

TRINIDAD AND TOBAGO.

Council Paper No. 45 of 1917.

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## MINES DEPARTMENT.

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Report of the Inspector of Mines for the year 1916.

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*Laid before the Legislative Council on the  
13th April, 1917.*

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*Cons Council Paper No. 88 of 1916.*

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1917.

## MINES DEPARTMENT.

## Report of the Inspector of Mines for the year 1916.

*Council Paper No. 45 of 1917.**M.P. No. 2171/1917.**26th March, 1917.*

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 ended 31st December, 1916.

## OFFICIAL DUTIES.

2. There has been no change in the staff of the Department during the year.

## LEAVE.

3. Mr. A. P. Catherall, Deputy Inspector of Mines, was absent on leave from the Colony from 30th August to 25th November. During that time his duties were performed by Mr. N. P. Court, 2nd Assistant Inspector of Mines.

## LEGISLATION.

4. No further legislation in connection with the Department was enacted during the year.

## WORK UNDER THE MINES BORINGS AND QUARRIES ORDINANCES.

5. MANJAK.—Mining for this mineral was suspended during 1916.

6. PETROLEUM.—During the year the number of feet drilled shewed a satisfactory increase proportionately to the drilling done during the nine months covered by my last Administration Report, and a slight increase over the number of feet drilled during the twelve months ended March 31st 1915.

The figures are as follows:—

	<i>12 months ended March 31st, 1915.</i>	<i>9 months ended December 31st, 1915.</i>	<i>12 months ended December 31st, 1916.</i>
Private Lands ...	19,516 feet.	21,324 feet.	27,555 feet.
Crown Lands ...	38,453 „	18,729 „	30,835 „
Totals ...	<u>57,969 feet.</u>	<u>40,053 feet.</u>	<u>58,390 feet.</u>

The number of wells drilled during the year was 47 (27 on Crown and 20 on Private Lands), and Oil was struck in 34 of these. The total number of wells drilled in the Colony to 31st December, 1916, is 325, of which 161 are on Crown Lands. The quantity of Oil extracted during the past year amounted to 32,475,695 Imperial gallons, which compares favourably with the quantity (23,489,362 gallons) obtained during the nine months ended 31st December, 1915.

7. The number of Oil Companies engaged in the winning of Oil at the close of the year remained the same as in December, 1915, viz. 10.

8. The Trinidad Leaseholds, Limited, confined their drilling operations to Crown Lands leased by them in the Morne L'Enfer Forest Reserve. Additional wells were drilled to maintain and increase the production of crude oil. The various works under construction at the time of my last report have been completed. The pipe-line from the Morne L'Enfer Forest Reserve has been in operation, and large quantities of oil were pumped through it to the Company's Shipping Depôt at Pointe-à-Pierre. A great deal of work was done at this Depôt—the island jetty was completed, and a number of ships have been alongside to receive cargoes of Oil. Three large storage tanks have been completed, and a number of small ones are in course of erection. At the time of writing a Refinery to treat the Crude Oil from Fyzabad is nearing completion.

At Guayaguayare the Company's Geological Staff have been engaged on a careful examination of the large area under Lease to them.

9. The Trinidad Lake Petroleum Company, Limited, have continued operations on their private lands at Brighton. A production has been maintained from the old wells, and several new wells have been drilled. Practically the whole of the production has been exported to the United States of America. ✓

10. The United British Oilfields of Trinidad, Limited, are now working under Lease the Crown Lands formerly held by the Trinidad Oilfields, Limited. Additional lands at and near the Morne L'Enfer Reserve, formerly held under Prospecting Licence, have also been incorporated in this Lease. Work has been chiefly confined to the Private Lands and to the Crown Lands formerly held by the Parry Syndicate. Several wells have been drilled on the latter area, and a large production of crude oil obtained. ✓

11. The United British West Indies Petroleum Syndicate, Limited, continued drilling on the areas originally licensed to Messers. J. G. Rust and Dreyfus, and wells were also sunk on lands originally applied for by Mr. C. C. Stollmeyer. The work on these lands has so far been confined to the drilling of test wells. Oil has not yet been obtained in any of them in paying quantities. The Refinery which was erected by this Company at Point Fortin, has been transferred to the United British Refineries, Limited, a subsidiary Company formed for the purpose of refining and marketing the production of the United British West Indies Petroleum Syndicate, Limited, and the United British Oilfields of Trinidad, Limited. This Refinery has been operated during the period under review, and various qualities of refined products, including oil fuel to Admiralty Specification, have been obtained. ✓

12. The negotiations respecting the lease to be issued to the Trinidad Central Oilfields, Limited, have continued during the year, and the Company are, therefore, still operating on their Crown Lands in the Montserrat Ward under Prospecting Licence. Drilling has progressed steadily during the period under review, a number of the wells drilled have been capped, whilst the production from the rest has been refined-petrol, kerosene, lubricating and fuel oils being produced. A can-making plant has been installed, and petrol and kerosene are now available in convenient packages for customers. A storage installation has been erected by this Company near the sea at Claxton's Bay, and connected by a submarine pipe-line to a loading berth approximately one mile out to sea. The Company is now engaged in laying a pipe-line from their Oilfields at Tabaquite to their Storage Tanks at Claxton's Bay—a distance of approximately seven-teen miles.

13. Only a small amount of drilling was done by the Trinidad Oil and Transport Company, Limited, on their private lands at Barrackpore, as sufficient oil for their needs was obtained from the existing wells. Small additions to their Refinery have been carried out. This Refinery was operated during the whole of the year, and the products (petrol, kerosene and fuel oil) were disposed of locally. The Trinidad Leaseholds, Limited, have arranged to purchase a part of this Company's production, and have laid a six-inch pipe-line from the Refinery at Barrackpore to connect with their main pipe-line running from the field at Fyzabad to Pointe-à-Pierre. ✓

14. The Petroleum Development Company, Limited, have continued operations upon the Crown Lands in the Morne L'Enfer Forest Reserve which they hold under lease. The work has been almost entirely confined to the production of oil which is pumped over to Brighton, and disposed of by the Trinidad Lake Petroleum Company, Limited. ✓

15. Mr. C. C. Stollmeyer has done a small amount of drilling on his Perseverance Estate at Guapo, and small quantities of oil have also been won. ✓

16. The Trinidad United Oilfields, Limited, have continued drilling shallow wells upon the Crown Lands which they hold under Lease at Palo Seco, and have been successful in obtaining a small production of oil. A small refinery has been erected in which the output of crude oil is treated and petrol obtained.

17. No further drilling has been done by the Trinidad Oil Leases, Limited. The existing wells have yielded small quantities of oil which has been disposed of locally. This Company is now known as the T. O. P., Limited. ✓

18. A well was drilled by Mr. E. Bowen on his private lands in the Guapo Ward, but operations were discontinued before oil was struck.

19. No work has been done by any of the following Companies during the year ;—The Cruse Syndicate, Limited ; The Oil Concessions of Mayaro (Trinidad), Limited ; The Trinidad-Tarouba Oil Development Company ; The Trinidad Silverstream Oilfields, Limited ; and the Iacos (Trinidad) Development Company, Limited.

20. The amount of Royalty earned during the period was £7,765, of which £384 were in respect of Prospecting Licences, £7,348 in respect of Leases, and £33 in respect of oil extracted from a well drilled in error by the Trinidad Lake Petroleum Company, Limited, on Crown Lands. ✓

21. This Department is also responsible for the assessment of the way-leave payable in respect of pipe-lines laid along the Trinidad Government Railway and along the Public Roads of the Colony. During the past year £256 became due for oil piped along the Railway, and £115 for oil piped along Roads. In addition £2 were charged for crossing the foreshore in two places.

22. The Companies have regularly submitted the various returns in respect of drilling work, and the extraction and disposal of the oil. These, after being checked, have been filed with the records in the Office.

23. **INSPECTIONS.**—The usual routine inspections have been made by the Officers of the Department, and in nearly all cases the Ordinances and Regulations have been found to have been satisfactorily carried out. In no case was it found necessary to institute proceedings for breaches, as a warning was considered sufficient. A considerable number of additional inspections in connection with Accidents, Royalty, Way-leave, Refineries, Pipe-lines, etc., have had to be made.

24. **LEASES AND LICENCES.**—A Lease dated 4th December, 1915, over some 5,986 acres of Crown Lands, the greater part of which was formerly held under Lease by the Trinidad Oilfields, Limited, was issued to the United British Oilfields of Trinidad, Limited.

The Trinidad Leaseholds, Limited, selected the areas from their Exploration Licence which they desired to take up under Lease, and these were incorporated in the original lease by deed dated 14th July, 1916.

The Exploration Licence issued to the United British West Indies Petroleum Syndicate, Limited, over a small area at San Fernando, and which was extended for six months to 11th May, 1916, expired, and no renewal was asked for. An application from this Company for a Prospecting Licence in respect of a certain portion of the large area held by them under Exploration Licence was received. At the time of writing, however, the Company has submitted an application covering the whole of the areas they desire to take up under Prospecting Licence.

25. **QUARRIES.**—The various Quarries in the Colony have been regularly inspected by Officers of the Department, and there is little to report in this branch, as with the exception of a few Government Quarries, they are mostly unimportant. There were 61 Quarries worked during the year as against 60 during the period covered by my last report.

#### **WORK UNDER THE PETROLEUM ORDINANCE, NO. 20 OF 1915.**

26. Since the beginning of 1916 work under the Petroleum Ordinance has been in charge of this Department, and a large number of inspections have been undertaken in carrying out the provisions of the Ordinance. I am pleased to say that, on the whole, the utmost care is taken by the public in storing the various products of petroleum.

#### **THE PREVENTION OF ACCIDENTS ORDINANCE, No. 13 OF 1915.**

27. This Ordinance was brought into operation during the latter half of 1915; and during 1916, in addition to the Oil-fields, 79 factories were inspected in Trinidad and 16 in the Tobago Ward.

When the Ordinance was brought into force it was found that in a number of cases machinery of a highly dangerous nature was entirely unprotected, rendering the employees extremely liable to accidents. I am pleased to record, however, that the fullest co-operation was accorded the Department by the Owners and Managers of the various Factories in carrying out the provisions of the Ordinance.

During the year seven minor, two serious and two fatal accidents were reported.

#### **WORK UNDER THE ASPHALT INDUSTRY REGULATION ORDINANCE, No. 10 OF 1906.**

28. There has been no digging of the village lots at La Brea during the period under review. This is due, I believe, to the lack of tonnage available for export owing to the War, and I understand that it is the intention of at least one owner to commence operations again as soon as normal conditions are restored.

29. **APPENDICES.**—The majority of the returns under the Ordinances from which the appendices to this report are prepared were obtained from the various parties without trouble.

Appendix A shows the average number of persons employed and the quantity and value of minerals obtained.

The list of Accidents is shewn in Appendix B; they are chiefly of a minor nature and are such as are incidental to all industrial operations.

The Borings and Quarries worked during the period are shewn in Appendix C.

30. GENERAL REMARKS.—Some of the smaller Companies are awaiting the close of the War to commence or extend operations, but the larger Companies have on the whole continued to make satisfactory progress—more especially as regards the Survey (Geological) and testing of Oil Lands. The production from many of the present producing Wells can be considerably increased, and now that the prospects of satisfactory sales have improved we may I think confidently anticipate a considerable increase in the Colony's Oil production. The total quantity of Oil and its products exported during the twelve months ended 31st December, 1916, exceeded 34,000,000 Imperial gallons. This compares very favourably with the quantity—slightly over 14,000,000 gallons—exported during the nine months ended 31st December, 1915. During the last nine months of 1916 five cargoes of Crude and Fuel Oil were shipped to the Admiralty.

31. STAFF.—Once again it affords me sincere pleasure to record my appreciation of the loyal and able assistance rendered by the several Members of the Staff.

26th March, 1917.

P. STEVENS,  
Inspector of Mines.

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## APPENDIX A.

Daily average number of persons employed and quantity and value of Minerals obtained from Mines, Oilfields, and Quarries, during the year ended 31st December, 1916.

MINERALS.	Daily average number of persons employed.		Total.	Quantity.	Approximate value. £
	Males.	Females.			
Oil ... ..	1,457	54	1,511	32,475,695 Imp. Gals.	132,256
Asphalt ... ..	582	...	582	128,780 tons	83,889
Private Quarries (Limestone, Gravel, &c.) ...	157	50	207	84,150 ,,	3,776
Government Quarries (Limestone, &c.) ...	470	83	553	63,760 ,,	7,825

NOTE.—The difference in value between metal won from Private Quarries and Government Quarries is that the former consists of both Limestone and Gravel whilst the latter is chiefly Limestone.

## APPENDIX B.

List of Accidents which occurred at Mines, Oilfields and Quarries, during the year ended 31st December, 1916, reported under Section 19 of Ordinance, No. 13 of 1907.

Name of Mine, Oilfield or Quarry.	Date.	No. of Accidents reported.			
		Minor.	Serious.	Fatal.	Total.
Trinidad Leaseholds, Limited ...	28th January, 1916	1	...	...	1
	18th April, ,,	1	...	...	1
	19th ,, ,,	1	...	...	1
	6th May, ,,	...	1	...	1
	21st August, ,,	1	...	...	1
	7th September, ,,	1	...	...	1
	16th ,, ,,	1	...	...	1
	4th October, ,,	1	...	...	1
	11th ,, ,,	1	...	...	1
	12th ,, ,,	1	...	...	1
	26th ,, ,,	1	...	...	1
	3rd November, ,,	1	...	...	1
13th December, ,,	1	..	...	1	
Perseverance Estate ..	14th February, ,,	1	...	...	1
United British West Indies Petroleum Syndicate, Limited ..	16th May, ,,	...	1	...	1
Eastern Quarries ... ..	26th July, ,,	3	...	...	3
Trinidad Central Oilfields, Limited	14th August ,,	4	...	...	4
	15th ,, ,,	...	1	...	1
Basilon Street Quarry ... ..	3rd October, ,,	1	...	...	1
New Trinidad Lake Asphalt Co., Ltd. ...	16th ,, ,,	..	...	1	1
		21	3	1	25

APPENDIX C.—List of Mines, Oilfields and Quarries worked during the year ended 31st December, 1916.

No.	Name.	Situation.	Owner and Address.	Manager.	Daily Average No. of persons employed.	Mineral worked.
<i>Mines.</i>						
1	La Brea Asphalt Works	... La Brea	... Chas. F. Stollmeyer, Port-of-Spain	... Claude Phelps	123	Asphalt.
2	New Trinidad Lake Asphalt Company, Limited	... Brighton	... New Trinidad Lake Asphalt Coy., Ltd, Brighton, Trinidad	... Wm. D. Fowler	459	..
<i>Oilfields.</i>						
1	Trinidad Central Oilfields, Limited	... Tabaquite	... Trinidad Central Oilfields, Ltd., 79, Bishopsgate, London, E.C.	... H. P. Ingram	212.50	Oil.
2	Trinidad Oil and Transport Coy., Limited	... Barrackpore	... Trinidad Oil & Transport Coy., Ltd., 48, Canon st., London, E.C.	... G. A. Peat	39	..
3	Trinidad United Oilfields, Limited	... Palo Seco	... Trinidad United Oilfields, Ltd., Finsbury Court, London, E.C.	... F. E. Cherry	28.71	..
4	Perseverance Estate	... Guapo	... C. C. Stollmeyer, Port-of-Spain	... E. Pereira	8	..
5	United British West Indies Petroleum Syndicate, Limited	... San Fernando, Siparia and Moruga	... United British West Indies Petroleum Syndicate, Limited, 32, Bishopsgate, London, E.C.	... F. J. Fleming	48	..
6	United British Oilfields of Trinidad, Limited	... Point Fortin	... United British Oilfields of Trinidad Limited, 32, Bishopsgate, London, E.C.	... H. S. Fuller	337	..
7	Trinidad Leaseholds, Limited	... Forest Reserve, near Fyzabad	... Trinidad Leaseholds, Ltd., 1, London Wall Buildings, London	... H. S. Fuller	178	..
8	Trinidad Leaseholds, Limited	... Guayaguayare	... " " " "	... " "	68	..
9	Trinidad Leaseholds, Limited	... Pointe-à-Pierre	... " " " "	... " "	352	..
10	Petroleum Development Coy., Ltd.	... Brighton	... Petroleum Development Company, Limited, Brighton	... W. D. Fowler	54	..
11	Trinidad Lake Petroleum Coy., Limited	... "	... Trinidad Lake Petroleum Company, Limited, Brighton	... " "	181	..
12	T.O.P., Limited	... Point Ligoure	... T.O.P., Ltd., 18, Chacon street, Port-of-Spain	... Mungo Thomas	1	..
13	E. Bowen	... "	... E. Bowen, Town Hall, Port-of-Spain	... E. Bowen	4	..
<i>Quarries.</i>						
1	River Estate	... Diego Martin	... Trinidad Government, Port-of-Spain	... District Officer	6	Limestone
2	Cutucupano	... Santa Cruz	... " " " "	... " "	3	..
3	Matchapoorie	... Talparo	... " " " "	... " "	10.50	..
4	Southern Central Road Quarry No. 1.	... Cedros	... " " " "	... " "	8.93	Porcellanite.
5	Siparia	... Siparia	... " " " "	... " "	7	..
6	Buenos Ayres	... Erin	... " " " "	... " "	4	..
7	La Ressource	... "	... " " " "	... " "	3	..
8	Morichal	... Morichal	... " " " "	... " "	6	Limestone.
9	Mayo	... Mayo village	... " " " "	... " "	7	..
10	Guaracara	... Guaracara village	... " " " "	... " "	7	..
11	Corosal	... Corosal road	... " " " "	... " "	10	..
12	Nariva	... Tabaquite Nariva road	... " " " "	... " "	9	..
13	Providence	... Tobago	... " " " "	... " "	5	Dead Rock.
14	Mt. Parnassus	... "	... " " " "	... " "	2	..
15	Grange Main Road	... "	... " " " "	... " "	5	Limestone

APPENDIX C.—List of Mines, Oilfields and Quarries worked during the year ended 31st December, 1916.—*Continued.*

No.	Name.	Situation.	Owner and Address.	Manager.	Daily average No. of persons employed.	Mineral worked.
<i>Quarries.—Contd.</i>						
16	Moruga ...	Princes Town	Trinidad Government, Port-of-Spain	District Officer	9	Sandstone.
17	Prisoners ..	Laventille	" " "	Supt. of Prisons	35	Limestone.
18	Carrera Island ...	Carrera Island	" " "	H. Daniel	144	"
19	Mount Hope ...	St. Joseph	" " "	J. McInroy	4	"
20	Eastern Quarries ...	Laventille	" " "	F. J. Horsford	157	"
21	Trinidad Government Railway ...	St. Joseph	" " "	Hillary Aug. Sharpe	10	"
22	Morne Diable ...	San Fernando	" " "	District Officer	11	"
23	Cunapo Southern Road 13th mile	Cunapo Southern Road	" " "	"	5	"
24	Plum ...	Plum Road	" " "	"	20	"
25	Guaico Tamana ...	Guaico Tamana Road	" " "	"	35	"
26	Cumuto ...	Cumuto Road	" " "	"	12	"
27	Sanchuchu... ..	Tamana Road	" " "	"	10	"
28	Pointe Radix ...	Mayaro	" " "	"	8	"
29	La Pique ..	San Fernando	Canadian Mission, San Fernando	James Bhoopsingh	1	Gravel.
30	Perseverance Estate ..	Guapo	C. C. Stollmeyer, Port-of-Spain	E. Perce	7	Sandstone.
31	Woodford Farm Estate	St. Ann's	Rebecca Bennett, 22, Bedford Lane, Port-of-Spain	F. M. Thorne	4	Limestone.
32	Usine ...	San Fernando	Ste. Madeleine Sugar Company, Limited, England	O. P. Bennett	9	Gravel
33	Trelawne ...	Tabaquite	E. F. Stone, Trelawne Estate, Tabaquite...	Edwin Manohur	270	Marl.
34	Bandhoo ...	San Juan	Bandhoo, San Juan	Tonwa Jaffay	2	Gravel.
35	Plum ...	Manzanilla	Manzanilla Local Road Board, Sangre Grande	A. P. William	4	Limestone
36	Champ Fleurs ...	St. Joseph	E. J. Gransauil, St. Joseph	Leopold Brown	5	"
37	San Juan ..	San Juan	" " "	"	3	Gravel.
38	St. Joseph No. 2 ..	San Fernando	J. J. Waddell, San Fernando	P. P. Pickering	2	"
39	Glendale ...	"	H. R. McClean,	H. R. McClean	15	"
40	Pointe-à-Pierre ...	Pointe-à-Pierre	Percy Glendenning, Port-of-Spain	"	10	Sandstone.
41	Borough Council ..	San Fernando	Borough Council, San Fernando	J. J. Waddell	1	Gravel.
42	Circular Road ...	"	"	"	7	"
43	Verdun ...	"	J. J. Waddell, San Fernando	"	1	"
44	St. Joseph No. 1 ..	"	A. H. Harewood and P. P. Pickering, San Fernando	P. P. Pickering	2	"
45	Charles ...	"	Louis Charles, 115, Tragarete Road, Port-of-Spain	C. Lucas	1	"
46	La Coulée ..	"	Heirs of Mary Joaquin, San Fernando	F. E. Oliviera	2	"
47	Duke Street ...	Port-of-Spain	Virginia Prime, 12, Duke Street, Port-of-Spain	Chas. Attwell	7	Limestone.
48	St. Ann's ...	St. Ann's	F. Martin Campbell, St. Ann's	Norman Charles	6	"
49	Champs Elysees ...	Maraval	Poleska de Boissière, Maraval	C. Mohan	11	Sand & Gravel.
50	Stanislaus ...	Laventille	J. T. Gittens, Tragarete Road, Port-of-Spain	John Lashley	5	Limestone.
51	Irving Lane ...	Clifton Hill	" " "	"	7	"
52	Campo Street ...	San Juan	" " "	C. H. Gittens	8	"
53	Silver Mill ...	"	" " "	"	2	Sand & Gravel.
54	St. John Street ...	St. John St., Port-of-Spain.	" " "	John Lashley	7	Limestone.
55	Basilon Street ..	East Dry River	" " "	"	22	"
56	Thomas Bay ..	Gaspatee	Wellington Park, 21, Sandhurst Street, Port-of-Spain	E. Seraphin	4	"
57	F. J. Masson ..	Chaguaramas	Geo. Dranguet, Charlotte Street, Port-of-Spain	F. B. Masson	6	"
58	Clifton Hill ...	St. Joseph Road	J. T. Gittens, 25, Phillip Street, Port-of-Spain	John Lashley	5	"
59	Bourne Bay ...	Gaspatee	J. T. Gittens, 25, Tragarete Road,	M. Goveia	12	"
60	La Pena ...	Clifton Hill	Mrs. B. Blackman, 5, Duke Street,	Chas. Mann	4	"
61	Aranguéz Farm ...	San Juan	Mrs. M. H. Rapsey, Maraval	Ronald A. Boyack	22	Gravel.



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Council Paper No. 39 of 1918.

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MINES DEPARTMENT.

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## MINES DEPARTMENT.

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M.P. No. 1572/1918.

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 ended 31st December, 1917.

## OFFICIAL DUTIES.

2. Owing to the continuation of the War no increase was made to the staff of the Department during the year.

## LEAVE.

3. No officer of the Department was on leave of absence outside the Colony during the year.

## LEGISLATION.

4. Two Ordinances were passed, one to amend the Petroleum Spirit and Petroleum Oil Excise Ordinance, 1914, and the other to control the acquisition of Oil-bearing lands in the Colony.

## WORK UNDER THE MINES, BORINGS AND QUARRIES ORDINANCES.

5. MANJAK. Mining operations by the Trinidad-Tarouba Oil Development Company on the Vistabella Estate, San Fernando, were recommenced during the early part of the year and are still in progress.

6. PETROLEUM. Although the number of feet drilled shews a decrease over that of the previous year, it affords me great pleasure to be able to record an increase of over 72 per cent. in the production of oil.

The figures are as follows :—

	Year ended 31st December, 1916.		Year ended 31st December, 1917.	
	Feet drilled.	Oil won. Imperial Gallons.	Feet drilled.	Oil won. Imperial Gallons
Crown Lands ...	30,835	16,758,467	42,480	37,307,980
Private Lands ...	27,555	15,717,228	9,557	18,772,934
Totals ...	58,390	32,475,695	52,037	56,080,914

New wells aggregating 44 were drilled during the period under review—38 on Crown and 6 on Private Lands—and in 31 of these oil was struck. This brings the total number of wells drilled in the Colony to 31st December, 1917, to 369, of which 199 are located on Crown Lands.

7. The number of Companies engaged in the winning of oil at the close of the year was eleven—an addition of one to the number operating at the end of 1916.

8. The Trinidad Leaseholds, Limited, continued their drilling operations on the Crown Lands leased by them in the Morne L'Enfer Forest Reserve. A very active drilling programme was carried out, resulting in a largely increased production. The construction work has been chiefly confined to the making of roads and to the erection of the various buildings incidental to increased development. A considerable amount of work has also been carried out at this Company's Shipping Depôt at Pointe-à-Pierre. The Refinery mentioned in my last report was completed and in operation for the greater part of the year. Oil Fuel to Admiralty Specification was manufactured in fair quantities and exported for the use of His Majesty's Navy. An additional pipe-line for the shipment of distillates from the storage tanks to the island jetty was also laid.

9. The Trinidad Lake Petroleum Company, Limited, have done very little drilling on their private lands at Brighton, their energies being mainly directed to the production of oil from the old wells. I understand that difficulty is being experienced in obtaining tank steamers to export the crude oil which in former years was shipped to the United States.

10. The United British Oilfields of Trinidad, Limited, have continued work on the lands held by them under lease near Guapo. The drilling has been chiefly confined to the area formerly held under Prospecting Licence by the Parry Syndicate, and a considerable production of Crude Oil has resulted. The wells on the Crown and Private lands at Point Fortin have also continued to produce. This Company's oil has been purchased by the United British Refineries, Limited, and put through their Refinery at Point Fortin—the resulting products being either exported or disposed of locally.

11. The United British West Indies Petroleum Syndicate, Limited, have continued the drilling of test wells, but, so far, without obtaining oil in paying quantities. During the early part of the year operations on the Stollmeyer block were suspended, and, since then, work has been largely confined to the areas formerly held under Prospecting Licence by Clark and Dreyfus.

12. The lease to be issued to the Trinidad Central Oilfields, Limited, has not yet been signed and, therefore, the Company is still operating under their Prospecting Licence. Towards the end of the year the drilling programme was increased, and the prospects of an enlarged production appear favourable. The pipe-line from the field at Tabaquite to their storage depôt at Claxton's Bay has been completed, but, so far, it has not been used. The Refinery has been in operation during the whole of the year, the products—petrol, kerosene, lubricating and fuel oils—finding a ready market in the West Indies. A portion of these products has also been exported to England in barrels.

13. The Trinidad Oil and Transport Company, Limited, continued drilling operations on their private lands at Barrackpore, and the production was greatly increased. Considerable quantities of Oil Fuel to Admiralty Specification were manufactured at the Refinery and sold to the Trinidad Leaseholds, Limited, who exported same for the use of His Majesty's Navy. In addition the local requirements of a number of sugar estates were supplied. Some small alterations to the refinery were made and additional tank storage provided.

14. The Petroleum Development Company, Limited, have suffered from the same lack of shipping facilities as the Trinidad Lake Petroleum Company, Limited, by whom all their production is taken. A small quantity of drilling work was undertaken. The existing wells continued to produce oil which, as hitherto, was pumped to the storage tanks of the Trinidad Lake Petroleum Company at Brighton.

15. Small quantities of oil have been obtained from the wells on the Perseverance Estate, the property of Mr. C. C. Stollmeyer.

16. The Trinidad United Oilfields, Limited, who are operating on Crown Lands under lease at Palo Seco, did no drilling during the period under review. A fair production of oil was obtained from the wells already drilled, and this was treated in the refinery—petrol and kerosene being obtained and sold locally. I am given to understand that this Company intends to resume drilling operations at an early date.

17. The wells situated on private lands at Pointe Ligoure and the property of the T. O. P., Limited, continued to produce oil in small quantities.

18. The Oil Exploration of Trinidad, Limited, commenced operations on Private Lands at Guayaguayare, but, so far, oil has not been met with in paying quantities.

19. No work has been done by any of the following Companies during the year :—The Cruse Syndicate, Limited; The Oil Concessions of Mayaro (Trinidad) Limited; The Trinidad-Tarouba Oil Development Company; The Trinidad Silverstream Oilfields, Limited; and the Icaos (Trinidad) Development Company, Limited.

20. I am pleased to be able to report that the Royalty earned during the past year was nearly double that earned during 1916 being £14,616 as against £7,765. The major portion of this, namely, £14,269, was derived from oil won from lands held under lease, while £347 were obtained from lands held under Prospecting Licence.

21. The way-leave payable in respect of pipe-lines laid along the Trinidad Government Railway and along the Public Roads of the Colony also shewed a very considerable increase, as £2,599 became due for oil piped along the Railway and £1,039 for oil piped along Roads—the corresponding figures for the previous year being £256 and £115, respectively. In addition to this £11 were charged for crossing with pipe-lines the Foreshore, Railway and Roads.

22. The usual returns in respect of drilling work, and the extraction and disposal of the oil, have been regularly submitted by the Companies concerned, and after being checked have been filed with the records in the office.

23. INSPECTIONS. In addition to the routine inspections which have been regularly made by the Officers of the Department, it was, as usual, necessary to carry out a considerable number of additional ones in connection with accidents, royalty, wayleave, refineries, the exclusion of water

from wells, etc. In most cases it was found that the Ordinances and Regulations were satisfactorily followed. There was, however, one instance in which proceedings had to be taken against the Manager of one of the Oil Companies.

24. LEASES AND LICENCES. No Licence or Lease over Crown Lands were issued during the year. As mentioned in my last report an application was received from the United British West Indies Petroleum Syndicate, Limited, covering the whole of the areas they desire to take up under Prospecting Licence. The Licence has, however, not yet been executed. The Lease to be issued to the Trinidad Central Oilfields, Limited, is also awaiting execution.

25. QUARRIES. The remark under this head in my last report as to there being little to report in this branch still holds good, as, with the exception of a few Government Quarries, they are small and unimportant. They have been regularly inspected by the Officers of the Department, and in most cases they have been worked in a careful manner. There were 68 quarries worked during the year, as against 61 in 1916.

#### WORK UNDER THE PETROLEUM ORDINANCE, NO. 20 OF 1915.

26. A large number of Inspections in connection with this Ordinance have been carried out, and I am pleased to say that in most cases it was found that the utmost care was exercised by the public in storing the various products of petroleum.

#### THE PREVENTION OF ACCIDENTS ORDINANCE, NO. 13 OF 1915.

27. In addition to the Oilfields 82 Factories in Trinidad and 16 in the Tobago Ward were inspected. On the whole the provisions of the Ordinance were very satisfactorily carried out by the owners and managers of the various Factories concerned. During the year there were seven accidents, of which four were fatal.

#### WORK UNDER THE ASPHALT INDUSTRY REGULATION ORDINANCE.

28. I have again to report that there has been no digging of the village lots at La Brea during 1917. I do not anticipate that this industry will be re-opened until there are more shipping facilities.

29. APPENDICES. The majority of the returns under the Ordinances from which the appendices to this report are prepared were obtained from the various parties without trouble.

Appendix A shews the average number of persons employed and the quantity and value of minerals obtained.

The list of accidents is shewn in Appendix B, they are chiefly of a minor nature, and are such as are incidental to all industrial operations.

The Mines, Borings and Quarries worked during the period are shewn in Appendix C.

30. GENERAL REMARKS. As mentioned in my last report some of the smaller Companies are awaiting the close of the War to commence or extend operations. On the other hand the larger Companies have on the whole done well, and this in spite of their having been seriously handicapped by the scarcity and greatly increased cost of materials, and by the lack in certain instances of shipping facilities. Regular shipments of Crude Oil, Oil Fuel and Distillates have been made to the Admiralty for the use of His Majesty's Navy, and these are likely to continue for some time to come. The bunkering trade has also continued to progress satisfactorily—and the same may be said of the local and West Indian Markets. The total quantity of Oil and its products exported exceeded 37,000,000 Imperial gallons, an increase of some 3,000,000 gallons over the previous year.

31. STAFF. I have again to express my sincere thanks to the several members of the staff for their very able and loyal assistance.

P. STEVENS,  
Inspector of Mines.

22nd March, 1918.

## APPENDIX A.

Daily average number of persons employed and quantity and value of Minerals obtained from Mines, Oilfields and Quarries, during the year ended 31st December, 1917.

MINERALS.	Daily average number of persons employed.		Total.	Quantity.	Approximate Value.
	Males.	Females.			
Oil ... ..	1,792	65	1,857	50,080,914 Imp. Gals.	£ 236,534
Asphalt ... ..	542	..	542	131,483 tons ..	87,769
Manjak ... ..	22	2	24	434 ,, ..	1,808
Private Quarries (Limestone, Gravel, &c.) ..	165	53	223	90,040 ,, ..	4,392
Government Quarries (Limestone, &c.) ..	327	103	430	66,771 ,, ..	10,541

NOTE:—The difference in value between metal won from Private Quarries and Government Quarries is that the former consists of both Limestone and Gravel, whilst the latter is chiefly Limestone.

## APPENDIX B.

List of Accidents which occurred at Mines, Oilfields and Quarries, during the year ended 31st December, 1917, reported under Section 19 of Ordinance, No. 13 of 1907.

Name of Mine, Oilfield or Quarry.	Date.	Number of Accidents Reported.			
		Minor.	Serious.	Fatal.	Total.
Trinidad Leaseholds, Limited	11th January, 1917	1	..	..	1
	22nd ,, ,,	2	..	..	2
	19th February ,, ,,	1	..	..	1
	21st ,, ,,	1	..	..	1
	22nd ,, ,,	1	..	..	1
	20th April, ,, ,,	1	..	..	1
	30th May, ,, ,,	1	..	..	1
	31st ,, ,,	1	..	..	1
	7th June, ,, ,,	3	..	..	3
	15th ,, ,,	..	1	..	1
	2nd July, ,, ,,	1	..	..	1
	7th August, ,, ,,	1	..	..	1
	11th ,, ,,	..	1	..	1
	16th ,, ,,	..	1	..	1
3rd September, ,, ,,	1	..	..	1	
Trinidad Central Oilfields, Ltd.	24th ,, ,,	2	1	..	3
	8th November ,, ,,	1	..	..	1
	23rd ,, ,,	1	..	..	1
	5th March ,, ,,	1	..	..	1
	27th November, ,, ,,	..	1	..	1
Trinidad Oil & Transport Co., Ltd.	30th ,, ,,	1	..	..	1
	13th February, ,, ,,	2	..	..	2
	17th May, ,, ,,	..	1	..	1
	28th July, ,, ,,	..	..	1	1
Trinidad Lake Petroleum Co., Ltd.	4th September ,, ,,	..	1	..	1
	11th December, ,, ,,	1	..	..	1
	15th ,, ,,	1	..	..	1
	17th ,, ,,	1	..	..	1
United British Oilfields of Trinidad Limited.	10th June, ,, ,,	..	1	..	1
	13th August, ,, ,,	..	..	2	2
	26th September, ,, ,,	..	..	1	1
	12th January, ,, ,,	1	..	..	1
Perseverance Estate	24th April, ,, ,,	..	1	..	1
	12th May, ,, ,,	..	1	..	1
	25th July, ,, ,,	..	1	..	1
	16th August, ,, ,,	..	1	..	1
La Brea Asphalt Works	29th ,, ,,	..	1	..	1
	23rd April ,, ,,	1	..	..	1
New Trinidad Lake Asphalt Co., Ltd.	26th October, ,, ,,	1	..	..	1
	31st March, ,, ,,	..	1	..	1
Usine Quarry	17th September, ,, ,,	1	..	..	1
	7th February, ,, ,,	1	..	..	1
Bourne's Bay Quarry	3rd May, ,, ,,	1	..	..	1
	6th November, ,, ,,	1	..	..	1
Duke Street Quarry	13th June, ,, ,,	1	..	..	1
	30th October, ,, ,,	..	1	..	1
	24th November, ,, ,,	1	..	..	1
Eastern Quarries	..	..	..	..	..
	..	..	..	..	..
		35	15	4	54

APPENDIX C.—List of Mines, Oilfields and Quarries worked during the year ended 31st December, 1917.

No.	Name.	Situation.	Owner and Address.	Manager.	Daily Average Number of persons employed.	Mineral worked.
<i>Mines.</i>						
1	La Brea Asphalt Works	La Brea	Stollmeyer, Limited, Port-of-Spain	Claude Phelps	125	Asphalt.
2	New Trinidad Lake Asphalt Company, Limited	Brighton	New Trinidad Lake Asphalt Company, Limited, Brighton, Trinidad	John H. Weller	417	"
3	Vistabella	San Fernando	Trinidad Tarouba Oil Development Company	J. J. Waddell	24	Manjak.
<i>Oilfields.</i>						
1	Trinidad Central Oilfields, Limited	Tabaquite	Trinidad Central Oilfields, Limited, 2, Broad Street Place, London, E.C.	R. H. May	259.4	Oil.
2	Trinidad Oil and Transport Company, Limited	Barrackpore	Trinidad Oil & Transport Company, Limited, 48, Canon Street, London, E.C.	Latham Watson	102	"
3	Trinidad United Oilfields, Limited	Palo Seco	Trinidad United Oilfields Ltd., Finsbury Court, London, E.C.	P. C. Bird	23.27	"
4	Perseverance Estate	Guapo	C. C. Stollmeyer, Port-of-Spain	E. Pereira	14	"
5	United British West Indies Petroleum Syndicate, Limited	San Fernando, Siparia and Moruga	United British West Indies Petroleum Syndicate, Limited, P.O. Box 162, Port-of-Spain	F. J. Flemming	59	"
6	United British Oilfields of Trinidad, Limited	Point Fortin	United British Oilfields of Trinidad, Limited, 32, Bishopsgate, London, E.C.	"	553	"
7	Trinidad Leaseholds, Limited	Forest Reserve near Fyzabad	Trinidad Leaseholds, Limited, 1, London Wall Buildings, London, E.C.	H. S. Fuller	395	"
8	Trinidad Leaseholds, Limited	Pointe-à-Pierre	Trinidad Leaseholds, Limited, 1, London Wall Buildings, London, E.C.	"	230	"
9	Petroleum Development Company, Limited	Brighton	Petroleum Development Company, Limited, Brighton	John H. Weller	65	"
10	Trinidad Lake Petroleum Company, Limited	Brighton	Trinidad Lake Petroleum Company, Limited, Brighton	"	137	"
11	T. O. P., Limited	Pointe Ligoure	T. O. P., Limited, 18, Chacon Street, Port-of-Spain	L. Daly	3	"
12	Oil Exploration of Trinidad, Limited	Guayaguayare	Oil Exploration of Trinidad, Limited, 62, London Wall	R. Rust	17	"
<i>Quarries.</i>						
1	River Estate	Diego Martin	Trinidad Government, Port-of-Spain	District Officer	3.21	Limestone.
2	Cutucupano	Santa Cruz	" " "	"	3.50	"
3	Mat hapoorie	Talparo	" " "	"	6.4	"
4	Trinidad Government Railway	St. Joseph	" " "	"	9	"
5	Old Grange Main Road	Tobago	" " "	"	2.11	Marl.
6	Mt. Parnassus	Tobago	" " "	"	3.46	Rotten Rock.
7	Plum	Plum Road	" " "	"	8	Limestone.
8	Siparia	Siparia	" " "	"	12	Porcellanite.
9	Buenos Ayres	Erin	" " "	"	7	"
10	Morne Diable	San Fernando	" " "	"	11	Limestone.
11	Southern Central Road, No. 1	Cedros	" " "	"	8	Porcellanite.
12	Brasso	Brasso Road	" " "	"	5	Limestone.
13	Corosal	Corosal	" " "	"	13	"
14	Guaracara	Guaracara	" " "	"	5.94	"
15	Morichal	Morichal	" " "	"	3	"
16	Mayo	Near Mayo Village	" " "	"	5	"
17	Tabaquite-Nariva No. 1	Tabaquite-Nariva Road	" " "	"	9.44	"
18	Mount Hope	St. Joseph	" " "	J. McInroy	9	"
19	Moruga	Moruga Road	" " "	District Officer	8	Sandstone.
20	Eastern Quarries	Laventille	" " "	F. J. Horsford	129	Limestone.

APPENDIX C. - List of Mines, Oilfields and Quarries worked during the year ended 31st December, 1917.—Continued

No.	Name.	Situation.	Owner and Address.	Manager.	Daily Average Number of Persons Employed.	Mineral Worked.
<i>Quarries—Continued.</i>						
21	Prisoners ...	Port-of-Spain ...	Trinidad Government, Port-of-Spain ...	Supt. of Prisons ...	30	Limestone.
22	Carrera Island ...	Carrera Island ...	" " " " " "	H. Daniel... ..	78	" "
23	Point Radix ...	Mayaro ...	" " " " " "	District Officer ...	7	" "
24	Fishing Pond ...	Yaigual ...	" " " " " "	" " " " " "	3	" "
25	Tamana Quarry 5½ mile	Tamana Road ...	" " " " " "	" " " " " "	7	" "
26	Guaico-Tamana Road 8th mile	Guaico-Tamana Road	" " " " " "	" " " " " "	13	" "
27	" " 10th "	" " " " " "	" " " " " "	" " " " " "	4	" "
28	" " 11th "	" " " " " "	" " " " " "	" " " " " "	6	" "
29	Cunapo Southern 13½ "	Cunapo Southern Road	" " " " " "	" " " " " "	7	" "
30	" " 16½ "	" " " " " "	" " " " " "	" " " " " "	3	" "
31	Tamana-Cumuto Rd. 17th "	Tamana-Cumuto Road	" " " " " "	" " " " " "	4	" "
32	Mandillon ...	Mandillon Road	" " " " " "	" " " " " "	6	Gravel.
33	La Pique ...	San Fernando ...	Canadian Mission, San Fernando	W. Boopsingh ...	3	" "
34	Usine ...	" " " " " "	St. Madeleine Sugar Company, Limited	O. P. Bennett ...	6	" "
35	Borough Council ...	" " " " " "	Borough Council, San Fernando	J. J. Waddell ...	1	Marl.
36	Circular Road ...	" " " " " "	" " " " " "	" " " " " "	1	" "
37	Stollmeyer's ...	Guapo ...	C. C. Stollmeyer, Port-of-Spain	E. Pereira... ..	8	Sandstone.
38	Bandhoo... ..	San Juan ...	Bandhoo, San Juan ...	Jonwa Jaffar ...	2	Gravel.
39	Les Champs Elysees Estate	Maraval ...	Mrs. Poleska de Boissière, Maraval	C. Mohan ...	12	" and Sand.
40	" " No. 2 ...	" " " " " "	" " " " " "	Boodoo ...	3	Limestone.
41	Mahon ...	Carenage ...	George Mahon, Hart's Cut	T. Alexander ...	3	" "
42	Thomas Bay ...	Gaspatee ...	Wellington Park, 21, Sandhurst Street, Port-of-Spain	E. Seraphim ...	2	" "
43	La Coulée ...	San Fernando ...	Heirs of Mary Joaquin, 99, Coffee Street, San Fernando	F. E. Olliviera ...	2	Gravel.
44	Bourne's Bay ...	Gaspatee ...	J. T. Gittens, 25, Tragarete Road, Port-of-Spain	M. Govia ...	6	Limestone.
45	San Juan ...	San Juan ...	F. J. Gransaul, St. Joseph ...	L. Brown ...	2	Gravel.
46	Champ Fleurs ...	St. Joseph ...	" " " " " "	" " " " " "	3	Limestone.
47	St. Joseph No. 1 ...	San Fernando ...	A. W. Harewood & P. P. Pickering, San Fernando	P. P. Pickering ...	1	Gravel.
48	" " 2 ...	" " " " " "	" " " " " "	" " " " " "	1	" "
49	St. John Gravel Pit ...	Carapichaima ...	Amelio Bailey, Freeport Village	J. Malony... ..	4	" "
50	Duke Street ...	12, Duke St., Port-of-Spain.	Virginia Prime, 12, Duke Street, Port-of-Spain	C. Atwell ...	9	Limestone.
51	Pointe-à-Pierre ...	Pointe-à-Pierre ...	H. R. McLean, San Fernando ...	S. O. Rudin ...	12	Sandstone.
52	Savary Bay ...	Gaspatee ...	" " " " " "	" " " " " "	5	Blue Limestone.
53	Mary William ...	Gasparillo ...	" " " " " "	" " " " " "	44	White Limestone.
54	Glendale ...	San Fernando ...	" " " " " "	H. R. McLean ...	18	Gravel.
55	Charles ...	" " " " " "	Lewis Charles, 115, Tragarete Road, Port-of-Spain	C. Lucas ...	1	" "
56	Silver Mill... ..	San Juan ...	J. T. Gittens, 25, Tragarete Road, Port-of-Spain	C. A. Gittens ...	4	" "
57	Campo Street ...	" " " " " "	" " " " " "	" " " " " "	6	Limestone.
58	Gonzales ...	Gloster Lodge ...	" " " " " "	J. Lashley... ..	6	" "
59	St. John Street ...	East Dry River... ..	" " " " " "	" " " " " "	5	" "
60	Basilon Street ...	" " " " " "	" " " " " "	" " " " " "	15	" "
61	Irving Lane ...	Clifton Hill ...	" " " " " "	" " " " " "	5	" "
62	Masson ..	Pointe Gourde ..	Lee Lum and Heirs of George Dranguet, Port-of-Spain	F. B. Masson ...	5	Blue Limestone.
63	Boca View... ..	Gaspatee ...	T. de Fague, 26, Frederick Street, Port-of-Spain	T. de Fague ...	3	Limestone.
64	Cocorite Farm ...	Mucurapo ...	The Port-of-Spain City Council	Philip Charles ...	4	" "
65	Stanislaus ...	Laventille ...	J. T. Gittens, 25, Tragarete Road, Port-of-Spain	J. Lashley ...	3	" "
66	Aranguez Farm ...	San Juan ...	Mrs. M. A. Rapsey, Maraval ..	J. P. Potter ...	15	Sand and Gravel.
67	La Pena ...	Port-of-Spain ...	Blanche Blackman, 5, Duke Street, Port-of-Spain	J. Anthony ...	3	Limestone.
68	Plum ...	Manzanilla ...	Manzanilla Local Road Board, Sangre Grande	A. P. William ...	2	" "

TRINIDAD AND TOBAGO.

Council Paper No. 46 of 1919.

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# MINES.

Administration Report of the Inspector of Mines for 1918.

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*Laid before the Legislative Council on  
the 4th April, 1919.*

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## MINES.

## Administration Report of the Inspector of Mines for 1918.

Council Paper No. 46 of 1919.

M.P. No. 2053/19.

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 ended 31st December, 1918:—

## OFFICIAL DUTIES.

2. Owing to the continuation of the War no increase was made to the Staff during 1918, but the Secretary of State having sanctioned the amalgamation of the Crown Lands and Mines Departments the re-organisation consequent thereon will shortly be effected.

## LEAVE.

3. No officer of the Department was on leave of absence outside the Colony during the year.

## LEGISLATION.

4. No further legislation in connection with the Department was enacted.

## WORK UNDER THE MINES, BORINGS AND QUARRIES ORDINANCES.

5. MANJAK. Mining operations by the Trinidad-Tarouba Oil Development Company on the Vistabella Estate, San Fernando, were suspended in April.

6. PETROLEUM. The number of feet drilled shews a slight increase over that of 1917, and the production of oil an increase of nearly 30 per cent.

The figures are as follows:—

	Year ended 31st December, 1917.		Year ended 31st December, 1918.	
	Feet drilled.	Oil won. Imperial Gallons.	Feet drilled.	Oil won. Imperial Gallons.
Crown Lands ...	42,480	37,307,980	47,487	55,609,748
Private Lands ...	9,557	18,772,934	6,751	17,262,650
Totals ...	52,037	56,080,914	54,238	72,872,398

During 1918 the number of new wells drilled was 41 (37 on Crown and 4 on Private lands) and in 29 of these oil was struck. The total number of wells drilled in the Colony to 31st December, 1918, is 410 of which 236 are on Crown Lands.

7. Companies engaged in the winning of oil numbered 12 as against 11 at the end of 1917.

8. During the year the Trinidad Leaseholds, Limited, acquired the property at Barrackport from the Trinidad Oil and Transport Company, Limited, and a fair production of oil is being obtained therefrom. On the Crown Lands of the Morne L'Enfer Reserve held by them under Lease work has progressed satisfactorily and the production has been considerably increased. In several of the wells the oil is extracted by means of compressed air. Most of the oil is refined at the Company's Refinery at Pointe-à-Pierre; this Refinery has been in operation during the whole of 1918 and has given excellent results. Considerable quantities of Oil Fuel to Admiralty Specification, White Oil and Petrol have been manufactured and exported for the use of His Majesty's Navy. It having been found that the waters of the Gulf of Paria had a very detrimental effect on the pipe lines laid on the sea bed for the purpose of shipping oil, these lines have now been taken up and laid on piles from the sea shore to the island jetty. The Company now possesses four pipe lines for shipping different grades of oil. A number of storage tanks, bungalows, &c., have also been erected during the period under review.

9. The Trinidad Lake Petroleum Company, Limited, did no drilling on their private lands at Brighton, but continued to produce oil from the old wells. They have large stocks of Crude Oil on hand owing to the difficulties experienced in obtaining shipping facilities. One cargo of oil was shipped by the Company to the Admiralty.

10. Drilling by the United British Oilfields of Trinidad, Limited, on the Parry area near the Morne L'Enfer Forest Reserve has been continued and a fair production of oil obtained. Oil has also been extracted from the old wells in the vicinity of Point Fortin. The whole of the production has been sold to the United British Refineries, Limited, at Point Fortin, and the resulting products either exported or disposed of locally.

11. The United British West Indies Petroleum Syndicate, Limited, have continued drilling on the areas formerly held under Licence by Clark and Dreyfus. A small production of a fairly high grade oil, which has been sold to the United British Refineries, Limited, has been obtained from the Clark area.

12. The Trinidad Central Oilfields, Limited, have now taken a lease over a considerable portion of the Crown lands formerly held by them under Prospecting Licence at Tabaquite. In my last report I stated that the prospects of an enlarged production appeared favourable, and I am pleased to say my anticipations have been realised—the production of this Company having of late very largely increased. The oil obtained is of the highest quality. Considerable quantities of the Crude Oil have been refined on the Field, the balance being pumped to their Storage and Shipping Depot at Claxton's Bay. Towards the close of the year a bulk shipment was made to the Admiralty.

13. The Petroleum Development Company, Limited, have continued to produce oil from the old wells, and this oil has, as in former years, been disposed of to the Trinidad Lake Petroleum Company, Limited. When the shipping situation becomes easier it is expected that operations will be resumed on a much larger scale.

14. Mr. C. C. Stollmeyer has not drilled any new wells on the Perseverance Estate at Guapo, but has obtained a small production from the existing wells.

15. I regret to state that the Trinidad United Oilfields, Limited, have not yet resumed drilling on the Crown Lands held by them under Lease at Palo Seco. The wells already drilled have produced oil in small quantities. This has been passed through their Refinery and the resulting products disposed of locally.

16. The Company known as the T. O. P. Limited, is now the Transvaal and Rhodesian Estates, Limited, and from wells situated on their private lands at Point Ligoure small quantities of oil have been obtained.

17. The Oil Exploration of Trinidad, Limited, continued drilling operations on their private lands at Guayaguayare during the early part of the year but were not successful in striking oil.

18. The Ière Oil Company, Limited, the capital of which has been subscribed locally, drilled two wells on private lands near Barrackpore and quite lately from one of these wells oil has been obtained.

19. Another new Company—the London and West Indies Oil Company, Limited—commenced drilling operations on private lands adjoining the Crown Lands held under Lease by the Trinidad Leaseholds in the Morne L'Enfer Forest Reserve. So far one well has been drilled and oil struck.

20. The Cruse Syndicate, Limited, and the Oil Concessions of Mayaro (Trinidad), Limited, have been absorbed by the Trinidad Central Oilfields, Limited, and an Agreement with the Government has been entered into regarding the taking up of a Licence and Lease over these and other lands.

21. No work has been done by any of the following Companies:—The Trinidad-Tarouba Oil Development Company; The Trinidad Silverstream Oilfields, Limited; and the Icacos (Trinidad) Development Company, Limited.

22. The Royalty earned during 1918 was £18,542 as against £14,616 in 1917. Leases accounted for £18,485 and Licences for £57.

23. The Revenue obtained from way-leave in respect of pipe lines laid along the Trinidad Government Railway and along the Public Roads of the Colony has also shewn an increase. The amounts for 1918 are Railways £3,167 and Roads £1,334, as against £2,599 and £1,039, respectively, for 1917. Fees charged for crossing the Foreshore, Railway and Roads with pipe lines amounted to £14.

24. The Companies have regularly submitted the various returns in respect of drilling work, and the extraction and disposal of the oil. These, after being checked, have been filed with the office records.

25. **INSPECTIONS.** The Officers of the Department have carried out the usual routine inspections, in addition to which a large number of special inspections in connection with accidents, royalty, way-leave, refineries, and exclusion of water from wells have been made, and it has been found that in the majority of cases the provisions of the Ordinances and Regulations have been carefully carried out. It has not been necessary to institute any prosecutions.

26. **LEASES AND LICENCES.** A Mining Lease over 1,000 acres of Crown Lands was issued to the Trinidad Central Oilfields, Limited. The Prospecting Licence to the United British West Indies Petroleum Syndicate, Limited, mentioned in my last report, has not yet been executed.

27. **QUARRIES.** Have been regularly inspected and in most cases found to be worked in a careful manner. In 1918 the number of quarries worked was 73 as compared with 68 in 1917.

#### **WORK UNDER THE PETROLEUM ORDINANCE, No. 20 OF 1915.**

28. The premises in which the various products of Petroleum are stored have been carefully inspected, and it is satisfactory to note that as a rule great care is exercised in the storing of these products.

**THE PREVENTION OF ACCIDENTS ORDINANCE, No. 13 OF 1915.**

29. Regular visits have been paid to the various factories, and I am pleased to be able to report that the provisions of the Ordinance have been most carefully followed. In all 83 factories in Trinidad and 12 in Tobago were inspected. During the year there were eight accidents of which two proved fatal.

**WORK UNDER THE ASPHALT INDUSTRY ORDINANCE.**

30. No work was done on the Village Lots at La Brea during 1918, but I understand that operations may be resumed so soon as freights are reduced.

31. APPENDICES. Appendix A shews the average number of persons employed and the quantity and value of minerals obtained.

The accidents shown in Appendix B were chiefly of a minor nature.

In Appendix C is given a list of the Borings and Quarries worked during 1918.

A comparative statement of oil produced, refined and exported is given in Appendix D.

32. GENERAL REMARKS.—During the past year the Petroleum Industry has progressed satisfactorily. Some of the larger Companies have continued to do well, and now that the War is practically over it is expected that the smaller Companies will shortly resume or extend operations. It must also be noted that the oil rights over large tracts of land have lately been acquired by some influential British Companies, so that everything considered the future prospects of the Trinidad oil industry appear excellent. The shipments of Crude Oil, Oil Fuel and Distillates to the Admiralty have largely increased and I understand are likely to continue to do so. A good business has been done in 'bunkering' and the prospects for a considerable and continuous increase are very favourable. The Local and West Indian trade continues to make excellent progress. During the twelve months ended 31st December, 1918, the export of oil and its products amounted to 45,000,000 Imperial Gallons as against 37,000,000 for 1917.

33. STAFF. It affords me the greatest pleasure to record my sincere appreciation of the very able and loyal assistance I have invariably received from all members of the Staff.

P. STEVENS,  
Inspector of Mines.

26th March, 1919.

## APPENDIX A.

Daily average number of persons employed and quantity and value of Minerals obtained from Mines, Oilfields and Quarries, during the year ended 31st December, 1918.

MINERALS.	Daily average number of persons employed.		Total.	Quantity.	Approximat Value.
	Males.	Females.			
Oil ... ..	2,262	49	2,311	72,872,398 Imp. Galls.	£301,016
Asphalt ... ..	521	...	521	71,233 Tons ...	44,520
Manjak ... ..	37	2	39	171 ,, ...	534
Private Quarries (Limestone, Gravel, etc.)..	1,544	63	1,607	91,320 ,, ...	5,888
Government Quarries (Limestone, etc.) ..	492	101	593	79,306 ,, ...	11,898

NOTE.—The difference in value between metal won from Private Quarries and Government Quarries is that the former consists of both Limestone and Gravel whilst the latter is chiefly Limestone.

## APPENDIX B.

List of Accidents which occurred at Mines, Oilfields and Quarries, during the year ended 31st December, 1918, reported under Section 19 of Ordinance, No. 13 of 1907.

