1950

NEW ZEALAND

STATE COAL-MINES

(REPORT ON THE WORKING OF) FOR THE YEAR ENDED 31ST MARCH, 1950.

Prepared in Accordance With the Requirements of Section 184 of the Coal-mines Act, 1925

REPORT

BY THE HON. W. SULLIVAN, MINISTER OF MINES

MR. SPEAKER,—

I have the honour to present to Parliament the Balance-sheet, Statement of Accounts, and reports on the operations of the State Coal-mines for the year ended 31st March, 1950.

During the year the State acquired the following coal-mining undertakings:—

Name of Mine or Company.	Purchase-price.	Purpose.
	£	
Renown Collieries, Ltd., Huntly	186,000	Underground mining.
Linton Coal Co., Ltd., Ohai	159,216	Underground and opencast mining.
Burnwell Mine, Reefton	7,000	Underground mining.

UNDERGROUND OPERATIONS

NORTH AUCKLAND

Operations at the Kamo Mine were carried on steadily during the year, with an improved output being recorded. The mine generally is in better order for production, and higher outputs are expected when the belt haulage system has been installed. The drilling programme was not commenced owing to a suitable drill rig not being available.

Waikato District

At Rotowaro, limited development was carried out, production being mainly from pillar-extraction from previously developed areas, whilst at Alison No. 1 Mine, where all development has been completed, coal-winning was confined solely to pillar coal. At Alison No. 2 Mine all coal was won from development work. The crawler-type coal-cutters and power drills have been used with success in this colliery.

Operations continued normally at the Renown Colliery, which was recently acquired by the State.

At Glen Massey the extraction of coal from the No. 2 Mine was completed and the mine closed down. The No. 3. Wilton Mine has also ceased production and coal-winning is confined to the No. 3 Extended Mine, in which the area available for further development seems limited. Although some years of coal-winning from developed areas remain, the Department is giving consideration to possible new areas for the establishment of a new mine to replace the existing one when the extraction of available coal is nearing an end.

King-country

At the Mangapehi Colliery, Benneydale, the daily output showed a slight improvement, although, owing to the reduced number of days worked, the output for the year showed a slight decrease. This mine is being developed with a view to future operations being conducted on a plan of hydraulic stowage. Survey work for hydraulic stowage is nearing completion and road-formation work to the quarry site has been completed.

At the Tatu Mine, near Ohura, a slight increase in output was recorded, underground conditions being unchanged, the soft swelling floor of the coal-seam still necessitating costly maintenance work.

Buller District

Due to a reduction in the number of days worked, there was a reduction in output from both the Fly Creek and Webb Mines in the Stockton field. At Fly Creek, coal-winning was confined to pillar-extraction in the south area, whilst further progress was made with the development of a hydro scheme for winning the coal in the east area. Temporary and unexpected difficulties were encountered in the Webb Mine, in which complex faulting retarded development for a time. Satisfactory progress has been made with the erection of an aerial ropeway from the mines to the bins at Ngakawau, a distance of five and a half miles.

Pillar-extraction continued at the Millerton Colliery with good results on the whole, and a programme of boring has recently been commenced to try and locate a new area of coal suitable for underground mining.

At Denniston, mining operations have been satisfactory, but the long, expensive haulage system to railway has proved very costly for the reduced output compared with some years ago. Work is well under way on the opening-up of an additional mine at the Plateau area from which a good-quality coal suitable for gas-manufacture will be won and the erection of an aerial transport system from the mines to the bins at Denniston is proceeding and should greatly reduce haulage costs.

Reefton District

Generally the operations in this field have not been encouraging. Dip development at Burke's Creek has been pursued under difficult and costly conditions. At the Central Mine, haulage roads have been reconditioned, but dip development has met with varying conditions in the coal-seam. Underground heatings and trouble in maintaining main haulage roadways due to previous system of mining has caused problems for the management of the Burnwell Mine.

A steady output was obtained from the Garvey Creek Mine and work is proceeding to secure coal from opencast blocks on both sides of the creek. A contract has been let for the extension of the road to the main coal-bearing areas in this field, especially substantial blocks suitable for mining by the opencast method.

Grey District

An increased output was secured from the Liverpool Colliery with normal mining conditions. A decision was made to defer opening a new mine at Rewanui pending results of further boring at Mount Davy and a review of the coalfield generally.

At the Strongman Mine an increase in output was recorded, with conditions underground unchanged.

Steady outputs were obtained from the Blackball, Roa, and Dobson Mines under conditions similar to those noted in earlier reports.

At Wallsend, output and conditions have been normal, and the future life of the area will depend upon the outcome of the work on dewatering the old Tyneside Mine, which adjoins the Wallsend Colliery.

Ohai District

The Mossbank Mine continued on pillar-extraction with satisfactory results, although some spontaneous heatings have caused anxiety on occasions.

Successful development work at the Wairaki Mine has been carried out under much improved conditions now that the adjoining Star Mine is also under the same ownership.

Coal-winning in the Star and Birchwood Mines is confined to pillar-extraction, and increased outputs were secured from both mines.

The acquisition of the Linton Coal Co.'s property by the State, and the possibility of a large area being suitable for opencast mining, may necessitate a revision of plans for underground development in the district, including the Morley project. No decision will be made until drilling has been completed, when full consideration will be given to all factors involved.

OPENCAST OPERATIONS

Waikato District

At Kemp's, coal-production was completed in June, 1949, 239,314 tons of coal having been won. The overburden in this area was 9·665 cubic yards to each ton of coal. The financial results of this venture as shown by the accounts does not reflect the true position owing to the artificial price-subsidy structure under which these undertakings were operated in the past.

As a replacement to Kemp's, the Hillcrest Opencast Mine was commenced at Glen Massey, and by May, 1950, operations were completed, 380,000 cubic yards having been stripped for a recovery of 54,282 tons of coal.

At Lake Kimihia, the No. 1 area was completed last year, 250,586 tons of coal having been won in a most successful operation. A further block is now being worked, and this is estimated to contain nearly 500,000 tons of good-quality coal. During the coming summer months a complete programme of drilling on the lake will be carried out in order to determine new opencast projects and to provide for continuity of operations.

On the property of Taupiri Coal Mines, Ltd., opencast explorations have been accelerated and three areas, Thompson's, Barker's, and Devlin's, are in production and capable of producing not less than 900 tons daily when rail transport is available.

The initial project at Callaghan's did not fulfil early expectations, but at Weaver's Crossing close boring and surveys have disclosed an area of about 100 acres which will yield not less than 4,000,000 tons of good-quality coal, the ratio of overburden to coal being about 5 to 1. It is intended to commence work on this project as soon as certain engineering problems have been settled and other formalities concluded.

At Barker's area the possibility of extensions to recover a further 500,000 tons of coal by opencast means is being examined in detail, and the prospects look very good indeed.

Other potential areas at Maori Farm and in the vicinity thereof will be investigated by the project engineer as soon as possible.

A bright future for opencast coal-mining in the Huntly district is indicated.

King-country

At Waitewhena, where conditions are not easy during the wet season, work proceeded with a commendable record of steady work. Small blocks not suitable for opencast work have been let to parties of miners working on a co-operative basis. The contractors have now taken over all phases of the opencast operation, and a general improvement has resulted.

Buller District

Delay in securing plant held up work on a small opencast block at Denniston, but road access has now been completed and coal-production should commence in the near future.

At Stockton a decrease in output was due to less days being worked than usual. A very large area of coal to be won by opencast methods has been proved and modern expensive plant to deal with a large output is on the site. Unfortunately, the loss by fire of No. 4 substation has greatly reduced the haulage capacity of the existing transport. Exhaustive efforts to obtain replacement plant in N.Z. were fruitless, and an order had to be placed in England for a mercury arc rectifier, which is expected to arrive within a few months. When installed, this will give some relief, but full advantage of the productive capacity of the opencast project will not be secured until the new aerial ropeway is functioning.

Reefton District

Production from the south-east side of the vertical seam at Garvey Creek has been slower to commence than anticipated, but it should be under way this summer. Arrangements for stripping two small blocks on the other side of the creek have been made. A contract for the first mile of road access to the main block has been let.

Otago District

A steady output was secured from the Wangaloa opencast area, which is being operated in a very satisfactory manner for the Department by the Ministry of Works. The State holds rights over a large area of coal in this district suitable for mining by the opencast method.

