

MINES.

Report of the Inspector of Mines and Petroleum Technologist for the year 1944.

HONOURABLE ACTING COLONIAL SECRETARY,

I have the honour to submit, for the information of His Excellency the Acting Governor, the following report on the work of the Mines Department for the year 1944.

THE PETROLEUM INDUSTRY.

2. During the year 1944 the Petroleum Industry continued to operate under similar conditions to those which were described in this Department's Administration Report for 1943; *i.e.*, drilling operations were governed by programmes duly approved by the appropriate authorities in London and Washington, and, by means of selective drilling, an average production of crude oil of approximately 60,000 barrels daily was maintained.

3. Exploration drilling to investigate the potentialities of the Herrera Sandstone (to which attention was drawn in the Report for 1943) has continued with extremely variable results, and, from information available to date, it is apparent that oil pools of commercial value will be just as difficult to locate in this horizon as in others in this Colony. Further exploration wells are in progress in various localities to test this horizon.

4. *Production of Crude Oil.*—The total production of crude oil for the year 1944 amounted to 21,634,965 barrels, an average of 59,111 barrels per day. This total is 249,725 barrels or 1.17 per cent. more than the production for 1943.

5. *Drilling.*—Drilling operations showed a reduction during the year 1944, the number of oil wells commenced being only 105 compared with 127 for the year 1943. The total number of oil wells drilled in the Colony to the end of 1944 was 4,143 of which 2,756 are on lands the oil rights of which are vested in the Crown and 1,387 are on private lands.

The number of feet drilled during 1944 amounted to 456,957, a decrease of 36,774 feet, or 7.45 per cent., on the footage for 1943.

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 1942, 1943 and 1944:—

	Number of Feet Drilled.			Production in Barrels of 35 Imp. Gals.		
	1942	1943	1944	1942	1943	1944
Crown Oil Rights ..	546,233	389,527	352,988	17,793,360	17,056,197	17,392,799
Private Oil Rights ..	77,165	104,204	103,969	4,275,818	4,329,043	4,242,166
Totals ..	623,398	493,731	456,957	22,069,178	21,385,240	21,634,965

7. *Oilfield Operators.*—The number of oilfield operators in the Colony during the year was 14 as compared with 15 in 1943.

8. *Persons Employed.*—The average number of persons employed in the Petroleum Industry during 1944 amounted to 13,883 per day as compared with 13,781 during 1943.

9. *Leases and Licences.*—Two Principal Leases and one Supplemental Lease were registered and seven Exploration Licences were renewed during the year. The total number of mining leases and exploration licences in force at the end of the year amounted to 86, the details of which are as follows:—

		Acreage.					
		Crown.			Alienated.		
		A.	R.	P.	A.	R.	P.
79 Mining Leases ..	..	152,544	0	00	56,942	0	00
7 Exploration Licences ..	..	141,395	0	00	—	—	—
86	Total ..	293,939	0	00	56,942	0	00

10. *Total Area under Lease or Licence.*—The total area under Crown and Private Leases on the 31st December, 1944, amounted to 431,555 acres (or 36.18 per cent. of the total area of Trinidad) made up as follows:—

	A.	R.	P.
Area of Crown Lands under Exploration Licence..	141,395	0	00
Area of Alienated Lands under Mining Lease the oil rights of which are vested in the Crown ..	56,942	0	00
Area of Crown Lands under Mining Lease ..	152,544	0	00
Area of privately owned oil rights under lease, according to details supplied by the oil companies ..	80,674	0	00
Total ..	431,555	0	00

11. *Revenue from Royalties and Fees.*—The revenue collected under these heads amounted to \$1,428,657.01 as compared with \$1,410,289.56 collected during the year 1943. For purposes of comparison, the following table shows the amounts collected under each head for the years 1942, 1943 and 1944:—

	Amounts Collected					
	1942	1943	1944			
	\$	c.	\$	c.	\$	c.
Royalties in respect of oil produced from Crown and Alienated Lands	1,382,558	75	1,407,605	09	1,423,790	04
Fees charged for pipelines along and across the Trinidad Government Railway and Public Roads ..	5,070	55	2,684	47	4,866	97
Totals	1,387,629	30	1,410,289	56	1,428,657	01

12. *Refineries.*—Eight 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 four were issued in respect of small field topping plants the operations of which are of relative unimportance.

