

MINES

REPORT OF THE INSPECTOR OF MINES AND PETROLEUM TECHNOLOGIST FOR THE YEAR 1945

HONOURABLE COLONIAL SECRETARY,

I have the honour to submit, for the information of His Excellency the Governor, the following report on the work of the Mines Department for the year 1945.

The Petroleum Industry

2. Operations on the oilfields of the Colony during the year continued to be carried out on a very similar scale to that which has existed during the past three years, *i.e.*, a production target figure of 60,000 barrels a day was aimed at and every effort made to produce this amount of oil with the minimum use of steel. In actual fact the average daily production of crude oil during the year amounted to 57,788 barrels. A change in the procedure adopted in recent years in regard to the approval of drilling and production programmes and material requirements occurred as a result of the cessation of hostilities and the termination of "lease-lend", and as from approximately the middle of the year 1945 all programmes and material requirements had to be approved by the Petroleum Division of the Ministry of Fuel and Power only, the Petroleum Administration for War in the United States of America, which also exercised control during the latter years of the war, ceasing to do so. Difficulties in regard to equipment supplies continued to be acute throughout the year.

3. *Marine Concessions.*—During the year 1945 for the first time in the history of the industry in Trinidad licences were granted to explore for and win crude oil and natural gas in submarine areas adjacent to this Colony.

4. *Production of Crude Oil.*—The total production of Crude Oil for the year 1945 amounted to 21,092,608 barrels, an average of 57,788 barrels per day. This total is 542,357 barrels or 2.51 per cent. less than the production for 1944.

5. *Drilling.*—Drilling operations showed an increase during the year 1945, the number of oil wells commenced being 110 compared with 105 for the year 1944. The total number of oil wells drilled in the Colony to the end of 1945 was 4,253 of which 2,833 are on lands the oil rights of which are vested in the Crown and 1,420 are on private lands.

The number of feet drilled during 1945 amounted to 453,872, a decrease of 3,085 feet, or 0.7 per cent. on the footage for 1944.

The depth of the deepest well completed in the Colony remains unaltered at 10,015 feet.

6. The following table shows comparatively the number of feet drilled and the quantity of oil produced during the years 1943, 1944 and 1945 :—

	Number of Feet Drilled			Production in Barrels of 35 Imp. Gals.		
	1943	1944	1945	1943	1944	1945
Crown Oil Rights ..	389,527	352,988	345,071	17,056,197	17,392,799	16,842,424
Private Oil Rights ..	104,204	103,969	108,801	4,329,043	4,242,166	4,250,184
Totals	493,731	456,957	453,872	21,385,240	21,634,965	21,092,608

7. *Oilfield Operators.*—The number of oilfield operators in the Colony during the year was 14, the same as in 1944.

8. *Persons Employed.*—The average number of persons employed in the Petroleum Industry during 1945 amounted to 13,587 per day as compared with 13,883 during 1944.

9. Leases and Licences

(a) *Land Areas.*—One Principal and 4 supplemental leases were registered, and 7 Exploration Licences were renewed during the year. The total number of Mining Leases and Exploration Licences over land areas in force at the end of the year amounted to 87, the details of which are as follows :—

	Acreage					
	Crown			Alienated		
	A.	R.	P.	A.	R.	P.
80 Mining Leases ..	152,599	1	08	57,099	1	07
7 Exploration Licences	137,896	0	07	—	—	—
87 Total ..	290,495	1	15	57,099	1	07

In addition to the abovementioned Crown Oil Rights under Mining Lease there are, according to details supplied by the Oil Companies, 85,835 acres of privately owned oil rights under lease. The total acreage of Crown and Private oil rights under Oil Mining Lease or Licence on the 31st December, 1945 is, therefore, 433,430 acres (or 36.34 per cent. of the total area of Trinidad).

(b) *Marine Areas.*—Nine Licences to explore for and win crude oil and natural gas in marine areas adjacent to the Colony were granted during the year. The approximate total area included in these licences is 356,864 acres (including both territorial and high-seas areas).

10. *Revenue from Royalties and Fees*.—The revenue collected under these heads amounted to \$1,436,797.89 as compared with \$1,428,657.01 collected during the year 1944. For purposes of comparison, the following table shows the amounts collected under each head for the years 1943, 1944 and 1945 :—

	Amounts Collected		
	1943	1944	1945
	\$ c.	\$ c.	\$ c.
Royalties in respect of oil produced from Crown and Alienated Lands	1,407,605 09	1,423,790 04	1,431,831 43
Fees charged for pipelines along and across the Trinidad Government Railway and Public Roads	2,684 47	4,866 97	4,966 46
Totals	1,410,289 56	1,428,657 01	1,436,797 89

11. *Refineries*.—Seven permits for the refining of oil were issued during the year under the Oil Mining and Refining Ordinance, Ch. 26. No. 3. Of these permits 4 were issued in respect of small field topping plants the operations of which are of relative unimportance.

The total crude capacity of the refineries operating in the Colony amounts to approximately 28,141,884 barrels per annum. During 1945 a total quantity of 23,170,211 barrels of crude oil was refined, compared with 22,498,439 barrels during 1944.

12. *Gasolene Extraction Plants*.—Four Gas Absorption and two Gas Adsorption Plants for the recovery of gasolene from natural gas were in operation during the year.

13. *Loading Facilities*.—Four deep-water piers equipped for loading tank steamers with petroleum and its products are in use. Facilities for bunkering vessels in the harbour of Port-of-Spain are also available.

14. *Pipelines*.—Approximately 351 miles of main oil pipelines have been laid down in the Colony under the Pipelines Ordinance, Ch. 26. No. 9.