Ohai District

Production from the Black Diamond Mine again showed a substantial increase over that of the preceding year, and operations are being maintained on a satisfactory basis.

At McLean's Opencast, situated on the Star property, work was continued until the No. 1 Section was exhausted, when attention was directed to diverting the creek and other work preparatory to commencing operations on the adjoining No. 5 Section. Reserves of coal in this and the adjacent No. 2 Section are sufficient to maintain the present rate of production for some years to come.

The acquisition of the Linton property has considerably extended the scope of opencast mining in the Ohai field, and an area at present under investigation holds out promise of being suitable to opencast mining operations on a large scale.

GENERAL

While opencast mining was responsible last year for over 26 per cent. of the total coal production, considerable scope for expansion of this type of mining still remains. At the present time new projects capable of large-scale production in all the major coalfields with the exception of Grey are either in the process of development or under investigation.

Surveys and drilling operations are being continued in the search for additional opencast areas, and every effort will be made to expand this form of mining to the utmost.

OUTPUT

A comparative statement of outputs for the last two financial years is shown hereunder :—

Mine.	Output, 1949–50.		Output, 1948–49.		Percentage Variation in Gross Output.	Percentage Variation in Net Output.
	Gross.	Net.	Gross.	Net.		
	Tons.	Tons.	Tons.	Tons.		
Kamo	56,847	56,807	50,096	50,072	+ 13·48	+ 13·45
Kemp's Opencast*	12,125	12,125	68,084	68,084	..	..
Hillcrest†	48,253	48,253	..	..	..	..
Kimihia Opencast‡	35,953	35,953	78,340	78,340	..	..
Wilton	87,199	85,249	93,482	90,985	— 6·72	— 6·30
Mangapehi	38,119	37,225	38,190	36,210	— 0·19	+ 2·80
Tatu	38,229	36,400	30,800	29,535	+ 24·12	+ 23·24
Waitewhena Opencast	39,199	39,199	42,932	42,932	— 8·70	— 8·70
Denniston	76,203	66,045	75,904	66,320	+ 0·39	+ 0·41
Millerton	51,972	51,599	59,318	58,874	— 12·38	— 12·36
Stockton Mine and Opencast	196,968	191,551	214,933	209,741	— 8·36	— 8·67
Burke's Creek	19,284	18,907	20,462	19,612	— 5·76	— 3·59
Garvey Creek	14,880	14,782	12,560	12,451	+ 18·47	+ 18·72
Burnwell§	3,386	3,376	..	..	..	..
Central‖	4,329	4,294	75	68	..	..
Blackball	69,860	67,635	70,785	68,574	— 1·31	— 1·37
Dobson	74,276	71,748	69,121	67,230	+ 7·46	+ 6·72
Paparoa	31,217	30,500	27,651	26,865	+ 12·90	+ 13·53
Wallsend	55,840	52,780	55,953	53,868	— 0·20	— 2·02
Liverpool	100,037	97,400	93,114	90,220	+ 7·43	+ 7·96
Strongman	97,249	94,260	85,187	82,300	+ 14·16	+ 14·53
Wangaloa Opencast	41,111	41,111	45,462	45,462	— 9·57	— 9·57
Birchwood	23,695	22,790	22,524	21,633	+ 5·20	+ 5·35
Black Diamond Opencast	42,242	42,242	35,769	35,769	+ 18·10	+ 18·10
Mossbank	25,962	24,981	26,350	24,790	— 1·47	+ 0·77
Star	40,636	39,157	34,690	33,285	+ 17·14	+ 17·64
McLean's Opencast¶	43,690	43,690	8,728	8,728	..	..
Wairaki	65,634	60,941	66,215	61,730	— 0·88	— 1·28
Totals	1,434,395	1,391,000	1,426,725	1,383,678	..	..

* Mine ceased operations (worked out) in June, 1949. † Mine commenced operations in April, 1949.
‡ Operations in No. 1 area completed in December, 1949. § Mine acquired on 1st May, 1949. ‖ Mine acquired on 21st March, 1949. ¶ Mine commenced operations on 4th October, 1948.

SALES

The following table shows the total sales of coal from the State mines as compared with the previous year and the average f.o.r. price realized by each mine exclusive of subsidy :—

Mine.	Total Sales, 1949–50.	Total Sales, 1948–49.	Percentage Variation.	Average Price F.O.R. Realized.
	Tons.	Tons.		s. d.
Kamo	56,738	50,091	+ 13·27	26 1·73
Kemp's Opencast*	12,124	68,084	..	24 0·60
Hillcrest†	48,243	..	..	24 9·56
Kimihia Opencast‡	35,953	78,340	..	25 3·61
Wilton	85,206	90,876	— 6·24	23 8·38
Mangapehi	37,110	36,230	+ 2·43	24 3·62
Tatu	36,305	29,700	+ 22·24	27 2·05
Waitewhena Opencast	48,061	42,932	+ 11·95	23 11·37
Denniston	66,367	68,667	— 3·35	25 7·74
Millerton	52,191	57,790	— 9·69	28 0·96
Stockton Mine and Opencast ..	193,424	214,590	— 9·86	24 4·75
Burke's Creek	18,803	19,760	— 4·84	27 9·04
Garvey Creek	14,611	12,503	+ 16·86	29 11·30
Burnwell§	3,196	..	..	25 11·64
Central	4,347	46	..	24 10·34
Blackball	66,745	68,464	— 2·51	22 6·70
Dobson	70,008	66 355	+ 5·51	28 4·07
Paparoa	30,180	27,035	+ 11·63	27 8·14
Wallsend	53,080	51,753	+ 2·56	26 5·93
Liverpool	99,793	90,057	+ 10·81	23 3·33
Strongman	92,240	84,657	+ 8·96	27 3·32
Wangaloa Opencast	41,111	45,427	— 9·50	21 10·11
Birchwood	22,750	21,633	+ 5·16	24 11·63
Black Diamond Opencast ..	42,237	35,769	+ 18·08	20 11·00
Mossbank	24,946	24,790	+ 0·63	26 7·64
Star	39,104	33,285	+ 17·48	26 8·40
McLean's Opencast	43,690	8,728	..	31 8·09
Wairaki	60,857	61,681	— 1·34	26 7·79
Totals	1,399,420	1,389,243	..	..

* Mine ceased production in June, 1949. † Mine commenced production in April, 1949. ‡ No. 1 Area ceased production in December, 1949. § Mine acquired on 1st May, 1949.

The difference between the output shown in the previous table and sales is accounted for by (1) coal used on works, (2) waste, (3) free issues, and (4) opening and closing stocks.

OUTPUT PER MAN EMPLOYED

The following table shows (*a*) the output per calendar year per man employed underground and (*b*) the output per calendar year per man employed (underground and surface) :—

Mine.	1949.		1948.		1947.		1946.		1945.		1944.		1943.		1942.		1941.		1940.	
	Underground.	Total.	Underground.	Total.	Underground.	Total.	Underground.	Total.	Underground.	Total.	Underground.	Total.	Underground.	Total.	Underground.	Total.	Underground.	Total.	Underground.	Total.
	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.
Kamo ..	427	360	402	334	484	394	520	426	619	508	680	558	686	558	615	497	704	540	590	467
Wilton ..	484	404	617	444	492	363	557	398	639	456	669	478	658	471	606	459	834	613	789	608
Mangapehi	392	301	352	280	509	397	553	434	533	428	683	524	714	550	722	534	622	442	587	339*
Tatu ..	604	381	447	317	563	339	505	310	508	311	481	303	482	306	596	364	341	199	458	276
Denniston ..	340	241	390	278	405	293	434	317	495	376	576	433	614	464	717	502	715	507	632	461
Millerton ..	666	408	780	473	779	489	889	562	905	592	879	625	1,019	703	931	707	955	726	799	609
Stockton ..	600	357	772	520	724	484	764	509	655	451	731	438	633	418	782	520	812	547	852	576
Burke's Creek	289	220	341	265	496	344	371	272	†	..	750	531	565	442	624	456	655	476	528	392
Garvey Creek	407	348	401	342	239	189	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Burnwell ..	204	204	963	803	607	569	1,128	1,128	609	565	759	683	805	805	597	597	384	384	387	344
Central ..	211	179	453	396	469	402	778	681	306	240	230	184	..	..	..	..	..	..	..	..
Blackball ..	417	355	431	369	379	312	421	351	538	416	509	391	545	394	595	419	772	326	350	179
Dobson ..	364	299	373	306	353	287	316	257	333	271	382	318	418	349	549	453	540	443	517	423
Paparoa ..	484	346	480	347	482	371	570	410	676	491	800	503	988	620	878	532	607	440	718	509
Wallsend ..	417	337	437	344	359	291	357	282	415	329	346	290	422	352	478	369	466	356	414	326
Liverpool ..	397	311	354	274	412	293	441	336	468	352	498	371	583	440	672	504	715	521	528	410
Strongman	454	341	451	335	535	390	564	403	538	394	545	393	627	451	711	463	694	475	579	390
Birchwood	548	394	585	383	678	456	748	561	749	571	537	407	709	545	772	579	750	573	668	523
Mossbank	792	637	725	555	724	554	854	592	719	544	727	546	695	521	616	441	523	316	..	..
Star ..	835	606	790	603	900	653	1,012	620	841	634	1,019	736	1,016	715	946	719	713	539	867	650
Wairaki ..	678	487	823	604	936	669	960	686	866	624	924	647	955	669	1,309	804	800	561	720	538