Name of Mine, Oilfield or Quarry.	Date.	Number of Accidents Reported.			
		Minor.	Serious.	Fatal.	Total.
Trinidad Leaseholds, Limited	12th January, 1918 ...	2	..	...	2
	18th ,, ,, ...	...	1	...	1
	15th February, ,, ...	1	...	...	1
	22nd ,, ,, ...	...	...	1	1
	4th March, ,, ...	1	...	...	1
	4th April, ,, ...	1	...	...	1
	26th ,, ,, ...	1	...	...	1
	17th May, ,, ...	1	...	...	1
	31st ,, ,, ...	1	...	...	1
	21st June, ,, ...	...	...	1	1
	6th July, ,, ...	1	...	...	1
	13th ,, ,, ...	1	...	...	1
	29th ,, ,, ...	...	1	...	1
	6th August, ,, ...	1	...	...	1
	28th ,, ,, ...	...	1	...	1
	3rd September, ,, ..	1	...	...	1
	10th ,, ,, ...	1	1	...	2
17th ,, ,, ...	1	...	...	1	
9th October, ,, ...	2	...	...	2	
9th November, ,, ...	1	...	...	1	
11th ,, ,, ...	1	...	...	1	
29th ,, ,, ...	1	...	...	1	
11th December, ,, ...	...	1	...	1	
28th ,, ,, ...	...	1	...	1	
William Bertram Mitford ...	9th ,, ,, ...	3	...	...	3
Trinidad Central Oilfields, Limited...	5th January, ,, ..	1	...	...	1
	29th ,, ,, ...	1	...	...	1
	22nd March, ,, ..	1	...	...	1
	30th May, ,, ...	...	1	...	1
	23rd September, ,, ...	1	...	...	1
United British Oilfields of Trinidad, Limited	4th October, ,, ...	1	...	...	1
	10th December, ,, ...	1	...	...	1
	19th ,, ,, ...	1	...	...	1
La Brea Asphalt Works	23rd ,, ,, ...	...	1	...	1
	7th January, ,, ...	...	1	...	1
Glendale Quarry	8th October, ,, ...	...	..	1	1
	8th January, ,, ...	1	...	...	1
Morne Diable Quarry (No. 1)	30th ,, ,, ...	...	1	...	1
	23rd February, ,, ...	1	...	...	1
Eastern Quarry...	26th August, ,, ..	1	...	...	1
	1st May, ,, ...	1	...	...	1
	5th October, ,, ..	1	...	...	1
Havering Estate	8th November, ,, ...	...	...	1	1
	2nd December, ,, ...	...	1	...	1
	12th July, ,, ..	...	1	...	1
		34	12	4	50

APPENDIX C.

No.	Name.	Situation.	Owner and Address.	Manager.	Daily Average Number of persons employed.	Mineral worked.
<i>Mines.</i>						
1	La Brea Asphalt Works	La Brea	Stollmeyer, Limited	Claude Phelps	121	Asphalt.
2	New Trinidad Lake Asphalt Co., Limited	Brighton	New Trinidad Lake Asphalt Company, Ltd., Brighton, Trinidad.	John H. Weller	400	"
3	Vistabella	San Fernando	Trinidad-Tarouba Oil Development Company, San Fernando	J. J. Waddell	39	Manjak.
<i>Oilfields.</i>						
1	Trinidad United Oilfields, Limited	Palo Seco	Trinidad United Oilfields, Limited, 40-42, Broad Street Avenue, London, E. C.	P. C. Bird	19.39	Oil.
2	Transvaal and Rhodesian Estates, Limited	Pointe Ligoure	Transvaal and Rhodesian Estates Limited, London	L. S. Daly	2	"
3	Perseverance Estate	Guapo	C. C. Stollmeyer, Port-of-Spain	E. Pereira	9	"
4	Trinidad Central Oilfields, Limited	Tabaquite	Trinidad Central Oilfields, Limited, 2, Broad Street Place, London, E.C. 2.	R. H. May	378.2	"
5	Ière Oil Company, Limited	Barrackpore	Ière Oil Company, Limited, San Fernando	C. E. Burrows	30	"
6	Oil Exploration of Trinidad, Ltd.	Guayaguayare	Oil Exploration of Trinidad, Limited, 14, Chacon Street, Port-of-Spain	R. Rust	25	"
7	Trinidad Lake Petroleum Company, Limited	Brighton	Trinidad Lake Petroleum Company, Limited, Brighton	J. H. Weller	102	"
8	Petroleum Development Company, Limited	"	Petroleum Development Company, Limited, Brighton	"	51	"
9	United British Oilfields of Trinidad, Limited	Point Fortin	United British Oilfields of Trinidad, Limited, Port-of-Spain	F. J. Fleming	618	"
10	United British West Indies Petroleum Syndicate, Limited	Siparia and Moruga	United British West Indies Petroleum Syndicate, Limited, Port-of-Spain	"	84	"
11	William Bertram Mitford	Oropuche	W. B. Mitford, Hampstead, London	R. Slye	14	"
12	Trinidad Leaseholds, Limited	Fyzabad	Trinidad Leaseholds, Limited, 1, London Wall Buildings, E. C.	H. S. Fuller	446	"
13	"	Barrackpore	"	"	132	"
14	"	Pointe-à-Pierre	"	"	401	"
<i>Quarries.</i>						
1	Plum No. 1	Sangre Grande	Trinidad Government, Port-of-Spain	District Officer	2.98	Limestone.
2	Fishing Pond No. 1	"	"	"	2.14	Porcellanite.
3	" No. 2	"	"	"	4.48	"
4	Mandillon	"	"	"	4.4	Limestone
5	Plum No. 2	"	"	"	6.27	"
6	" 3	"	"	"	3.06	"
7	San Chu Chu	"	"	"	6.31	"
8	Guaico-Tamana 7½ Mile	"	"	"	10	"
9	Cumuto Road 17th	Cumuto	"	"	5.25	"
10	Morne Diable No. 1	San Fernando	"	"	11	"
11	" No. 2	"	"	"	18	"
12	Buenos Ayres	Erin	"	"	6	Porcellanite.
13	Siparia	Siparia	"	"	9	"
14	Brasso	Brasso	"	"	7.82	Limestone.
15	Corosal	"	"	"	13	"

APPENDIX C.—CONTINUED.

Name.	Situation.	Owner and Address.	Manager.	Daily Average Number of persons employed.	Mineral worked.	
<i>Quarries.—Contd.</i>						
16	Morichal ... ..	Brasso ... ..	Trinidad Government, Port-of-Spain ... ..	District Officer ... ..	4	Limestone.
17	Mayo ... ..	" ... ..	" ... ..	" ... ..	5	"
18	Guaracara... ..	" ... ..	" ... ..	" ... ..	6	"
19	Providence ... ..	Tobago ... ..	" ... ..	" ... ..	4.28	Dead Rock.
20	Mount Parnassus ... ..	" ... ..	" ... ..	" ... ..	2.94	"
21	Eastern ... ..	Laventille ... ..	" ... ..	F. J. Horsford ... ..	128	Limestone.
22	Southern Road 73½ Mile	Cedros ... ..	" ... ..	District Officer ... ..	7	Porcellanite.
23	" 72½ "	" ... ..	" ... ..	" ... ..	7	"
24	Chatham Main Road 5th mile	" ... ..	" ... ..	" ... ..	10	"
25	Matchapoorie ... ..	Arina ... ..	" ... ..	" ... ..	5	Limestone.
26	Moruga ... ..	Moruga Road ... ..	" ... ..	" ... ..	15	Sandstone.
27	Point Radix ... ..	Point Radix ... ..	" ... ..	" ... ..	33	Limestone.
28	Morne Roche ... ..	San Fernando ... ..	" ... ..	" ... ..	5	"
29	Trinidad Government Railway	St. Joseph ... ..	" ... ..	H. A. Sharpe ... ..	8	"
30	Prisoners ... ..	Laventille ... ..	" ... ..	Supt. of Prisons ... ..	49.7	"
31	Carrera ... ..	Carrera Island ... ..	" ... ..	" ... ..	138.9	"
32	Havering Estate ... ..	Cumuto ... ..	" ... ..	District Officer ... ..	8.11	"
33	Guaico Tamana ... ..	Sangre Grande... ..	" ... ..	" ... ..	8	"
34	Moreau ... ..	Princes Town ... ..	" ... ..	" ... ..	20	Sandstone.
35	Mount Hope ... ..	St. Joseph ... ..	" ... ..	J. McInroy ... ..	7	Limestone.
36	Cutucupano ... ..	Santa Cruz ... ..	" ... ..	District Officer ... ..	6	"
37	River Estate ... ..	Diego Martin ... ..	" ... ..	" ... ..	4.5	"
38	La Coulée ... ..	San Fernando ... ..	Heirs of Joaquim, San Fernando ... ..	S. Passee ... ..	1	Gravel.
39	Basilon Street ... ..	Port-of-Spain ... ..	J. T. Gittens, South Quay, Port-of-Spain ... ..	Chas. Archibald ... ..	11	Limestone.
40	St. John's ... ..	" ... ..	" ... ..	" ... ..	4	"
41	Irving Lane ... ..	" ... ..	" ... ..	" ... ..	4	"
42	Clark's ... ..	Laventille ... ..	Chas. Newallo, 48, Oxford Street, Port-of-Spain ... ..	Chas. Newallo ... ..	38	"
43	Prizgar ... ..	" ... ..	Trinidad Shipping & Trading Co., Ltd., Port-of-Spain ... ..	C. C. Carmichael ... ..	3.4	"
44	Adivinanza ... ..	Princes Town ... ..	C. H. Packer, Princes Town ... ..	C. H. Packer ... ..	10	Sandstone.
45	Usine ... ..	San Fernando ... ..	Ste. Madeleine Sugar Company, Limited, England ... ..	A. G. Mahon ... ..	9	Gravel.
46	Boca View ... ..	Gaspree ... ..	T. de Fague, 45, Belmont Circular Road, Port-of-Spain ... ..	J. Williams ... ..	2	Limestone.
47	Masson ... ..	Pointe Gourde ... ..	Lee Lum, Port-of-Spain ... ..	F. B. Masson ... ..	5	Blue Limestone.
48	Gonzales ... ..	Laventille ... ..	L. A. Fitzwilliam ... ..	L. A. Fitzwilliam ... ..	5	Limestone.
49	Gransauil ... ..	San Juan ... ..	F. E. Gransauil, St. Joseph ... ..	L. R. Brown ... ..	2	Gravel.
50	Duke Street ... ..	Port-of-Spain ... ..	V. Prime, 12, Duke Street, Port-of-Spain ... ..	C. Attwell ... ..	7	Limestone.
51	Circular Road ... ..	San Fernando ... ..	Borough Council, San Fernando ... ..	J. J. Waddell ... ..	1	Gravel.
52	Borough Council ... ..	" ... ..	" ... ..	" ... ..	1	"
53	Pointe-à-Pierre ... ..	Pointe-à-Pierre ... ..	H. R. McLean, " ... ..	H. R. McLean ... ..	14	Sandstone.
54	Savary Bay ... ..	Gaspree ... ..	" ... ..	" ... ..	7	Limestone.
55	Glendale ... ..	San Fernando ... ..	" ... ..	" ... ..	15	Gravel.
56	Thomas Bay ... ..	Gaspree ... ..	W. Park, Sandhurst Lane, Port-of-Spain ... ..	E. Seraphin ... ..	2	Limestone.
57	Silver Mill... ..	San Juan ... ..	J. T. Gittens, 67, Tragarete Road, Port-of-Spain ... ..	C. H. Gittens ... ..	4	Sand and Gravel.
58	Campo Street ... ..	" ... ..	" ... ..	" ... ..	5	Limestone.

APPENDIX C.—CONTINUED.

No.	Name.	Situation.	Owner and Address.	Manager.	Daily Average Number of persons employed.	Mineral worked.
<i>Quarries.—Contd.</i>						
59	Bourne's Bay ...	Gasparee ...	St. Madeleine Sugar Company, Limited, San Fernando	C. H. Gittens	4	Limestone.
60	Mahon ...	Pointe Gourde ...	J. T. Gittens, 67, Tragareto Road, Port-of-Spain	"	2	"
61	Quarry Street ...	Port-of-Spain ...	"	Charles Archibald	2	"
62	Verdant Vale ...	Arima ...	Trinidad Cocoa and Coffee Co., Limited, Arima	E. Thatcher	1	"
63	Charles ...	San Fernando ...	L. Charles, 115, Tragareto Road, Port-of-Spain	C. Lucas	1	Gravel.
64	Mitchell's Bay ...	Pointe Gourde ...	J. W. Edwards, 45, Queen Street, Port-of-Spain	J. W. Edwards	2	Limestone.
65	Stollmeyer ...	Guapo ...	C. C. Stollmeyer, Port-of-Spain	E. Pereira	8	"
66	St. Joseph No. 1 ...	San Fernando ...	G. W. Harwood and P. P. Pickering, San Fernando	P. P. Pickering	1	Gravel.
67	" No. 2 ...	"	J. J. Waddell, San Fernando	"	"	"
68	Aranguez Farm ...	San Juan ...	M. A. Rapsey, Maraval	A. Maradge	15	"
69	St. Ann's ...	St. Ann's ...	Martin Campbell, St. Ann's	L. Lamorell	5	"
70	La Pena ...	Port-of-Spain ...	Mrs. Blackman, 5, Duke Street, Port-of-Spain	A. Todman	11	Limestone.
71	La Pique ...	San Fernando ...	T. L. Dunsire, San Fernando	Arch. Sandiford	2	Gravel.
72	Champs Elysee ...	Maraval ...	Mrs. P. de Boissière, Maraval	C. Mohan	12	Sand and Gravel.
73	Plum ...	Manzanilla ...	Manzanilla Local Road Board, Sangre Grande	A. P. Williams	2	Limestone.

APPENDIX D.—Comparative Statement of Oil produced, refined and exported year by year since inception of Industry.

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YEAR.	Production in Gallons.	Quantity of Crude Oil refined in Gallons.	Quantity of Crude and Refined Oil exported in Gallons.
1905-1909-10 ...	368,934	...	...
1910-11 ...	4,378,942	...	...
1911-12 ...	9,985,748	Previous to 1912-13 ... 1,324,468	7,685,374
1912-13 ...	17,626,563	331,928	4,295,707
1913-14 ...	22,523,060	1,227,134	13,570,152
1914-15 ...	36,753,931	1,449,445	12,192,289
9 months ended December, 1915 ...	23,489,362	2,045,286	14,286,585
1916 ...	32,475,695	3,773,770	34,129,955
1917 ...	56,080,914	17,675,068	37,777,919
1918 ...	72,872,398	73,722,915	45,689,234
	276,555,547	101,550,014	169,627,215

TRINIDAD AND TOBAGO

Council Paper No. 44 of 1920.

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## MINES DEPARTMENT.

Administration Report of the Inspector of Mines for the  
year 1919.

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*Laid before the Legislative Council on the  
9th April, 1920.*

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*Previous Council Paper No. 46 of 1919.*

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## MINES DEPARTMENT.

### Administration Report of the Inspector of Mines for the year 1919.

*Council Paper No. 44 of 1920.*

*M. P. No. 2470/1920.*

HON'BLE 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 ended 31st December, 1919 :—

#### Official Duties.

2. It was mentioned in the last Administration Report that the Secretary of State had sanctioned the amalgamation of the Crown Lands and Mines Departments, the details of this scheme being published in Council Paper No. 3 of 1919. The amalgamation will take place as from the date of the arrival in the Colony of the Director of Lands and Mines, but up to the time of writing no advice has been received regarding the filling of the appointment.

On the 15th July last the late Inspector of Mines, Mr. P. Stevens, went on three months leave of absence, and at the end of that period retired after 45 years service in the Colony. Since the date of his going on leave I have been acting as Inspector of Mines in addition to performing the duties of my substantive post, viz., Deputy-Inspector of Mines.

On the 19th December last the Chief Clerk, Mr. John de Nobriga, was seconded from this Department to act as Secretary to the Wages Committee, Mr. F. Delmas of the Audit Office being appointed to act in his stead.

#### Leave.

3. I was on leave of absence outside the Colony from the 20th February to the 9th July last during which time my duties were performed by Mr. N. Betancourt, the 2nd Assistant Inspector of Mines.

#### Legislation.

4. No further legislation in connection with the Department was enacted.

#### Work under the Mines, Borings and Quarries Ordinances.

5. MANJAK. This industry continues in a small way. The Trinidad-Tarouba Oil Development Company recommenced their operations during the year and in all did about 5 months work, the total output being 208 tons.

#### Petroleum.

6. GENERAL REMARKS. During the past year there has been a considerable boom in the Oil Industry and a number of Companies of good financial standing have acquired lands with a view to commencing drilling operations, and I expect that in the near future the oil bearing lands of the Colony will be developed on a very much greater scale than has been done in the past. At the present moment, however, I understand that there is considerable difficulty in obtaining prompt delivery of drilling equipment, etc., largely due to the demand in all parts of the world for machinery.

Although, as will be seen later, the number of feet drilled shews a considerable increase over that of 1918 there is a decrease in the production of oil; but I expect to see this condition of affairs altered in the near future, as wells are being drilled in entirely new districts and, if oil is found in them, the production of the Colony should be considerably increased.

The export of crude oil and its products shows an increase over last year, the figures being 49,000,000 Imperial Gallons during the year under review as against 45,000,000 Imperial Gallons for 1918. The shipments of crude oil, oil fuel and distillates to the Admiralty have continued during the whole of the year, and constitute the largest part of the oil exported from the Colony. The bunkering trade continues to make good progress, as a considerable number of ships call to replenish their bunkers with oil fuel. The local and West Indian trade is also increasing.

7. The following table will shew the number of feet drilled and the quantity of oil produced during the period under review compared with the previous year :—

	<i>Year ended 31st December, 1918.</i>		<i>Year ended 31st December, 1919.</i>	
	<i>Feet drilled.</i>	<i>Oil won. Imperial Gallons.</i>	<i>Feet drilled.</i>	<i>Oil won. Imperial Gallons.</i>
Crown Lands	... 47,487	55,609,748	49,122	53,534,295
Private Lands	... 6,751	17,262,650	18,937	10,902,337
<b>Totals</b>	... 54,238	72,872,398	68,059	64,436,632

During the year 1919 the number of new wells drilled was 53 (37 on Crown and 16 on Private Lands), an increase of 12 over the previous year and in 36 of these oil was struck. The total number of wells drilled in the Colony to 31st December last is 463 of which 273 are on Crown Lands.

8. At the close of the year 13 Companies were engaged in the winning of oil as against 12 at the end of 1918.

9. The Trinidad Leaseholds, Limited, continued their operations at the Morne L'Enfer Forest Reserve and Barrackpore during the whole of the year. The bulk of their production came from Crown Lands held under Lease by them at the Morne L'Enfer Reserve. At the time of writing this Company is opening up new fields in other parts of the Island, and I hope that in the near future a largely increased production will result. The oil produced on their fields has, as before, been pumped to their Refining and Storage Dépôt at Pointe-à-Pierre where most of it has been refined. The Refinery has been worked during the whole of the year, the products manufactured being oil fuel, kerosene, white oil and petrol; the greater part of these products have been sold to the Admiralty and exported by them. At the present time very considerable additions to the Refinery are being undertaken and, when completed, the Plant will be capable of a much larger throughput; part of these additions will consist of a Cracking Plant which should result in a much larger percentage of the lighter and more valuable products being obtained. Considerable additional constructional work has been undertaken at Pointe-à-Pierre during the period under review and now the Company possesses a very complete installation at that place.

10. The Trinidad Lake Petroleum Company, Limited, did no drilling on their private lands at Brighton, but continued to produce oil from the existing wells. This Company holds considerable stocks of crude oil at Brighton as there is still difficulty in obtaining facilities for shipment.

11. In addition to continuing drilling on the Parry area at the Morne L'Enfer Forest Reserve the United British Oilfields of Trinidad, Limited also recommenced drilling on the old field at Point Fortin. As before, the entire production of this Company has been sold to the United British Refineries, Limited, at Point Fortin, who have refined it and either exported or sold locally the resulting products.

12. The United British West Indies Petroleum Syndicate, Limited, have continued drilling at Los Bajos and Moruga. The production at Los Bajos has increased and, as hitherto, been pumped to Point Fortin where it is sold to the United British Refineries, Limited.

13. The Trinidad Central Oilfields, Limited, have continued to increase their production, as during the period under review it was doubled. Their drilling operations are still confined to the area held under Lease at Tabaquite, but towards the close of the year they applied for a Prospecting Licence over the large area held by them under Exploration Licence and, I understand, it is their intention to open up new fields in the near future. The small Refinery at Tabaquite has continued to be worked during the year, the surplus production of crude oil being pumped to their Storage and Shipping Dépôt at Claxton's Bay and exported. Several small bulk shipments have been made from there during the year. The field at Tabaquite has been extended as a considerable amount of construction work has been undertaken. At Claxton's Bay additional storage tanks are in process of erection.

14. The Petroleum Development Company, Limited, resumed drilling operations on the lands held by them under Lease in the Morne L'Enfer Reserve in addition to producing oil from the existing wells. This oil has, as in the past, been disposed of to the Trinidad Lake Petroleum Company, Limited.

15. Mr. C. C. Stollmeyer recommenced drilling operations on the Perseverance Estate at Guapo and continued to obtain a small production of oil from the existing wells.

16. The Trinidad United Oilfields, Limited, have not yet resumed drilling operations on the Crown Lands held by them under Lease at Palo Seco. At the time of writing, however, a new Field Manager has arrived from England and I understand from him that it is proposed to resume drilling operations as soon as the necessary material is obtained. The old wells continued to produce small quantities of oil which is passed through the Refinery and disposed of locally.

17. The Oropuche Oilfields, Limited, continued drilling operations on private lands adjoining the property of the Trinidad Leaseholds, Limited, in the Morne L'Enfer Forest Reserve. The oil produced is being sold to the Trinidad Leaseholds, Limited.

18. The Ière Oil Company, Limited, drilled another well during the early part of the year and closed down operations in July last.

19. The Transvaal and Rhodesian Estates, Limited, have not yet recommenced drilling operations. A small quantity of oil still continues to flow from the existing wells.

20. The Fyzabad Oilfields of Trinidad, Limited, commenced drilling operations during the year on private lands held by them near the San Françoise Road but, so far, no oil has been obtained.

21. The Anglo-Trinidad Oil Company, Limited, to whom a Prospecting License has been granted over alienated lands, of which the Crown holds the oil rights, commenced drilling operations during the year on private lands held by them but, so far, have not obtained a production.

22. No work has been done by any of the following Companies:—The Trinidad-Tarouba Oil Development Company; The Trinidad Silverstream Oilfields, Limited; The Icaos (Trinidad) Development Company, Limited, and The Oil Exploration of Trinidad, Limited.

23. The Royalty earned during the period under review was £17,205 as against £18,542 in 1918. Leases accounted for £16,749 and Licences £456.

24. The revenue obtained from way-leave in respect of pipe-lines laid along the Trinidad Government Railway and along the public roads of the Colony was as follows:—

Railways	..	...	...	...	£2,955
Roads	...	...	...	...	1,327

25. Fees charged for crossing the Foreshore, Railway and Roads with pipe-lines amounted to £16.

26. The various oil companies have regularly submitted the returns required to be furnished by them in respect of their operations. These, after being checked, have been filed with our records in the office.

27. INSPECTIONS. Owing to the increased activity in the oilfields the work of the Officers of the Department has been increased. The usual routine inspections have been carried out and, in addition, a large number of special inspections in connection with accidents, royalty, way-leave, refineries and exclusion of water from wells have been necessary. In the majority of cases the provisions of the Ordinances and Regulations have been carefully carried out. It has only been found necessary to institute one prosecution.

28. LEASES AND LICENCES. The Trinidad Central Oilfields, Limited, applied for a Prospecting Licence over 69,768 acres which they formerly held under Exploration Licence. This will shortly be issued and will date as from 1st January, 1920. A Prospecting Licence over 2,286 acres of alienated lands on which the Crown holds the oil rights was issued to the Anglo-Trinidad Oil Company, Limited. The United British West Indies Petroleum Syndicate, Limited, have applied for a Lease over some 34,000 acres of Crown Lands, formerly held by them under Exploration Licence, and this will be issued in due course.

29. QUARRIES. With the exception of the Eastern and Carrera Quarries, both owned by the Government, they are relatively unimportant and carry on operations on a very small scale. They have been regularly inspected and in most cases found to have been worked in a careful manner. During the period under review the number worked was 66 as compared with 73 in 1918.

#### Work under the Petroleum Ordinance, No. 20 of 1915.

30. The premises in which the various products of petroleum are stored have been carefully inspected by officers of this Department and as a general rule the utmost care is observed by the owners. There has only been one record of a fire occurring due to the storing of petrol; this occurred at one of the garages in Port-of-Spain whilst transferring petrol from a drum into an underground storage tank. It was not discovered how the petrol came to be ignited.

#### The prevention of Accidents Ordinance, No. 13 of 1915.

31. On the whole the machinery in the various factories is efficiently protected by the Owners and Managers who co-operate with the Department in ensuring safety to the workmen in their employment; in all 86 factories in Trinidad and 12 in Tobago were worked during the year. There were ten accidents of which I am pleased to report none proved fatal.

#### Work under the Asphalt Industry Ordinance.

32. Work has not yet been recommenced on the village lots at La Brea and I am not in a position to state when this industry is likely to be recommenced.

33. APPENDICES. Appendix A shews the average number of persons employed and the quantity and value of minerals obtained.

In Appendix B the list of accidents is given and indicate that they are such as are incidental to all industrial operations of this class.

In Appendix C is given a list of the Mines, Oilfields and Quarries worked during the year 1919.

A comparative statement of the oil produced, refined and exported is shewn at Appendix D.

34. STAFF. I have the greatest pleasure in recording the very able and loyal assistance I have received from the members of the Staff.

27th March, 1920.

A. P. CATHERALL,  
Acting Inspector of Mines.

## APPENDIX A.

Daily average number of persons employed and quantity and value of Minerals obtained from Mines, Oilfields and Quarries, during the year ended 31st December, 1919.

MINERALS.	Daily average number of persons employed.		Total.	Quantity.	Approximate Value.
	Males.	Females.			
Oil ... ..	2,393	32	2,425	64,436,632 Imp. Gals.	£ 295,453
Asphalt ... ..	475	...	475	93,806 Tons ..	56,685
Manjak ... ..	12	1	13	208 ,, ...	866
Private Quarries (Limestone, Gravel, etc.)..	232	67	299	82,531 ,, .	8,066
Government Quarries (Limestone, etc.) ..	231	97	328	59,518 ,, ...	9,964

NOTE.—The difference in value between metal won from Private Quarries and Government Quarries is that the former consists of both Limestone and Gravel whilst the latter is chiefly Limestone.

## APPENDIX B.

List of Accidents which occurred at Mines, Oilfields and Quarries, during the year ended 31st December, 1919, reported under Section 19 of Ordinance, No. 13 of 1907.

Name of Mine, Oilfield or Quarry.	Date.	Number of Accidents Reported.			
		Minor.	Serious.	Fatal.	Total.
La Pique Quarry ... ..	15th January ...	1	...	...	1
Trinidad Leaseholds, Limited	{ 7th March ... ..	...	...	1	1
	{ 15th June ... ..	1	...	...	1
	{ 2nd July ... ..	1	...	...	1
	{ 13th August ... ..	...	1	...	1
	{ 15th September ... ..	...	1	...	1
	{ 8th October ... ..	2	...	...	2
	{ 23rd October ... ..	...	1	...	1
	{ 6th November ... ..	1	...	...	1
	{ 12th November ... ..	1	...	...	1
	{ 28th November ... ..	1	...	...	1
	{ 13th December ... ..	1	...	...	1
	{ 16th December ... ..	1	...	...	1
{ 30th December ... ..	...	1	...	1	
New Trinidad Lake Asphalt Company, Limited	{ 2nd August ... ..	...	1	...	1
	{ 22nd September ... ..	...	...	1	1
	{ 22nd October ... ..	...	1	...	1
Trinidad Central Oilfields, Limited	{ 5th August ... ..	...	1	...	1
	{ 15th October ... ..	...	1	...	1
	{ 15th November ... ..	...	1	...	1
United British Oilfields, of Trinidad, Limited	{ 7th August ... ..	2	...	...	2
	{ 20th August ... ..	1	...	...	1
	{ 13th September ... ..	..	1	...	1
	{ 19th December ... ..	1	...	...	1
Guaico Tamana Road 7½ mile Quarry..	5th September ...	..	1	...	1
Eastern Quarry ... ..	21st October ...	1	...	...	1
		15	11	2	28

APPENDIX C.

No.	Name.	Situation.	Owner and Address.	Manager.	Daily average Number of persons employed.	Mineral worked.
<i>Mines.</i>						
1	La Brea Asphalt Works	La Brea	Stollmeyer, Limited	Claude Phelps	120	Asphalt.
2	New Trinidad Lake Asphalt Co., Limited	Brighton	New Trinidad Lake Asphalt Company, Ltd., Brighton, Trinidad	Paul Munoz	355	"
3	Vistabella	San Fernando	Trinidad-Tarouba Oil Development Company, San Fernando	J. J. Waddell	13	Manjak.
<i>Oilfields.</i>						
1	Trinidad United Oilfields, Limited	Palo Seco	Trinidad United Oilfields, Limited, 40-42, Broad Street Avenue, London, E.C.	George Rooks	13.44	Oil.
2	Transvaal and Rhodesian Estates, Limited	Pointe Ligoure	Transvaal and Rhodesian Estates Limited, London	L. S. Daly	2.5	"
3	Perseverance Estate	Guapo	C. C. Stollmeyer, Port-of-Spain	E. Pereira	7	"
4	Trinidad Central Oilfields, Limited	Tabaquite	Trinidad Central Oilfields, Limited, 2, Broad Street Place, London, E.C. 2.	R. H. May	653.70	"
5	Ière Oil Company, Limited	Barrackpore	Ière Oil Company, Limited, San Fernando	C. E. Burrows	7	"
6	Anglo-Trinidad Oil Company, Limited	Siparia	Anglo-Trinidad Oil Company, Limited, 5, Royal Bank Buildings, Port-of-Spain	P. Ashmead-Bartlett	19	"
7	Trinidad Lake Petroleum Company, Limited	Brighton	Trinidad Lake Petroleum Company, Limited, Brighton	Paul Munoz	87	"
8	Petroleum Development Company, Limited	Do.	Petroleum Development Company, Limited, Brighton	Do.	45	"
9	United British Oilfields of Trinidad, Limited	Point Fortin	United British Oilfields of Trinidad, Limited, Port-of-Spain	G. Bailward	606	"
10	United British West Indies Petroleum Syndicate, Limited	Siparia and Moruga	United British West Indies Petroleum Syndicate, Limited, Port-of-Spain	Do.	95	"
11	Oropuche Oilfields, Limited	Oropuche	W. B. Mitford, Hampstead, London	P. Ashmead-Bartlett	14	"
12	Trinidad Leaseholds, Limited	Fyzabad	Trinidad Leaseholds, Limited, 1, London Wall Buildings, E.C.	Hon. H. S. Fuller	327.40	"
13	Do. do.	Barrackpore	Do. do.	Do.	147	"
14	Do. do.	Pointe-à-Pierre	Do. do.	Do.	365	"
15	Fyzabad Oilfields of Trinidad, Limited	San Francisco Road	Fyzabad Oilfields of Trinidad Limited, 5, Royal Bank Buildings, Port-of-Spain	P. Ashmead-Bartlett	9	"
<i>Quarries.</i>						
1	Plum Quarry	Sangre Grande	Trinidad Government, Port-of-Spain	District Officer	3.49	Limestone.
2	Guiaico-Tamana 11th Mile	Do.	Do. do.	Do.	5.62	"
3	Mandillon	Do.	Do. do.	Do.	3.43	"
4	Tabaquite-Nariva	Tabaquite-Nariva	Do. do.	Do.	8	"
6	San Chu Chu	Do.	Do. do.	Do.	4.24	"
6	Guaico-Tamana 7½ Mile	Do.	Do. do.	Do.	16.22	"
7	Morne Diable No. 1	San Fernando	Do. do.	Do.	25	"
8	Buenos Ayres	Erin	Do. do.	Do.	8	Porcellanite.
9	Siparia	Siparia	Do. do.	Do.	20	"
10	Brasso	Brasso	Do. do.	Do.	4.73	Limestone.
11	Corosal	Do.	Do. do.	Do.	2	"
12	Morton's	Sangre Grande	Do. do.	Do.	3.61	Porcellanite.

APPENDIX C.—CONTINUED.

No.	Name.	Situation.	Owner and Address.	Manager.	Daily Average Number of persons employed.	Mineral worked.
<i>Quarries.—Contd.</i>						
13	Morichal ... ..	Brasso ... ..	Trinidad Government, Port-of-Spain ... ..	District Officer ... ..	6	Limestone.
14	Mayo ... ..	Do. ... ..	Do. do. ... ..	Do. ... ..	6	Do.
15	Guaracara ... ..	Do. ... ..	Do. do. ... ..	Do. ... ..	5	Do.
16	Mount Parnassus ... ..	Tobago ... ..	Do. do. ... ..	Do. ... ..	2-15	Dead Rock.
17	Eastern ... ..	Laventille ... ..	Do. do. ... ..	F. J. Horsford ... ..	95	Limestone.
18	Southern Road 73½ Mile	Cedros ... ..	Do. do. ... ..	District Officer ... ..	8	Porcellanite.
19	Do. 71¼ "	Do. ... ..	Do. do. ... ..	Do. ... ..	7	Do.
20	Chatham Main Road 5th mile	Do. ... ..	Do. do. ... ..	Do. ... ..	5	Do.
21	Matchapourie ... ..	Arima ... ..	Do. do. ... ..	Do. ... ..	6-20	Limestone
22	Moruga ... ..	Moruga road ... ..	Do. do. ... ..	Do. ... ..	11	Sandstone.
23	Trinidad Government Railway	St. Joseph ... ..	Do. do. ... ..	H. A. Sharpe ... ..	4	Limestone.
24	Carrera ... ..	Carrera Island ... ..	Do. do. ... ..	Supt. of Prisons ... ..	35	Do.
25	Guaioco Tamana 8½ mile	Sangre Grande ... ..	Do. do. ... ..	District Officer ... ..	15-70	Do.
26	Moreau ... ..	Princes Town ... ..	Do. do. ... ..	Do. ... ..	8	Sandstone.
27	Mount Hope ... ..	St. Joseph ... ..	Do. do. ... ..	J. McInroy ... ..	5	Limestone.
28	River Estate ... ..	Diego Martin ... ..	Do. do. ... ..	District Officer ... ..	6	Do.
29	La Coulée ... ..	San Fernando ... ..	Heirs of Joaquin, San Fernando ... ..	S. Passeur ... ..	1	Gravel.
30	Basilon street ... ..	Port-of-Spain ... ..	Gerold and Scherer, South Quay, Port-of-Spain ... ..	L. A. Robertson ... ..	6	Limestone.
31	Irving Lane ... ..	Do. ... ..	J. W. McCarthy, Queen's Park East ... ..	F. Cumberbatch ... ..	4	Do.
32	Clark's ... ..	Laventille ... ..	Chas. Newallo, Port-of-Spain, 38, Belle Eau road ... ..	Chas. Newallo ... ..	36	Do.
33	Prizgar ... ..	Do. ... ..	Trinidad Shipping & Trading Co., Ltd., Port-of-Spain ... ..	C. C. Carmichael ... ..	12	Do.
34	Adivinanza ... ..	Princes Town ... ..	C. H. Packer, Princes Town ... ..	C. H. Packer ... ..	5	Sandstone.
35	Jsine ... ..	San Fernando ... ..	Ste. Madeleine Sugar Company, Limited, England ... ..	A. G. Mahon ... ..	12	Gravel.
36	Boea View ... ..	Gasparee ... ..	T. de Fague, 45, Belmont Circular Road, Port-of-Spain ... ..	B. James ... ..	2	Limestone.
37	Masson ... ..	Pointe Gourde ... ..	Lee Lum, Port-of-Spain ... ..	F. B. Masson ... ..	11	Blue Limestone.
38	Gonzales ... ..	Laventille ... ..	L. A. Fitzwilliam ... ..	L. A. Fitzwilliam ... ..	3	Limestone.
39	Duke street ... ..	Port-of-Spain ... ..	V. Prime, 12, Duke street, Port-of-Spain ... ..	W. Bowers ... ..	4	Do.
40	Circular road ... ..	San Fernando ... ..	Borough Council, San Fernando ... ..	J. J. Waddell ... ..	1	Gravel.
41	Borough Council ... ..	Do. ... ..	Do. do. ... ..	Do. ... ..	1	Do.
42	Pointe-à-Pierre ... ..	Pointe-à-Pierre ... ..	Trinidad Leaseholds Limited, Port-of-Spain ... ..	Hon. H. S. Fuller ... ..	50	Sandstone.
43	Glendale ... ..	San Fernando ... ..	H. R. McClean, San Fernando ... ..	H. R. McClean ... ..	29	Gravel.
44	Bourne's Bay ... ..	Gasparee ... ..	St. Madeleine Sugar Company, Limited, San Fernando ... ..	G. Archibald ... ..	11	Limestone.
45	Mahon ... ..	Pointe Gourde ... ..	G. F. Huggins & Co., Port-of-Spain ... ..	Do. ... ..	4	Do.
46	Verdant Vale ... ..	Arima ... ..	Trinidad Cocoa and Coffee Co., Limited, Arima ... ..	E. Thatcher ... ..	2	Do.
47	Charles ... ..	San Fernando ... ..	L. Charles, 115 Tragarete road, Port-of-Spain ... ..	C. Lucas ... ..	1	Gravel.
48	Mitchell's Bay ... ..	Pointe Gourde ... ..	J. W. Edwards, 45, Queen street, Port-of-Spain ... ..	J. W. Edwards ... ..	2	Limestone.
49	Stollmeyer ... ..	Guapo ... ..	C. C. Stollmeyer, Port-of-Spain ... ..	E. Pereira ... ..	7	Do.
50	St. Joseph No. 1 ... ..	San Fernando ... ..	G. W. Harwood and P. P. Pickering, San Fernando ... ..	P. P. Pickering ... ..	1	Gravel.
51	Aranguez Farm ... ..	San Juan ... ..	M. A. Rapsey, Maraval ... ..	A. Maradge ... ..	12	Do.
52	St. Ann's ... ..	St. Ann's ... ..	Martin Campbell, St. Ann's ... ..	N. Charles ... ..	3	Do.
53	La Pena ... ..	Port-of-Spain ... ..	Mrs. Blackman, 5, Duke Street, Port-of-Spain ... ..	W. Gittens ... ..	4	Limestone.
54	La Pique ... ..	San Fernando ... ..	T. L. Dunsire, San Fernando ... ..	Arch. Sandiford ... ..	2	Gravel.
55	Champs Elysee No. 1 ... ..	Maraval ... ..	Mrs. P. de Boissière, Maraval ... ..	C. Mohan ... ..	5	Sand and Gravel.
56	Plum ... ..	Manzanilla ... ..	Manzanilla Local Road Board, Sangre Grande ... ..	R. W. Collins ... ..	1	Limestone.

APPENDIX C.—CONTINUED.

No.	Name.	Situation.	Owner and Address.	Manager.	Daily Average Number of persons employed.	Mineral worked.
<i>Quarries.—Contd.</i>						
57	Verdun ...	San Fernando ...	P. P. Pickering, San Fernando ...	P. P. Pickering ..	1	Gravel.
58	Champs Elysee No. 2 ...	Maraval ...	Mrs. P. de Boissière, Maraval ...	David John ...	5	Sand and Gravel.
59	Cocorite Farm ...	Cocorite ...	City Corporation, Port-of-Spain ...	P. Charles ...	2	Limestone.
60	La Corona ...	Cumuto ...	Dr. Guiseppi, England ...	R. de Verteuil ...	4	"
61	Monte Cristo ...	Do. ...	H. Monceaux, Cumuto ...	E. Monceaux ...	2	"
62	Renown ...	Pointe Gourde ...	Charles Archibald, Gasparee ...	C. C. Cambridge ...	2	"
63	Arena ...	Arima ...	M. Lange, Guanapo ...	M. Lange ...	1	Gravel.
64	Barataria ...	San Juan ...	Mrs. M. A. Rapsey, San Juan ...	J. H. Rapsey ...	28	"
65	Point Baleine ...	Gasparee ...	A. G. Agostini, 10, Queen's Park East, Port-of-Spain ...	G. T. Mathiew ...	6	Limestone.
66	David ...	Gloster Lodge ...	Mrs. Gittens, 40, Frederick Street, Port-of-Spain ...	W. Gittens ..	6	"

APPENDIX D.—Comparative Statement of Oil produced, refined and exported year by year since inception of industry.

YEAR.	Production in Gallons.	Quantity of Crude Oil refined in Gallons.	Quantity of Crude and Refined Oil exported in Gallons.
1905-1909-10 ...	368,934	...	...
1910-11 ...	4,378,942	...	...
1911-12 ...	9,985,748	Previous to 1912-13 ...	7,685,374
1912-13 ...	17,626,563	331,928	4,295,707
1913-14 ..	22,523,060	1,227,134	13,570,152
1914-15 ..	36,753,931	1,449,445	12,192,289
9 months ended December, 1915 ...	23,489,362	2,045,286	14,286,585
1916 ..	32,475,695	3,773,770	34,129,955
1917 ...	56,080,914	17,675,068	37,777,919
1918 ...	72,872,398	73,722,915	45,689,234
1919 ...	64,436,632	40,248,014	49,219,226
	340,092,179	141,798,028	218,846,441

TRINIDAD AND TOBAGO.

Council Paper No. 37 of 1921.

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## MINES DEPARTMENT.

Administration Report of the Acting Inspector of Mines for the  
year 1920.

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*Laid before the Legislative Council on the  
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*Previous Council Paper No. 44 of 1920.*

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# MINES DEPARTMENT.

## Administration Report of the Acting Inspector of Mines for the year 1920.

*Council Paper No. 37 of 1921.*

*M.P. No. 3234/1921.*

THE HONOURABLE THE COLONIAL SECRETARY, (Acting).

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 ended 31st December, 1920.

### Official Duties.

2. The amalgamation of the Crown Lands and the Mines Departments, the details of which were published in Council Paper No. 3 of 1919, has not yet taken place. Mr. R. R. Thompson has been appointed to the post of Director of Lands and Mines by the Secretary of State, but up to the time of writing has not arrived in the Colony. As the newly appointed Director of Lands and Mines was due to leave Persia, where he held an important appointment with the Anglo-Persian Oil Company Ltd. : at the end of December last, his arrival in the Colony may be expected at a very early date. During the whole of the past year I have acted as Inspector of Mines in addition to performing the duties of my substantive post, viz., Deputy-Inspector of Mines.

Mr. J. de Nobriga, Chief Clerk, was seconded for service as Secretary of the Wag. Committee from the 19th December 1919 to 30th September 1920. Mr. de Nobriga also acted as Chief Clerk of the Public Works Department from 1st October to 30th November last. Mr. F. Delmas of the Audit Office acted as Chief Clerk until 11th July 1920 and Mr. W. H. Clark of this Department acted as Chief Clerk from 12th July to 30th November last. Mr. F. O. Rooks, 3rd Clerk, acted as 2nd Clerk in the Forest Department from 15th March to 29th August last, when I regret to say that the career of this promising young officer was terminated by his death. Mr. N. A. Brown acted as 2nd Clerk from 12th July to 30th November 1920.

### Leave.

3. No leave was granted during the year.

### Legislation.

4. The only legislation passed during the period under review, affecting this Department, was the Oil Pollution and Water Conservation Ordinance No 46 of 1920. This Ordinance was introduced owing to the fact that a number of Injunctions had been obtained by lower riparian owners against several of the Oil Companies for the pollution, and abstraction, of water from the water courses. Consequently it was found necessary to introduce and pass legislation designed to enable the Oil Companies to carry on their operations in certain cases by paying suitable compensation and providing an alternative water supply.

### Work under the Mines, Borings and Quarries Ordinances.

5. MANJAK. The Trinidad Tarouba Oil Development Company is the only Company which is operating in this industry. This Company continues to work the Vistabella Mine at San Fernando from which 134 tons of manjak were produced during the period under review.

### Petroleum.

6. GENERAL REMARKS. In my last report, I mentioned that there was great difficulty in obtaining delivery of drilling equipment and machinery. I am glad to report that during the past year the situation in this respect has materially improved and in consequence a number of new Oil Companies have been enabled to commence operations. Several Companies have started drilling in areas from which, up to the present, no oil has been extracted. If the wells, which at present are being drilled in these districts, are successful in obtaining oil in commercial quantities, the production of oil in the Colony should be very largely increased in the near future.

The number of feet drilled in the Colony shows a considerable increase over that for the year 1919. There is also, I am glad to be able to report, an increase in the quantity of oil produced as appears from the following paragraph, as compared with the preceding year. But when compared with the year 1918, this increase is only very slight.

The export of crude oil and its products shows a substantial decrease during the past year, the figures being 36,000,000 Imperial Gallons as against 49,000,000 Imperial Gallons for 1919. There were, however, considerable stocks of oil still awaiting export at the close of the past year. Large shipments of oil fuel have been made to the Admiralty and constitute the largest part of the oil exported from the Colony; most of the lighter products are now exported to private

TRINIDAD AND TOBAGO.

Council Paper No. 36 of 1922.

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## LANDS AND MINES DEPARTMENT.

Administration report of the Director of Lands and Mines and  
Sub-Intendant of Crown Lands for the year 1921.

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## LANDS AND MINES DEPARTMENT.

### Administration report of the Director of Lands and Mines and Sub-Intendant of Crown Lands for the year 1921.

*Council Paper No. 36 of 1922.*

*M. P. No. 3051/1922.*

HON'BLE COLONIAL SECRETARY,

I have the honour to submit, for the information of His Excellency the Governor, the reports of the Heads of the three branches of the Lands and Mines Department for the year ended 31st December, 1921.

2. The amalgamation of these departments, viz : the Crown Lands, Surveys and Mines, took place on the 17th April, 1921, the date of my arrival in the Colony.

#### **Crown Lands.**

3. The amount realised from the sale of Crown Lands during the year was the lowest on record during the last decade. This can be accounted for by the general commercial depression and by the lack of access to otherwise available lands. There was also a falling off, as compared with the previous year, in the amount of revenue derived from the Asphalt industry, which may also be attributed to the general trade depression prevailing throughout the world, necessitating the curtailment of expenditure on road building, etc.

4. I attach as Appendix I of this report a statement shewing the approximate area of Crown Lands available for sale North of latitude 10 degrees, 26 minutes, 36 seconds. It will be seen that there are about 118,000 acres still unsold, which must remain so until the finances of the Colony permit of the necessary surveys and Crown Traces being made.

Appendix II gives the number of Crown Grants issued and the acreage of Crown Lands alienated during the period 1910-1911 to 1921, while Appendix III gives the number of applications for the year for Prospecting and Exploration Licenses. There were no applications received for Mining Leases. Appendices IV and V shew graphically the distribution of lands in Trinidad and Tobago.

5. As pointed out by the Deputy Sub-Intendant in his report, the forfeitures for default of payment of lands and buildings taxes was the lowest on record and this reflects great credit on the Wardens, who are responsible for the collection of these taxes.

#### **Surveys.**

6. The report on the Survey Branch calls for little comment. A large amount of work has been carried out by this department, both outdoor and indoor. The surveys made have been mostly cadastral, and I hope that my recommendations for a complete cadastral survey of the Colony, which is a pressing necessity, will be acted upon without delay.

7. In addition to the survey work carried out by this department, a considerable amount has been done by several Oil Companies and large Estate Owners, the results of which have, in every case where required, been given free to the department.

I would specially mention that the Trinidad Petroleum Development Company, Limited, (Messrs. S. Pearsons & Son, Ltd.) have very generously promised to hand over to the Government, when completed, their topographical map of the southern half of the Island.

8. It is not generally known that this department takes solar observations for time once a week, and that standard time can thus be given to navigating officers and others interested.

**Mines.**

9. During the period under review the production of crude oil in the Colony was the largest yet known, the increase over that for the year 1920 being 9,389,648 imperial gallons.

Drilling continued actively and the majority of the Companies are to be congratulated on their development work, more especially when it is remembered that the rains have been unprecedented and retarded materially both the actual drilling as well as the preliminary work in the way of road building, etc.

10. Considerable improvement in and facilities for the handling of imports of plant, as well as in its transport, were made during the year ; and the discharge by a number of steamers of their cargoes of oilfield supplies at San Fernando, instead of at Port-of-Spain as heretofore, contributed largely to relieving the serious congestion experienced on the wharves towards the end of the year 1920 and the beginning of 1921.

11. In consideration of the grant of a permit to run heavy traffic on certain of the main roads of the Colony, the Oil Companies have, at their own expense, repaired several of these as well as made others in various parts of the southern half of the Island.

12. A Committee has been formed of representatives of the Oil Companies operating in the Colony, known as the Oilfield Managers Committee, which meets regularly under the chairmanship of the Head of the Lands and Mines Department to discuss questions in connection with the Oil industry. These meetings, though few in number so far, have resulted in a closer co-operation between the work of the companies themselves as well as with the Government.

13. I attach six Curves shewing graphically the progress made in the Oil, Asphalt and Manjak mining industries from the 1st April, 1911 to the 31st December, 1921.

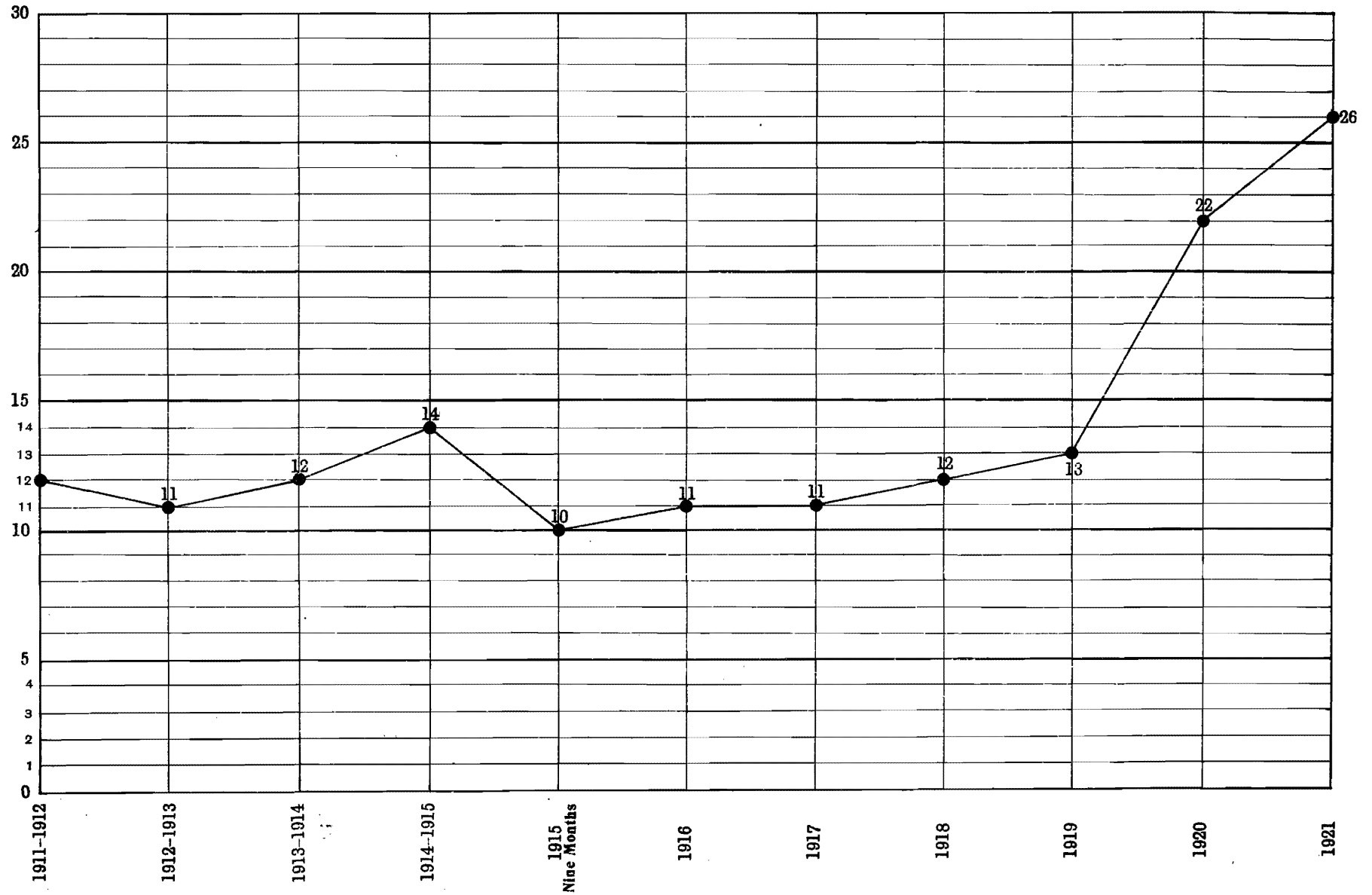
14. I should like here to express my thanks for the great help I have received from the Heads of the other Departments of the Government as well as to the Heads of the Branches of the Department under my direction: Mr. A. P. Catherall, Assistant Director of Lands and Mines, Mr. G. E. L. Guppy, Deputy Sub-Intendant of Crown Lands and Mr. J. W. Macgillivray, Crown Surveyor.

R. R. THOMPSON,  
*Director of Lands and Mines.*

24th March, 1922.

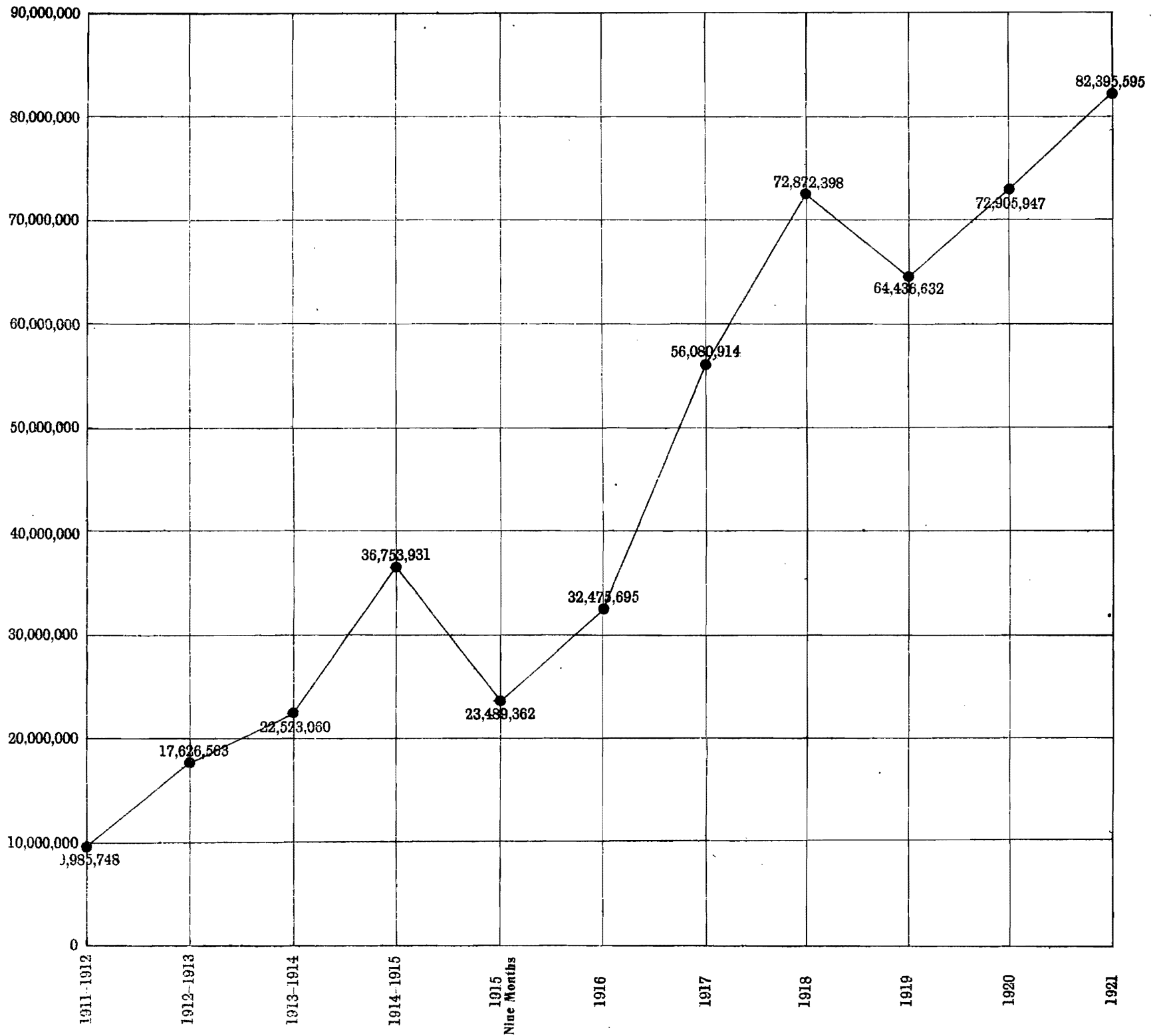
“ A ”

Curve showing total number of Oil Companies that have operated annually in the Colony from 1st April, 1911, to 31st December, 1921.



“ B ”

Curve showing yearly total production of Crude Oil from the Colony in Imperial Gallons from 1st April, 1911, to 31st December, 1921.



firms During the early part of the year 1920, a considerable increase in the bunker trade was experienced; this increase was not sustained as towards the close of the past year, the demand for bunker oil materially declined.

7. The following table shows the number of feet drilled and the quantity of oil produced during the period under review, as compared with the years 1918 and 1919:—

	Year ended 31st December, 1918.		Year ended 31st December, 1919.		Year ended 31st December, 1920.	
	Feet drilled.	Oil won. Imp. Gals.	Feet drilled.	Oil won. Imp. Gals.	Feet drilled.	Oil won. Imp. Gals.
Crown Lands ...	47,487	55,609,748	49,122	53,534,295	53,404	61,532,046
Private Lands ...	6,751	17,262,650	18,937	10,902,337	23,972	11,373,901
Totals ...	54,238	72,872,398	68,059	64,436,632	77,376	72,905,947

During the year 1920 the number of new wells drilled was 67 (44 on Crown Lands and 23 on Private Lands), a total increase of 14 over the previous year. In 41 of these wells oil was struck. The total number of wells drilled in the Colony from the commencement of operations to 31st December last was 523, of which 313 were on Crown Lands.

8. At the close of the year 1920, 22 Companies were engaged in the winning of oil as against 13 at the end of the year 1919.

9. The Trinidad Leaseholds Limited, in addition to continuing its operations on the Morne L'Enfer Forest Reserve and Barrackpore Fields during the past year, also continued drilling in the Piparo and Santa Cecilia districts. In both of the latter districts, however, operations were suspended before the close of the year 1920. This Company has continued to obtain a large production from its fields at Morne L'Enfer Forest Reserve and Barrackpore, the whole of which has been treated at its Refinery at Pointe-à-Pierre. Large shipments of oil fuel have been exported to the Admiralty from the Company's shipping depot at Pointe-à-Pierre, and in addition there has been a considerable shipment of oil fuel for bunker purposes. The Company's Refinery has been worked during the whole of the past year the products manufactured being Oil Fuel, Kerosene, White Oil and Petrol. Although work on the additions to the Refinery as mentioned in my last report has been continued during the whole of the year under review, these additions have not as yet been completed.