15. *Tank Storage*.—The total main tank storage capacity for petroleum and its products in the Colony amounted to 7,954,677 barrels at the end of 1945.

16. *Exports of Petroleum and its Products*.—The quantity of petroleum and its products exported during the year showed some increase as compared with the year 1944, the amounts and values for the two years being as follows :—

1944—19,754,296 barrels valued at \$39,582,389.00.

1945—20,651,037 barrels valued at \$43,627,559.00.

Petroleum and its products, including Asphalt, continued to form the largest part, viz. : 81.29 per cent. of the Colony's exports during 1945, the value being more than seven and a half times that of the products of the next most important of its industries, viz. : Sugar (including Molasses and Rum).

The value of the leading staple products of the Colony exported during 1945 is shown in the following table :—

<i>Staple Products Exported</i>	<i>Value</i>	<i>Percentage of Total</i>
Petroleum and its Products	\$43,627,559	79.59
Sugar, Molasses and Rum	5,829,031	10.63
Cocoa	1,080,047	1.97
Asphalt and Products	933,593	1.70
Coconut, Copra and Coconut Oil	601,121	1.10
Fruits and Fruit Juices	539,352	0.98
Bitters	437,850	0.80
Coffee	168,691	0.31
Other Exports not enumerated	1,597,863	2.92
Total	\$54,815,107	100.00

17. *Returns*.—Returns submitted by the Oil Companies under the various Ordinances and Regulations in respect of their operations have been regularly received, and after being checked have been filed with the records of the Departments.

18. *Inspections*.—The operations on the various oilfields were inspected by Officers of this Department as frequently as possible, and I have pleasure in recording that the Managers have readily co-operated in ensuring that the provisions of the Ordinances and Regulations were effectively carried out.

19. Included in this Report as Appendix " B " will be found some notes and statistics relating to the progress of the Petroleum Industry which have been compiled by the Assistant Petroleum Technologist.

The Asphalt Industry

20. This Industry continued to operate under difficulties during the year and a slight decrease in production occurred, the quantity of asphalt produced during the year amounting to 63,118 tons as compared with 71,877 tons for the year 1944, a decrease of 8,759 tons. The following table shows, comparatively, the quantity of asphalt produced and exported during the years 1943, 1944 and 1945 :—

		1943	1944	1945
Production (tons)	.. ..	84,701	71,877	63,118
Export (tons)	.. ..	47,150	35,477	28,000

Factories and Workshops.

21. During the period under review 428 factories and workshops, exclusive of units situated on oilfields, were in operation in Trinidad and Tobago. During the inspection of these factories and workshops by Officers of this Department recommendations were made for ensuring the safety of workmen, and such recommendations were at all times readily carried out by the Managers concerned. New legislation modelled on the United Kingdom Factory Act has been drafted by the Senior Inspector of Factories and is now before the Legislative Council.

Quarries

22. The number of quarries worked during the year was 146 as compared with 129 in operation during the year 1944. Most of these quarries are very small and relatively unimportant. As a result of inspection it was found that, as a general rule the quarries were being worked in a careful manner. The various recommendations made by Officers of this Department for increasing the safety of the workmen were usually carried out without delay

Accidents

23. All fatal and serious accidents which occurred on oilfields and refineries, factories and quarries during the period under review have been investigated, as in the past, by Officers of this Department under the Mines, Borings and Quarries Ordinance, Ch. 26. No. 4, and the Prevention of Accidents Ordinance, Ch. 30. No. 3, and where necessary, recommendations have been made to the employers with the object of reducing the incidence of such accidents to a minimum. During the year 1945, one fatal accident occurred in the Petroleum Industry as compared with seven for the year 1944, and none occurred in other industries as compared with four in 1944.

Petroleum Ordinance, Ch. 26. No. 2

24. The premises where dangerous petroleum products are stored have been inspected and all possible care has been taken to ensure safety. During the year 1945, 479 licences were issued for the storage and sale of petroleum and its products. The revenue actually collected from such licences during 1945 was \$1,564.80.

Legislation

25. During the year under review the following legislation relating to this Department's activities were enacted :—

- (a) Pipelines (Amendment) Ordinance, 1945.
- (b) Petroleum Office and Conservation Board (Amendment) Ordinance, 1945.
- (c) Submarine (Oil Mining) Regulations, 1945.
- (d) Distillery (Prevention of Accidents) Regulations, 1945.

Appendices

26. Appendix " A " shows the list of oil and asphalt operators in the Colony during the year 1945.

27. Appendix " B " gives notes and statistics relating to the Petroleum Industry.

28. Appendix " C " is a statement of the quantity and value of minerals obtained and the daily average number of persons employed in the Petroleum, Asphalt and Quarry Industries.

29. Appendix " D " gives the Rates of Wages and Hours of Labour employed in the Oilfields for the year 1945.

30. A statement of oil produced and exported is shown as Appendix " E ".

31. Appendix " F " shows the amount of oil refined year by year.

Staff

32. Mr. W. N. Foster, Assistant Petroleum Technologist, was granted 103 days vacation leave with effect from the 10th June, 1945.

Mr. M. W. Jowett, 2nd Assistant Petroleum Technologist, resigned his appointment with effect from the 31st May, 1945, and Mr. I. S. Rutherford was appointed to succeed him with effect from the 7th December, 1945.

Mr. J. G. A. Roe was appointed to the vacant post of 3rd Assistant Petroleum Technologist with effect from the 1st April, 1945.

