

TRINIDAD AND TOBAGO.

Council Paper No. 47 of 1934.

MINES DEPARTMENT.

Administration Report of the Inspector of Mines for the year 1933.

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MINES DEPARTMENT.

Administration Report of the Inspector of Mines for the year 1933.

Council Paper No. 47 of 1934.

M.P. No. 21316.

HONOURABLE COLONIAL SECRETARY,

I have the honour to submit, for the information of His Excellency the Governor, the following report on the working of the Mines Department for the year 1933.

2. For the first time since 1920 the production of crude oil has shown a decrease as compared with that of the previous year, the figures being 9,561,354 barrels compared with 10,126,065 barrels during 1932. There was also a decline in the quantity of petroleum products exported from the Colony as compared with 1932, the figures being as follows :—

1932—9,637,474 barrels valued at	....	....	...£ 2,382,846
1933—8,909,298 do.	....	....	...£ 2,254,055

It will be seen that during the period under review prices obtainable for petroleum products exported from the Colony still remain very low but there has been a slight rise during the past year as the average value per barrel returned to the Customs Department was 5s. 0 $\frac{3}{4}$ d. compared with 4s. 11 $\frac{1}{4}$ d. in 1932.

In view of the financial conditions existing throughout the world during the period under review, I consider that the situation may be regarded as satisfactory, and that when world conditions in industry approach normal the petroleum industry of the Colony will again continue to expand.

3. Petroleum and its products still formed the largest part of the Colony's exports in 1933, the amount exported being twice that of the products of the next most important of the Colony's industries, viz. : sugar, molasses and rum. Of the Colony's exports 52 per cent. consisted of petroleum products.

The value of the exports of the leading staples of the Colony during 1933 is shown below :—

	Value £	Percentage of total.
Petroleum products	2,254,055	52·13
Sugar, molasses and rum	1,160,054	26·83
Cocoa	555,907	12·86
Asphalt	150,867	3·49
Coconuts, copra and coconut oil	108,009	2·49
Bitters	21,205	·49
Coffee	7,416	·17
Other exports not enumerated	66,601	1·54
	<u>4,324,114</u>	<u>100·00</u>

4. In my last administration report I made mention that the United British Oilfields of Trinidad, Ltd., had commenced the construction of a new refinery and deep water loading pier, and also that a new refinery was in process of erection by the Kern Trinidad Oilfields, Ltd. All these works were completed during the year, and are now in operation. During the period under review, the Trinidad Leaseholds, Ltd., commenced to replace the old Dubbs Cracking Plant at their refining depot at Pointe-a-Pierre. Apart from the above, there is little of interest to note regarding the construction of new works.

5. The following table shows the number of feet drilled and the quantity of oil produced during 1933 as compared with the years 1931 and 1932 :—

	YEAR ENDED 31ST DECEMBER, 1931.		YEAR ENDED 31ST DECEMBER, 1932.		YEAR ENDED 31ST DECEMBER, 1933.	
	Feet drilled.	Oil won Brls. of 35 galls.	Feet drilled.	Oil won Brls. of 35 galls.	Feet drilled.	Oil won Brls. of 35 galls.
Crown Lands	138,360	5,328,469	111,730	5,610,901	173,473	5,290,743
Private Lands	80,107	4,415,034	61,557	4,515,164	62,046	4,270,611
	<u>218,467</u>	<u>9,743,503</u>	<u>173,287</u>	<u>10,126,065</u>	<u>235,519</u>	<u>9,561,354</u>

6. During the period under review 81 new wells were commenced of which 58 were on Crown Lands, bringing the total number of wells drilled in the Colony at the close of the year to 1,983 of which 1,255 are on Crown Lands. Of the wells commenced during the year 41 had been completed at 31st December last, and in 27 of these oil was struck.

7. The number of firms engaged in the mining of oil at the close of the year was 14 as against 16 at the end of 1932.

8. ROYALTY.—As is to be expected in view of the diminished production in 1933, the royalty collected in respect of crude oil won from Crown Lands showed a decrease as compared with that received in 1932. The figures being £89,588 9s. 7½d. compared with £90,053 7s. 4½d. during 1932.

9. WAYLEAVES.—The revenue collected under this head was wholly in respect of oil pumped along the public roads of the Colony and amounted to £1,569 15s. 2d. compared with £2,619 17s. 1½d. for the previous year. The fall in revenue is chiefly due to the fact that oil from the Trinidad Petroleum Development Company, Ltd., is now pumped to Point Fortin instead of to Sobó, the former pipeline not being laid along any roads. → 17,534.34

10. FEES.—Fees charged for pipelines crossing the Trinidad Government Railway, public roads and the foreshore amounted to £430.

11. LEASES AND LICENSES.—During the year 3,703 acres of Crown Lands, situated at Siparia, La Brea and Guayaguayare were selected by the Trinidad Leaseholds, Ltd., from the areas (7,634 acres) held by them under Prospecting License Registered No. 390 of 1929, and a Mining Lease over this area (published as Council Paper No. 122 of 1933) was issued to the Company.

The following Prospecting Licenses were extended pending the settling of the new forms of mining lease now in course of preparation :—

Prospecting License to the Apex (Trinidad) Oilfields, Ltd., Registered No. 1938 of 1930 was further extended for one year from 1st July, 1933 by Deed Registered No. 4090 of 1933.

Prospecting License to the Siparia Trinidad Oilfields, Ltd., Registered No. 1742 of 1929 was further extended for one year from 1st May, 1933.

12. RETURNS.—The returns required to be submitted by the various oil companies in respect of their operations have been regularly forwarded by them to the Department, where, after being checked, they have been filed with the records of the Department.

13. 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 readily co-operate with the Department in endeavouring to carry out the provisions of the Ordinances and Regulations.

14. LEGISLATION.—A new Pipelines Ordinance No. 29 of 1933, was passed and the old Ordinance, Cap. 146 (in force since 1911) which had been found to be unduly restrictive on the oil companies was repealed.

Regulations under the Air Pressure Tanks (Regulation) Ordinance No. 3 of 1931 were also passed.

SAN FERNANDO BRANCH OF THE DEPARTMENT.

15. A report by the Petroleum Technologist on the working of his branch is enclosed as Appendix " B ".

PREVENTION OF ACCIDENTS ORDINANCE, CAP. 157.

16. During the period under review 176 factories in Trinidad and Tobago were worked. Taking the factories as a whole the Managers co-operate satisfactorily with the Department in ensuring safety to the workmen in their employment.

QUARRIES.

17. The number of quarries worked during the past year was 81 as compared with 77 during 1932. From inspections that 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.

18. The premises in which the various products of petroleum are stored have been carefully inspected, and it is satisfactory to note that, generally, care has been taken to ensure safety. The revenue derived from licenses issued to sell petroleum products during 1933 amounted to £430.

APPENDICES.

19. Appendix "A" shows the list of oil companies operating in the Colony during the year 1933.

20. Appendix "B" is the Report on the working of the Petroleum Office, San Fernando.

21. 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.

22. A comparative statement of the oil produced and exported is shown in Appendix "D".

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

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

25. Appendix "G" shows the relation of mineral exports to agricultural exports.

STAFF.

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

A. P. CATHERALL,
Inspector of Mines.

27th March, 1934.

APPENDIX A.