OUTPUT PER MAN EMPLOYED—*continued*

Mine.	1939.		1938.		1937.		1936.		1935.		1934.		1933.		1932.		1931.		1930.	
	Under-ground.	Total.	Under-ground.	Total.	Under-ground.	Total.	Under-ground.	Total.	Under-ground.	Total.	Under-ground.	Total.	Under-ground.	Total.	Under-ground.	Total.	Under-ground.	Total.	Under-ground.	Total.
	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.
Kamo ..	678	481	438	322	522	387	709	515	560	395	331	214	..	..	..	..	..	..	..	..
Wilton ..	686	539	678	549	656	526	595	468	753	580	742	554	488	395	903	613	461	373	359	227
Mangapehi	809	589	739	554	719	629	1,135	883	530	441	40	11	..	..	..	..	..	..	..	..
Tatu ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Denniston	603	429	649	425	661	479	611	425	534	396	420	295	432	302	351	249	385	275	513	359
Millerton ..	854	616	969	700	963	685	969	653	936	628	872	564	623	421	492	376	225	184	443	374
Stockton ..	811	552	828	557	895	573	714	460	631	388	587	356	606	371	558	362	548	351	771	491
Burke's Creek	773	560	1,144	735	867	585	764	540	574	402	569	416	415	308	311	235	381	288	301	205
Garvey Creek	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Burnwell ..	261	228	1,524	1,524	166	166	17	17	419	419	221	221	276	276	147	147	281	281	369	369
Central ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Blackball ..	84*	53	565	314	600	437	478	328	713	444	476	346	654	444	932	607	451	259	392	319
Dobson ..	463	390	486	400	481	388	543	426	428	358	401	331	408	341	411	348	278	231	450	377
Paparoa ..	1,053	720	633	464	669	492	583	428	771	582	801	588	1,051	738	1,092	804	950	739	1,048	782
Wallsend ..	500	394	496	394	587	456	566	442	575	430	446	345	520	389	426	333	430	340	501	389
Liverpool ..	612	459	561	423	560	417	536	396	556	408	407	304	388	289	392	290	481	348	552	397
Strongman	281*	192	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Birchwood	547	431	322	246	550	426	521	396	543	379	514	364	576	440	517	388	560	406	456	286
Mossbank	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Star ..	579	404	783	536	694	490	851	601	722	532	864	610	700	467	417	239	..	..	..	..
Wairaki ..	714	567	674	525	543	412	721	463	764	562	702	520	656	410	261	208	631	454	564	420

* Mine worked portion of year only. † Separate output returns for Burke's Creek not available for 1945.

NOTE.—Some of the high output per man employed prior to 1944 are due to slack being raised from dump and credited to output.

SCREENING OF COAL

The following table shows the percentage of coal sold as unscreened and the results obtained from the screening of the balance of the output :—

Mine.	Percentage Sold as Unscreened.	Percentages of Screened and Small Obtained from Coal Screened.	
		Screened.	Small.
Kamo	100·00	..	..
Kemp's	5·63	35·36	64·64
Hill Crest	5·34	46·63	53·37
Kimihia	0·06	53·42	46·58
Waitewhena	4·62	28·78	71·22
Denniston	9·59	51·38	48·62
Millerton..	6·07	63·75	36·25
Stockton	24·49	53·22	46·78
Burke's Creek	5·61	40·43	59·57*
Garvey Creek	100·00	..	..
Burnwell..	20·45	10·24	89·76
Central	7·96	20·31	79·69
Blackball	6·16	36·73	63·27
Dobson	7·56	84·23	15·77
Paparoa	71·31	79·16	20·84
Wallsend	2·77	63·45	36·55
Liverpool	100·00	..	..
Strongman	9·62	76·51	23·49
Wangaloa	..	72·43	27·57
Birchwood	..	65·17	34·83
Black Diamond	11·73	79·96	20·04
Mossbank	..	76·63	23·37
Star	..	75·21	24·79
McLean's	..	78·06	21·94
Wairaki	..	77·86	22·14

Mine.	Percentage of House, Kitchen, and Slack (North Island Grading).			
	House.	Domestic.	Kitchen.	Slack.
Mangapehi	19·82	..	35·00	45·18
Wilton	..	50·64	..	49·36
Tatu	..	59·83	..	40·17

* Includes unscreened nuts.

ACCIDENT INSURANCE

The number of compensatable accidents at State coal-mines decreased from 1,406 for the year ended 31st March, 1949, to 1,310 for the year ended 31st March, 1950.

The cost of claims per cent. on wages paid amounted to £2 16s. 2d. for the year ended 31st March, 1950, as compared with £2 9s. 6d. for the previous year, while the average cost of each claim was £42 15s. 9d., as compared with £30 13s. 8d. These increases reflect the increased benefits payable under the Workers' Compensation Amendment Act, 1949, which were payable from 1st September, 1949, and also the more serious nature of injuries with consequent longer periods on compensation.

The Accident Insurance Working Account showed a surplus of £48,319 4s. 11d. on the year's working, as compared with £51,474 2s. 10d. for the previous year, and the Accident Insurance Reserve Account now stands at £217,673

The DISTRICT MANAGER, State Coal-mines, Kamo, to the UNDER-SECRETARY, Mines Department, Wellington.

SIR,— 11th May, 1950.

I have the honour to submit my report on the workings of the Kamo State Mine for the year ended 31st March, 1950.

Coal-winning.—The gross output for the year was 56,847 tons 8 cwt. 3 qr., an increase of 6,751 tons 12 cwt. 2 qr. when compared with the figures for the previous year. After allowing for the quantity used on works (40 tons 3 cwt. 1 qr.), there remained for disposal a net output of 56,807 tons 5 cwt. 2 qr.

Taking into account the stocks at the beginning and end of the year, the following statement shows details of the coal disposed of during the year :—

	Tons	cwt.	qr.	Tons	cwt.	qr.
1st April, 1949—						
Stock on hand	..					
Add net output for the period ..	56,807	5	2			
				56,807	5	2
31st March, 1950—						
Less stock on hand	..			..		
Total disposed of ..	..			56,807	5	2

Disposals

	Tons	cwt.	qr.			
Railed	50,680	18	0			
Local sales	4,906	16	3			
Sales to workmen and free issues ..	1,219	10	3			
				56,807	5	2

The gross output of the mine since its acquisition by the State on 5th January, 1948, totals 116,726 tons 10 cwt.

Days Worked.—The colliery worked 235 days out of a possible 240 ordinary working-days. The difference between the ordinary days worked and the possible number of working-days is accounted for as follows : 1 day holiday on the anniversary day of the province ; 1 day dispute regarding miners knocking off before the agreement time : 3 days deaths and funerals of employees.

Employees.—In connection with coal-winning, the average number of persons employed in and about the mine was 150 men, made up as follows—Underground : Coal-hewers, 38 ; deputies, shiftmen, and truckers, 90. Surface : 22 men.

Coal-hewers' Average Daily Earnings.—The coal-hewers' average daily earnings (gross) were £4 0s. 1d., and after deducting stores (explosives) their net return was £3 10s. 2d., an increase of 9s. 6d. per day when compared with the previous period.