The total crude oil capacity of the refineries operating in the Colony amounts to approximately 28,141,884 barrels per annum. During 1944 a total quantity of 22,488,439 barrels of crude oil was refined, compared with 21,085,972 barrels during 1943.

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

14. *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.

15. *Pipelines.*—Approximately 361 miles of main oil pipelines have been laid down in the Colony, and the total number of permits in force under the Pipelines Ordinance, Ch. 26. No. 9, to the end of 1944 amounted to 100.

16. *Tank Storage.*—The total main tank storage capacity for petroleum and its products in the Colony amounted to 7,979,777 barrels at the end of 1944.

17. *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 1943, the amounts and values for the two years being as follows:—

1943—15,861,354 barrels valued at	\$27,913,004.00
1944—19,754,296 barrels valued at	\$39,582,389.00

Petroleum and its products including Asphalt continued to form the largest part, viz.: 82.54 per cent. of the Colony's exports during 1944, the value being more than eight 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 1944 is shown in the following table :—

<i>Staple Products Exported</i>	<i>Value</i>	<i>Percentage of Total</i>
Petroleum and its Products ..	\$39,582,389	80.33
Sugar, Molasses and Rum	4,783,809	9.71
Cocoa	1,411,796	2.87
Asphalt and Products	1,087,514	2.21
Fruits and Fruit Juices	528,460	1.07
Bitters	441,641	0.90
Coconuts, Copra and Coconut Oil	243,273	0.49
Coffee	12,036	0.02
Other Exports not enumerated	1,181,770	2.40
	\$49,272,688	100.00

18. *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 Department.

19. *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.

20. 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

21. This Industry has continued to be depressed on account of shipping difficulties caused by war conditions, and some reduction, both in the quantity of asphalt produced and also exported, as compared with the year 1943, took place. The production of asphalt during the year amounted to 71,877 tons as compared with 84,701 tons for the year 1943, a decrease of 12,824 tons. The following table shows, comparatively, the quantity of asphalt produced and exported during the years 1942, 1943 and 1944 :—

	1942	1943	1944
Production (in tons)	63,409	84,701	71,877
Export (in tons)	24,331	47,150	35,477

FACTORIES AND WORKSHOPS

22. During the period under review 366 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 Legislative Council.

QUARRIES

23. The number of quarries worked during the past year was 129 as compared with 133 in operation during the year 1943. 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

24. 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 1944 seven fatal accidents occurred in the Petroleum Industry as compared with none for the year 1943, and four fatal accidents occurred in other industries compared with six for 1943.

PETROLEUM ORDINANCE, Ch. 26. No. 2

25. The premises where dangerous petroleum products are stored have been inspected and all possible care has been taken to ensure safety. During the year 488 licences were issued for the storage and sale of petroleum and its products. The revenue actually collected from such licences during 1944 was \$1,392.00.

LEGISLATION

26. During the year under review the following legislation relating to this Department's activities was enacted.

- (a) The Control of Oilwell Drilling Regulations, 1944. The object of these Regulations is to ensure the maximum economy in the use of steel in oilwells.
- (b) Drilling (Amendment) Regulations, 1944. The object of this amendment is to secure, fuller information with regard to oil mining operations.

APPENDICES

- 27. Appendix "A" shows the list of oil and asphalt operators in the Colony during the year 1944.
- 28. Appendix "B" gives notes and statistics relating to the Petroleum Industry.
- 29. 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.
- 30. Appendix "D" gives the Rates of Wages and Hours of Labour employed in the Oilfields or the year 1944.
- 31. A statement of oil produced and exported is shown as Appendix "E".
- 32. Appendix "F" shows the amount of oil refined year by year.