No.	Companies.	Nature of tenure of lands on which operations took place.		Disposal of Oil.	Remarks.
1	Trinidad Leaseholds, Ltd.	Crown oil rights under lease Private lands	Fyzabad, Barrackpore and 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 Trinidad Leaseholds, Ltd., is the most important company in the Colony from the point of view of refining and marketing, and is second only to the Apex (Trinidad) Oilfields, Ltd., in respect of production. The bulk of the Company's production still continues to be obtained from its holdings in the Fyzabad area where there has been a considerable increase in development with a resultant increase of production. In the Guayaguayare field there has been a considerable increase of drilling, and the production has more than doubled. The production from the Barrackpore area has declined.
2	United British Oilfields of Trinidad, Ltd.	Crown lands under lease Private lands	Morne L'Enfer Forest Reserve Point Fortin	Pumped to the Company's refinery at Point Fortin and there refined. Most of the production is exported in bulk	Development of the Parry Lands field in the Morne L'Enfer Reserve has continued during the year, and the production has been maintained at much the same level as last year. Towards the end of the year a mining lease over 1,999 acres of Crown lands in the Morne L'Enfer Reserve, held by the Petroleum Development Co., Ltd., since 1915, was assigned by this Company to the United British Oilfields of Trinidad, Ltd. A new refinery and deep-water loading pier, commenced in 1932, was completed during the period under review.
3	Trinidad Central Oilfields, Ltd. ..	Crown lands under lease	Tabaquite, Guapo and Lizard Springs	Production from Tabaquite and Lizard Springs refined, sold locally and exported; that from the Cruse field is sold to the Trinidad Leaseholds, Ltd.	The operations of this Company during the major part of the year were on a small scale. Recently, agreement was entered into with Trinidad Leaseholds, Ltd., for the development of the Cruse area at Guapo, where the production has been increased. The production from the Tabaquite and Lizard Springs fields has slightly declined.
4	Trinidad Lake Petroleum Co., Ltd. ..	Private lands	Brighton	Refined	Producing only.
5	Petroleum Development Co., Ltd. ..	Crown lands under lease	Morne L'Enfer Forest Reserve and La Brea	Sold to Trinidad Lake Petroleum Co., Ltd.	The lease of Crown oil rights within the Protected Area was surrendered to the Government on the 30th June last, and the lease over Crown lands in the Morne L'Enfer Reserve was assigned to the United British Oilfields of Trinidad, Ltd., later in the year. No drilling was done.

APPENDIX A.—Continued.

No.	Companies.	Nature of tenure of lands on which operations took place.		Disposal of Oil.	Remarks.
6	Apex (Trinidad) Oilfields, Ltd.	Crown oil rights under lease and prospecting license, and private lands	Fyzabad and Siparia	Crude oil sold to the Trinidad Leaseholds, Ltd., casing head petroleum spirit sold to the United British Oilfields of Trinidad, Ltd.	The Company is the largest producer in the Colony. Drilling and production have been maintained at about the same level as last year.
7	Kern Trinidad Oilfields, Ltd. . .	Crown lands under lease Private lands	La Brea Guapo and Roussillac	Some of the production is exported in bulk and also sold to the Trinidad Leaseholds, Ltd., West India Oil Co., and United British Oilfields of Trinidad, Ltd.	There was a considerable increase of footage by this Company, mostly on its private lands at Guapo. The production from this area has also been increased.
8	Trinidad Investments, Ltd. . .	Private lands	Fyzabad	Sold to the Trinidad Leaseholds, Ltd.	This Company during the year leased the private lands formerly held by the New Oropuche (Trinidad) Oilfields, Ltd. No drilling has been done, and production has been maintained at much the same level as last year.
9	Trinidad Petroleum Development Co., Ltd.	Crown oil rights under lease and prospecting license Private lands	Palo Seco Palo Seco and Naparima	Sold to the United British Oilfields of Trinidad, Ltd.	The Company's operations have been chiefly confined to the Palo Seco district where a very active drilling programme has been undertaken. The production, however, has considerably declined.
10	Palo Seco Oilfield (C. C. Stollmeyer)	Crown lands under lease	Palo Seco	Refined, and products sold locally . .	A small amount of drilling has been undertaken. The production has declined.
11	Trinidad Oilfields Operating Co., Ltd. . .	Private lands Crown lands under lease	Fyzabad, San Francique and Palo Seco Pointe D'Or and San Francique	Sold to the West India Oil Co. . .	Drilling operations were recommenced in the Palo Seco area; the production was smaller than in 1932.
12	New Dome Oilfields, Ltd. . .	Private lands	Fyzabad	Sold to Trinidad Leaseholds, Ltd. and Kern Trinidad Oilfields, Ltd.	A small amount of drilling was done in the Fyzabad field. The production was less than that during the previous year.
13	Siparia Trinidad Oilfields, Ltd.	Crown lands under prospecting license	Palo Seco	Sold to Trinidad Leaseholds, Ltd. and the Trinidad Petroleum Development Co., Ltd.	More drilling was done than in 1932, but a smaller production was obtained.
14	Trinidad Freeholds, Ltd.	Private lands	Fyzabad	Sold to the Trinidad Leaseholds, Ltd.	Small production obtained from this area. No drilling.
15	Tucker, H. S.	Private lands	Pointe Ligoure and Fyzabad	Refined and products sold locally . .	A small production was obtained from an old field at Pointe Ligoure.

APPENDIX B.

HONOURABLE INSPECTOR OF MINES,

The year under review shows a decrease in production of 5.5 per cent, but an increase in footage of 36 per cent. over the 1932 figures. The corresponding figures with regard to 1930 were 1.7 per cent. increase and 36.8 per cent. decrease respectively.

An analysis of the production and feet drilled for 1932 and 1933 shows :—

	1932.			1933.		
	Production Barrels.	Feet drilled.	Average Production per Well.	Production Barrels.	Feet drilled.	Average Production per Well.
Crown Lands ..	3,340,290.65	44,568	806	3,684,148.30	85,946	741
Alienated ..	2,270,610.21	67,162	1,775	1,606,594.66	87,527	1,014
Private ..	4,515,164.49	61,557	1,856	4,270,611.44	62,046	1,226

Eighty-one new wells were started up during the year making a grand total for the Colony of 1,933. These new wells were disposed of as follows :—

					<i>Crown.</i>	<i>Private.</i>
Wells started in 1933	....	....	....	....	58	23
Wells brought forward from 1932	....	....	....	....	22	10
Total	....	....	....	....	80	33
Wells completed as Producers	....	....	....	....	38	21
Wells completed as Water Wells	....	....	....	....	3	—
Wells completed as dry hole but not abandoned	....	....	....	....	1	—
Wells current in 1933 and abandoned as dry or uncommercial	....	....	....	....	7	3
Wells unfinished at end of 1933	....	....	....	....	31	9
Total	....	....	....	....	80	33
Old Wells abandoned in 1933	....	....	....	....	6	3
Well re-completed during the year	....	....	....	....	17	6

The average number of wells producing shows a large increase over 1932 as under :—

				1930.	1931.	1932.	1933.
Wells flowing	....	....	....	170	185	215	231
Wells pumping	....	....	....	544	504	469	443
Wells Swabbing or Bailing	....	....	....	38	60	81	124
Wells on Air or Gas Lift	....	....	....	19	13	15	29
Wells on Displacement Pumping	....	....	....	—	—	6	9
				771	762	786	836

The increase in numbers is mostly due to two private properties starting up again, these wells are practically all included under the pumping and bailing categories. The number of flowing wells has again shown an increase and from the table attached it will be noticed that there has been an increased use of air or gas lift and displacement pumping.

The greatest production again came from the Fyzabad structure with 67.8 per cent. of the total for the Colony divided amongst the Companies operating here.

Surface geological surveys are still being carried out to fit in with the geophysical survey of the south-west corner of the Island as mentioned in my last year's report. Recently the survey work has been helped by some small core drills.

The torsion balance and magnetometer surveys from Cedros to Moruga mentioned in my last year's report did not add materially to our present knowledge though they gave confirmatory evidence of what was already known.

On the Palo Seco structure an oil sand at approximately 2,000 feet below the base of the Forest Clay has been located and is being developed as a good producing horizon.

On one field experiments with drilling under pressure were started which have shown that much lighter mud fluid can be used. One well has been drilled successfully by this means and brought on to production and the experiments are to be continued, the main object being to reduce the use of barytes.

On another field a pressure bomb is being used for determining bottom hole pressures in wells and the rate at which these build up when the well is shut in after producing.