Daily Output.—The average daily output was 241 tons 18 cwt., and the coal-hewers' average daily output was 7 tons 7 cwt. 1 qr., as compared with 207 tons 17 cwt. 1 qr. and 6 tons 9 cwt. 1 qr. respectively for the previous period. The total number of hewers' shifts for the year was 7,715.

Deficiencies.—No amounts were paid out under the minimum-wage clause during the year.

Accidents.—There were numerous accidents of a minor nature during the year, but no accident of a serious nature.

Mine-workings.—All the output has been won from developing places. Three sections have been worked as follows : East Dip Section, Slant Dip (bottom section), and Slant Dip (middle section). All the workings are now in the top seam.

Slant Dip (Middle Section): Six places are being developed on two shifts. The main developing levels have been driven to a point 20 chains from the Main Slant Dip The main level is standing on a fault in the meantime. The coal is good quality 7 ft. to 8 ft. thick. This section only requires to be driven another 6 chains to be in line with the Old South Dip which was stopped a long time ago when the coal-seam thinned and became unworkable.

Slant Dip (Bottom Section): Seven places are being developed on two shifts. The main developing levels have been driven to a point 40 chains from the Main Slant Dip. The main level is standing on a fault in the meantime, and development is being carried on in panels to the rise. This section only requires to be driven 9 chains to be in line with the Old South Dip. The coal is good quality 8 ft. to 9 ft. thick.

East Dip: Seven places are being developed on two shifts in the top seam. The top seam was picked up at a point 10 chains from the dip top. The Main Dip and Return Dip have been driven in the top seam 16 chains. An area is being developed in a north-west direction. The developing levels have been driven 7 chains, and a panel is being opened up on the rise of the seam. The coal is good quality 7 ft. to 8 ft. thick.

No. 6 Drive: This drive is being used as an additional intake air-course.

Transport: Arrangements are in hand to install a belt-conveyor system of haulage, from the bottom of the Slant Dip to the surface.

I have, &c.,
J. HADCROFT, District Manager.

The MANAGER, Wilton State Colliery, Ngaruawahia, to the UNDER-SECRETARY Mines Department, Wellington.

SIR,— 27th April, 1950.

I have the honour to submit my annual report of the working of the Wilton State Colliery for the year ended 31st March, 1950.

Output.—The gross output for the year was 87,199 tons 10 cwt., being a decrease of 6,282 tons 11 cwt. when compared with the previous year. After allowing for waste (1,188 tons 10 cwt.), and coal used on works (761 tons 11 cwt.), there remained for disposal a net output of 85,249 tons 9 cwt.

Taking into account the stocks at the beginning and end of year, the following statement shows details of the coal disposal during the year:—

	Tons	cwt.	qr.	Tons	cwt.	qr.
1st April, 1949—						
Stock in railway wagons	109	0	0			
Net output for year	85,249	9	0			
				85,358	9	0
31st March, 1950—						
Less stock in railway wagons				8	0	0
Total disposed of				85,350	9	0

Disposals

	Tons	cwt.	qr.			
Railed	45,897	18	0			
Railway sales	38,223	5	0			
Local and mine sales	..					
Sales to workmen and free issues ..	1,229	6	0			
				85,350	9	0

The gross output from the colliery since its acquisition by the Government on 20th October, 1944, amounts to 464,636 tons 13 cwt.

Days Worked.—The colliery worked 218 days 2¼ hours out of a possible 240 ordinary working-days. No statutory holidays were worked. The difference between the ordinary working-days (218 days 2¼ hours) and the possible number of working-days (240) is accounted for as follows: 7 days 3¾ hours, stopwork meetings; 1 day, Auckland carpenters' dispute; 1 day, funeral of an employee; ⅜ day, breakdown of engine; 1 day, breakdown on haulage; 5 days, dispute *re* machineman; 3 days, mass meetings, Huntly; ⅜ day, general election; ⅛ day, shortage of wagons; ⅜ day, medical meeting; 2 days, death of Hon. P. C. Webb.

Employees.—In connection with coal-winning the average number of persons employed in and about the mine was 196 men and 2 boys, made up as follows: Coal-hewers, 66; officials, shiftmen, truckers, 102. Surface, 28 men and 2 boys.

Coal-hewers' Average Daily Earnings.—The average daily earnings of the coal-hewers was £3 11s. 9d.; after deducting explosives the net return was £3 7s. 4d., an increase of 6s. 3d. per day when compared with the previous year.

Daily Output.—The average daily output from the mine was 398 tons 12 cwt. 2 qr. and the hewers' daily output was 6 tons 14 cwt. 3 qr., compared with 398 tons 4 cwt. and 6 tons 15 cwt. for the previous year. The number of hewers' shifts was 12,950, as compared with 13,962 for the previous year. NOTE.—The basis of computing hewer shifts at this mine has been altered to bring it into line with the basis used at other mines.

Deficiencies.—Nil.

Accidents.—During the year the number of accidents which necessitated absence from work for more than three days was 114, a decrease of 54 as compared with the previous year. On the 25th August, 1949, a miner sustained a fractured pelvis. On the 7th December, 1949, a shiftman sustained a fractured leg. Apart from these two accidents, none were of a serious nature.

Underground Workings.—No. 2 Mine: All coal won from this mine was from pillar-extraction. Production ceased at the mine, 7th July, 1949, all available coal having been extracted. All workmen employed were transferred to No. 3 Extended Mine.

No. 3 Mine: These workings ceased production 24th January, 1950. All coal which could be safely extracted without endangering the main haulage from the No. 3 Extended Mine was extracted.

No. 3 Extended Mine—No. 2 East Section: Pillar-extraction has been carried on north and south of haulage road. Wherever possible, the "places" have been machine cut.

No. 3 East Section: Development was continued to north and south of main headings. On the north side, development was continued for some 6 chains when a fairly extensive upthrow fault was encountered. Pillar-extraction was commenced at this point. On the south side, development was continued until a point was reached where the seam was split by thick intervening stone bands. Pillar-extraction was therefore commenced. In the Main and Tail Subsection, the main headings were driven to the outcrop when pillar-extraction commenced. Solid work on the outbye high side has recently been completed.

No. 4 East Section: All coal from this section was won from pillar-extraction.

No. 3 and 4 West: These are relatively small areas, and coal-production has been from small development in the former, and pillar-extraction in the latter.

No. 4 West Extended: The main headings were driven 6 chains, and the endless-rope haulage extend to this point. Development has thus proceeded to the south-east where the bulk of the coal in this area lies. Development has been greatly hindered by faulted ground—one fault of a series necessitated 1½ chains of stonework. Roof conditions have been exceedingly bad, requiring the setting of a large amount of timber. The main levels have been driven a distance of 10 chains and development at the main part of field commenced. A main and tail haulage has been installed to bring output to the main endless-rope haulage of this area. At present, conditions have substantially improved and the outlook is much better. The north-west side of the main heading is also being developed, but as the major fault of the field cuts this area, the amount of work therein will be small.

No. 1 and 2 West Sections: Pillar-extraction has been continued in the latter section during the year. The remaining undeveloped coal on low side of No. 2 West is being worked from No. 1 Area.

Coal-cutters, &c.—At present, in the colliery, 4 chain-type coal cutters, 3 electrically driven percussion coal-cutters, and 9 electric drills are in service.

Stone-dusting.—Stone-dusting and sampling has been carried out during the year.

Dangerous Occurrences.—The only dangerous occurrence during the year was a heating which took place in the No. 4 West Section—this was effectively dealt with.

Plant.—On the 5th September, 1949, a fire occurred at the main workshops, destroying a large amount of electrical and other equipment. New workshops on more modern lines have since been erected and equipped. All other plant in and about colliery has been kept in good condition.

Private Railway.—Maintenance work has been carried out during the year.

Bus Service.—At present, five buses are being operated by the contractors between Ngaruawahia and the mine. The service has been carried out efficiently during the year.

Housing and Mine Buildings.—Departmental houses situated in Ngaruawahia and Glen Massey have been maintained in good repair. An additional bathhouse to accommodate 40 men was completed. New workshops were erected. A new lunch-room was completed at screens.

I have, &c.,
J. BAIRD, Manager.