STAFF

33. Mr. R. S. Mackilligin, Inspector of Mines and Petroleum Technologist, was granted 93 days vacation leave with effect from 4th December, 1944, and during his absence, Mr. N. Betancourt, Assistant Inspector of Mines, acted as Inspector of Mines, and Mr. W. N. Foster, Assistant Petroleum Technologist, acted as Petroleum Technologist.

Mr. W. N. Foster was absent from this Colony from 4th July, 1944 to 6th August, 1944, on duty, when he proceeded to Washington in connection with the Colony's 1945 Drilling and Production Programme.

Mr. R. G. Ffoulkes-Jones, 2nd Assistant Petroleum Technologist, retired from the Service with effect from 30th September, 1944. This Officer had been with the Department for six years and I wish to place on record an expression of appreciation of the very valuable services rendered by him. Mr. M. W. Jowett was appointed to the post of 2nd Assistant Petroleum Technologist to succeed Mr. Ffoulkes-Jones on the 13th November, 1944.

The secondment of Mr. G. D. Proctor, Senior Inspector of Factories, was extended for a further period of one year from 18th June, 1944.

Three new posts were created during the year, viz. :—3rd Assistant Petroleum Technologist and two Factory Inspectors. At the end of the year only one of these had been filled, Mr. J. E. F. Wooding-Deane being appointed to one of the posts of Factory Inspector.

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.*

22nd June, 1945.

APPENDIX "A"

LIST OF OIL AND ASPHALT OPERATORS IN TRINIDAD

No.	Company	Nature of tenure of lands on which operations took place	Districts in which operations took place	Dispersal of Oil
1	Antilles Petroleum Co., (T'dad) Ltd.	Private Lands	Brighton, Vessigny, Roussilac	Crude sold to United British Oilfields of Trinidad, Ltd.
2	Apex (T'dad) 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, Fifth Company Road	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	do. do.
8	Siparia Trinidad Oilfields, Ltd.	Crown Lands, and Crown Oil Rights under Lease	Palo Seco, Morne Diablo	do. do.
9	Trinidad Central Oilfields, Ltd.	Crown Lands under Lease	Guapo, Barrackpore	do. do.
10	Trinidad Consolidated Oilfields, Ltd.	Private Lands, Crown Oil Rights under Lease	Fyzabad	do. do.
11	Trinidad Lake Asphalt Operating Co.	Crown Lands under Lease ..	La Brea	Pitch refined and exported.
12	Trinidad Leaseholds, Ltd. ..	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 Co.	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, Ltd.	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, Ltd.	Private Lands	Fyzabad	Crude sold to Trinidad Leaseholds, Ltd.

3rd July, 1945.

W. N. FOSTER,
Assistant Petroleum Technologist.

APPENDIX " B "

INSPECTOR OF MINES AND PETROLEUM TECHNOLOGIST.

Production

The target production figure for the Colony remained the same as last year, namely, 60,000 barrels per day. The crude availability figure was at all times in excess of target. The actual production averaged 59,111 barrels per day giving a total of 21,634,965 barrels for the year, a figure slightly in excess of last year's production. Both the total crude potential figure and the availability figure showed a decrease of about 4,000 barrels per day during the year. This was due to production from individual wells drilled during the year falling short of estimate, and also to there being fewer completions than estimated.

A comparison of footage and production figures for 1943 and 1944 is as follows:—

<i>Oil Rights</i>	<i>Footage</i>		<i>Production</i>	
	1943	1944	1943	1944
Crown	389,527	352,988	17,056,197	17,392,799
Private	104,204	103,969	4,329,043	4,242,166
Totals	493,731	456,957	21,385,240	21,634,965

Drilling

The footage drilled during the year amounted to 456,957 feet a decrease of 7.4 per cent. compared to last year. The number of drilling rigs in operation remained fairly constant at approximately 19.