During the year two wells have been surveyed with an electric teleclinometer and three wells were tested for temperature gradient with an electric thermometer, the main object of these latter tests being to locate water ingress to the wells.

There were three fatal accidents and twenty-four other reportable accidents during the year. An analysis of these shows that 66.6 per cent. of the fatal accidents and 20 per cent. of the other accidents were due to carelessness on the part of the deceased or injured man; the balance were unavoidable.

Two wells accidentally caught fire during the year but only minor damage was done in both cases. During the nights of September 9th and 10th five wooden derricks were struck by lightning, one derrick being struck on both nights, damage being done to the legs of the derricks which were struck, the gas from the pop valves of three separators inside the derricks was set on fire. In one case pieces of the derrick leg were hurled over 100 yards away.

On the evening of the 27th June the southern part of the Island was struck by a cyclone which overturned one steel and 150 wooden derricks. Most of these fell in a south-westerly direction. In some cases the derricks when overturning broke away the Xmas tree connections and the wells flowed wild until they could be closed in. The large number of overturned or broken trees hampered the work of closing in the wells and repairing pipelines. Luckily there were no casualties amongst the oilfield workmen.

Owing to considerable difficulties in shutting off the gas in the Point D'Or Field the work of abandoning this area has only just been completed.

Frequent inspections of drilling and production machinery were carried out in conjunction with the ordinary routine duties. I am pleased to report that I have received continued co-operation in carrying out my duties by all the Companies and their Staffs.

9th March, 1934.

C. ERIK CAPITO,
Petroleum Technologist.

DRILLING AND PRODUCTION RETURN FOR 1933.

Month.	New Wells Started.		New Wells completed as producers.		Wells re-completed as producers.		Wells abandoned.		Total Wells started to date.	Footage drilled during month.	Production for month. Barrels.	Wells producing by								Total No. of Wells Producing.		Grand Total Crown and Private.	Percentage Wells producing to total wells drilled.	New Wells completed as dry or uncommercial holes.	REMARKS.			
	C	P	C	P	C	P	C	P				C	P	C	P	C	P	C	P	C	P							
January ..	2	2	3	3	—	—	—	—	1,906	12,952	815,823.70	150	84	296	147	89	49	14	1	4	6	553	287	840	44.07	—	—	
February ..	4	3	6	1	—	1	—	1	1,913	16,784	779,308.14	142	82	306	149	81	48	17	1	4	6	550	286	836	43.70	—	1	
March ..	8	2	3	1	2	1	1	—	1,923	23,856	840,321.29	149	83	294	157	88	51	18	3	4	4	553	298	851	44.25	1	—	2 water wells.
April ..	4	2	5	2	1	1	—	—	1,929	16,572	834,875.62	151	84	294	167	88	34	18	3	4	3	555	291	846	43.81	—	—	
May ..	6	1	1	3	1	—	1	1	1,936	17,946	816,080.12	144	88	293	170	86	33	25	2	3	5	551	298	849	43.85	—	—	1 water well.
June	6	1	2	—	3	—	1	1	1,943	17,595	772,626.37	139	83	285	157	87	27	28	2	3	5	542	274	816	42.00	—	—	
July ..	3	2	3	—	2	1	—	1	1,948	22,273	759,075.69	142	86	260	156	83	31	32	1	2	5	519	279	798	40.97	2	—	
August	5	3	6	2	1	1	—	—	1,956	22,735	780,928.90	142	88	272	165	86	30	32	2	3	5	535	290	825	42.18	—	—	
September	5	2	2	2	3	—	3	—	1,963	21,538	755,676.43	145	86	280	162	88	30	32	4	3	8	548	290	838	42.69	—	—	
October ..	7	1	3	4	1	—	2	—	1,971	23,364	818,183.84	142	89	272	167	95	31	34	5	4	9	547	301	848	43.02	2	—	
November	6	4	2	—	1	—	2	1	1,981	17,496	788,970.30	144	83	269	166	95	31	35	9	3	8	546	297	843	42.55	2	1	
December ..	2	—	2	3	2	1	3	1	1,983	22,591	799,484.00	156	84	281	162	88	32	30	8	2	8	557	293	850	42.81	1	—	
Totals ..	58	23	38	21	17	6	13	6				Averages 146 85		Averages 283 160		Averages 88 36		Averages 26 3		Averages 3 6		Averages 546 290		—	—	8	2	
Grand Totals	81		59		23		19		1,983	235,702	9,561,354.40	231		443		124		29		9		836		836	43.00	10		

"C" denotes Crown Oil Rights.
 "P" denotes Private Oil Rights.

C. ERIK CAPITO,
 Petroleum Technologist.

9th March, 1934.

COLONY OF TRINIDAD.

Yearly details of wells started and footage drilled 1867-1933 inclusive.

YEAR.	TOTAL WELLS STARTED BY YEARS IN COLONY.								FOOTAGE DRILLED ANNUALLY BY ALL COMPANIES (APEX PHANTOM FT. INCLUDED).								Accumulation.
	CROWN.		ALIENATED.		PRIVATE.		TOTALS.		CROWN.		ALIENATED.		PRIVATE.		TOTALS		
	Annual.	Cum.	Annual.	Cum.	Annual.	Cum.	Annual.	Cum.	Annual.	Cum.	Annual.	Cum.	Annual.	Cum.	FOR YEAR.		
1867	—	—	—	—	1	1	1	1	—	—	—	—	964	964	964	964	
1902	1	1	—	—	2	3	3	4	600	600	—	—	1,315	2,279	1,915	2,879	
1903	1	2	—	—	—	3	1	5	1,072	1,772	—	—	1,060	3,339	2,232	5,111	
1904	1	3	—	—	—	3	1	6	860	2,632	—	—	—	3,339	860	5,971	
1905	—	3	—	—	—	3	—	6	—	2,632	—	—	—	3,339	—	5,971	
1906	1	4	—	—	2	5	3	9	1,104	3,736	—	—	1,499	4,838	2,603	8,574	
1907	1	5	—	—	2	7	3	12	798	4,534	—	—	1,563	6,401	2,361	10,935	
1908	—	5	—	—	4	11	4	16	—	4,534	—	—	2,352	8,753	2,352	13,287	
1909	—	5	—	—	6	17	6	22	—	4,534	—	—	5,362	14,115	5,362	18,649	
1910	5	10	—	—	7	24	12	34	3,771	8,305	—	—	4,319	18,434	8,090	26,739	
1911	8	18	1	1	38	62	47	81	4,902	13,207	796	796	33,254	51,688	38,952	65,691	
1912	10	28	—	1	35	97	45	126	6,839	20,046	—	796	32,881	84,569	39,720	105,411	
1913	25	53	—	1	18	115	43	169	13,813	33,859	—	796	26,388	110,957	40,201	145,612	
1914	50	103	—	1	16	131	66	235	35,146	69,005	—	796	23,283	134,240	58,429	204,041	
1915	31	134	—	1	19	150	50	285	29,208	98,213	—	796	25,652	159,892	54,860	258,901	
1916	26	160	2	3	20	170	48	333	27,511	125,724	3,355	4,151	28,035	187,927	58,901	317,802	
1917	38	198	—	3	6	176	44	377	39,942	165,666	1,285	5,436	9,557	197,484	50,784	368,586	
1918	38	236	—	3	4	180	42	419	47,700	213,366	—	5,436	6,796	204,280	54,496	423,082	
1919	39	275	—	3	13	193	52	471	49,741	263,107	—	5,436	16,769	221,049	66,510	489,592	
1920	45	320	—	3	24	217	69	540	54,667	317,774	—	5,436	24,319	245,368	78,986	568,578	
1921	53	373	—	3	32	249	85	625	74,214	391,988	—	5,436	44,631	289,999	118,845	687,423	
1922	70	443	2	5	19	268	91	716	93,855	485,843	3,145	8,581	39,463	329,462	136,463	823,886	
1923	71	514	4	9	33	301	108	824	79,907	565,750	7,060	15,641	58,805	388,267	145,772	969,658	
1924	71	585	4	13	35	336	110	934	90,141	655,891	6,190	21,831	55,197	443,464	151,528	1,121,186	
1925	55	640	7	20	37	373	99	1,033	92,843	748,734	12,507	34,338	63,543	507,007	168,893	1,290,079	
1926	72	712	10	30	46	419	128	1,161	112,053	860,787	15,913	50,251	72,691	579,698	200,657	1,490,736	
1927	73	785	13	43	73	492	159	1,320	101,920	962,707	17,288	67,539	122,465	702,163	241,673	1,732,409	
1928	43	828	32	75	64	556	139	1,459	71,481	1,034,188	58,842	126,381	112,863	815,026	243,186	1,975,595	
1929	52	880	59	134	48	704	159	1,618	92,590	1,126,778	118,583	244,964	96,309	911,335	307,482	2,283,077	
1930	76	956	31	165	56	660	163	1,781	170,389	1,297,167	85,561	330,525	116,706	1,028,041	372,656	2,655,733	
1931	9	965	25	190	26	686	60	1,841	42,972	1,340,139	95,410	425,935	80,260	1,108,301	218,642	2,874,375	
1932	21	986	20	210	20	706	61	1,902	44,568	1,384,707	67,162	493,097	61,557	1,169,858	173,287	3,047,662	
1933	36	1,022	22	232	23	729	81	1,983	85,946	1,470,653	87,550	580,647	62,206	1,232,064	235,702	3,283,364	