The SUPERINTENDENT, Mines Department, Huntly, to the UNDER-SECRETARY, Mines Department, Wellington.

SIR,— 1st April, 1950.

I have the honour to submit my report on the State opencast coal-mines in the Waikato district for the year ended 31st March, 1950.

KEMP'S OPENCAST MINE, GLEN MASSEY

All coal-mining operations at this mine were completed in June. The total overburden removed since operations commenced is 2,313,149 cubic yards, and the total quantity of coal removed from this area is 239,314 tons.

The foregoing represents a ratio of 9·665 cubic yards of overburden for each ton of coal won.

It would have been impracticable to recover the coal-seams by the method of underground mining practiced in this district, and the complete manner in which the maximum recovery of coal has been effected by the opencast method of work is a credit to the operators, and provides a definite indication of the stripping ratio limits which can be successfully undertaken under reasonably favourable operating conditions.

Stripping operations were carried out with Works Department plant.

Hillcrest Opencast Mine, Glen Massey

This is situated adjacent to the Wilton No. 2 Mine.

Since operations commenced at this mine 380,000 cubic yards of overburden have been removed. Stripping is completed. The quantity of coal recovered up to date is 48,253 tons.

Stripping operations were carried out by Works Department plant. It can be said that the opencast operations in the Glen Massey district have been carried out in a highly satisfactory manner.

Kimihia No. 1 Area

Mining operations have been completed at this area, the total quantity of overburden removed from this area is 1,045,200 cubic yards and the total quantity of coal recovered is 250,585 tons 16 cwt. 3 qr.

The railway siding in this area has been partially removed, and all plant used in connection with coal-winning has been dismantled.

Viewing the operations of this area in retrospect the position simply is that 250,000 tons of coal have been recovered by opencast-mining methods which could not have been attempted by our present methods of underground mining. The work has been performed in a skilful manner.

Kimihia, No. 5 Area

Stripping operations have been continued on this area throughout the year by the 120B Shovel with suitable earth transport vehicles. Stripping operations here are very subject to interruptions following periods of rain because the material is being removed from an original lake-bed and is of an unstable nature.

As a result of favourable weather conditions, 555,800 cubic yards of overburden have now been removed, and a further quantity of material has also been removed for the purpose of providing an access road into the area for coal-transportation purposes. The coal will be conveyed from the pit to the bins by belt-conveyor. The work of erecting the screening-plant and the installation of the necessary railway siding is at present in hand. It is expected that coal-production will commence in July of this year.

It is confidently expected that a large quantity of good-quality coal will be recovered from this area.

I have, &c.,

Job Hughes, Superintendent.

The District Manager, State Coal-mines, Benneydale, to the Under-Secretary, Mines Department, Wellington.

Sir,— 1st June, 1950.

I have the honour to submit my report on the working of the Mangapehi and Tatu Mines and the Waitewhena Opencast for the year ended 31st March, 1950.

Mangapehi Colliery

Output.—The gross output for the year was 38,118 tons 19 cwt., a decrease of 70 tons 19 cwt. when compared with the figures of the previous year. After allowing for waste (428 tons 19 cwt.) and the quantity used on works (465 tons) there remained for disposal a net output of 37,225 tons.

Taking into account the stocks at the beginning and the end of the year, the following statement shows details of the coal disposed of during the year :—

	Tons	cwt.	qr.	Tons	cwt.	qr.
1st April, 1949—						
Stock in bins and yard	58	9	0			
Add net output for year ..	37,225	0	0			
	37,283	9	0			
Less stock written off ..	39	9	0			
				37,244	0	0
31st March 1950—						
Less stock in bins and yard				48	0	0
				37,196	0	0

Disposals

	Tons	cwt.	qr.			
Local and mine sales	1,379	15	0			
Railed	35,165	5	0			
Sales to workmen and free issues ..	651	0	0			
				37,196	0	0

The gross output since the colliery was taken over by the State Coal-mines to date is 479,328 tons.

Days Worked.—The colliery worked 221 days 3 hours out of a possible of 240 ordinary working-days. The difference between the ordinary days worked and the possible number of working-days is accounted for as follows : Union meetings, 3½ days ; Waitewhena strike, 5½ days ; dispute *re* Saturday work, 1 day ; traffic dispute, ½ day ; mechanical breakdown, 1¼ days ; haulage alterations, 1½ days ; no wagons available, 1½ days ; funeral ex-employee, 1 day ; respect late Hon. P. C. Webb, 1 day ; polling, election day, ⅜ day ; smoke in mine due to bush-fires, 1 day ; no outturn of miners last backshift before Christmas, ½ day—a total of 18⅝ days.

Employees.—In connection with coal-winning, there were employed in and about the mine an average of 126 men and 2 boys, made up as follows—Underground : Coal-hewers, 30 ; deputies, shiftmen, and truckers, 73. Surface : 23 men and 2 boys.

Daily Earnings.—The coal-hewers' average daily earnings were (gross) £3 13s. 3d., and after deducting stores (explosives) their net return was £3 10s. 7d., an increase of 1s 8d. per day when compared with the previous year.

Daily Output.—The average daily output was 172 tons and the average per coal-hewer was 6 tons 5 cwt., as compared with 169 tons 5 cwt. and 5 tons 19 cwt. the previous year.

NOTE.—In addition, 1,932 tons of stone was filled during the year.

Hewers' Shifts.—Hewers' shifts worked were 6,105 out of a possible total of 7,180.

Deficiencies.—No amounts were paid under the minimum-wage clause during the year.

Accidents.—There were 44 accidents reported during the year, 3 being of a serious nature.

Underground Workings.—Due to the fact that it is proposed to extract the coal by mechanized means and to hydraulically stow the goaf, no pillar-extraction was attempted during the year, and operations were confined to the extension of No. 2 and No. 3 East levels.

No. 2 East level has been driven for a distance of 4,000 ft., but is now in such troubled country that development in this direction has been stopped in the meantime.

Further rise panel entries for E and F Panels were driven off No. 2 East level, but these entries encountered the same fault which cut off operations in No. 1 East level. At the time of writing this report all development in these entries has ceased.

No. 3 East level has now been driven a distance of 950 ft. from the Slant Dip. The distance between the No. 3 East levels and the Main Dip is 950 ft., and a pair of headings to connect these roadways have now been driven 450 ft. Coal in the No. 3 East working-places is of good quality.

The dip section at the end of No. 1 East has been dewatered, and it is proposed to enter this section from No. 2 East and to extract the pillars.

It is proposed to extract the coal between No. 2 and No. 3 East by mechanical means and to stow hydraulically the goaf. To this end a connecting heading between the two levels has been started. This heading has been broken away 2,000 ft. along the No. 2 East and to the dip; at the same time a rise heading has been broken away in No. 3 East to meet it.

During the year a new armoured main-feeder cable was installed in the mine, and a new 300 kVA. transformer was put into use.

A concrete overcast air-crossing was built at the head of No. 3 East Slant Dip, and this section is now ventilated on a separate split of air.

The temporary road bridge, which was built near the mine after a washout last year, has been lifted 3 ft. and permanent concrete piles built under it.

Township.—During the period the exterior painting of 13 houses and the interior decoration of 30 houses was completed.

A supper-room, with kitchen attached, was built on to the public hall. It will accommodate 100 persons.

Assistance was granted to the softball club, the croquet club, and the tennis club for improvements and maintenance of their respective playing-areas.

Waitewhena Opencast

Coal-winning.—The net output for the year ending 31st March, 1950, was 39,199 tons 1 cwt., a decrease of 3,732 tons 13 cwt. Coal from two parties operating on the Waitewhena field is purchased by the Department, and the following table sets out the quantities of coal passed over the screening-plant:—

	Tons	cwt.	qr.
Waitewhena Opencast	39,199	1	0
McKinley Wilson Brothers Party	7,900	8	0
Williams and Party	962	1	0
Gross output through screening-plant	48,061	10	0

The following statement shows details of coal disposed of during the year:—

1st April, 1949—	Tons	cwt.	qr.	Tons	cwt.	qr.
Stock in hand						
Add gross output	48,061	10	0			
Less stock in hand						
				48,061	10	0

Disposals

	Tons	cwt.	qr.			
Railed	48,009	10	0			
Workmen	51	0	0			
Railways	1	0	0			
				48,061	10	0

The net output of the Waitewhena Opencast since its inception amounts to 190,269 tons 10 cwt. 3 qr.