During the year 105 oil wells were started as compared to 127 last year. The total number of oil wells in the Colony was 4,143 at the end of the year.

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

	<i>Crown Lands</i>	<i>Alienated Lands</i>	<i>Private Lands</i>	<i>Total</i>
Unfinished at end of 1943	16	5	15	36
Started during 1944	51	28	26	105
	67	33	41	141
Completed as oil producers	50	21	25	96
Uncompleted wells abandoned	1	—	1	2
Unfinished at end of 1944	16	12	15	43
	67	33	41	141
Completed wells abandoned during 1944	40	4	22	66
Wells recompleted during 1944	35	19	23	77

The following tables are attached:—

No. 1—Showing Drilling Summary for 1944

No. 2—Showing Production Summary for 1944.

No. 3—Showing the number of wells started and footage drilled annually.

No. 4—Showing the Annual Production since returns were first sent to the Government in 1908.

W. N. FOSTER,
Assistant Petroleum Technologist.

3rd July, 1945.

TABLE No. 1
DRILLING SUMMARY FOR THE YEAR 1944

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	6	—	2	4	2	1	6	1	—	—	1	—	27,107	5,926	11,035	44,068	18	
February	5	4	3	6	1	4	6	1	2	—	—	4	24,353	7,762	7,254	39,369	19	
March	6	1	1	5	2	1	3	1	2	2	—	1	18,496	13,836	7,717	40,049	18	
April	4	4	2	3	4	1	2	—	3	—	—	1	24,398	6,850	9,953	41,201	21	
May	5	1	3	5	1	2	2	1	2	1	—	1	22,623	11,896	9,106	43,625	18	
June	6	3	4	7	4	5	3	3	4	8	—	—	22,462	7,392	8,990	38,844	18	
July	2	3	2	2	1	1	3	—	2	1	1	3	20,618	7,936	11,142	39,696	19	
August	3	—	3	4	—	—	—	—	2	2	—	4	14,629	10,859	6,981	32,469	16	
September	4	1	3	3	2	3	3	5	1	2	—	3	18,208	4,067	10,082	32,357	17	
October	4	6	2	5	2	2	2	2	3	—	1	1	19,879	10,695	11,431	42,005	17	
November	4	3	1	3	1	3	3	3	1	2	—	2	13,696	13,439	9,475	36,610	17	
December	2	2	—	3	1	2	2	2	1	22	1	2	15,851	10,010	803	26,664	17	
Totals	51	28	26	50	21	25	35	19	23	40	4	22	242,320	110,668	103,969	456,957		
	= 105			= 96			= 77			= 66								