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, 1933.

Minerals.	Daily average number of persons employed.			Quantity.	Approximate Value. †
	Males.	Females.	Total.		
Oil	5,140	79	5,219	9,561,354 barrels	£1,242,156
Asphalt	489	4	493	72,676 tons*	45,423
Private Quarries (limestone, gravel, &c.)	258	123	381	140,757 tons	10,162
Government Quarries (limestone, &c.)	275	67	342	60,452 tons	8,647

* In addition to this amount 38,661 tons were extracted from the Pitch Lake by the Public Works Department for use on the roads of the Colony.

† 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 and exported year by year since the inception of the Petroleum Industry in the Colony.

	Production 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	219,582
1912-1913	503,616	122,734
1913-1914	643,516	387,719
1914-1915	1,050,112	348,351
9 months ended December, 1915	671,125	408,188
1916	927,877	975,142
1917	1,602,312	1,079,369
1918	2,082,068	1,305,407
1919	1,841,047	1,406,264
1920	2,083,027	1,034,907
1921	2,354,160	1,223,346
1922	2,444,752	1,615,740
1923	3,050,872	2,432,470
1924	4,056,612	3,224,529
1925	4,386,507	3,606,608
1926	4,971,471	3,988,308
1927	5,380,464	4,456,770
1928	7,684,450	6,361,675
1929	8,715,652	8,243,023
1930	9,418,907	7,678,807
1931	9,743,502	8,964,303
1932	10,126,065	9,637,474
1933	9,561,354	8,909,298
	93,720,428	77,630,014

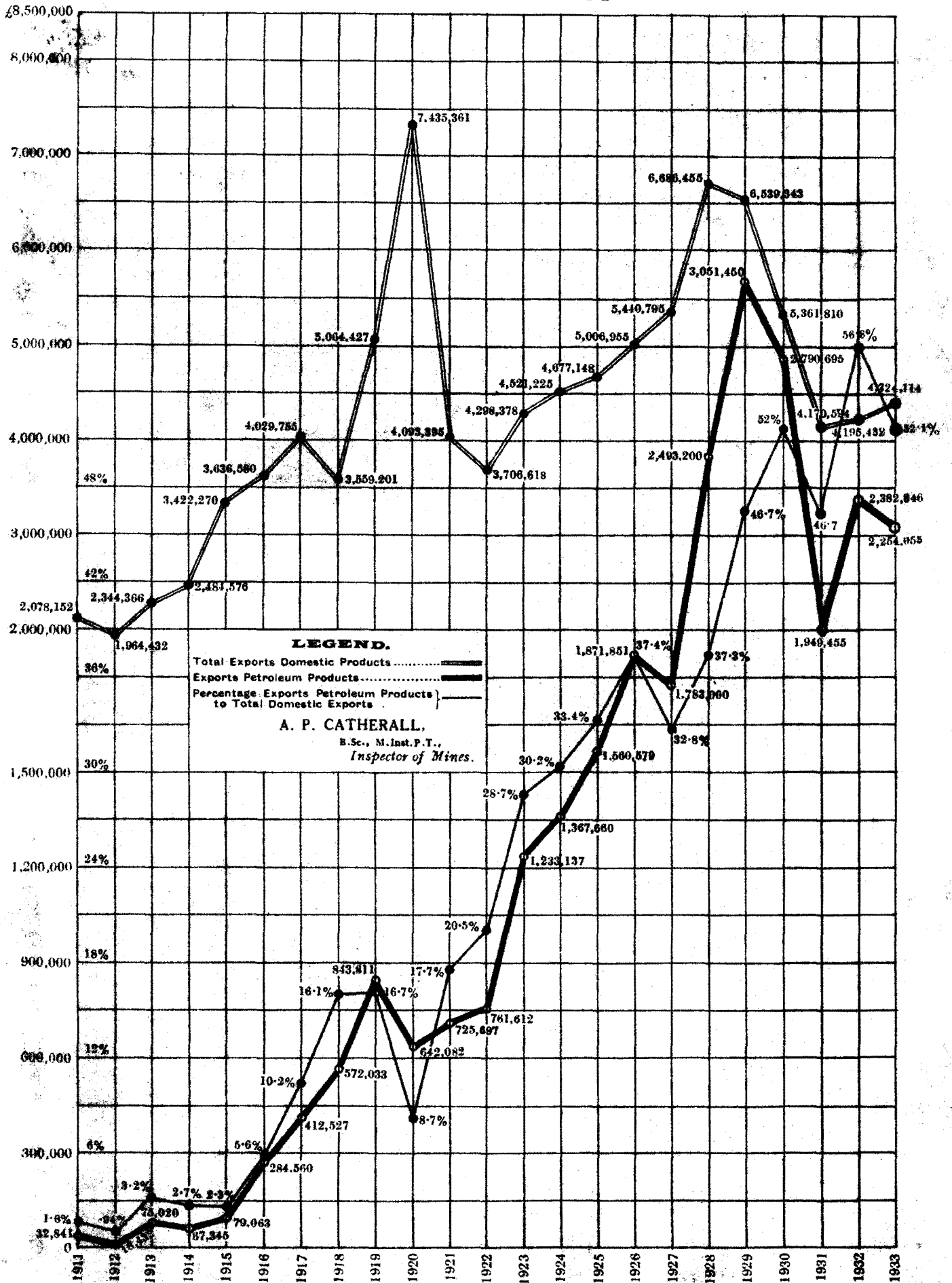
APPENDIX E.**Comparative Statement of Oil refined in the Colony.**

Previous to 1920	..	..	..	..	..	4,051,373 barrels.
1920	..	..	..	..	..	1,395,487 do.
1921	..	..	..	..	..	1,806,016 do.
1922	..	..	..	..	..	1,820,018 do.
1923	..	..	..	..	..	2,360,279 do.
1924	..	..	..	..	..	3,433,902 do.
1925	..	..	..	..	..	3,790,343 do.
1926	..	..	..	..	..	3,786,876 do.
1927	..	..	..	..	..	4,796,223 do.
1928	..	..	..	..	..	6,725,383 do.
1929	..	..	..	..	..	7,642,726 do.
1930	..	..	..	..	..	7,989,679 do.
1931	..	..	..	..	..	6,899,144 do.
1932	..	..	..	..	..	7,635,296 do.
1933	..	..	..	..	..	9,129,810 do.
						<hr/>
				Total	..	73,262,555 do.
						<hr/>

APPENDIX F.

