

TRINIDAD AND TOBAGO.

Council Paper No. 49 of 1930.

MINES DEPARTMENT.

Administration Report of the Inspector of Mines for
the year 1929.

*Laid before the Legislative Council on the
9th May, 1930.*

Previous Council Paper No. 42 of 1929.

Registered No. of Correspondence relating to the subject—M.P. No. 1768/1930.

TRINIDAD:
PRINTED BY THE GOVERNMENT PRINTER,
GOVERNMENT PRINTING OFFICE,
PORT-OF-SPAIN.

1930.

[Price 3/2.]

MINES DEPARTMENT.

Administration Report of the Inspector of Mines for
the year 1929.

Council Paper No. 49 of 1930.

M.P. No. 1768/1930.

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 1929.

2. The period under review has been marked by an increase in the production of petroleum of over 1,000,000 barrels more than that for 1928 and for the first time on record Trinidad has produced more oil than any other part of the British Empire. In 1928 the production from British India was 8,300,000 barrels whilst the Trinidad production was 7,684,450 barrels. In 1929 the production from British India was maintained at almost the same level namely 8,286,000 barrels, whilst the Colony's production was 8,715,652 barrels. As it is believed that the peak of production has been reached in British India whilst the production of the Colony is increasing steadily it is to be expected that in a few years to come the production from Trinidad will greatly exceed that from any other part of the Empire. It should also be noted that for the first time on record the value of mineral exports amounted to over 50 per cent. of the total domestic exports. During the period under review the value of petroleum products exported was more than double that of cocoa and nearly three times as much as those of the sugar industry. The value of the exports of the leading staples of the Colony and their relation to the total exports is shown below :

| | <i>Value.</i> | <i>Percentage of</i> |
|---|---------------|----------------------|
| | <i>£</i> | <i>total.</i> |
| Petroleum Products | 3,051,450 | 46.66 |
| Cocoa | 1,446,127 | 22.12 |
| Sugar, Molasses and Rum | 1,081,729 | 16.54 |
| Asphalt | 432,085 | 6.61 |
| Coconuts, Copra and Coconut Oil | 281,455 | 4.30 |
| Bitters | 87,570 | 1.34 |
| Coffee | 32,288 | 0.50 |
| Other exports not enumerated | 126,639 | 1.93 |
| | 6,539,343 | 100.00 |

The sugar industry is now threatened by economic conditions and cocoa by disease therefore, unless there is a marked recovery in these two industries, by far the largest proportion of the exports of the Colony in the near future will be from the mineral industries.

Reference to Appendix E "A" will show that the values of exports of agricultural products reached their peak in the boom year of 1920, the figures for sugar products and cocoa being £2,737,291 and £3,226,379 respectively. The magnitude of the petroleum industry at present may be judged from the fact that the value of exports of oil in 1929 exceeded that of sugar and its products in that year, and it is expected that the value of oil exports will soon exceed the value of cocoa exports in the same record year.

3. As will be seen from the succeeding paragraph there has been greatly increased activity in the development of the fields. In addition to this there has been considerable activity in other phases of the oil industry the chief of which has been the construction of a new refinery near La Brea by the West India Oil Company to deal with the production of the Trinidad Oil Fields Operating Company, Limited, and large additions to the refinery and storage depot of the Trinidad Leaseholds, Limited, at Pointe-a-Pierre. The latter Company has also completed the pipeline to link up its Guayaguayare field with its trunk pipeline at Barrackpore so that this Company now has a pipeline system extending across the width of the island.

4. The following table will show the number of feet drilled and the quantity of oil produced during 1929 as compared with the years 1927 and 1928 :—

| | YEAR ENDED 31ST DECEMBER, 1927. | | YEAR ENDED 31ST DECEMBER, 1928. | | YEAR ENDED 31ST DECEMBER, 1929. | |
|---------------------|------------------------------------|---------------------------------------|------------------------------------|---------------------------------------|------------------------------------|---------------------------------------|
| | <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 | 119,284 | 2,362,150 | 130,630 | 4,141,816 | 211,024 | 4,621,567 |
| Private Lands | 121,440 | 3,018,344 | 114,010 | 3,542,634 | 96,310 | 4,094,085 |
| | <u>240,724</u> | <u>5,380,464</u> | <u>244,640</u> | <u>7,684,450</u> | <u>307,334</u> | <u>8,715,652</u> |

5. The total number of wells drilled in the Colony to 31st December, 1929, is 1,610 of which 1,009 are on Crown lands. During the year under review 158 new wells were drilled of which 111 were on Crown lands and 48 on private lands, an increase of 19 compared with 1928. In 115 of these wells oil was struck.

6. The number of companies engaged in the winning of oil at the close of the year was 15 ; the same as the previous year.

7. ROYALTY.—The royalty collected in respect of oil won from Crown lands showed an increase of over £20,000 as compared with the previous year ; the figures being £74,937 5s. 1½d. and £54,573 6s. 11d. respectively.

8. WAYLEAVES.—Whilst the revenue derived from wayleaves on oil pumped along public roads of the Colony has shown a large increase that from oil pumped along the Railway has dwindled to an almost negligible amount owing to the fact that the Trinidad Leaseholds, Limited main trunk pipeline is now not laid along the Trinidad Government Railway. The revenue for the years 1928 and 1929 is as follows :—

| | <i>Trinidad Government Railway.</i> | | | <i>Roads.</i> | | |
|------------|-------------------------------------|----|----|---------------|----|----|
| | £ | s. | d. | £ | s. | d. |
| 1928 | 7,453 | 11 | 8 | 5,157 | 11 | 10 |
| 1929 | 745 | 4 | 3 | 8,138 | 15 | 1½ |

9. FEES.—Fees charged for crossing the foreshore, the Railway and the public roads amounted to £155.

10. Three leases and five licences were issued during the year as follows :—

Mining Lease to Trinidad Central Oilfields, Limited over 6,996 acres of Crown lands—Reg. No. 2049 of 1929.

Mining Lease to Trinidad Leaseholds, Limited over 44 acres the surface of which was alienated subsequent to 30th January, 1902—Reg. No. 1154 of 1929.

Mining Lease to Trinidad Petroleum Development Company, Limited over 17,269 acres of Crown Lands—Reg. No. 2890 of 1929.

Prospecting Licence to Trinidad Leaseholds, Limited over 7,634 acres of Crown land—Reg. No. 390 of 1929.

Prospecting Licence to Trinidad Petroleum Development Company, Limited over 50 acres the surface of which was alienated subsequent to 30th January, 1902—Reg. No. 1186 of 1929.

Prospecting Licence to Trinidad Petroleum Development Company, Limited over 139 acres the surface of which was alienated subsequent to 30th January, 1902—Reg. No. 3916 of 1929.

Prospecting Licence to Venezuelan Consolidated Oilfields, Limited over 664 acres the surface of which was alienated subsequent to 30th January, 1902—Reg. No. 1742 of 1929.

Exploration Licence to H. B. Phillips over 420 acres of Crown land—Reg. No. 1226 of 1929.

11. The various oil companies have regularly submitted to the Department the returns required to be furnished by them. After being carefully checked these have been filed with the records of the Department.

12. A large number of inspections have been carried out by the officers of this Department in connection with the various operations taking place on the fields, and I have much pleasure in reporting that the managers readily co-operate with this department in endeavouring to carry out the provisions of the ordinances and regulations.