The secondment of Mr. G. D. Proctor, Senior Inspector of Factories, was extended for a further period of one year from the 18th June, 1945.

I have much pleasure in recording the very able and willing assistance I have received from all the members of the Staff.

R. S. MACKILLIGIN,
*Inspector of Mines and Petroleum
Technologist.*

8th March, 1946.

APPENDIX "A"

List of Oil and Asphalt Operators in Trinidad

No.	Company	Nature of tenure of lands on which operations took place	District in which operations took place	Disposal of Oil
1	Antilles Petroleum Company (Trinidad) Ltd.)	Private Lands	Brighton, Vessigny, Rousillac	Crude sold to United British Oilfields of Trinidad, Ltd.
2	Apex (Trinidad) Oilfields, Ltd.	Private Lands, Crown Lands, and Crown Oil rights under Lease	Fyzabad, Siparia	Crude oil sold to Trinidad Leaseholds, Ltd.
3	Cory Bros. & Co., Ltd.	Crown Lands under Mining Lease	Moruga Road	No production
4	Kern Trinidad Oilfields, Ltd.	Private Lands, Crown Lands, and Crown Oil rights under Lease	Guapo	Crude sold to United British Oilfields of Trinidad, Ltd.
5	Partap, Ramesar	Private Lands	Fyzabad	Crude sold to United British Oilfields of Trinidad, Ltd.
6	Premier (Trinidad) Oilfields, Ltd.	Crown Lands under Lease. Private Lands	Palo Seco, San Francique	Crude sold to Trinidad Leaseholds, Ltd.
7	Roodal, Timothy	Private Lands	Fyzabad	Crude sold to Trinidad Leaseholds, Ltd.
8	Siparia Trinidad Oilfields, Ltd.	Crown Lands and Crown Oil rights under Lease	Palo Seco, Morne Diablo	Crude sold to Trinidad Leaseholds, Ltd.
9	Trinidad Central Oilfields, Ltd.	Crown Lands under Lease	Guapo, Barrackpore	Crude sold to Trinidad Leaseholds, Ltd.
10	Trinidad Consolidated Oilfields, Ltd.	Private Lands, and Crown Oil rights under Lease	Fyzabad	Crude sold to Trinidad Leaseholds, Ltd.
11	Trinidad Lake Asphalt Operating Company, Ltd.	Crown Lands under Lease	La Brea	Pitch refined and exported
12	Trinidad Leaseholds, Limited	Private Lands, Crown Lands, and Crown Oil rights under lease	Barrackpore, Forest Reserve, Guayaguayare, Quinam	Pumped to Company's Refinery at Pointe-a-Pierre
13	Trinidad Petroleum Development Company, Ltd.	Private Lands, Crown Lands, and Crown Oil rights under Lease	Coora, Los Bajos, Palo Seco, Quarry	Crude sold to United British Oilfields of Trinidad, Ltd.
14	United British Oilfields of Trinidad, Limited	Private Lands, Crown Lands, and Crown Oil rights under Lease	Los Bajos, Cedros, Parrylands, Penal, Point Fortin	Pumped to Company's Refinery at Point Fortin
15	Zenith (Trinidad) Oilfields, Limited	Private Lands	Fyzabad	Crude sold to Trinidad Leaseholds, Ltd.

W. N. FOSTER,
Acting Petroleum Technologist.

APPENDIX "B"

INSPECTOR OF MINES AND PETROLEUM TECHNOLOGIST.

A comparison of footage and production figures for 1944 and 1945 is as follows:—

Oil Rights	Footage		Production	
	1944	1945	1944	1945
Crown	352,988	345,071	17,392,799	16,842,424
Private	103,969	108,801	4,242,166	4,250,184
TOTALS	456,957	453,872	21,634,965	21,092,608

The footage drilled during the year amounted to 453,872 feet, a decrease of 0.7 per cent. compared to last year. The number of drilling rigs in operation remained fairly constant at approximately 18.

During the year 110 oilwells were started as compared to 105 last year. The total number of oilwells in the Colony was 4,253 at the end of the year.

The following table gives an analysis of the drilling operations carried out during the year.

	Crown Lands	Alienated Lands	Private Lands	Total
Unfinished at end of 1944	16	12	15	43
Started during 1945	51	26	33	110
	67	38	48	153
Completed as oil producers	47	24	24	95
Uncompleted wells abandoned	2	—	4	6
Unfinished at end of 1945	18	14	20	52
	67	38	48	153
Completed Wells abandoned during 1945	17	3	19	39
Wells recompleted during 1945	62	15	24	101

The following Tables are attached:—

No. 1—Showing Drilling Summary for 1945.

No. 2—Showing Production Summary for 1945.

No. 3—Showing the Annual Production since returns were first sent to the Government in 1908.

No. 4—Showing the number of wells started and footage drilled since the commencement of the Industry in 1867.

26th March, 1946.