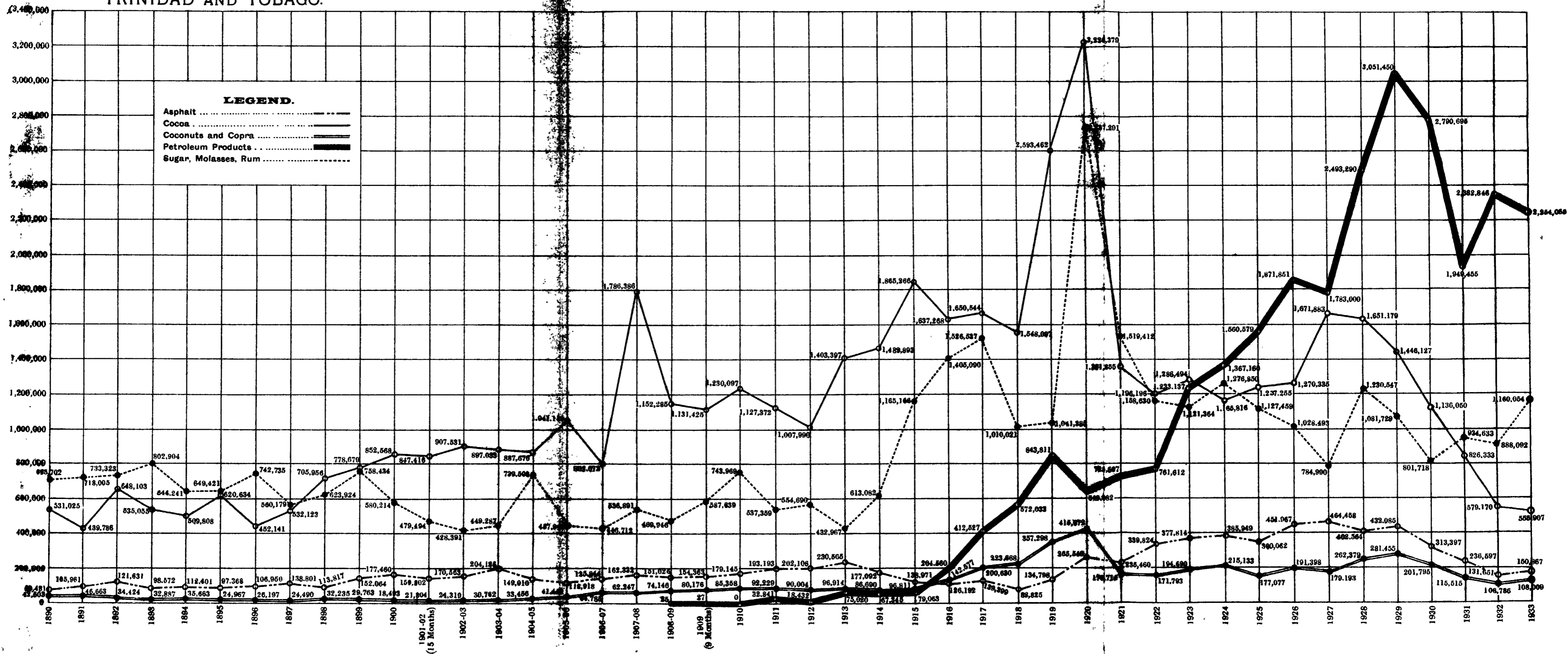
A

TRINIDAD AND TOBAGO.



TRINIDAD AND TOBAGO.

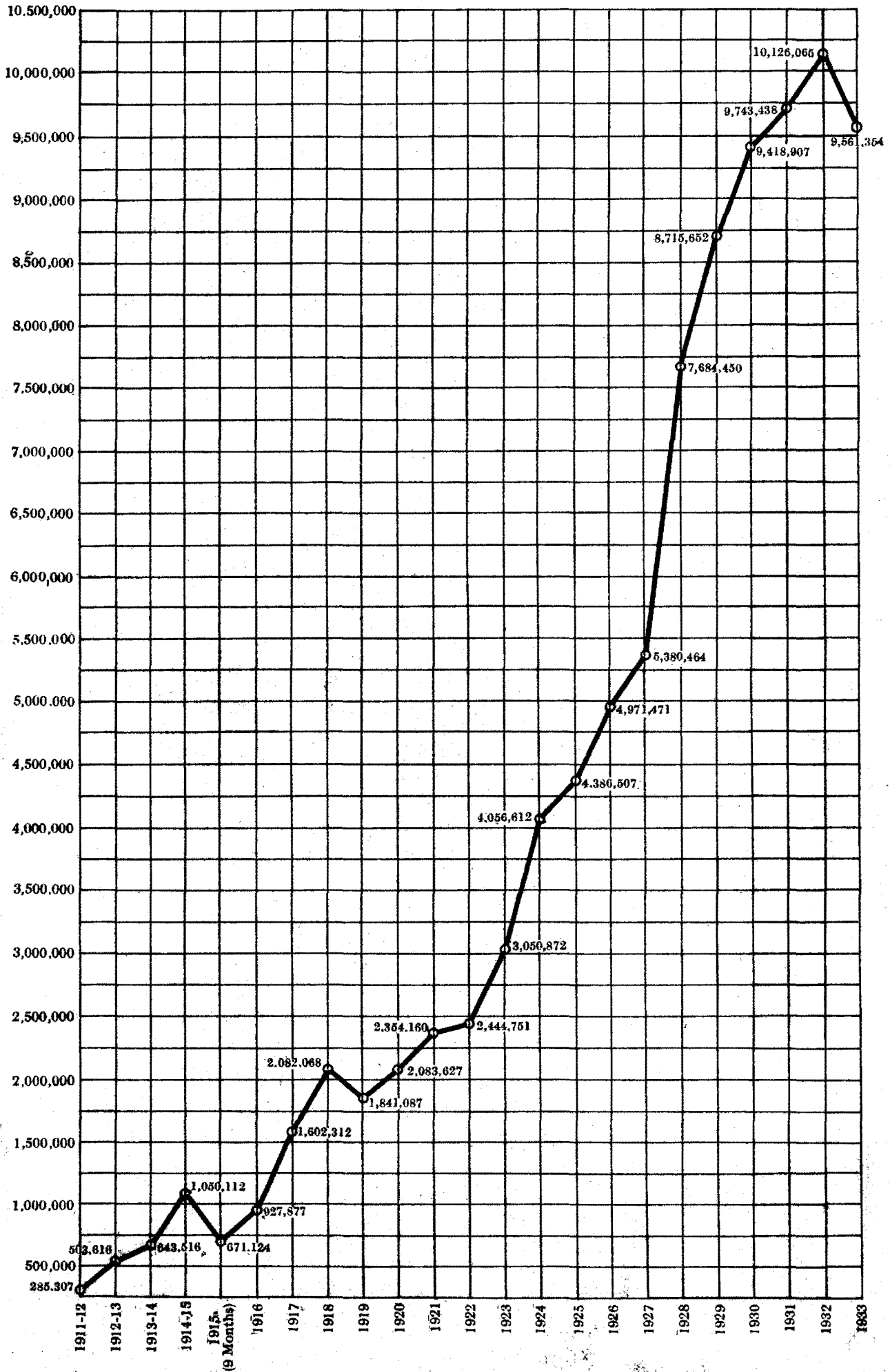
EXPORT OF LOCAL PRODUCE



APPENDIX F.