SAN FERNANDO BRANCH OF THE DEPARTMENT.

13. Until 31st May, 1929, this branch of the Department was carried on by voluntary subscriptions from the oil companies as has been done for the past six years. From 1st June, however, this branch was put on a legal footing under Ordinance No. 8 of 1929 in accordance with Clause 3 (1) of that Ordinance which read as follows:—

“For the better conservation of the oil resources of the Colony there shall be established and maintained at San Fernando a branch of the Mines Department to be called the Petroleum Office.”

This office is now called the Petroleum Office and the officer in charge the Petroleum Technologist.

As from 1st June, Messrs. C. A. P. Southwell, M.C., B.Sc., Oilfield Water Inspector and H. W. Reid, B.Sc., Deputy Inspector of Mines were appointed Petroleum Technologist and Assistant Petroleum Technologist respectively.

A report on the working of this branch by the Acting Petroleum Technologist is enclosed at Appendix B.

PREVENTION OF ACCIDENTS ORDINANCE, CAP. 157.

14. During the year 117 factories in Trinidad and 3 in Tobago were worked. Regular visits were paid to these factories and I am pleased to be able to place on record that the provisions of the Ordinance were carefully observed.

QUARRIES.

15. With few exceptions the quarries of the Colony are relatively unimportant and their operations are on a small scale. They have been inspected and in most cases were found to have been worked in a careful manner. The total number worked during the year was 74 as compared with 76 in 1928.

PETROLEUM ORDINANCE, CAP. 145.

16. In all, 445 licences to store and sell petroleum products were issued during the year.

ASPHALT INDUSTRY ORDINANCE, CAP. 147.

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

APPENDICES.

18. Appendix A shows the list of oil companies operating in the Colony during the year 1929.

19. Appendix B—Report on the working of the Petroleum Office.

20. In Appendix C 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 shown in Appendix D.

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

23. Appendix F shows the relation of Mineral Exports to Agricultural Exports.

STAFF.

24. Miss M. E. Perry was appointed to the post of Assistant Clerk and Typist in the Petroleum Office as from 19th August, 1929.

Mr. C. A. P. Southwell, M.C., B.Sc., Petroleum Technologist, resigned his post and left the Colony on 13th October.

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

A. P. CATHERALL,
Inspector of Mines.

7th April, 1930.

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 Fyzabad and Barrackpore | Pumped to the Company's refinery at Pointe-a-Pierre, and there refined. Most of the production is exported in bulk | The most important Company in the Island. The fields in the Fyzabad area have been actively developed and considerable increase in production has resulted. The development of the Barrackpore and Guayaguayare fields has been much the same as in 1928, the production from each field having slightly increased. Considerable additions to the refinery and storage depot at Pointe-a-Pierre have been made during the year. The bulk of the production of the Colony is refined by this Company. |
| 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 the United British Refineries, Ltd. | There has been a large increase in production from the Parry Lands field of this Company, but the production from the Point Fortin and Los Bajos fields has declined. |
| 3 | Trinidad Central Oilfields, Ltd. .. | Crown lands under lease Tabaquite, Guapo and Lizard Springs | Production from Tabaquite refined, sold locally and exported; that from Cruse area sold to Trinidad Leaseholds, Ltd. | The major portion of the production has been obtained from the Company's Cruse field at Guapo. A considerable amount of drilling has been done on the Lizard Spring field in the Guayaguayare district but up to the present the production has not been great. The production from the old field at Tabaquite has slightly declined. |
| 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 and La Brea | Sold to Trinidad Lake Petroleum Company, Ltd. | Drilling on the Crown oil rights in the La Brea district was continued during the year and a satisfactory production was obtained. |
| 6 | Apex (Trinidad) Oilfields, Ltd. .. | Crown lands under lease and prospecting licence and Private lands Fyzabad and Siparia.. | Sold to Trinidad Leaseholds, Ltd. | This Company has continued a very active programme during the year with the result that its production is now the largest in the Colony. |
| 7 | Kern Trinidad Oilfields, Ltd. .. | Crown lands under lease Private lands .. La Brea Guapo and Rousillac | Sold to United British Refineries, Ltd. | Development of the properties in the Guapo district continued during the whole of the year and an increased production resulted. |

APPENDIX A.—Continued.

| No. | Companies. | Nature of tenure of lands on which operations took place. | Disposal of Oil. | Remarks. |
|-----|--|--|--|--|
| 8 | New (Oropuche) Trinidad Oilfields, Ltd. | Private lands .. Fyzabad and San Francique | Sold to Trinidad Leaseholds, Ltd. | A subsidiary of the Trinidad Leaseholds, Ltd. A relatively small amount of drilling was done and a satisfactory production obtained. |
| 9 | Trinidad Petroleum Development Company, Ltd. | Private lands .. Naparima, Palo Seco and Fyzabad Crown lands under lease and prospecting licence .. Palo Seco and Fyzabad | The bulk of this Company's production is exported in the crude state, the remainder of it is sold to the United British Refineries, Ltd. | Drilling during the year was confined to the Palo Seco district where a very active development programme has been undertaken, the production has been very largely increased compared with last year. A small production has also been obtained from wells in the Fyzabad and Naparima districts. |
| 10 | Petroleum Options, Ltd. | Private lands .. Fyzabad .. | Exported by Trinidad Oil Fields Operating Company, Ltd. | The properties of this Company have been leased to the Trinidad Oil Fields Operating Company, Ltd., and are being developed by the latter Company. |
| 11 | Venezuelan Consolidated Oilfields, Ltd. | Private lands .. San Francique Crown lands under prospecting licence .. San Francique and Palo Seco | Sold to Trinidad Leaseholds, Ltd., and Trinidad Petroleum Development Company, Ltd. | Drilling has continued in the Fyzabad district and a moderate production has been obtained. A prospecting licence over alienated lands in the Palo Seco district has been granted to this Company and towards the middle of the year an active drilling programme was commenced. A satisfactory production was obtained and at the close of the year this Company was fourth in order of production. |
| 12 | British Controlled Oilfields, Ltd; | .. Crown lands under lease .. Oropuche .. | Sold to United British Refineries, Ltd. | Drilling operations have been suspended since 1926 and towards the close of the year notice to terminate the lease was received from the Company. |
| 13 | Palo Seco Oilfield (C. C. Stollmeyer) .. | .. Crown lands under lease .. Palo Seco .. | Sold locally | Drilling continued during the period under review and a small production was obtained. |
| 14 | Trinidad Oil Fields Operating Company, Ltd. | Private lands .. Fyzabad, San Francique, Palo Seco and Aripere Crown lands .. Pointe D'Or | Sold to West India Oil Company and Trinidad Leaseholds, Ltd. | This Company, the share capital of which is owned by the West India Oil Company, has continued drilling on its various properties and a fair production has been obtained. A refinery to deal with production from this Company was constructed during the year by the West India Oil Company. |
| 15 | Fyzabad Dome Oilfields | .. Private lands .. Fyzabad .. | Sold to Trinidad Leaseholds, Ltd. | Drilling was continued during the year and a good production obtained from the small plot of land on which the operations were undertaken. |

APPENDIX B.

HONOURABLE INSPECTOR OF MINES,

The outstanding features of the year were the increased footage and production, these figures being given in the General Report.