W. N. FOSTER,
Assistant Petroleum Technologist.

TABLE No. 1
DRILLING SUMMARY FOR THE YEAR 1945

Month	Wells Started			Completed as Producers			Recompleted as Producers			Abandoned			FOOTAGE DRILLED FOR OIL				Rigs Running
	C.	A.	P.	C.	A.	P.	C.	A.	P.	C.	A.	P.	Crown	Alienated	Private	Total	
January	3	1	4	3	1	2	9	—	3	3	—	3	14,551	14,055	5,633	34,239	17
February	5	2	4	3	5	2	9	3	—	2	—	5	20,736	9,844	7,751	38,331	18
March	4	2	4	6	1	3	4	1	6	—	1	—	19,995	10,511	15,316	45,822	20
April	5	3	2	5	1	3	1	2	3	2	—	—	16,223	14,479	8,820	39,522	24
May	7	1	4	2	1	2	4	2	3	—	1	3	19,500	12,569	6,240	38,309	25
June	3	6	3	2	5	1	4	1	2	1	—	2	20,169	8,594	10,630	39,393	17
July	4	1	3	6	1	3	8	1	1	—	—	3	22,420	12,835	12,907	48,162	18
August	6	1	3	4	—	1	4	—	—	—	—	1	17,608	9,247	9,648	36,503	17
September	3	1	1	4	2	2	3	—	1	3	1	—	23,667	10,101	11,127	44,895	19
October	4	4	2	2	4	2	4	—	1	6	—	1	19,667	7,468	8,988	36,123	17
November	3	1	2	4	2	2	4	2	2	—	—	—	11,267	7,099	6,864	25,230	14
December	4	3	1	6	1	1	8	3	2	—	—	1	11,678	10,788	4,877	27,343	15
Totals	51	26	33	47	24	24	62	15	24	17	3	19	217,481	127,590	108,801	453,872	—
	110			95			101			39							

C= Crown. A= Alienated. P= Private.

W. N. FOSTER,
Assistant Petroleum Technologist.

TABLE
ANNUAL PRODUCTION SUMMARY
(In barrels of

MONTH	Light Fractions returned to Crude	Per cent.	FLOWING				GAS/AIR LIFT				PUMPING				PLUNGER LIFT			
			No. of Wells	Pro-duction	Per cent.	Daily Average per Well	No. of Wells	Pro-duction	Per cent.	Daily Average per Well	No. of Wells	Pro-duction	Per cent.	Daily Average per Well	No. of Wells	Pro-duction	Per cent.	Daily Average per Well
Jan.	7,668	0.4	655	1,224,026	67.3	60.3	104	96,286	5.3	29.9	693	368,558	20.3	17.2	213	119,874	6.6	18.1
Feb.	6,888	0.4	659	1,082,133	65.7	58.6	114	93,629	5.7	29.3	704	352,652	21.4	17.9	217	108,911	6.6	17.9
March	7,781	0.4	631	1,176,107	65.3	60.1	107	97,233	5.4	29.3	735	402,376	22.3	17.7	214	116,571	6.5	17.6
April	7,629	0.4	623	1,114,455	64.9	59.3	111	94,227	5.5	28.3	720	393,281	22.9	18.3	212	106,288	6.2	16.7
May	8,010	0.4	635	1,210,282	67.2	61.4	78	57,713	3.2	23.8	740	410,846	22.8	17.9	214	112,808	6.3	17.0
June	7,407	0.4	639	1,163,582	66.3	60.7	66	53,037	3.0	26.8	755	421,635	24.1	18.6	212	106,543	6.1	16.8
July	7,746	0.4	626	1,194,126	65.7	61.5	54	47,500	2.6	28.4	780	451,787	24.8	18.6	213	113,362	6.2	17.1
Aug.	7,726	0.4	638	1,184,611	65.8	59.9	54	47,478	2.6	28.3	791	449,922	25.0	18.3	212	109,170	6.1	16.6
Sept.	7,730	0.4	627	1,134,571	65.5	60.3	56	52,053	3.0	30.9	806	431,154	24.9	17.8	211	104,495	6.0	16.5
Oct.	7,510	0.4	618	1,129,189	64.1	58.9	52	42,205	2.4	26.2	820	475,717	27.0	18.7	211	105,215	6.0	16.0
Nov.	6,983	0.4	625	1,069,065	63.2	57.0	52	42,574	2.5	27.2	823	470,868	27.8	19.0	211	102,851	6.0	16.2
Dec.	7,683	0.4	626	1,095,256	62.9	56.4	58	46,052	2.6	25.6	855	487,428	27.9	18.4	210	107,197	6.1	16.3
Totals	90,761	0.4	Avg. 634	Avg. 13,777,403	Avg. 65.3	—	Avg. 76	Avg. 769,987	Avg. 3.6	—	Avg. 769	Avg. 5,116,224	Avg. 24.3	—	Avg. 212	Avg. 1,313,285	Avg. 6.2	—
Daily Avg.	249			37,746				2,110				14,017				3,598		

28th February, 1946.

No. 2

BY MONTHS DURING 1945

35 Imperial Gallons)

No. of Wells	OTHER METHODS			Total No. Producing Wells	Total No. Idle Wells	Total No. Wells Abandoned	No. of Wells Drilling	Total No. of Wells started	Daily average per producing Well	PRODUCTION: dry oil in barrels of 35 Imperial Gallons				TOTAL
	Pro-duction	Per cent.	Daily Average per Well							No. of Wells	Crown	No. of Wells	Private	
41	2,328	0.1	1.8	1,706	1,413	1,018	14	4,151	34.4	1,224	1,459,392	482	359,348	1,818,740
50	2,473	0.1	1.8	1,744	1,381	1,023	14	4,162	33.7	1,248	1,302,556	496	344,130	1,646,686
42	2,239	0.1	1.7	1,729	1,405	1,024	14	4,172	33.6	1,225	1,450,067	504	352,240	1,802,307
50	2,310	0.1	1.5	1,716	1,428	1,024	14	4,182	33.3	1,209	1,389,229	507	328,961	1,718,190
43	1,871	0.1	1.4	1,710	1,442	1,029	13	4,194	33.5	1,195	1,450,202	515	351,328	1,801,530
45	2,177	0.1	1.6	1,717	1,435	1,034	20	4,206	34.1	1,189	1,402,633	528	351,748	1,754,381
41	2,115	0.1	1.6	1,714	1,444	1,038	18	4,214	34.2	1,179	1,450,487	535	366,149	1,816,636
44	1,995	0.1	1.4	1,789	1,427	1,039	19	4,224	33.4	1,201	1,432,751	538	368,151	1,800,902
40	1,667	0.1	1.3	1,740	1,428	1,044	17	4,229	33.2	1,212	1,376,915	528	354,755	1,731,670
43	2,162	0.1	1.6	1,744	1,429	1,051	15	4,239	32.6	1,226	1,408,013	518	353,985	1,761,998
42	1,809	0.1	1.4	1,768	1,410	1,051	16	4,245	31.9	1,229	1,346,135	539	348,015	1,694,150
49	1,802	0.1	1.2	1,798	1,304	1,053	14	4,253	31.3	1,242	1,374,044	556	371,374	1,745,418
Avg.		Avg.		Avg.						Avg.		Avg.		
46	24,948	0.1	—	1,735	—	—	—	—	33.3	1,215	16,842,424	520	4,250,184	21,092,608
	68													57,788