C

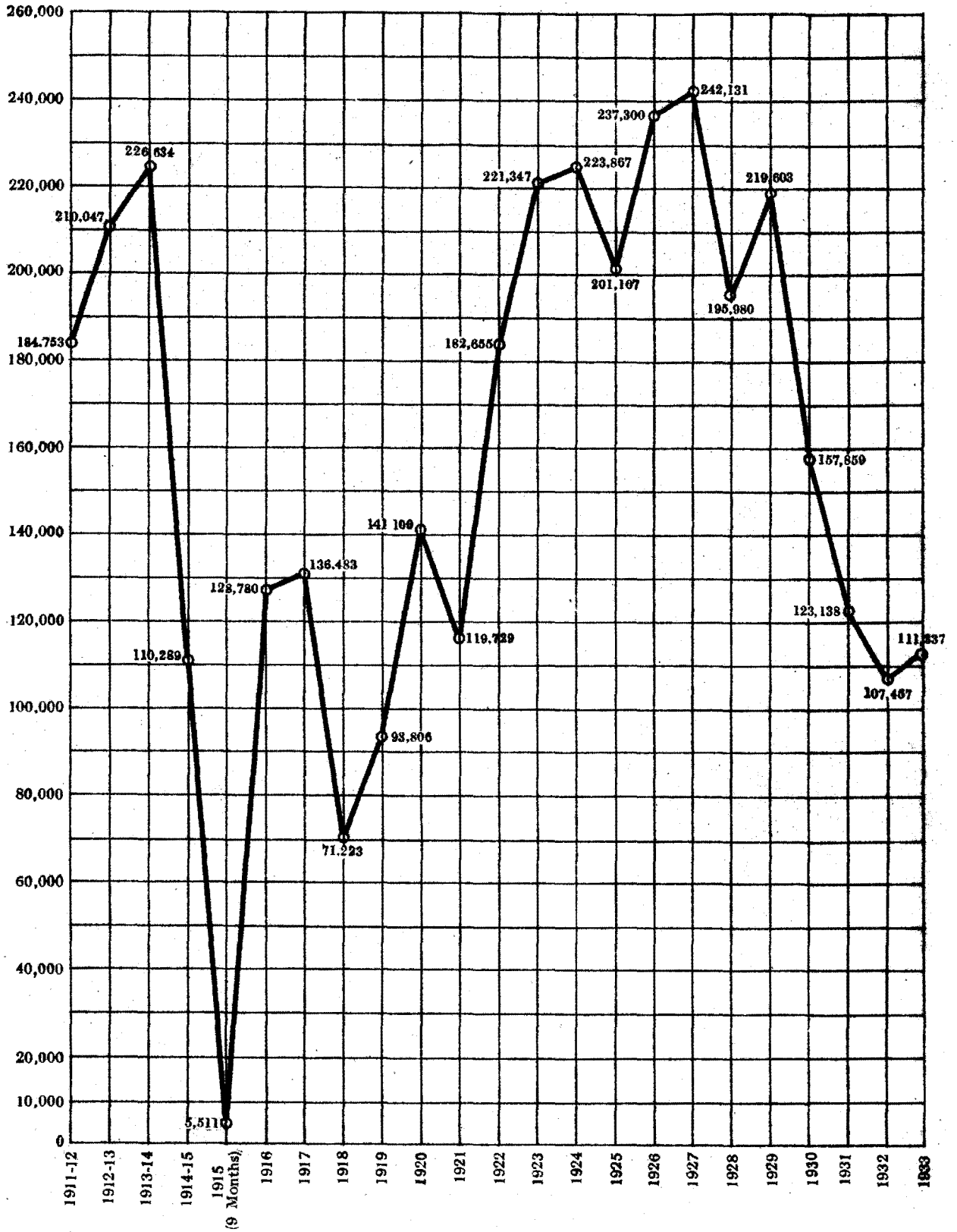
Total Annual Production of Crude Oil in Barrels
One barrel = 35 gallons.



APPENDIX F.

D

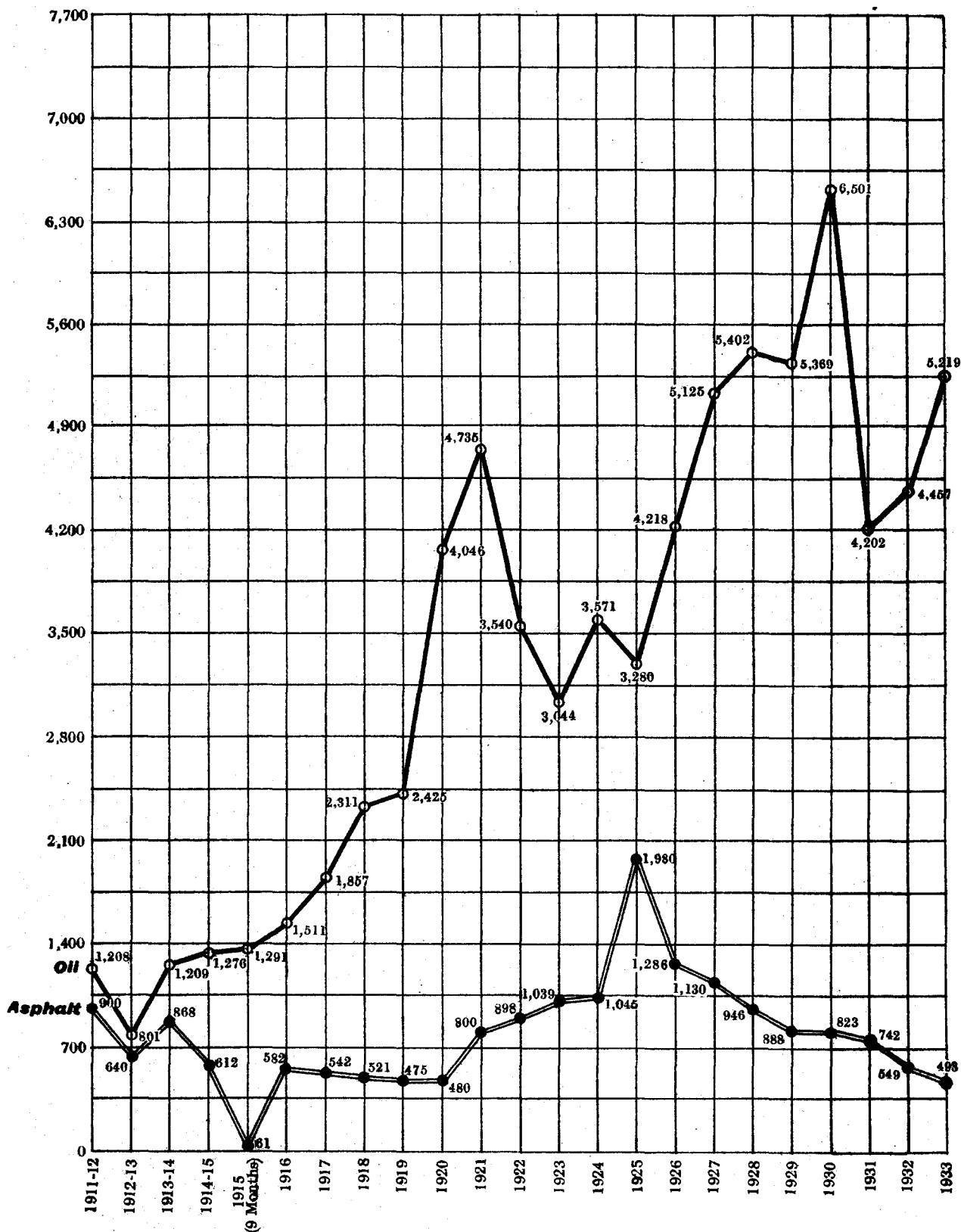
Curve showing yearly output of Asphalt from the Colony in Tons, from 1st April, 1911 to 31st December, 1933.



APPENDIX F.