10. The Trinidad Lake Petroleum Company Limited did no drilling on its private lands at Brighton, but still continues to produce oil from wells previously drilled. This Company exported a considerable quantity of oil during the past year, which had been in stock for some time owing to the difficulty of obtaining shipment.

11. The Petroleum Development Company, Limited, has continued drilling on the lands held by it under lease on the Morne L'Enfer Forest Reserve. A very large increase in production on the part of this Company has resulted in the past year, as a number of the new wells drilled have proved exceedingly prolific.

12. The operations of the United British Oilfields of Trinidad, Limited, has been chiefly confined to the Parry area in the Morne L'Enfer Forest Reserve. A considerable amount of drilling has been done by this Company during the past year, as a consequence of which the area of the fields under operation has been greatly extended. The production of this Company has, as before, been pumped to Point Fortin and sold to its allied Company, the United British Refineries, Limited, which refined the crude oil and marketed the products.

13. The United British West Indies Petroleum Syndicate, Limited closed down operations at Moruga at the end of 1919, but has continued drilling on the Los Bajos field. A moderate production is being obtained by this Company, from this latter field which is pumped to Point Fortin and sold to the United British Refineries, Limited.

14. The Trinidad Central Oilfields, Limited, has continued drilling operations on the Crown Lands held under lease by it at Tabaquite. The production found in this district as before, has been of a high grade oil. I regret, however, to have to report that the quantity produced during the past year has not been so great as during the year 1919.

15. The Perseverance Estate at Guapo, owned by Mr. C. C. Stollmeyer, has been purchased by the Kern Trinidad Oilfields, Limited, a subsidiary Company of the Kern River Oilfields of California, Limited. There has been a small production of oil from the estate during the past year, but the Company is now actively engaged in building roads and opening up this property with a view to subsequent drilling operations, a considerably increased production should result in the near future, as a consequence.

16. No drilling was done by the Trinidad United Oilfields, Limited, on the Crown Lands held by this Company under Lease at Palo Seco. At the date of my report, however, a well is in process of being drilled but so far no oil has been struck.

17. The Oropuche Oilfields, Limited, continued drilling operations on its private lands which adjoin the property of the Trinidad Leaseholds, Limited, in the Morne L'Enfer Forest Reserve. Towards the close of the year 1920 a very largely increased production was obtained. The production of this Company has been sold to the Trinidad Leaseholds Limited.

18. The Fyzabad Oilfields of Trinidad, Limited, continued drilling operations on its private lands near San Francique Road during the early part of the past year. No oil, however, was obtained, and during the latter part of the year operations have been suspended.

19. The Transvaal and Rhodesian Estates, Limited, has transferred its properties to the Globe Oilfields, Limited, but this latter Company has not yet commenced drilling operations on the properties thus acquired.

20. The Anglo-Trinidad Oil Company, Limited, undertook drilling operations in the San Francique and Fyzabad districts, but was not successful in obtaining oil. Preparations are now being made by this Company to commence drilling in the Rio Claro area.

21. The Trinidad National Petroleum Company, Limited, drilled wells in the Poonah and Madingo Road districts. Accidents were met with in each of its wells before oil in commercial quantities was struck, and operations have now for some time been suspended.

22. Drilling on private lands in the Fyzabad district was commenced by the Trinidad Oil Producing and Refining Company, Limited. The Company obtained from this area a production of oil which has been sold to the Trinidad Leaseholds Limited.

23. The Apex (Trinidad) Oil Company, Limited, undertook drilling operations in the early part of the year on the Santa Maria Estate near Fyzabad. This Company has maintained a very active programme during the period under review, and oil has been struck in several of the wells. The resulting production has been sold by the Apex Company to the Trinidad Leaseholds Limited.

24. The Amalgamated Oilfields of Trinidad, Limited, is now engaged in drilling a well in the Moruga district, but up to the present no oil has been struck.

25. The Trinidad Freeholds, Limited, put in hand operations on private lands adjoining the area held under lease by the Trinidad Leaseholds, Limited, at Fyzabad. The resultant production has been sold to the Trinidad Leaseholds, Limited.

26. The Uroz Oilfields, Limited, (to whom a Prospecting Licence over some 1,500 acres of alienated lands on which the Crown holds the oil rights was issued) commenced work on its private lands in the Piparo district. At the time of my report, operations had also been commenced by this company in the Charuma district on the area held under Prospecting Licence.

27. During the past year, drilling operations have been commenced on private lands by the following Companies:—

British Controlled Oilfields, Limited.  
 Trinidad Esmeralda Estates, Limited.  
 Trinidad-Tarouba Oil Development Company.  
 General Petroleum Company of Trinidad, Limited,

but oil has not yet been produced by any of them in Commercial quantities.

28. The Royalty earned during the year amounted to £18,710. Of this, £18,609 accrued under leases and £101 under licences. The amount earned during the year 1919 was £17,205 which shows a total increase of £1,505 during the past year. The Revenue obtained from Wayleaves for oil piped along the Trinidad Government Railway and the Public Roads of the Colony, was as follows:—

Wayleaves from Railways	...	...	...	£3,286
Do. Do. Roads	...	...	...	£1,365

29. Fees charged for crossing the foreshore, Railway and Roads with pipelines, amounted to £16.

30. The various Oil Companies have regularly submitted to the department the returns required to be furnished by them in respect to their operations. These, after being checked, have been filed with the office records of this Department.

31. INSPECTION. The work of the Inspecting Officers of the Department has considerably increased during the past year, owing to the number of new Companies which have started active operations. The various Oilfields have been regularly inspected and in addition a considerable number of special inspections arising out of accidents and in connection with Royalties, Wayleaves, etc., has been executed. In the majority of cases the provision of the Ordinances and Regulations relating thereto, have been carefully carried out. It has not been necessary to institute any prosecution for breaches of the law.

32. LEASES AND LICENCES. A Prospecting Licence over 1,507 acres of alienated lands, on which the Crown holds the oil rights, was issued to the Uroz Oilfields, Limited. A considerable number of applications for licences to Prospect for oil on lands over which the Government holds the oil rights has been received. These applications are under consideration.



33. QUARRIES. The remarks made in my last report for 1919 on this subject still hold good. With the exception of the Eastern and Carrera Quarries, both owned by the Government, the Quarries, at present being worked in the Colony are relatively unimportant. Regular inspections have been carried out, and, in most cases, it has been found that such quarries have been operated in a careful manner. During the year 1920 the number of quarries worked amounted to 62 as compared with 66 at the end of 1919.

34. WORK UNDER THE PETROLEUM ORDINANCE No. 20 of 1915. The premises, in which the various products of Petroleum are stored, have been regularly inspected by the officers of this Department, and it has generally been found that the utmost care has been observed by the owners of such premises. It was necessary to institute one prosecution against a Garage Manager for storing Petrol without a licence.

35. PREVENTION OF ACCIDENTS ORDINANCE No. 13 of 1915. I am pleased to be able to record that the owners and managers of the various factories co-operate with this Department in insuring safety to the workmen in their employment. In general, the machinery in the various factories, is most efficiently protected. In all, 83 factories in Trinidad and 12 in Tobago were worked during the past year. The total number of accidents was 8, only one of which proved fatal.

#### Work under the Asphalt Industry Ordinance.

36. Work has not been recommenced on the village lots at La Brea and I am not in a position to state when this industry is likely to be recommenced.

37. APPENDICES. Appendix A shews the average number of persons employed and the quantity and value of minerals obtained.

In Appendix B the list of accidents is given and indicates that they are such as are incidental to all industrial operations of this class.

In Appendix C is given a list of Mines, Oilfields and Quarries worked during the year 1920.

A comparative statement of oil produced, refined and exported is shewn at Appendix D.

38. STAFF. I have the greatest pleasure in recording the very able and loyal assistance I have received from the members of the Staff.

31st March, 1921.

A. P. CATHERALL,  
Acting Inspector of Mines.

## APPENDIX A.

Daily average number of persons employed and quantity and value of Minerals obtained from Mines, Oilfields and Quarries, during the year ended 31st December, 1920.

MINERALS.	Daily average number of persons employed.		Total.	Quantity.	Approximate Value.
	Males.	Females.			
Oil ... ..	3,990	56	4,046	72,905,947 Imp. Gals.	£ 379,302
Asphalt ... ..	400	80	480	141,100 Tons ...	88,187
Manjak ... ..	24	1	25	134 ,, ...	698
Private Quarries (Limestone Gravel, etc.)..	233	98	331	116,391 ,, ...	11,860
Government Quarries (Limestone, etc.) ..	305	117	421	75,097 ,, . . .	14,059

NOTE.—The difference in value between metal won from Private Quarries and Government Quarries is that the former consists of both Limestone and Gravel whilst the latter is chiefly Limestone.

## APPENDIX B.

List of accidents which occurred at Mines, Oilfields and Quarries, during the year ended 31st December, 1920, reported under section 19 of Ordinance, No. 13 of 1907.

NAME OF MINE, OILFIELD OR QUARRY.	DATE.	NUMBER OF ACCIDENTS REPORTED.			
		Minor.	Serious.	Fatal.	Total.
Masson's Quarry ... ..	24th March ...	...	1	...	1
Trinidad Central Oilfields, Ltd.	20th October ...	...	1	...	1
	26th November ...	...	1	1	2
	7th December ...	1	...	...	1
United British Oilfields of Trinidad, Ltd.	4th March ...	...	1	...	1
	4th August ...	...	1	...	1
	15th do. ...	1	...	...	1
	16th September ...	...	...	1	1
	22nd November ...	...	1	...	1
United British West Indies Petroleum Syndicate, Ltd.	26th January ...	1	...	...	1
	30th June ...	...	...	...	1
Apex (Trinidad) Oilfields, Ltd.	9th June ...	...	1	...	1
	3rd July ...	1	...	...	1
Trinidad Leaseholds, Limited	16th January ...	2	...	...	2
	16th do. ...	1	...	...	1
	4th February ...	...	...	1	1
	1st March ...	...	1	...	1
	8th do. ...	1	...	...	1
	9th do. ...	...	1	...	1
	27th do. ...	1	...	...	1
	29th do. ...	...	...	1	1
	8th April ...	...	1	...	1
	12th August ...	1	...	...	1
	15th do. ...	...	1	...	1
	21st September ...	1	...	...	1
	21st November ...	1	...	...	1
24th do. ...	1	...	...	1	
25th do. ...	1	...	...	1	
Anglo-Trinidad Oil Co., Ltd. ..	20th August ...	...	1	...	1
New Trinidad Lake Asphalt Company, Ltd.	12th February ...	...	1	...	1
	5th April ...	...	1	...	1
	8th June ...	...	1	...	1
		15	15	4	34

APPENDIX C.

No.	Name.	Situation.	Owner and Address.	Manager.	Daily average Number of persons employed.	Mineral worked.
9	Trinidad Lake Petroleum Co., Ltd.	Brighton ...	Trinidad Lake Petroleum Co., Limited, Brighton ...	Paul Munoz	111	Oil.
10	Petroleum Development Co., Ltd.	Forest Reserve ...	Petroleum Development Co., Ltd., Brighton ...	Do.	86	"
11	Oropuche Oilfields, Limited	Fyzabad ...	Oropuche Oilfields, Ltd., Pointe-à-Pierre Road, San Fernando...	A. W. Ibbett	78	"
12	Trinidad-Tarouba Oil Development Co.	Williamsville ...	Trinidad-Tarouba Oil Development Co., Royal Bank Buildings, Marine Square, Port-of-Spain	E. K. Soper	25	"
13	Apex (Trinidad) Oilfields, Ltd.	Fyzabad ...	Apex (Trinidad) Oilfields, Ltd., 208-224, Salisbury House, London, E.C., England	H. C. B. Hickling	80	"
14	Transvaal & Rhodesian Estates, Limited	Pointe Ligoure ...	Transvaal & Rhodesian Estates, Ltd., 18, Chacon Street, Port-of-Spain	Percy Cowderoy	2	"
15	British Controlled Oilfields, Ltd.	Santa Lucia, Williamsville...	British Controlled Oilfields, Ltd., 27, Marine Square, Port-of-Spain	C. R. Clark	116	"
16	Uroz Oilfields, Ltd.	Williamsville ...	Uroz Oilfields, Ltd., 9, St. Vincent Street, Port-of-Spain ...	J. R. Falconer	68	"
17	Trinidad Esmeralda Estates, Ltd.	Do. ...	Trinidad Esmeralda Estate, Ltd., 9, St. Vincent Street, Port-of-Spain	C. B. Gasson	10	"
18	Kern Trinidad Oilfields, Ltd.	Guapo ...	Kern Trinidad Oilfields, Ltd., Guapo ...	C. C. Stollmeyer	5	"
19	Anglo-Trinidad Oil Co., Limited	Oropuche ...	Anglo-Trinidad Oil Co., Ltd., Pointe-à-Pierre Rd., San Fernando	A. W. Ibbett	31	"
20	Trinidad United Oilfields, Limited	Palo Seco ...	Trinidad-United Oilfields, Ltd., 40-42, Broad St. Ave., London	George Rooks	12	"
21	Trinidad Freeholds, Ltd.	Fyzabad ...	Trinidad Freeholds, Ltd., Henry Street, Port-of-Spain	Trinidad Leaseholds, Ltd.	20	"
22	Trinidad Leaseholds, Ltd.	Do. ...	Trinidad Leaseholds, Ltd., 76, Marine Square, Port-of-Spain ...	Hon. H. S. Fuller	674	"
23	Do. do.	Pointe-à-Pierre...	Do. do. do.	Do.	643	"
24	Do. do.	Barrackpore ...	Do. do. do.	Do.	150	"
25	Do. do.	Siparia ...	Do. do. do.	Do.	15	"
26	Do. do.	Piparo ...	Do. do. do.	Do.	37	"
27	Do. do.	Guayaguayare ...	Do. do. do.	Do.	10	"
<i>Mines.</i>						
28	New Trinidad Lake Asphalt Co., Limited	La Brea ...	New Trinidad Lake Asphalt Co., Ltd., Brighton ...	Paul Munoz	480	Asphalt.
29	Vistabella	San Fernando ...	Trinidad-Tarouba Oil Development Company ...	E. K. Soper	25	Manjak.
<i>Quarries.</i>						
1	Matchaporie Quarry	Talparo Road ...	Trinidad Government, Port-of-Spain ...	District Engineer, North Caroni	8	Limestone.
2	San Chu Chu	Tamana ...	Do. do. ...	Do. do.	4	Do.
3	Chin Chin Extension Road	Chin Chin Extension Road..	Do. do. ...	Do. do.	15	Do.
4	Buenos Ayres Quarry	Erin Road ...	Do. do. ...	District Engineer, Siparia	13	Porcellanite.
5	Siparia Quarry	do. ...	Do. do. ...	Do. do.	9	Do.
6	Morne Diable No. 2	Morne Diable ...	Do. do. ...	Do. do.	28	Limestone.
7	Southern Road 73½ mile	Southern Central Road 73½ mile	Do. do. ...	District Engineer, Cedros	5	Porcellanite.
8	Southern Road 71¼ mile	Southern Central Road 71¼ mile	Do. do. ...	Do. do.	22	Do.
9	Corosal Quarry	Corosal Road ...	Do. do. ...	District Engineer, San Fernando	3	Limestone.

APPENDIX C.—CONTINUED.

No.	Name.	Situation.	Owner and Address.	Manager.	Daily average Number of persons employed.	Mineral worked.
<i>Quarries.—Contd.</i>						
10	Mayo Quarry	Mayo Quarry Road	Trinidad Government, Port-of-Spain	District Engineer, San Fernando	4	Limestone.
11	Morichal	Morichal Local Road	Do. do.	Do. do.	6	Do.
12	Morne Roche	Morne Roche Quarry Road	Do. do.	Do. do.	4	Do.
13	Carrera	Carrera Island	Do. do.	Superintendent of Prisons	72	Do.
14	Mount Parnassus	Scarborough	Do. do.	District Engineer, Tobago	2	Rotten Rock.
15	Brasso Quarry	Brasso Caparo Station Road	Do. do.	District Engineer, South Caroni	4	Limestone.
16	Moreau	Moreau Road	Do. do.	District Engineer, Princes Town	10	Sandstone.
17	Moruga	Moruga Road	Do. do.	Do. do.	14	Do.
18	Plum Road Quarry	Plum Road	Do. do.	Do. St. Andrew	10	Limestone.
19	Fishing Pond Road 4½ mile	Fishing Pond Road	Harry Morton, Tunapuna	Do. do.	3	Porcellanite.
20	Fishing Pond Road 2½ mile	do. do.	Trinidad Government, Port-of-Spain	Do. do.	7	Do.
21	Mandillon	Mandillon Road	Do. do.	Do. do.	3	Do.
22	Guaico-Tamana 7½ mile	Guaico Tamana	Do. do.	Do. do.	3	Do.
23	Guaico-Tamana 8½ mile	Do.	Do. do.	District Engineer, St. Andrew	18	Limestone.
24	Guaico-Tamana 11 mile	Do.	Do. do.	Do. do.	6	Do.
25	Eastern Quarries	Laventille	Do. do.	F. J. Horsford	116	Do.
26	Cutucupano	Santa Cruz	Do. do.	District Engineer, Port-of-Spain	5	Do.
27	Morne Coco	Morne Coco Road	Do. do.	Do. do.	8	Do.
28	River Estate	Diego Martin	Do. do.	Do. do.	6	Do.
29	Chatham Road 5th mile	Chatham Road	Do. do.	Do. Cedros	5	Porcellanite.
30	Tabaquite-Nariva	Tabaquite-Nariva	Do. do.	District Engineer, Nariva-Mayaro	9	Limestone.
31	Gonzales Quarry	Port-of-Spain	City Corporation, Port-of-Spain	City Engineer	3	Do.
32	Thomas Bay	Gasperee Island	A. Augustine, Thomas Bay, Gasperee	A. Augustin	4	Do.
33	Circular Road	San Fernando	Louis Charles, San Fernando	C. A. Lucas	1	Gravel.
34	Glendale	Do.	H. R. McLean, 27-29, Circular Road, San Fernando	H. R. McLean	30	Do.
35	Duke Street Quarry	Port-of-Spain	Virginia Prime, 12, Duke Street, Port-of-Spain	Wm. Bowers	11	Limestone.
36	La Pique	San Fernando	T. L. Dunsire, Pointe-à-Pierre Road, San Fernando	J. Hurdle	3	Gravel.
37	Champs Elysees	Maraval	Mrs. P. de Boissière, Champs Elysees, Maraval	Jules Thomas	10	Sand and Gravel.
38	Borough Council	San Fernando	Borough Council, San Fernando	J. J. Waddell	1	Gravel.
39	Adivinanza	Princes Town	Heirs of Riddell, Princes Town	C. H. Packer	8	Sandstone.
40	Prizgar	Laventille	Trinidad Shipping & Trading Co., Ltd., 84, Marine Square, Port-of-Spain	C. C. Carmichael	16	Limestone.
41	Point Baleine	Gasperee Island	A. G. Agostini, 69, Marine Square, Port-of-Spain	J. A. Blondell	9	Do.
42	Usine	San Fernando	Ste. Madeleine Sugar Co., Ltd., San Fernando	N. Fleming	10	Gravel.
43	La Corona	Tamana	Do. do.	R. de Verteuil	7	Limestone.
44	Pandohi	Carapichaima	Benjamin Pandohi, Chickland Junction	Benjamin Pandohi	3	Gravel.
45	Stollmeyer	Guapo	C. C. Stollmeyer, Port-of-Spain	E. Pereira	3	Sandstone.
46	Masson	Pointe Gourde	Lee Lum & Co., 31, Charlotte Street, Port-of-Spain	Conrad Smith	15	Limestone.
47	Archer Quarry	Laventille	H. H. Archer, 5, St. Joseph Road, Port-of-Spain	Walter Purvis	16	Limestone.

APPENDIX C.—CONTINUED.

No.	Name.	Situation.	Owner and Address.	Manager.	Daily average Number of persons employed.	Mineral worked.
<i>Quarries.—Contd.</i>						
48	St. Joseph	San Fernando	A. W. Harewood & P. P. Pickering, San Fernando	P. P. Pickering	4	Gravel.
49	Mitchell's Bay	Pointe Gourde	John Edwards, 45, Queen Street, Port-of-Spain	J. Edwards	1	Limestone.
50	Baldeo	Gasparillo	Mahabir, Maharaj & Co., San Fernando	H. Gajadaharsingh	3	Do.
51	La Coulee	San Fernando	Heirs of Joaquim, San Fernando	S. Passeur	1	Gravel.
52	Verdant Vale	Arima	Trinidad Cocoa & Coffee Co., Ltd., Arima	E. Tatcher	1	Limestone.
53	Bourne's Bay	Gasparce Island	Geo. F. Higgins & Co., Ltd., Port-of-Spain	C. Archibald	6	Do.
54	Mahon's	Pointe Gourde	Do. do. do.	Do.	4	Do.
55	Renoun	Do.	C. Archibald, 22, Sweet Briar Road, Port-of-Spain	C. Cambridge	6	Do.
56	Aranguéz	San Juan	John H. Rapsey, San Juan	G. L. Yearwood	10	Gravel.
57	Clark's	Laventille	Chas. Newallo, 38, Belle Eau Road, Port-of-Spain	Chas. Newallo	30	Limestone.
58	Arena	Guanapo	M. Lange, Guanapo	M. Lange	1	Gravel.
59	Monte Cristo	Guiaco-Tamana	H. Monceaux, Cumuto	E. E. Monceaux	1	Limestone.
60	Plum Road	Manzanilla	Manzanilla Local Road Board	L. S. Daly	1	Do.
61	La Carrière	Pointe-à-Pierre	Trinidad Leaseholds, Ltd., 76, Marine Square, Port-of-Spain	Hon. H. S. Fuller	108	Sandstone.
62	Charles	San Fernando	Louis Charles, Chacon Street, San Fernando	C. A. Lucas	1	Gravel.
1	Trinidad Central Oilfields, Ltd.	Tabaquite	Trinidad Central Oilfields, Ltd., 2 Broad Street Place, London E.C. 21	R. H. May	938	Oil.
2	United British Oilfields of Trinidad, Ltd.	Point Fortin	United British Oilfields of Trinidad, Ltd., 15, Abercromby Street, Port-of-Spain	F. J. Flemming	767	Oil.
3	United British West Indies Petroleum Syndicate, Ltd.	Siparia	United British West Indies Petroleum Syndicate, Ltd., 15, Abercromby Street, Port-of-Spain	Do.	119	Oil.
4	Trinidad Oil Producing & Refining Co., Ltd.	Fyzabad	Trinidad Oil Producing & Refining Co., Ltd., Pointe-à-Pierre Road, San Fernando	A. W. Ibbett	9	Oil.
5	Trinidad National Petroleum Co., Ltd.	Williamsville and Mandingo Road	Trinidad National Petroleum Co., Ltd., Pointe-à-Pierre Road, San Fernando	Do.	14	Oil.
6	General Petroleum Co. of Trinidad, Ltd.	Fifth Company	General Petroleum Company of Trinidad Ltd., Pointe-à-Pierre Road, San Fernando	Do.	9	Oil.
7	Amalgamated Oilfields of Trinidad, Ltd.	Moruga	Amalgamated Oilfields of Trinidad, Ltd., Pointe-à-Pierre Road, San Fernando	Do.	18	Oil.

APPENDIX D.--Comparative Statement of Oil produced, refined and exported year by year since inception of industry.

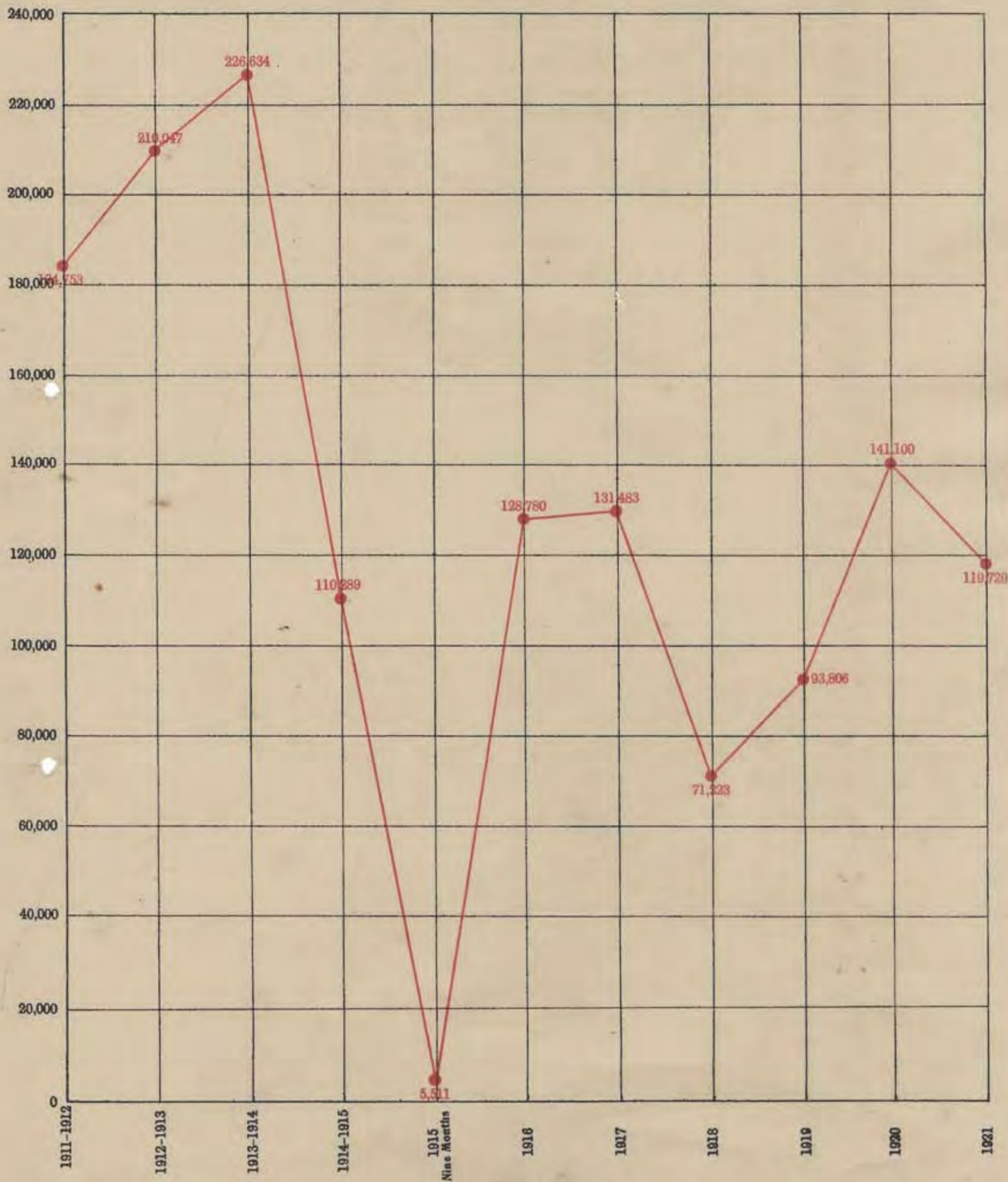
YEAR.	Production in Gallons.	Quantity of Crude Oil refined in Gallons.		Quantity of Crude and Refined Oil exported in Gallons.
1905-1909-10 ... ..	368,934	...	...	...
1910-11 ... ..	4,378,942	...	...	...
1911-12 ... ..	9,985,748	Previous to 1912-13		7,685,374
1912-13 ... ..	17,626,563	1,324,468	331,928	4,295,707
1913-14 ... ..	22,523,060	1,227,134	1,449,445	13,570,152
1914-15 ... ..	36,753,931	2,045,286	1,449,445	12,192,289
9 months ended December, 1915	23,489,362	3,773,770	2,045,286	14,286,585
1916 ... ..	32,475,695	17,675,068	3,773,770	34,129,955
1917 ... ..	56,080,914	73,722,915	17,675,068	37,777,919
1918 ... ..	72,872,398	40,248,014	73,722,915	45,689,234
1919 ... ..	64,436,632	48,842,055	40,248,014	49,219,226
1920 ... ..	72,905,947		48,842,055	36,221,728
	413,898,126	190,640,083		255,068,169

Statement of work done at Oilfields by various Companies during the year ended 31st December, 1920.

NAME OF COMPANY.	NO. OF WELLS DRILLED.				FEET DRILLED.		OIL EXTRACTED IN IMPERIAL GALLONS.		REMARKS.
	Private.	Oil Struck.	Crown.	Oil Struck.	Private.	Crown.	Private.	Crown.	
United British Oilfields of Trinidad, Limited ...	2	2	10	5	3,776	12,992	2,917,656	7,411,608	
Trinidad Lake Petroleum Co., Ltd. ...	...	...	...	...	...	...	2,530,530	...	
*Kern River Oilfields of California, Ltd. ...	...	...	...	...	1	...	67,595	...	
Trinidad Central Oilfields, Limited ...	...	...	9	4	...	9,329	...	3,383,649	
Trinidad National Petroleum Co., Ltd. ...	2	...	...	...	1,635	...	...	...	
Oropuche Oilfields, Limited ...	1	1	...	...	2,165	...	2,484,790	...	
†Petroleum Development Company, Ltd. ...	...	...	2	2	...	3,678	...	10,167,981	
Trinidad Leaseholds, Ltd., (Forest Reserve, &c.) ...	2	1	12	10	1,808	16,879	6,930	36,010,660	
Do. do. (Barrackpore) ...	1	1	6	6	1,153	4,936	1,995,735	2,925,300	
Transvaal & Rhodesian Estates, Ltd. ...	...	...	...	...	...	...	11,860	...	
United British West Indies Petroleum Syndicate, Ltd. ...	...	...	5	3	...	5,790	...	1,592,640	
Trinidad United Oilfields, Limited ...	...	...	...	...	...	...	...	40,208	
Anglo-Trinidad Oil Company, Limited ...	1	...	...	...	590	...	...	...	
Trinidad Oil Producing & Refining Co., Ltd. ...	1	1	...	...	753	...	529,480	...	
†Apex (Trinidad) Oilfields, Limited ...	4	3	...	...	4,847	...	281,610	...	
Amalgamated Oilfields of Trinidad, Limited ...	1	...	...	...	656	...	...	...	
Trinidad Freeholds, Limited ...	2	2	...	...	2,239	...	547,715	...	
Uroz Oilfields, Limited ...	1	...	...	...	1,185	...	...	...	
British Controlled Oilfields, Ltd. ...	2	...	...	...	1,624	...	...	...	
Trinidad Esmeralda Estates, Limited ...	1	...	...	...	805	...	...	...	
Trinidad-Tarouba Oil Development Co. ...	1	...	...	...	170	...	...	...	
General Petroleum Company of Trinidad, Ltd. ...	1	...	...	...	565	...	...	...	
	23	11	44	30	2.				

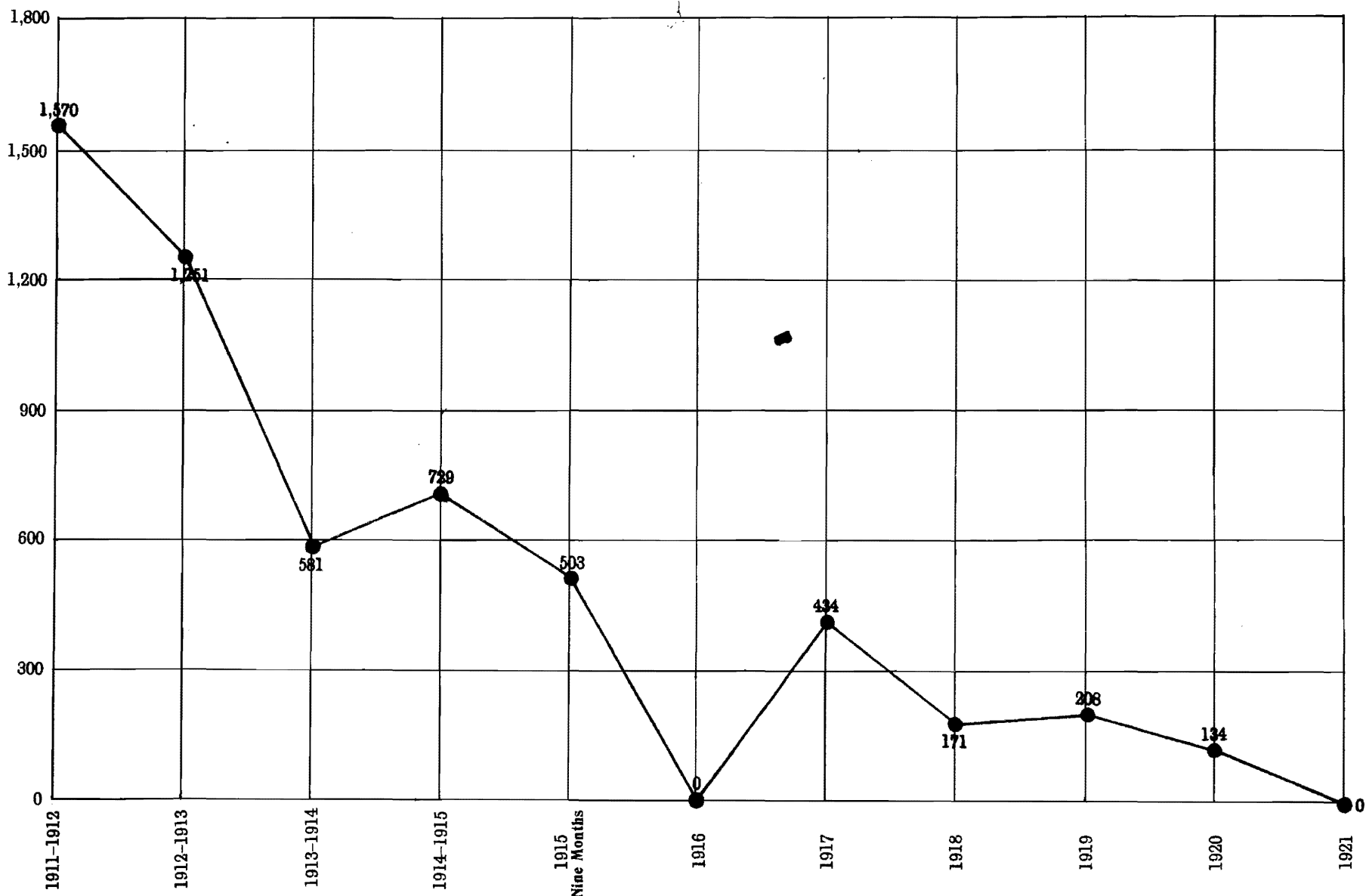
“C”

Curve showing yearly output of Asphalt from the Colony in Tons from 1st April, 1911, to 31st December, 1921.



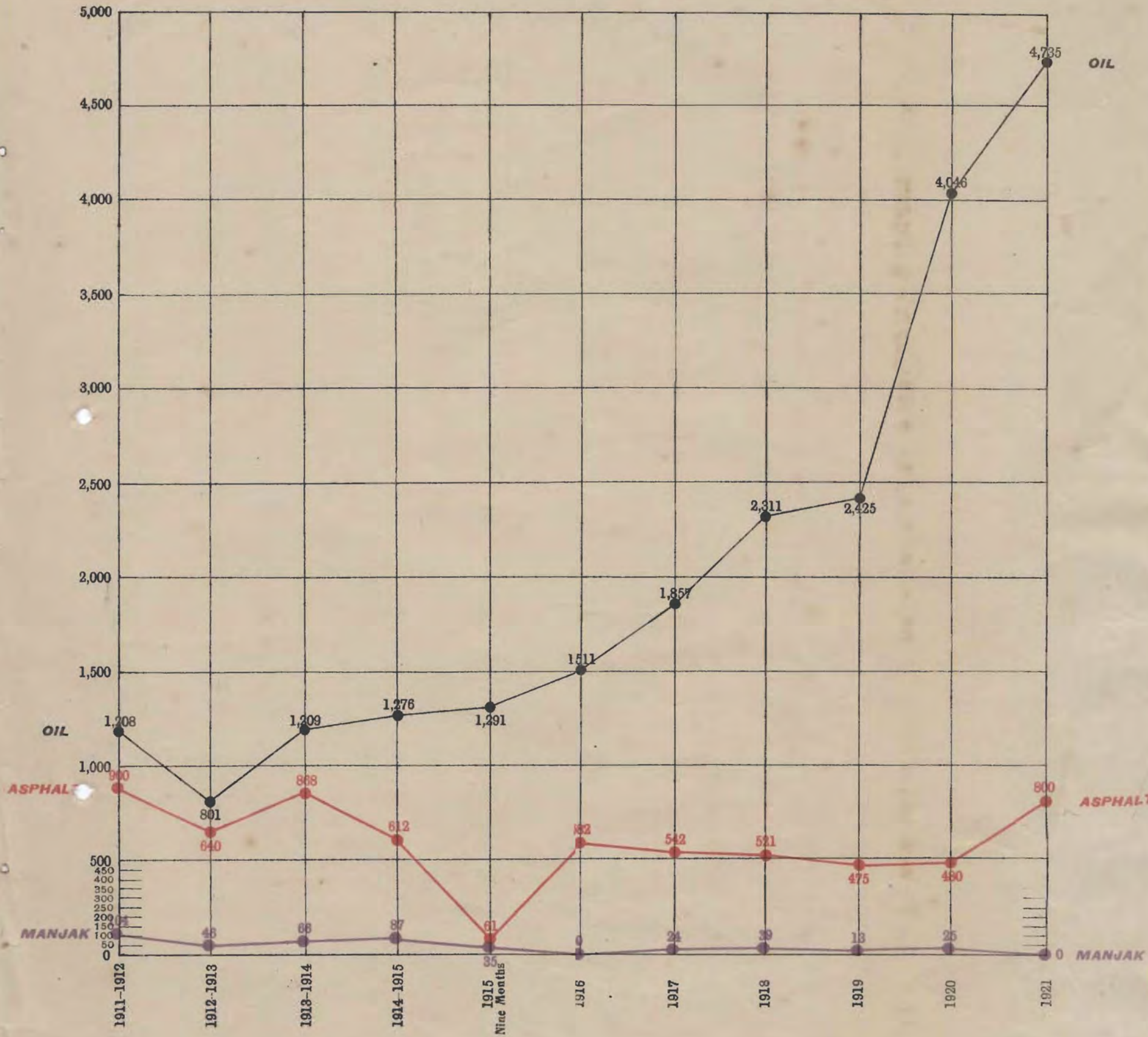
# “ D ”

Curve showing yearly output of Manjak in tons in the Colony from 1st April, 1911, to 31st December, 1921.



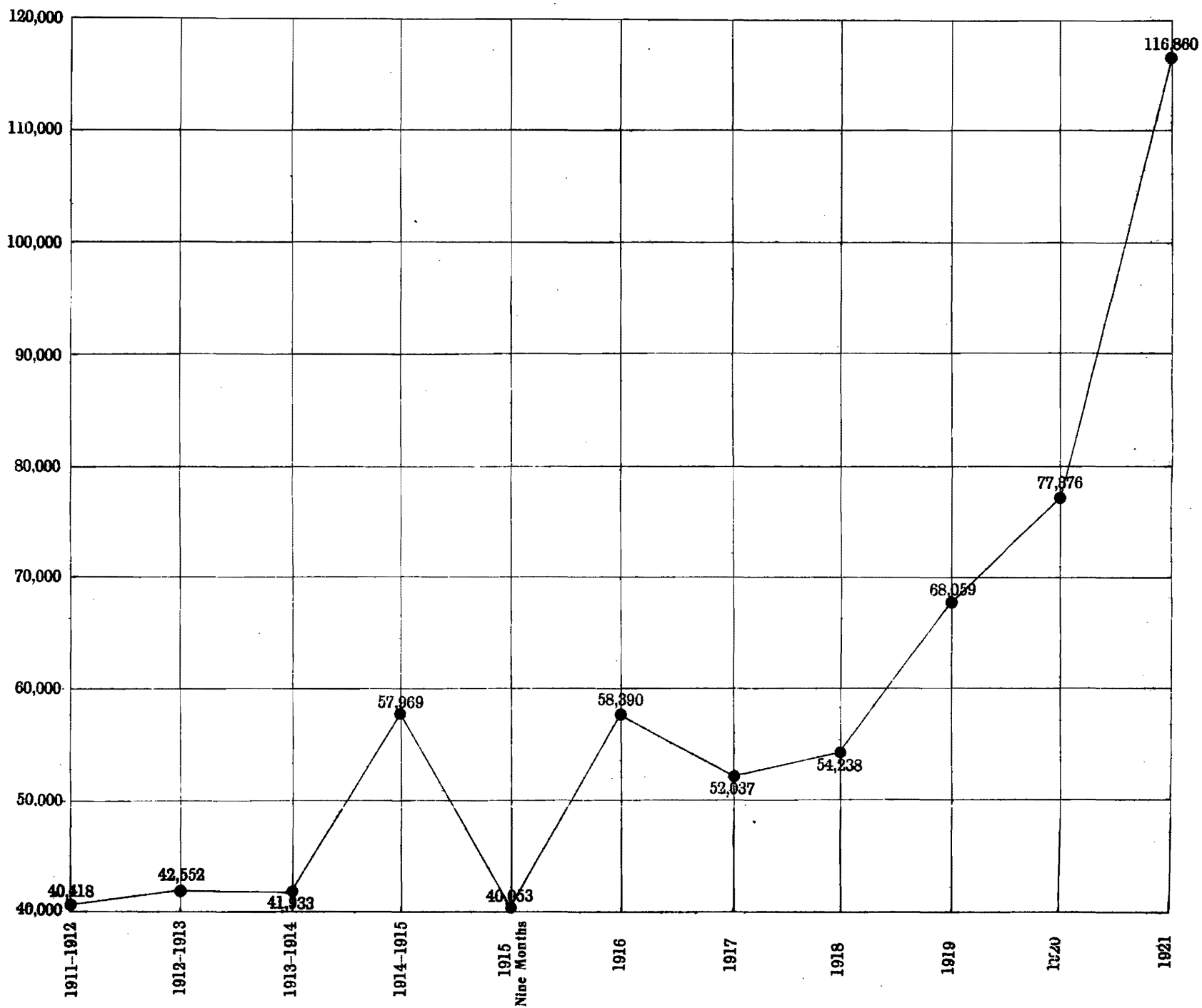


Curve showing comparison of daily average number of persons employed in the Oil, Asphalt, and Manjak Industries of the Colony from 1st April, 1911, to 31st December, 1921.



"F"

Curve showing yearly total number of feet drilled in the Colony from 1st April, 1911, to 31st December, 1921.



## APPENDIX I.

Approximate area of Crown Lands available for sale above Lat. 10 degrees 26 minutes 36 seconds.

County.				Ward.				Area.		
St. David	..	..	..	Toco	..	..	..	14,268·3		
				Manzan'lla	..	..	..	290·9		
				Matura	..	..	..	20,206·8		
St. Andrew	..	..	..	Tamana	..	..	..	2,873·6		
				Va'encia	..	..	..	15,236·8		
				Turure	..	..	..	5,833·8		
				Blanchisseuse	..	..	..	29,174·3		
				Tacarigua	..	..	..	1,590·2		
St. George	..	..	..	St. Ann's	..	..	..	2,223·9		
				Diego Ma tin	..	..	..	7,158·1		
				Arima	..	..	..	5,292·8		
				Cunupia	..	..	..	7,560·6		
				Cha juanas	..	..	..	3,252·2		
Caroni	..	..	..	San Rafael	..	..	..	2,917·4		
				Montserrat	..	..	..	115·6		
Total								..	..	118,000·3

## APPENDIX II.

Statement showing Crown Lands alienated from 1910-11 to 1921 also number o Crown Grants issued.

Year.	No. of Grants and Leases.	Acreage.			No. of Lots.
		Acres.	Rds.	Prchs.	
1910-11 ..	543	3,466	1	27	99
1911-12 ..	342	1,424	2	39	118
1912-13 ..	274	1,637	3	11	48
1913-14 ..	411	3,318	3	38	136
1914-15 ..	405	2,508	1	22	109
1915 (9 months)	281	867	0	39	139½
1916 ..	379	1,624	3	27	123
1917 ..	586	3,187	2	34	254
1918 ..	938	7,099	1	38	195
1919 ..	*485	2,536	1	36	115
1920 ..	†689	4,165	2	18	141
1921 ..	464	2,614	0	18	99½
Total	5,797	34,451	3	27	1,577

## APPENDIX. III.

## (a)—Applications for Prospecting Licenses, 1921.

No.	Name of Company.	Date of Application.
1	Trinidad Leaseholds, Limited .. .. .	5th January, 1921
2	U.B.W.I. Petroleum Syndicate, Limited .. .. .	8th Do.
3	B.A.W. Syndicate (J.R. Donnan) .. .. .	13th Do.
4	Trinidad Petroleum Development Co., Ltd. .. .. .	15th Do.
5	Do. do. do. .. .. .	21st Do.
6	Apex (Trinidad) Oilfields, Limited .. .. .	29th Do.
7	Trinidad Petroleum Development Co., Ltd. .. .. .	1st February, 1921
8	Trinidad Leaseholds Limited .. .. .	16th Do.
†9	James Lynch O'Connor .. .. .	11th March, 1921
10	Trinidad Petroleum Development Co., Ltd. .. .. .	29th April, 1921
11	Cardiff and Trinidad Petroleum Co., Ltd. .. .. .	2nd May, 1921
12	The Spies Petroleum Co., Ltd. .. .. .	10th Do.
13	Do. do. .. .. .	12th Do.
14	Uroz Oilfields, Limited .. .. .	12th Do.
15	Rosehaugh Company, Limited .. .. .	12th Do.
16	The Spies Petroleum Co., Ltd. .. .. .	23rd Do.
17	Trinidad Petroleum Development Co., Ltd. .. .. .	28th June, 1921
18	Trinidad Leaseholds, Limited .. .. .	29th Do.
19	Do. do. .. .. .	29th Do.
20	Do. do. .. .. .	2nd July, 1921
21	Kern (Trinidad) Oilfields, Ltd. .. .. .	9th Do.
22	Do. do. .. .. .	11th Do.
23	Apex (Trinidad) Oilfields, Ltd. .. .. .	24th October, 1921

## (b) Applications for Exploration Licenses, 1921.

No.	Name of Company.	Date of Application.
1	Trinidad Petroleum Development Co., Ltd. .. .. .	12th January, 1921
2	Oropuche Oilfields, Limited, now General Petroleum Company of Trinidad, Ltd. .. .. .	11th February, 1921
3	Trinidad Petroleum Development Co., Ltd. .. .. .	15th Do.
4	Do. do. do. .. .. .	5th March, 1921
5	Do. do. do. .. .. .	7th April, 1921
6	Do. do. do. .. .. .	22nd Do.
7	Do. do. do. .. .. .	24th June, 1921
8	Do. do. do. .. .. .	7th November, 1921

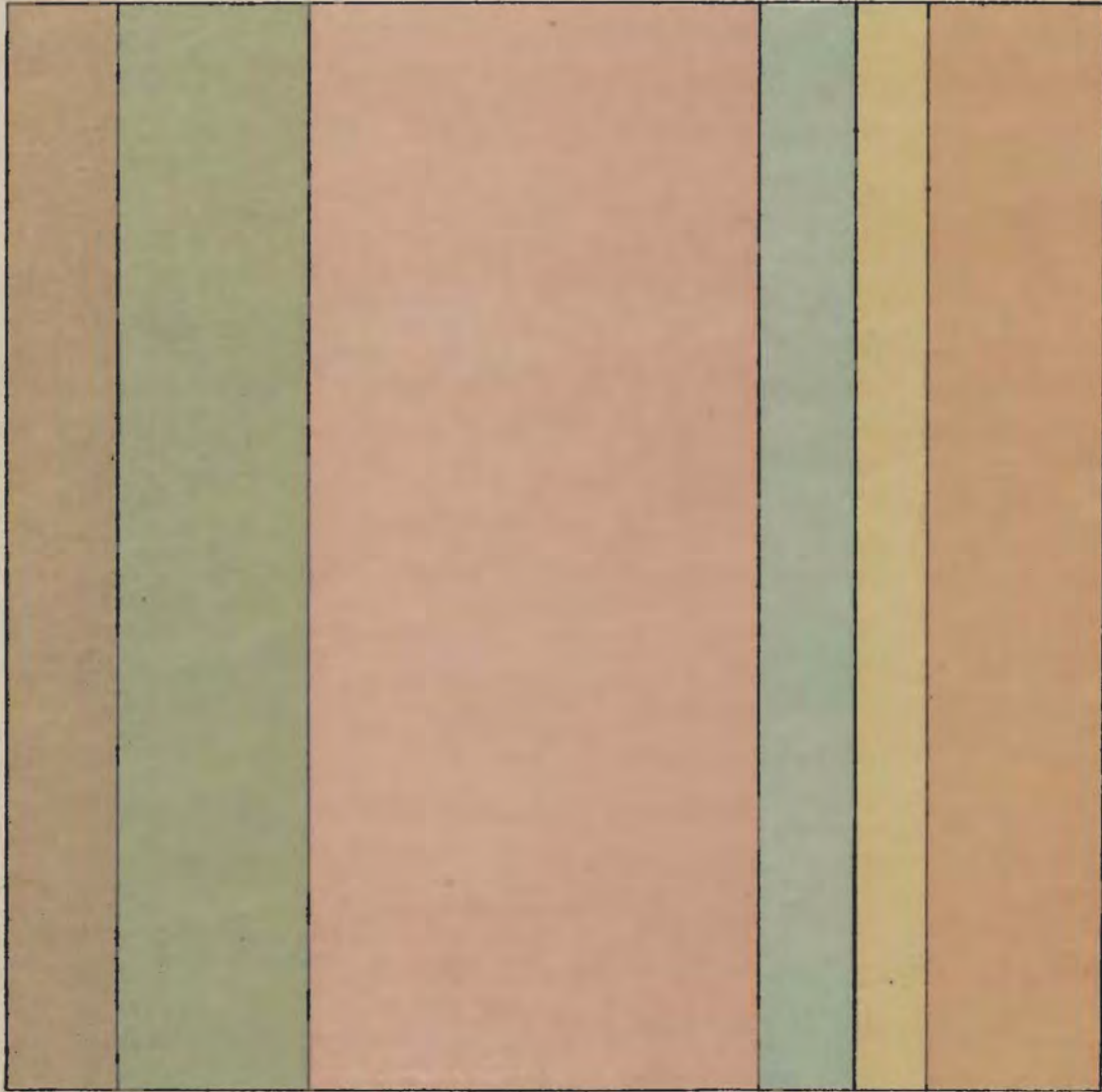
\* 7 Leases, lands at St. Clair.

† 17 Leases, lands at St. Clair.







‡ Prospect for graphite.

**APPENDIX IV.**

**GRAPHICAL DISTRIBUTION OF LANDS IN TRINIDAD.**

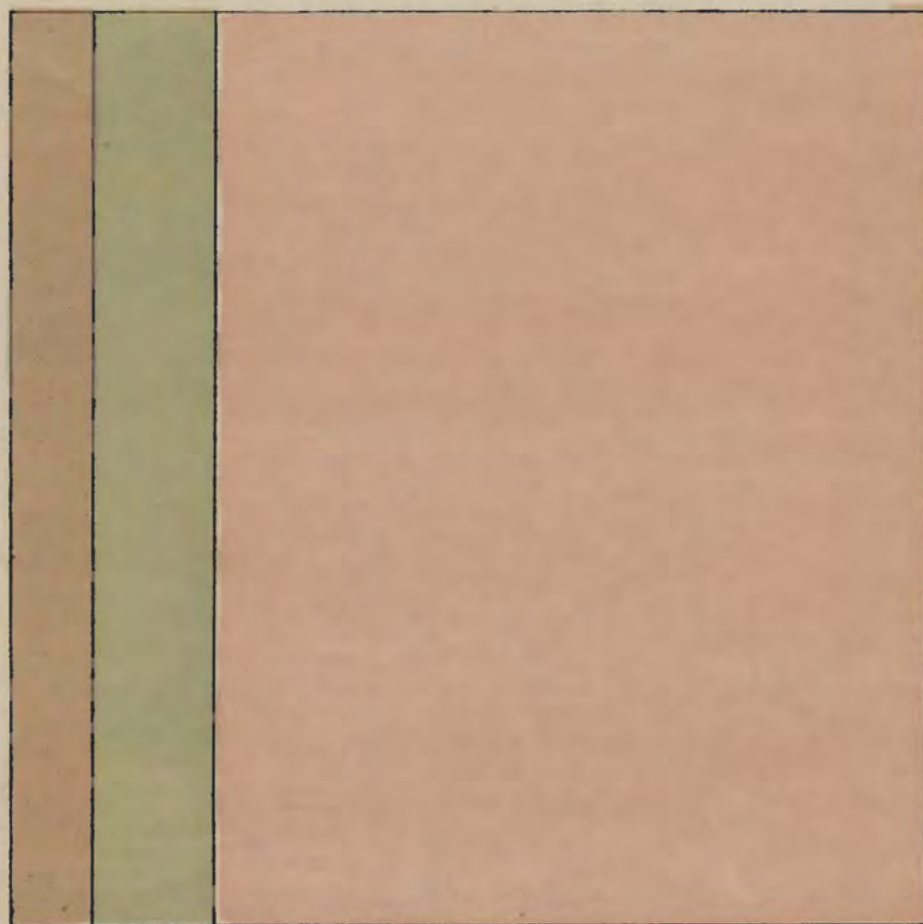


**REFERENCE**




-  .... **Crown lands available for sale above 10° 26' 36"**
-  .... **Forest Reserves**
-  .... **Alienated and other lands**
-  .... **Crown lands under Mining Lease**
-  .... " " **Prospecting License**
-  .... " " **Exploration License**

APPENDIX V.

GRAPHICAL DISTRIBUTION OF LANDS IN TOBAGO.



REFERENCE

- |   |     |                                |
|---|-----|--------------------------------|
|  | ... | Crown lands available for sale |
|  | ... | Forest Reserves                |
|  | ... | Alienated and other lands      |

**Report of the Deputy Sub-Intendant of Crown Lands on the Working of the Crown Lands Branch of the Lands and Mines Department for the year ended 31st December, 1921.**

DIRECTOR OF LANDS AND MINES, &c.

I have the honour to submit the Annual Report of the Lands Branch of the Lands and Mines Department for the year 1921.

2. The total number of petitions for Crown Lands received during the year was 295 compared with 774 for 1920, and these were divided among the Counties, the Ward of Tobago and the St. Clair District of Port-of-Spain as under :—

<i>County.</i>						<i>No.</i>
St. George	..	..	..	..	..	51
St. David	..	..	..	..	..	65
Caroni	..	..	..	..	..	57
St. Andrew	..	..	..	..	..	87
Victoria	..	..	..	..	..	5
Nariva-Mayaro	..	..	..	..	..	3
St. Patrick	..	..	..	..	..	2
Tobago	..	..	..	..	..	24
St. Clair	..	..	..	..	..	1
						295
				Total	..	295

Of the 295 petitions, 102 were for Village Lots, 1 St. Clair Lot, 106 were for parcels of 5 acres, 64 for parcels from 6 to 10 acres, 20 for parcels from 11 to 50 acres and 2 for parcels from 50 to 100 acres.

3. The total amount received on account of Land Sales was £4,833 1s. 7d. as against £15,111 4s. 6d. for 1920.

4. The "Completed" Land Sales for the year show a total of 464 Grants issued comprising 2,614 acres, 0 roods, 18 perches, and 99½ Village Lots as against 689 Grants comprising 4,165 acres 2 roods, 18 perches, and 141 Village Lots for 1920.

5. The amount actually received for these "Completed" Land Sales was £7,435 15s. 7½d. as against £17,460 7s. 9d. for 1920.

6. The number of Grants and the acreage and number of lots alienated on each of the Counties, and in Tobago and St. Clair are given below :—

<i>County.</i>		<i>No. of Grants.</i>	<i>Acreage.</i>			<i>Lots.</i>
			A.	R.	P.	
St. George	..	103	633	1	26	11½
St. David	..	79	193	1	39	54
Caroni	..	70	454	0	3	12
St. Andrew	..	125	969	2	3	12
Victoria	..	10	47	1	29	3
Nariva	..	2	—	—	21	1
St. Patrick	..	2	—	—	30	2
St. Clair	..	1	—	—	—	1
Tobago	..	72	315	3	27	3
Totals	..	464	2,614	0	18	99½

7. The number of Grants issued to East Indians during the year was 63, comprising 351 acres, 1 rood, and 25 perches, and 15 Village Lots.

8. It will be seen that there has been a considerable decrease in the sale of Crown Lands, which may partly be attributed to the very low prices paid for local produce during 1921, and partly to the fact that new Crown Traces are needed to give access to the lands available in the Northern and North-eastern Districts of the Colony.

The Crown Land in the Southern, or Oil area of the Colony is necessarily still withheld from sale, so as not to hamper the development of the Oil Industry.

9. The usual comparative statement Appendix "A" showing the "Completed Land Sales" in respect of the years 1920 and 1921 is appended.

10. The Forfeitures for default of payment of Lands and Buildings Taxes for 1920 recorded in 1921 were 17 in number as compared with 15 for the previous year (*see* Appendix B). This is very satisfactory when it is recalled that the forfeitures recorded for previous years were seldom less than two to three hundred a year, and that the number of forfeitures for 1918, recorded in 1919, namely 52, was the lowest ever recorded up to that time, and this I think indicates that the Wardens are not relaxing their activities in carrying out the provisions of the Lands and Buildings Taxes Ordinance No. 14 of 1920.

11. 37 Re-grants of Forfeited lands were issued during 1921.

12. The Revenue derived from Asphalt was as follows:—

Export Duty	..	..	..	..	£29,655	8	10
Royalty on Asphalt shipped	..	..	..	..	9,980	8	6
Royalty on Asphalt used locally		..	..	..	75	9	0
					<hr/>		
Total..	..	..	..	..	£39,711	6	4
					<hr/>		

as compared with £47,707 16s. 1d. for 1920.