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.	6,701	0.4	642	1,314,997	70.8	66.1	123	81,605	4.4	21.4	640	328,079	17.7	16.5	200	116,070	6.2	18.0
Feb.	6,749	0.4	639	1,236,979	71.1	66.7	117	92,840	5.3	27.3	613	289,631	16.7	16.3	201	104,985	6.0	18.0
March	7,803	0.5	625	1,259,589	69.7	83.6	113	99,031	5.4	28.2	630	319,150	17.6	16.4	206	116,356	6.5	18.3
April	7,647	0.4	634	1,247,782	69.6	65.6	125	102,040	5.7	27.2	595	323,827	18.0	18.1	200	107,504	6.0	17.8
May	7,390	0.4	647	1,309,984	70.5	65.3	101	100,053	5.4	31.9	623	332,042	17.8	17.2	199	104,901	5.6	17.0
June	7,243	0.4	641	1,254,519	70.2	65.2	110	99,218	5.6	30.1	603	319,154	17.9	17.6	199	103,557	5.8	17.3
July	7,799	0.4	632	1,249,535	67.7	64.0	118	111,084	6.0	30.4	646	366,145	19.8	18.3	203	106,334	5.7	16.9
Aug.	7,368	0.4	631	1,228,565	68.0	62.5	118	115,395	6.3	31.4	638	340,557	18.8	17.2	201	113,319	6.3	18.1
Sept.	7,612	0.4	634	1,225,280	69.0	64.4	109	96,713	6.0	29.5	645	334,317	19.0	17.3	205	105,044	6.0	17.1
Oct.	8,118	0.5	667	1,209,420	67.0	58.5	102	112,800	6.0	35.7	639	352,889	20.0	17.8	206	111,734	6.0	17.5
Nov.	7,634	0.4	660	1,187,254	68.0	60.0	105	113,552	6.5	36.0	652	320,742	18.3	16.4	210	115,895	6.6	18.4
Dec.	7,666	0.4	651	1,246,003	68.0	61.7	98	103,282	5.6	34.3	672	350,972	19.2	16.8	212	120,567	6.6	18.3
Totals	89,730	0.4	Avg. 642	Avg. 14,969,907	Avg. 69.2	—	Avg. 111	Avg. 1,227,613	Avg. 5.7	—	Avg. 633	Avg. 3,977,505	Avg. 18.4	—	Avg. 203	Avg. 1,326,266	Avg. 6.1	—
Daily Avg.	245			40,901				3,354				10,867				3,624		

3rd July, 1945.

No. 2

BY MONTHS DURING 1944

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	
71	8,375	0.4	3.8	1,676	1,405	949	16	4,046	35.7	1,140	1,482,279	536	373,548	1,855,827	
57	6,324	0.3	3.8	1,627	1,462	953	16	4,058	36.8	1,147	1,394,176	480	343,332	1,737,508	
53	4,919	0.3	3.0	1,627	1,467	956	16	4,066	35.8	1,146	1,451,529	481	355,319	1,806,848	
49	2,836	0.2	1.9	1,603	1,499	957	17	4,076	37.2	1,139	1,417,493	464	374,143	1,791,636	
44	2,546	0.2	1.9	1,614	1,497	959	15	4,085	57.1	1,163	1,474,835	451	382,081	1,856,916	
36	2,135	0.1	2.0	1,589	1,531	967	11	4,098	37.5	1,163	1,458,927	426	326,899	1,785,826	
46	3,407	0.2	2.5	1,645	1,475	972	13	4,105	36.2	1,179	1,482,046	466	362,258	1,844,304	
47	3,583	0.2	2.5	1,635	1,483	978	15	4,111	35.8	1,181	1,474,084	454	334,703	1,808,787	
40	2,302	0.1	1.9	1,633	1,486	983	17	4,119	36.1	1,185	1,425,063	448	346,205	1,771,268	
38	2,234	0.1	1.9	1,652	1,480	984	15	4,131	35.1	1,211	1,452,143	441	345,052	1,797,195	
46	2,721	0.2	2.0	1,673	1,464	988	15	4,139	34.8	1,213	1,406,642	460	341,156	1,747,798	
41	2,562	0.1	2.0	1,674	1,444	1,013	13	4,143	35.3	1,209	1,473,582	465	357,470	1,831,052	
Avg.		Avg.		Avg.						Avg.		Avg.			
47	43,944	0.2		1,637	—	—	—	—	36.1	1,173	17,392,799	464	4,242,166	21,634,695	
	120													59,112	

W. N. FOSTER,
Assistant Petroleum Technologist.

TABLE 3
COLONY OF TRINIDAD
Number of Wells started and Footage Drilled Annually

YEAR	WELLS STARTED								FOOTAGE DRILLED								YEARLY TOTALS	CUMU-LATIVE
	CROWN		ALIENATED		PRIVATE		TOTALS		CROWN		ALIENATED		PRIVATE					
	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 3—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	4,291,832	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		

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.

TABLE 4
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

* 1944 onwards all royalty oil shown under one head.