E

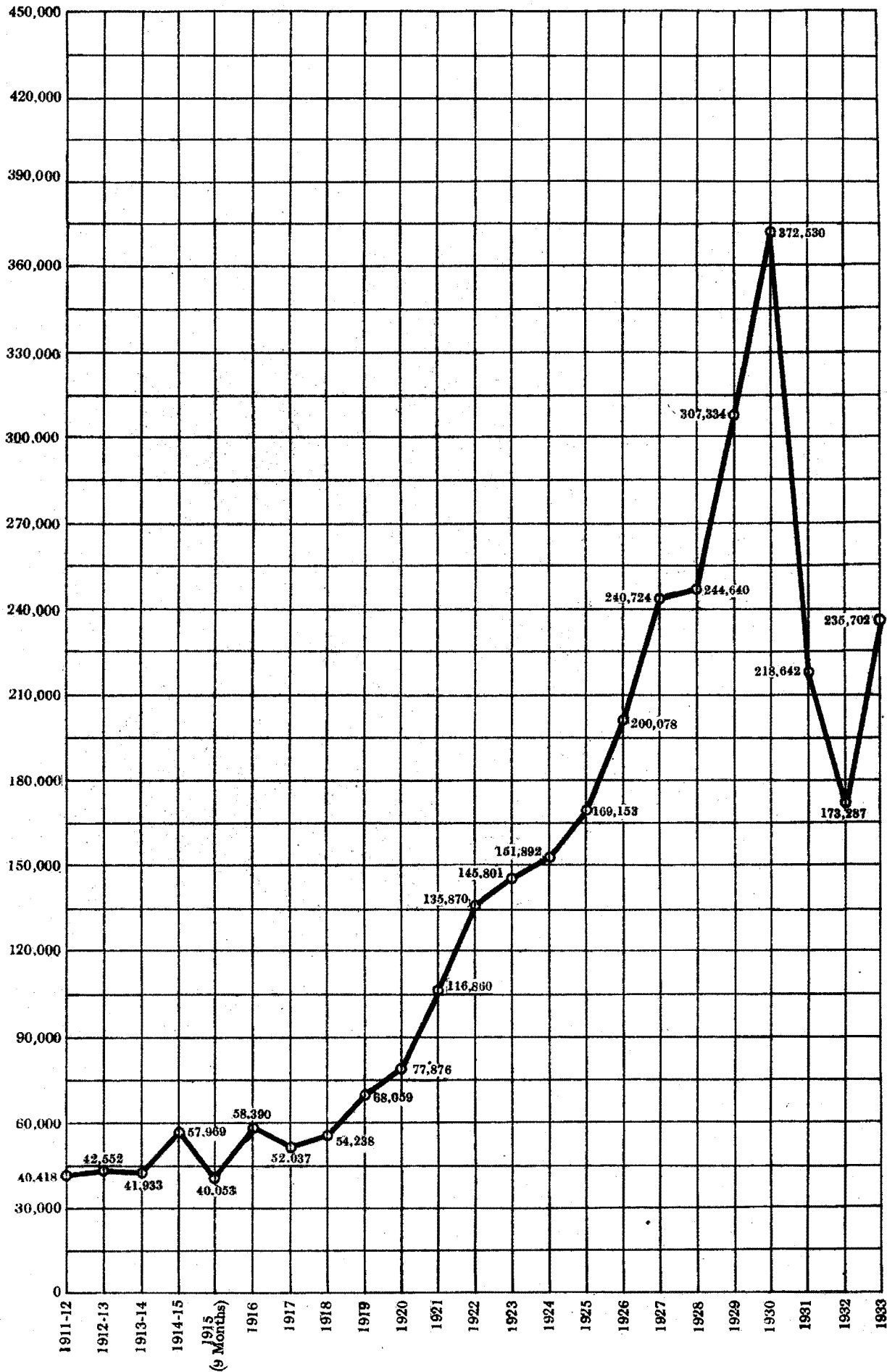
Curve showing comparison of daily average number of persons employed in the Oil and Asphalt Industries of the Colony from 1st April, 1911 to 31st December, 1933.



APPENDIX F.

F

Curve showing yearly total number of feet drilled in the Colony from 1st April, 1911 to 31st December, 1933.

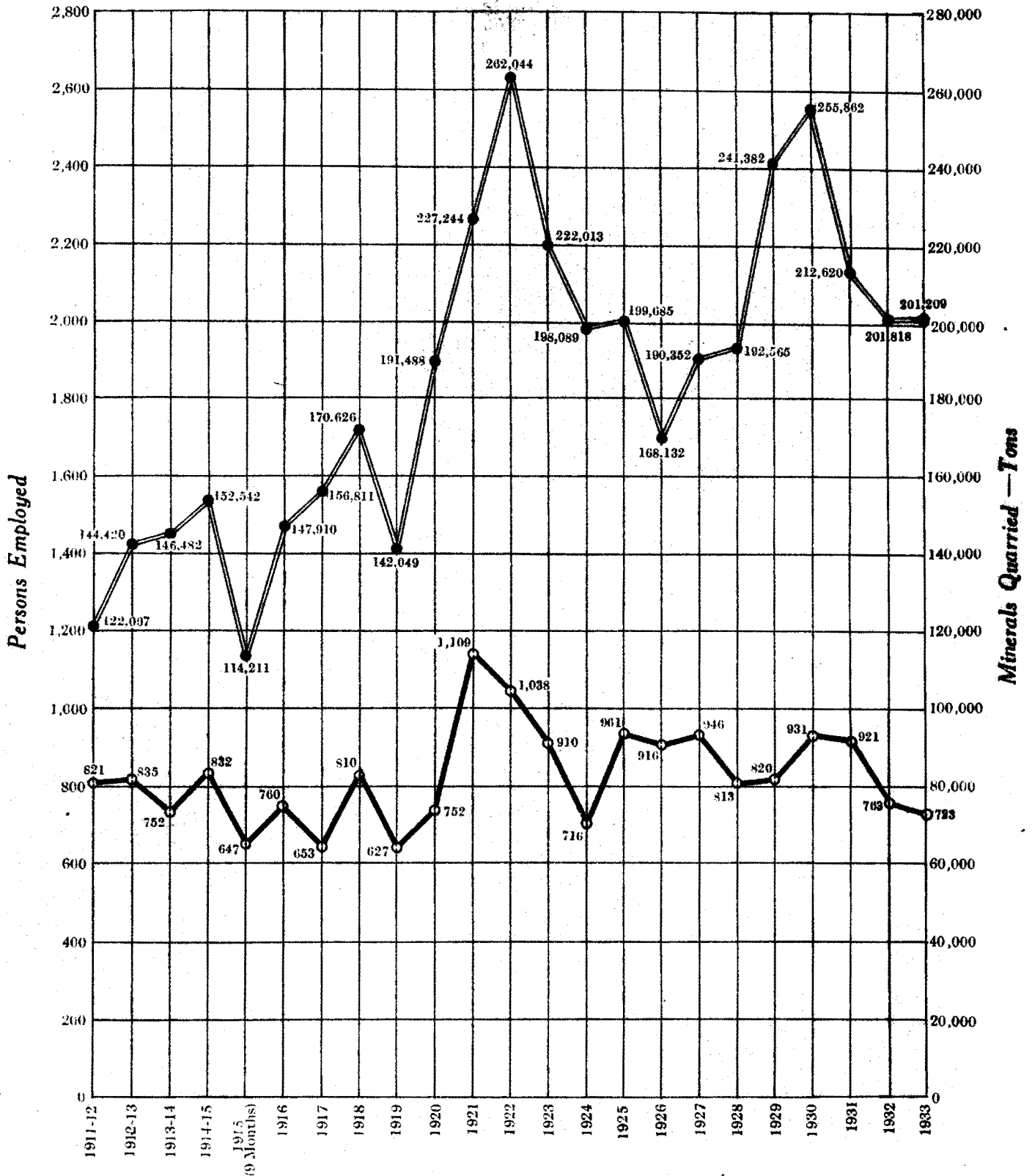


APPENDIX F.

G

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, 1933.