13. ST. CLAIR LOTS—With the exception of one lot reserved for Government purposes, all the lots laid out at St. Clair have now been sold.

14. There is no doubt that there is a large and growing demand for more building sites in and around Port-of-Spain, and this want is being acutely felt, and the Government may shortly have to consider the feasibility of releasing such portions of the remaining Crown Lands as are not actually required for Government purposes.

15. None of the lots laid out in the vicinity of The Lady Chancellor Road have been sold, (though many enquiries have been made about them) but this is in a large measure due to the fact that no roads to give easy access to these lots have yet been constructed, and to the present difficulties of Water Supply and the heavy cost of building construction.

16. ST. AUGUSTINE ESTATE.—This Estate was handed over to the Crown Lands Department in October, 1920, when the sale and lease of the remaining areas were temporarily suspended, and His Excellency the Governor has since appointed a Committee to go into the question of the price to be charged for these lands and also of revising the areas to be leased as building sites.

17. The number of applications received for Licenses to Explore and Prospect for Oil during the year was 31. There were no applications for Mining Leases.

18. The necessity of a Land Register containing all the Real Property and other references became apparent in dealing with the alienated lands applied for by Oil Companies, and a special Vote of £200 was taken in Council on 13th May, 1921, for this purpose. The preparation of this Register was entrusted to Mr. E. C. M. Stone, in July, 1921. Fair progress has been made, but as the work is necessarily slow and tedious it is not anticipated that it will be brought to a completion until about the middle of 1922.

15th March, 1922.

G. L. GUPPY,  
*Deputy Sub-Intendant.*



## APPENDIX A—CROWN LANDS.

Return showing the number of Grants, and the acreage sold in each County, for the years 1920-1921.

County.	1920.					1921.				
	No. of Grants.	Acreage Sold.			Lots.	No. of Grants.	Acreage sold.			Lots.
		A.	R.	P.			A.	R.	P.	
St. George ..	129	1,002	0	32	12	103	633	1	26	11½
St. David ..	87	459	0	21	23	79	193	1	39	54
Caroni ..	147	1,030	0	11	23	70	454	0	03	12
St. Andrew ..	185	1,409	0	20	12	125	969	2	03	12
Victoria ..	24	63	2	20	13	10	47	1	29	3
Nariva ..	42	11	3	02	40	2			21	1
St. Patrick ..	2	7	3	16	—	2			30	2
Tobago ..	56	181	3	16	1	72	315	3	27	3
St. Clair (Port-of-Spain)	17	—	—	—	17	1	—	—	—	1
Totals ..	689	4,165	2	18	141	464	2,614	0	18	99½
Total amount realised		£17,460 7s. 9d.					£7,435 15s. 7½d.			

## APPENDIX B—CROWN LANDS.

County.	1919.		1920.	
	No. forfeited.	No. since sold or regranted.	No. forfeited.	No. since sold or regranted.
St. George ..	2	2	6	Nil.
St. David ..	Nil	Nil	Nil	Nil
Caroni ..	9	2	7	Nil
St. Andrew ..	2	Nil	4	Nil
Victoria ..	Nil	Nil	Nil	Nil
Nariva ..	Nil	Nil	Nil	Nil
Mayaro ..	Nil	Nil	Nil	Nil
St. Patrick ..	Nil	Nil	Nil	Nil
Tobago ..	2	2	Nil	Nil
Total ..	15	6	17	—

**Report of the Crown Surveyor on the working of the Survey Branch of the Lands and Mines Department for the year ended 31st December, 1921.**

DIRECTOR OF LANDS AND MINES, &c.

I have the honour to submit the Annual Report of the Survey Branch of the Lands and Mines Department for the year 1921.

*A.—Triangulation.*

No Triangulation was carried out by this Department during the year, but four new tertiary trigonometrical stations—fixed by the Officer in Charge of the Topographical Survey, which can be used for controlling cadastral surveys—were permanently marked with concrete pillars by this department.

*B.—Topographical.*

Spot Levels were taken and contours at vertical intervals of 10 feet shewn on a plan of a portion of the St. Augustine Estate, containing 300 acres in order to facilitate the selection of the sites for the Residences of the Principal and Staff of the West Indian Agricultural College.

A plan shewing the positions of trees, buildings and other details in the Queen's Park—which contains about 200 acres—was prepared from actual survey.

A certain amount of topographical information was also obtained in the surveys of roads, but as these surveys were undertaken primarily to control the plotting of boundary lines on the Cadastral Sheets, this work has been included under heading C.—Cadastral.

*C.—Cadastral.*

During the year 279 orders were prepared for the surveys of Crown Lands petitioned for, as well as 78 orders for special surveys, making a total of 357 survey orders.

In addition 105 survey orders, issued in 1920 but uncompleted at the end of that year, were completed during the year.

The total area of Crown lands surveyed during the year for oil concessions amounted to 16,544 acres.

The orders for these surveys were given to Contract Surveyors who were paid by the Oil Companies interested.

The total area of new Forest Reserves surveyed during the year amounted to 7,013 acres. This work was also executed by Contract Surveyors, the cost of survey being paid by the Forest Department.

A great deal of time was, however, spent by the Survey Staff in checking the computations of these Oil Concession and Forest Reserve surveys and co-ordinating them to the Trigonometrical Stations before plotting them on the Cadastral Sheets.

The total length of boundary lines marked on the ground in the execution of the surveys completed is as follows :—

Petition and Resumption Surveys	..	..	16,690
Surveys of Forest Reserves	..	..	2,089
Surveys of Oil Concessions	..	..	7,121
			25,900
or 323 $\frac{3}{4}$ miles	..	..	chains

In addition, eleven miles of accurate traverse surveys—connected to the trigonometrical framework—were run along roads and boundaries to control the plotting of the alienated lands on the Cadastral Sheets and a considerable amount of survey work was done for the preparation of a Cadastral map of Princes Town on the scale of 1 in 2500. When completed this map will shew the boundaries of over 700 separately assessed parcels of land, lying within the limits of the town, of which at present we have no general plan.

Of the 56 Special orders executed by the Staff the following 10 are given as examples :—

- S.O. 178/21.—A cadastral survey of the Bagatelle lands—San Juan.
- S.O. 97/21.—Re-survey of certain alienated lands at Carenage to determine the boundaries of the adjoining Crown Lands.
- S.O. 323/21.—A survey of the Moruga Village.
- S.O. 357/21.—A first-class traverse survey along the Streets in the North-western part of Port-of-Spain for the preparation of a cadastral plan of the residential lots in that district.
- S.O. 306/21.—The setting out of 56 lots for a new Village at the  $24\frac{1}{2}$  mile of the Naparima-Mayaro Road.
- S.O. 289/21.—The survey of the reserve for the new Village of Valencia containing 255 acres in which 44 lots were laid out.
- S.O. 74/21.—Re-survey of Water Reserves at Atagual.
- S.O. 174/21.—Survey of a reserve for the diversion of the canal through La Holdi—St. Augustine.
- S.O. 184/21.—A re-survey of certain alienated parcels near Brasso Seco—Blanchisseuse—in order to determine the boundaries of the adjoining Crown Lands.
- S.O. 207/21.—Survey of the Harkoo Trace for resumption purposes.

Among the Special Orders executed by the Staff were some intricate boundary surveys of Crown Lands, of which we had no reliable plans or records.

By means of the survey of the Bagatelle lands—San Juan—(S.O. 178/21) 129 separately assessed parcels, with irregular boundaries—varying from  $\frac{1}{8}$  of an acre to 8 acres—were located, and 73 acres of unassessed lands defined and forfeited to the Crown.

It took one of my Assistants three months to complete this survey, though the total area covered was only 323 acres and the length of boundary lines run, 920 chains.

These surveys take a great deal of time to execute, due to the exhaustive searches and enquiries that have to be made in order to obtain the most reliable data available for the determination of the correct positions of the numerous boundary lines to be set out.

#### D.—*Office Work.*

In addition to the work of computing and checking the traverses and other calculations of the surveys executed by the Staff and Contract Surveyors, the following Maps and Plans were prepared :—

*Maps.*—An Agricultural Map of Trinidad—scale 1 in 300,000—was prepared, shewing in colours the approximate positions of lands under the principal agricultural products, and reproduced by Lithography at the Local Government Printing Office.

An Agricultural Map of Tobago, scale 1 in 50,000 was prepared and reproduced in a similar manner.

A Map of Trinidad—scale 1 in 150,000—shewing the Motor and Carriage Roads of the Island was prepared and is now being printed by Messrs. E. Stanford, London.

The 32 Cadastral Sheets comprising Districts H and K, on the scale of 12 chains to an inch, were reduced by means of the eidograph to the scale of 1 in 50,000, and improved maps of Sheets H and K, scale 1 in 50,000, are now being prepared.

**Plans.**

1,690 Grant, Lease and Survey Plans were made in connection with petitions, as well as numerous tracings for use in the field.

The alienations for the year were plotted on Maps to the scales of 1 in 9,504, 1 in 50,000 and 1 in 150,000.

Small scale plans of 16 Forest Reserves were revised and prepared for reproduction by lithography.

A general plan of the St. Augustine group of Estates was prepared.

244 separate plans were made of the St. Augustine Rice Lots.

180 plans, in duplicate, of properties within the area affected by the Caroni Reclamation Scheme were made.

New plans of Preau Village, California Village and Redhead Village were plotted.

Several plans were prepared in connection with the proposed West Indian Agricultural College as well as other miscellaneous plans and tracings.

The number of plans dealing with transactions under the Real Property Ordinance checked and certified by the Crown Surveyor during the year amounted to 792.

Solar observations for time were taken once a week to determine the correction to the Standard Clock kept in this office, from which the correct time for the Colony is obtained.

*E.—Expenditure.*

				£	s.	d.
Salaries of Staff	..	..	..	2,433	3	2
Expenses of Surveys	..	..	..	2,637	6	10½
Travelling Expenses	..	..	..	544	17	11½
Office Contingencies	..	..	..	17	18	0
				<hr/>	<hr/>	<hr/>
				5,633	6	0

The Staff have worked hard throughout the year and performed their duties in a very efficient manner.

J. W. MACGILLIVRAY,

8th March, 1922.

*Crown Surveyor.*

**Report of the Inspector of Mines on the working of the Mines Branch of the Lands and Mines Department for the year ended 31st December, 1921.**

DIRECTOR OF LANDS AND MINES, &c..

I have the honour to submit the following report on the working of the Mines Department for the year ending 31st December, 1921.

**Official Duties.**

2. The Mines Department was carried on as a separate department until your arrival in the Colony on the 17th April last, and I acted as Inspector of Mines in addition to performing the duties of my substantive post, Deputy Inspector of Mines, from the beginning of the year until that date.

The amalgamation of the lands and Mines Departments took place from the date of your arrival in the Colony when I was appointed to the post of Inspector of Mines. The posts of Deputy Inspector of Mines, 1st Assistant Inspector of Mines, 2nd Assistant Inspector of Mines have been abolished, and three new posts created in their places, viz :—Geologist and two posts designated Assistant Inspector of Mines.

**Petroleum.**

3. I am glad to be able to state that there has been much activity in this industry during the past year. As will be seen later in this report, there has been a considerable increase in the footage drilled by the various oil companies with the result that the production of crude oil has also been largely increased. I have to record that during the year 1921 the greatest production of crude oil in the history of the Colony has been obtained. Although the exports of crude oil and its products, during the period under review, shew an increase over the year 1920 they are still below the quantities exported in 1918 and 1919 ; there were, however at the close of the year, large stocks in storage. The Admiralty continues to purchase considerable quantities of oil fuel, and have entered into new contracts to take supplies from two local companies, viz : the Trinidad Leaseholds, Ltd. and the United British Refineries, Ltd. Shipments of both crude oil and refined products continue to be made to private firms in the United Kingdom, and there is also a considerable trade with the other West Indian Colonies. Regular shipments are also made by steamers calling here for oil bunkers.

4. The following table shews the number of feet drilled and the quantity of oil produced during the period under review, as compared with the years 1919 and 1920 :—

	<i>Year ended 31st December, 1919.</i>		<i>Year ended 31st December, 1920.</i>		<i>Year ended 31st December, 1921.</i>	
	<i>Feet drilled.</i>	<i>Oil won. Imp. Gals.</i>	<i>Feet drilled.</i>	<i>Oil won. Imp. Gals.</i>	<i>Feet drilled.</i>	<i>Oil won. Imp. Gals.</i>
Crown Lands ...	40,122	53,534,295	53,404	61,532,046	70,710	61,325,279
Private Lands ...	13,937	10,902,337	23,972	11,373,901	46,150	21,070,316
Totals ...	68,059	64,436,632	77,376	72,905,947	116,860	82,395,595

During the year 1921 the number of new wells drilled was 84 (49 on Crown Lands and 35 on Private Lands) a total increase of 17 over the previous year. In 42 of these wells oil was struck. The total number of wells drilled in the Colony from the commencement of operations to the 31st December last was 607 of which 362 were on Crown Lands.

5. At the close of the year 1921, 20 companies were actively engaged in the winning of oil as against 22 at the end of 1920. Several companies had, however, temporarily suspended operations just before the end of the year.

6. The Trinidad Leaseholds, Limited, have continued, during the period under review, to concentrate their energies on their fields at the Morne L'Enfer Forest Reserve and Barrackpore. Drilling has also been carried out in the Piparo and Santa Cecilia districts but, up to the present, oil in commercial quantities has not been encountered at either place. A large production of oil has been continued to be obtained from the two former fields, the greater part of which is pumped to their refining and shipping installation at Pointe-à-Pierre. Small quantities have been retained at each of these places and refined for field consumption and for supplying local sugar factories. The additions to the refinery at Pointe-a-Pierre, mentioned in my last report, are now nearing completion; the Greenstreet process for "cracking" oil is, at the time of writing, in operation. The refinery has continued to be worked during the whole of the past year and regular shipments of oil, both to the Admiralty and private firms, have taken place. At the close of the year considerable stocks of oil and products were awaiting shipment.

7. The Trinidad Lake Petroleum Company, Limited, continued to produce oil from its private lands near the Pitch Lake; no further drilling has, however, taken place during the past year. Only small shipments were made by this company during the period under review, and at the close of the year large stocks, mainly composed of oil acquired from the Petroleum Development Company, Limited, were awaiting shipment.

8. The Petroleum Development Company, Limited, has continued drilling operations on the Crown Lands held under lease in the Morne L'Enfer Forest Reserve during the whole of the past year. The wells drilled thereon have continued to be very satisfactory, a large production being obtained.

9. The United British Oilfields of Trinidad, Limited, have confined their drilling operations to the Parry Lands area in the Morne L'Enfer Forest Reserve and have considerably extended this field. The production from this field together with that won from the Crown Lands held under lease and the private lands near Point Fortin has continued to be sold to the United British Refineries, Limited.

10. The operations of the United British West Indies Petroleum Syndicate, Limited, have been confined to the Los Bajos Field near Siparia, and drilling has been continued during the whole of the past year. The production of this Company has, as before, been pumped to Point Fortin and sold to the United British Refineries, Limited.

11. The Trinidad Central Oilfields, Limited continued developing the Crown Lands held under lease near Tabaquite. A prospecting licence over some 70,000 acres of Crown Land has been held by this company since the 1st January, 1920 and drilling operations have also been commenced on this area. Considerable additions to the machinery and buildings on the area held under mining lease have been made during the year, and the "Air lift" system of raising oil has been installed in a number of the producing wells on the field.

12. The Kern Trinidad Oilfields, Limited, a subsidiary of the Kern River Oilfields of California, Limited, commenced drilling operations during the early part of the year on the Perseverance Estate at Guapo, formerly worked by Mr. C. C. Stollmeyer. This company has continued a very active programme of development and is, at the time of writing, arranging to dispose of its production to the United British Refineries, Limited at Point Fortin.

13. Drilling was recommenced by the Trinidad United Oilfields, Limited, during the early part of the year on the Crown Lands held under lease at Palo Seco, but after drilling one well these operations were suspended. Oil has continued to be produced from the old wells and has been treated in the small refining plant owned by the company.

14. The Oropuche Oilfields, Limited, continued developing its private lands adjoining the property of the Trinidad Leaseholds, Limited near Fyzabad. As before the whole of the production obtained has been sold to this latter company.

15. A very active programme has been undertaken by the Apex (Trinidad) Oilfields, Limited, during the period under review on its private lands near Fyzabad. A large production was obtained which had, I understand, to be restricted towards the close of the year owing to the fact that the Trinidad Leaseholds, Limited, to whom the production obtained by this company is sold, were unable to provide the necessary storage; I understand, however, that the latter company will shortly be able to take largely increased quantities. A mining lease over some 100 acres of land, the surface of which has been alienated subsequent to 17th January, 1902, will shortly be issued to this company.

16. The Naparima Oilfields of Trinidad, Limited, commenced drilling operations on the private lands owned by the Saint Madeleine Sugar Company, Limited. A number of wells are in process of being drilled but, up to the present, oil in commercial quantities has not been encountered.

17. The Trinidad Petroleum Development Company, Limited, which is a subsidiary company of S. Pearson and Sons, Limited, commenced drilling on private lands near San Fernando and on Crown Lands held under prospecting licence near Tabaquite. The producing stage has not, as yet, been reached.

18. The Transvaal and Rhodesian Estates, Limited, continued extracting oil during the whole of the past year from the wells already drilled on its private lands at Point Ligoure, but no further development work has yet been undertaken.

19. A well was drilled by the Anglo-Trinidad Oil Company, Limited, on lands held under prospecting licence in the Rio Claro District. Oil was struck in this well but operations are temporarily suspended pending, I understand, the raising of further capital.

20. Drilling operations were resumed towards the close of the year by the Trinidad National Petroleum Company, Limited, on its Poonah field and a small quantity of oil was struck.

21. The Trinidad Oil Producing and Refining Company, Limited, continued drilling on its private lands near Fyzabad during the early part of the year. The production obtained was sold to the Trinidad Leaseholds, Limited.

22. The Amalgamated Oilfields of Trinidad, Limited suspended drilling on its private lands near Moruga during the early part of the year; oil in commercial quantities was not encountered.

23. The Trinidad Freeholds, Limited continued producing oil from the existing wells which was sold to the Trinidad Leaseholds, Limited.

24. The Uroz Oilfields, Limited, drilled both on private lands and lands held under prospecting licence. Operations were suspended in the middle of the year without oil in payable quantities having been struck.

25. The Trinidad Esmeralda Estates, Limited continued drilling on its private estates during the greater part of the year and were successful in striking oil. Operations are, for the present, suspended.

26. The British Controlled Oilfields, Limited, drilled several wells on private lands in the Montserrat district without striking oil in paying quantities. Work was suspended at the end of the year in order that the machinery might be transferred to Venezuela.

27. The Trinidad Tarouba Oil Development Company, Limited, continued drilling on private estates near San Fernando, but no oil was struck.

28. The General Petroleum Company of Trinidad, Limited, drilled one well on private lands in the Fort George District and then ceased work about the middle of the year.

29. Drilling operations have not been resumed by the Fyzabad Oilfields of Trinidad, Limited, during the period under review. I understand that their properties have been sold to the Spies Petroleum Company, Limited.

30. The B.A.W. Syndicate, Limited, to whom a prospecting licence over 3,484 acres of lands, the surface of which was alienated subsequent to the 17th January, 1902, was issued, commenced drilling in the Piparo District towards the end of the year.

31. The Cardiff and Trinidad Petroleum Company, Limited, and the Poole Syndicate, Limited both commenced drilling on private lands during the year.

32. The amount of royalty earned during 1921 was £20,003 being an increase of £1,293 over the previous year. The revenue obtained from wayleaves for oil conveyed through pipe lines laid along the Trinidad Government Railway was £4,101 and £1,713 in respect of oil piped along the Public Roads, making a total of £5,814 as compared with £4,651 for 1920.

33. Fees charged for crossing the Railway, Roads and Foreshore with pipe lines amounted to £16.

34. The various returns required to be submitted by the oil companies operating in the Colony, under the Ordinances administered by the Department, have been regularly furnished and after being checked have been filed in this Office.

35. INSPECTIONS.—The oilfields in the Colony have been regularly inspected, and I have to place on record my appreciation of the various fields managers and others who have assisted the officers of the Department to carry out their duties under the various Ordinances. In addition to carrying out the usual routine inspections it has been necessary to pay a considerable number of visits to the oilfields in connection with accidents, the shutting off of water, royalties, wayleaves, etc. I have much pleasure in reporting that, in the majority of cases, the various managers co-operate with this department in endeavouring to carry out the provisions of the Ordinances and Regulations. It has not been necessary to institute any prosecutions for breaches of the law.

36. LEASES AND LICENCES.—Three prospecting licences over alienated lands on which the Crown holds the oil rights were issued during the past year as follows :—

B. A. W. Syndicate, Limited	..	..	..	3,484 acres.
General Petroleum Company of Trinidad, Limited	..		..	1,331 acres.
British Union Oil Company, Limited	..	..	..	175 acres.

An exploration licence was also issued to the Trinidad Petroleum Development Company, Limited, over 185,893 acres.



37. QUARRIES.—The quarries in the Colony with the exception of the Eastern and Carrera quarries, both owned by the Government, are small and unimportant. They have been inspected as occasion demands, and have, in most cases been found to be worked in a careful manner. The number of quarries in operation during the year 1921 was 69 as against 62 during the year 1920.

38. WORK UNDER THE PETROLEUM ORDINANCE NO. 20 OF 1915.—Regular inspections of the premises in which the various products of petroleum are stored have been carried out by the officers of this department, and I have to report that in most cases the utmost care was taken by the owners to ensure safety.

39. PREVENTION OF ACCIDENTS ORDINANCE NO. 13 OF 1915.—The remarks in my Annual Report for 1920 on this subject still hold good. In the main, the managers of the various factories took great care in making the machinery under their control as safe as possible. During the period under review 83 factories were worked in Trinidad and 13 in Tobago.

#### **Work under the Asphalt Industry Ordinance.**

40. Digging on the village lots at La Brea has not yet been recommenced. There does not appear to be any prospect of it being resumed in the near future.

41. APPENDICES.—Appendix A shews the average number of persons employed and the quantity and value of minerals obtained.

Appendix B contains the list of accidents, and it will be seen that they are such as are incidental to all industrial operations of this nature.

In Appendix C is given a list of the oilfields and quarries worked during the year 1921.

Appendix D contains a comparative statement of the oil produced, refined and exported.

42. STAFF.—I have great pleasure in recording the able and loyal assistance I have received from the members of the Staff.

16th March, 1922.

A. P. CATHERALL,  
*Inspector of Mines.*

## APPENDIX A.—MINES.

Daily average number of persons employed and quantity and value of Minerals obtained from Mines, Oilfields and Quarries during the year ended 31st December, 1921.

MINERALS.	Daily average number of persons employed.		Total.	Quantity.	Approximate Value.
	Males.	Females.			
Oil .. .. .	4,647	88	4,735	82,395,595 Imp. Gls.	£ 602,406
Asphalt .. .. .	780	20	800	119,729 Tons ..	149,661
Private Quarries (Limestone, Gravel, etc.)..	447	133	580	139,061 do. ..	20,281
Government Quarries (Limestone, etc.) ..	413	116	529	88,183 do. ..	19,054

NOTE.—The difference in value between metal won from Private Quarries and Government Quarries is that the former consists of both Limestone and Gravel whilst the latter is chiefly Limestone.

## APPENDIX B.—MINES.

List of Accidents which occurred at Mines, Oilfields and Quarries during the year ended 31st December, 1921, reported under section 19 of Ordinance No. 13 of 1907.

Name of Mine, Oilfield or Quarry.	NUMBER OF ACCIDENTS REPORTED.			
	Minor.	Serious.	Fatal.	Total.
United British Oilfields of Trinidad, Limited ..	4	3	2	9
United British West Indies Petroleum Syndicate, Ltd...	4	..	..	4
Trinidad Freeholds, Ltd.. .. .	1	..	..	1
Trinidad Leaseholds, Ltd., (Pointe-à-Pierre) ..	9	..	..	9
Trinidad Leaseholds, Ltd., (Fyzabad) .. ..	19	..	1	20
General Petroleum Company of Trinidad, Limited ..	1	..	..	1
Amalgamated Oilfields of Trinidad, Limited ..	1	..	..	1
Oropuche Oilfields, Ltd. .. .. .	5	3	..	8
Trinidad Oil Producing and Refining Co., Ltd. ..	1	..	..	1
Trinidad Central Oilfields, Ltd. .. .. .	6	2	1	9
Kern Trinidad Oilfields, Ltd. .. .. .	2	..	1	3
Poole Syndicate, Limited .. .. .	1	..	..	1
New Trinidad Lake Asphalt Company, Limited ..	2	1	1	4
Prizgar's Quarry .. .. .	1	..	..	1
	57	9	6	72

APPENDIX C.—MINES.

No.	Name.	Situation.	Owner and Address.	Manager.	Daily average No. of persons employed.	Mineral worked.
1	Trinidad Central Oilfields, Ltd. . . . .	Tabaquite . .	Trinidad Central Oilfields, Ltd., 2, Broad Street Place, London E.C. 2	R. H. Sperling . . . .	966	Oil.
2	United British Oilfields of Trinidad, Ltd. . . . .	Point Fortin . .	United British Oilfields of Trinidad, Ltd., 15, Abercromby Street, Port-of-Spain	F. J. Fleming . . . .	985	Oil.
3	United British West Indies Petroleum Syndicate, Ltd.	Siparia . .	United British West Indies Petroleum Syndicate, Limited, 15, Abercromby Street, Port-of-Spain	Do. . . . .	130	Oil.
4	Trinidad Oil Producing and Refining Co., Limited	Fyzabad . .	Trinidad Oil Producing and Refining Company, Limited, Pointe-a-Pierre Road, San Fernando	A. W. Ibbett . . . .	7	Oil.
5	General Petroleum Company of Trinidad, Limited	Fifth Company . .	General Petroleum Company of Trinidad, Ltd., Pointe-a-Pierre Road, San Fernando	Do. . . . .	24	Oil.
6	Amalgamated Oilfields of Trinidad, Ltd. . . . .	Moruga . .	Amalgamated Oilfields of Trinidad, Ltd., Pointe-a-Pierre Road, San Fernando	Do. . . . .	18	Oil.
7	Trinidad National Petroleum Company, Ltd.	Williamsville and Mandingo Rd.	Trinidad National Petroleum Company, Ltd., 14, Chacon Street, Port-of-Spain	Randolph Rust . . . .	11	Oil.
8	Trinidad Lake Petroleum Company, Ltd. . . . .	Brighton . .	Trinidad Lake Petroleum Company, Limited, Brighton	Paul Munoz . . . .	150	Oil.
9	Petroleum Development Company, Ltd. . . . .	Forest Reserve . .	Petroleum Development Company, Limited, Brighton	Paul Munoz . . . .	150	Oil.
10	Oropuche Oilfields, Limited . . . . .	Fyzabad . .	Oropuche Oilfields, Limited, Pointe-a-Pierre Road, San Fernando	A. W. Ibbett . . . .	84	Oil.
11	Trinidad Tarouba Oil Development Company, Limited	Williamsville . .	Trinidad Tarouba Oil Development Company, Ltd., Royal Bank Buildings, Marine Square, Port-of-Spain	E. K. Soper . . . .	14	Oil.
12	Apex (Trinidad) Oilfields, Limited . . . . .	Fyzabad . .	Apex (Trinidad) Oilfields, Ltd., 208-224, Salisbury House, London, E.C. England	H. C. B. Hickling . . . .	142	Oil.
13	Transvaal and Rhodesian Estates, Limited . . . . .	Pointe Ligoure . .	Transvaal and Rhodesian Estates, Ltd., 18, Chacon Street, Port-of-Spain	J. Greenidge . . . .	2	Oil.
14	British Controlled Oilfields, Limited . . . . .	Santa Lucia, Williamsville	British Controlled Oilfields, Ltd., 27, Marine Square, Port-of-Spain	C. R. Clark . . . .	35	Oil.
15	Uroz Oilfields, Limited . . . . .	Williamsville . .	Uroz Oilfields, Limited, 9, St. Vincent Street, Port-of-Spain	H. P. Ingram . . . .	67	Oil.
16	Trinidad Esmeralda Estates, Limited . . . . .	Do. . .	Trinidad Esmeralda Estates, Ltd., 9, St. Vincent Street, Port-of-Spain	C. B. Gasson . . . .	10	Oil.
17	Kern Trinidad Oilfields, Limited . . . . .	Guapo . .	Kern Trinidad Oilfields, Ltd., Guapo . . . . .	W. Calder . . . .	255	Oil.
18	Anglo-Trinidad Oil Company, Limited . . . . .	Oropuche and Rio Claro	Anglo-Trinidad Oil Company, Ltd., Pointe-a-Pierre Road, San Fernando	A. W. Ibbett . . . .	14	Oil.
19	Trinidad United Oilfields, Limited. . . . .	Palo Seco . .	Trinidad United Oilfields, Ltd., 40-42, Broad Street Avenue, London	G. Rooks . . . .	16	Oil.
20	Trinidad Freeholds, Limited . . . . .	Fyzabad . .	Trinidad Freeholds, Ltd., Henry Street, Port-of-Spain	Trinidad Leaseholds, Ltd.	9	Oil.
21	Trinidad Leaseholds, Limited . . . . .	Do. . .	Trinidad Leaseholds, Ltd., Pointe-a-Pierre . . . . .	R. Beaumont . . . .	614	Oil.
22	Do. do. . . . .	Pointe-a-Pierre . .	Do. do. do. . . . .	Do. . . . .	631	Oil.
23	Do. do. . . . .	Barrackpore . .	Do. do. do. . . . .	Do. . . . .	134	Oil.
24	Do. do. . . . .	Siparia . .	Do. do. do. . . . .	Do. . . . .	9	Oil.
25	Do. do. . . . .	Piparo . .	Do. do. do. . . . .	Do. . . . .	28	Oil.
26	Do. do. . . . .	Guayaguayare . .	Do. do. do. . . . .	Do. . . . .	5	Oil.
27	Cardiff & Trinidad Petroleum Co., Ltd.	Mayo Road, Williamsville	Cardiff and Trinidad Petroleum Company, Ltd., 68, High Street, San Fernando	W. R. Brown . . . .	18	Oil.
28	Naparima Oilfields of Trinidad, Limited . . . . .	San Fernando . .	Naparima Oilfields of Trinidad, Ltd., San Fernando	A. Jeffreys . . . .	112	Oil.
29	Trinidad Petroleum Development Company, Limited	South Naparima	Trinidad Petroleum Development Company, Ltd., 107, Queen Street, Port-of-Spain	G. Kemsley . . . .	54	Oil.
30	Boole Syndicate, Limited. . . . .	Rio Claro . .	Rio Syndicate, Limited, Henry Street, Port-of-Spain	Jean de Verteuil. . . .	23	Oil.
31	B. A. W. Syndicate, Limited . . . . .	Piparo . .	6, Royal Bank Buildings, Marine Square, Port-of-Spain	J. R. Donnan . . . .	18	Oil.

APPENDIX C.—MINES.—Continued.

No.	Name.	Situatoin.	Owner and Address.	Manager.	Daily average No. of persons employed.	Mineral worked.
	MINES.					
1	New Trinidad Lake Asphalt Company, Ltd.	La Brea	New Trinidad Lake Asphalt Company, Ltd., Brighton	Paul Munoz	800	Asphalt
	QUARRIES.					
1	Bon Accord Quarry	Pointe-a-Pierre	Trinidad Government Railway, Port-of-Spain	C. Newallo	20	Sandstone.
2	Brasso Quarry	Brasso-Caparo Road	Trinidad Government, Port-of-Spain	District Engineer, South Caroni	14	Limestone.
3	Atagual Quarry	Guaracara-Tabaquite Rd.	Do. do.	Do.	4	Do.
4	Guaracara	Brasso	Do. do.	Do.	5	Do.
5	Cutucupano	Santa Cruz Rd.	Do. do.	District Engineer, Port-of-Spain	3	Do.
6	Morne Coco Quarry	Diego Martin	Do. do.	Do.	5	Do.
7	Chancellor Road	St. Ann's Hill	Do. do.	Do.	7	Do.
8	Moruga Quarry	Moruga	Do. do.	Y. de Verteuil, Princes Town	19	Sandstone.
9	Moreau Quarry	Moreau Road	Do. do.	Do.	7	Limestone.
10	Buenos Ayres	Erin Road	Do. do.	District Engineer, Siparia	9	Porcellanite.
11	Morne Diable No. 2	Morne Diable	Do. do.	Do.	25	Limestone.
12	Siparia Government	Erin Road	Do. do.	Do.	16	Porcellanite.
13	Matchapoorie	Talparo Road	Do. do.	District Engineer, North Caroni	13	Limestone.
14	Chin Chin Road	Chin Chin Extension Road	Do. do.	Do.	10	Do.
15	San Chu Chu	Tamana Road	Do. do.	Do.	3	Do.
16	Southern Road 73½ mile	Southern Central Road 73½ mile	Do. do.	District Engineer, Cedros	5	Porcellanite.
17	Southern Road 71½ Mile	Southern Central Road 71½ mile	Do. do.	Do.	8	Do.
18	Morichal	Morichal Local Road	Do. do.	District Engineer, San Fernando	8	Limestone.
19	Morne Roche	Morne Roche Quarry Road	Do. do.	Do.	5	Do.
20	Mayo Quarry	Mayo Quarry Road	Do. do.	Do.	6	Do.
21	Corosal	Corosal Road	Do. do.	Do.	4	Do.
22	8½ Mile Guaico-Tamana Road	8½ Mile Guaico-Tamana Road	Do. do.	District Engineer, St. Andrew	16	Do.
23	11 Mile Guaico-Tamana Road	11 Mile Guaico-Tamana Road	Do. do.	Do.	10	Do.
24	2½ Mile Fishing Pond Road	2½ Mile Fishing Pond Road	Do. do.	Do.	2	Do.
25	½ Mile Mandillon Road Quarry	½ Mile Mandillon Road	Do. do.	Do.	2	Do.
26	Mt. Parnassus	Scarborough	Do. do.	District Engineer, Tobago	5	Rotten Rock.

APPENDIX C.—MINES.—Continued.

No.	Name.	Situation.	Owner and Address.	Manager.	Daily average No. of persons employed.	Mineral worked.
27	Carrera .. .. .	Carrera Islands	Trinidad Government, Port-of-Spain .. .. .	Superintendent of Prisons	102	Limestone.
28	Mount Hope Quarry .. .. .	St. Joseph .. .	Do. do. .. .. .	Do. .. .. .	37	Do.
29	Easterr Quarries .. .. .	Laventille .. .	Do. do. .. .. .	F. J. Horsford .. .. .	120	Do.
30	Tabaquite-Nariva Road 1st Mile .. .. .	Tabaquite Village	Do. do. .. .. .	District Engineer, Nariva-Mayaro	16	Do.
31	Cunapo Southern Road 16½ Mile .. .. .	Biche Village .. .	Do. do. .. .. .	Do. .. .. .	23	Do.
32	Plum Road Quarry .. .. .	Manzanilla .. .	Manzanilla Local Road Board .. .. .	L. S. Daly .. .. .	2	Do.
33	Charles' Quarry .. .. .	San Fernando .. .	L. Charles, Chacon Street, San Fernando .. .. .	C. Lucas .. .. .	3	Gravel.
34	Renown Quarry .. .. .	Pointe Gourde .. .	Charles Archibald, 26, Gatacre Street, Port-of-Spain .. .. .	C. Cambridge .. .. .	6	Limestone.
35	Laventille Quarry .. .. .	Port-of-Spain .. .	Trinidad Quarrying and Transport Company, 78, South Quay, Port-of-Spain	L. R. Gransaul .. .. .	60	Do.
36	Verdun Quarry .. .. .	San Fernando .. .	H. R. McLean, 27-29, Circular Road, San Fernando .. .. .	F. de Gannes .. .. .	2	Gravel.
37	Glendale Quarry .. .. .	Do. .. .. .	Do. do. do. .. .. .	Do. .. .. .	56	Do.
38	Zonzales Place .. .. .	Port-of-Spain .. .	City Council, Port-of-Spain .. .. .	City Engineer .. .. .	4	Limestone.
39	La Pique Quarry .. .. .	San Fernando .. .	S. C. Boodoosingh, Pointe-a-Pierre Road, San Fernando .. .. .	F. de Gannes .. .. .	6	Gravel.
40	La Coulee Quarry .. .. .	Do. .. .. .	Heirs of Joachim, care of Mr. J. Dopson, San Fernando .. .. .	Do. .. .. .	14	Do.
41	Monte Cristo Quarry .. .. .	Tamana .. .. .	H. Monceaux, Cumuto .. .. .	E. E. Monceaux .. .. .	2	Limestone.
42	Mahon's Quarry .. .. .	Pointe Gourde .. .	H. H. Archer, 5, St. Joseph Road, Port-of-Spain .. .. .	C. Archibald .. .. .	62	Do.
43	Osine Quarry .. .. .	San Fernando .. .	Ste. Madeleine Sugar Company, San Fernando .. .. .	N. Fleming .. .. .	9	Gravel.
44	Heirs of Prizgar .. .. .	Laventille .. .	Heirs of Prizgar, 22, Hermitage Road, Port-of-Spain .. .. .	James Walker .. .. .	36	Limestone.
45	Thomas Bay Quarry .. .. .	Gaspree .. .. .	A. Augustine, Pointe Gourde .. .. .	A. Augustine .. .. .	5	Do.
46	Mitchell Bay Quarry .. .. .	Pointe Gourde .. .	Do. do. .. .. .	Do. .. .. .	10	Do.
47	Pointe-a-Pierre Quarry .. .. .	Pointe-a-Pierre .. .	Trinidad Leaseholds, Limited, Pointe-a-Pierre .. .. .	G. H. Simpson .. .. .	20	Sandstone.
48	Aranguel Gravel Pit .. .. .	San Juan .. .. .	Mrs. M. A. Rapsey, Maraval .. .. .	J. H. Rapsey .. .. .	18	Gravel.
49	O'Brady's Quarry .. .. .	Laventille .. .	R. M. T. Prizgar, 62, Maraval Road, Port-of-Spain .. .. .	C. Newallo .. .. .	26	Limestone.
50	Champ Fleur .. .. .	St. Joseph .. .. .	Mrs. F. Gransaul, St. Joseph .. .. .	L. R. Gransaul .. .. .	40	Do.
51	Masson Bay Quarry .. .. .	Pointe Gourde .. .	O. H. Lee Lum, 31, Charlotte Street, Port-of-Spain .. .. .	A. Joseph .. .. .	30	Do.
52	St. Joseph Quarry .. .. .	San Fernando .. .	A. Harwood & P. Pickering, San Fernando .. .. .	P. Pickering .. .. .	2	Gravel.
53	Prizgar's Quarry .. .. .	Laventille .. .	Trinidad Trading Company, Ltd., Port-of-Spain .. .. .	C. C. Carmichael .. .. .	27	Limestone.
54	Mt. Pleasant Quarry .. .. .	Mt. Pleasant Rd. .. .	Messrs. R. & J. Henderson, 31, St. Vincent Street, Port-of-Spain .. .. .	F. Thomson .. .. .	4	Shell.
55	Duke Street Quarry .. .. .	12, Duke Street, Port-of-Spain	Virginia Prime, 12, Duke Street, Port-of-Spain .. .. .	W. Bowers .. .. .	11	Limestone.
56	Champs Elysees Quarry .. .. .	Maraval .. .. .	Madame de Boissière, Champs Elysees, Maraval .. .. .	Madame de Boissière .. .. .	12	Gravel, sand and boulders
57	Heemah Quarry .. .. .	San Fernando .. .	Heemah, San Fernando .. .. .	H. Gajadharsingh .. .. .	4	Limestone.
58	Baldeo Quarry .. .. .	Do. .. .. .	M. Maharaj & Company, Gasparillo Post Office, San Fernando .. .. .	Do. .. .. .	3	Do.
59	Siparia Hill Quarry .. .. .	Port-of-Spain .. .	T. Layne, 22, Siparia Hill, Port-of-Spain .. .. .	C. McCarthy .. .. .	2	Do.
60	Savonetta Bay Quarry .. .. .	Gaspree .. .. .	A. G. Agostini, 78, South Quay, Port-of-Spain .. .. .	A. J. Blondell .. .. .	10	Do.
61	Stollmeyer No. 1 Quarry .. .. .	Guapo .. .. .	Kern Trinidad Oilfields, Ltd., Guapo .. .. .	W. Calder .. .. .	10	Asphalt Sand.
62	Stollmeyer No. 2 Quarry .. .. .	Do. .. .. .	Do. do. .. .. .	Do. .. .. .	4	Sand.
63	Stollmeyer No. 3 Quarry .. .. .	Do. .. .. .	Do. do. .. .. .	Do. .. .. .	10	Asphalt Sand.
64	Verdant Vale Quarry .. .. .	Arima-Blanchisseuse Rd. .. .	Trinidad Cocoa & Coffee Co., Palmiste Estate, San Fernando .. .. .	Eddy Thatcher .. .. .	12	Limestone.
65	La Corona Estate .. .. .	Tamana .. .. .	Roque de Verteuil, Corona Estate, Tamana .. .. .	Roque de Verteuil .. .. .	11	Do.
66	Kelly's Quarry .. .. .	Diego Martin .. .	E. T. V. Kelly, 103, Queen Street, Port-of-Spain .. .. .	Louis Cuthbert .. .. .	6	Do.
67	Fishing Pond Road 4¼ Mile .. .. .	Fishing Pond Rd 4¼ Mile	H. H. Archer, 5, St. Joseph Road, Port-of-Spain .. .. .	H. H. Archer .. .. .	10	Porcellanite.
68	Plum Road Quarry .. .. .	Manzanilla .. .	Do. do. do. .. .. .	Pedro Marcano .. .. .	25	Limestone.
69	Bourne's Bay Quarry .. .. .	Gaspree .. .. .	Ste. Madeleine Sugar Company, San Fernando .. .. .	A. Manswell .. .. .	6	Do.

## APPENDIX D.—MINES.

Comparative statement of Oil produced refined and exported year by year since inception of industry.

YEAR.	Production in Gallons.	Quantity of Crude Oil Refined in Gallons.	Quantity of Crude Oil and Refined Oil exported in Gallons.
1905-1909-10 .. .. .	368,934	..	..
1910-1911.. .. .	4,378,942	..	..
1911-1912.. .. .	9,985,748	Previous to 1912-1913 1,324,468	7,685,374
1912-1913.. .. .	17,626,563	331,928	4,295,707
1913-1914.. .. .	22,523,060	1,227,134	13,570,152
1914-1915.. .. .	36,753,931	1,449,445	12,192,289
9 months ended December, 1915 ..	23,489,362	2,045,286	14,286,585
1916 .. .. .	32,475,695	3,773,770	34,129,955
1917 .. .. .	56,080,914	17,675,068	37,777,919
1918 .. .. .	72,872,398	73,722,915	45,689,234
1919 .. .. .	64,436,632	40,248,014	49,219,1
1920 .. .. .	72,905,947	48,842,055	36,221,728
1921 .. .. .	82,395,595	63,210,566	42,817,117
	496,293,721	253,850,649	297,885,286

TRINIDAD AND TOBAGO.

Council Paper No. 48 of 1923.

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## LANDS AND MINES DEPARTMENT.

Administration Reports of the Acting Director of Lands and  
Mines, the Acting Sub-Intendant of Crown Lands and the  
Crown Surveyor for the year 1922.

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*Laid before the Legislative Council on the  
20th April, 1923.*

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HON'BLE ACTING COLONIAL SECRETARY.

I have the honour to submit the following report on the working of the Mines Branch of the Lands and Mines Department for the year ended 31st December, 1922.

#### Official Duties.

2. Mr. R. R. Thompson, O.B.E., B.Sc., Director of Lands and Mines, was on leave of absence from the Colony from the 27th March to the 26th September, and at the expiration of his leave retired from the Colonial Service on being appointed to the Chair of Oil Mining at the University of Birmingham.

#### The Petroleum Industry.

3. I am glad to be able to state that, in spite of the financial depression which prevailed during the period under review, the production of crude oil was well maintained. There was considerable activity in the industry during the year, but this was chiefly confined to the larger companies. Some of these companies had to restrict their production owing to the difficulty in finding suitable markets for their products. In spite of this fact the quantity of crude oil produced in the Colony during 1922 exceeded the highest production previously recorded, namely that for 1921, by over 3,000,000 gallons. In view of the foregoing I hope to see a very large increase in the production of petroleum in the Colony when financial conditions improve.

4. A substantial increase in the export of petroleum products was recorded during 1922, the figures being 56,000,000 gallons as against 42,000,000 gallons for the year 1921. In addition to the regular shipments of oil fuel, made under contract to the Admiralty by the Trinidad Leaseholds, Limited, and the United British Refineries, Limited, large quantities of petroleum products were exported to private firms in the United Kingdom and the United States of America. A considerable demand for petroleum products refined in Trinidad also exists throughout the West Indies.

5. The following table shews the number of feet drilled and the quantity of oil produced during 1922 compared with the years 1920 and 1921.

	Year ended 31st December, 1920.		Year ended 31st December, 1921.		Year ended 31st December, 1922.	
	<i>Feet drilled.</i>	<i>Oil won. Imp. Gals.</i>	<i>Feet drilled.</i>	<i>Oil won. Imp. Gals.</i>	<i>Feet drilled.</i>	<i>Oil won. Imp. Gals.</i>
Crown Lands ..	53,404	61,532,046	70,710	61,325,279	97,802	53,725,443
Private Lands ..	23,972	11,373,901	46,150	21,070,316	38,068	31,840,860
Total ...	77,376	72,905,947	116,860	82,395,595	135,870	85,566,303

6. The total number of wells drilled in the Colony to the 31st December, 1922, is 710, of which 445 are on Crown lands. During the year under review 91 wells were drilled, of which 73 were on Crown lands and 18 on private lands making an increase of 7 over the number drilled during the previous year. Oil was encountered in 63 out of the 91 wells drilled during the year.

7. At the close of the year 16 companies were actively engaged in the winning of oil as against 20 at the end of the year 1921.



8. During the period under review the Trinidad Leaseholds, Limited, confined its drilling operations to its producing fields in the Morne L'Enfer Forest Reserve and at Barrackpore, the major portion of the production being obtained from the former field. The additions to the refinery at Pointe-a-Pierre, mentioned in my last report, were completed during the year and the storage capacity of this company was also considerably increased. Owing to the fact that large purchases of crude oil are made from other companies, more than half the oil produced in the Colony is now refined at Pointe-a-Pierre.

9. No drilling was undertaken by the Trinidad Lake Petroleum Company, Limited, during the year. Regular production was, however, obtained from the wells already drilled on private lands in the vicinity of the Pitch Lake.

10. The Petroleum Development Company, Limited, continued developing the Crown lands held under mining lease in the Morne L'Enfer Forest Reserve and obtained a very satisfactory production, which was disposed of to its allied company the Trinidad Lake Petroleum Company, Limited.

11. The operations of the United British Oilfields of Trinidad, Limited, were chiefly confined to the Parry Lands area in the Morne L'Enfer Forest Reserve. A considerable amount of drilling was done by this company during the year, in consequence of which the area of the fields under operation has been extended. This company's production was sold to its allied company, the United British Refineries, Limited, by which it was refined and marketed.

12. The United British West Indies Petroleum Syndicate, Limited, continued drilling operations on the Los Bajos field during the whole of the year. A moderate production was obtained from this field and disposed of to the United British Refineries, Limited.

13. The prospecting license held by the Trinidad Central Oilfields, Limited, expired on the 31st December, 1922, and a mining lease has been applied for. A very active drilling programme was undertaken with the result that the present field at Tabaquite has been largely extended. I am glad to be able to record that a considerable increase of production was shewn towards the close of the year.

14. The Apex (Trinidad) Oilfields, Limited, continued, during the whole of the period under review, to develop its private lands adjoining the fields of the Trinidad Leaseholds, Limited, at Fyzabad. A large production was obtained which was, to some extent, curtailed owing to a lack of marketing facilities. The mining lease, mentioned in my last report, over lands on which the Crown holds the oil rights, was issued to this company as from the 1st July, 1922.

15. The Trinidad Petroleum Development Company, Limited, a subsidiary of S. Pearson & Sons, Limited, continued drilling operations on the Phillipine Estate near San Fernando and was successful in striking a high grade oil. At the end of the year operations were being continued to test the potential production and the extent of the field. Prospecting wells were drilled on locations in the Central Range Forest Reserve and at Lizard Springs, but in neither of these wells was oil encountered in commercial quantities.

Control of the Naparima Oilfields of Trinidad, Limited, was acquired during the year and a new company, the New Naparima Oilfields, Limited, was formed to continue operations on the private lands owned by the Ste. Madeleine Sugar Company, Limited.

16. The Uroz Oilfields, Limited, recommenced work on the lands held under prospecting license but did not succeed in striking oil in commercial quantities. Control of the properties held by the Trinidad Oil Producing and Refining Company, Limited, was acquired during the period under review, and at the close of the year the company was engaged in drilling a well on this area.

17. The Kern Trinidad Oilfields, Limited, continued a very active programme during the year. A number of new wells were drilled and a considerable amount of construction work was undertaken. The production obtained was sold to the United British Refineries, Limited.

18. The Oropuche Oilfields, Limited, experienced difficulty in marketing its production and suspended drilling operations during the early part of the year. Arrangements have now been made with the Trinidad Leaseholds, Limited, for the sale of the production. The company has been recently reconstructed and will, I understand, shortly resume active development.

19. The General Petroleum Company of Trinidad, Limited, drilled one well on lands held under prospecting license in the Rio Claro district without striking oil. Operations were suspended towards the close of the year.

20. The British Union Oil Company, Limited, continued drilling operations throughout the year on lands held under prospecting license near Tabaquite, but did not succeed in striking oil in commercial quantities.

21. The B. A. W. Syndicate, Limited, continued drilling on the lands held under prospecting license during the early part of the year. Oil was not encountered in commercial quantities and operations were discontinued.

22. The Trinidad Freeholds, Limited, continued producing from the wells already drilled on private lands but did not undertake any fresh development work.

23. The Petroleum Options, Limited, drilled one well on private lands in the San Francique district and were successful in striking oil. Towards the end of the year preparations were being made to commence drilling another well.

24. The Trinidad United Oilfields, Limited, did no drilling during the year. The mining lease held by this company on Crown Lands at Palo Seco was cancelled on the 28th February, 1922.

25. The Transvaal and Rhodesian Estates, Limited, have not yet recommenced drilling operations. A small quantity of oil still continues to flow from the existing wells.

26. The Rio Syndicate suspended operations on its private lands at Rio Claro during the early part of the year.

27. ROYALTY.—The royalty earned during the period under review was £19,542 as against £20,003 for the year 1921.

28. WAYLEAVES.—The revenue obtained from wayleaves in respect of pipe lines laid along the Trinidad Government Railway and along the public roads of the Colony was as follows :—

Railways..	..	..	..	..	..	..£ 4,267
Roads ..	..	..	..	..	..	..£ 1,798

29. FEES.—Fees charged for crossing the foreshore, the railway and public roads with pipe lines amounted to £28.

30. RETURNS.—The various oil companies have regularly submitted to the department the returns required to be furnished by them in respect of their operations.

31. INSPECTIONS.—In addition to the regular field inspections which were made by officers of the department, it was necessary, as in previous years, to carry out many additional inspections in connection with accidents, royalty computations, wayleaves, refineries, water shut offs, abandonment of wells, &c. In most cases it was found that the provisions of the Ordinances and Regulations had been satisfactorily observed.

#### Leases and Licenses.

32. Two licenses and one mining lease have been issued to companies during the year :—

Mining lease to Apex (Trinidad) Oilfields, Limited—over 105 acres.

Prospecting license to General Petroleum Company of Trinidad, Ltd , over 2,286 acres.

Exploration license to General Petroleum Company of Trinidad, Ltd., over 2,182 acres.

### **Quarries.**

33. With very few exceptions the quarries of the Colony are relatively unimportant and their operations are on a small scale. They were regularly inspected and in most cases were found to have been worked in a careful manner. The number of quarries worked during 1922 was 73 as against 69 in 1921.

### **Work under the Petroleum Ordinance No. 20 of 1915.**

34. The premises in which the various products of petroleum are stored were regularly inspected by officers of the department, and it was generally found that great care had been taken to ensure safety. I have to record that, in consequence of the increase in the number of motor vehicles in the Colony, there has been, of late, a substantial increase in the number of applications to store and sell dangerous petroleum.

### **The Prevention of Accidents Ordinance, No. 13 of 1915.**

35. Regular visits were paid to the various factories and I am pleased to be able to report that the provisions of the Ordinance were carefully observed. There were 83 factories in operation in Trinidad and 13 in Tobago during the year.

### **Work under the Asphalt Industry Ordinance, No. 10 of 1906.**

36. No asphalt was dug on the village lots at La Brea during 1922, and I am unable to state whether there is any prospect of digging being resumed in the near future.

### **Appendices.**

37. Appendix A shews the daily average number of persons employed in Oilfields, Mines and Quarries and the quantity and value of minerals obtained during the year ended 31st December, 1922.

38. Appendix B shews the list of accidents which occurred at Oilfields, Mines and Quarries during the year ended 31st December, 1922, reported under section 19 of Ordinance No. 13 of 1907. A comparison with last year's report shows that there was a considerable decrease in the number of accidents during the period under review.

39. In Appendix C will be found a list of the Oilfields, Mines and Quarries worked during the year 1922.

40. Appendix D comprises a comparative statement of oil produced, refined and exported year by year since the inception of the Petroleum Industry in the Colony.

41. Appendix E consists of curves illustrating the progress made in the oil, asphalt, manjak and quarrying industries from the 1st April, 1911, to 31st December, 1922.

### **Miscellaneous.**

42. STAFF.—I have great pleasure in recording the able and loyal assistance that I have received from the members of the staff.

10th April, 1923.

A. P. CATHERALL,  
*Acting Director of Lands and Mines.*

## APPENDIX A.

Daily average number of persons employed in Oilfields, Mines and Quarries and the quantity and value of minerals obtained during the year ended 31st December, 1922.

MINERALS.	Daily average number of persons employed.		Total.	Quantity.	Approximate Value.
	Males.	Females.			
Oil .. .. .	3,464	76	3,540	85,566,303 Imp. Gals	£ 599,006
Asphalt .. .. .	890	8	898	182,655 Tons ..	114,159
Private Quarries (Limestone, Gravel, &c.) ..	492	135	627	195,706 Tons ..	23,570
Government Quarries (Limestone, &c.) ..	325	86	411	66,338 Tons ..	9,996

## APPENDIX B.

List of Accidents which occurred at Oilfields, Mines and Quarries during the year ended 31st December, 1922, reported under Section 19 of Ordinance No. 13 of 1907.

NAME OF OILFIELD, MINE OR QUARRY.	NUMBER OF ACCIDENTS REPORTED.			
	Minor.	Serious.	Fatal.	Total.
United British Oilfields of Trinidad, Limited .. .. .	..	4	..	4
United British West Indies Petroleum Syndicate, Limited .. .. .	1	..	..	1
Trinidad Leaseholds, Limited, (Pointe-a-Pierre) .. .. .	6	..	..	6
Trinidad Leaseholds, Limited, (Fyzabad) .. .. .	20	..	..	20
Trinidad Central Oilfields, Limited .. .. .	..	1	..	1
Kern Trinidad Oilfields, Limited? .. .. .	..	1	..	1
Apex (Trinidad) Oilfields, Limited .. .. .	4	..	..	4
Trinidad Petroleum Development Company, Limited .. .. .	..	..	1	1
New Trinidad Lake Asphalt Company, Limited .. .. .	..	1	..	1
Prizgar's Quarry .. .. .	1	..	..	1
Pointe Gourde Quarry .. .. .	1	..	..	1
Southern Road Quarry 73½ miles .. .. .	..	1	..	1
	33	8	1	42

APPENDIX C.

Oilfields, Mines and Quarries worked during the year ended 31st December, 1922.