A considerable amount of development was undertaken with the result that 158 new wells were started during the period under review. Active drilling programmes were carried out on most fields, especially on the north of the Palo Seco structure. The latter resulted in a greatly increased production but the results obtained further to the west were disappointing. Two deep sands were penetrated on the south flank of the Parry Lands structure and up to the end of the year these were being exploited in other wells. Exploration work was started on the Pointe-d'Or Estate, near La Brea, and resulted in a small production. In one well Sulphuretted Hydrogen Gas was encountered, and, while this well was being placed on production one of the crew was fatally overcome by the gas.

Fyzabad continued to give the greatest production, 67.96 per cent. of the total being obtained by the Companies operating in this area.

The features of operating technique most deserving of note were:—

- (1) The use of Barytes-laden mud fluid for overcoming high gas pressures.
- (2) The consequent increase in the amount of coring carried out in high pressure wells.
- (3) The introduction of better drilling equipment, and, in some cases, better control fittings.

Frequent inspections of drilling and production machinery were carried out in conjunction with the routine field duties of the Office, such as witnessing Water Shut Off Tests and Shooting operations. All Companies have shown the greatest willingness to co-operate with this Office both as regards conservation problems and in carrying out safety measures for the better protection of the workers. In this connection it should be mentioned that there was a marked improvement in the devices employed to further safety, more strict attention being paid to machinery guards and to the type and quality of fittings for well-head controls. The latter was necessary in some fields owing to the fact that much higher pressures were encountered than had hitherto obtained.

During the period under review there were three fatal accidents. No serious oilfield fires occurred.

On the 1st June, the title of the Office of Oilfield Water Inspector was changed* to Petroleum Technologist upon the establishment of the Petroleum Office under Ordinance No. 8 of 1929. Besides the conservation work which had previously been undertaken, the supervision of safety measures at all wells was included in the duties of the office.

In August, Miss M. E. Perry was appointed to be Typist.

In October, Mr. C. A. P. Southwell, M.C., B.Sc., resigned his post as Petroleum Technologist and left the Colony.

H. W. REID,
Acting Petroleum Technologist.

31st March, 1930.

APPENDIX C.

Daily average number of persons employed in Oilfields and Quarries and the quantity and value of minerals obtained during the year ended 31st December, 1929.

| Minerals. | Daily average number of persons employed | | Total. | Quantity. | Approximate Value*. |
|---|--|----------|--------|-------------------|---------------------|
| | Males. | Females. | | | |
| Oil | 5,307 | 62 | 5,369 | 8,715,652 Barrels | £1,686,390 |
| Asphalt | 879 | 9 | 888 | 219,603 Tons | 137,252 |
| Private Quarries (Limestone, Gravel, &c.) | 304 | 103 | 407 | 156,151 Tons | 17,417 |
| Government Quarries (Limestone, &c.) | 311 | 102 | 413 | 85,231 Tons | 13,489 |

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

APPENDIX D.

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

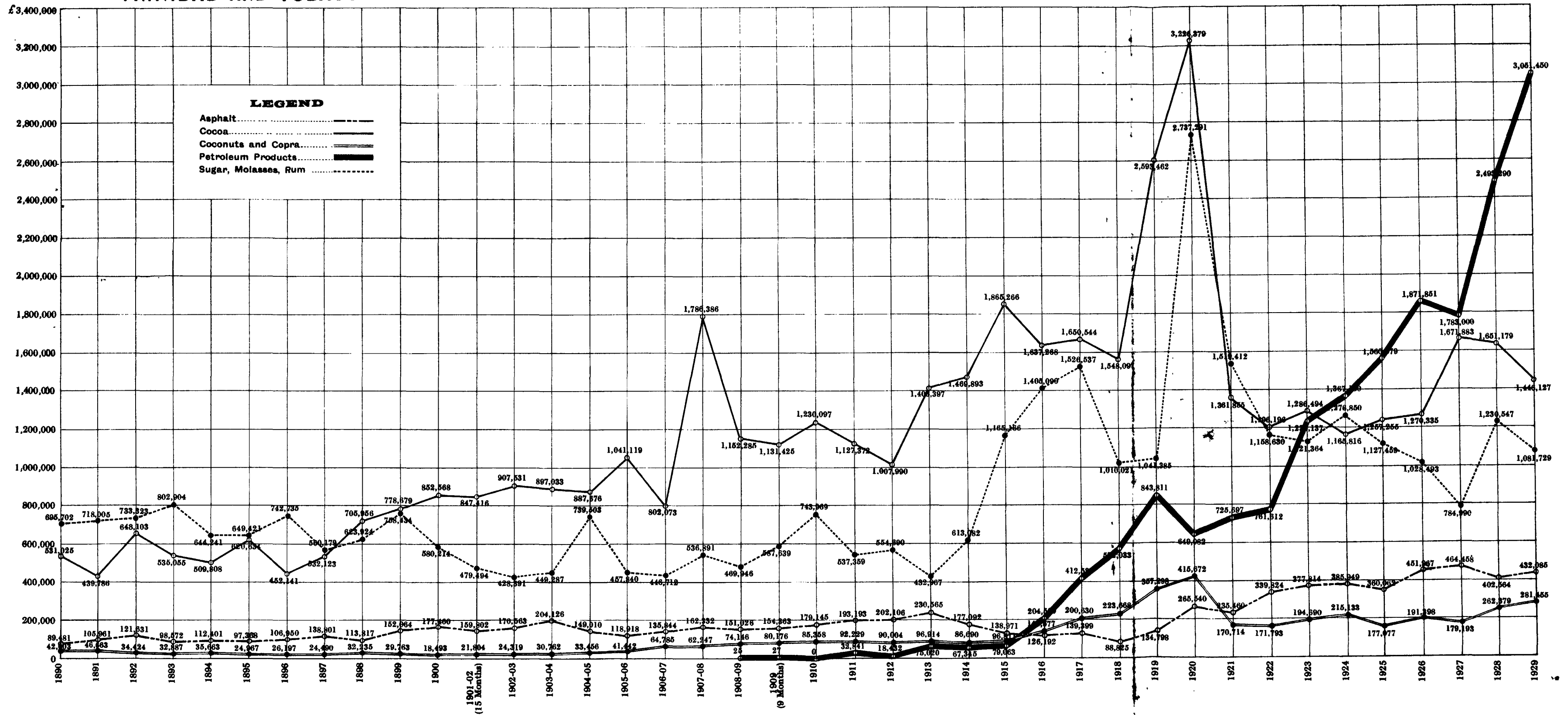
| | Production in barrels. | Quantity of Crude Oil refined in barrels. | Quantity of Crude Oil and Refined Oil exported in barrels. |
|-------------------------------|---------------------------|--|---|
| 1905 to 31st March, 1910 .. | 10,541 | — | — |
| 1910-1911 | 225,112 | — | — |
| 1911-1912 | 285,307 | Previous to 1912-1913 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 | 1,079,369 |
| 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 |
| 1926 | 4,971,471 | 3,786,876 | 3,988,308 |
| 1927 | 5,380,464 | 4,796,223 | 4,456,770 |
| 1928 | 7,684,450 | 6,725,383 | 6,361,675 |
| 1929 | 8,715,652 | 7,642,726 | 8,243,023 |
| | 54,870,600 | 41,608,626 | 42,440,132 |

APPENDIX E.