The year's output (39,199 tons 1 cwt.) has been won from No. 2 Area. No. 2 Area will be completed by extraction of a further 6,505 tons.

The opencast mine worked 241 days out of a possible 253 working-days. Twelve days were lost owing to a strike during April (union objecting to private contractor taking over No. 5 Area).

The average daily output was 162 tons 13 cwt.

Employees.—Thirty-five employees were engaged in the stripping, production of coal, cartage, and screening from the opencast, and were employed by the Ministry of Works, coal cartage contractor, and the Mines Department.

Accidents.—There were no serious accidents during the year.

Stripping.—Stripping was carried out by the Ministry of Works and the coal cartage and excavating contractor. Ministry of Works earthwork plant consisted of five D8 tractors and blades and two 12-cubic-yard carryalls.

The coal cartage excavating contractor's plant consisted of ten motor trucks averaging 5½ tons per load, carting coal from the mines to the Waitewhena Siding. A compressor and boring equipment is used at the mine for blasting the coal and a ⅝-cubic-yard shovel excavator is used for loading the coal. Earthwork plant consists of one ¾-cubic-yard shovel excavator and 1 TD 14 and one HD 10 tractor. Overburden removed during the year by the M.O.W. was 62,158 cubic yards. Overburden removed from No. 5 Area by the contractor was 46,675 cubic yards.

Mangarohe Access.—The new access up the Mangarohe Valley to No. 5 Area is almost completed.

Tatu Colliery

Coal-winning.—The gross output for the year was 38,229 tons 6 cwt., an increase of 7,429 tons 4 cwt. when compared with the output of the previous year. After allowing for waste (1,650 tons 2 cwt.) and the quantity of coal used on works (179 tons 10 cwt.), there remained a net output of 36,399 tons 14 cwt. for disposal.

Taking into account the stocks at the beginning and end of each year, the following statement shows details of coal disposed of during the year :—

	Tons	cwt.	qr.	Tons	cwt.	qr.
1st April, 1949—						
Stock in bins	40	0	0			
Add net output for year	36,399	14	0			
				36,439	14	0
31st March, 1950—						
Less stocks in bins				82	7	0
				36,357	7	0

Disposals

	Tons	cwt.	qr.			
Railed	34,270	1	0			
Mine sales	1,455	5	0			
Workmen	579	12	0			
Free	52	9	0			
				36,357	7	0

The gross output from the colliery since inception amounts to 279,083 tons 2 cwt.

Days Worked.—The Colliery worked 213 days 5 hours out of a possible 240 working-days. The difference is accounted for as follows—Strikes : Opencast dispute, 7 days ; pillar workings, 2 days 3½ hours ; Disputes : Trucker, 3 hours ; miners' walkout, 4 hours ;

transport service, 4 hours ; miscellaneous, 1 day 2 hours : Union meetings, 3 days ½ hour : no backshift (16th December), 4 hours ; polling day, 2 hours ; cable-line fouled, 6 hours ; aerial ropeway breakdowns, 4 days 6 hours ; bus breakdown, 1 hour ; mine flooded, 2 days ; fall in main haulage road, 1 day 4 hours ; runaways, 3 hours.

Employees.—In connection with coal-winning, the average number of men employed in and about the mine was 93 men and 2 boys, made up as follows—Underground : Hewers, 18 ; deputies, shiftmen, and truckers, 35 ; haulage road, 13 ; others, 2. On the surface : 25 men and 2 boys.

Hewers' Daily Average Earnings.—The coal-hewers' daily earnings were : Gross, £4 15s. 8d. ; net (*i.e.*, after deducting stores explosives), £4 7s. 5d. This shows an increase of 15s. 3d. per day on last year's earnings.

Daily Output.—The average daily output was 178 tons 18 cwt. and the average daily output per coal-hewer was 11 tons 9 cwt., compared with 140 tons 4 cwt. and 8 tons 12 cwt. for the previous year. The total number of hewer shifts for the year was 3,343.

Accidents.—During the year there were no serious accidents and there were 64 minor accidents.

Workings.—During the year the Main South Headings were driven a further distance of 2 chains, further development in that direction being discontinued due to the length of the main haulage.

The development of No. 3 Panel was completed up to the Cunningham Fault and extraction commenced, the results obtained being excellent. Only two pillars remain to be extracted in this section.

No. 4 Rise Panel is in course of development in good quality coal 7 ft. to 8 ft. thick, and a new pair of Main Development Headings have been driven 4 chains to the rise from the Main South Headings towards the Cunningham Fault. The intention is to pick up the seam on the downthrow side. This fault has every appearance of becoming more troublesome, having increased from 2 ft. to 10 ft. in a distance of 8 chains.

The V.J. Fault has been crossed by a Dip Heading which has penetrated 100 ft. into the seam on the upthrow side, the throw of the fault at that point being only 4 ft. Further development in this direction has been halted because of the heaved floor in the approaches thereto. A shortage of labour necessary to carry out the brushing-work is hampering the resumption of production in this section.

The Main Return Airway was holed through in May, but the use of the new airway was held up due to the necessity of cleaning a further section of 15 chains which was completely blocked by falls and heaved floor. This represented a major operation and was concluded in January with a rocker shovel which greatly expedited the job. The new airway is now in use and has effected a considerable improvement in ventilation.

The soft floor has necessitated a very large amount of maintenance work in keeping airways open and will continue to do so in direct proportion to their length. This problem has been accentuated by the difficulty experienced over the last twelve months in obtaining labour. The old West Return Airway required a great deal of attention in order to keep it open until the Main Return was completed.

Where possible the permanent air-stoppings have been extended, but a considerable number still remain to be constructed.

The centrifugal pump in the West has been withdrawn and is in process of being overhauled and installed in the Barrier Sump with a new 4 in. delivery column which has been laid. A considerable improvement in coping with the mine water in the coming winter should be expected.

A large amount of repair work has been carried out to the aerial ropeway. Various towers have been strengthened, wheels rebushed, &c., and a new tower has been built to replace No. 19 (5 ft. 6 in. higher than the old one).

I have, &c.,

T. YOUNG, District Manager.

The DISTRICT MANAGER, State Coal-mines, Ngakawau, to the UNDER-SECRETARY, Mines Department, Wellington.

SIR,— 13th June, 1950.

I have the honour to submit my report on the workings of the Buller State-mines for the year ended 31st March, 1950.

STOCKTON STATE COAL-MINES

Output.—The gross output for the year from the Fly Creek and Webb Mines and "E" Hill Opencast was 196,968 tons 7 cwt. 2 qr., a decrease of 17,964 tons 16 cwt. 3 qr. when compared with the previous year. Gross outputs of the individual mines were as follows:

	Tons	cwt.	qr.
Fly Creek	25,658	0	3
Webb Mine	72,157	4	3
"E" Hill Opencast	99,153	2	0
	196,968	7	2

After allowing for waste (207 tons 7 cwt. 2 qr.) and coal used on works (5,210 tons), there remained for disposal a net output of 191,551 tons.

Taking into account the stocks at the beginning of the year, the following statement shows details of the coal disposed of during the year:—

	Tons	cwt.	qr.	Tons	cwt.	qr.
1st April, 1949						
Stocks on wharf	1,822	14	0			
Stock in bins and yard	1,800	0	0			
				3,622	14	0
Add surplus stock taken on charge	2,657	8	1			
Add net output for year	191,551	0	0			
				194,208	8	1
				197,831	2	1
31st March, 1950						
Less stock in bins and yard	2,450	0	0			
Less stock on wharf	1,488	8	0			
				3,938	8	0
Total disposed of				193,892	14	1

Disposals

	Tons	cwt.	qr.			
Shipped	135,462	8	1			
Railed	15,018	14	3			
Railway sales	39,943	1	0			
Local and mine sales	2,195	4	1			
Workmen and free issues	1,273	6	0			
				193,892	14	1

The gross output of the collieries since being taken over by the State on 1st July, 1944, totals 1,238,097 tons 12 cwt.

