

MINES

REPORT OF THE INSPECTOR OF MINES AND PETROLEUM TECHNOLOGIST FOR THE YEAR 1946

HON. 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 1946.

THE PETROLEUM INDUSTRY

2. Operations on the oilfields and in the refineries of the Colony during the year have shown certain tendencies reflecting the adjustments from war time conditions and policy, and difficulties in obtaining oilfield equipment remained acute. Drilling showed an increase compared to the previous year but still remained considerably below pre-war figures. Production, which had declined in 1945 by 2.04% on the previous year, further declined by 4.08% on the 1945 figures, but the tendency to decline was reversed in the latter part of the year. Considerable geological work, including that of two seismic parties, was undertaken during the year.

3. **Production of Crude Oil.**—The total production of crude oil for the year 1946 amounted to 20,232,641 barrels, an average of 55,432 barrels per day. This total is 859,967 barrels, or 4.08%, less than the production for 1945.

4. **Drilling.**—Drilling operations showed an increase during the year 1946, the number of oil wells commenced being 124 compared with 110 for the year 1945. The total number of oil wells drilled in the Colony to the end of 1946 was 4,377 of which 2,928 are on lands the oil rights of which are vested in the Crown and 1,449 are on private lands.

The number of feet drilled during 1946 amounted to 533,209, an increase of 79,337 feet, or 17.5%, on the footage for 1945.

The depth of the deepest well completed in the Colony is 11,042 feet.

5. The following table shows comparatively the number of feet drilled and the quantity of oil produced during the years 1944, 1945 and 1946 :—

	Number of Feet Drilled			Production in Barrels of 35 Imp. Gals.		
	1944	1945	1946	1944	1945	1946
Crown Oil Rights ..	352,988	345,071	406,017	17,392,799	16,842,424	15,519,193
Private Oil Rights ..	103,969	108,801	127,192	4,242,166	4,250,184	4,713,448
Totals ..	456,957	453,872	533,209	21,634,608	21,092,608	20,232,641

6. The number of oilfield operators in the Colony during the year was 15, as compared with 14 for the year 1945.

7. **Persons Employed.**—The average number of persons employed in the Petroleum Industry during 1946 amounted to 14,311 per day as compared with 13,587 during 1945.

8. **Leases and Licences.**—3 Principal and 3 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 88, the details of which are as follows :—

	A c r e a g e					
	Crown			Alienated		
	A.	R.	P.	A.	R.	P.
81 Mining Leases ...	...155,160.	3.	26	56,809.	2.	32½
7 Exploration Licences ...	...137,896.	0.	07	—	—	—
<u>88</u> Total. ...	<u>...293,056.</u>	<u>3.</u>	<u>33</u>	<u>56,809.</u>	<u>2.</u>	<u>32½</u>

In addition to the abovementioned Crown Oil Rights under Mining Lease there are, according to details supplied by the Oil Companies, 110,115 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 1946 is, therefore, 459,982 acres (or 38.56% of the total area of Trinidad).

9. **Revenue from Royalties and Fees.**—The revenue collected under these heads amounted to \$1,510,971.40 as compared with \$1,436,797.89 during the year 1945. For purposes of comparison, the following table shows the amounts collected under each head for the years 1944, 1945 and 1946 :—

	Amounts Collected					
	1944		1945		1946	
	\$	c.	\$	c.	\$	c.
Royalties in respect of Oil produced from Crown and Alienated Lands.	1,423,790.04		1,431,831.43		1,506,868.91	
Fees charged for Pipelines along and across the Trinidad Government Railway and Public Roads.	4,866.97		4,966.46		4,102.49	
Totals	1,428,657.01		1,436,797.89		1,510,971.40	

10. **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 5 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 1946 a total quantity of 22,713,677 barrels of crude oil was refined, compared with 23,170,211 barrels during 1945.

11. **Gasoline Extraction Plants.**—Three Plants for the recovery of gasoline from natural gas were in operation during the year.

12. **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.

13. **Pipeline.**—Approximately 376 miles of main oil pipe-lines have been laid down in the Colony under the Pipelines Ordinance, Ch. 26. No. 9.

14. **Tank Storage.**—The total main tank storage capacity for petroleum and its products in the Colony amounted to 7,896,077 barrels at the end of 1946.

15. **Exports of petroleum and its products.**—The quantity of petroleum and its products exported during the year showed some decrease as compared with the year 1945, the amounts and values for the two years being as follows :—

1945	—	20,651,037	barrel	valued	at	\$43,627,559.00
1946	—	20,432,076	„	„	„	\$41,520,918.00

Petroleum and its products, including Asphalt, continued to form the largest part, viz : 77.79 per cent., of the Colony's exports during 1946, the value being more than 5½ times that of the products of the next important of its industries, viz : Sugar (including Molasses and Rum).