No.	Name.	Situation.	Owner and Address.	Manager.	Daily average No. of persons employed.	Mineral worked.
1	Trinidad Central Oilfields, Limited	.. Tabaquite	.. Trinidad Central Oilfields, Limited, 2, Broad Street Place, London, E.C. 2	R. H. Sperling ..	727	Oil.
2	United British Oilfields of Trinidad, Limited	Point Fortin	.. United British Oilfields of Trinidad, Limited, 15, Abercromby Street, Port-of-Spain	F. J. Fleming ..	605	Oil.
3	United British West Indies Petroleum Syndicate, Limited	Siparia	.. United British West Indies Petroleum Syndicate, Limited, 15, Abercromby Street, Port-of-Spain	Do. ..	96	Oil.
4	Trinidad Oil Producing and Refining Company, Limited	Fyzabad	.. Trinidad Oil Producing and Refining Company, Limited, Pointe-a-Pierre Road, San Fernando	A. W. Ibbett ..	30	Oil.
5	General Petroleum Company of Trinidad, Limited	Rio Claro	.. General Petroleum Company of Trinidad, Limited, Pointe-a-Pierre Road, San Fernando	Do. ..	33	Oil.
6	Trinidad National Petroleum Company, Limited	Williamsville and Mandingo Road	.. Trinidad National Petroleum Company, Limited, 14, Chacon Street, Port-of-Spain	R. Rust ..	7	Oil.
7	Trinidad Lake Petroleum Company, Limited	Brighton	.. Trinidad Lake Petroleum Company, Limited, Brighton	P. Munoz ..	115	Oil.
8	Petroleum Development Company, Limited	Forest Reserve	.. Petroleum Development Company, Limited, Brighton	Do ..	71	Oil.
9	Oropuche Oilfields, Limited	.. Fyzabad	.. Oropuche Oilfields, Limited, Pointe-a-Pierre Road, San Fernando	A. W. Ibbett ..	28	Oil.
10	Apex (Trinidad) Oilfields, Limited	.. Fyzabad	.. Apex (Trinidad) Oilfields, Limited 208-224, Salisbury House, London, E.C., England	H. C. B. Hickling ..	200	Oil.
11	Transvaal and Rhodesian Estates, Limited	.. Pointe Ligoure	.. Globe Oilfields, Limited, Finsbury Pavement House, London E.C., 2	J. Greenidge ..	1	Oil.
12	Uroz Oilfields, Limited	.. Williamsville	.. Uroz Oilfields, Limited, Williamsville	H. P. Ingram ..	35	Oil.
13	Kern Trinidad Oilfields, Limited	.. Guapo	.. Kern Trinidad Oilfields, Limited, Guapo	J. A. Stokes ..	261	Oil.
14	Trinidad United Oilfields, Limited	.. Palo Seco	.. Trinidad United Oilfields, Limited, 40-42 Broad Street Avenue, London	G. Rooks ..	3	Oil.
15	Trinidad Freeholds, Limited	.. Fyzabad	.. Trinidad Freeholds, Limited, 18 Henry Street, Port-of-Spain	Trinidad Leaseholds, Limited	1	Oil.
16	Trinidad Leaseholds, Limited	.. Fyzabad	.. Trinidad Leaseholds, Limited, Pointe-a-Pierre	R. Beaumont ..	417	Oil.
17	Do. do.	.. Pointe-a-Pierre	.. Do. do. do.	Do. ..	395	Oil.
18	Do. do.	.. Barrackpore	.. Do. do. do.	Do. ..	121	Oil.
19	Do. do.	.. Siparia	.. Do. do. do.	Do. ..	4	Oil.
20	Do. do.	.. Piparo	.. Do. do. do.	Do. ..	3	Oil.
21	Do. do.	.. Guayaguayare	.. Do. do. do.	Do. ..	6	Oil.
22	New Naparima Oilfields, Limited	.. San Fernando	.. New Naparima Oilfields, Limited, 107, Queen Street, Port-of-Spain	G. Kemsley ..	62	Oil.
23	Trinidad Petroleum Development Company, Limited	South Naparima	.. Trinidad Petroleum Development Company, Limited, 107, Queen Street, Port-of-Spain	Do. ..	191	Oil.
24	B. A. W. Syndicate, Limited	.. Piparo	.. 6, Royal Bank Buildings, Marine Square, Port-of-Spain	E. Cooper-Scott ..	14	Oil.
25	British Union Oil Company, Limited	.. Tabaquite	.. British Union Oil Company, Limited, 21, Bury Lane, London, E.C. 3	G. Ponsonby ..	70	Oil.
26	Petroleum Options, Limited	.. Fyzabad	.. Petroleum Options, Limited, St. Vincent Street, Port-of-Spain	F. E. Scott ..	19	Oil.
27	Rio Syndicate	.. Rio Claro	.. Rio Syndicate, Henry Street, Port-of-Spain	A. W. Ibbett ..	25	Oil.

APPENDIX C.

Oilfields, Mines and Quarries worked during the year ended 31st December, 1922.—Continued.

No.	Name.	Situation.	Owner and Address.	Manager.	Daily average No. of persons employed.	Mineral worked.
	. MINES.					
1	New Trinidad Lake Asphalt Company, Limited	La Brea	New Trinidad Lake Asphalt Company, Limited, Brighton	Paul Munoz	898	Asphalt
	QUARRIES.					
1	Trinidad Government Railway Quarry	Champ Fleur	Trinidad Government Railway	J. Sealy	1	Limestone.
2	Chancellor Road Quarry	St. Ann's	Trinidad Government, Port-of-Spain	District Engineer, Port-of-Spain	3	Limestone.
3	Morne Coco Road Quarry	Diego Martin	Do. do.	Do.	18	Limestone.
4	Cutucupano Quarry	Santa Cruz	Do. do.	Do.	6	Limestone.
5	Buenos Ayres Quarry	Erin Road	Do. do.	District Engineer, Siparia	5	Porcellanite.
6	Morne Diabie No. 2 Quarry	Morne Diabie	Do. do.	Do.	14	Limestone.
7	Siparia Quarry	San Fernando-Siparia-Erin Road	Do. do.	Do.	8	Porcellanite.
8	Tabaquite Nariva Road, 1st Mile Quarry	Tabaquite	Do. do.	District Engineer, Rio Claro	15	Limestone.
9	Morne Roche Quarry	Morne Roche Quarry Road	Do. do.	District Engineer, San Fernando	14	Limestone.
10	Morichal Quarry	Morichal Road	Do. do.	Do.	12	Limestone.
11	Mayo Quarry	Mayo Road	Do. do.	Do.	12	Limestone.
12	Corosal Quarry	Corosal Road	Do. do.	Do.	5	Limestone.
13	Mount Hope Quarry	St. Joseph	Do. do.	Superintendent of Frisons	22	Limestone.
14	Carrera Quarry	Carrera Island	Do. do.	Do.	121	Limestone.
15	Southern Road 73½ Mile Quarry	Southern Road 73½ mile	Do. do.	Assistant District Engineer, Cedros	7	Porcellanite.
16	Southern Road 71½ Mile Quarry	Southern Road 71½ mile	Do. do.	Do.	6	Porcellanite.
17	Mandillon Road 1½ Mile Quarry	Mandillon Road 1½ mile	Do. do.	District Engineer, St. Andrew	4	Limestone.
18	Guaico Tamana Road 11th mile Quarry	Guaico-Tamana Road 11th mile	Do. do.	Do.	2	Limestone.
19	Guaico-Tamana Road 8½ mile Quarry	Guaico-Tamana Road 8½ mile	Do. do.	Do.	17	Limestone.
20	Moreau Road Quarry	Moreau Road	Do. do.	Y. de Verteuil, Princes Town	17	Limestone.
21	Moruga Quarry	Moruga Road	Do. do.	Do.	15	Sandstone.
22	Cunin Quarry	Moruga	Do. do.	Do.	10	Limestone.
23	Brasso Quarry	Brasso Caparo Road	Do. do.	District Engineer, South Caroni	13	Limestone.
24	Guaracara Quarry	Brasso	Do. do.	Do.	3	Limestone.
25	Atagual Quarry	Guaracara-Tabaquite Rd.	Do. do.	Do.	5	Limestone.
26	Matchapoorie Quarry	Talparo Road	Do. do.	District Engineer, North Caroni	17	Limestone.
27	Chin-Chin Road Quarry	Chin-Chin Extension Road	Do. do.	Do.	30	Sandstone.

APPENDIX C.

Oilfields, Mines and Quarries worked during the year ended 31st December, 1922.—Continued.

No.	Name.	Situation.	Owner and Address.	Manager.	Daily average No of persons employed.	Mineral worked.
28	Mount Parnasus Quarry .. ..	Scarborough Tobago	Trinidad Government, Port-of-Spain .. ..	District Engineer, Tobago	9	Rotten Rock
29	Verdun Quarry .. ..	San Fernando ..	H. R. Mc Lean, Circular Road, San Fernando ..	R. F. de Gannes ..	2	Argiline.
30	Glendale Quarry .. ..	do. ..	Do. do. ..	Do. ..	21	Argiline.
31	Stollmeyer No. 1 .. ..	Guapo ..	C. C. Stollmeyer, Port-of-Spain ..	S. J. Davies ..	10	Sandstone.
32	Stollmeyer No. 4 .. ..	do. ..	Kern Trinidad Oilfields, Limited, Guapo ..	Do. ..	1	Pitch Sand.
33	Prizgar's Quarry .. ..	Laventille ..	Trinidad Trading Company, Limited, Port-of-Spain ..	C. C. Carmichael ..	21	Limestone.
34	Usine Quarry .. ..	San Fernando ..	Ste. Madeleine Sugar Company, San Fernando ..	P. Pierre ..	9	Argiline.
35	Guaico Tamana Road 9½ Mile Quarry ..	Guaico Tamana Road ..	R. de Verteuil, Cumuto ..	J. Lessee ..	9	Limestone.
36	La Corona Estate .. ..	Tamana ..	Do. ..	R. de Verteuil ..	9	Limestone.
37	La Resource Quarry .. ..	Erin ..	C. E. Jemmott, Erin ..	C. E. Jemmott ..	4	Porcellanite.
38	Gonsalves Quarry .. ..	Port-of-Spain ..	City Council, Port-of-Spain ..	City Engineer ..	6	Limestone.
39	Champs Elysees .. ..	Maraval ..	Madame P. de Boissiere, Maraval ..	Panhree ..	11	Gravel.
40	Arima-Blanchisseuse Road Quarry ..	Arima-Blan- chisseuse Road ..	Dr. Marry, Mount Pleasant Estate ..	E. Thatcher ..	6	Limestone.
41	Charles' Quarry .. ..	San Fernando ..	J. E. Crosbie, 114, Coffee Street, San Fernando ..	C. A. Lucas ..	2	Argiline.
42	Pointe-a-Pierre Quarry .. ..	Pointe-a-Pierre ..	Trinidad Leaseholds, Limited, Pointe-a-Pierre ..	R. Beaumont ..	8	Sandstone and grit.
43	Duke Street Quarry .. ..	Duke Street ..	Virginia Prime, 12, Duke Street, Port-of-Spain ..	W. Bowers ..	12	Limestone.
44	Stollmeyer No. 3 .. ..	Guapo ..	C. C. Stollmeyer, Port-of-Spain ..	S. J. Davies ..	2	Sandstone.
45	Stollmeyer No. 5 .. ..	do. ..	Do. do. ..	Do. ..	10	Sandstone.
46	Hermitage Estate .. ..	Pointe-a-Pierre ..	H. Gajadharsing, Gasparillo Post Office ..	H. Gajadharsing ..	7	Limestone.
47	Baldeo Quarry .. ..	San Fernando ..	Do. do. ..	Do. ..	2	Limestone.
48	Caratal Road 1½ Mile Quarry ..	do. ..	Do. do. ..	Do. ..	2	Limestone.
49	St. Joseph No. 1 Quarry .. ..	San Fernando ..	P. Pickering, San Fernando ..	P. Pickering ..	2	Argiline.
50	La Coulee Quarry .. ..	do. ..	H. R. Mc Lean, San Fernando ..	R. F. de Gannes ..	8	Argiline.
51	Clarke's Quarry .. ..	Laventille ..	Trinidad Quarrying and Transport Company, Port-of-Spain ..	L. R. Gransauil ..	47	Limestone.
52	Cronstadt Island Quarry .. ..	Cronstadt Island ..	Do. do. ..	Do. ..	21	Limestone.
53	Circular Road Quarry .. ..	San Fernando ..	San Fernando Borough Council, San Fernando ..	J. J. Waddell ..	1	Argiline.
54	Kelly's Quarry .. ..	Diego Martin ..	E. T. V. Kelly, 103, Queen Street, Port-of-Spain ..	L. Cuthbert ..	6	Limestone.
55	Mitchell Bay Quarry .. ..	Pointe Gourde ..	A. Augustin, Pointe Gourde ..	A. Augustin ..	5	Limestone.
56	Aranguez Quarry .. ..	San Juan ..	Mrs. M. A. Rapsey, Aranguez Estate ..	J. H. Rapsey ..	20	Gravel.
57	Basilon Street Quarry .. ..	Port-of-Spain ..	C. M. Lastique, 26, Siparia Hill, Port-of-Spain ..	C. M. Lastique ..	4	Limestone.
58	O'Brady's Quarry .. ..	Laventille ..	C. C. Newallo, 38, Belle Eau Road, Belmont ..	C. Newallo ..	6	Limestone.
59	Heirs of Prizgar .. ..	do. ..	J. Walker, 25, St. Vincent Street, Port-of-Spain ..	J. Walker ..	8	Limestone.
60	Newallo's Quarry .. ..	San Juan ..	C. Newallo, 38, Belle Eau Road, Port-of-Spain ..	C. Newallo ..	24	Gravel.
61	Plum Road Quarry .. ..	Manzanilla ..	Manzanilla Local Road Board ..	L. S. Daly ..	2	Limestone.
62	Masson's Quarry .. ..	Pointe Gourde ..	Lec Lum and Company, 31, Charlotte Street, Port-of-Spain ..	A. Joseph ..	40	Limestone.
63	Mahon's Quarry .. ..	do. ..	H. H. Archer, St. Joseph Road, Port-of-Spain ..	C. Archibald ..	29	Limestone.
64	Renown Quarry .. ..	do. ..	C. Archibald, 5, St. Joseph Road, Port-of-Spain ..	C. Cambridge ..	5	Limestone.
65	La Pique Quarry .. ..	San Fernando ..	S. C. Boodoosingh, San Fernando ..	P. Wadally ..	3	Argiline.
66	Dunsire Quarry .. ..	Pointe-a-Pierre ..	T. L. Dunsire, San Fernando ..	J. Hurdle ..	2	Argiline.
67	Monte Cristo Quarry .. ..	Tamana ..	H. Monceaux, Arizona Estate, Cumuto ..	E. E. Monceaux ..	1	Limestone.
68	Bourne's Bay Quarry .. ..	Gaspree ..	Ste. Madeleine Sugar Company, San Fernando ..	A. Andre ..	7	Limestone.
69	Arena Quarry .. ..	San Rafael ..	M. Lange, Guanapo Station ..	M. Lange ..	1	Limestone.
70	Verdant Vale Quarry .. ..	Arima- Blanchisseuse ..	J. C. Augustus, Palmiste Estate, San Fernando ..	E. Thatcher ..	3	Limestone.
71	Plum Road Quarry .. ..	Manzanilla ..	H. H. Archer, 5, St. Joseph Road, Port-of-Spain ..	H. H. Archer ..	18	Limestone.
72	Fishing Pond Road, 4½ Mile Quarry ..	Caigual ..	Do. do. do. ..	do. ..	10	Sandstone.
73	Eastern Quarries .. ..	Laventille ..	Do. do. do. ..	Do. ..	200	Limestone.

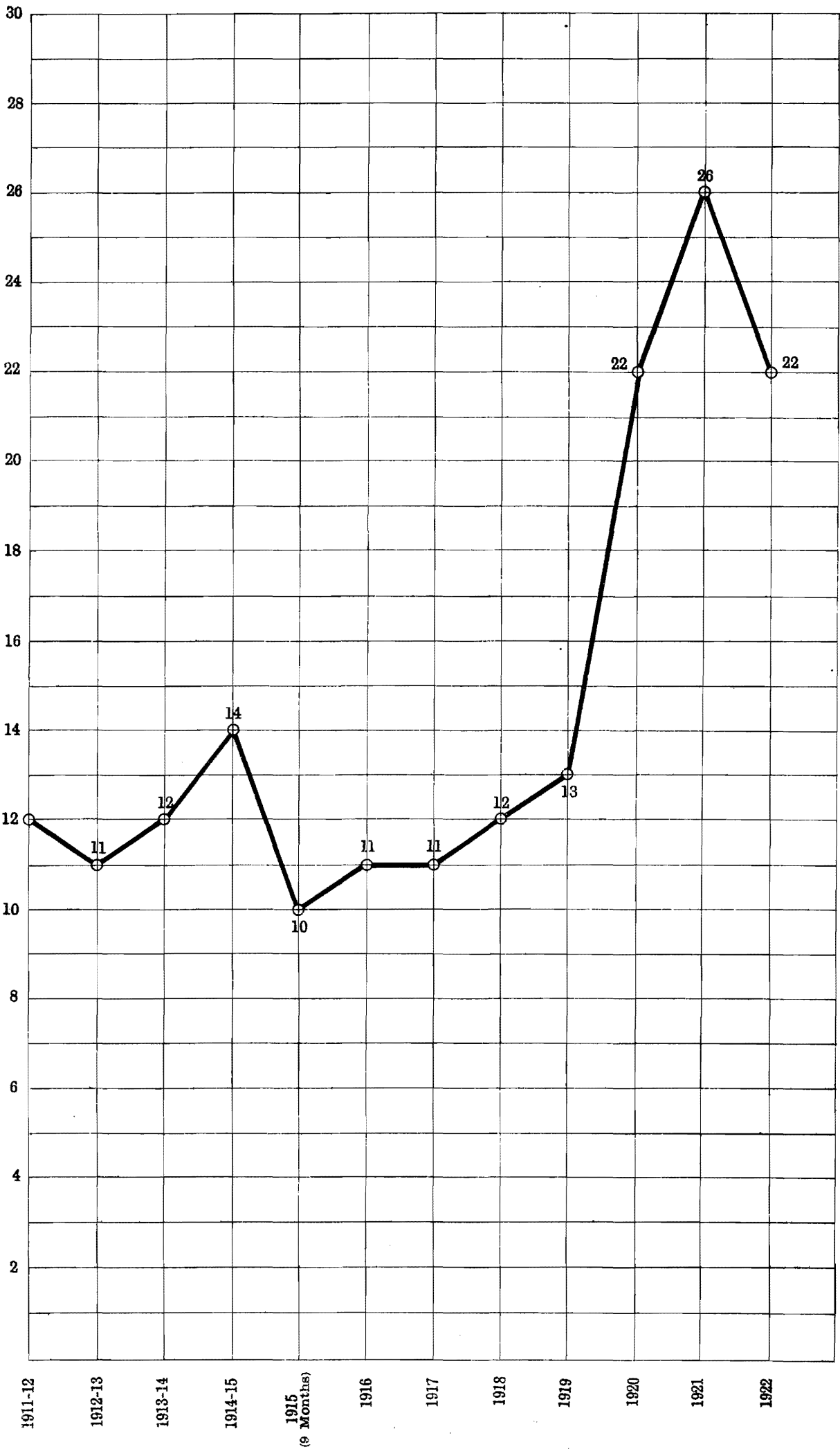
## APPENDIX D.

Comparative statement of oil produced, refined and exported year by year since the inception of the Petroleum Industry in the Colony.

YEAR.	Production in Gallons.	Quantity of Crude Oil refined in Gallons.	Quantity of Crude Oil and Refined Oil exported in Gallons.
1905 to March 31st, 1910 .. .. .	368,934	..	..
1910-1911 .. .. .	4,378,942	..	..
1911-1912 .. .. .	9,985,748	Previous to 1912-1913 1,324,468	7,685,374
1912-1913 .. .. .	17,626,563	331,928	4,295,707
1913-1914 .. .. .	22,523,060	1,227,134	13,570,152
1914-1915 .. .. .	36,753,931	1,449,445	12,192,289
months ended December, 1915 ..	23,489,362	2,045,286	14,286,585
1916 .. .. .	32,475,695	3,773,770	34,129,955
1917 .. .. .	56,080,914	17,675,068	37,777,919
1918 .. .. .	72,872,398	73,722,915	45,689,234
1919 .. .. .	64,436,632	40,248,014	49,219,226
1920 .. .. .	72,905,947	48,842,055	36,221,728
1921 .. .. .	82,395,595	63,210,566	42,817,117
1922 .. .. .	85,566,303	63,700,621	56,550,915
	581,860,024	317,551,270	354,436,201

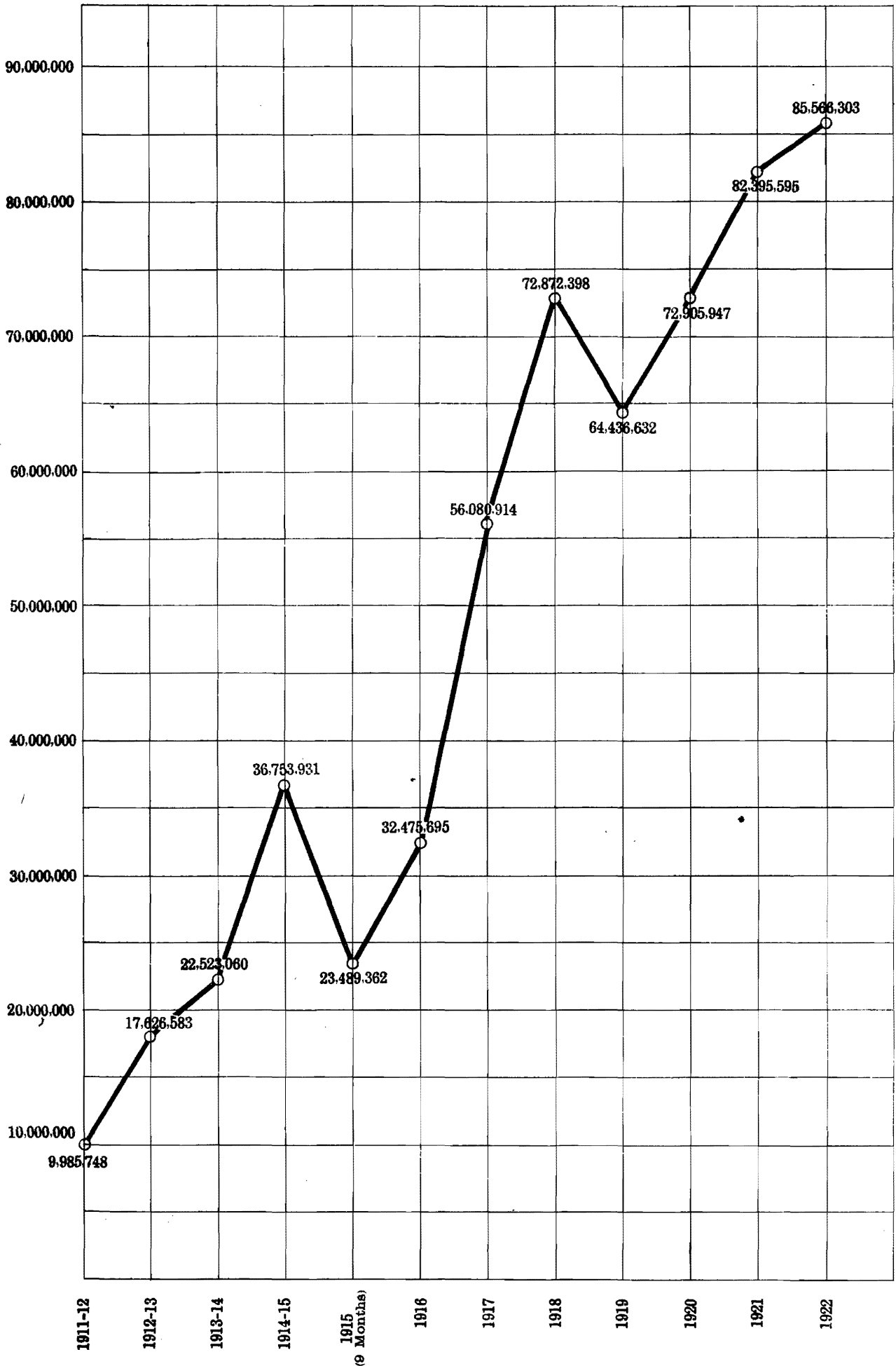


Curve showing the number of Oil Companies that have operated annually in the Colony from 1st April, 1911, to 31st December, 1922.



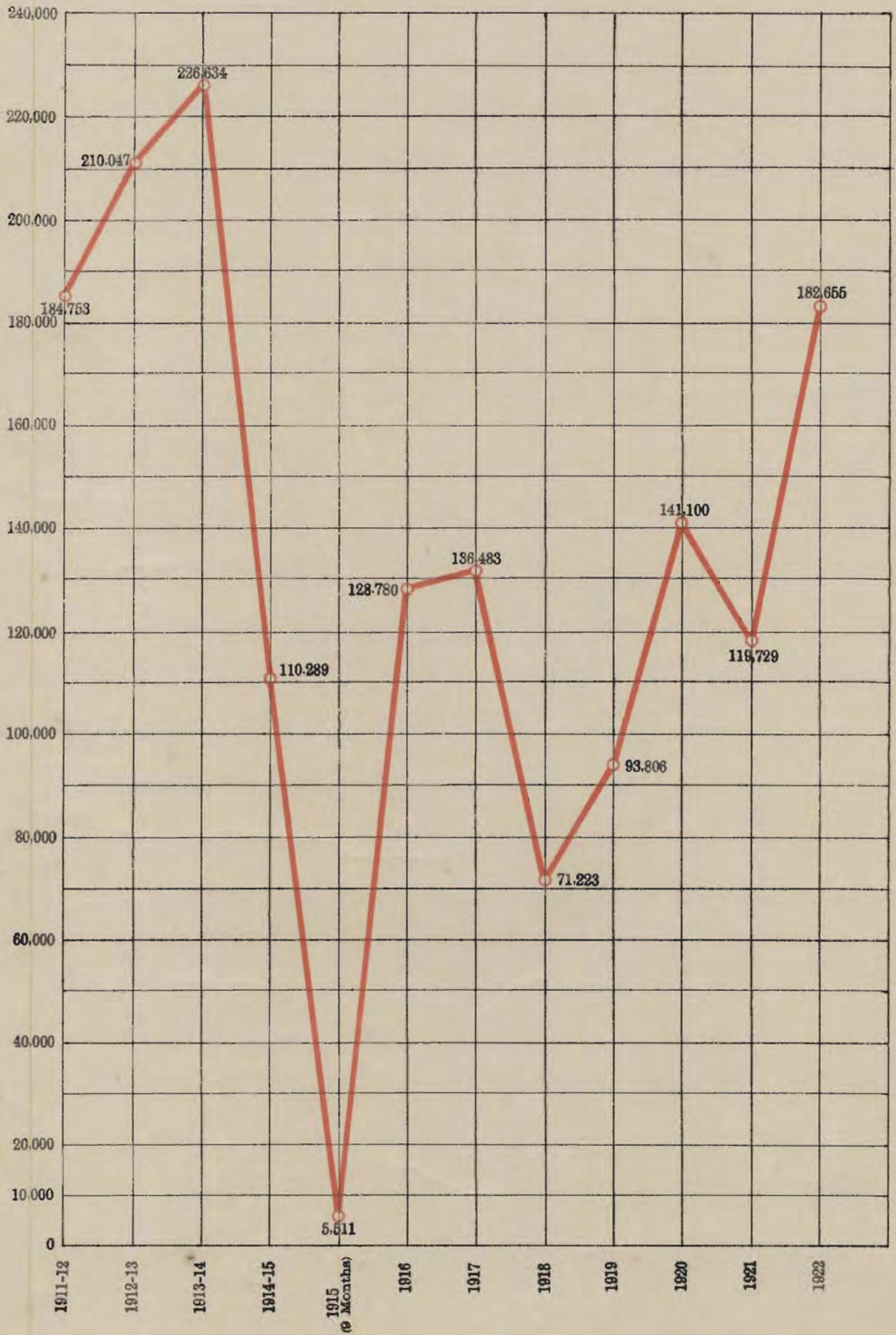
“ B ”

Curve showing yearly total production of Crude Oil from the Colony in Imperial Gallons from 1st April, 1911, to 31st December, 1922.

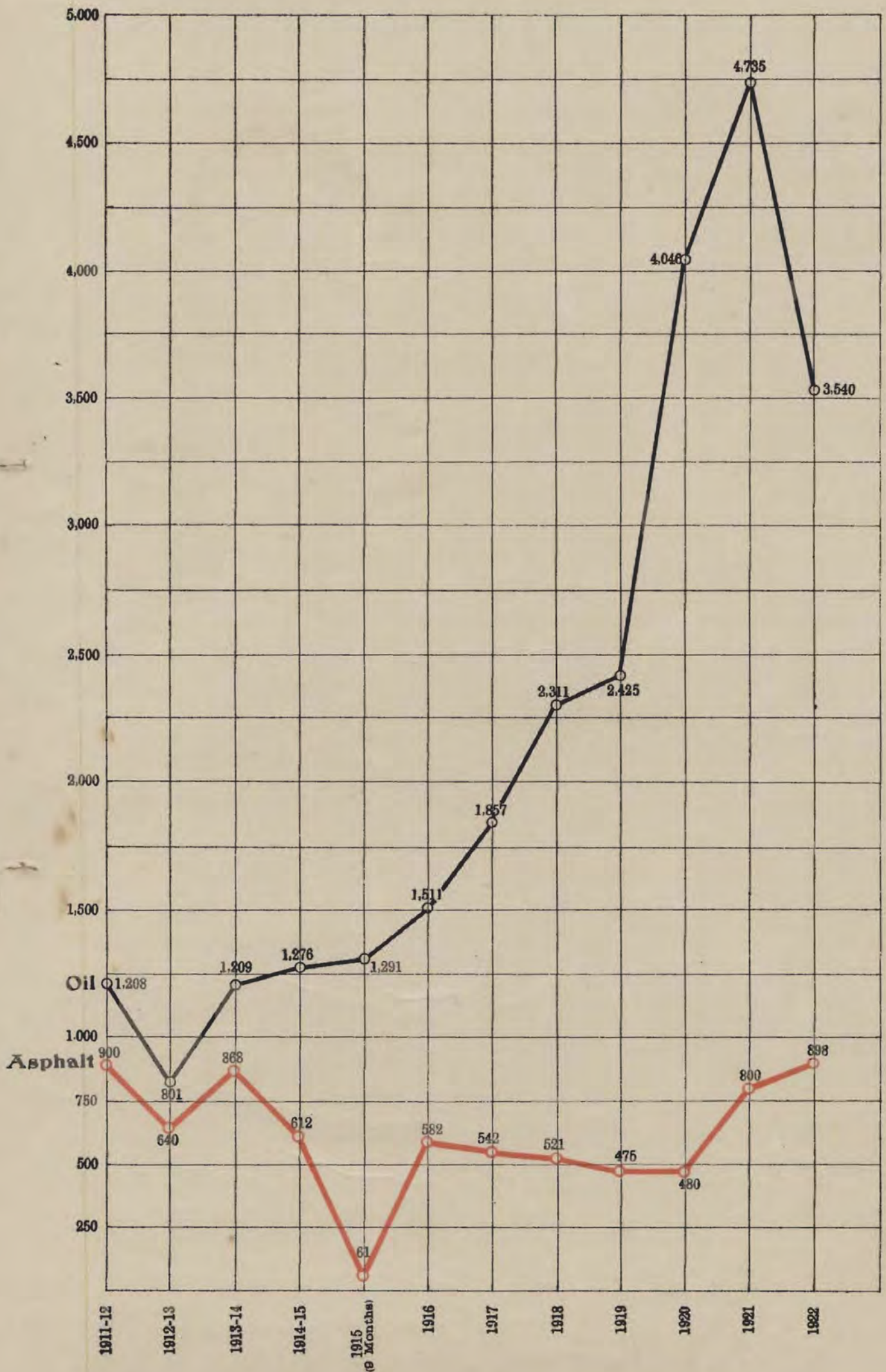


“ C ”

Curve showing yearly output of Asphalt from the Colony in Tons from 1st April, 1911, to 31st December, 1922.

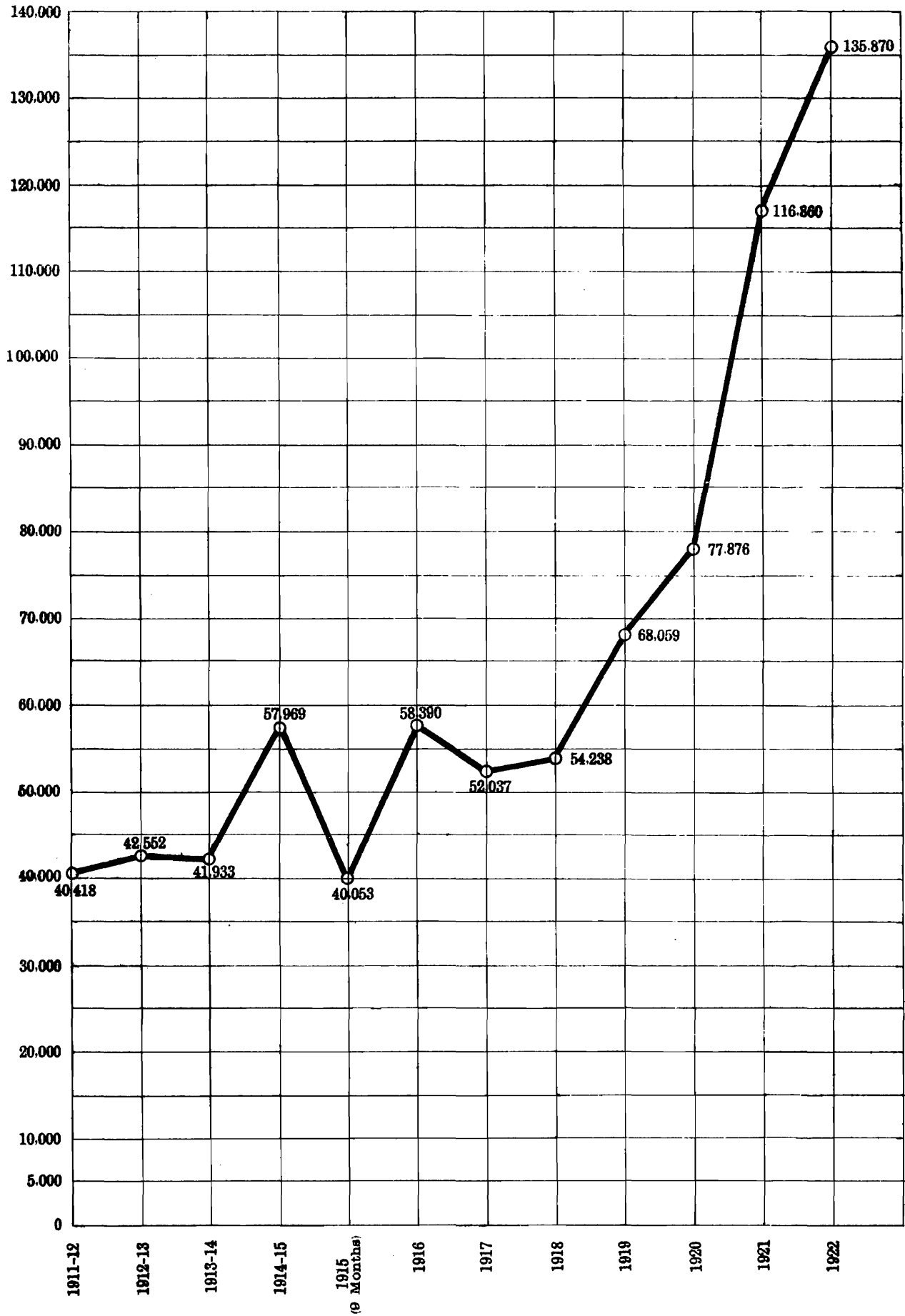


Curve showing comparison of daily average number of persons employed in the Oil and Asphalt Industries of the Colony from 1st April, 1911, to 31st December, 1922.



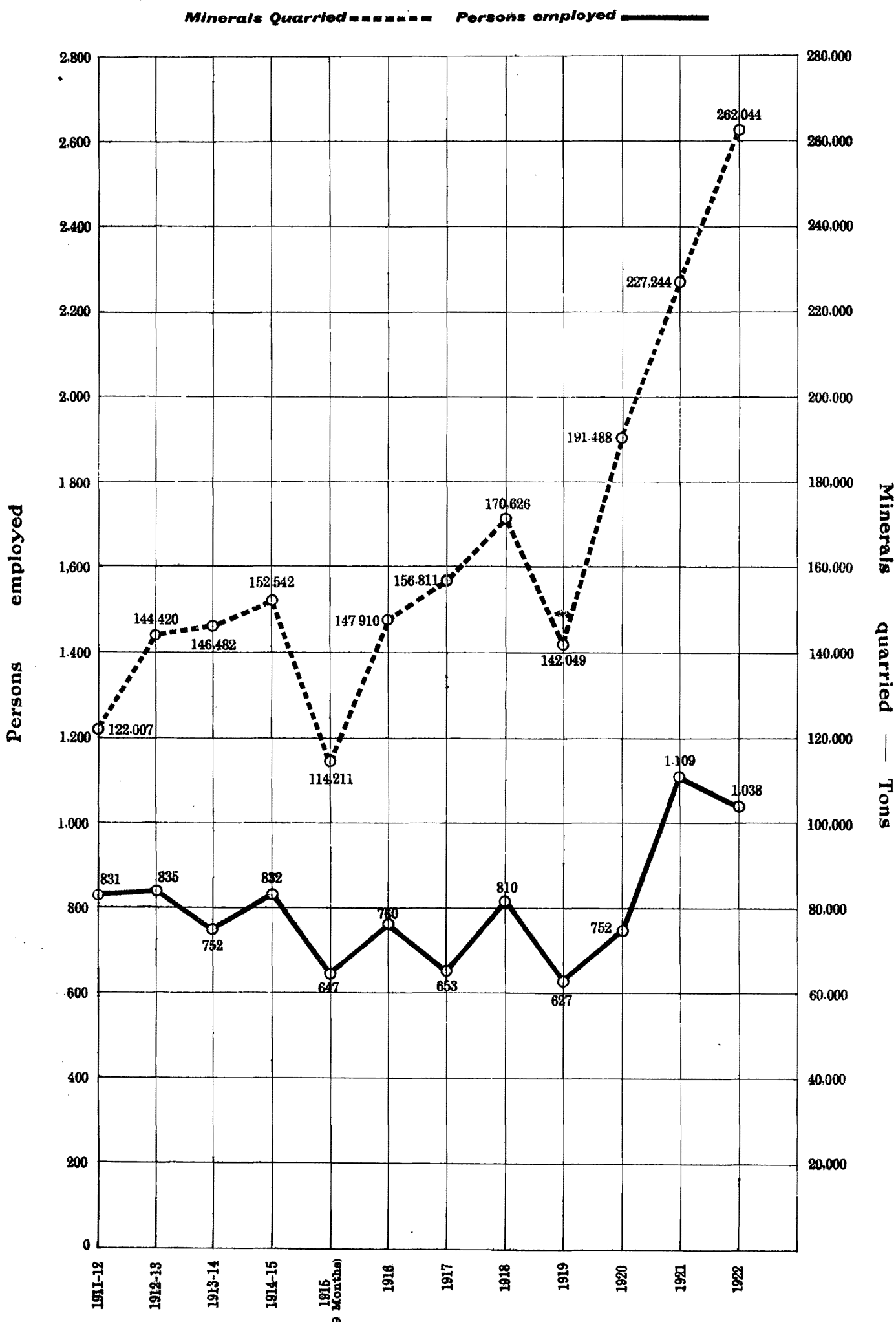
“ E ”

Curve showing yearly total number of feet drilled in the Colony from 1st April, 1911, to 31st December, 1922.



# “ F ”

**Curve showing the yearly total quantity of Minerals quarried and a comparison of the daily average number of persons employed in Quarries in the Colony from 1st April, 1911, to 31st December, 1922.**



**Report of the Acting Sub-Intendant of Crown Lands for the year ended  
31st December, 1922.**

HON'BLE ACTING COLONIAL SECRETARY.

SIR,

I have the honour to forward for the information of His Excellency the Governor the Annual Report on the Settlement of Crown Lands for the year ended 31st December, 1922.

2. OFFICIAL DUTIES.—On the 27th March, 1922, Mr. R. R. Thompson, O.B.E., the Director of Lands and Mines and Sub-Intendant of Crown Lands was granted vacation leave to proceed to the United Kingdom, and the following arrangements were made to carry on the duties of his dual appointment :—

Mr. A. P. Catherall, Assistant Director of Lands and Mines, was appointed to act as Director in control of Mines and

Mr. G. E. L. Guppy, Deputy Sub-Intendant of Crown Lands, was appointed to act as Sub-Intendant of Crown Lands in control of the Crown Lands and Survey Branches of the combined Departments.

Mr. Thompson did not resume duties but resigned his appointment whilst in England as from the 30th September, and the acting arrangements mentioned above were continued to the 31st December, 1922, and are still in force.

3. The total number of petitions for Crown Lands received during the year was 225, as compared with 295 for 1921 and 774 for 1920. These were divided among the Counties, the Ward of Tobago and the St. Clair District of Port-of-Spain as under :—

<i>County.</i>	<i>No.</i>
St. George .. .. .	45
St. David .. .. .	12
Caroni .. .. .	72
St. Andrew .. .. .	46
Victoria .. .. .	12
Nariva-Mayaro .. .. .	18
St. Patrick .. .. .	6
Tobago .. .. .	12
St. Clair .. .. .	2
Total .. .. .	225

4. Of the 225 petitions 100 were for Village Lots. 2 for St. Clair Lots. 75 were for parcels of 5 acres, 36 for parcels from 6 to 10 acres, and 12 for parcels from 11 to 50 acres.

5. The total amount received on account of Land Sales was £3,574 2s. 7d., as against £4,833 1s. 7d., for 1921. The average for the previous 5 years 1916 to 1920 was at the rate of £12,820 13s. 7d., per annum.

6. The Revenue realised from the Sale of Crown Lands is the lowest recorded, but this, to a great extent, is due to the more accessible of the fertile lands in the Northern Division having already been taken up, and the temporary withholding from sale of the Crown Lands in the Central and Southern Districts.

7. The "Completed" Land Sales for the year shew a total of 254 Grants issued comprising 1,133 acres, 0 roods, 11 perches and 98 Village Lots, as against 2,614 acres, 0 roods, 18 perches and 99½ Village Lots for 1921. The average for the previous 5 years 1916 to 1920 was at the rate of 613 Grants, comprising some 5,722 acres and 165 Village Lots per annum.

8. The amount actually received for these "Completed" Land Sales was £4,336 8s. 11d., as against £7,435 15s. 7½d., for 1921. The average for the previous 5 years 1916 to 1920 was at the rate of £12,501 3s. 8d., per annum.

9. The number of Grants and the acreage and number of Lots alienated in each of the Counties, in Tobago and in St. Clair are given below :—

County.	No. of Grants.	Acreage.			Lots.
		A.	R.	P.	
St. George .. ..	47	213	0	04	12
St. David .. ..	16	38	3	10	10
Caroni .. ..	77	470	0	15	32
St. Andrew .. ..	51	244	1	36	14
Victoria .. ..	8	12	3	13	2
Nariva-Mayaro .. ..	15	..	..	38	18
St. Patrick .. ..	6	4	0	05	5
St. Clair .. ..	2	—	—	—	2
Tobago .. ..	32	149	2	10	3
Totals .. ..	254	1,133	0	11	98

10. The number of Grants issued to East Indians during the year was 50 comprising 335 acres 1 rood 29 perches and 15 Village Lots, as compared with 63 comprising 351 acres 1 rood and 25 perches and 15 Village Lots in 1921. The average for the previous 5 years 1916 to 1920 was at the rate of 180, comprising 1,035 acres and 75 Village Lots per annum.

11. I attach as Appendix "C" a Table shewing the distribution of lands in Trinidad and Tobago. It will be seen that approximately 117,031 acres of Crown Lands North of Latitude 10 degrees 26 minutes 36 seconds are available for sale in Trinidad and about 6,050 acres in Tobago. Appendix "C I" shews approximately how much of this 117,031 acres is situate in each of the Wards and Counties of Trinidad lying North of Latitude 10 degrees 26 minutes 36 seconds.

12. The question is under consideration of whether it is possible to open up for sale certain areas of lands situate South of Latitude 10 degrees 26 minutes 36 seconds as it is thought that the time is approaching when this may be done without unduly interfering with the development of the Mineral resources of the Colony, and if this is accomplished it is hoped that the demand for land which has arisen in the Southern Division since the releasing for sale in 1917 and 1918 of some 5,000 acres of land situate in the Wards of Naparima, Savana Grande, La Brea, Guapo and Cedros, will be more than satisfied.

13. The usual comparative statement Appendix "A" shewing the "Completed" Land Sales in respect of the years 1920, 1921 and 1922 is appended.

14. The Forfeitures for Default of payment of Lands and Buildings Taxes for 1921 recorded in 1922 were 43 in number, which is more than the total for the two previous years (32)—(See Appendix "B").

15. The heavy decline in the market value of Cocoa and Coconuts and other agricultural produce, as well as short crops, has to a large measure contributed to the above-mentioned increase in the number of forfeitures during 1922.

16. 25 regrants of Forfeited Lands were issued during 1922, for details of which see Appendix B.I.

17. The Revenue derived from Asphalt was as follows :—

	£	s.	d.
Export Duty .. ..	44,448	3	0
Royalty on Asphalt shipped .. ..	14,971	4	1
Royalty on Asphalt shipped locally .. ..	16	15	8
Total .. ..	59,436	2	9

as compared with £39,711 6s. 4d., for 1921 and £47,707 16s. 1d., for 1920, and it is most satisfactory to record this considerable increase of Revenue from the Asphalt Industry in 1922, as compared with £39,711 6s. 4d., for 1921, and an average of £36,460 14s. 0d., for the 5 previous years—1916 to 1920.

18. St. Clair Lots. One lot of land reserved for Government purposes was released for sale and divided into two smaller lots and sold.

19. Notwithstanding the trade and agricultural depression which continued during the whole of 1922 the demand for more building sites in and around Port-of-Spain is more evident than ever, and the time has come I think for the Government



to seriously consider the feasibility of releasing for sale such portions of the remaining Crown Lands in the vicinity of Port-of-Spain as are not actually required for Government purposes as indicated in my report for 1921. See para. 14, page 8 of Council Paper 36 of 1922.

20. The number of applications received for Licenses to explore and prospect for oil during the year was 9. See Appendix "E."

A mining lease was issued to the Apex (Trinidad) Oilfields Limited.

21. To meet the demand of the peasant proprietors and other residents in the country districts the following work in connection with New Villages and Village Extensions has been undertaken.

#### New Villages.

(a) A new village in the Ward of Charuma, County of Nariva (named Liberts-ville in memory of the late Warden, Mr. C. N. Libert) was laid out in the Crown Reserve at the 24½ mile of the Naparma-Mayaro Road, and 56 lots were surveyed and opened for sale.

(b) In the New Village of Valencia 44 lots were surveyed and laid out in 1921, but as the question of re-defining and locating the lots of the old Village, of which no plan existed, arose, the lots in the New Village were not opened for sale until the latter part of 1922.

(c) The question of opening a New Village near the Brothers Railway Station in the Ward of Charuma, County of Nariva, has been under consideration, and it is hoped that the necessary formalities will be completed and the village laid out and the Lots opened for sale early in 1923.

#### Village Extensions.

(a) 70 New Village Lots were laid out at Mairao Village at the 16th mile of the Naparima-Mayaro Road in the Ward of Ortoire, County of Victoria.

(b) 37 Lots of the Old Village of Valencia near the 21¾ mile of the Eastern Main Road in the Ward of Valencia, County of St. Andrew were re-surveyed and laid out.

(c) 69 New Lots were laid out in the Siparia Village at the 11th mile of the San Fernando-Siparia-Erin Road in the Ward of Siparia, County of St. Patrick.

(d) 97 New Lots were laid out in the Fonrose Village at the 19th mile of the Naparima-Mayaro Road in the Ward of Charuma, County of Nariva.

22. LAND REGISTER.—Mr. E. C. M. Stone who undertook the compilation of the Land Register in July, 1921, has found the work more difficult than anticipated, and I fear that it will not be completed until after the end of the first quarter of 1923.

23. REVENUE AND EXPENDITURE.—REVENUE. Exclusive of Licenses to cut Timber £11,134 1s. 7d., Royalty on Asphalt or Pitch £14,987 19s. 9d., and Royalty on Oil £19,020 12s. 6d., the accrued Revenue of this office during 1922 was £12,941 as against £6,166 for 1921 and an average of £14,112 per annum for the previous 5 years 1916 to 1920.

EXPENDITURE. Exclusive of the salary of the Director of Lands and Mines and Sub-Intendant of Crown Lands—£1,000 to £1,200—the Expenditure for 1922 was

Salaries .. .. .	£ 1,307 14 3
Bonus .. .. .	480 9 8
	<hr/>
Other Charges .. .. .	£ 1,788 3 11
	575 14 9½
	<hr/>
Total .. .. .	£ 2,363 18 8½

which together with the Expenditure of the Survey Branch of

Salaries .. .. .	£ 2,433 3 2
Other Charges .. .. .	2,268 14 5
	<hr/>
	4,701 17 7

gives a Grand Total of .. .. . £ 7,065 16 3½ as against £8,595 14s. 7d., for 1921. It is not possible to compare the Expenditure with that for the previous 5 years as the Forest Department was then part of the Crown Lands Department.

24. STAFF.—On the 1st October, 1922, Mr. St. Clair Ashby, the 2nd Clerk, was promoted and his post still remains vacant. There was no other change in the Establishment.

I must record my satisfaction at the manner in which the staff as a whole performed their duties, and a good deal of overtime was put in during the latter part of the year in order that the work should be kept up to date.

25. The Annual Report of the Crown Surveyor for the year 1922 is appended and much interesting matter will be found in it, illustrating the more technical side of a considerable portion of the work that is performed and recorded in the Crown Lands Office.

I have the honour to be,

Sir,

Your obedient Servant,

G. L. GUPPY,  
*Acting Sub-Intendant of Crown Lands.*

## APPENDIX "A"—CROWN LANDS.

Return showing the number of Grants and the acreage sold in each County for the years 1920, 1921 and 1922.

County.	1920.					1921.					1922.				
	No. of Grants	Acreage Sold.			Lots.	No. of Grants	Acreage Sold.			Lots.	No. of Grants	Acreage Sold.			Lots.
		A.	R.	P.			A.	R.	P.			A.	R.	P.	
St. George ..	129	1,002	0	32	12	103	633	1	26	11½	47	213	0	04	12
St. David ..	87	459	0	21	23	79	193	1	39	54	16	38	3	10	10
Caroni ..	147	1,030	0	11	23	70	454	0	03	12	77	470	0	15	32
St. Andrew ..	185	1,409	0	20	12	125	969	2	03	12	51	244	1	36	14
Victoria ..	24	63	2	20	10	10	47	1	29	3	8	12	3	13	2
Nariva ..	42	11	3	02	40	2			21	1	15			38	18
St. Patrick ..	2	7	3	16	..	2			30	2	6	4	0	05	5
Tobago (Ward) ..	56	181	3	16	1	72	315	3	27	3	32	149	2	10	3
St. Clair (Port-of-Spain) ..	17	..	..	..	17	1	..	..	..	1	2	..	..	..	2
Totals ..	689	4,165	2	18	141	464	2,614	0	18	99½	254	1,133	0	11	98
Total amount realized ..	..	..	£17,460	7s.	9d.	..	£7,435	15s.	7½d.	..	..	£4,336	8s.	11d.	..

## APPENDIX "B"—CROWN LANDS.

County.	1919.		1920.		1921.	
	No. forfeited.	No. since sold or re-granted.	No. forfeited.	No. since sold or re-granted.	No. forfeited.	No. since sold or re-granted.
St. George ..	2	2	6	Nil	9	2
St. David ..	Nil	Nil	Nil	Nil	Nil	Nil
Caroni ..	9	2	7	Nil	15	3
St. Andrew ..	2	Nil	4	Nil	10	4
Victoria ..	Nil	Nil	Nil	Nil	2	Nil
Nariva-Mayaro ..	Nil	Nil	Nil	Nil	Nil	Nil
St. Patrick ..	Nil	Nil	Nil	Nil	Nil	Nil
Tobago (Ward) ..	2	2	Nil	Nil	7	Nil
Totals ..	15	6	17	..	43	9

## APPENDIX "B1"—CROWN LANDS.

Re-grants issued during the year 1922.

1	in respect of land forfeited in 1893.
1	do. do. 1897.
1	do. do. 1908.
1	do. do. 1911.
1	do. do. 1914.
1	do. do. 1915.
3	do. do. 1916.
3	do. do. 1917.
1	do. do. 1919.
3	do. do. 1920.
9	do. do. 1921.
Total ..	25

## APPENDIX "C."

Approximate Distribution of Lands in Trinidad and Tobago.

TRINIDAD.		
Crown Lands available for sale above line 10 degrees 26 minutes 36 seconds	117,031	acres.
Mining Lease ..	104,509	do.
Prospecting License ..	78,400	do.
Exploration License ..	190,411	do.
Forest Reserves—Total Area 206,506 less 124,833 (included in Oil Concessions above)	81,673	(not included in Oil Concessions).
Alienated and other lands ..	619,654	
Total ..	1,191,678	Acres or 1,826 sq. miles.
TOBAGO.		
Crown Lands available for sale ..	6,050	acres.
Forest Reserves ..	9,776	do.
Alienated and other lands ..	57,387	do.
Total ..	73,213	Acres or 114.40 sq. miles.

## APPENDIX "C."

Approximate area of Crown Lands in each Ward and County available for sale North of Latitude 10 degrees 26 minutes 36 seconds and in Tobago.

County.	Ward.		Area.
St. David .. ..	Toco .. ..	.. ..	14,229
St. Andrew .. ..	Manzanilla .. ..	.. ..	282
	Matura .. ..	.. ..	20,026
	Tamana .. ..	.. ..	2,846
	Valencia .. ..	.. ..	15,210
	Turure .. ..	.. ..	5,838
St. George .. ..	Blanchisseuse .. ..	.. ..	29,108
	Tacarigua .. ..	.. ..	1,588
	St. Ann's .. ..	.. ..	2,209
	Diego Martin .. ..	.. ..	7,125
	Arima .. ..	.. ..	5,195
Caroni .. ..	Cunupia .. ..	.. ..	7,392
	Chaguanas .. ..	.. ..	3,041
	San Rafael .. ..	.. ..	2,827
	Montserrat .. ..	.. ..	115
			117,031
Tobago (Ward) .. ..	.. ..	.. ..	6,050
Total .. ..			123,081

## APPENDIX "D."

Statement shewing Crown Lands alienated from 1910-11 to 1922 also number of Crown Grants issued.

Year.	No. of Grants and Leases.	Acreage.			No. of Lots.
		A.	R.	P.	
1910-11 .. ..	543	3,466	1	27	99
1911-12 .. ..	342	1,424	2	39	118
1912-13 .. ..	274	1,637	3	11	48
1913-14 .. ..	411	3,318	3	38	136
1914-15 .. ..	405	2,508	1	22	109
1915 (9 months) .. ..	281	867	0	39	139½
1916 .. ..	379	1,624	3	27	123
1917 .. ..	586	3,187	2	34	254
1918 .. ..	938	7,099	1	38	195
1919 .. ..	*485	2,536	1	36	115
1920 .. ..	*689	4,165	2	18	141
1921 .. ..	464	2,614	0	18	99½
1922 .. ..	*254	1,133	0	11	98
Total .. ..	6,051	35,584	3	38	1,675

\*7 Leases—Lands at St. Clair, 1919.

17 Leases—Lands at St. Clair, 1920

2 Leases—Lands at St. Clair, 1922.

## APPENDIX "E."

## (a) Applications for Prospecting Licenses, 1922.

No.	Name of Company.	Date of Application.
1	Kern Trinidad Oilfields Limited .. ..	8th April, 1922.
2	Trinidad Petroleum Development Company Limited .. ..	24th April, 1922.
3	Trinidad Leaseholds Limited .. ..	28th March, 1922.
4	M. Hamel Smith .. ..	3rd May, 1922.
5	Trinidad Leaseholds Limited .. ..	23rd May, 1922.
6	M. Hamel Smith .. ..	9th June, 1922.

## (b) Applications for Exploration Licenses, 1922.

No.	Name of Company.	Date of Application.
1	Trinidad Petroleum Development Company Limited .. ..	13th January, 1922.
2	do. do. do. .. ..	15th March, 1922.
3	do. do. do. .. ..	26th September, 1922.

**Report of the Crown Surveyor on the working of the Survey Branch of the Lands and Mines Department for the year ended 31st December, 1922.**

ACTING SUB-INTENDANT,

I have the honour to submit the Annual Report of the Survey Branch of the Lands and Mines Department for the year 1922.

A.—*Triangulation.*

No New Triangulation was carried out by this Department during the year.

B.—*Topographical.*

No special Topographical surveys were undertaken, but a certain amount of topographical information was obtained in traverses along roads, rivers, &c., made in order to control the plotting of boundary lines on the cadastral sheets. As in former years this work has been included under heading C.—Cadastral.

C.—*Cadastral.*

During the year 164 orders were prepared for the surveys of Crown Lands petitioned for, as well as 77 orders for special surveys, making a total of 241 orders.

In addition 38 survey orders, issued in 1921 were completed during 1922.

The total area of Crown Lands surveyed during the year for oil concessions amounted to 13,178 acres. The orders for these surveys were given to Contract Surveyors who were paid by the Oil Companies interested.

These surveys have all been connected to the trigonometrical framework.

The total length of boundary lines surveyed and marked on the ground in the execution of surveys completed is as follows :—

Petition and other surveys	..	..	11,120 chains
Surveys of Oil Concessions	..	..	5,225 do.
			16,345 chains or 204·3 miles

In addition 88 miles of accurate traverse surveys were run along roads and existing boundaries to control the plotting of the alienated lands on the Cadastral Sheets.

Nearly all of the Crown Grants contained in Sheets K4 and K9 have been controlled and plotted in their correct positions.

Of the 46 Special Orders executed by the Staff the following are given as examples :—

1. Re-surveys of roads and certain boundary lines in sections K4 and K9 in order to control the surveys of the alienated lands within these sections.
2. Survey of 70 lots at Mairo Village.
3. Re-survey of 37 old lots at Valencia Village surveyed in 1884.
4. Survey of Crown Traces in south west portion of E20, N. W. portion of E25, and S. E. portion of E19 in order to control cadastral detail.
5. Survey of the Cumuto River from the crossing of the Cumuto road in a westerly direction to the S. E. corner of Heirs of Llanos in sheet E10.
6. Survey of the eastern boundary of El Carmen Estate and south-western boundaries of J. F. Wallen and C. Jacelon.
7. Survey to control the cadastral detail between Martin's Road and Freeport-Todd's road.
8. Survey of a canal reserve through the Oropuche Lagoon.

9. Survey to determine the boundaries of the Crown and the extent of an alleged encroachment in the Ward of La Brea.
10. Survey of an encroachment on Crown Lands west of La Retraite Estate—Moruga Ward.
11. Survey to determine the boundaries of the Crown and El Regalo Estate—Ward of San Rafael.
12. Re-survey of the lots from Real Street to Camps Street, San Juan Village.
13. Survey of 69 Village Lots south of Siparia Village.
14. Survey necessary to define the boundaries of Crown Lands in the vicinity of Lands of Kesiah Exeter—San Juan.
15. Survey of Savary Trace and Trace connecting Savary to Hercules Trace—Wards of Chaguanas and Cunupia.
16. Survey of 96 Village Lots in Fonrose Village.