Days Worked.—Fly Creek Colliery worked 206$\frac{2}{7}$ days out of a possible 240 days. The difference between the ordinary days worked, 206$\frac{2}{7}$, and the possible number of working-days is accounted for as follows: Union stop-work meetings, 5$\frac{2}{7}$ days; dispute *re* doctor, 6 days; strike *re* cavil, 15 days; deputies' strike, 4 days; power failure, 1 day; polling days, $\frac{3}{7}$ day; Hon. P. C. Webb's death, 1 day; fall of snow, 1 day 33$\frac{5}{7}$ days.

Webb Colliery worked 206$\frac{2}{7}$ days out of a possible 240 days. The difference between the ordinary days worked, 206$\frac{2}{7}$, and the possible number of working-days is accounted for as follows:—Union stop-work meetings, 5$\frac{2}{7}$ days; dispute *re* doctor, 6 days; strike *re* cavil, 15 days; deputies' strike, 4 days; power failure, 1 day; fall of snow, 1 day; polling days, $\frac{3}{7}$ day; Hon. P. C. Webb's death, 1 day—33$\frac{5}{7}$ days.

"E" Hill Opencast worked 207$\frac{1}{8}$ days out of a possible 240 days. The difference between the ordinary days worked, 207$\frac{1}{8}$, and the possible number of working-days is accounted for as follows:—Union stop-work meetings, 4$\frac{4}{8}$ days; dispute *re* doctor, 6 days; strike *re* cavil, 15 days; deputies' strike, 4 days; power failure, 1 day; fall of snow, 1 day; polling days, $\frac{3}{8}$ day; Hon. P. C. Webb's death, 1 day—32$\frac{7}{8}$ days.

Employees.—In connection with coal-winning, the average number of persons employed in and about the mine was 341 men and 11 boys, made up as follows:—

Underground—	
Fly Creek—	
Coal-hewers	18
Deputies, shiftmen, and truckers	32
Webb Mine—	
Coal-hewers	36
Deputies, shiftmen, and truckers	78
Surface—	
"E" Hill Opencast—	
Machine operators and truck-drivers	37
Haulage, banking, screening, and loading, &c.—	
Men	140
Boys	11

Coal-hewers' Average Daily Earnings.—Fly Creek Colliery: The coal-hewer's average daily earnings (gross) were £4 1s. 5d., and after deducting stores (explosives) their net return was £3 18s. 2d., an increase of 1s. per day when compared with the previous period.

Webb Colliery: The coal-hewers' average daily earnings (gross) were £4 11s., and after deducting stores (explosives) their net return was £4 4s. 11d., an increase of 4s. per day when compared with the previous period.

Daily Outputs.—Fly Creek Colliery: The average daily output was 124 tons 7 cwt. 3 qr. and the coal-hewers' average daily output was 7 tons 4 cwt. 3 qr., as compared with 147 tons 10 cwt. 3 qr. and 7 tons 7 cwt. 1 qr. respectively for the previous year. The total number of hewer shifts was 3,544.

Webb Colliery: The average daily output was 349 tons 15 cwt 3 qr. and the coal-hewer's average daily output was 10 tons 15cwt. 1 qr. as compared with 311 tons 12 cwt. 2 qr. and 10 tons 13 cwt. 1 qr. respectively for the previous year. The total number of hewer shifts was 6,702.

"E" Hill Opencast: The average daily output was 478 tons 14 cwt. 1 qr. as compared with 438 tons for the previous year.

Accidents.—There were 138 accidents during the year, none being of a serious nature.

Underground Workings.—Fly Creek Mine: Operations were confined to pillar-extraction in the south area under very wet difficult conditions.

Steady progress is now being made with the installation of the pipe-lines for the hydro scheme in the east area.

In the Old Mine a new access drive from the escarpment has been completed, penetrating a large area of pillars of thick, hard coal.

Webb Mine: Unexpected difficulties, through faulting, seriously arrested progress with development for a period. The main headings have now penetrated beyond the troubled belt, in excellent coal.

Preparations are well in hand for the development of the Webb Extended Mine.

Opencast: Production during the year was fairly satisfactory. A large face has now been opened up on the main area. With the new equipment in use a large output should be obtained. Close boring has been continued over a large adjacent area, proving over 4,000,000 tons of excellent coal, within opencast range.

Survey and Prospecting.—Steady progress was maintained in surface mapping, and close boring Blocks F and G proving over 4,000,000 tons of low-ash, low-sulphur, and low-moisture coal.

In Baynes Block, which lies to the north of F and G scout, boring has proved about fifteen years' reserves for Webb Mine at the present rate of production.

Power-Station.—During the year a 1,500 kW. turbo generator was installed in the Ngakawau Power-house and a 11,000-volt six-panel switch board was built, and the necessary metering installed. One of the three water-tube boilers with the economizer was completed, and the new plant was put on load in December.

The Westport and district load was taken over from Denniston during the Christmas holidays (3 weeks) while the Denniston Plant was being overhauled. The Ngakawau Plant was able to do this while the mine was idle, but the changing over to the 50-cycle supply to the mine must be delayed until the arrival of 1,000 kVA. 11,000 to 6,600 volt transformer.

Boiler Installation.—The Department is arranging the completion of the installation of the boilers with its own employees, and this work is progressing satisfactorily.

New Power-lines.—The new 11,000-volt power-line from the Ngakawau Power-station through Granity, connecting up with the Denniston Power-line, is completed and the old low-tension line pulled down after transferring the low-tension lines on to the new poles. Two 11,000 to 415 volt transformers were also erected on this line at Granity and one at Ngakawau.

A new 11,000-volt line was erected from Ngakawau to Hector over the Ngakawau River and extended to the top of Hector. Two transformers are to be used in this area and one is erected, the other will be put up as soon as the earthing transformer comes to hand for the power-station. One of the 50 kVA. transformers purchased for Hector is being used for this duty in the meantime.

Ngakawau Bin Machinery Repairs.—During the Christmas holidays the machinery in the Ngakawau Bins was overhauled and a new driving-unit was installed on the first scraper conveyor, and a new distributing jigger was installed on the main screen.

A new power-line was built over Webb Mine and the high-tension power taken to a transformer at the 6 in. bore hole, where the 400-volt cable is taking the power underground. This will give an improvement in the voltage for the Webb Mine equipment which is being installed.

A branch of 6,600-volt line is also being erected to the Webb Mine Extended, and a winch, pump, and fan made ready to install at the Dip drive in this area.

In March, No. 4 Substation was destroyed by fire. This dislocated the running of the locomotives, but by regulating the traffic, coal transport is being maintained at a slightly reduced tonnage. Efforts to locate suitable equipment to replace that lost are being made.

Aerial Ropeway.—Progress has been maintained with the erection of the aerial. Thirty-five trestles foundations have been completed and eleven trestles erected. Access routes to trestle sites on Sections 3 and 4 are well advanced.

Excavations at No. 3 loop are in hand, also excavations for trestle foundations on Section 3.

Millerton Colliery

Coal-winning.—The gross output for the year from the colliery was 51,972 tons 8 cwt. A decrease of 7,345 tons 5 cwt. when compared with the previous year. After allowing for waste (236 tons 8 cwt.) and coal used on works (136 tons 12 cwt.), there remained for disposal a net output of 51,599 tons 8 cwt.

Taking into account the stocks at the beginning of the year, the statement shows details of the coal disposed of during the year:—

	Tons	cwt.	qr.	Tons	cwt.	qr.
1st April, 1949—						
Stock on wharf	420	9	0			
Stock in bins and yard	648	1	1			
				1,068	10	1
Add net output for year				51,599	8	0
				52,667	18	1
31st March, 1950—						
Less stock in bins and yard ..	473	16	0			
Less stock on wharf	78	14	0			
				552	10	0
Total disposed of				52,115	8	1

Disposals

	Tons	cwt.	qr.			
Shipped	27,252	19	0			
Railed	15,786	11	1			
Railway sales	7,234	11	2			
Local and mine sales	774	2	2			
Workmen and free issue	1,067	4	0			
				52,115	8	1

The gross output of the colliery since being taken over by the State on 1st April, 1948, totals 111,290 tons 1 cwt.

Days Worked.—The colliery worked 228 days out of a possible 240 days. The difference between ordinary days worked 228 and the possible number of working-days is accounted for as follows: Union meetings, $2\frac{4}{7}$ days; strike *re* doctor, 4 days; deputies' strike, 4 days; licensing poll, $\frac{1}{7}$ day; general election, $\frac{2}{7}$ day; funeral of ex-employee, 1 day.