The value of the leading staple products of the Colony exported during 1946 is shown in the following table :—

Staple Products Exported	Value	% of Total
Petroleum and its products	\$41,520,918.	72.12
Sugar, Molasses and Rum	7,823,002	13.59
Asphalt and Products	3,264,313	5.67
Cocoa	1,171,781	2.03
Coconuts, Copra and Coconut Oil	827,002	1.44
Fruits and Fruit Juices	689,556	1.20
Bitters	496,119	0.86
Coffee	204,158	0.35
Other Exports not enumerated	1,575,226	2.74
Total :	\$57,572,075	100.00

16. **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.

17. **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.

18. 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 Acting Assistant Petroleum Technologist.

THE ASPHALT INDUSTRY

19. This industry continued to operate under difficulties during the year but an increase in production was achieved, the quantity of asphalt produced during the year amounting to 93,851 tons as compared with 63,118 tons for the year 1945, an increase of 30,733 tons. The following table shows, comparatively, the quantity of asphalt produced and exported during the years 1944, 1945 and 1946 :—

	1944	1945	1946
Production (tons)	71,877	63,118	93,851
Export (tons)	35,477	28,000	90,255

FACTORIES AND WORKSHOPS

20. During the period under review 466 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 (viz : Factories Ordinance, No. 44 of 1946 and the Gas Cylinders (Use, Conveyance and Storage) Ordinance No. 45 of 1946), drafted by the Senior Inspector of Factories and modelled on the United Kingdom Acts, was laid before the Legislative Council and passed, but has not yet come into effect.

QUARRIES

21. The number of Quarries worked during the year was 139 as compared with 146 in operation during the year 1945. 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

22. 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 1946 2 fatal accidents occurred in the Petroleum Industry as compared with 1 for the year 1945, and 5 occurred in other industries as compared with none in 1945.

PETROLEUM ORDINANCE, Ch. 26. No. 2

23. The premises where dangerous petroleum products are stored have been inspected and all possible care has been taken to ensure safety. During the year 1946, 490 licences were issued for the storage and sale of petroleum and its products. The revenue actually collected from such licences during 1946 was \$1,828.80.

LEGISLATION

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

- (a) Petroleum (Amendment) Ordinance, No. 17 of 1946.
- (b) Oil Mining and Refining (Amendment) Ordinance, No. 49 of 1946.
- (c) Petroleum (Amendment) Regulations, 1946.
- (d) Oil Refining (Amendment) Regulations, 1946.
- (e) Mines, Borings and Quarries (Amendment) Regulations, 1946.

APPENDICES

25. Appendix " A " shows the list of oil and asphalt operators in the Colony during the year 1946.

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

27. 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.

28. A statement of oil produced and exported is shown as Appendix " D ".

29. Appendix " E " shows the amount of oil refined year by year.

STAFF

30. Mr. R. S. Mackilligin, C.M.G., O.B.E., M.C., terminated his engagement as Inspector of Mines and Petroleum Technologist with this Government on the expiry of his contract. He proceeded to the United Kingdom on leave up to the 1st October, 1946.

On the expiry of his period of secondment, Mr. G. D. Proctor, Senior Inspector of Factories, returned home to the United Kingdom on leave from the 21st September 1946 for 180 days, at the end of which he will rejoin his substantive Department there.

Mr. N. Betancourt, I.S.O., F. Inst. Pet., Assistant Inspector of Mines, retired from the Public Service on the 1st February 1946, after having served for 38 years in this Department.

On Mr. Mackilligin's departure from the Colony, Mr. W. N. Foster, M.A. (Cantab), Assistant Petroleum Technologist, was appointed to act as Inspector of Mines and Petroleum Technologist, and Mr. I. S. Rutherford, B.Eng., M.Inst., Pet., 2nd Assistant Petroleum Technologist, was appointed to act as Assistant Petroleum Technologist, both with effect from 9th March, 1946.

On Mr. Proctor's departure from the Colony, Mr. T. C. C. Harding, Factory Inspector, was appointed to act as Senior Inspector of Factories with effect from 31st August, 1946.

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

I. S. RUTHERFORD,
for Acting Inspector of Mines and
Petroleum Technologist.

3rd August, 1947.

APPENDIX "A"

List of Oil and Asphalt Operations in Trinidad, 1946

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 part sold to United British Oilfields of Trinidad, Ltd., and part exported
2	Apex (Trinidad) Oilfields, Ltd.	Crown Lands, and Crown Oilrights under Lease, Private Lands	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 Oilrights under Lease	Guapo, Ortoire	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 Oilrights 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 Oilrights 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 Oilrights under lease	Barrackpore, Forest Reserve, Guayaguayare, Quinam, Mayaro	Pumped to Company's Refinery at Pointe-a-Pierre
13	Trinidad Petroleum Development Company, Ltd.	Private Lands, Crown Lands, and Crown Oilrights 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 Oilrights under Lease	Los Bajos, Parrylands, Penal, Point Fortin, Ortoire	Pumped to Company's Refinery at Point Fortin
15	Zenith (Trinidad) Oilfields, Limited	Private Lands	Fyzabad	Crude sold to Trinidad Leaseholds, Ltd.
16	National Mining Corporation Ltd.	Private Lands, Crown Lands and Crown Oilrights under lease	Penal	No production

APPENDIX "B"

ACTING INSPECTOR OF MINES AND PETROLEUM TECHNOLOGIST,

A comparison of footage and production figures for 1945 and 1946 is as follows:—

Oil Rights	Footage		Production	
	1945	1946	1945	1946
Crown	345,071	406,017	16,842,424	15,519,193
Private	108,801	127,192	4,250,184	4,713,448
	<u>453,872</u>	<u>533,209</u>	<u>21,092,608</u>	<u>20,232,641</u>

The footage drilled during the year amounted to 533,209 feet, an increase of 17.5 per cent. compared to last year. The number of drilling rigs in operation remained fairly constant at approximately 20.