W. N. FOSTER,
Assistant Petroleum Technologist.

TABLE 3
Yearly Trinidad Production

Year	Crown	Accumulative Total	Alienated	Accumulative Total	Private	Accumulative Total	Yearly Totals	Grand Accumulative Total
1908	—	—	—	—	37	37	37	37
1909	—	—	—	—	47,295	47,332	47,295	47,332
1910	55	55	—	—	105,023	152,355	105,078	152,410
1911	3,994	4,049	—	—	217,298	369,653	221,292	373,702
1912	9,104	13,153	—	—	476,801	846,454	485,905	859,607
1913	52,153	65,306	—	—	533,029	1,379,483	585,182	1,444,789
1914	512,299	577,605	—	—	480,917	1,860,400	993,216	2,438,005
1915	392,389	969,994	—	—	512,330	2,372,730	904,719	3,342,724
1916	478,815	1,448,809	—	—	449,060	2,821,790	927,875	4,270,599
1917	1,065,945	2,514,754	—	—	536,357	3,358,147	1,602,302	5,872,901
1918	1,588,805	4,103,559	—	—	493,115	3,851,262	2,081,920	7,954,821
1919	1,539,973	5,643,532	—	—	301,063	4,152,325	1,841,036	9,795,857
1920	1,758,039	7,401,571	—	—	325,071	4,477,396	2,083,110	11,878,967
1921	1,751,943	9,153,514	300	300	601,916	5,079,312	2,354,159	14,233,126
1922	1,534,796	10,688,310	147	447	909,727	5,989,039	2,444,670	16,677,796
1923	1,847,118	12,535,428	63,334	63,781	1,140,335	7,129,374	3,050,787	19,728,583
1924	2,410,737	14,946,165	76,467	140,248	1,570,856	8,700,230	4,058,060	23,786,643
1925	2,647,095	17,593,260	200,781	341,029	1,538,634	10,238,864	4,386,510	28,173,153
1926	2,630,100	20,223,360	310,953	651,982	2,030,426	12,269,290	4,971,479	33,144,632
1927	2,039,363	22,262,723	297,761	949,743	3,043,676	15,312,966	5,380,800	38,525,432
1928	2,652,981	24,915,704	1,470,333	2,420,076	3,561,273	18,874,239	7,684,587	46,210,019
1929	2,987,795	27,903,499	1,627,439	4,047,515	4,100,554	22,974,793	8,715,788	54,925,807
1930	3,429,030	31,332,529	1,831,338	5,878,853	4,158,589	27,133,382	9,418,957	64,344,764
1931	2,795,572	34,128,101	2,530,175	8,409,028	4,417,751	31,551,133	9,743,498	74,088,262
1932	3,200,083	37,328,184	2,410,813	10,819,841	4,515,225	36,066,358	10,126,121	84,214,383
1933	3,684,148	41,012,332	1,606,595	12,426,436	4,270,610	40,336,968	9,561,353	93,775,736
1934	4,586,366	45,598,698	1,805,178	14,231,614	4,502,819	44,839,787	10,894,363	104,670,099
1935	5,288,943	50,887,641	2,255,484	16,487,098	4,126,797	48,966,584	11,671,224	116,341,323
1936	5,982,993	56,870,634	2,199,025	18,686,123	5,055,012	54,021,596	13,237,030	129,578,353
1937	7,128,085	63,998,719	2,615,207	21,301,330	5,759,697	59,781,293	15,502,989	145,081,342
1938	8,165,149	72,163,868	3,475,547	24,776,877	6,096,505	65,877,798	17,737,201	162,818,543
1939	9,724,193	81,888,061	4,170,532	28,947,409	5,846,891	71,724,689	19,741,616	182,560,159
1940	11,448,511	93,336,572	5,231,912	34,179,321	5,546,453	77,271,142	22,226,876	204,787,035
1941	10,300,161	103,636,733	5,080,065	39,259,386	5,125,754	82,396,896	20,505,980	225,293,015
1942	13,012,471	116,649,204	4,780,889	44,040,275	4,275,818	86,672,714	22,069,178	247,362,193
1943	12,250,379	128,899,583	4,805,818	48,846,093	4,329,043	91,001,757	21,385,240	268,747,433
*1944	17,392,799	146,292,382	—	—	4,242,166	95,243,923	21,634,965	290,382,398
1945	—	—	—	—	—	—	21,092,608	311,475,006

* 1944 onwards all royalty oil shown under one head.