APPENDIX "C"

Statement of the Quantity and Value of Minerals obtained and the Daily Average Number of Persons employed in the Petroleum, Asphalt and Quarry Industries during the years 1943 and 1944.

INDUSTRY	1943					1944				
	Quantity	Approximate Value *	Daily average number of persons employed			Quantity	Approximate Value *	Daily average number of persons employed		
			Males	Females	Total			Males	Females	Total
Petroleum	21,385,240 bbls.	\$ c. 18,451,962 32	13,601	180	13,781	21,634,965 bbls.	\$ c. 18,532,207 26	13,718	165	13,883
Asphalt (a)	50,323 tons	150,969 00	378	3	381	38,323 tons	114,969 00	511	3	514
Private Quarries (Limestone, Gravel, &c.)	455,660 tons	299,582 72	600	82	682	412,683½ tons	275,901 35	607	96	703
Government Quarries (Limestone, Gravel, &c.)	107,359 tons	90,563 62	258	32	290	102,806¼ tons	90,279 25	326	20	346

(*) 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 :

1943 34,378 tons. 1944 33,554 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 hrs.	<p><i>General Remarks</i></p> <p>1. <i>Housing:</i></p> <p>Accommodation is sometimes provided for those employees whose presence is required on the Fields.</p> <p>2. <i>Medical Attention:</i></p> <p>(a) In the case of accident arising from employment medical attention is usually free. In other cases the practice varies from Company to Company.</p> <p>3. <i>War Bonus:</i></p> <p>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:</p> <p>Effective 24th Jan., 1940— 1c. per hour.</p> <p>Effective 18th Feb., 1940— $1\frac{1}{2}$c. per hour.</p> <p>Effective 15th Sept., 1940— 2c. per hour.</p> <p>Effective 16th April, 1941— $2\frac{1}{2}$c. per hour.</p> <p>Effective 15th June, 1941— 3c. per hour.</p> <p>Effective 15th Feb., 1942— $3\frac{1}{2}$c. per hour.</p> <p>Effective 16th April, 1942— 4c. per hour.</p> <p>Effective 16th July, 1942— $4\frac{1}{2}$c. per hour.</p> <p>Effective 16th Aug., 1942— 5c. per hour.</p> <p>Effective 16th Oct., 1942— $5\frac{1}{2}$c. per hour.</p> <p>Effective 15th Nov., 1942— 6c. per hour.</p> <p>Effective 16th Jan., 1943— $6\frac{1}{2}$c. per hour.</p> <p>Effective 16th June, 1943— 7c. per hour.</p> <p>Effective 15th Aug., 1943— $7\frac{1}{2}$c. per hour.</p> <p>Effective 15th Dec., 1943— 8c. per hour.</p> <p>Effective 16th Feb., 1944— $8\frac{1}{2}$c. per hour.</p> <p>The amount being paid at the close of the year is thus $8\frac{1}{2}$c. per hour additional on all rates.</p>
Rigmen employed in Production	20	30	—	—	do.	
Production men	15	21	—	—	do.	
Rig Builders	16	30	—	—		
Blacksmiths	18	30	—	—		
Boilersmiths	18	30	—	—		
Cabinet Makers	18	30	—	—		
Carpenters	18	30	—	—		
Chauffeurs	18	30	—	—		
Electricians	18	30	—	—		
Firemen	16	24	—	—		
Fitters (Bench, Engine or Pump)	18	30	—	—		
Masons	15	26	—	—	45/48 hrs. up to 56, when working on shift.	
Motor Mechanics	18	30	—	—		
Moulders	15	26	—	—		
Painters	14	21	—	—		
Plumbers	15	30	—	—		
Riveters	18	30	—	—		
Tinsmiths	15	30	—	—		
Turners	18	30	—	—		
Welders	18	30	—	—		
Semi-skilled	13	26	—	—		
Unskilled	13	18	—	—		

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
Totals	290,382,398	251,144,322

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.
Total	...	...	...	...	...	...	...	...	<u>268,779,718</u> do.