A

EXPORT OF LOCAL PRODUCE

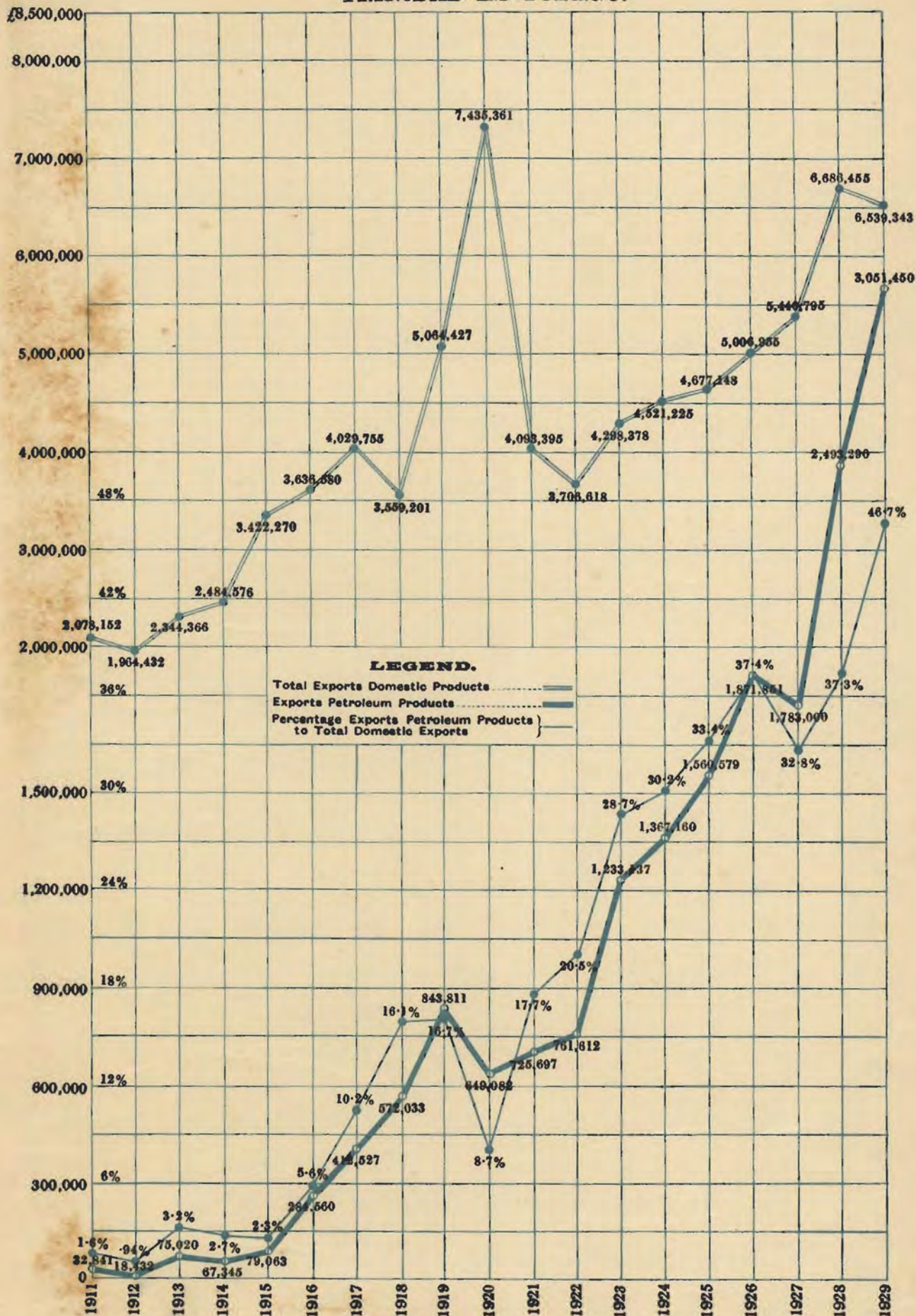
TRINIDAD AND TOBAGO.



APPENDIX E.

B

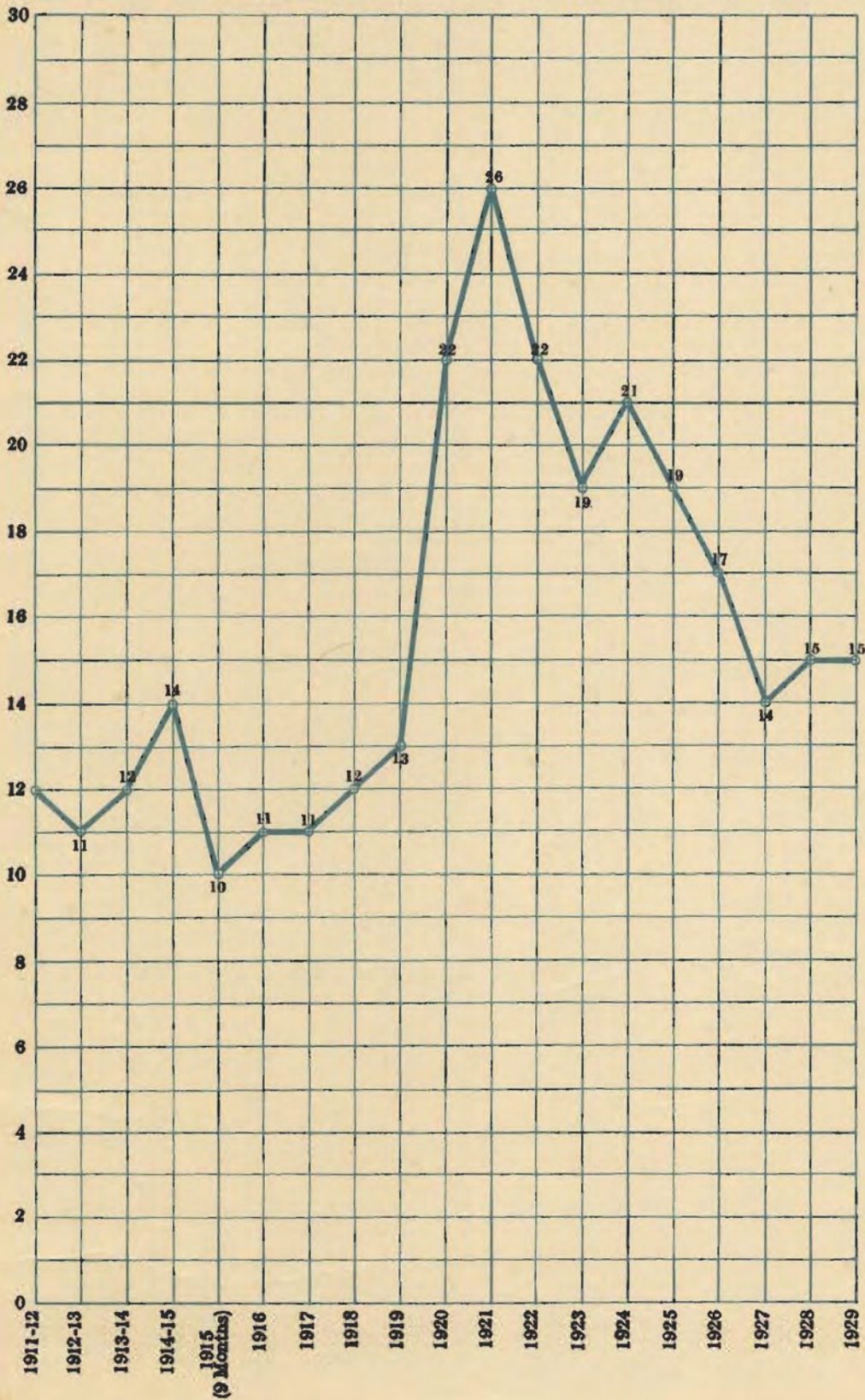
TRINIDAD AND TOBAGO.