TABLE 4
COLONY OF TRINIDAD
Number of Wells started and Footage Drilled Annually

YEAR	WELLS STARTED								FOOTAGE DRILLED							
	CROWN		ALIENATED		PRIVATE		TOTALS		CROWN		ALIENATED		PRIVATE		YEARLY TOTALS	CUMULATIVE
	Annual	Cum.	Annual	Cum.	Annual	Cum.	Annual	Cum.	Annual	Cum.	Annual	Cum.	Annual	Cum.		
1867 ...	—	—	—	—	1	1	1	1	—	—	—	—	964	964	964	964
1900 ...	—	—	—	—	1	2	1	2	—	—	—	—	600	1,564	600	1,564
1902 ...	1	1	—	—	2	4	3	5	600	600	—	—	1,315	2,879	1,915	3,479
1903 ...	1	2	—	—	—	4	1	6	1,172	1,772	—	—	1,060	3,939	2,232	5,711
1904 ...	1	3	—	—	—	4	1	7	860	2,632	—	—	—	3,939	860	6,571
1905 ...	—	3	—	—	—	4	—	7	—	2,632	—	—	—	3,939	—	6,571
1906 ...	1	4	—	—	2	6	3	10	1,104	3,736	—	—	1,499	5,438	2,603	9,174
1907 ...	1	5	—	—	2	8	3	13	798	4,534	—	—	1,563	7,001	2,361	11,535
1908 ...	—	5	—	—	4	12	4	17	—	4,534	—	—	2,352	9,353	2,352	13,887
1909 ...	—	5	—	—	6	18	6	23	—	4,534	—	—	5,362	14,715	5,362	19,249
1910 ...	5	10	—	—	7	25	12	35	3,771	8,305	—	—	4,319	19,034	8,090	27,339
1911 ...	8	18	—	—	38	63	46	81	4,902	13,207	—	—	34,010	53,044	38,912	66,251
1912 ...	10	28	—	—	35	96	45	126	6,839	20,046	—	—	32,881	85,925	39,720	105,971
1913 ...	25	53	—	—	18	114	43	169	13,813	33,859	—	—	26,388	112,313	40,201	146,172
1914 ...	50	103	—	—	16	132	66	235	35,146	69,005	—	—	23,283	135,596	58,429	204,601
1915 ...	31	134	—	—	19	151	50	285	29,208	98,213	—	—	25,652	161,248	54,860	259,461
1916 ...	28	162	—	—	20	171	48	333	30,866	129,079	—	—	28,035	189,283	58,901	318,362
1917 ...	38	200	—	—	6	177	44	377	41,227	170,306	—	—	9,557	198,840	50,784	369,146
1918 ...	38	238	—	—	4	181	42	419	47,700	218,006	—	—	6,796	205,636	54,496	423,642
1919 ...	40	278	—	—	13	194	52	471	49,741	267,747	—	—	16,769	222,405	66,510	490,152
1920 ...	43	321	1	1	23	217	68	539	53,002	320,749	1,665	1,665	24,009	246,414	78,676	568,828
1921 ...	49	370	4	5	32	249	85	624	71,318	392,067	2,896	4,561	44,631	291,045	118,845	687,673

TABLE 4—Continued
COLONY OF TRINIDAD
 Number of Wells started and Footage Drilled Annually—Continued

YEAR	WELLS STARTED								FOOTAGE DRILLED								YEARLY TOTALS	CUMULATIVE
	CROWN		ALIENATED		PRIVATE		TOTALS		CROWN		ALIENATED		PRIVATE					
	Annual	Cum.	Annual	Cum.	Annual	Cum.	Annual	Cum.	Annual	Cum.	Annual	Cum.	Annual	Cum.				
1922 ...	68	438	4	9	20	269	91	715	88,299	480,366	8,701	13,262	39,463	330,508	136,463	824,136		
1923 ...	70	508	5	14	33	302	108	823	79,907	560,273	7,060	20,322	58,805	389,313	145,772	969,908		
1924 ...	67	575	8	22	34	336	110	933	90,141	650,414	6,190	26,512	55,197	444,510	151,528	1,121,436		
1925 ...	46	621	16	38	37	373	99	1,032	86,904	737,318	18,446	44,958	63,543	508,053	168,893	1,290,329		
1926 ...	69	690	13	51	46	419	128	1,160	109,234	846,552	18,732	63,690	72,691	580,744	200,657	1,490,986		
1927 ...	73	763	13	64	73	492	159	1,319	101,920	948,472	17,288	80,978	122,465	703,209	241,673	1,732,659		
1928 ...	43	806	33	97	64	556	139	1,458	71,481	1,019,953	58,842	139,820	112,863	816,072	243,186	1,975,845		
1929 ...	52	858	58	155	48	604	159	1,617	92,590	1,112,543	118,583	258,403	96,309	912,381	307,482	2,283,327		
1930 ...	76	934	31	186	56	660	163	1,780	170,389	1,282,932	85,561	343,964	116,706	1,029,087	372,656	2,655,983		
1931 ...	9	943	25	211	26	686	60	1,840	42,972	1,325,904	95,410	439,374	80,260	1,109,347	218,642	2,874,625		
1932 ...	21	964	20	231	20	706	61	1,901	44,568	1,370,472	67,162	506,536	61,557	1,170,904	173,287	3,047,912		
1933 ...	36	1,000	22	253	23	729	81	1,982	85,946	1,456,418	87,550	594,086	62,206	1,323,110	235,702	3,382,614		
1934 ...	56	1,056	30	283	38	767	124	2,106	167,952	1,624,370	88,503	682,589	95,328	1,328,438	351,783	3,635,397		
1935 ...	55	1,111	46	329	38	805	139	2,245	185,788	1,810,158	142,722	825,311	107,789	1,436,227	436,299	4,071,696		
1936 ...	59	1,170	39	368	73	878	171	2,416	235,804	2,045,962	145,554	970,865	213,171	1,649,398	594,529	4,666,225		
1937 ...	92	1,262	46	414	151	1,029	289	2,705	345,393	2,391,355	162,804	1,133,669	403,378	2,052,776	911,575	5,577,800		
1938 ...	110	1,372	67	481	102	1,131	279	2,984	384,103	2,775,458	207,939	1,341,608	313,866	2,366,642	905,908	6,483,708		
1939 ...	106	1,478	66	547	73	1,204	245	3,229	377,737	3,153,195	208,098	1,549,706	249,011	2,615,653	834,846	7,318,554		
1940 ...	162	1,640	75	622	53	1,257	290	3,519	556,120	3,709,315	271,791	1,821,497	197,711	2,813,364	1,025,622	8,344,170		
1941 ...	178	1,800	43	641	49	1,301	270	3,742	593,930	4,291,882	191,557	1,995,509	149,767	2,960,699	935,254	9,248,090		
1942 ...	98	1,898	42	683	29	1,330	169	3,911	375,310	4,667,192	170,923	2,166,432	77,165	3,037,864	623,398	9,871,488		
1943 ...	64	1,962	32	715	31	1,361	127	4,038	261,172	4,928,364	128,355	2,294,787	104,204	3,142,068	493,731	10,365,219		
1944 ...	51	2,013	28	743	26	1,387	105	4,143	242,320	5,170,684	110,668	2,405,455	103,969	3,246,037	456,957	10,822,176		
1945 ...	51	2,064	26	769	33	1,420	110	4,253	217,481	5,388,165	127,590	2,533,045	108,801	3,354,838	453,872	11,276,048		