#### D.—*Office Work.*

In addition to the work of computing and checking the traverses and other calculations of the surveys executed by the Staff and Contract Surveyors the following Maps and Plans were prepared :—

*Maps.*—New and improved copies of the following 26 Ward Maps were prepared from the material at our disposal, and ferro-gallic prints were made of all of them :—

C6, E7, E8, E23, E25, F2, F6, F7, F12, F16, F17, H8, H13, H18,  
H19, H23, I1, I6, I22, J3, J4, J5, J8, K8, L2, L8.

73 of the Ward Maps used by the Wardens were plotted up to date.

*Plans.*—1,016 Grant, Lease and Survey Plans, were made in connection with petitions, as well as numerous tracings for the use of Surveyors in the field.

A great deal of work was plotted on Trigonometrical Sheets K4, K9, E10 and E19.

A new Map of section K, scale 1 in 50,000, was prepared and photographic reductions made of 58 sheets in sections E, H, F, I, L, K, J and G for the preparation of a general map on that scale.

The number of plans dealing with transactions under the Real Property Ordinance checked and certified by the Crown Surveyor during the year amounted to 662.

Solar observations for time were taken once a week to determine the correction to the standard Clock kept in this Office, from which the correct time for the Colony is obtained.

#### E.—*Expenditure.*

	£	s.	d.
Salaries of Staff .. .. .	2,433	3	2
Expenses of Surveys .. .. .	1,707	14	8½
Travelling Expenses .. .. .	535	16	8
Office Contingencies .. .. .	25	3	0½
	4,701	17	7

**General Remarks.**

An Ordinance to provide for the qualification and control of Land Surveyors was passed in the Legislative Council on the 5th of May, 1922, and became law as from the 1st day of February, 1923.

Rules and regulations under this new Ordinance were also made by the Governor in Executive Council on the 23rd November, 1922.

At an examination of the Pupil Surveyors held on the 18th, 19th and 20th December, Mr. F. De Gange, who had just completed three years pupilage, passed satisfactorily, and has obtained his license to practice as a Land Surveyor.

Through the courtesy of the Director of the Department of Terrestrial Magnetism of the Carnegie Institution, two observers Messrs. J. W. Green and J. T. Howard, who are engaged on Magnetic Work throughout the West Indies and South America, took observations for the diurnal variation in declination of the Magnetic Needle at the Savannah Referring Mark, on three separate days after proving by observations that the Referring Mark is free from any influence from the Electric Cars. In addition a large number of observations were taken by them in five widely separated parts of the Island in order to test the accuracy of our Isogonic Chart.

The results of these observations agree in a remarkable manner with our charted values for these places.

Mr. Green has promised to let me have a report on the result of his observations.

J. W. MACGILLIVRAY,  
*Crown Surveyor.*

15th March, 1923.

TRINIDAD AND TOBAGO.

Council Paper No. 41 of 1924.

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## MINES DEPARTMENT.

Administration Report of the Inspector of Mines for the year 1923.

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*Laid before the Legislative Council on the  
11th April, 1924.*

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*Previous Council Paper No. 48 of 1923.*

*Registered No. of Correspondence relating to the subject—M.P. No. 2923/1924.*

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1924.

[Price 3d.]



## MINES DEPARTMENT.

### Administration Report of the Inspector of Mines for the year 1923.

*Council Paper No. 41 of 1924.*

*M. P. No. 2928, 1924.*

HONOURABLE COLONIAL SECRETARY,

I have the honour to submit, for the information of His Excellency the Governor, the following report of the Mines Branch of the Lands and Mines Department for the period 1st January to 30th June, 1923, and of the Mines Department for the remainder of the year.

#### OFFICIAL DUTIES.

2. Following on the resignation of the late Mr. R. R. Thompson, as mentioned in my last report, the post of Director of Lands and Mines was abolished as from 30th June, 1923, and the departments of Lands and Mines became separate entities as they existed prior to 1921.

#### THE PETROLEUM INDUSTRY.

3. The financial conditions prevailing during the period under review have been unfavourable to any large expansion of the petroleum industry of the Colony, with the result that development has been chiefly confined to those companies already operating in the Colony which have, in most cases, concentrated their energies on the extension of the proven fields so that no great amount of prospecting work has been undertaken in new areas. I am glad to be able to report that several of the larger companies have carried out a very active drilling programme and considerably extended their fields with very satisfactory results, and I have to record that the production of crude oil in the Colony during the past year was the largest yet known, the increase over that for the year 1922 exceeding 21,000,000 gallons.

4. No new shipping or refining depots have been constructed during the past year though some additions have been made to existing installations. There are now four outlets for the shipment of petroleum products, viz. :—

Claxton Bay	..	Trinidad Central Oilfields, Limited.
Pointe-a-Pierre	..	Trinidad Leaseholds, Limited.
Brighton	..	Trinidad Lake Petroleum Company, Limited.
Point Fortin	..	United British Refineries, Limited.

Each of these companies also possesses facilities for the refining of crude oil.

5. During the past year a pipeline was laid by the Trinidad Petroleum Development Company, Ltd., from its property at Palmiste to Claxton Bay where a tank was built. A pipeline was also laid by the General Petroleum Company, Ltd. from its field near Fyzabad to Los Bajos in order to connect with the pipeline of the United British West Indies Petroleum Syndicate, Ltd. from there to Point Fortin, where the production was sold to the United British Refineries, Ltd.

6. The exports of petroleum products shew a considerable increase over last year, the figures being 85,000,000 gallons as against 56,000,000 gallons for the year 1922. In addition to the regular shipments of oil fuel made under contract to the Admiralty, large quantities of petroleum products were exported to private firms in the United Kingdom and the United States of America. There was also a considerable trade with the other West Indian Colonies and regular shipments were made by steamers calling here for bunkers.

7. The following table will shew the number of feet drilled and the quantity of oil produced during 1923 compared with the years 1921 and 1922 :—

	YEAR ENDED 31ST DECEMBER, 1921.		YEAR ENDED 31ST DECEMBER, 1922.		YEAR ENDED 31ST DECEMBER, 1923.	
	<i>Feet drilled.</i>	<i>Oil won Imp. Galls.</i>	<i>Feet drilled.</i>	<i>Oil won Imp. Galls.</i>	<i>Feet drilled.</i>	<i>Oil won Imp. Galls.</i>
Crown Lands ..	70,710	61,325,279	97,802	53,725,443	87,148	66,869,135
Private Lands ..	46,150	21,070,316	38,068	31,840,860	58,653	39,911,396
Total ..	116,860	82,395,595	135,870	85,566,303	145,801	106,780,531

8. During the past year the number of new wells drilled was 108 (75 on Crown lands and 33 on private lands), a total increase of 17 over the previous year, and in 73 of these oil was struck. The total number of wells drilled in the Colony to 31st December last is 818 of which 520 are on Crown lands.

9. At the close of the year 17 companies were actively engaged in the winning of oil as against 16 at the end of the year 1922.

10. ROYALTY.—The royalty collected during the period under review was £24,844 18s. 1d.

11. WAYLEAVES.—The revenue obtained from wayleaves in respect of pipelines laid along the Trinidad Government Railway and along the public roads of the Colony was as follows :—

	£	s.	d.
Railways .. .. .	5,212	8	4
Roads .. .. .	2,153	8	4

12. FEES.—Fees charged for crossing the foreshore, the railway and public roads with pipelines amounted to £29.

13. LEASES AND LICENSES.—No new leases or licenses were issued during the year.

14. RETURNS.—The various oil companies have regularly submitted to the department the returns required to be furnished by them in respect of their operations.

15. INSPECTIONS.—In addition to the regular field inspections which were made by officers of the department, it was necessary, as in previous years, to carry out many additional inspections in connection with accidents, royalty computations, wayleaves, refineries, water shut offs, abandonment of wells, &c. In most cases it was found that the provisions of the Ordinance and Regulations had been satisfactorily observed.

#### QUARRIES.

16. The quarries in the Colony, with very few exceptions, are small and unimportant. They have been inspected regularly and have, in most cases, been found to be working in a careful manner. The number of quarries in operation during the year 1923 was 69 as against 73 in 1922.

#### PETROLEUM ORDINANCE NO. 20 OF 1915.

17. The premises in which the various products of petroleum are stored have been carefully inspected, and it is satisfactory to note that as a rule great care has been taken to ensure safety.

#### PREVENTION OF ACCIDENTS ORDINANCE NO. 13 OF 1915.

18. On the whole the machinery in the various factories is efficiently protected by the owners and managers who co-operate with the Department in ensuring safety to the workmen in their employment ; in all 85 factories in Trinidad and 17 in Tobago were worked during the year.

**ASPHALT INDUSTRY ORDINANCE, No. 10 OF 1906.**

19. No asphalt has been dug on the village lots at La Brea since 1914.

**APPENDICES.**

20. Appendix A shews the list of oil companies operating in the Colony during the year 1923.

21. In Appendix B will be found the daily average number of persons employed in oilfields and quarries and the quantity and value of minerals obtained during the period under review.

22. A comparative statement of the oil produced, refined and exported is shown in Appendix C.

23. Appendix D consists of curves illustrating the progress made in the oil, asphalt, manjac and quarrying industries from 1st April, 1911, to 31st December, 1923.

**MISCELLANEOUS.**

24. STAFF.—I have great pleasure in recording the able and loyal assistance that I have received from the members of the staff.

A. P. CATHERALL,  
*Inspector of Mines.*

31st March, 1924.

**APPENDIX A.**

No.	Companies.	Nature of tenure of lands on which operations took place.		Disposal of oil.	Remarks.
1	Trinidad Leaseholds, Limited .. ..	Crown lands under lease	Fyzabad, Barrackpore	Refined in Company's refinery at Pointe-a-Pierre. Most of the production is exported in bulk	Largest producing Company in the Colony. Nearly all the production is from Crown lands.
2	United British West Indies Petroleum Syndicate, Limited	Crown lands under lease	Los Bajos	Sold to United British Refineries, Limited	No drilling except at Los Bajos.
3	United British Oilfields of Trinidad, Limited .. ..	Crown lands under lease.	Point Fortin	Sold to United British Refineries, Limited	Continued drilling on Parry Lands area. Produced also from wells already drilled on private lands at Point Fortin.
4	Trinidad Central Oilfields, Limited .. ..	Private lands	Point Fortin		
4	Trinidad Central Oilfields, Limited .. ..	Crown lands under lease	Tabaquite	Small quantities refined for local consumption and remainder exported in bulk in the crude state	Considerably extended their field on Crown lands at Tabaquite.
5	Trinidad Lake Petroleum Company, Limited .. ..	Private lands	Brighton	The bulk of the production exported in the crude state to the U. S. A.	Producing only.
6	Petroleum Development Company, Limited .. ..	Crown lands under lease	Morne L'Enfer	Sold to Trinidad Lake Petroleum Company, Limited	Drilling on Lots 1 and 4, Morne L'Enfer Reserve with satisfactory results.
7	Apex (Trinidad) Oilfields, Limited .. ..	Crown lands under lease and private lands	Fyzabad	Sold to the Trinidad Leaseholds, Limited.	Active drilling programme ; field largely extended.
8	Kern Trinidad Oilfields, Limited .. ..	Private lands	Guapo	Sold to United British Refineries, Limited	Continued drilling during the whole of the period ; fair production obtained.
9	General Petroleum Company of Trinidad, Ltd. .. ..	Private lands	Fyzabad	Sold to United British Refineries, Limited	Reconstructed from the Oropuche Oilfields, Ltd., and the General Petroleum Company of Trinidad, Ltd., in the middle of the year ; since when a very active drilling programme has been successfully carried out.
10	Trinidad Petroleum Development Company, Ltd.	Private lands	San Fernando	Kept in Storage .. ..	Drilling on Palmiste and Phillipine Estates near San Fernando during the whole of the period.
11	New Naparima Oilfields, Limited .. ..	Private lands	Naparima district		Two wells drilled on private lands ; no oil produced.
12	Trinidad Freeholds, Limited .. ..	Private lands	Fyzabad	Sold to Trinidad Leaseholds, Ltd.	Producing only.
13	Petroleum Options, Limited .. ..	Private lands	Fyzabad	Sold to Trinidad Leaseholds, Ltd.	Drilled one well ; oil struck.
14	Trinidad Friendship Petroleum Company, Ltd. .. ..	Private lands	Fyzabad	Sold to Trinidad Leaseholds, Ltd.	Drilled one well ; oil struck.
15	British Union Oil Company, Limited .. ..	Crown lands under prospecting license	Tabaquite		Suspended operations in the early part of the year and surrendered the prospecting license.
16	British Controlled Oilfields, Limited .. ..	Do.	Oropouche	Sold to Trinidad Leaseholds, Ltd.	Drilled one well and struck high grade oil.
17	Trinidad Oil Producing and Refining Company .. ..	Private lands	Fyzabad	Sold to Trinidad Leaseholds, Ltd.	Producing only.
18	Transvaal and Rhodesian Estates, Limited .. ..	Private lands	Point Ligoure	Barrelled and sold locally	Producing only.
19	E. J. Marsden .. ..	Private lands	Aripero Estate		Drilled one well on private lands and then closed down.

or

## APPENDIX B.

Daily average number of persons employed in Oilfields and Quarries and the quantity and value of minerals obtained during the year ended 31st December, 1923.

Minerals.	Daily average number of persons employed.		Total.	Quantity.	Approximate Value.
	Males.	Females.			
Oil .. .. .	3,008	36	3,044	106,780,531 Imp. Gals.	£ 782,689
Asphalt .. .. .	1,024	15	1,039	221,347 Tons	£ 138,341
Private Quarries (Limestone, Gravel, &c.) .. .. .	379	145	524	175,374 Tons	£ 22,171
Government Quarries (Limestone, &c.) .. .. .	306	80	386	46,639 Tons	£ 6,645

## APPENDIX C.

Comparative statement of oil produced, refined and exported year by year since the inception of the Petroleum Industry in the Colony.

Year.	Production in Gallons.	Quantity of Crude Oil refined in Gallons.	Quantity of Crude Oil and Refined Oil exported in Gallons.
1905 to March 31st, 1910 ..	368,934	..	..
1910-1911 .. .. .	4,378,942	..	..
1911-1912 .. .. .	9,985,748	Previous to 1912-1913. 1,324,468	7,685,371
1912-1913 .. .. .	17,626,563	331,928	4,295,707
1913-1914 .. .. .	22,523,060	1,227,134	13,570,152
1914-1915 .. .. .	36,753,931	1,449,445	12,192,289
9 months ended December, 1915 ..	23,489,362	2,045,286	14,286,585
1916 .. .. .	32,475,695	3,773,770	34,129,955
1917 .. .. .	56,080,914	17,675,068	37,777,919
1918 .. .. .	72,872,398	73,722,915	45,689,234
1919 .. .. .	64,436,632	40,248,014	49,219,226
1920 .. .. .	72,905,947	48,842,055	36,221,728
1921 .. .. .	82,395,595	63,210,566	42,817,117
1922 .. .. .	85,566,303	63,700,621	56,550,915
1923 .. .. .	106,780,531	82,609,767	85,136,457
	688,640,555	400,161,037	439,572,658

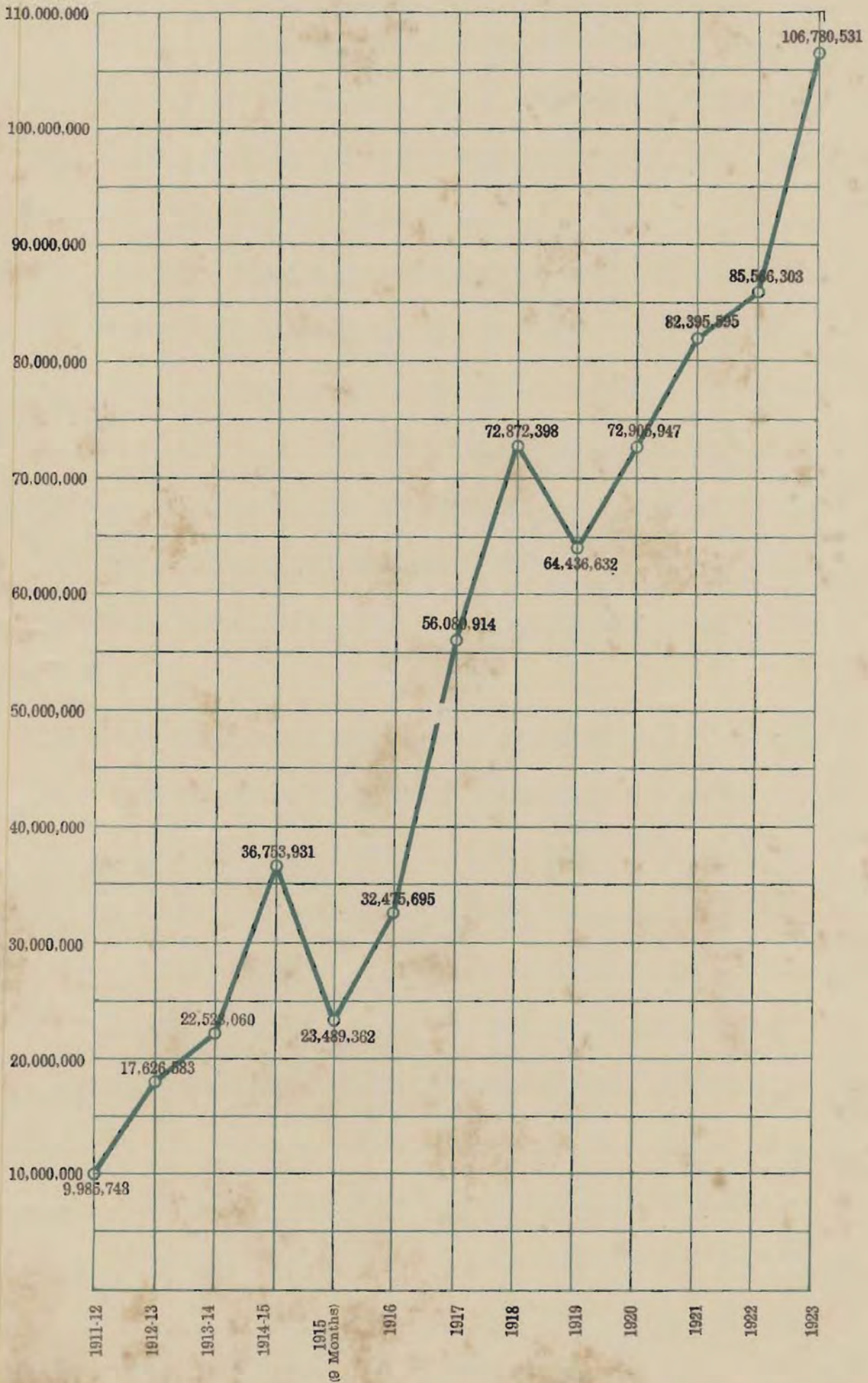
# A

Curve showing the number of Oil Companies that have operated annually in the Colony from 1st April, 1911, to 31st December, 1923.



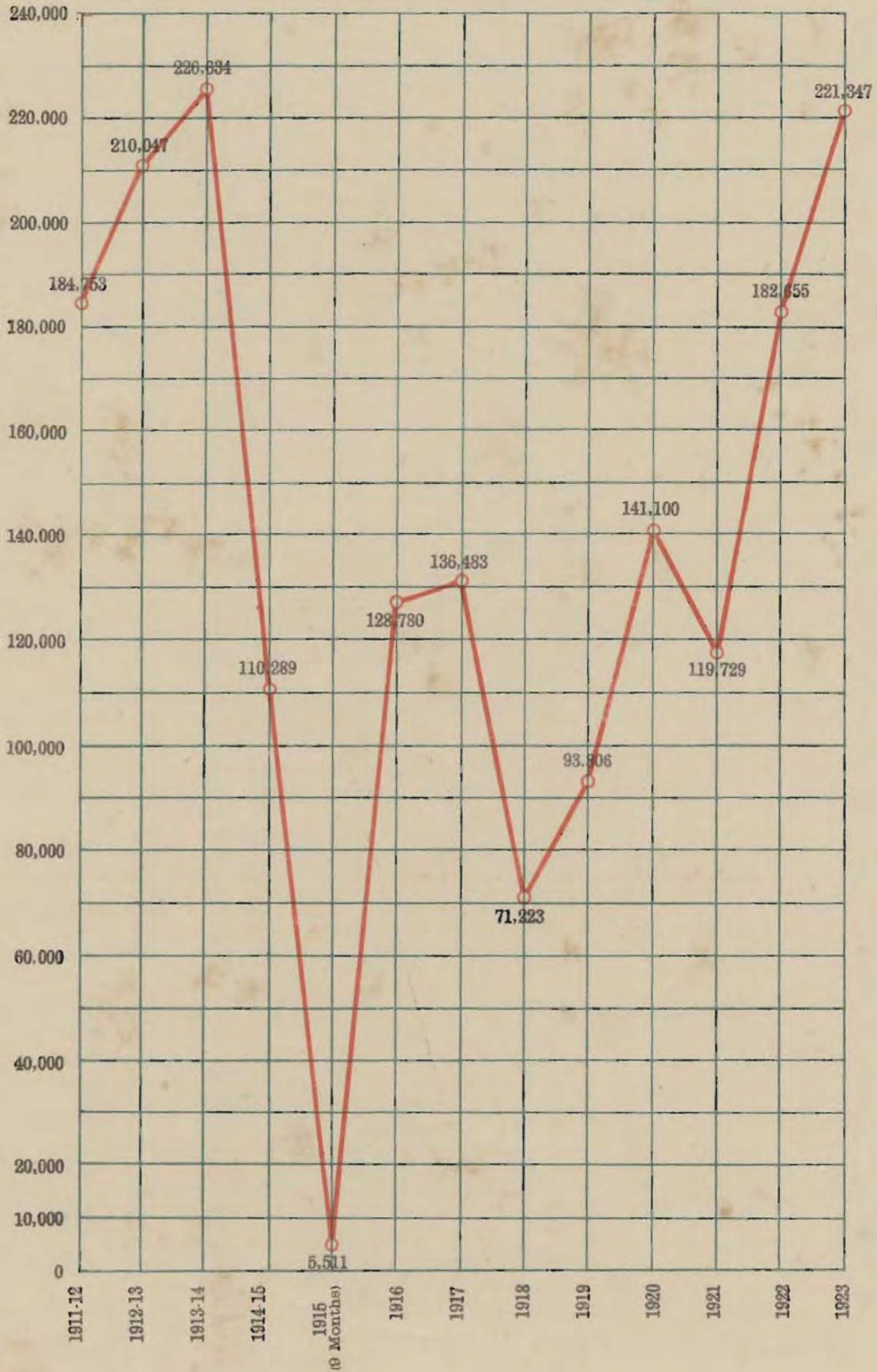
# B

Curve showing yearly total production of Crude Oil from the Colony in Imperial Gallons from 1st April, 1911, to 31st December, 1923.



# C

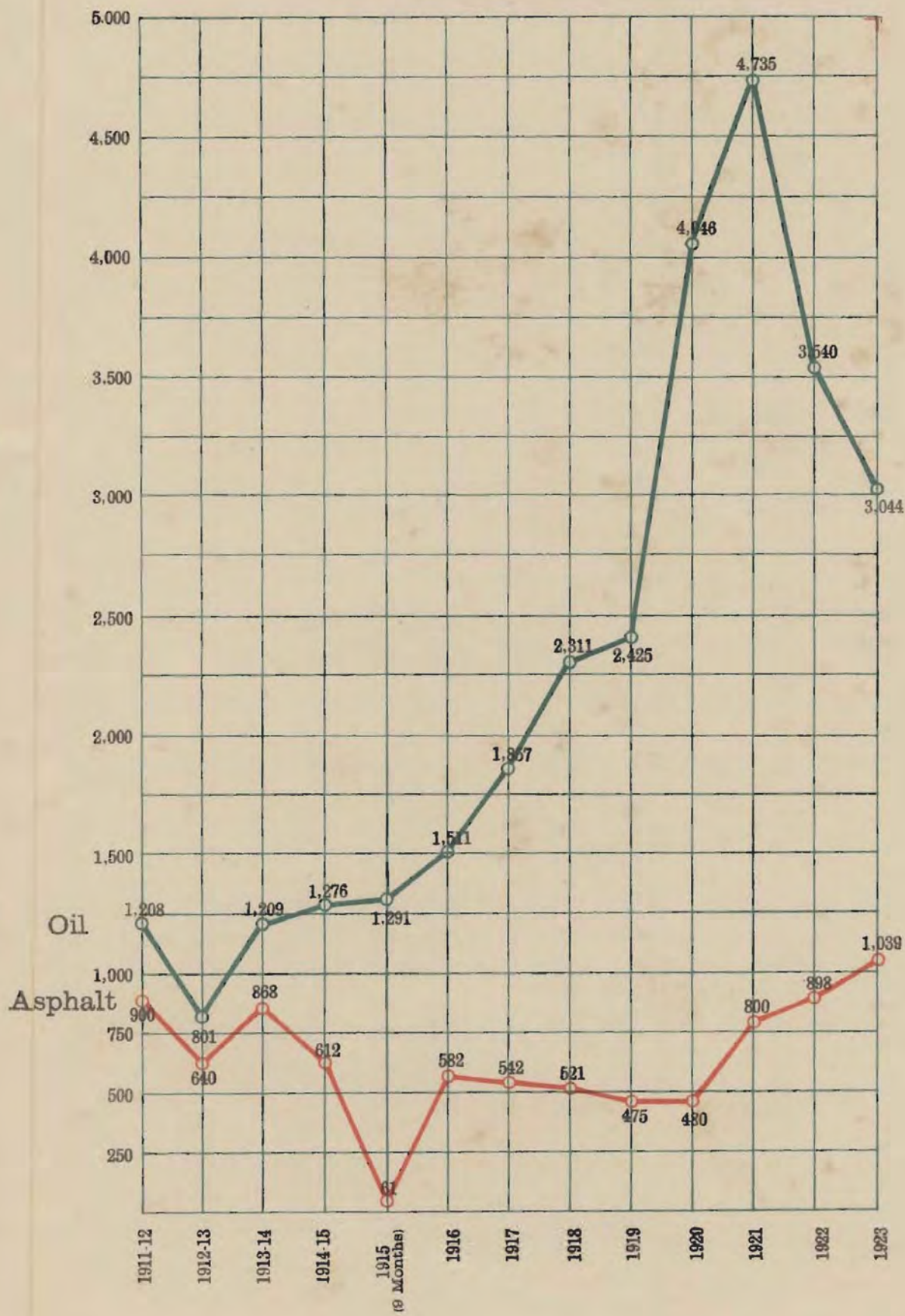
Curve showing yearly output of Asphalt from the Colony in Tons from 1st April, 1911, to 31st December, 1923.





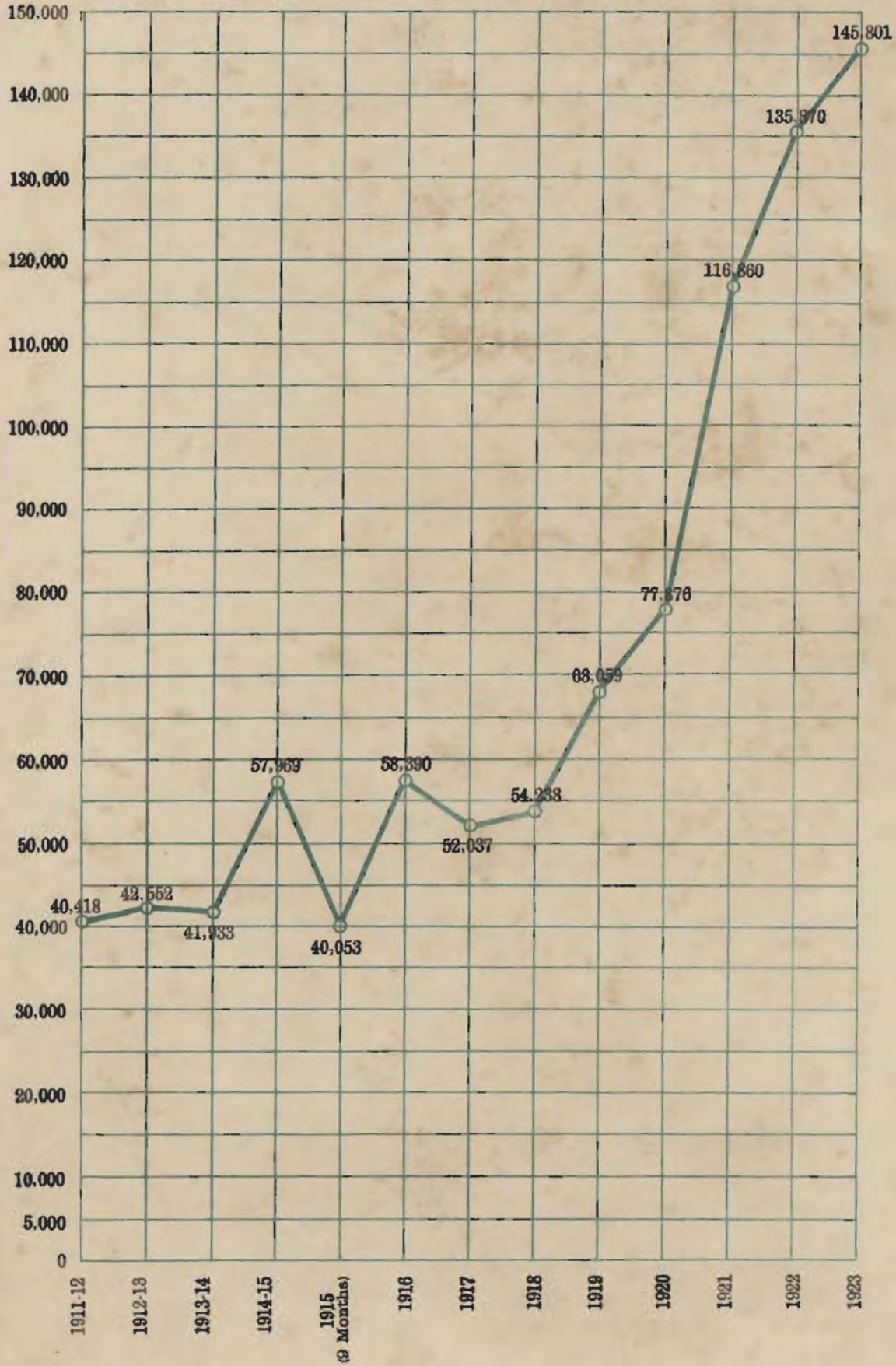
# D

Curve showing comparison of daily average number of persons employed in the Oil and Asphalt Industries of the Colony from 1st April, 1911, to 31st December, 1923.



# E

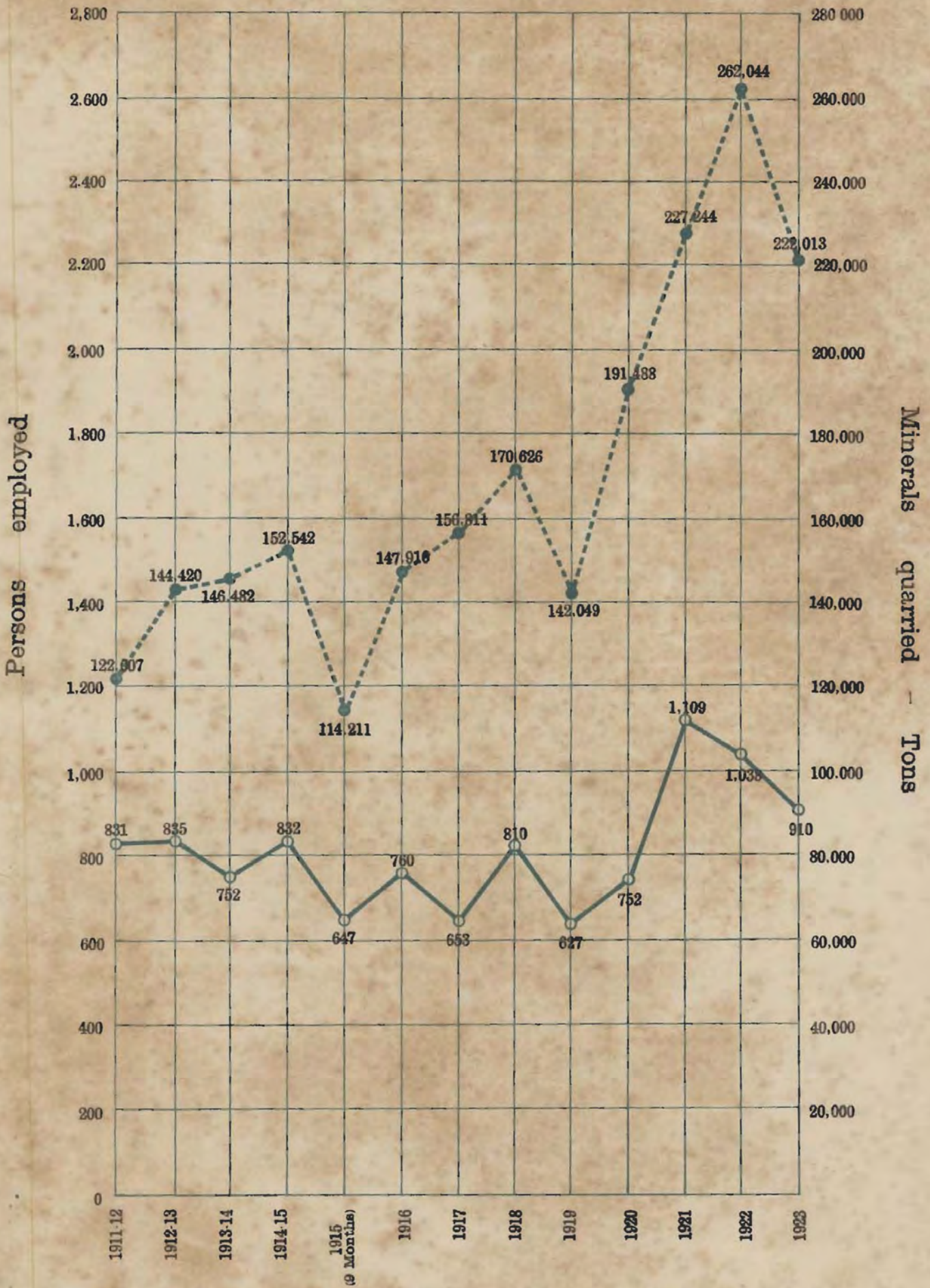
Curve showing yearly total number of feet drilled in the Colony from 1st April, 1911, to 31st December, 1923.



# F

Curve showing the yearly total quantity of Minerals quarried and a comparison of the daily average number of persons employed in Quarries in the Colony from 1st April, 1911, to 31st December, 1923.

Minerals quarried - - - - - Persons employed - - - - -



TRINIDAD AND TOBAGO.

**Council Paper No. 61 of 1925.**

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**MINES DEPARTMENT.**

**Administration Report of the Inspector of Mines for the year 1924:**

---

*Laid before the Legislative Council on the  
29th May, 1925.*

---

*Previous Council Paper No. 41 of 1924.*

*Registered No. of Correspondence relating to the subject.—M.P. No. 4271/1925.*

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TRINIDAD.  
PRINTED BY THE GOVERNMENT PRINTER,  
GOVERNMENT PRINTING OFFICE.

1925.

[Price 2/4.]

## MINES DEPARTMENT.

## Administration Report of the Inspector of Mines for the year 1924.

*Council Paper No. 61 of 1925.**M.P. No. 4271/1925.*

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 1924.

**THE PETROLEUM INDUSTRY.**

2. I am glad to be able to report a very large increase in production of crude petroleum during 1924. This was the largest yet known being over 1,005,740 barrels more than won during the previous year.

During the period under review nearly all the oil companies operating in the Colony have carried out an active drilling programme, but owing to the prevailing financial conditions the increase in production has been due to the extension of already proven fields rather than to the opening up of new areas.

3. No new shipping or refining depots have been constructed during the past year though some additions have been made to existing installations. There are now four outlets for the shipping of petroleum products, viz. :—

Claxton Bay ..	.. Trinidad Central Oilfields, Limited.
Pointe-a-Pierre ..	.. Trinidad Leaseholds, Limited.
Brighton ..	.. Trinidad Lake Petroleum Company, Ltd.
Point Fortin ..	.. United British Refineries, Limited.

Each of these companies also possesses facilities for the refining of crude oil.

4. The exports of petroleum products show a large increase compared with last year, the figures being 113,000,000 gallons as against 85,000,000 for the year 1923.

It is of great interest to note that for the first time in the history of the Colony the exports of petroleum products were greater in value than the products of any other industry and formed over 30 per cent. of the total exports of the Colony. In 1924 petroleum products to the value of £1,367,160 were exported, compared with £1,276,850 for sugar, molasses and rum and £1,165,816 for cocoa. To realize the phenomenal increase of the importance of this industry to the Colony we have only to compare the figures of ten years ago; in 1914 the value of petroleum products exported was £67,345 and formed less than 3 per cent. of the total exports. The major portion of the export trade is in the form of oil fuel of which a large part is shipped to the admiralty under contract.

5. The following table will show the number of feet drilled and the quantity of oil produced during 1924 compared with the years 1922 and 1923 :—

	YEAR ENDED 31ST DECEMBER, 1922.		YEAR ENDED 31ST DECEMBER, 1923.		YEAR ENDED 31ST DECEMBER, 1924.	
	<i>Feet drilled.</i>	<i>Oil won Brls. of 35 galls.</i>	<i>Feet drilled.</i>	<i>Oil won Brls. of 35 galls.</i>	<i>Feet drilled.</i>	<i>Oil won Brls. of 35 galls.</i>
Crown Lands ..	97,802	1,535,013	87,148	1,910,547	97,039	2,486,269
Private Lands ..	38,068	909,739	58,653	1,140,325	54,853	1,570,343
	135,870	2,444,752	145,801	3,050,872	151,892	4,056,612

6. The total number of wells drilled in the Colony to 31st December, 1924, is 928 of which 596 are on Crown Lands. During the year under review 110 new wells were drilled, of which 76 were on Crown Lands and 34 on private lands, an increase of 2 compared with 1923. In 80 of these wells oil was struck,

7. The number of companies engaged in the mining of oil at the close of the year was 16 as against 17 at the end of 1923.

8. ROYALTY.—I am pleased to be able to report that there has been a very considerable increase in the royalty collected during the past year, the amount being £31,006 6s. 11d. as compared with £24,844 18s. 1d. for 1923.

9. WAYLEAVES.—The revenue obtained from wayleaves in respect of pipe lines along the Trinidad Government Railway and the public roads of the Colony has also shewn an increase. The amounts for the years 1923 and 1924 are as follows :—

	<i>Trinidad Government Railway.</i>		<i>Roads.</i>
1923	....	£5,212 8s. 4d.	£2,153 8s. 4d.
1924	....	£6,550 10s. 5d.	£2,740 9s. 8d.

10. FEES.—Fees charged for crossing the foreshore, the railway and the public roads amounted to £29.

11. No new leases or licences were issued during the year.

12. RETURNS.—The various oil companies have regularly submitted to the department the returns required to be furnished by them.

13. INSPECTIONS.—A large number of inspections have been carried out by the officers of the department in connection with the various operations taking place on the fields, and I have much pleasure in reporting that the Managers co-operate with this department in endeavouring to carry out the provisions of the Ordinances and Regulations.

14. SAN FERNANDO BRANCH OF THE DEPARTMENT.—Toward the end of 1923 a small branch of the department was opened at San Fernando to deal with the conservation of oil and gas and other problems of the petroleum industry with which the department is concerned; a petroleum engineer, Mr. F. M. Ziegler, being in charge. The work of this branch expanded so rapidly that both additional staff and new office accommodation were found necessary. Mr. C. A. P. Southwell, M.C., B.Sc., Geologist, was transferred from the head office to this branch and has been stationed there during the whole of the period under review, with the exception of the last two months during which he was on leave of absence.

The offices occupied during the early part of the year proving too small, arrangements were made to move this branch into a portion of the Treasury building. These quarters are very satisfactory and it is hoped will prove adequate for many years.

Messrs. Ziegler and Southwell are engaged for a large part of the time on original research and I hope to be able to submit complete reports on the work undertaken during the early part of 1926.

A photograph of a part of the peg model room in which models of the underground conditions existing in the various oilfields are constructed by the officers in charge is enclosed herewith (Appendix E).\*

#### PREVENTION OF ACCIDENTS ORDINANCE NO. 13 OF 1915.

15. During the period under review 85 factories in Trinidad and 17 in Tobago were worked. Taking the factories as a whole the owners and managers co-operate satisfactorily with the department in ensuring safety to the workmen in their employment.

#### QUARRIES.

16. The remarks made in my last report on this subject still hold good. With very few exceptions, the quarries at present being worked in the Colony are relatively unimportant. From the inspections which have been made they have been found to be worked in most cases in a careful manner. The number of quarries in operation during the year 1924 was 70 compared with 69 in 1923.

\* Not printed.

**PETROLEUM ORDINANCE NO. 20 OF 1915.**

17. The premises in which the various products of petroleum are stored have been carefully inspected, and it is satisfactory to note that as a rule great care has been taken to ensure safety.

**ASPHALT INDUSTRY ORDINANCE NO. 10 OF 1906.**

18. No asphalt has been dug on the village lots at La Brea since 1914.

**APPENDICES.**

19. Appendix A shews the list of oil companies operating in the Colony during the year 1924.

20. In Appendix B will be found the daily average number of persons employed in oilfields and quarries and the quantity and value of minerals obtained during the period under review.

21. A comparative statement of the oil produced, refined and exported is shewn in Appendix C.

22. Appendix D consists of a series of charts depicting in graphical form the progress made in various industries during the past few years.

**STAFF.**

23. No additions to the permanent staff were made during 1924. Mr. C. A. P. Southwell, Geologist, was re-engaged for a period of two years from 20th December last, to collaborate with Mr. Ziegler in undertaking the special investigations now in progress in the San Fernando branch of the department. The title of the post was changed to Government Geologist, Mines Department.

I have the greatest pleasure in recording the very able and loyal assistance I have received from the members of the staff.

15th May, 1925.

A. P. CATHERALL,  
*Inspector of Mines.*

**APPENDIX A.**

No.	Companies.	Nature of tenure of lands on which operations took place.		Disposal of oil.	Remarks.
1	Trinidad Leaseholds, Limited .. ..	Crown lands under lease	Fyzabad, Barrackpore	Pumped to the Company's refinery at Pointe-a-Pierre, and there refined. Most of the production is exported in bulk	Largest producing Company in the Colony. Large purchases of crude oil from other companies are made and refined at Pointe-a-Pierre. Very great activity has been shewn during the past year, and the field on Crown lands at Fyzabad greatly extended. A well was also drilled on private lands at Guayaguayare without striking oil.
		Private lands	Barrackpore		
2	United British West Indies Petroleum Syndicate, Limited	Crown lands under lease	Los Bajos	Sold to United British Refineries, Limited	No drilling except at Los Bajos. This Company proposes to relinquish a large part of its holdings in the near future.
3	United British Oilfields of Trinidad, Limited ..	Crown lands under lease	Point Fortin, Morne L'Enfer Reserve	Sold to United British Refineries, Limited	Drilling continued on Crown lands at Point Fortin and on Parry lands area.
		Private lands	Point Fortin		
4	Trinidad Central Oilfields, Limited .. ..	Crown lands under lease	Tabaquite, Mayaro	Exported .. ..	Drilling was continued on the Tabaquite field during the whole of the year and a fair production obtained. A number of test wells were also drilled in dew districts.
			Guapo		
5	Trinidad Lake Petroleum Company, Limited ..	Private lands	Brighton	The bulk of the production is exported to the United States of America	Producing only.
6	Petroleum Development Company, Limited ..	Crown Lands under lease	Morne L'Enfer Forest Reserve	Sold to Trinidad Lake Petroleum Company, Limited	Drilling on Lots 1 and 4 with very satisfactory results.
7	Apex (Trinidad) Oilfields, Limited .. ..	Crown lands under lease and private lands	Fyzabad	Sold to Trinidad Leaseholds, Limited	Second largest producing Company in the Colony. Very active drilling programme has been undertaken and the field largely extended.
8	Kern Trinidad Oilfields, Limited .. ..	Private lands	Guapo, Rousillac	Sold to United British Refineries, Limited	Development of Perseverance Estate, Guapo, continued during the whole of the year. Drilling commenced on Boodhoodsingh Estate near La Brea in January and continued to the end of the year.
9	General Petroleum Company of Trinidad, Limited	Private lands	Fyzabad, Penal and San Francique	Sold to United British Refineries, Limited	Drilling was carried out on the Fyzabad and Penal fields with a fair production from the former.
10	Trinidad Petroleum Development Company, Ltd.	Private lands	San Fernando	Sold to Trinidad Leaseholds, Ltd.	This Company was originally under the control of S. Pearsons and Sons, Ltd. During the year the British Controlled Oilfields, Ltd., acquired the interests of this firm. Drilling operations were suspended for a great portion of the period.
11	New Naparima Oilfields, Limited .. ..	Private lands	Naparima District		Shut down during whole of period.
12	Trinidad Freeholds, Limited .. ..	Private lands	Fyzabad	Sold to Trinidad Leaseholds, Ltd.	Producing only.
13	Petroleum Options, Limited .. ..	Private lands	Fyzabad	Sold to Trinidad Leaseholds, Ltd.	Drilled one well and produced from two others.
14	Trinidad Friendship Petroleum Company, Ltd. ..	Private lands	Fyzabad	Sold to Trinidad Leaseholds, Ltd.	Producing only.
15	British Controlled Oilfields, Limited .. ..	Crown lands under Prospecting Licence	Oropuche	Sold to Trinidad Leaseholds, Ltd.	Continued drilling during the year with fair success.
16	Trinidad Oil Producing and Refining Company, Ltd.	Private lands	Fyzabad	Sold locally .. ..	Producing only.
17	Transvaal and Rhodesian Estates, Limited ..	Private lands	Pointe Ligoure	Barrelled and sold locally	Producing only.
18	Trinidad Esmeralda Estates, Limited .. ..	Private lands	Piparo		Drilled one well unsuccessfully during the year. A very small production was obtained from the existing wells.



## APPENDIX B.

Daily average number of persons employed in Oilfields and Quarries and the quantity and value of minerals obtained during the year ended 31st December, 1924.

Minerals.	Daily average number of persons employed.		Total.	Quantity.	Approximate value.*
	Males.	Females.			
Oil .. .. .	3,503	68	3,571	4,056,612 Barrels	£ 1,001,575
Asphalt .. .. .	1,033	12	1,045	223,867 Tons	£ 139,917
Private Quarries (Limestone, Gravel, &c.) .. .. .	308	103	411	150,142 Tons	£ 19,072
Government Quarries (Limestone, &c.) .. .. .	242	63	305	47,947 Tons	£ 6,327

\* N.B.—The values in this column are those returned by owners and managers, and represent the value at the place of production.

## APPENDIX C.

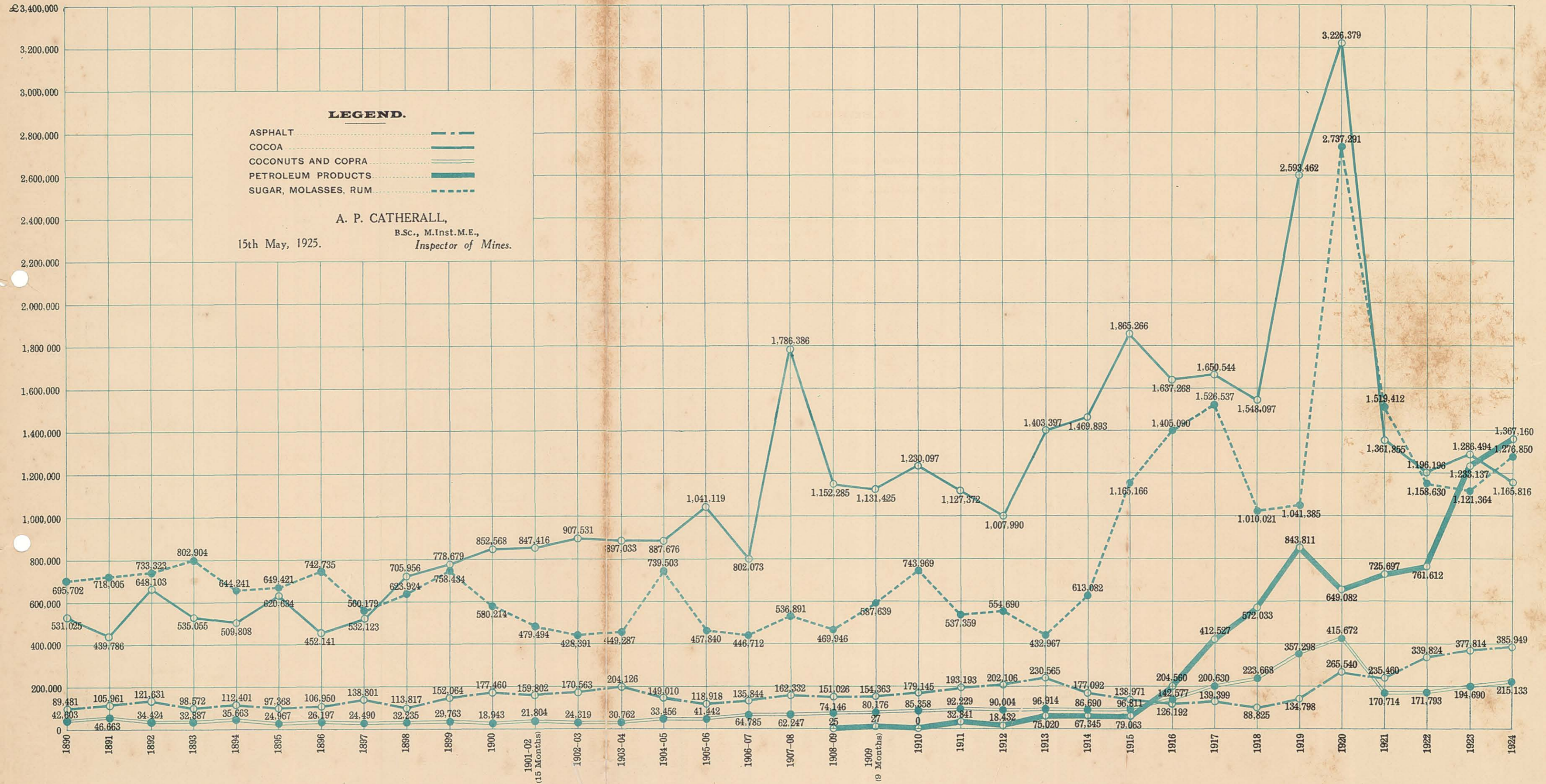
Comparative statement of oil produced, refined and exported year by year since the inception of the Petroleum Industry in the Colony.

Year.	Production in barrels.	Quantity of Crude Oil refined in barrels.	Quantity of Crude oil and Refined oil exported in barrels
1905 to March 31st, 1910 ..	10,541	..	..
1910-1911 .. .. .	125,112	..	..
1911-1912 .. .. .	285,307	Previous to 1912 to 1913	37,842
1912-1913 .. .. .	503,616		9,484
1913-1914 .. .. .	643,516		35,061
1914-1915 .. .. .	1,050,112		41,413
9 months ended December, 1915 ..	671,125		58,437
1916 .. .. .	927,877		107,822
1917 .. .. .	1,602,312		505,002
1918 .. .. .	2,082,068		2,106,369
1919 .. .. .	1,841,047		1,149,943
1920 .. .. .	2,083,027		1,395,487
1921 .. .. .	2,354,160		1,806,016
1922 .. .. .	2,444,752		1,820,018
1923 .. .. .	3,050,872		2,360,279
1924 .. .. .	4,056,612		3,433,902
	23,732,056		14,867,075
			15,783,748

A

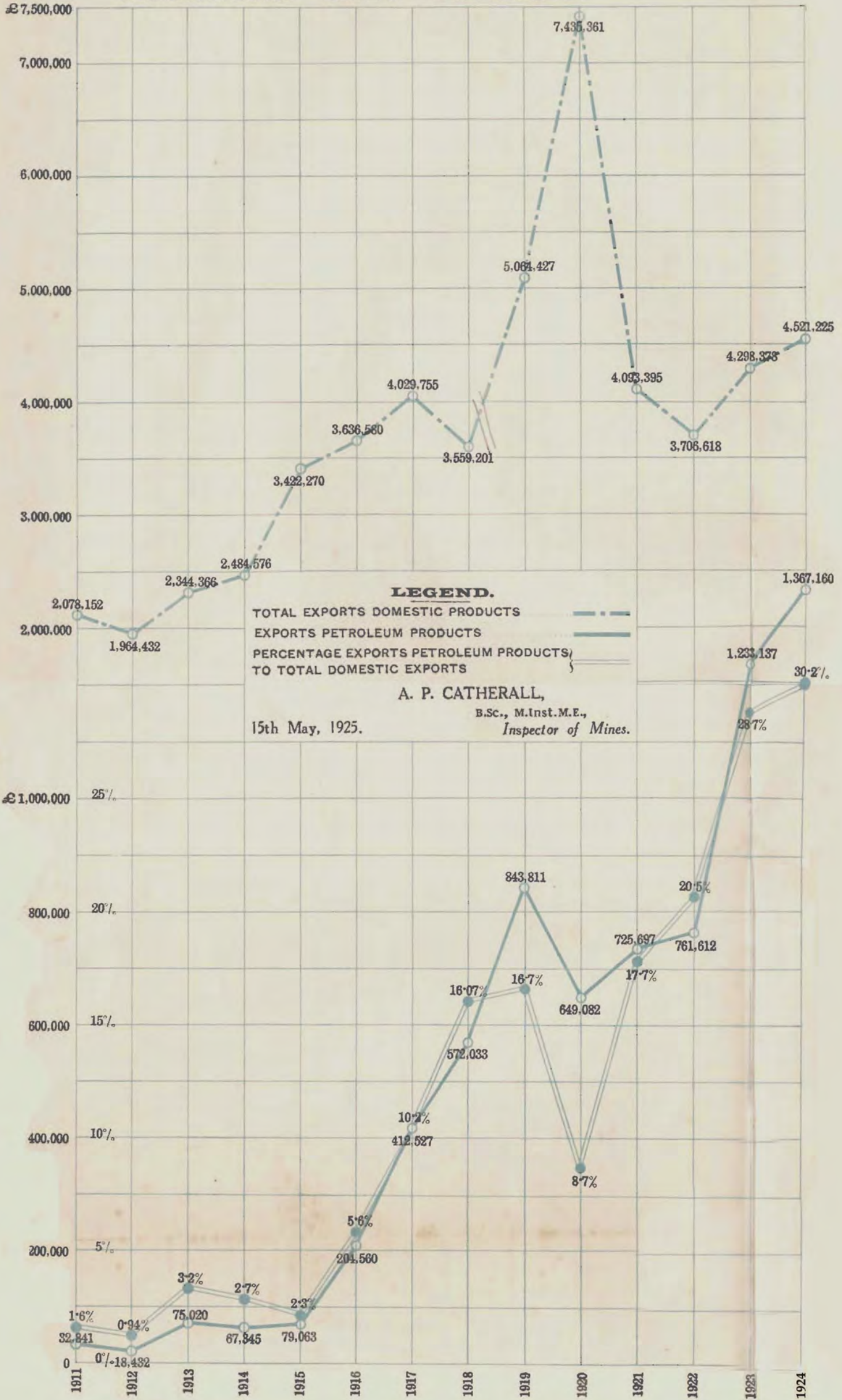
TRINIDAD AND TOBAGO.

EXPORTS OF LOCAL PRODUCE.



B

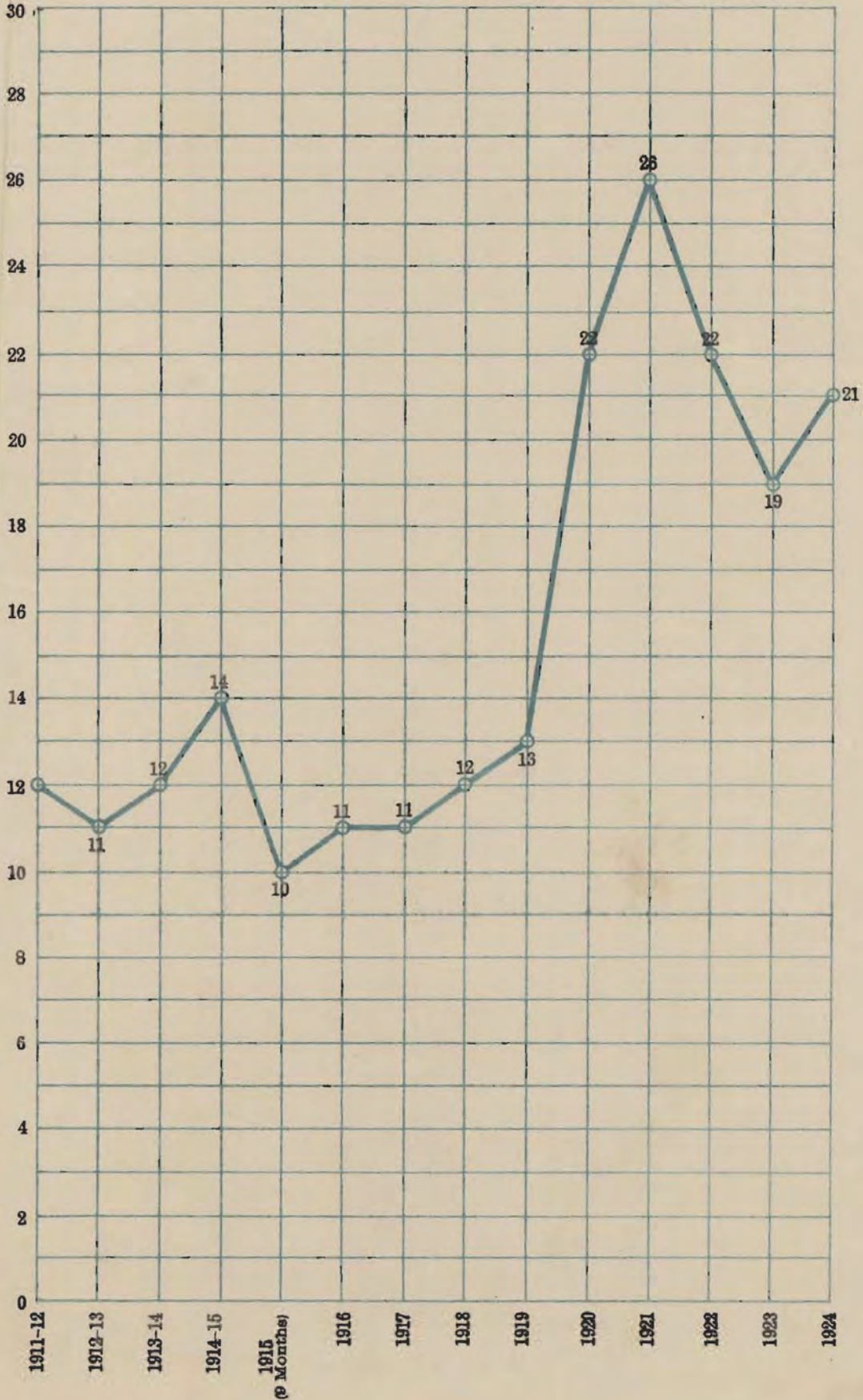
TRINIDAD AND TOBAGO.