APPENDIX E.

C

Curve showing the number of Oil Companies that have operated annually in the Colony from 1st April, 1911 to 31st December, 1929.

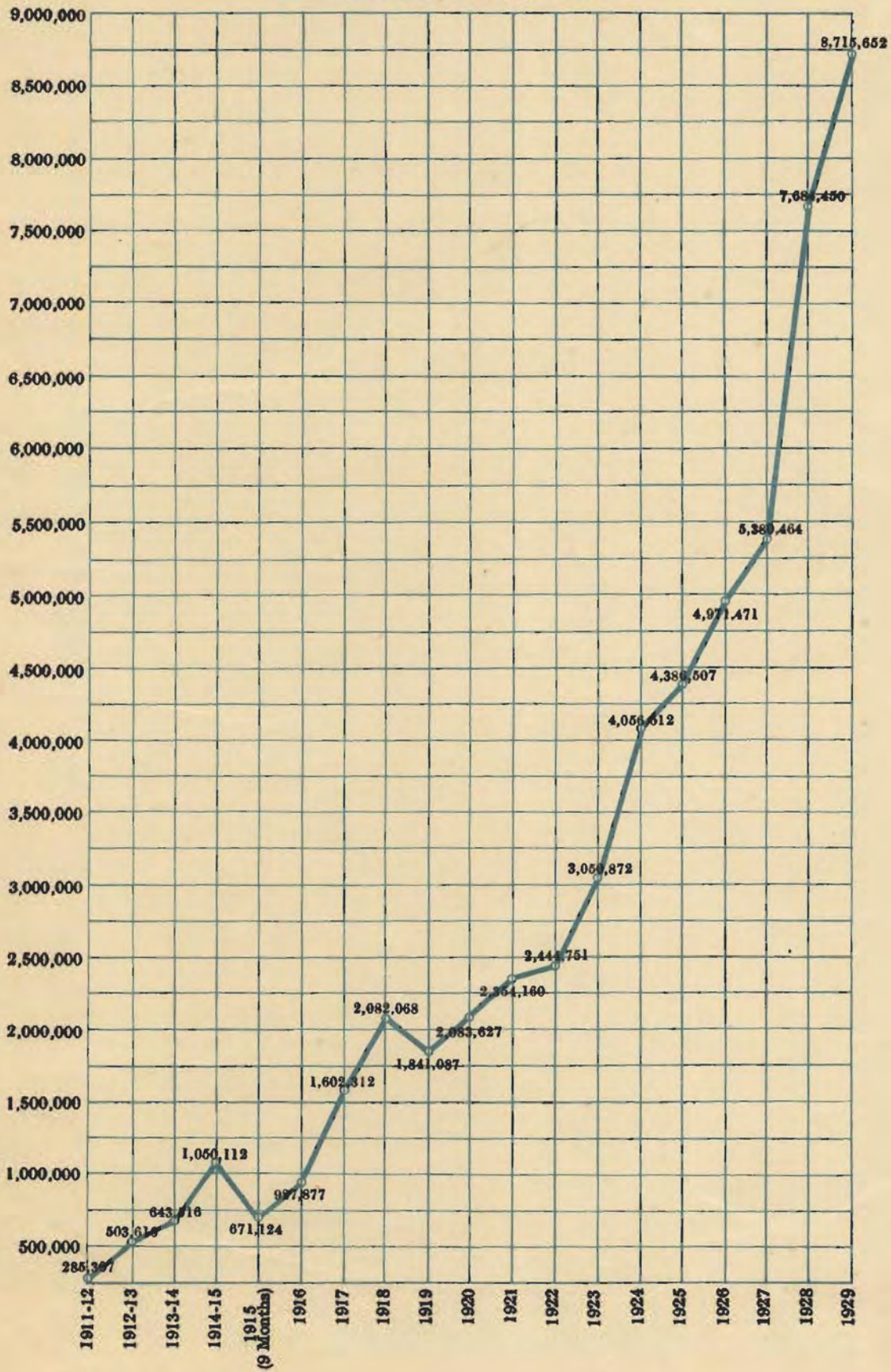


APPENDIX E.

D

Total Annual Production of Crude Oil in Barrels.

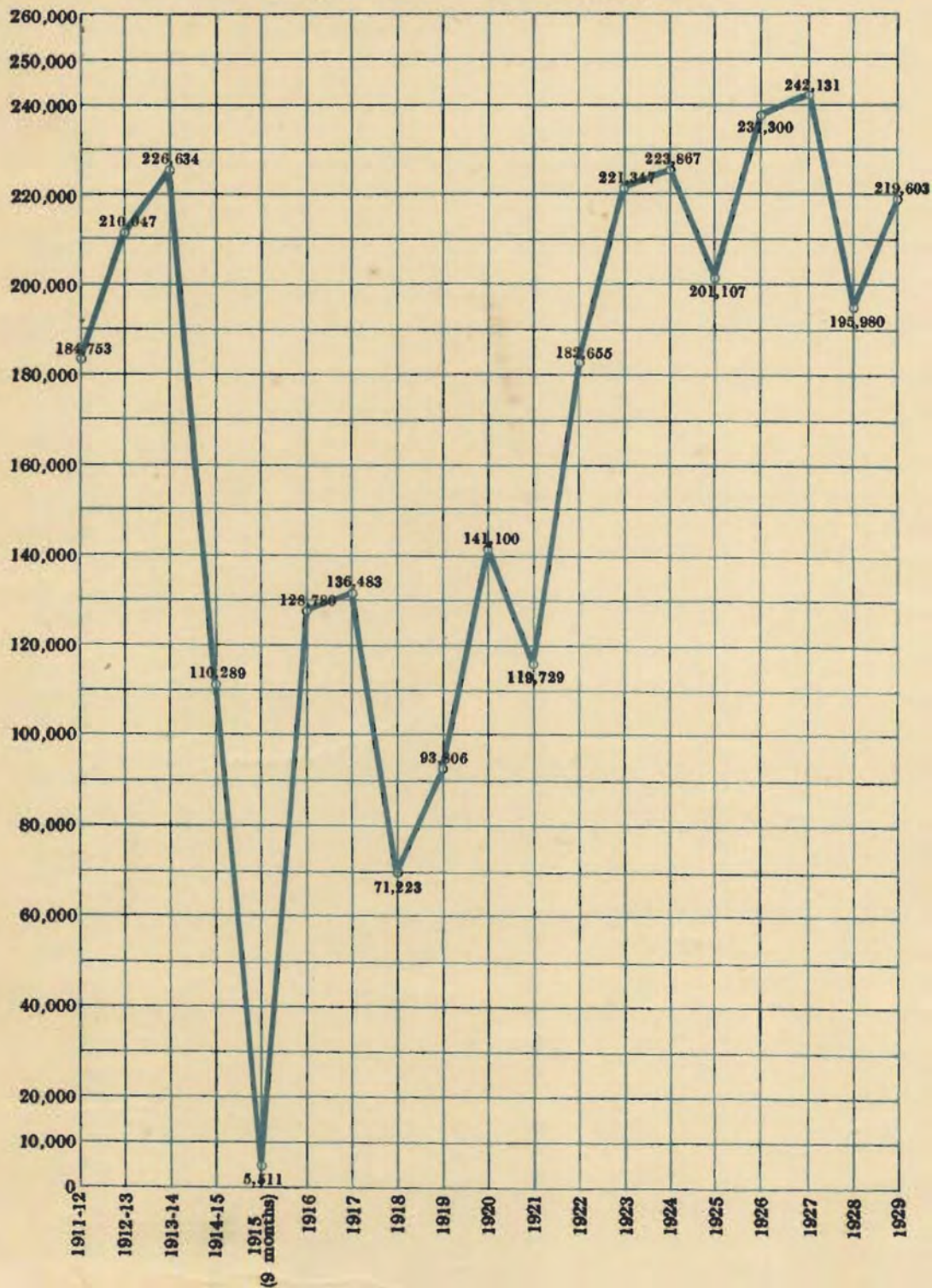
One barrel = 35 gallons.