NOTE:—Previous to the year 1941 figures showing the number of wells and footage drilled included fresh water wells. In the figures for 1941 and subsequent years fresh water wells are excluded

APPENDIX "C"

Statement of the Quantity of Minerals obtained and the Daily Average Number of Persons employed in the Petroleum, Asphalt and Quarry Industries during the years 1944 and 1945.

INDUSTRY	1944					1945				
	Quantity	Approximate Value *	Daily average number of persons employed			Quantity	Approximate Value *	Daily average number of persons employed		
			Males	Females	Total			Males	Females	Total
		\$ c.				\$ c.				
Petroleum	21,634,965 bbls.	18,532,207 26	13,718	165	13,883	21,092,608 bbls.	18,088,031 63	13,402	185	13,587
Asphalt (a)	38,323 tons	114,969 00	511	3	514	28,997 tons	86,991 00	466	4	470
Private Quarries (Limestone, Gravel, &c.)	412,683½ tons	275,901 35	607	96	703	426,995 tons	299,088 27	718	107	825
Government Quarries (Limestone, Gravel, &c.)	102,806¼ tons	90,279 25	326	20	346	180,603 tons	125,998 98	264	21	285

(*) The values given are those returned by Owners and Managers and represent value at place of production.

(a) In addition to the figure shown against this item, the following quantities were extracted from the Pitch Lake by the Public Works Department for use on the roads of the Colony, viz :

1944 33,554 tons. 1945 34,121 tons.

APPENDIX "D"

Rates of Wages and Hours of Labour employed on the Oilfields

CLASS OF WORKER	HOURLY WAGE		DAILY WAGE		Normal Weekly hours of Labour	EXPLANATORY NOTES
	Min. (Cents per hour.)	Max.	Min.	Max.		
Rigmen employed in Drilling	21	28	—	—	48/56	<i>General Remarks</i>
Rigmen employed in Production	20	30	—	—	do.	1. <i>Housing:</i>
Production men	15	21	—	—	do.	Accommodation is sometimes provided for those employees whose presence is required on the Fields.
Rig Builders	16	30	—	—		
Blacksmiths	18	30	—	—		
Boilersmiths	18	30	—	—		
Cabinet Makers	18	30	—	—		
Carpenters	18	30	—	—		2. <i>Medical Attention:</i>
Chauffeurs	18	30	—	—		(a) In the case of accident arising from employment medical attention is usually free. In other cases the practice varies from Company to Company.
Electricians	18	30	—	—		
Firemen	16	24	—	—		
Fitters (Bench, Engine or Pump)	18	30	—	—		3. <i>War Bonus:</i>
Masons	15	26	—	—	45/48 up to 56, when working on shift.	In addition to all the hourly rates stated there has been paid a "War Bonus Addition". This is payable at the rate of $\frac{1}{2}$ c. per hour for every 5 points increase in the Government cost of living index number. Such War Bonus additions have been paid as follows:
Motor Mechanics	18	30	—	—		Effective 24th Jan., 1940— 1c. per hour.
Moulders	15	26	—	—		Effective 18th Feb., 1940— $1\frac{1}{2}$ c. per hour.
Painters	14	21	—	—		Effective 15th Sept., 1940— 2c. per hour.
Plumbers	15	30	—	—		Effective 16th April, 1941— $2\frac{1}{2}$ c. per hour.
Riveters	18	30	—	—		Effective 15th June, 1941— 3c. per hour.
Tinsmiths	15	30	—	—		Effective 15th Feb., 1942— $3\frac{1}{2}$ c. per hour.
Turners	18	30	—	—		Effective 15th April, 1942— 4c. per hour.
Welders	18	30	—	—		Effective 16th July, 1942— $4\frac{1}{2}$ c. per hour
Semi-skilled	13	26	—	—		Effective 16th Aug., 1942— 5c. per hour.
Unskilled	13	18	—	—		Effective 16th Oct., 1942— $5\frac{1}{2}$ c. per hour.
						Effective 15th Nov., 1942— 6c. per hour.
						Effective 16th Jan., 1943— $6\frac{1}{2}$ c. per hour.
						Effective 16th June, 1943— 7c. per hour.
						Effective 15th Aug., 1943— $7\frac{1}{2}$ c. per hour.
						Effective 15th Dec., 1943— 8c. per hour.
						Effective 16th Feb., 1944— $8\frac{1}{2}$ c. per hour.
						The amount being paid at the close of the year is thus $8\frac{1}{2}$ c. per hour additional on all rates.