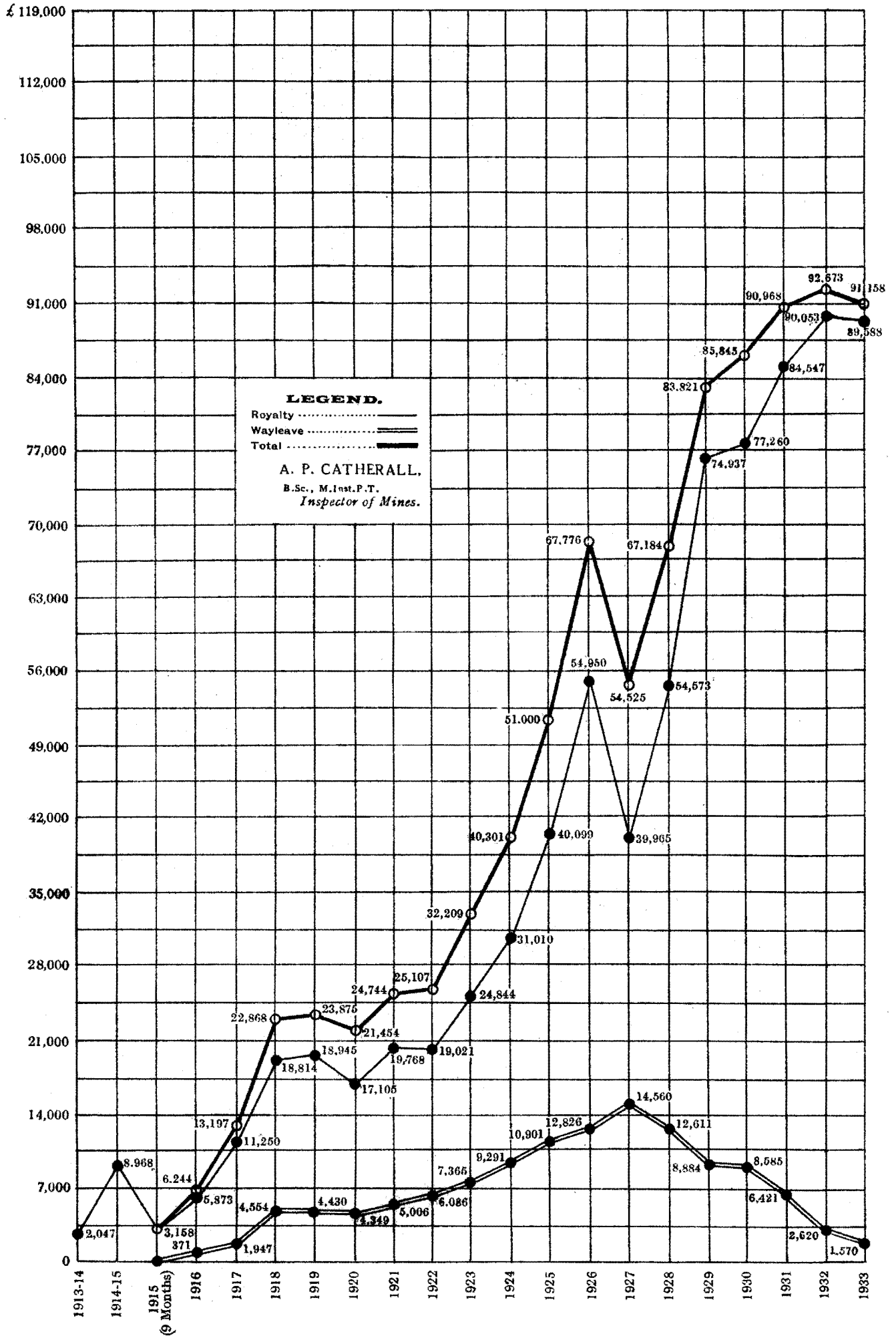
Minerals Quarried ——— Persons Employed ———



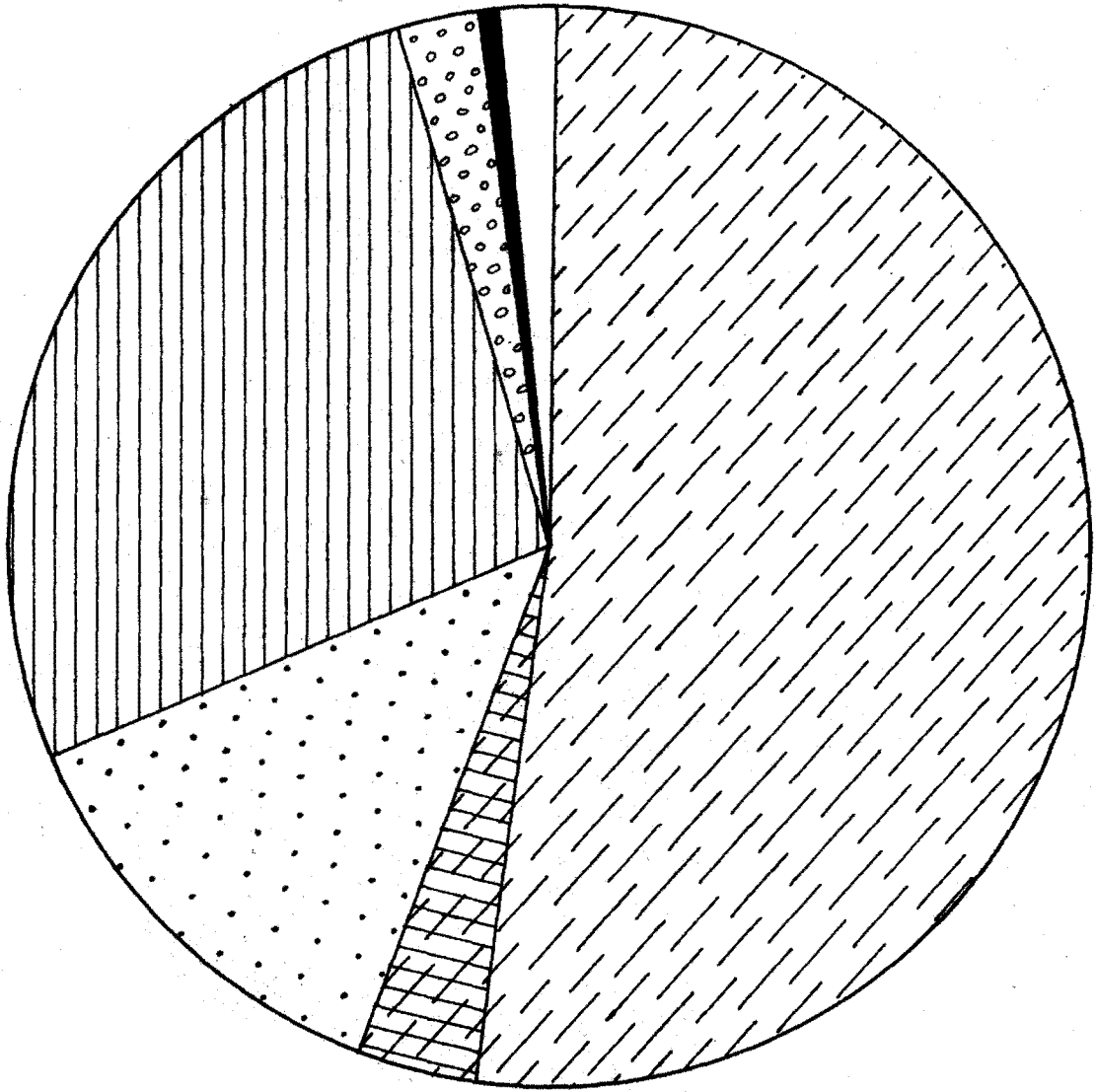
APPENDIX F.

H

ROYALTY AND WAYLEAVE.



APPENDIX G.



Mineral Exports 55.6%

Petroleum Products 52.1%

Asphalt 3.5%

Agricultural and other Exports 44.4%

Cocoa 12.9%

Sugar, Molasses, Rum 26.8%

Coconuts, Copra, Coconut Oil 2.5%

Bitters .5%

Other Exports 1.7%