APPENDIX E.

E

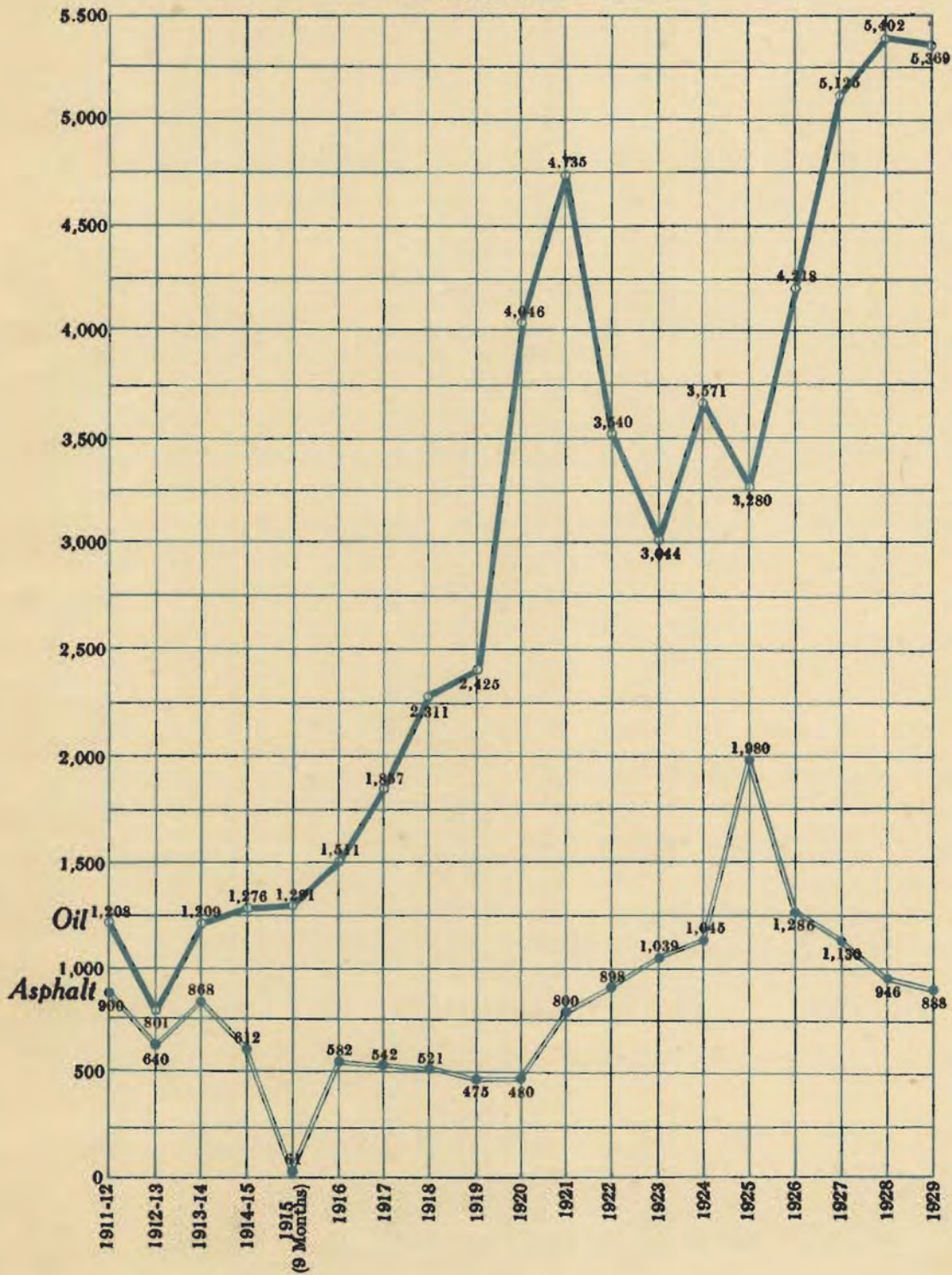
Curve showing yearly output of Asphalt from the Colony in Tons, from 1st April 1911 to 31st December, 1929.



APPENDIX E.