APPENDIX "E"

Statement of Oil produced and exported year by year since the inception of the Petroleum Industry in the Colony

Year						Production in barrels	Quantity of crude and refined oil exported in barrels
1908	...	...	...	...	...	37	—
1909	...	...	...	...	...	47,295	46
1910	...	...	...	...	...	105,078	—
1911	...	...	...	...	...	221,292	219,582
1912	...	...	...	...	...	485,905	122,734
1913	...	...	...	...	...	585,182	387,719
1914	...	...	...	...	...	993,216	348,351
1915	...	...	...	...	...	904,719	408,188
1916	...	...	...	...	...	927,875	975,142
1917	...	...	...	...	...	1,602,302	1,079,369
1918	...	...	...	...	...	2,081,920	1,305,407
1919	...	...	...	...	...	1,841,036	1,406,264
1920	...	...	...	...	...	2,083,110	1,034,907
1921	...	...	...	...	...	2,354,159	1,223,346
1922	...	...	...	...	...	2,444,670	1,615,740
1923	...	...	...	...	...	3,050,787	2,432,470
1924	...	...	...	...	...	4,058,060	3,224,529
1925	...	...	...	...	...	4,386,510	3,606,608
1926	...	...	...	...	...	4,971,479	3,988,308
1927	...	...	...	...	...	5,380,800	4,456,770
1928	...	...	...	...	...	7,684,587	6,361,675
1929	...	...	...	...	...	8,715,788	8,243,023
1930	...	...	...	...	...	9,418,957	7,678,807
1931	...	...	...	...	...	9,743,498	8,964,303
1932	...	...	...	...	...	10,126,121	9,637,474
1933	...	...	...	...	...	9,561,353	8,909,298
1934	...	...	...	...	...	10,894,363	9,981,774
1935	...	...	...	...	...	11,671,224	10,993,540
1936	...	...	...	...	...	13,237,030	12,405,222
1937	...	...	...	...	...	15,502,989	14,124,056
1938	...	...	...	...	...	17,737,201	16,417,020
1939	...	...	...	...	...	19,741,616	17,600,222
1940	...	...	...	...	...	22,226,876	20,188,921
1941	...	...	...	...	...	20,505,980	17,123,931
1942	...	...	...	...	...	22,069,178	19,063,926
1943	...	...	...	...	...	21,385,240	15,861,354
1944	...	...	...	...	...	21,634,965	19,754,296
1945	...	...	...	...	...	21,092,608	20,651,037
Totals	...	...	...	...	...	311,475,006	271,795,359

APPENDIX "F"
Comparative Statement of Oil refined in the Colony

Previous to 1920 ...	...	...	...	...	...	...	...	4,051,373 barrels.
1920 ...	...	...	...	...	...	...	...	1,395,487 do.
1921 ...	...	...	...	...	...	...	...	1,806,016 do.
1922 ...	...	...	...	...	...	...	...	1,820,018 do.
1923 ...	...	...	...	...	...	...	...	2,360,279 do.
1924 ...	...	...	...	...	...	...	...	3,433,902 do.
1925 ...	...	...	...	...	...	...	...	3,790,343 do.
1926 ...	...	...	...	...	...	...	...	3,786,876 do.
1927 ...	...	...	...	...	...	...	...	4,796,223 do.
1928 ...	...	...	...	...	...	...	...	6,725,383 do.
1929 ...	...	...	...	...	...	...	...	7,642,726 do.
1930 ...	...	...	...	...	...	...	...	7,989,679 do.
1931 ...	...	...	...	...	...	...	...	6,899,144 do.
1932 ...	...	...	...	...	...	...	...	7,635,296 do.
1933 ...	...	...	...	...	...	...	...	9,129,810 do.
1934 ...	...	...	...	...	...	...	...	10,846,584 do.
1935 ...	...	...	...	...	...	...	...	11,148,285 do.
1936 ...	...	...	...	...	...	...	...	13,028,161 do.
1937 ...	...	...	...	...	...	...	...	15,111,046 do.
1938 ...	...	...	...	...	...	...	...	17,596,932 do.
1939 ...	...	...	...	...	...	...	...	19,414,920 do.
1940 ...	...	...	...	...	...	...	...	22,060,110 do.
1941 ...	...	...	...	...	...	...	...	20,812,467 do.
1942 ...	...	...	...	...	...	...	...	21,914,247 do.
1943 ...	...	...	...	...	...	...	...	21,085,972 do.
1944 ...	...	...	...	...	...	...	...	22,498,439 do.
1945 ...	...	...	...	...	...	...	...	<u>23,170,211</u> do.
Total ...	...	...	...	...	...	...	...	<u>291,949,929</u> do.