APPENDIX-D.

C

Curve showing the number of Oil Companies that have operated annually in the Colony from 1st April, 1911, to 31st December, 1924.

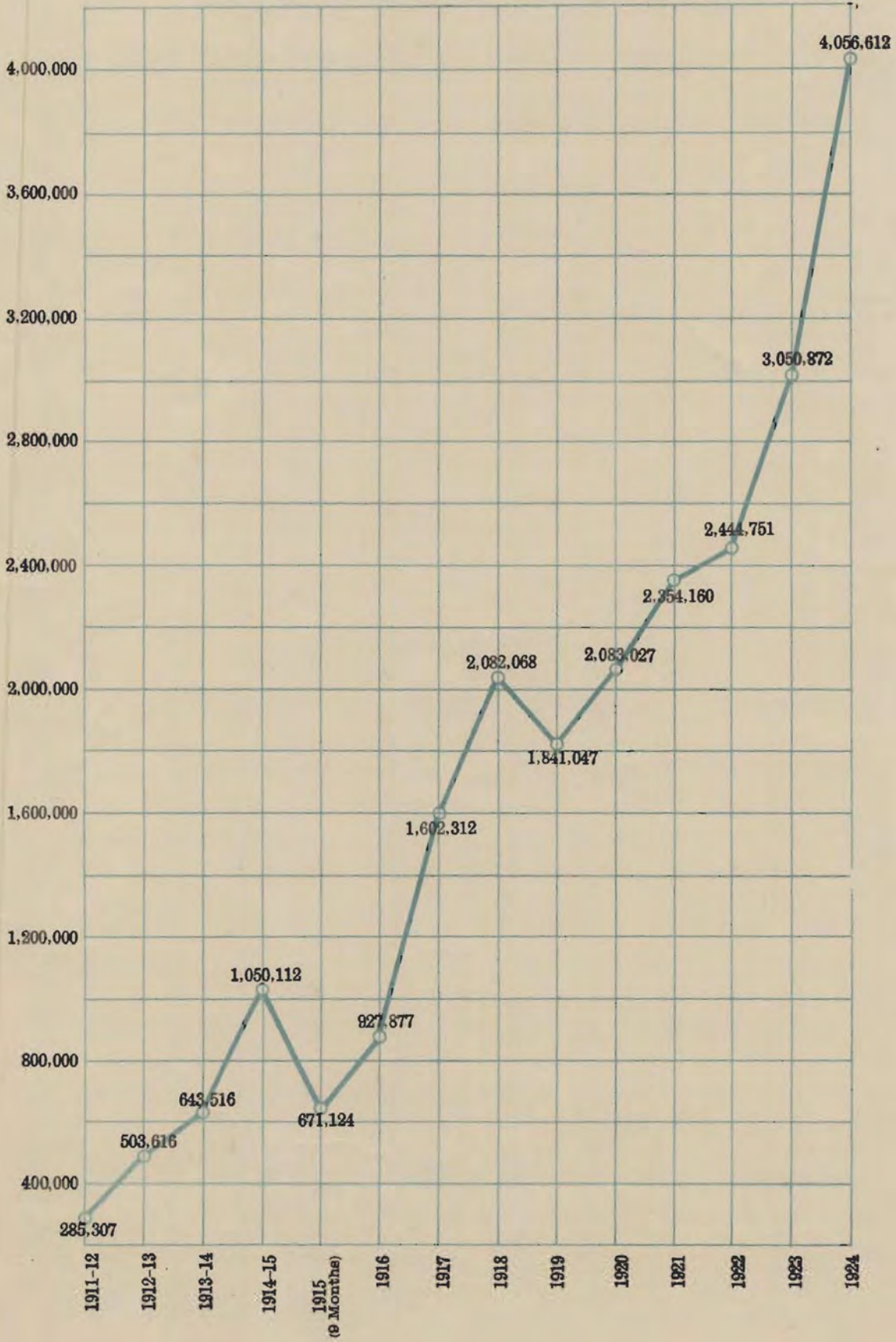


APPENDIX-D.

D

TOTAL ANNUAL PRODUCTION OF CRUDE OIL IN BARRELS.

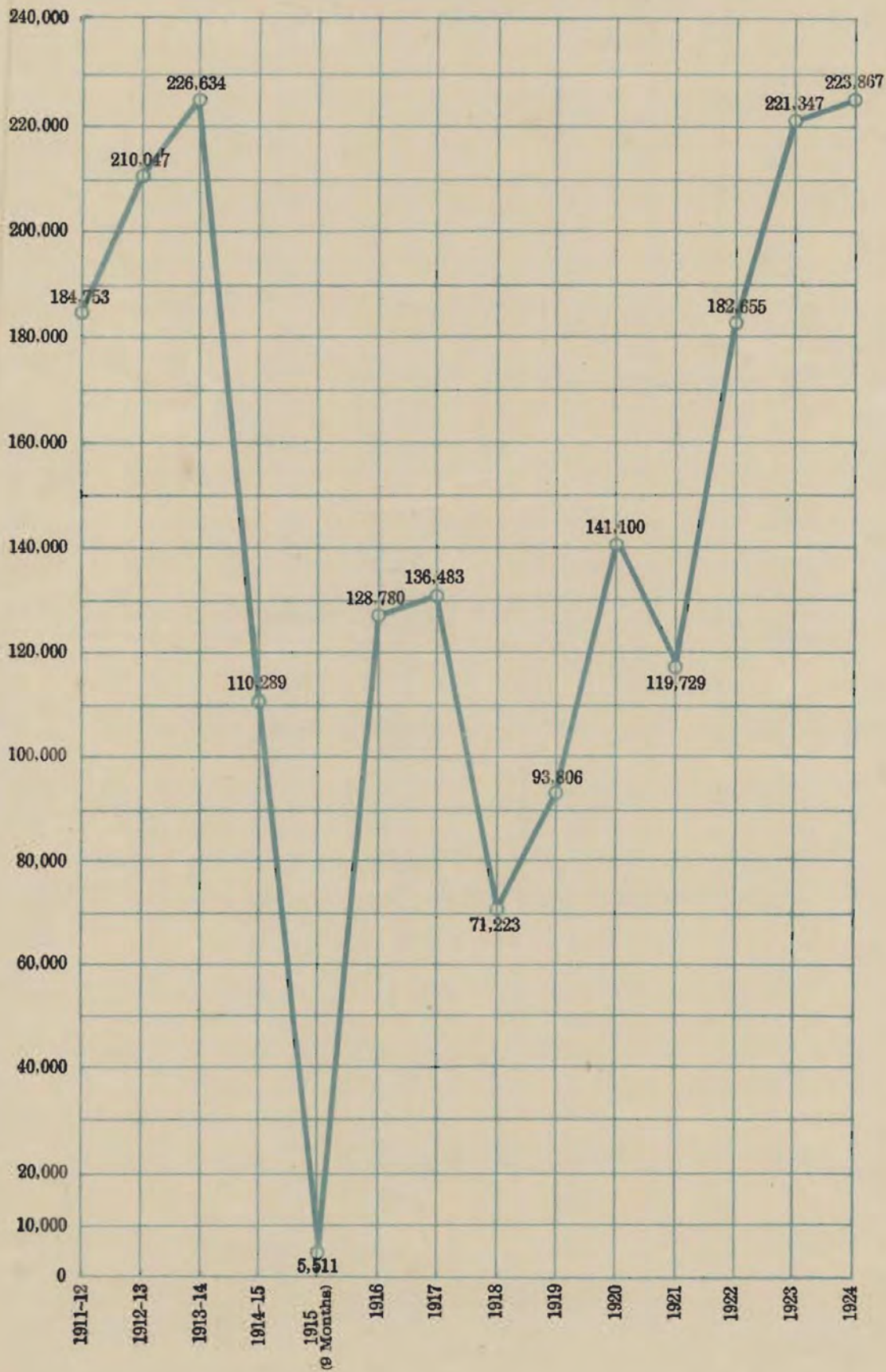
One barrel = 35 gallons



APPENDIX-D.

E

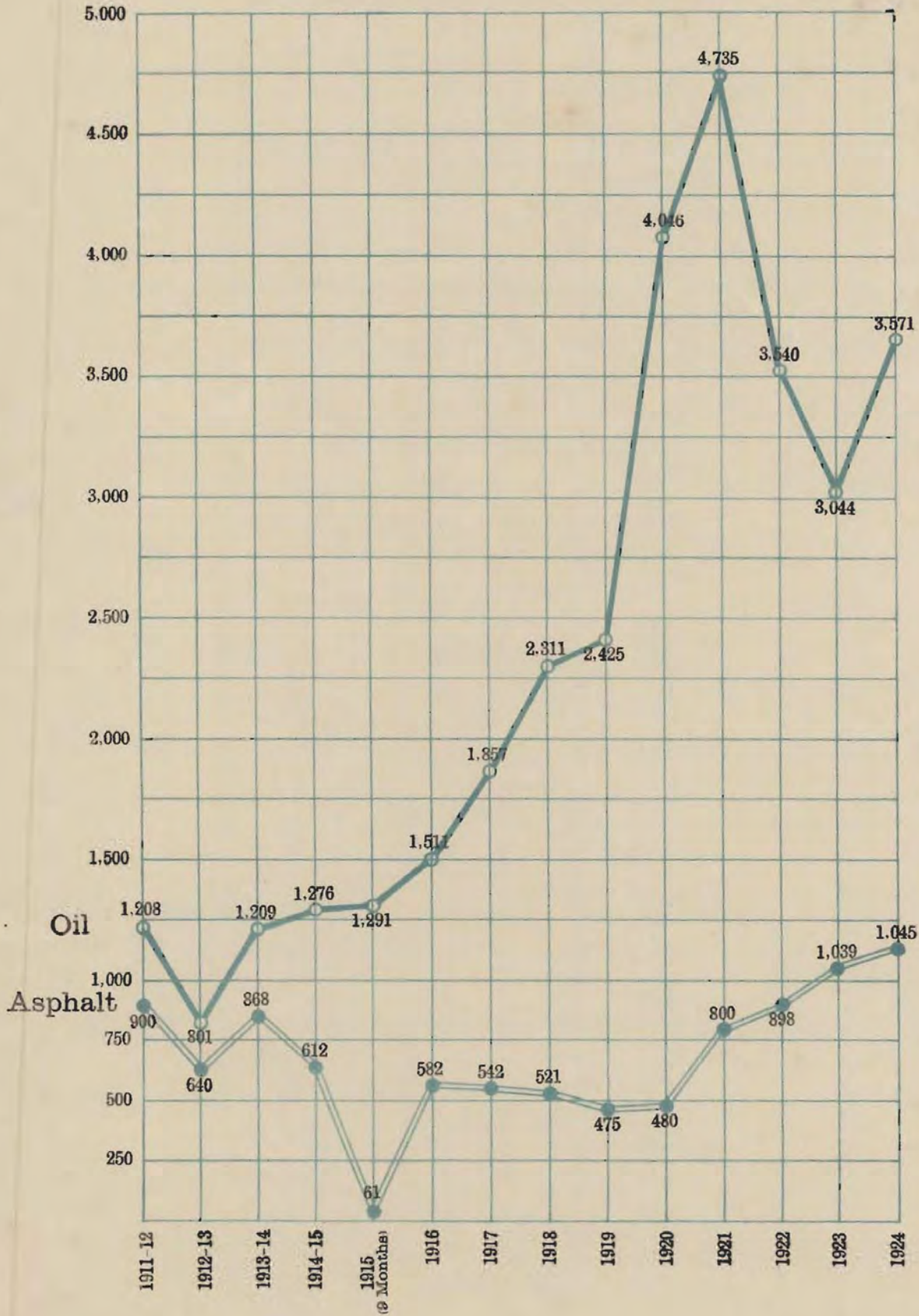
Curve showing yearly output of Asphalt from the Colony in Tons from 1st April, 1911, to 31st December, 1924.



APPENDIX-D.

F

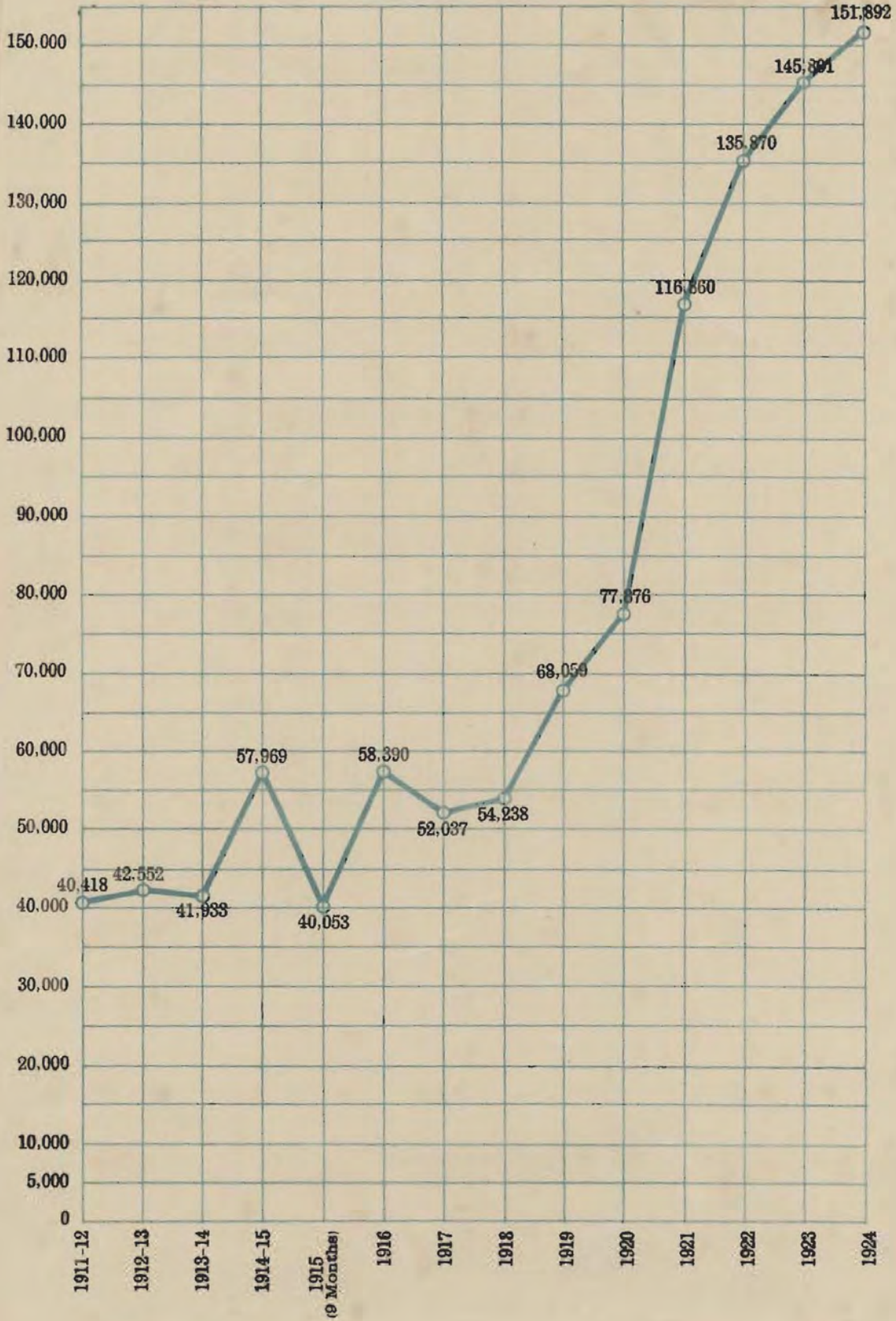
Curve showing comparison of daily average number of persons employed in the Oil and Asphalt Industries of the Colony from 1st April, 1911, to 31st December, 1924.



APPENDIX-D.

G

Curve showing yearly total number of feet drilled in the Colony from 1st April, 1911, to 31st December, 1924.

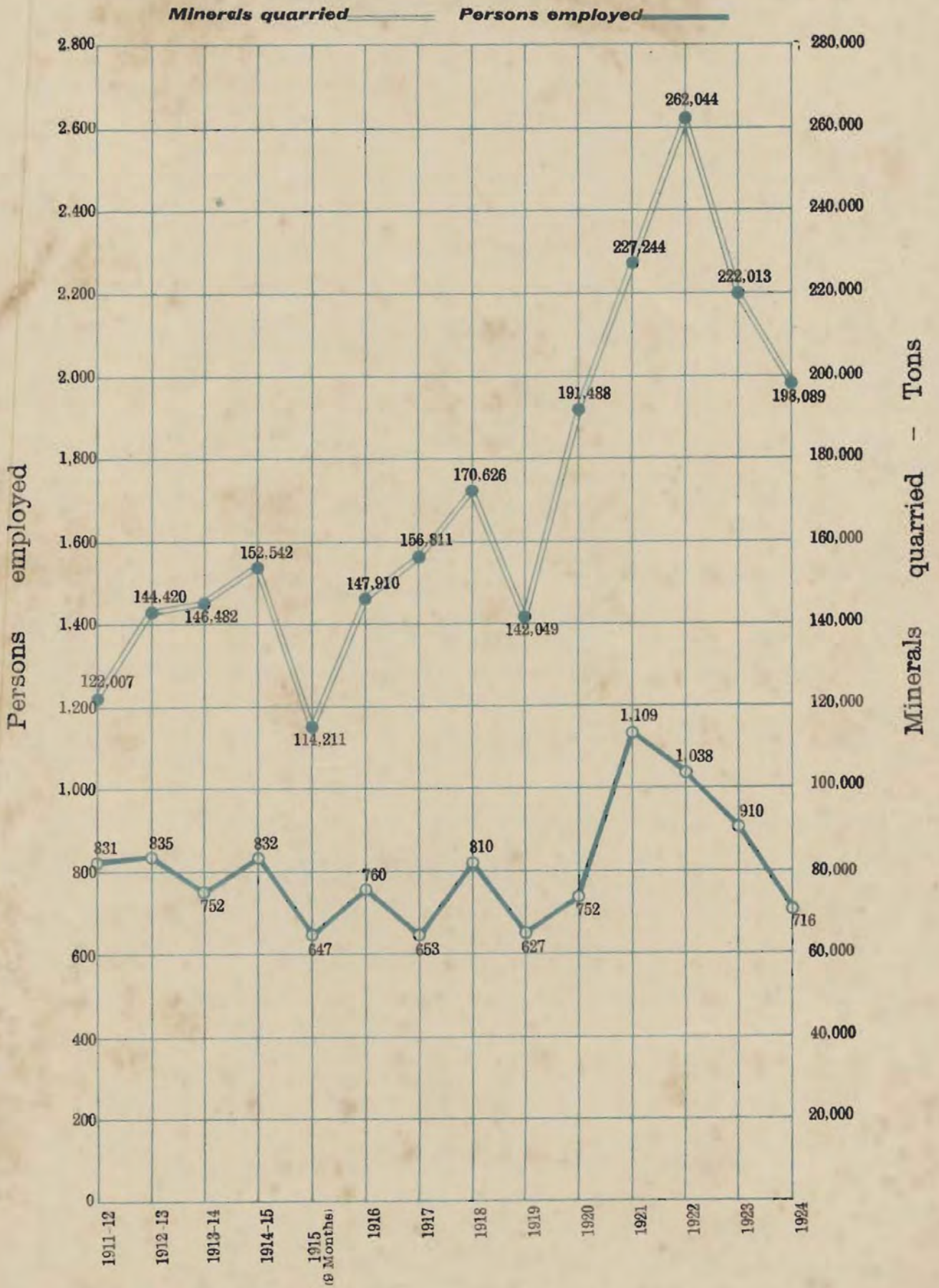




APPENDIX-D.

H

Curve showing the yearly total quantity of Minerals quarried and a comparison of the daily average number of persons employed in Quarries in the Colony from 1st April, 1911, to 31st December, 1924.



TRINIDAD AND TOBAGO.

**Council Paper No. 65 of 1926.**

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**MINES DEPARTMENT.**

Administration Report of the Inspector of Mines for the year 1925.

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*Circulated for information. To be laid before the  
Legislative Council.*

---

*Previous Council Paper No. 61 of 1925.*

*Registered No. of Correspondence relating to the subject—M.P. No. 4317/1926.*

TRINIDAD:  
PRINTED BY THE GOVERNMENT PRINTER,  
GOVERNMENT PRINTING OFFICE.

1926.

[Price 2/-.]

## MINES DEPARTMENT.

## Administration Report of the Inspector of Mines for the year 1925.

Council Paper No. 65 of 1926.

M.P. No. 4317/1926.

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 1925.

**THE PETROLEUM INDUSTRY.**

2. I am glad to be able to report that for the sixth year in succession there has been a considerable increase in the production of crude oil as compared with the previous year. The production in 1925 was the largest yet known, being 329,895 barrels more than in 1924.

For some time past owing to the financial conditions existing through the world, drilling in the Colony has been almost entirely confined to the existing fields rather than to the proving of new areas. Towards the close of the year it was apparent, that in the near future, there would be a considerable amount of activity in the development of new areas. At the time of writing operations are in progress in a number of new fields which I hope will prove productive and will thus add to the petroleum reserves of the Colony.

3. The shipping depots mentioned in my last report remain the same, viz. :—

Claxton Bay	..	..	Trinidad Central Oilfields, Limited.
Pointe-a-Pierre	..	..	Trinidad Leaseholds, Limited.
Brighton	..	..	Trinidad Lake Petroleum Company, Ltd.
Point Fortin	..	..	United British Refineries, Limited.

Each of these companies also possesses facilities for the refining of crude oil.

4. The exports of petroleum products show a considerable increase compared with last year, the figures being 126,000,000 gallons as against 113,000,000 for the year 1924.

The exports of petroleum products were again greater in value than the products of any other industry and formed over 33 per cent. of the total exports of the Colony. Ten years ago, in 1915, the value of petroleum products exported was £67,345 and formed less than 3 per cent. of the total exports. The major portion of the export trade is in the form of oil fuel of which a large part is shipped to the Admiralty under contract.

The value of exports of the leading staples of the Colony and their relation to the total exports of the Colony is shewn in the following table :—

			<i>Value.</i>	<i>Percentage of total.</i>
Petroleum products	..	..	1,560,579	33.4
Cocoa	..	..	1,257,255	26.9
Sugar, Molasses and Rum	..	..	1,127,459	24.1
Asphalt	..	..	360,062	7.7
Coconuts and Copra	..	..	177,077	3.8
Other exports not enumerated	..	..	194,716	4.1
Total domestic exports,	..	..	4,482,432	100 per cent.

5. The following table will show the number of feet drilled and the quantity of oil produced during 1925 as compared with the years 1923 and 1924 :—

	YEAR ENDED 31ST DECEMBER, 1923.		YEAR ENDED 31ST DECEMBER, 1924.		YEAR ENDED 31ST DECEMBER, 1925.	
	<i>Feet drilled.</i>	<i>Oil won Brls. of 35 galls.</i>	<i>Feet drilled.</i>	<i>Oil won Brls. of 35 galls.</i>	<i>Feet drilled</i>	<i>Oil won Brls of 35 galls.</i>
Crown Lands	87,148	1,910,547	97,039	2,486,269	105,631	2,877,437
Private Lands	58,653	1,140,325	54,853	1,570,343	63,522	1,509,070
	145,801	3,050,872	151,892	4,056,612	169,153	4,386,507

6. The total number of wells drilled in the Colony to 31st December, 1925, is 1,027 of which 658 are on Crown Lands. During the year under review 99 new wells were drilled, of which 62 were on Crown Lands and 37 on private lands, a decrease of 11 compared with 1924. In 65 of these wells oil was struck.

7. The number of companies engaged in the winning of oil at the close of the year was 19 as against 16 at the end of 1924.

8. ROYALTY.—The royalty collected in respect of oil won from Crown Lands shewed a very large increase over that during 1924, the figures being £40,099 9s. 4d. compared with £31,006 6s. 11d. during 1924. How rapidly the revenue from this source is increasing will be seen from Appendix D (I).

9. WAYLEAVES.—The revenue obtained from wayleaves in respect of pipe lines along the Trinidad Government Railway and the public roads of the Colony has also shewn an increase. The amounts for the years 1924 and 1925 are as follows :—

	<i>Trinidad Government Railway.</i>	<i>Roads.</i>
1924 ..	.. £6,550 10s. 5d.	£2,740 9s. 8d.
1925 ..	.. £7,736 2s. 6d.	£3,165 2s. 1d.

10. FEES.—Fees charged for crossing the foreshore, the railway and the public roads amounted to £67.

11. The following leases and licenses were issued during the year :—

2 leases over 4,443 acres of Crown Lands and over 1,414 acres of lands the surface of which was alienated subsequent to 16th January, 1902.

2 prospecting licenses over 19,667 acres of Crown Lands and over 4,598 acres of land the surface of which was alienated subsequent to 16th January, 1902.

1 exploration license over 2,000 acres of Crown Lands.

In addition to the above an agreement for leases was entered into between the Petroleum Development Company, Limited, and the Kern Trinidad Oilfields, Limited.

12. RETURNS.—The various returns required to be furnished by the oil companies have been regularly submitted and after being carefully checked filed with the records of the department.

13. INSPECTIONS.—A large number of inspections have been carried out by the officers of the department in connection with the various operations taking place on the fields, and I have much pleasure in reporting that the Managers co-operate with this department in endeavouring to carry out the provisions of the Ordinances and Regulations.

14. SAN FERNANDO BRANCH OF THE DEPARTMENT.—The work of this branch, as mentioned in my last report, has continued during the whole of the period under review.

**PREVENTION OF ACCIDENTS ORDINANCE, CAP. 157.**

15. During the period under review 92 factories in Trinidad and 17 in Tobago were worked. Taking the factories as a whole the owners and managers co-operate satisfactorily with the department in ensuring safety to the workmen in their employment.

**QUARRIES.**

16. The number of quarries worked during the period under review was 75 as compared with 70 in 1924. From inspections which have been made they have, in most cases, been found to have been worked in a careful manner, but, with few exceptions, they are relatively unimportant.

**PETROLEUM ORDINANCE, CAP. 145.**

17. The premises in which the various products of petroleum are stored have been carefully inspected, and it is satisfactory to note that as a rule great care has been taken to ensure safety.

**ASPHALT INDUSTRY ORDINANCE, CAP. 147.**

18. No asphalt has been dug on the village lots at La Brea since 1914.

**APPENDICES.**

19. Appendix A shews the list of oil companies operating in the Colony during the year 1925.

20. In Appendix B will be found the daily average number of persons employed in oilfields and quarries and the quantity and value of minerals obtained during the period under review.

21. A comparative statement of the oil produced, refined and exported is shewn in Appendix C.

22. Appendix D consists of a series of charts depicting in graphical form the progress made in various industries during the past few years.

**STAFF.**

23. The only addition to the permanent staff of the department has been to recreate the post of Draughtsman formerly in existence before the amalgamation of the Lands and Mines Departments in 1921. Mr. A. B. A. Spence was appointed to the post as from 1st January, 1925.

I have the greatest pleasure in recording the very able and loyal assistance I have received from the members of the staff.

A. P. CATHERALL,

*Inspector of Mines.*

26th May, 1926.

APPENDIX A.

No.	Companies.	Nature of tenure of lands on which operations took place.	Disposal of oil.	Remarks.
1	Trinidad Leaseholds, Limited .. ..	Crown lands under lease Private lands.	Fyzabad, Barrackpore Guayaguayare. Barrackpore.	Pumped to the Company's refinery at Pointe-a-Pierre, and there refined. Most of the production is exported in bulk Largest producing company in the Colony. Large purchases of crude oil from other companies are made and refined at Pointe-a-Pierre. Great activity has been shown during the past year and the field on Crown lands greatly extended. Toward the close of the year preparations were being made to continue further drilling at Guayaguayare.
2	United British West Indies Petroleum Syndicate, Limited	Crown lands under lease	Los Bajos	Sold to United British Refineries, Limited No drilling except at Los Bajos.
3	United British Oilfields of Trinidad, Limited .. ..	Crown lands under lease Private lands	Point Fortin, Morne L'Enfer Reserve. Point Fortin.	Sold to United British Refineries, Limited Drilling continued on Crown lands in the Parry lands area.
4	Trinidad Central Oilfields, Limited .. ..	Crown lands under lease	Tabaquite, Mayaro, Guapo.	Exported .. .. Drilling was continued on the Tabaquite area with fair success. A number of wells were drilled in other districts but no great production was obtained.
5	Trinidad Lake Petroleum Company, Limited	Private lands	Brighton ..	The bulk of the production is exported to the United States of America. Producing only.
6	Petroleum Development Company, Limited .. ..	Crown lands under lease	Morne L'Enfer Forest Reserve.	Sold to Trinidad Lake Petroleum Company, Limited Drilling on Crown lands near the Pitch Lake with very satisfactory results.
7	Apex (Trinidad) Oilfields, Limited .. ..	Crown lands under lease and private lands	Fyzabad ..	Sold to Trinidad Leaseholds, Limited Second largest producing Company in the Colony. Very active drilling programme has been undertaken and the field largely extended.
8	Kern Trinidad Oilfields, Limited .. ..	Private lands .. Crown lands under lease	Guapo, Rousillac La Brea.	Sold to United British Refineries, Limited Development of Perseverance Estate, Guapo continued during the whole of the year. Drilling continued on the Boodoosingh Estate near La Brea and operations were commenced on Crown lands near Guapo. A satisfactory production was obtained.
9	General Petroleum Company of Trinidad, Limited	Private lands	Fyzabad, Penal and San Francique	Sold to United British Refineries, Limited Drilling was continued on the Fyzabad field and a fair production obtained.
10	Trinidad Petroleum Development Company, Ltd.	Private lands ..	San Fernando.	Sold to Trinidad Leaseholds, Limited Drilling operations were recommenced. One new well was sunk and a small production obtained.
11	Trinidad Freeholds, Limited .. ..	Private lands	Fyzabad.	Sold to Trinidad Leaseholds, Ltd. Producing only.
12	Petroleum Options, Limited .. ..	Private lands.	Fyzabad.	Sold to Trinidad Leaseholds, Ltd. Drilled two wells and produced from two others.
13	Trinidad Friendship Petroleum Company, Ltd. .. ..	Private lands	Fyzabad.	Sold to Trinidad Leaseholds, Ltd. Drilled one well and produced from one other.
14	British Controlled Oilfields, Limited .. ..	Crown lands under Prospecting Licence	Oropuche ..	Sold to Trinidad Leaseholds, Ltd. Continued drilling during the year but only small production obtained.
15	Trinidad Oil Producing and Refining Company, Limited	Private Lands.	Fyzabad.	Sold locally .. .. Producing only.
16	Transvaal and Rhodesian Estates, Limited .. ..	Private lands.	Point Ligoure ..	Barrelled and sold locally .. .. Producing only.
17	Collic's Palo Seco Oilfield .. ..	Crown lands under lease	Palo Seco ..	Sold to United British Refineries, Limited Lands formerly held by Trinidad United Oilfields, Limited. Small production from existing wells.

## APPENDIX B.

Daily average number of persons employed in Oilfields and Quarries and the quantity and value of minerals obtained during the year ended 31st December, 1925.

Minerals.	Daily average number of persons employed.		Total.	Quantity.	Approximate value.*
	Males.	Females.			
Oil .. .. .	3,243	37	3,280	4,386,507 Barrels	£ 1,041,057
Asphalt .. .. .	996	10	1,006	201,107 Tons.	£ 125,692
Private Quarries (Limestone, Gravel, &c.) .. .. .	529	166	695	172,003 Tons.	£ 20,548
Government Quarries (Limestone, &c.) .. .. .	220	46	266	27,682 Tons.	£ 5,474

\*N.B.—The values in this column are those returned by owners and managers, and represent the value at the place of production.

## APPENDIX C.

Comparative statement of oil produced, refined and exported year by year since the inception of the Petroleum Industry in the Colony.

Year.	Production in barrels.	Quantity of Crude Oil refined in barrels.	Quantity of Crude oil and refined oil exported in barrels.
1905 to March 31st, 1910 .. .. .	10,541	..	..
1910-1911 .. .. .	125,112	..	..
1911-1912 .. .. .	285,307	Previous to 1912 to 1913 37,842	219,582
1912-1913 .. .. .	593,616	9,484	122,734
1913-1914 .. .. .	643,516	35,061	387,719
1914-1915 .. .. .	1,050,112	41,413	348,351
9 months ended December, 1915 .. .. .	671,125	58,437	408,188
1916 .. .. .	927,877	107,822	975,142
1917 .. .. .	1,602,312	505,002	1,079,369
1918 .. .. .	2,082,068	2,106,369	1,305,407
1919 .. .. .	1,841,047	1,149,943	1,406,264
1920 .. .. .	2,083,027	1,395,487	1,034,907
1921 .. .. .	2,354,160	1,806,016	1,223,346
1922 .. .. .	2,444,752	1,820,018	1,615,740
1923 .. .. .	3,050,872	2,360,279	2,432,470
1924 .. .. .	4,056,612	3,433,902	3,224,529
1925 .. .. .	4,386,507	3,790,343	3,606,608
	28,118,563	18,657,418	19,390,356

A

EXPORTS OF LOCAL PRODUCE.

TRINIDAD AND TOBAGO.

LEGEND.

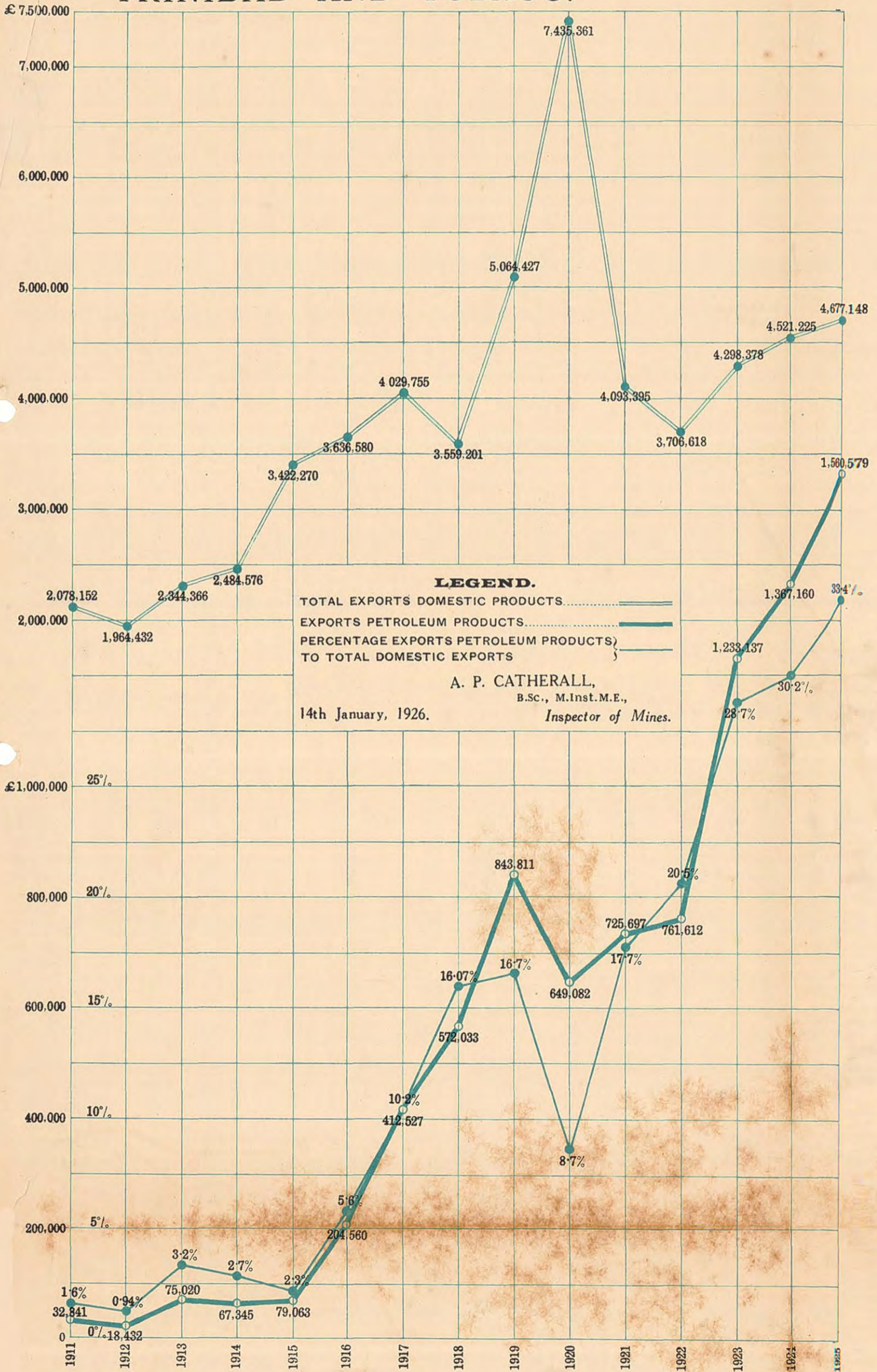
- ASPHALT
- COCOA
- COCONUTS AND COPRA
- PETROLEUM PRODUCTS
- SUGAR, MOLASSES, RUM

A. P. CATHERALL,  
 B.Sc., M.Inst.M.E.,  
 14th January, 1927. Inspector of Mines.



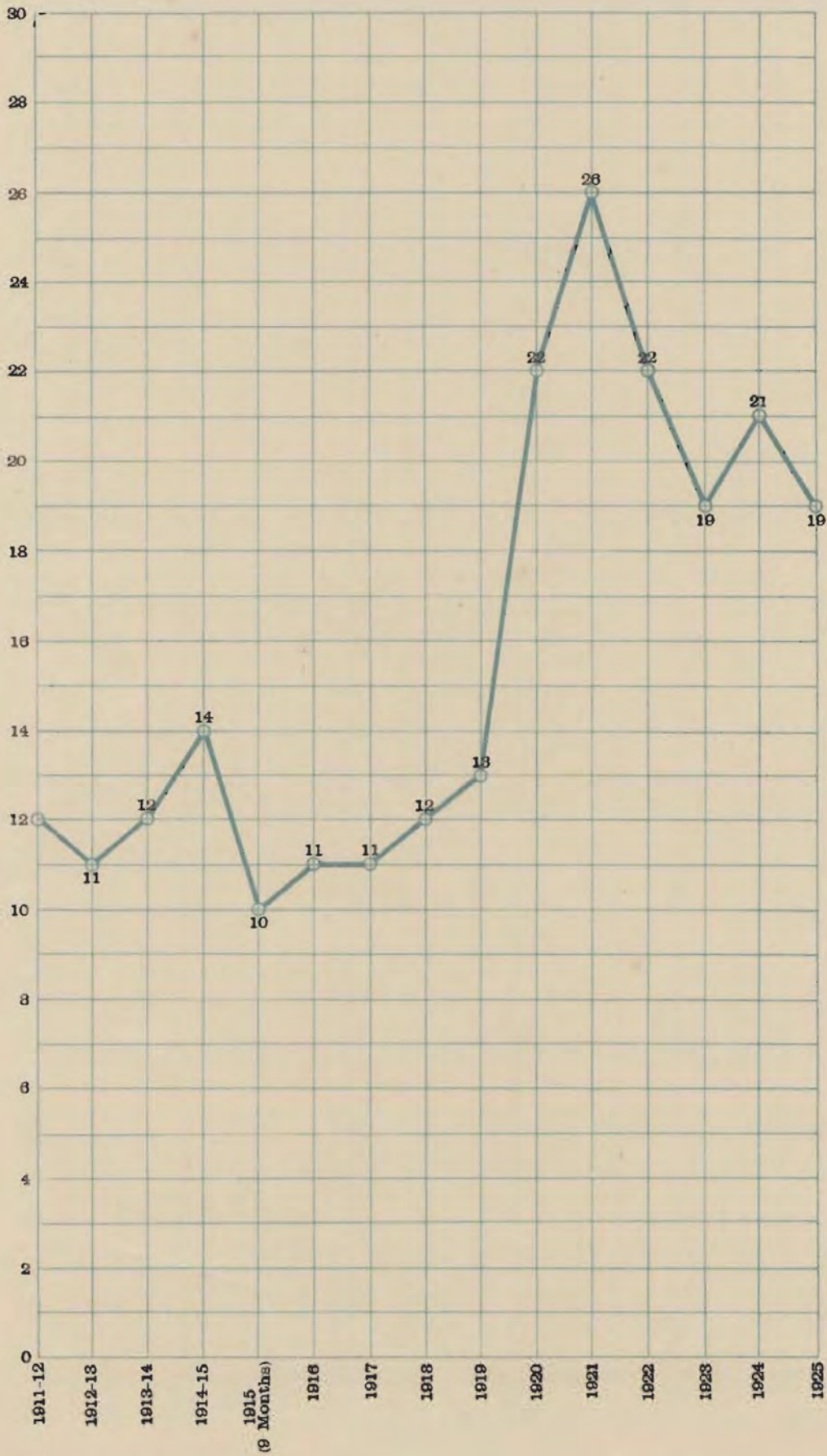


# TRINIDAD AND TOBAGO.



# C

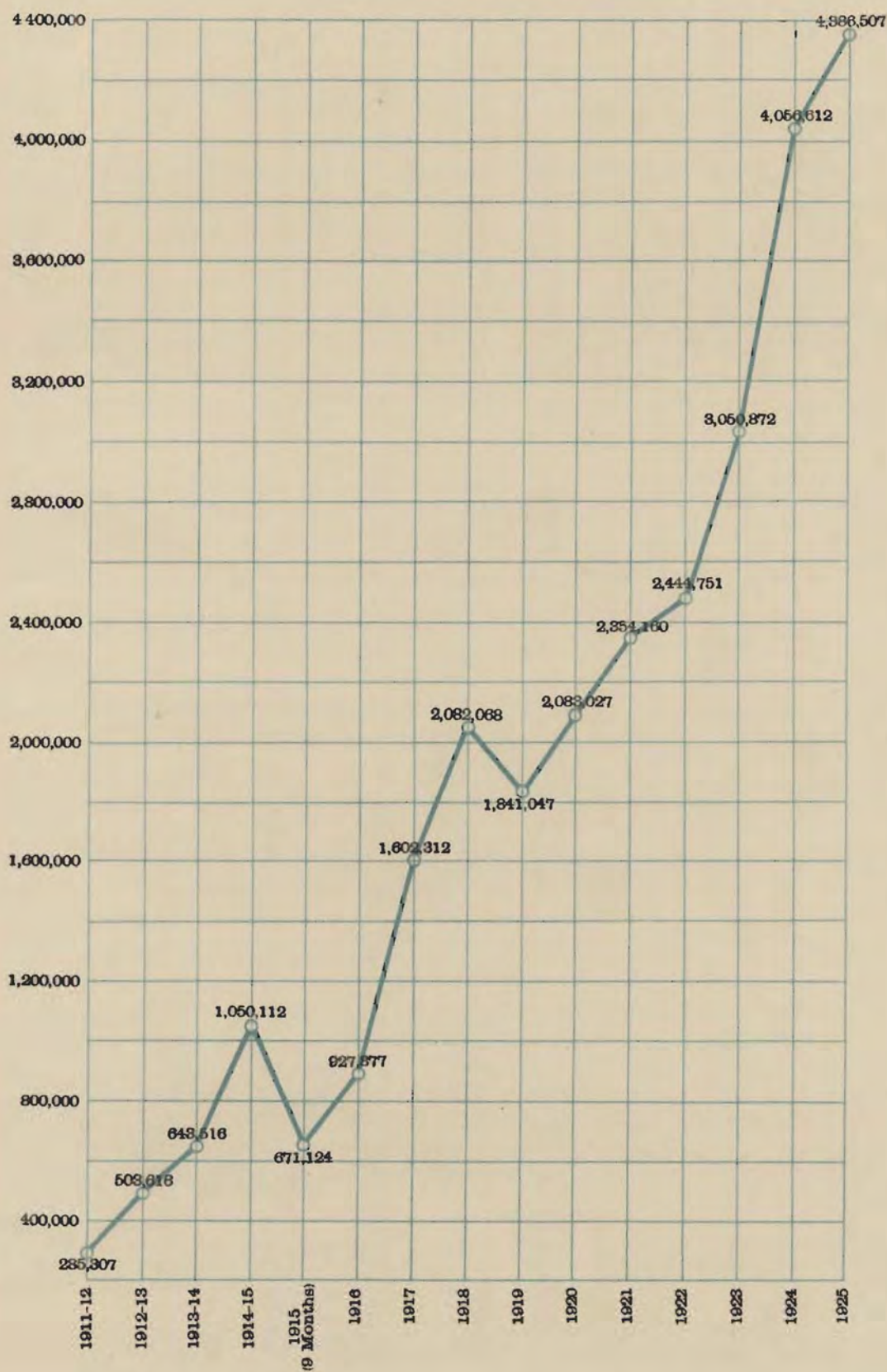
Curve showing the number of Oil Companies that have operated annually in the Colony from 1st April, 1911, to 31st December, 1925.



# D

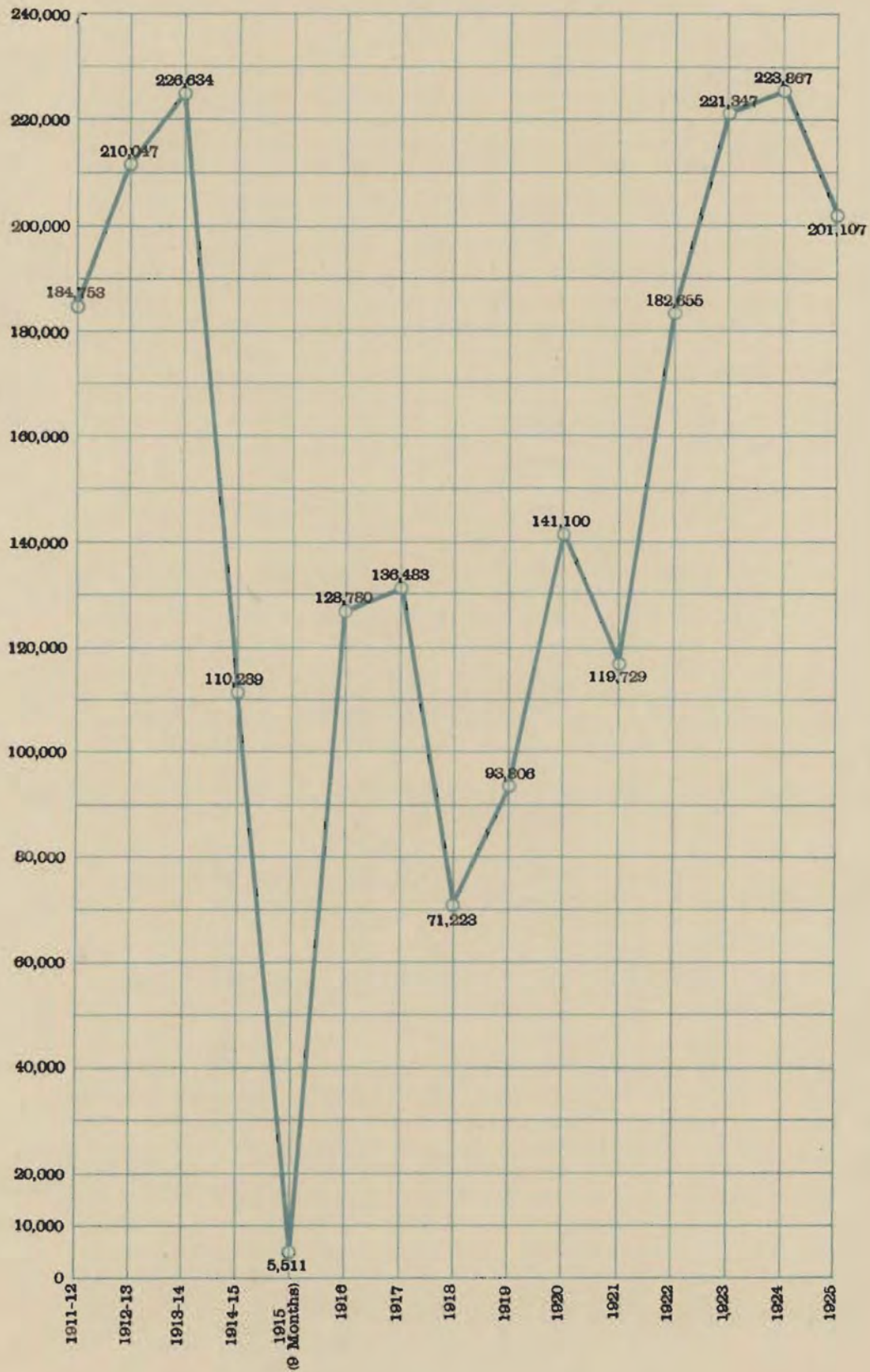
## TOTAL ANNUAL PRODUCTION OF CRUDE OIL IN BARRELS.

One barrel = 35 gallons.



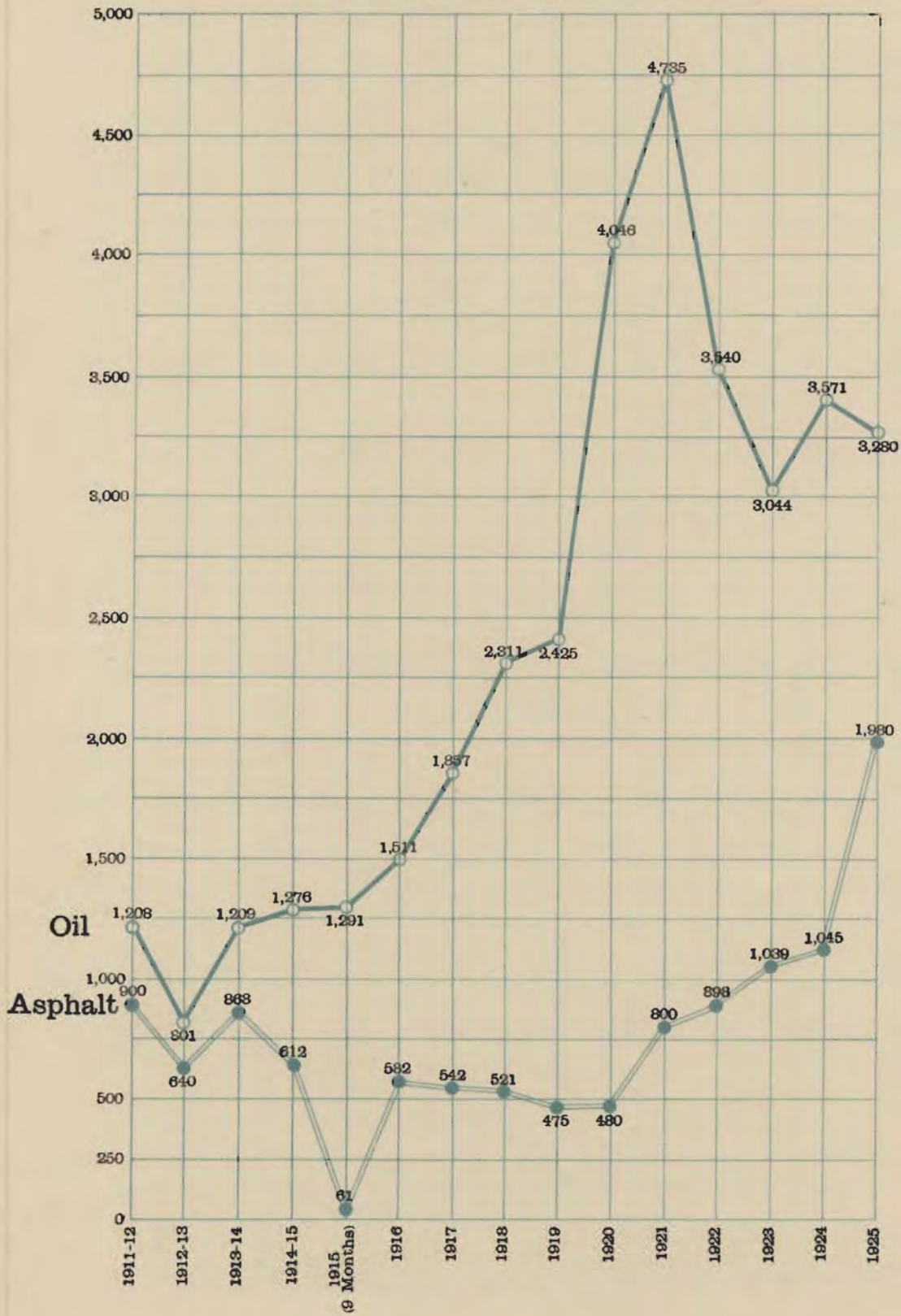
# E

Curve showing yearly output of Asphalt from the Colony in Tons from 1st April, 1911, to 31st December, 1925.



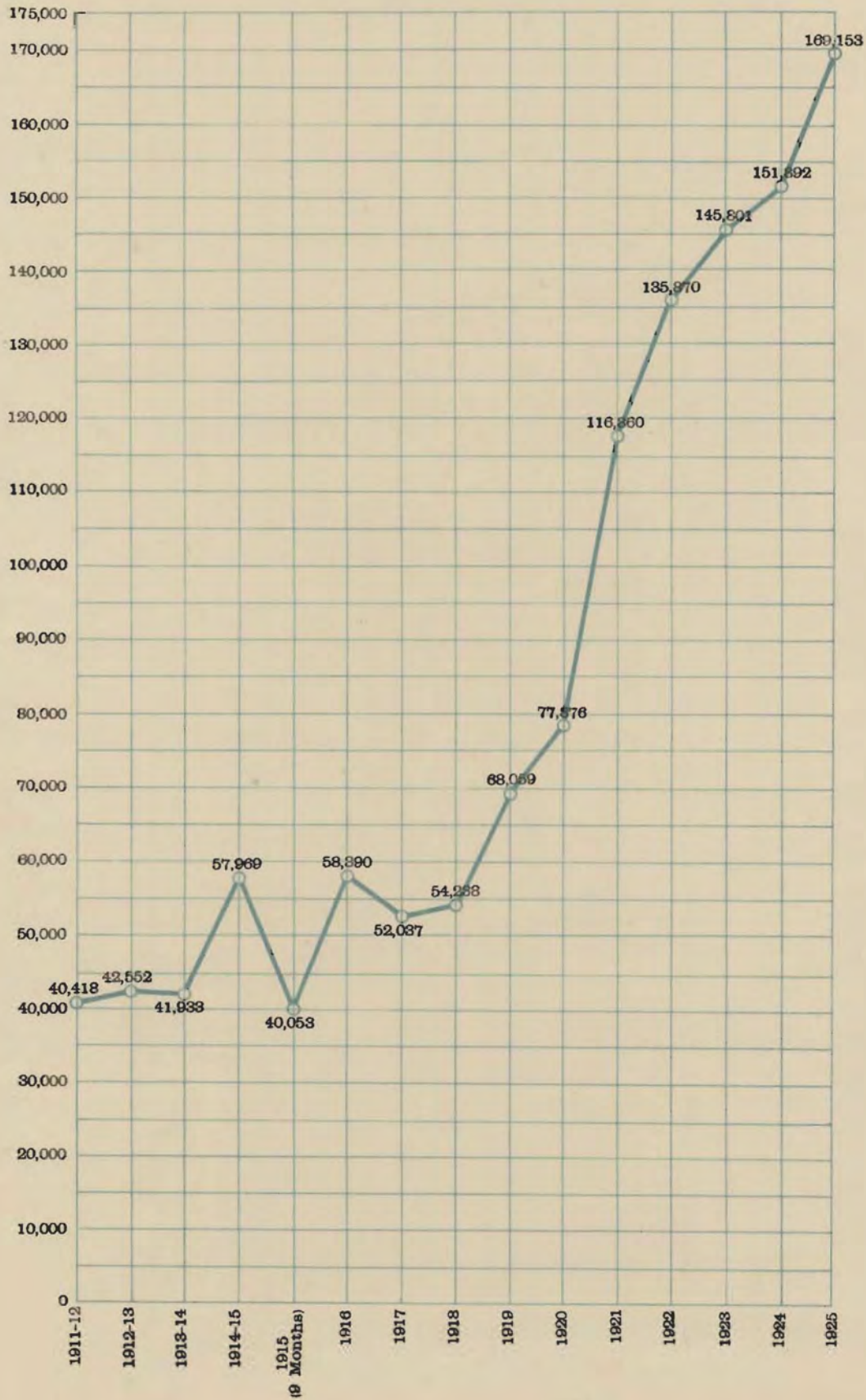
# F

Curve showing comparison of daily average number of persons employed in the Oil and Asphalt Industries of the Colony from 1st April, 1911, to 31st December, 1925.