F

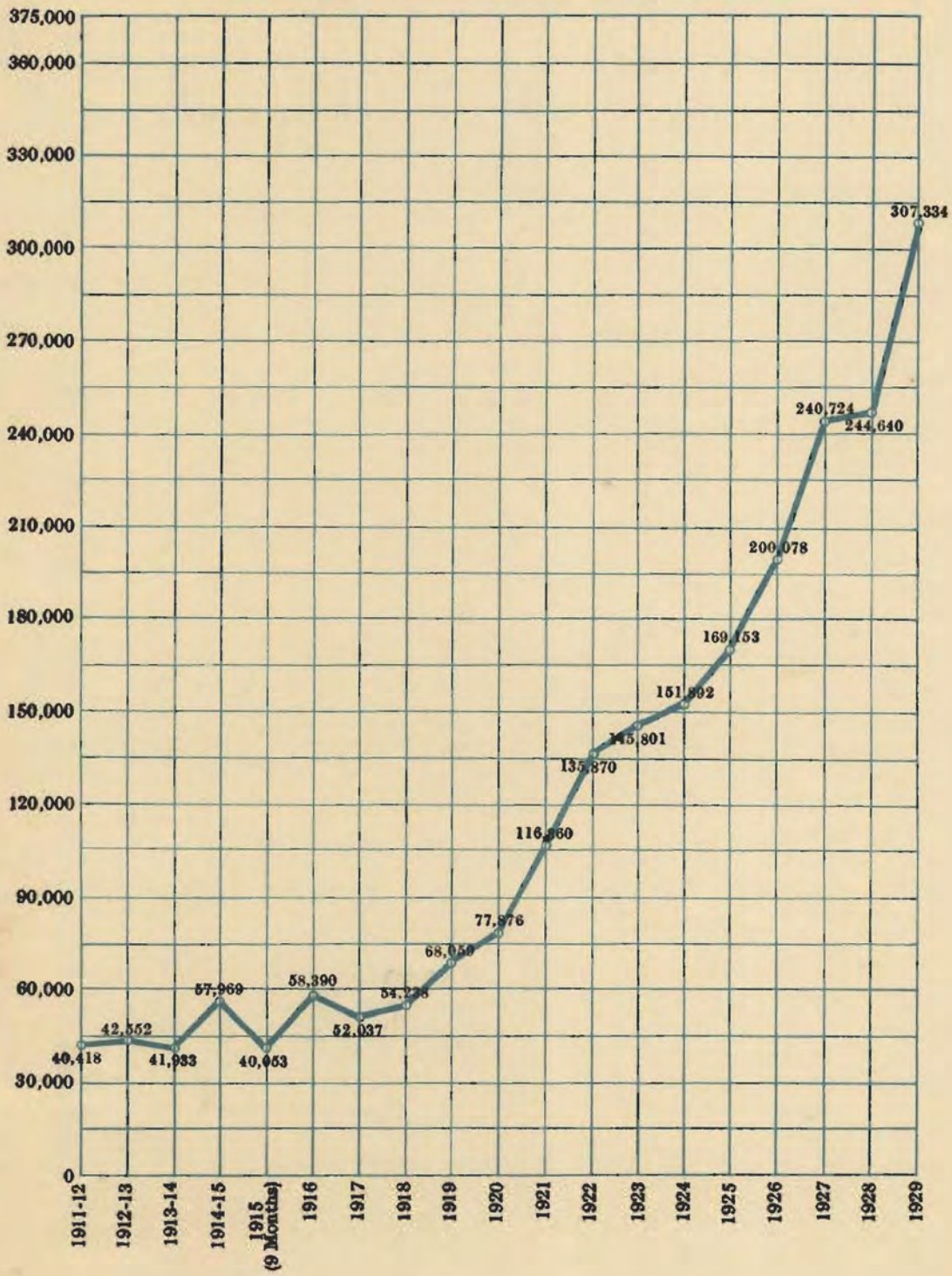
Curve showing comparison of daily average number of persons employed in the Oil and Asphalt Industries of the Colony from 1st April, 1911 to 31st December, 1929.



APPENDIX E.

G

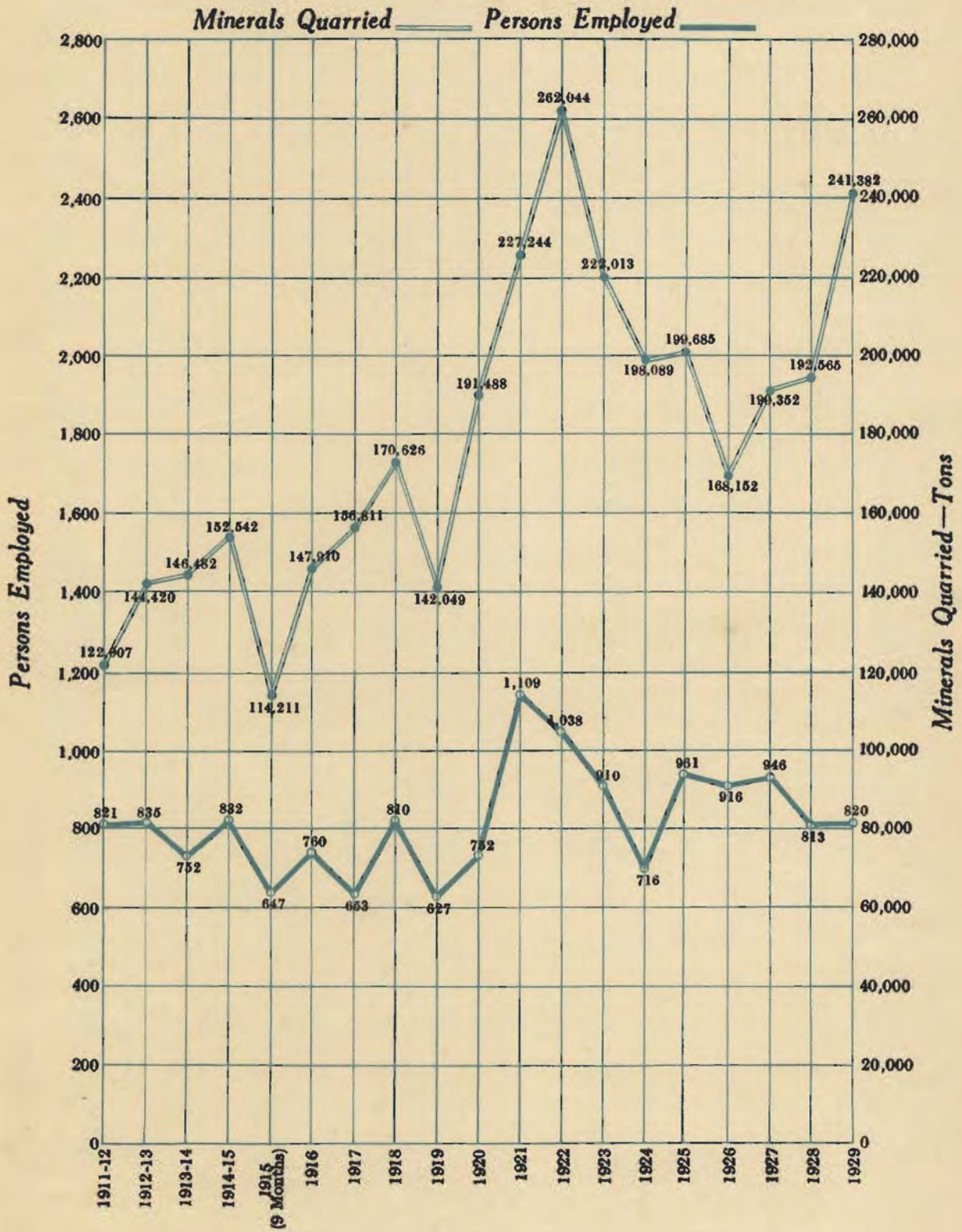
Curve showing yearly total number of feet drilled in the Colony from 1st April, 1911 to 31st December, 1929.



APPENDIX E.

