccccccccccc$				18 0 12 18 0 12								
4	KERN TRINIDAD OILFIELDS LIMITED Holdings as at 1.1.59 Holdings acquired during 1959 Holdings surrendered during 1959 Holdings as at 31.12.59		347 2 23 — — — 347 2 23	$\begin{array}{cccccccccccccccccccccccccccccccccccc$	8,748 2 00 — — — — 8,748 2 00	5,760 0 00 		15,475 <u>1</u> <u>29</u>								
5	PREMIER CONSOLIDATED OILFIELDS LIMITED Holdings as at 1.1.59 Holdings acquired during 1959 Holdings surrendered during 1959 Holdings as at 31.12.59	1	10,718 2 09 — — — 10,718 2 09	2,640 1 13 — — — — 2,640 1 13	$\begin{array}{cccccccccccccccccccccccccccccccccccc$			19,854 2 05 13 0 06 19,867 2 11								
6	TIMOTHY ROODAL Holdings as at 1.1.59 Holdings acquired during 1959 Holdings surrendered during 1959 Holdings as at 31.12.59			$\begin{array}{cccccccccccccccccccccccccccccccccccc$				$\begin{array}{cccccccccccccccccccccccccccccccccccc$								

TABLE IX

IMPORTANT EXPLORATION OR OUTSTEP WELLS AND DEEP EXPLOITATION WELLS DRILLED DURING 1959

Company	Field and Well No.	Total Depth (Feet)	Remarks	Map Reference Appendix I
Apex	Cedros—C3/651	14,850	Temporarily abandoned	. E-1
Dominion Oil Limited	South Boundary No. 1 East Domoil No. 1 South Domoil No. 1 South Domoil No. 2	10,487 9,475 11,387 9,957	Abandoned	E-6 B-6
Kern Trinidad Oilfields	Guapo F—60A F—58 M—11	4 000	Successful deeper pool test down to Nariva Sands Planned to test Nariva Sands. Only thin sands present Producing from higher sands Successful offshore N.W. outstep. Producing from Nariva Sands	E-3
	M—11 M—12	1 700	Suspended because of drilling difficulties	1 77 0
Shell	Ortoire OL—2 do. FO—1 Balata West BW—6	10,705 3,164	Abandoned	. K-3 . L-4
	do. BW—7 do. BW—7A Catshill CO—86 do. CO—87	9,251 9,681 10,709 10,283	Abandoned	L-4 L-3
Texaco	Palo Seco PS—128	9,374	Objective lower Cruse not tested due to drilling difficulties—Well completed as producer in higher sands	1
	do. RD—119	9,845	Successful producer from the Upper and Middle Cruse Sands, N.W. extension well of the Palo Seco Field	F-2
	Brighton AS—84	8,532	Successful well establishing extension of Nariva Sands N.E. of Brighton Harbour reserve	
	do. ABM—13	6,050	Successful well establishing extension of Nariva Sands approximately 4,000 feet S.E. of ABM—1	. F-4
	do. ABM—14	5,500 ,	Successful well establishing extension of Nariva Sands approximately 4,000 feet East of ABM—1	. F4
	do. ABM—15	6,000	Successful well establishing extension of Nariva Sands approximately N.E. of ABM—1	F4
	Forest Reserve 1118 Guayaguayare G—287	0.100	Successful in Forest Sands	. G-2
	do. G—305	6,646	—Upper Cretaceous dry—abandoned Successful test of Gros Morne and Lower Cruse Sands on South flank of Lizard Uplift	M—2
Trinidad Northern Areas	Soldado S—16 do. S—18 do. S—20 do. S—22 do. S—25	5,819 6,898 5,827 8,587	Successful Outstep 7,200 feet West of Sol. 1 Successful Outstep 12,000 feet North of Sol. 1 Successful Outstep 4,800 feet South of Sol. 1 Successful Outstep 18,000 feet North of Sol. 1 Successful Outstep 12,000 feet East South-East of Sol. 1	B-2 B-3 B-2 B-3 B-3 B-2
Trinidad Petroleum Development Limited	do. S—30 Los Bajos LB—60	11.147	Successful Outstep 12,000 feet East North-East of Sol. 1 Deeper pool test aimed at testing the Herrera Sands. Encountered drilling	1
Zamani z Jacobani zovoopava ziiniba	do. LB—67	10.410	difficulties short of objective. Well was completed in an upper sand Replacement well for LB—60, successfully reached the Herrera Sands	F—2
	Quarry Qu—205	11,961	Sand development was better than expected, but wet Deeper pool test, encountered drilling difficulties short of objective. Wel	F-2
	North Marine NM—1	9,010	was completed in an upper sand Successful new field wildcat completed in the Morne L'Enfer Sand	G-1 C-4

TABLE X

SUMMARY OF CROWN (ROYALTY) CRUDE ASSESSED WITH PRICES AND ANALYSES

(For half-yearly assessment periods ending 30th June and 31st December, 1959)—1 barrel=34.9726 I.G.