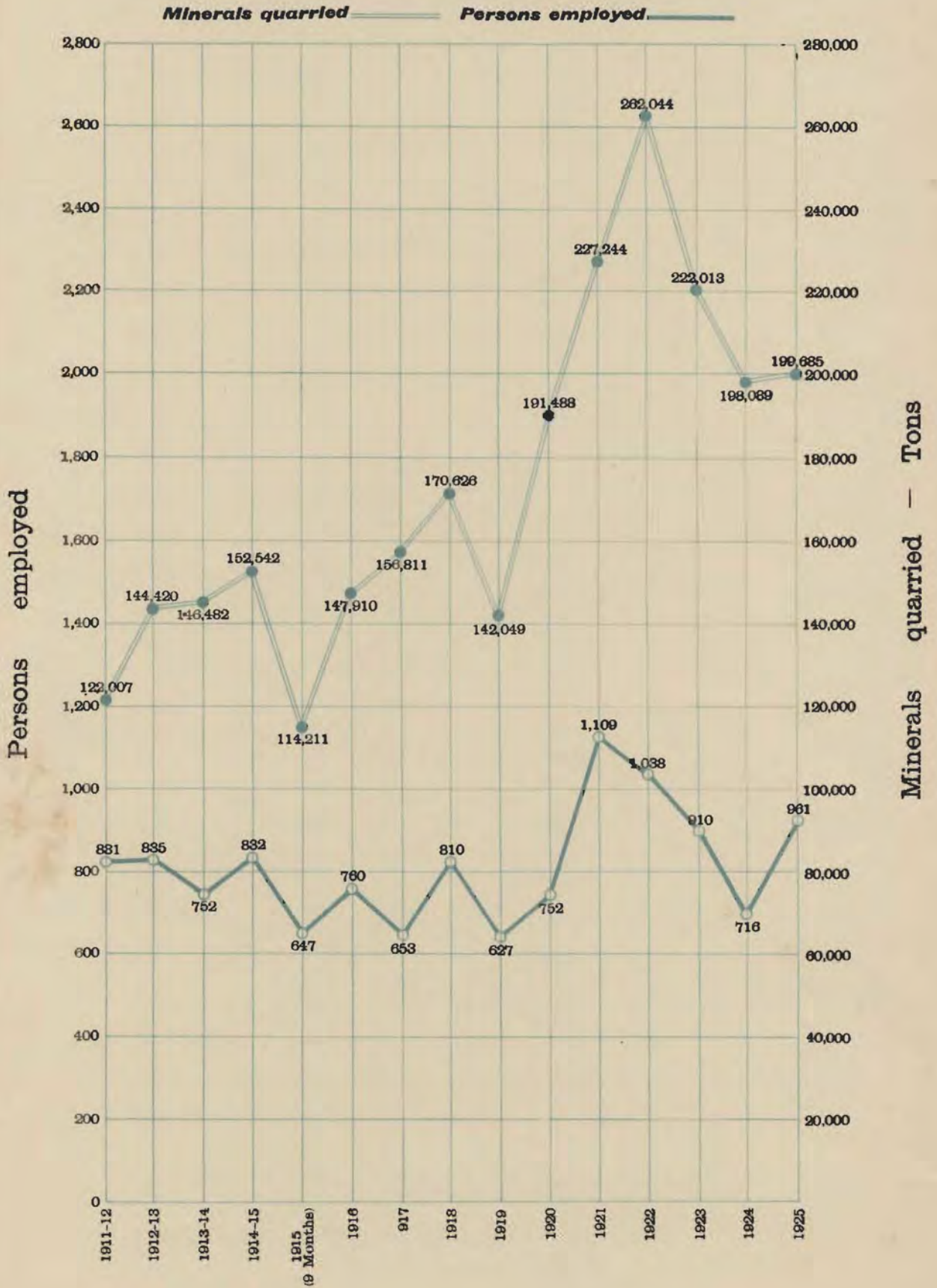
# G

Curve showing yearly total number of feet drilled in the Colony from 1st April, 1911, to 31st December, 1925.

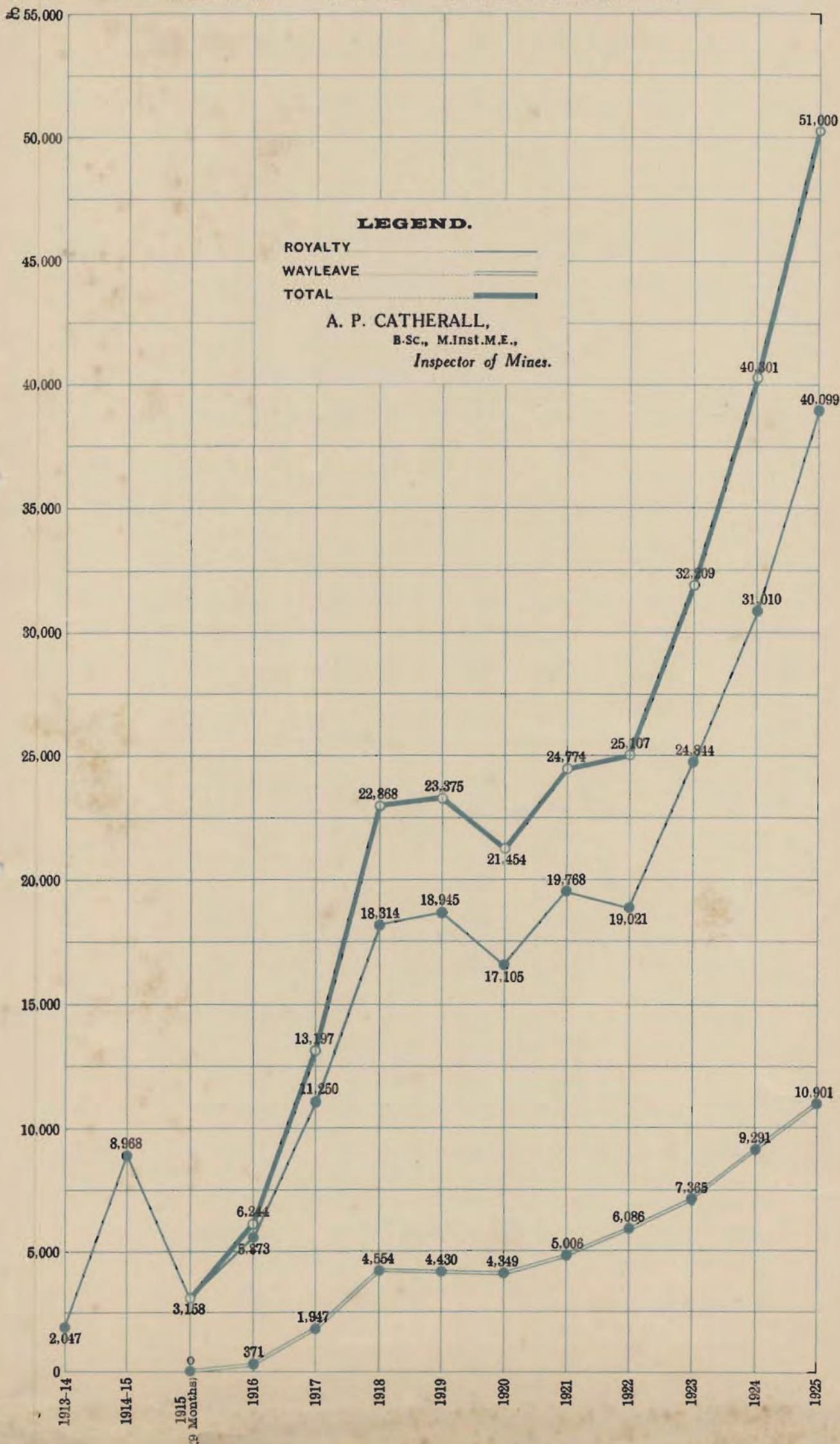


# H

Curve showing the yearly total quantity of Minerals quarried and a comparison of the daily average number of persons employed in Quarries in the Colony from 1st April, 1911, to 31st December, 1925.



# ROYALTY AND WAYLEAVE.





TRINIDAD AND TOBAGO.

**Council Paper No. 29 of 1927.**

---

**MINES DEPARTMENT.**

**Administration Report of the Inspector of Mines for the year 1926.**

---

*Laid before the Legislative Council on the  
25th March, 1927.*

---

*Previous Council Paper No. 65 of 1926.*

*Registered No. of Correspondence relating to the subject--M.P. No. 2202/1927.*

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## MINES DEPARTMENT.

## Administration Report of the Inspector of Mines for the year 1926.

*Council Paper No. 29 of 1927.**M.P. No. 2202/1927.*

HONOURABLE COLONIAL SECRETARY,

I have the honour to submit, for His Excellency the Governor's information, the following report on the work of the Mines Department for the year 1926.

**THE PETROLEUM INDUSTRY.**

2. The year under review has been marked by an increase in activity in the industry. An energetic drilling programme has been carried out by the majority of the Companies in the already proven fields and, in addition, a considerable amount of prospecting work has been undertaken in new areas with promising results. In this connection I may mention that the Trinidad Leaseholds, Ltd., recommenced operations at Guayaguayare and the results obtained have led this Company to embark upon an extensive programme for the development of this area. The Trinidad Petroleum Development Co., Ltd. has drilled a number of wells in the Palo-Seco-Erin district and obtained a production of high grade oil. This latter Company has also brought into production a well in the Cedros district. In addition to the above, towards the close of the year the Trinidad Oilfields Operating Co., Ltd., a Company registered in Trinidad, but allied to American interests, commenced a very active drilling programme on private lands and at the time of writing has successfully obtained a considerable production.

3. The quantity of oil won during the past year has been the largest yet known, there being a steady upward trend since the year 1920. The production was 584,964 barrels more than in 1925.

4. There have been no new shipping or refining depots constructed during the period under review. They remain the same as in my last report, viz. :—

Claxton Bay	....	....Trinidad Central Oilfields, Ltd.
Pointe-a-Pierre	....	....Trinidad Leaseholds, Ltd.
Brighton	....	....Trinidad Lake Petroleum Co., Ltd.
Point Fortin	....	....United British Refineries, Ltd.

The Trinidad Leaseholds, Ltd. has made very considerable additions to its refining depot at Pointe-a-Pierre by the addition of a Dubb's cracking plant for the treatment of fuel oil. At the close of the year it was nearly complete and at the time of writing had just been put into operation. A very considerable extension to the pier of the Trinidad Lake Asphalt Operating Co., Ltd. (with which is associated the Trinidad Lake Petroleum Co., Ltd.) at Brighton has been made.

5. As will be expected in view of the increased production, the exports of petroleum products have shown a large increase compared with last year, the figures being 139,500,000 gallons as against 126,000,000 for the year 1925.

The value of exports of petroleum products during the year under review was greatly in excess of the value of the products of any other industry and formed over 37 per cent. of the total exports of the Colony. The major portion of the export trade is in the form of fuel oil of which a large part is shipped to the Admiralty under contract.

The value of the exports of the leading staples of the Colony and their relation to the total exports is shown in the following table :—

	<i>Value</i> £	<i>Percentage of</i> <i>total.</i>
Petroleum products .. .. .	1,871,851	37·4
Cocoa .. .. .	1,270,335	25·4
Sugar, Molasses and Rum .. .. .	1,028,493	20·6
Asphalt .. .. .	451,967	9·0
Coconuts and Copra .. .. .	101,398	3·8
Other exports not enumerated .. .. .	192,911	3·8
Total domestic exports .. .. .	5,006,955	100 per cent.

From the above it will be seen that the value of exports of petroleum products exceeded that of cocoa, which is the leading industry of the Colony, by over half a million sterling.

6. The following table will show the number of feet drilled and the quantity of oil produced during 1926 as compared with the years 1924 and 1925 :—

	YEAR ENDED 31ST DECEMBER, 1924.		YEAR ENDED 31ST DECEMBER, 1925.		YEAR ENDED 31ST DECEMBER, 1926.	
	<i>Feet</i> <i>drilled.</i>	<i>Oil won Brls.</i> <i>of 35 galls.</i>	<i>Feet</i> <i>drilled.</i>	<i>Oil won Brls.</i> <i>of 35 galls.</i>	<i>Feet</i> <i>drilled.</i>	<i>Oil won Brls.</i> <i>of 35 galls.</i>
Crown Lands	97,039	2,486,269	105,631	2,877,437	126,339	2,976,227
Private Lands	54,853	1,570,343	63,522	1,509,070	73,739	1,995,243
	151,892	4,056,612	169,153	4,386,507	200,078	4,971,471

7. The total number of wells drilled in the Colony to 31st December, 1926, is 1,154 of which 739 are on Crown lands. During the year under review 127 new wells were drilled, of which 81 were on Crown Lands and 46 on private lands, an increase of 28 compared with 1925. In 77 of these wells oil was struck.

8. The number of Companies engaged in the winning of oil at the close of the year was 17 as against 19 at the end of 1925.

9. ROYALTY.—The Royalty collected in respect of oil won from Crown Lands shewed a large increase over that during 1925, the figures being £54,950 3s. 3d. compared with £40,099 9s. 4d. during 1925. How rapidly the revenue from this source is increasing will be seen from Appendix D (1).

10. WAYLEAVES.—The revenue obtained from wayleaves in respect of pipe lines along the Trinidad Government Railway and the public roads of the Colony has also shown an increase. The amounts for the years 1925 and 1926 are as follows :—

	<i>Trinidad Government Railway.</i>	<i>Roads.</i>
1925	...£7,736 2s. 6d.	£3,165 2s. 1d.
1926	...£9,121 11s. 8d.	£3,704 5s. 7d.

11. FEES.—Fees charged for crossing the foreshore, the Railway and the public roads amounted to £61.

12. The following leases and licenses were issued during the year:—

Six leases over 70,879 acres of Crown Lands and 6,479 acres of lands the surface of which was alienated subsequent to 16th January, 1902.

Two prospecting licenses over 245 acres of Crown Lands and 248 acres of land the surface of which was alienated subsequent to 16th January, 1902.

Two exploration licenses over 31,922 acres of Crown Lands.

13. RETURNS.—The various returns required to be furnished by the oil companies have been regularly submitted and after being carefully checked filed with the records of the department.

14. INSPECTIONS.—A large number of inspections have been carried out by the Officers of the department in connection with the various operations taking place on the fields, and I have much pleasure in reporting that on the whole the Managers co-operate with this department in endeavouring to carry out the provisions of the Ordinances and Regulations.

15. ACCIDENTS.—The accidents which occurred during the period under review were with one exception such as are usually incident to mining operations of this nature and do not call for special comment. The exception mentioned was the worst that has happened in the history of the oil industry of the Colony and resulted from a well of the Petroleum Options, Ltd. becoming ignited whilst it was being drilled in. The Manager and four workmen were, I regret to say, so badly burnt that they succumbed to their injuries. Enquiries did not show that any breach of the Boring Regulations had been committed and the Coroner's verdict at the inquest held on the deceased was—"The deceased died from heart failure as the result of extensive burns occasioned by a fire and that no felony was committed."

#### **SAN FERNANDO BRANCH OF THE DEPARTMENT.**

16. The work of this branch of the department has continued during the whole of the period under review. Up till the middle of the year the work was carried on by Messrs. F. M. Ziegler and C. A. P. Southwell. The former Officer completed his engagement (of three years duration) in August and Mr. Southwell, Government Geologist, was appointed to succeed him. This Officer's post as Government Geologist was not filled during the latter part of the year and has been abolished as from 1st January, 1927. In addition to the routine work of this branch, investigations into various problems regarding conservation in the petroleum industry are being undertaken as far as time and staff permit.

#### **PREVENTION OF ACCIDENTS ORDINANCE, CAP. 157.**

17. During the period under review 92 factories in Trinidad and 17 in Tobago were worked. A considerable number of inspections have been necessary to ensure that the types of safeguard best suited to prevent accidents in each particular part of the machinery are installed. That great care has been exercised at the inspections is proved by the fact that the number of accidents has been considerably reduced.

It also gives me pleasure to record the close co-operation between the various managers with this Department and that it has been only necessary to institute prosecutions on few occasions.

**QUARRIES.**

18. The number of quarries worked during the period under review was 82 as compared with 75 in 1925. From inspections which have been made they have in most cases, been found to have been worked in a careful manner, but, with few exceptions, they are relatively unimportant.

**PETROLEUM ORDINANCE, CAP. 145.**

19. The premises in which the various products of petroleum are stored have been carefully inspected, and it is satisfactory to note that as a rule great care has been taken to ensure safety.

**ASPHALT INDUSTRY ORDINANCE, CAP. 147.**

20. No asphalt has been dug on the village lots at La Brea since 1914.

**APPENDICES.**

21. Appendix A shows the list of oil companies operating in the Colony during the year 1926.

22. In Appendix B will be found the daily average number of persons employed in oilfields and quarries and the quantity and value of minerals obtained during the period under review.

23. A comparative statement of the oil produced, refined and exported is shown in Appendix C.

24. Appendix D consists of a series of charts depicting in graphical form the progress made in various industries during the past few years.

25. Appendix E shows the relation of Mineral Exports to Agricultural Exports.

**STAFF.**

26. With the exception of the change mentioned in paragraph 16 above there has been no change in the personnel of the department.

I have the greatest pleasure in recording the very able and loyal assistance I have received from the members of the staff.

8th March, 1927.

A. P. CATHERALL,  
*Inspector of Mines.*

**APPENDIX A.**

No.	Companies	Nature of tenure of lands on which operations took place.	Disposal of oil.	Remarks.	
1	Trinidad Leaseholds, Ltd.	Crown lands under lease. Private lands	Fyzabad, Barrackpore, Guayaguayare. Barrackpore	Pumped to the Company's refinery at Pointe-a-Pierre, and there refined. Most of the production is exported in bulk.	The largest producing Company in the Colony. Large purchases of crude oil are made from other Companies and refined at Pointe-a-Pierre. The fields at Fyzabad and Barrackpore have been considerably extended. Drilling has been recommenced at Guayaguayare and preparations commenced for an extensive drilling programme. A Dubb's cracking plant has been erected at Pointe-a-Pierre.
2	United British Oilfields of Trinidad, Ltd.	Crown lands under lease Private Lands	Point Fortin, Morne L'Enfer Reserve, Los Bajos. Point Fortin	Sold to United British Refineries, Ltd.	Drilling has been continued at Point Fortin, Parry Lands, and a small production continues to be obtained from the field at Los Bajos.
3	Trinidad Central Oilfields, Ltd.	Crown lands under lease	Tabaquite, Mayaro, Guapo	Exported	Wells have been drilled at Tabaquite, Guapo and Rio Claro, production being obtained from the two former fields. The production from the latter was so small that the whole field was abandoned.
4	Trinidad Lake Petroleum Company, Ltd.	Private lands	Brighton	The bulk of the production is exported to the United States of America	Producing only.
5	Petroleum Development Company, Ltd.	Crown lands under lease	Morne L'Enfer Forest Reserve	Sold to Trinidad Lake Petroleum Company, Ltd.	Drilling on Crown oil rights near the Pitch Lake with very satisfactory results.
6	Apex (Trinidad) Oilfields, Ltd.	Crown lands under lease and private lands	Fyzabad	Sold to Trinidad Leaseholds, Ltd.	Second largest producing Company in the Colony. The production has been largely increased compared with former years.
7	Kern Trinidad Oilfields, Ltd.	Private lands Crown lands under lease	Guapo, Rousillac, La Brea	Sold to United British Refineries Ltd.	Development of Perseverance Estate, Guapo, continued during the whole of the year. Operations were continued on Crown Lands near Guapo. A satisfactory production was obtained.
8	General Petroleum Company of Trinidad, Ltd.	Private lands	Fyzabad, Penal and San Francique	Sold to United British Refineries Ltd.	Little work was done by this Company whose properties have now been acquired by the Trinidad Leaseholds, Ltd.
9	Trinidad Petroleum Development Company, Ltd.	Private lands Crown Lands	Naparima, Palo Seco, Cedros. Palo Seco, Cedros, Guapo	Sold to Trinidad Leaseholds, Ltd.	The Company has carried on drilling operations at Cedros, Palo Seco and Guapo. Production has been successfully obtained in the two former districts.
10	Trinidad Freeholds, Ltd.	Private lands	Fyzabad	Sold to Trinidad Leaseholds, Ltd.	During the course of the year the properties of the Company were acquired by the Trinidad Leaseholds, Ltd.
11	Petroleum Options, Ltd.	Private lands	Fyzabad	Sold to Trinidad Leaseholds, Ltd.	Produced from two wells.
12	Trinidad Friendship Petroleum Company, Ltd.	Private lands	Fyzabad	Sold to Trinidad Leaseholds, Ltd.	Drilled one well and produced from three.
13	British Controlled Oilfields, Ltd.	Crown lands under lease	Oropuche	Sold to Trinidad Leaseholds, Ltd.	Drilling operations have been suspended for some time past and small production has been obtained from existing wells.
14	Trinidad Oil Producing and Refining Company, Ltd.	Private lands	Fyzabad	Sold locally	Producing only.
15	Transvaal and Rhodesian Estates, Ltd.	Private lands	Pointe Ligoure	Barrelled and sold locally	Producing only.
16	Collie's Palo Seco Oilfield	Crown lands under lease	Palo Seco	Sold to United British Refineries, Ltd.	Lands formerly held by the Trinidad United Oilfields, Ltd. Two new wells sunk.
17	Trinidad Oilfields Operating Company, Ltd.	Private lands	Fyzabad, Brighton and San Francique	Sold to United British Refineries, Ltd.	This Company commenced a very active drilling programme towards the end of the year chiefly in new areas.

## APPENDIX B.

Daily average number of persons employed in Oilfields and Quarries and the quantity and value of minerals obtained during the year ended 31st December, 1926.

Minerals.	Daily average number of persons employed.		Total.	Quantity.	Approximate value. *
	Males.	Females.			
Oil .. .. .	4,157	61	4,218	4,971,471 Barrels.	£ 1,280,912
Asphalt .. .. .	1,270	16	1,286	237,300 Tons.	148,312
Private Quarries (Limestone, Gravel, &c.) .. .. .	342	137	497	104,860 Tons.	13,367
Government Quarries (Limestone, &c.) .. .. .	350	87	437	63,292 Tons.	9,609

\* N.B.—The values in this column are those returned by owners and managers, and represent the value at the place of production.

## APPENDIX C.

Comparative statement of oil produced, refined and exported year by year since the inception of the Petroleum Industry in the Colony.

Year.	Production in barrels.	Quantity of Crude Oil refined in barrels.	Quantity of Crude oil and refined oil exported in barrels.
1905 to 31st March, 1910 .. .. .	10,541	..	..
1910-1911 .. .. .	125,112	..	..
1911-1912 .. .. .	285,307	Previous to 1912 to 1913 37,842	219,582
1912-1913 .. .. .	503,616	9,484	122,734
1913-1914 .. .. .	643,516	35,061	387,719
1914-1915 .. .. .	1,050,112	41,413	348,351
9 months ended December, 1915 .. .. .	671,125	58,437	408,188
1916 .. .. .	927,877	107,822	975,142
1917 .. .. .	1,602,312	505,002	1,079,309
1918 .. .. .	2,082,068	2,106,369	1,305,407
1919 .. .. .	1,841,047	1,149,943	1,406,264
1920 .. .. .	2,083,027	1,395,487	1,034,907
1921 .. .. .	2,354,160	1,806,016	1,223,346
1922 .. .. .	2,444,752	1,820,018	1,615,740
1923 .. .. .	3,050,872	2,360,279	2,432,470
1924 .. .. .	4,056,612	3,433,902	3,224,529
1925 .. .. .	4,386,507	3,790,343	3,606,608
1926 .. .. .	4,971,471	3,786,876	3,988,308
	33,090,034	22,444,294	23,378,664

# TRINIDAD AND TOBAGO.

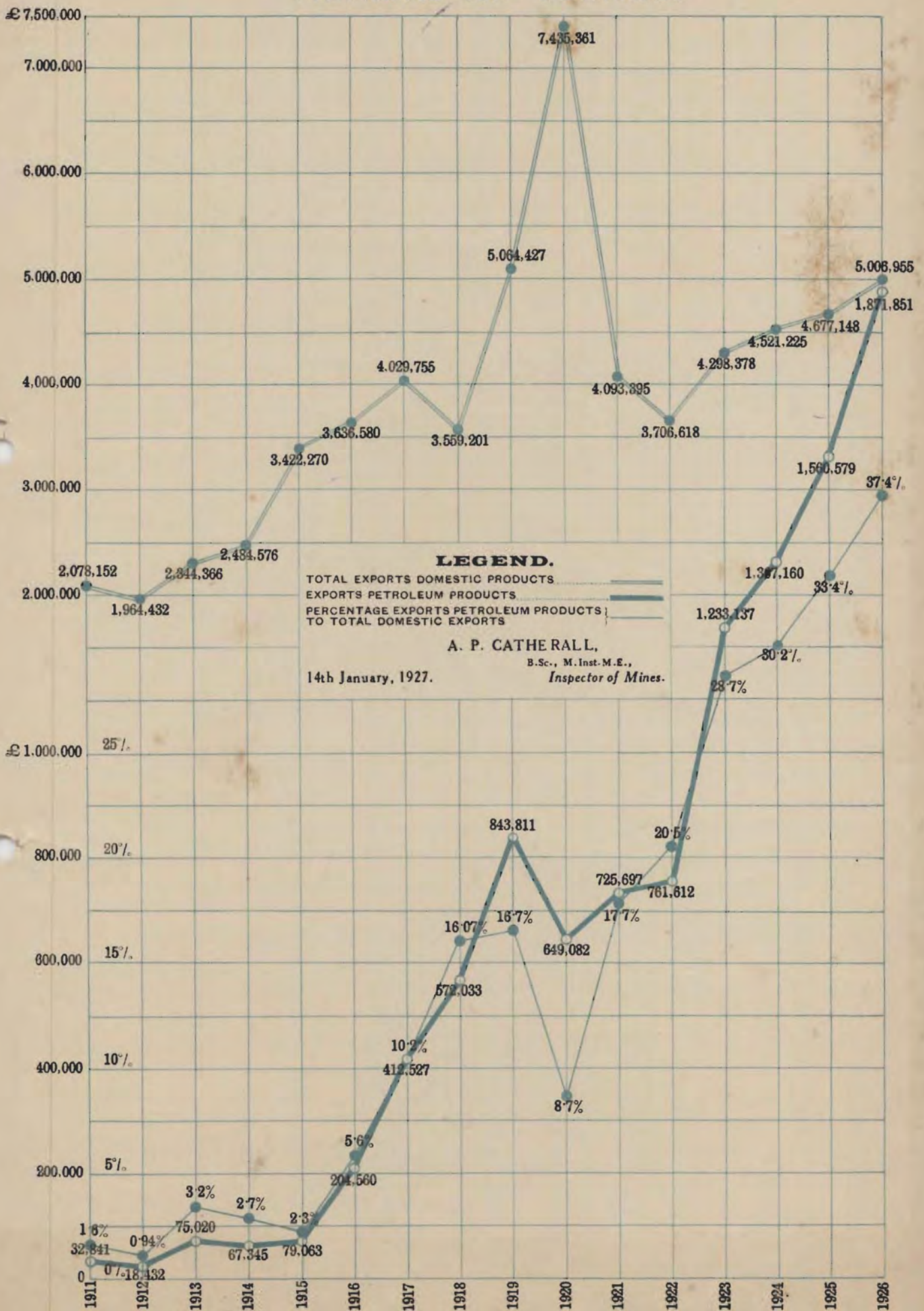
# EXPORTS OF LOCAL PRODUCE.





B

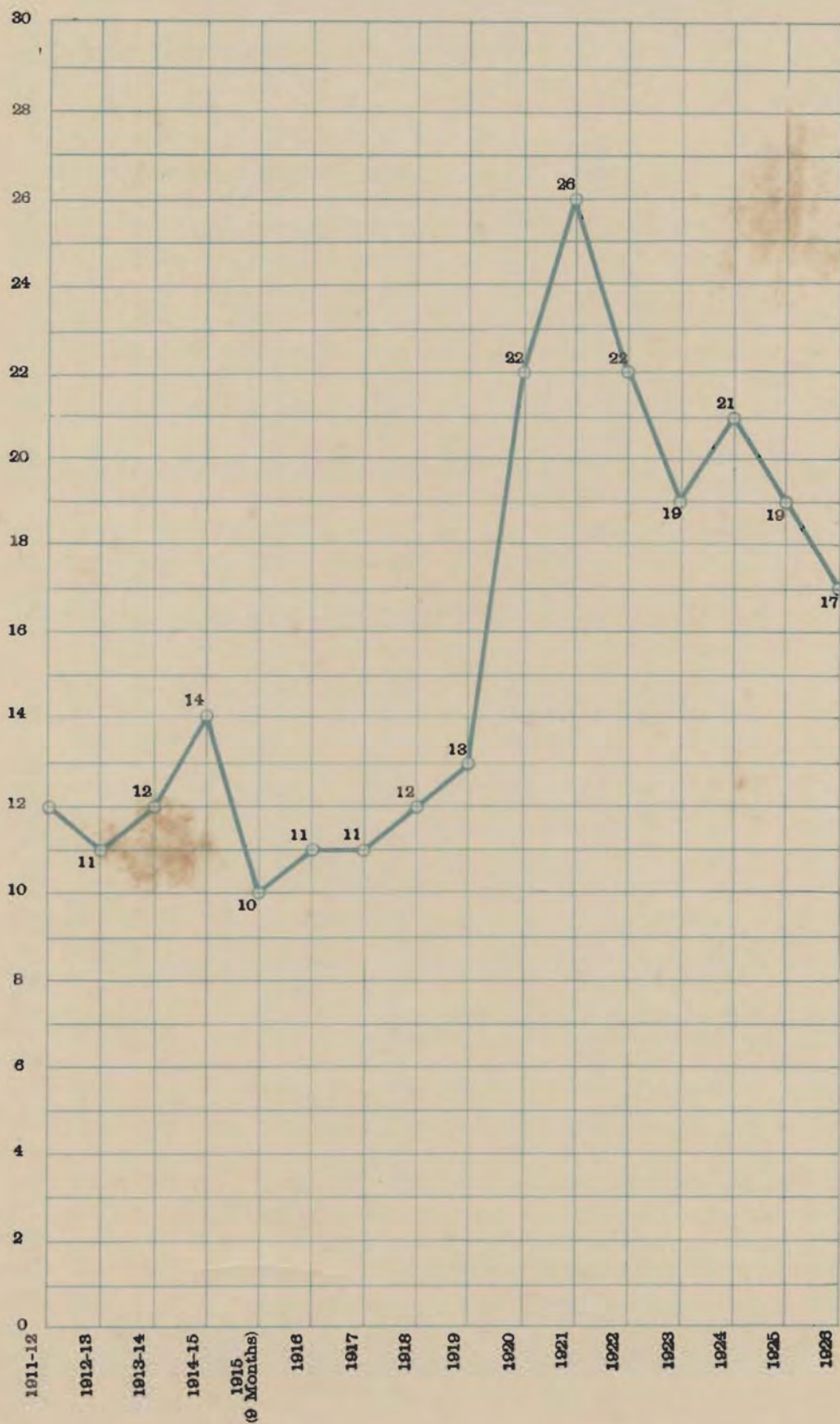
TRINIDAD AND TOBAGO.



APPENDIX-D.

C

Curve showing the number of Oil Companies that have operated annually in the Colony from 1st April, 1911, to 31st December, 1926.

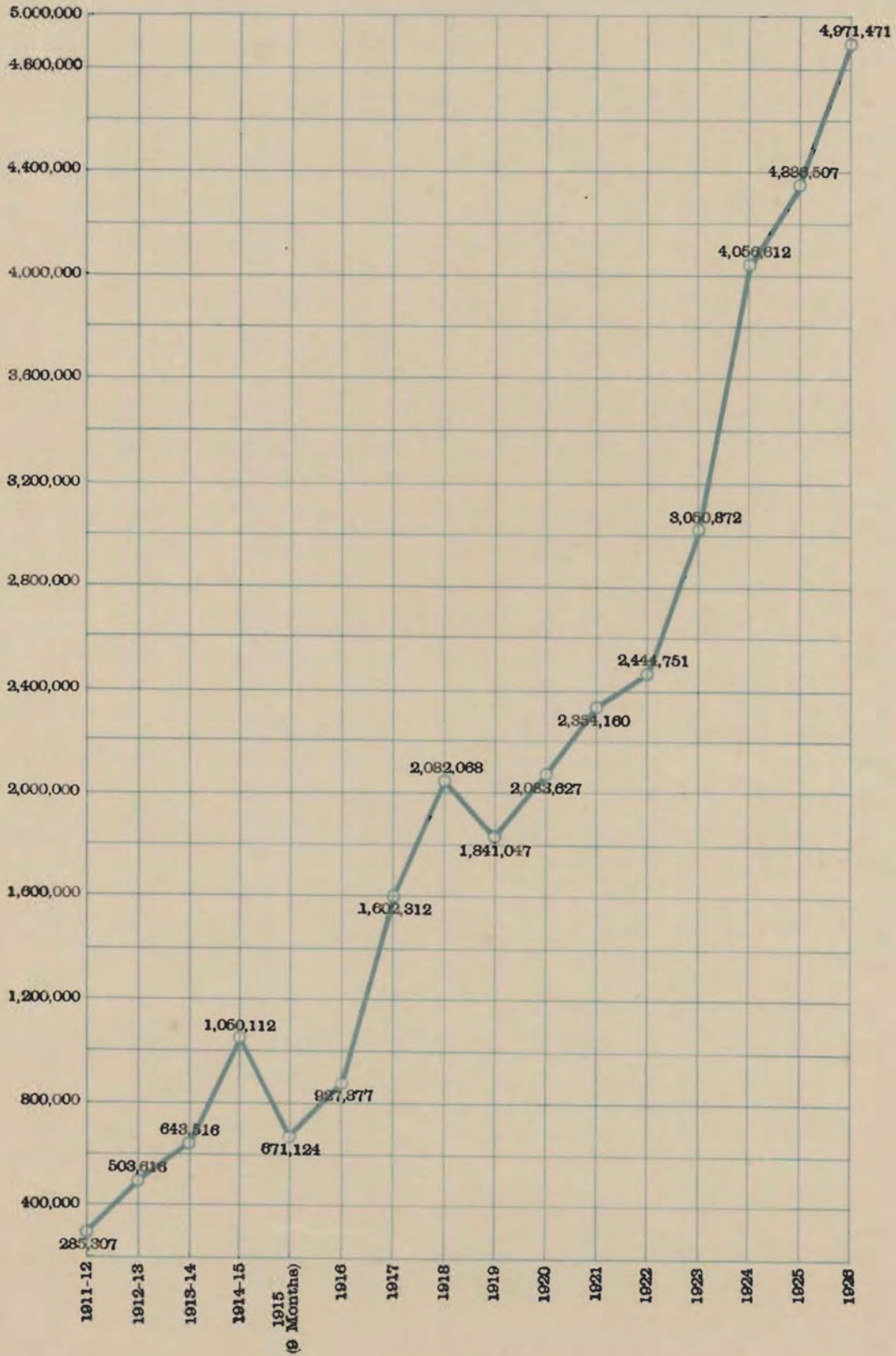


APPENDIX-D.

D

TOTAL ANNUAL PRODUCTION OF CRUDE OIL IN BARRELS.

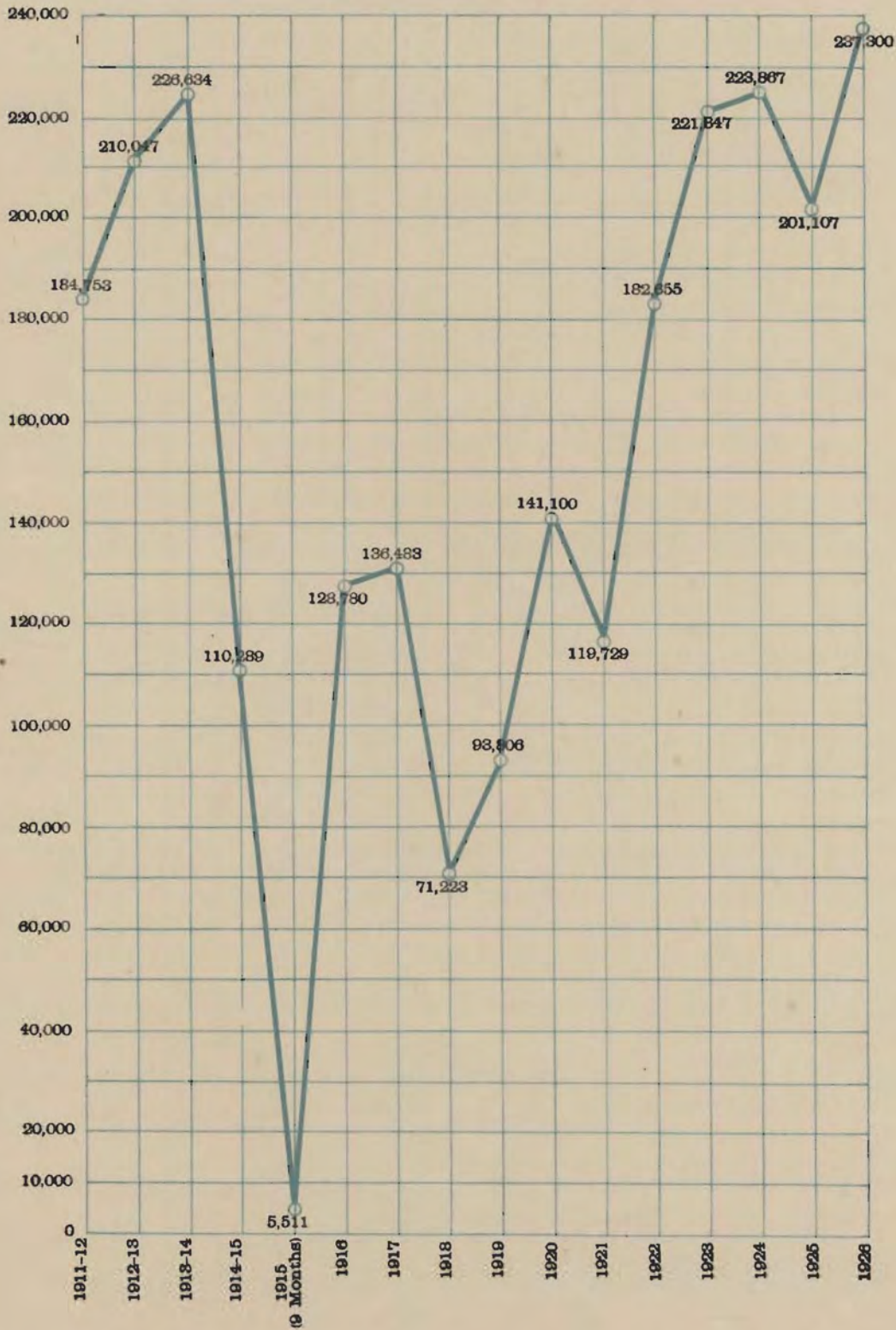
One barrel = 35 gallons.



APPENDIX-D.

E

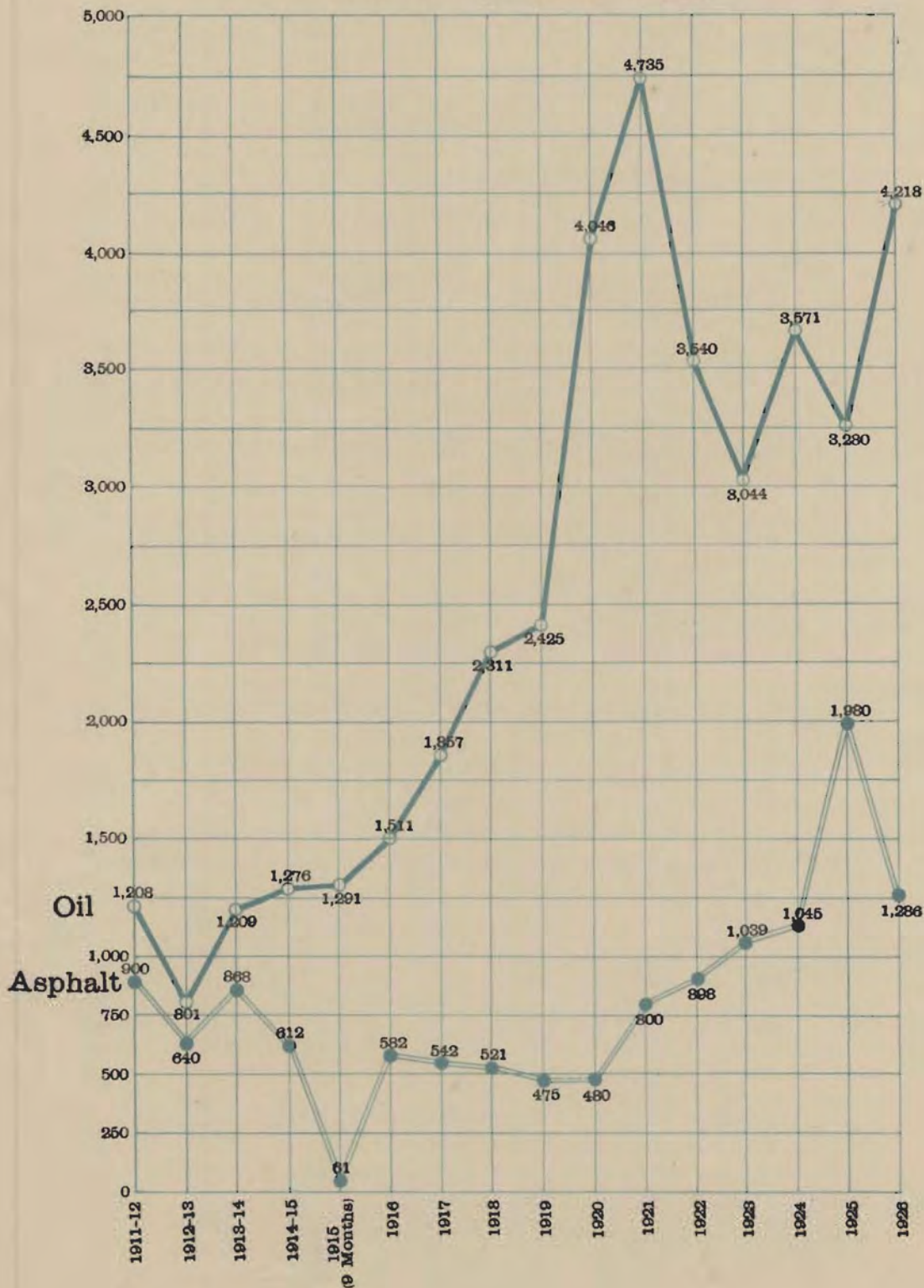
Curve showing yearly output of Asphalt from the Colony in Tons from 1st April, 1911, to 31st December, 1926.



APPENDIX-D.

F

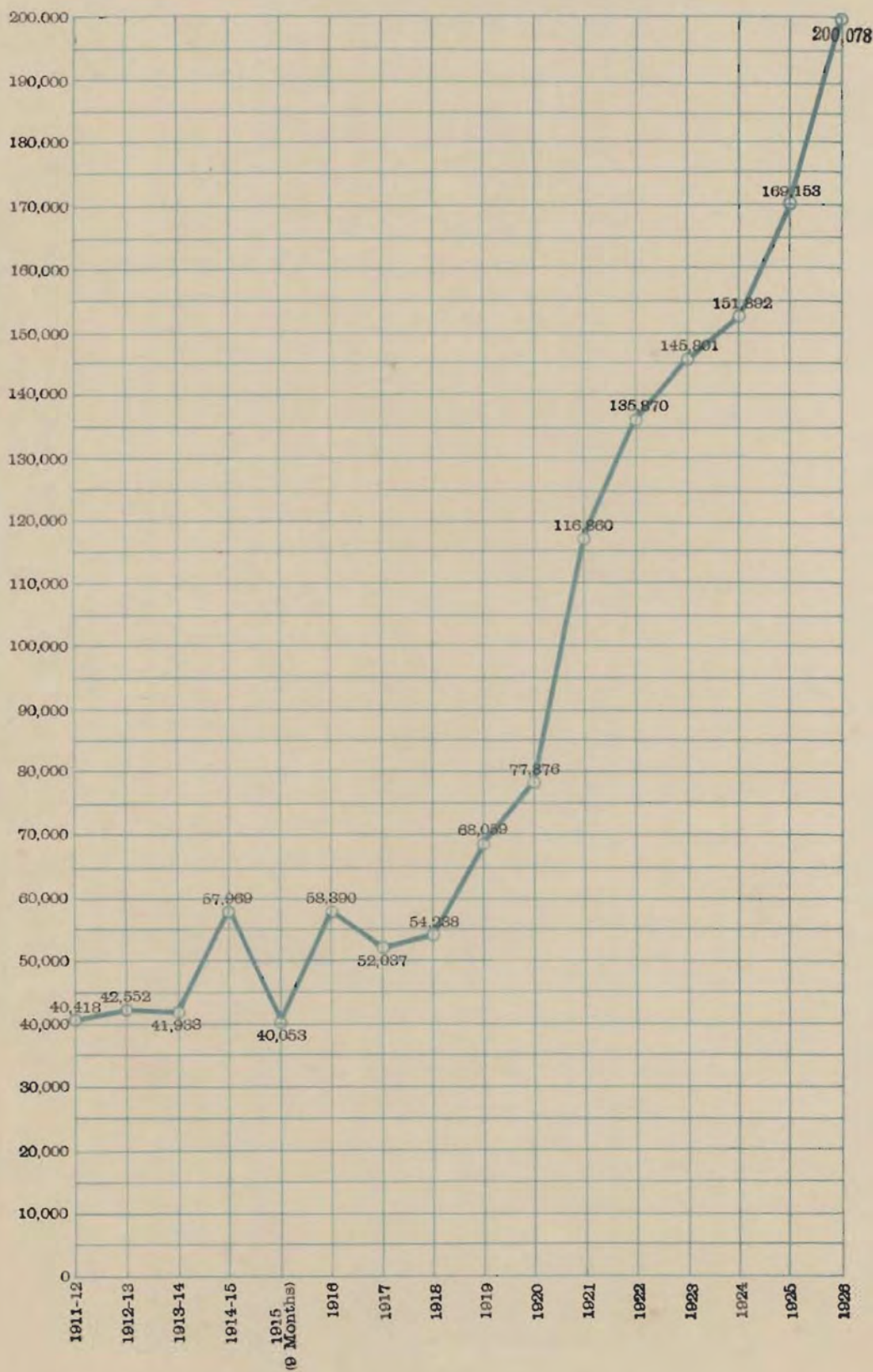
Curve showing comparison of daily average number of persons employed in the Oil and Asphalt Industries of the Colony from 1st April, 1911, to 31st December, 1926.



APPENDIX-D.

G

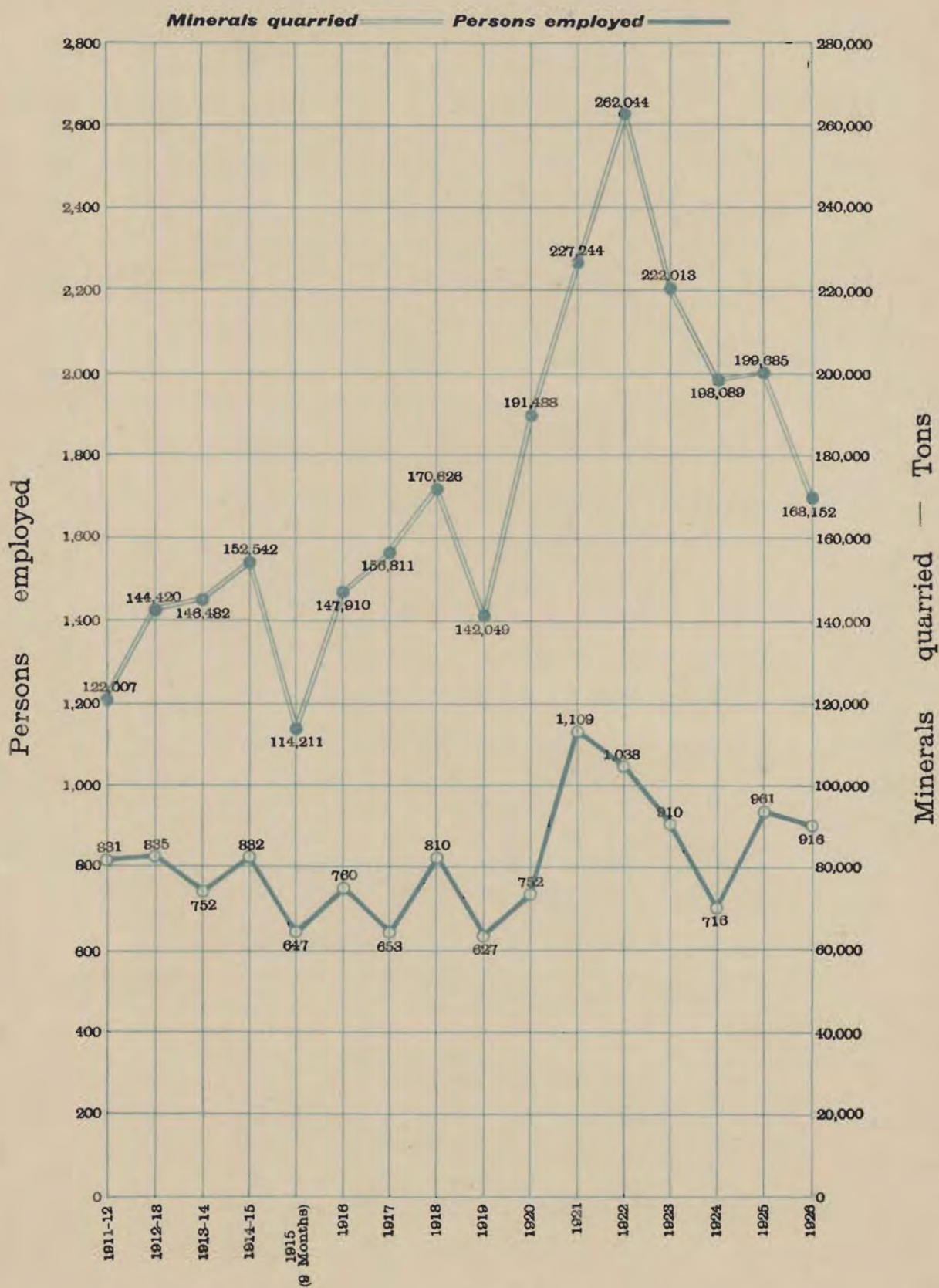
Curve showing yearly total number of feet drilled in the Colony from 1st April, 1911, to 31st December, 1926.



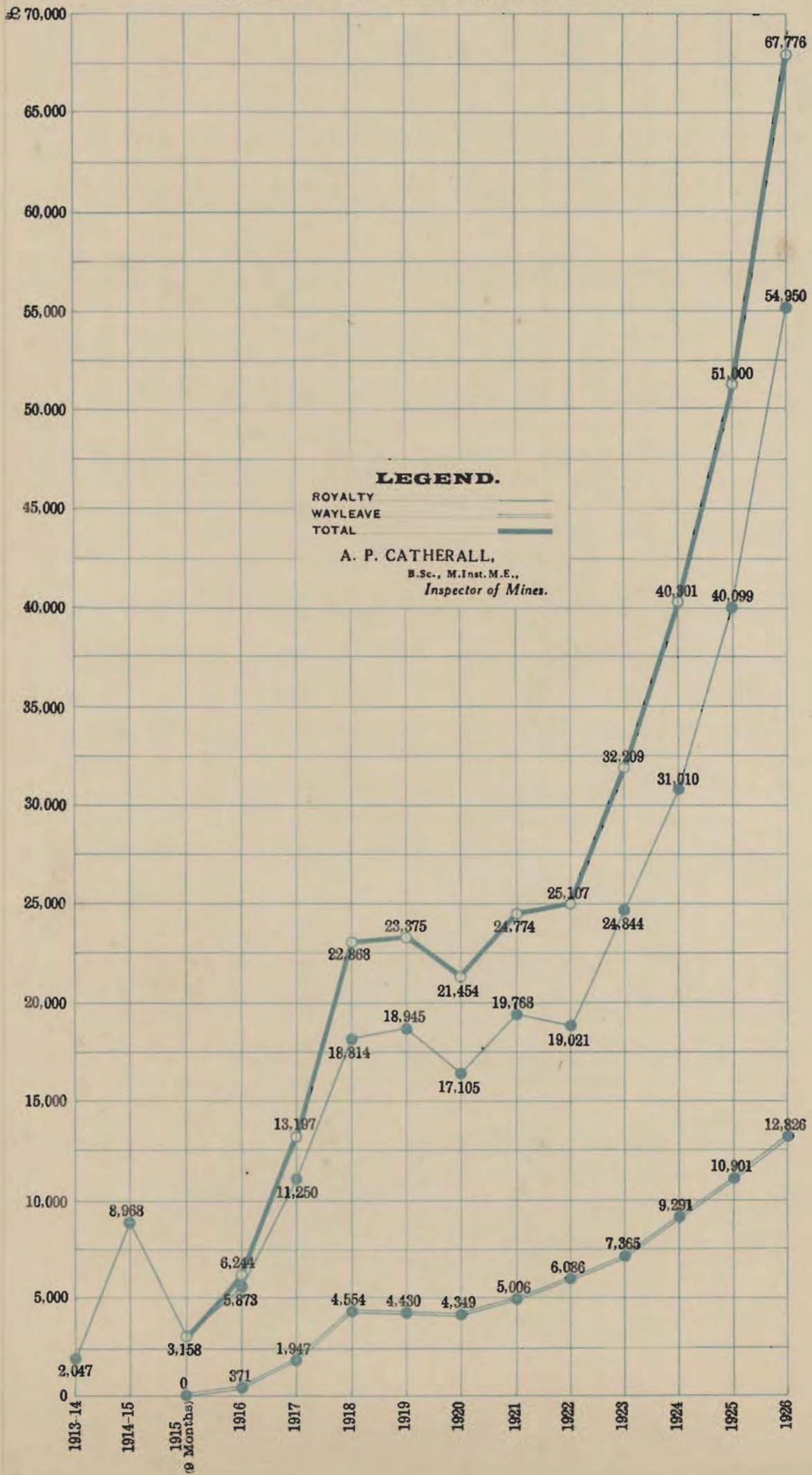
APPENDIX D.

H

Curve showing the yearly total quantity of Minerals quarried and a comparison of the daily average number of persons employed in Quarries in the Colony from 1st April, 1911, to 31st December, 1926.

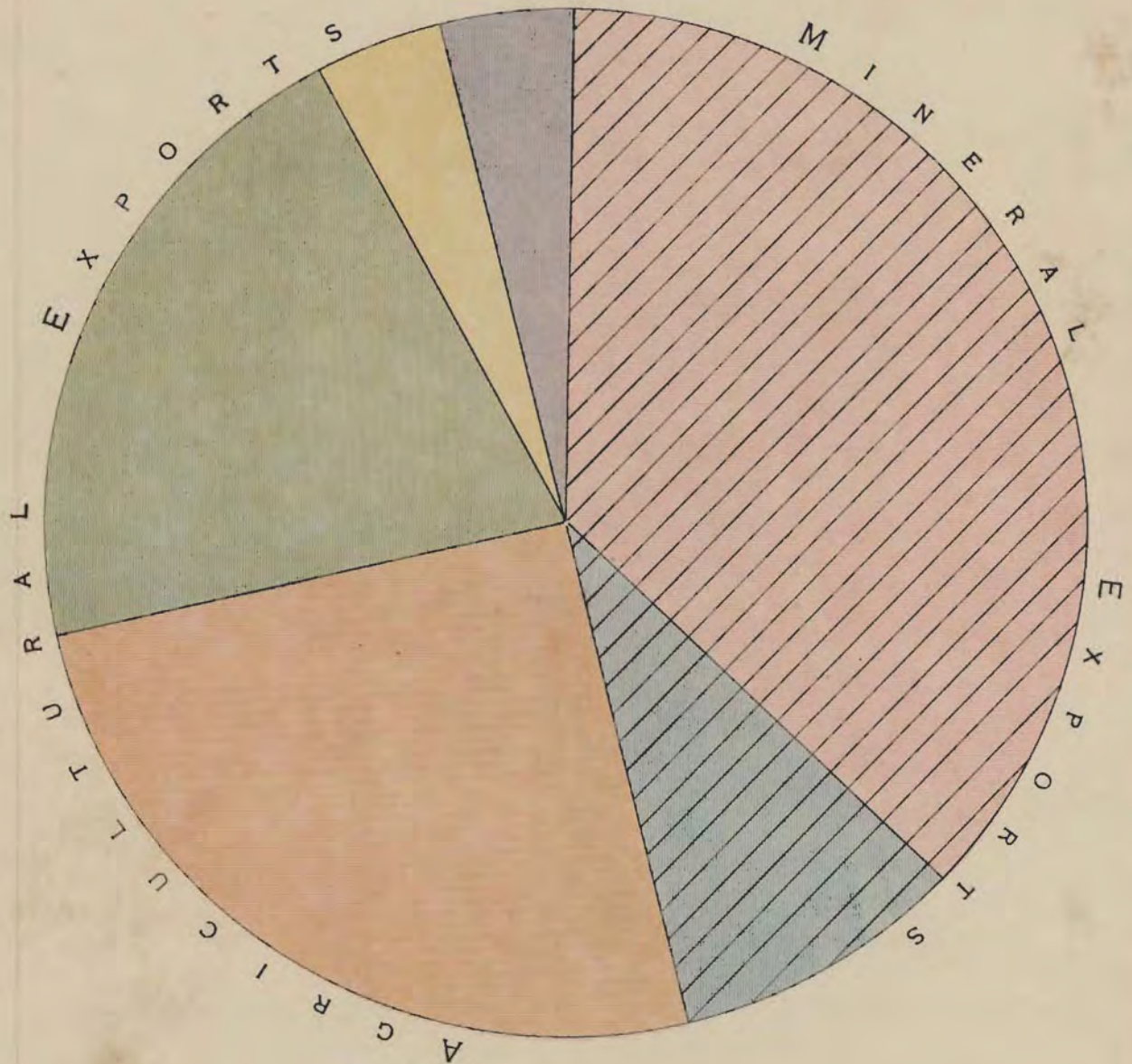


ROYALTY AND WAYLEAVE.





APPENDIX-E.



MINERAL EXPORTS

46.4%

Petroleum Products

37.4%



Asphalt

9.0%



AGRICULTURAL AND OTHER EXPORTS

58.6%

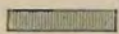
Cocoa

25.4%



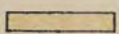
Sugar, Molasses, Rum

20.6%



Coconuts and Copra

3.8%



Other Exports

3.8%