H

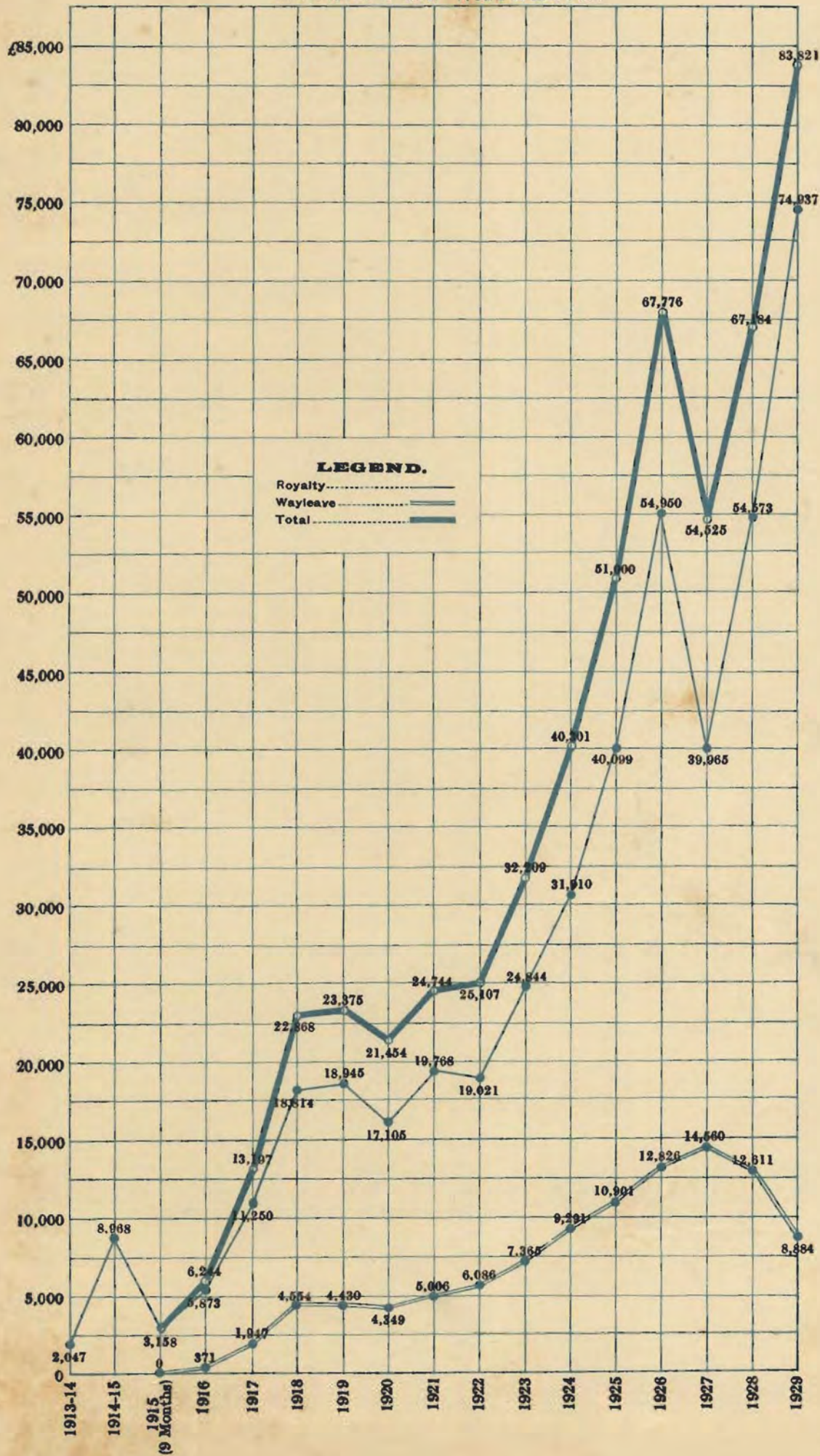
Curve showing the yearly total quantity of Minerals quarried and a comparison of the daily average number of persons employed in Quarries in the Colony from 1st April, 1911 to 31st December, 1929.



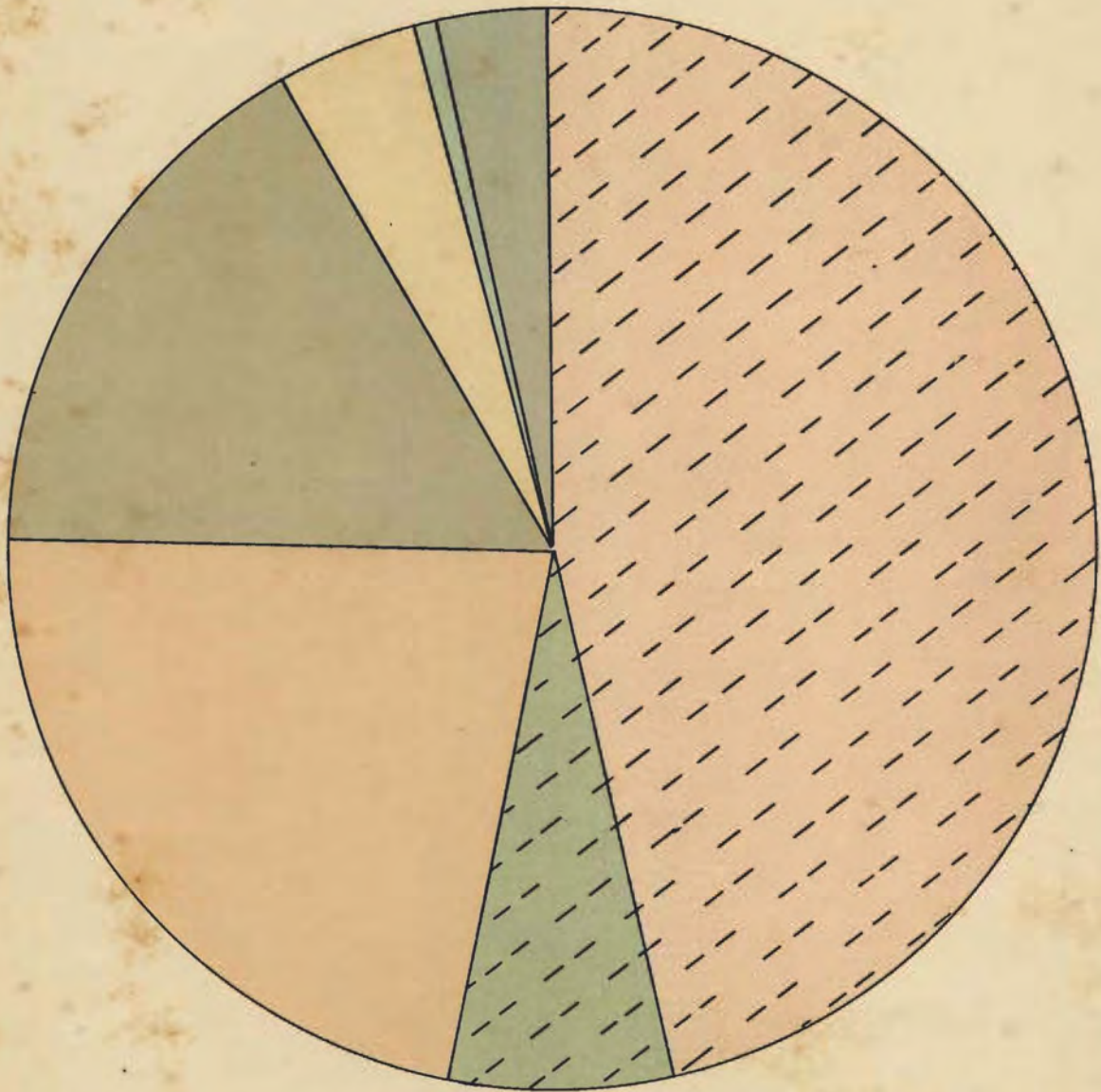
APPENDIX E.

I

ROYALTY AND WAYLEAVE.



APPENDIX F.



Mineral Exports 53.3%
 Petroleum Products 46.7%
 Asphalt 6.6%

Agricultural and other Exports 46.7%
 Cocoa 22.1%
 Sugar, Molasses, Rum 16.5%
 Coconuts, Copra, Coconut Oil 4.3%
 Coffee 5%
 Other Exports 3.3%