			ROYALTY		*****		Sub-1	DIVISION OF (B	ROYALTY) CRUI	DE INTO PROD	ucts as per R	.L.E1 ANA	LYSIS		
	Net Royalty				Lı	GHT FRACTION	rs	GAS OIL							r or
COMPANY	on Production	10% Assessed	Value	Average Price	Quantity	Percentage	Tetra Ethyl lead to blend to 70/72 Oct. Gasolene	53-57 D.I.	48-52 D.I.	43-47 D.I.	No. 2 Fuel	Total Gas Oils	Percentage	Quantity	Percentage
	Bbls.	Bbls,	\$ c.	\$ c.	Bbls.		Millilitres	Bbls.	Bbls.	Bbls.	Bbls.	Bbls.		Bbls.	<u> </u>
Apex (Trinidad) Oilfields Limited	764,069	76,407	334,986 85	4.38	9,528	12.5	113,797			_	24,396	24,396	31.9	42,483	55.6
Dominion Oil Limited				-		_	_		_			_		-	
Kern Tripidad Oilfields Limited	224,507	22,451	74,736 96	3.33	1,538	6.8	28,745	268	_			268	1.2	20,645	92.0
Premier Consolidated Oilfields Limited	52,536	5,254	21,923 38	4.17	636	12.1	8,626		-	255	1,058	1,313	25.0	3,305	62.9
Estate of Timothy Roodal	594	59	242 26	4.11	2	2.5					18	18	30.6	39	66.9
Shell Trinidad Limited	3,175,644	317,563	1,463,160 14	4.61	63,290	19.9	2,155,332	58,025	8,342	33,020	332	99,719	31.4	154,554	48.7
Trinidad Central Oilfields Limited	749,097	74,910	342,422 00	4.57	22,745	30.4	816,983		3,413	_	13,500	16,913	22.6	35,252	47.0
Trinidad Northern Areas Limited	1,645,127	164,513	762,564 58	4.64	41,573	25.3	1,792,652		46,532		_	46,532	28.3	76,408	46,4
Trinidad Petroleum Development Company Limited	2,936,324	293,532	1,315,540 67	4.48	52,925	18.0	1,043,694		_	25,520	62,747	88,267	30.1	152,440	51.9
Texaco Trinidad Incorporated	7,792,493	779,249	3,430,754 89	4.40	145,134	18.7	2,831,931		24,947	22,443	161,817	209,207	26.8	424,908	54.5
TOTALS AND AVERAGES FOR FIRST HALF-YEAR	17,340,391	1,734,038	7,746,331 73	4.47	337,371	19,5	8,791,760	58,293	83,234	81,238	263,868	486,633	28.1	910,034	52.4
Apex (Trinidad) Oilfields Limited	768,112	76,811	319,819 09	4.16	9,450	12.3	131,393	_			24,017	24,017	31.3	43,344	56.4
Dominion Oil Limited	46,594	4,659	25,974 79	5.58	2,307	49.5	94,901	1,985	-	_		1,985	42.6	367	7.9
Kern Trinidad Oilfields Limited	210,218	21,022	70,945 68	3.37	1,607	7.6	37,503	292				292	1.4	19,123	91.0
Premier Consolidated Oilfields Limited	51,704	5,170	21,559 78	4.17	483	9.4	4,624		682		1,109	1,791	34.6	2,896	56.0
Estate of Timothy Roodal	107	11	41 33	3.76			_	-	_	_	4	4	34.0	7	66.0
Shell Trinidad Limited	3,283,685	328,369	1,458,279 38	4.44	65,997	20.1	2,223,293	53,068	_	50,926	244	104 238	31.7	158,134	48.2
Trinidad Central Officelds Limited	719,775	71,978	322,360 43	4.48	21,719	30.2	780,869	1,946	1,218	_	12,627	15,791	21.9	34,468	47.9
Trinidad Northern Areas Limited	2,127,296	212,730	951,492 36	4.47	51,721	24.3	2,261,896		60,045	_	_	60,045	28.2	100,964	47.5
Trinidad Petroleum Development Company Limited	2,895,842	298,584	1,287,015 66	4.31	53,210	17.8	1,068,816	_	_	25,742	64,778	90,520	30.3	154,854	51.9
Texaco Trinidad Incorporated	8,468,183	846,818	3,529,783 56	4.29	160,852	19.0	2,908,935		36,560	28,210	167,286	232,056	27.4	453,910	53.6
TOTALS AND AVERAGES FOR SECOND HALF-YEAR	18,661,516	1,866,152	8,087,272 06	4.33	367,346	19.7	9,512,240	57,291	98,505	104,878	270,065	530,739	28.4	968,067	51.9
Year's Totals and Averages	36,001,907	3,600,190	15,833,603 79	4.40	704,717	19.6	18,304,000	115,584	181,739	186,116	533,933	1,017,372	28.2	1,878,101	52.2

SUMMARY OF LEASED OIL AREAS, 1959

Cr	own Oil Ri	GHTS				A.	R.	P.		
1. Principal leases issued as		98,731	2	06						
2. Principal leases issued as		328,677	2	16						
3. Exploration Licences										
4. Marine Licences	•••	•••	•••	•••	• • •	861,413	0	00		
5. Total acreage under lease	5. Total acreage under lease or licence									
Pri	VATE OIL R	IGHTS				Α.	R.	P.		
6. Private Oil rights under	lease as at 1	st Janu	ary, 1960	•••	•••	152,918	2	36		
7. Total acreage of all lands	under lease	·	•••			1,441,740	3	18		

STAFF

- 41. Mr. J. Burslem, Assistant Petroleum Technologist went on pre-retirement leave on the 12th May after $8\frac{1}{2}$ years' service in the Department. In September, Mr. O. O. Fernandes proceeded to Pennsylvania State University on one year's study leave to pursue an M.Sc. degree in Petroleum and Natural Gas Engineering.
- 42. I have much pleasure in recording the very able and willing assistance that I have received from all members of the staff.

G. J. MAINGOT
Acting Assistant Petroleum Technologist

Petroleum Department,
Ministry of Industry, Commerce,
Tourism and External Communications,
Trinidad.

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