During the year 124 oilwells were started as compared to 110 last year. The total number of oilwells in the Colony was 4,377 at the end of 1946.

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

	Crown Lands	Alienated Lands	Private Lands	Total
Unfinished at the end of 1945	18	14	20	52
Started during 1946	58	37	29	124
	<u>76</u>	<u>51</u>	<u>49</u>	<u>176</u>
Completed as Oil producers	42	39	23	104
Uncompleted wells abandoned	2	3	2	7
Unfinished at end of 1946	13	3	5	21
	<u>57</u>	<u>45</u>	<u>30</u>	<u>132</u>
Completed wells abandoned during 1946	9	2	19	30
Wells recompleted during 1946	73	35	23	131

The following tables are attached:—

No. 1—Showing Drilling summary for 1946.

No. 2—Showing Production Summary for 1946.

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

No. 4—Showing the number of wells started annually and the status of these wells on the 31st December, 1946.

20th June, 1947.

I. S. RUTHERFORD,
Acting Assistant Petroleum Technologist.

Table No. 1
DRILLING SUMMARY FOR 1946

MONTHS	Wells Started			Completed as Producers			Recompleted as Producers			Abandoned C. A. P.	FOOTAGE DRILLED FOR OIL				Average No. of Rigs Running		
	C.	A.	P.	C.	A.	P.	C.	A.	P.		Crown	Alienated	Private	Total			
January	3	6	4	2	4	—	11	4	—	—	1	15,097	16,740	15,920	47,757	15	
February	3	4	—	1	4	3	5	4	2	—	3	13,726	18,479	7,411	39,616	20	
March	2	6	—	1	7	2	6	2	2	4	5	16,313	16,764	6,539	39,616	18	
April	6	5	2	4	2	—	6	5	1	1	4	13,785	21,351	7,216	42,352	20	
May	6	2	3	5	6	1	5	5	8	1	—	30,904	15,432	5,795	52,131	21	
June	6	0	1	4	1	—	5	3	—	—	1	29,328	5,021	6,572	40,921	21	
July	8	4	3	8	3	1	9	1	2	1	1	24,154	12,967	14,588	51,709	21	
August	5	1	3	2	4	3	3	2	2	—	—	23,931	4,571	13,420	41,922	21	
September	2	2	2	2	3	3	6	5	4	—	1	21,449	6,435	10,053	37,937	20	
October	8	4	4	7	1	4	8	3	—	2	—	28,010	11,833	14,486	54,329	22	
November	6	2	4	4	2	3	3	—	1	—	—	24,275	9,492	13,302	47,069	25	
December	3	1	3	2	2	3	6	1	1	—	4	20,251	5,709	11,890	37,850	22	
TOTALS	58	37	29	42	39	23	73	35	23	9	2	19	261,223	144,794	127,192	533,209	
	<u>124</u>			<u>104</u>			<u>131</u>			<u>30</u>							

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
1946	—	—	—	—	—	—	20,232,641	331,707,647

* 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

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
1946	...	58	2,122	37	806	29	1,449	124	4,377	261,223	5,649,388	144,794	2,677,839	127,192	3,482,030	533,209	11,809,257

NOTE:—Previous to the year 1941 figures showing the number of wells and footage drilled included fresh water wells. In the figures for 1941 shown above 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 1945 and 1946.

INDUSTRY	1945					1946				
	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	21,092,608 bbls.	\$ 18,088,031 63 c.	13,402	185	13,587	20,232,641 bbls.	\$ 21,050,097 98 c.	14,125	186	14,311
Asphalt (a)	28,997 tons	86,991 00	466	4	470	58,588 tons	175,764 00	545	4	549
Private Quarries (Limestone, Gravel, &c.)	426,995 tons	299,088 27	718	107	825	409,246 tons	252,519 77	585	80	665
Government Quarries (Limestone, Gravel, &c.)	180,603 tons	125,998 98	264	21	285	272,282 tons	188,678 58	225	17	242

(*) 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 :

1945 34,121 tons. 1946 35,263 tons.

APPENDIX "D"

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
1946	20,232,641	20,432,076
Totals	331,707,647	292,227,435

APPENDIX "E"
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 ...	...	...	...	...	...	...	...	23,170,211 do.
1946 ...	...	...	...	...	...	...	...	22,713,677 do.
Total ...	...	...	...	...	...	...	...	<u>314,663,606 do.</u>