Employees.—In connection with coal-winning, the average number of persons employed in and about the mine was 112 men and 8 boys, made up as follows—Underground: Hewers, 26; deputies, shiftmen, and truckers, 42 men and 1 boy. Surface, 44 men and 7 boys.

Coal-hewers' Average Daily Earnings.—The coal-hewers' average daily earnings (gross) were £3 7s. 5d.; and after deducting stores (explosives) their net return was £3 4s. 2d., an increase of 1s. 6d. per day when compared with the previous year.

Daily Outputs.—The average daily output was 227 tons 19 cwt. and the coal-hewer's average daily output was 10 tons 19 cwt., as compared with 240 tons 17 cwt. and 11 tons 11 cwt. respectively for the previous year. The total number of hewer shifts worked was 4,747.

Accidents.—There were 32 accidents during the year, none being of a serious nature.

Underground Workings.—Old Dip Mine: Extraction of pillars was carried on without interruption in both sections of this mine, high coal being worked with satisfactory results in the Settlement section. In the lower area of the Old Dip, trouble was experienced with a fire which has been burning for many years. At a point 12 chains north-east of the present mine mouth, the fire ate its way over a concrete stopping, but luckily a

single block preparatory stopping with a doorway in it had been built in front. This was promptly sealed off. A further line of stoppings, 3 ft. thick, has been built and the area is again normal.

Mine Creek: In the Mangatini section, pillar-extraction was continued with three pairs of miners. An endeavour to extract the small pillars encountered difficulties, and, owing to the soft nature of the coal near the floor, heaving in the roadways was very prevalent. Heavy rains, too, at times rendered the places unworkable. Good results were obtained by the pair of miners in Pollock's Level, where high coal is being extracted. In the north-east area, development and prospecting was carried on by two pairs, but results so far have not been very encouraging. A new 5 in. circumference rope was put on Mine Creek endless haulage, approximately 4 miles of rope being required. During the year the final sealing off of the old fire areas in second, fourth, and sixth west areas was accomplished by a line of strong stoppings built in the vicinity of the "Cross Cut Flat."

Bathhouse.—The improvements which had been undertaken were finalized early in the year, and the new plant is working to satisfaction.

Cottages.—One new cottage was built in Granity by the mine carpenters, and another, similar in design, was started in Millerton. Inside renovations and outside painting was carried out on a number of cottages in Millerton.

Pipe-lines.—A new 6 in. line was installed on the main Millerton incline, the purpose being to lead water from a dam situated below Millerton Township down to the screens and workshops, all of which are operated by hydraulic rams and pelton wheels.

Denniston Colliery

Coal-winning.—The gross output for the year was 76,202 tons 10 cwt. An increase of 298 tons 1 cwt. when compared with the previous year. After allowing for waste (617 tons) and the quantity used on works (9,541 tons 3 cwt. 3 qr.), there remained for disposal a net output of 66,044 tons 6 cwt. 1 qr. Taking into account the stocks at the beginning and end of the year, the following statement shows details of the coal disposed of during the year:—

	Tons	cwt.	qr.	Tons	cwt.	qr.
1st April, 1949—						
Stock in bin and yard	150	0	0			
Stock on wharf	755	5	1			
				905	5	1
Add net output for year ..	66,044	6	1			
Add surplus taken on charge ..	284	7	1			
				66,328	13	2
				67,233	18	3
31st March, 1950—						
Less stock in bin and yard ..	80	0	0			
Less stock on wharf	821	14	0			
				901	14	0
Total disposed of ..	..			66,332	4	3

Disposals

	Tons	cwt.	qr.			
Shipped	57,109	13	3			
Railed	1,789	3	0			
Railway sales	171	14	1			
Local and mine sales	5,033	1	3			
Sales to workmen and free issues ..	2,228	12	0			
				66,332	4	3

The gross output of the colliery since being taken over by the State on 1st April, 1948, totals 152,106 tons 19 cwt.

Days Worked.—The colliery worked 228 days out of a possible 240 working-days. The difference between the ordinary days worked, 228, and the possible number of working-days is accounted for as follows: Deputies' dispute, 4 days; no doctor at Stockton, 3 days; union stop-work meetings, $3\frac{2}{7}$ days; polling days $\frac{2}{7}$ day; Hon. P. C. Webb's death, 1 day; Wellington *v.* Buller Rugby match, $\frac{2}{7}$ day.

Employees.—In connection with coal-winning the average number of persons employed in and about the mine was 279 men and 22 boys, made up as follows—Underground: Coal-hewers, 64; deputies, shiftmen, and truckers, 108 men and 2 boys. Surface, 107 men and 20 boys.

Coal-hewers' Average Daily Earnings.—The coal-hewers' average daily earnings (gross) were £3 4s. 4d., and after deducting stores (explosives) their net return was £3, an increase of 7s. per day when compared with the previous year.

Daily Output.—The average daily output was 334 tons 4 cwt. 2 qr. and the coal-hewers' average daily output was 6 tons 15 cwt. 2 qr., as compared with 310 tons 18 cwt. and 7 tons 14 cwt. 2 qr. respectively for the previous year. The total number of hewer shifts for the year was 11,249.

Accidents.—The accidents for the year totalled 185. There were no fatal or serious accidents.

Underground Operations.—Whareatea Colliery—

Forsyths Rope End Section: Places on pillar-extraction. This section is now practically exhausted.

Nine Box Jig Section, Fourth South: Production mainly from pillar-extraction and splitting of barrier pillars.

Scotties Section, Third South: Mainly pillar extraction including top coal. Two places have been driven to the dip on low side of the horse road south-easterly, to develop an area containing approximately 5 acres of coal, and is proceeding satisfactorily.

Kitchins Landing, First North: Development of the bottom seam proceeded throughout the year in good-quality coal 5 ft. to 6 ft. thick. Wet conditions prevailed in this area. Approximately 32,000 tons are now standing in pillars, but, unfortunately, the prospect headings have encountered numerous bands of stone in the seam which makes it appear that we have reached the limits of the particular split seam. However, when underground boring rig is procured, proof or otherwise of continuity could be obtained by drilling from the top-seam workings ahead of the present troubled ground. In the meantime the prospect headings have been stopped.

Waterloo Dip: Mainly on splitting and pillar-extraction, but a prospect heading is being driven in a westerly direction towards a borehole showing 19 ft. 6 in. of coal. Numerous attempts were made in the past to negotiate this troubled ground to reach the afore-mentioned area, but were abandoned. Satisfactory progress was made by shiftmen, and now a pair of miners are producing in 7 ft. of coal. If further progress is satisfactory an auxiliary fan will be installed to improve the ventilation.

Birchalls: Prospecting in the bottom seam is proceeding in a westerly direction and is showing satisfactory progress. In the top seam production is mainly from splitting and pillar-extraction.

Old Waterloo : Production in this section is confined mainly to splitting and robbing pillars, a percentage of which must be left for the purpose of supporting creeks on the surface.

Extension Section : In the bottom seam the artificial barrier has been completed by a number of concrete stoppings so as to allow of pillar-extraction when desired. Above this area in the top seam the same procedure is being adopted, and much more coal will be recovered from this area than what was at first anticipated due to excessive falls in the old roadways which have been negotiated by judicious splitting of the pillars.

Surface Operations.—Birchalls Opencast Area : Some preparatory work has been done on the formation of the access road from the bus-sheds, and the arrival of the machines to develop this area is now awaited.

Plateau Area : Much preparatory work has been done in this area—*i.e.*, access road, winch-house, with winch installed, compressor sheds, with two air-compressors installed, poles and power-lines for transmission of electric power, temporary substation, a scraper-loader has been fabricated, and the stone drive portals prepared in readiness for the successful tenderer for driving the respective drives. These drives will be approximately as follows : Main drive, length 650 ft., grade of 1 in 4·3 ; and a return drive, 450 ft., grade of 1 in 3, the estimated quantity of coal in this area is in the vicinity of 3,250,000 tons, and the seam will be tapped at its lowest workable thickness.

Cook's Lease : Prospecting over the latter part of the year has been confined to an area where three workable seams exist. This field has proved difficult due to the incidence of faulting, but up to date 1,219,000 tons of coal has been proved. A large portion of this coal could be worked by opencast methods.

I have, &c.,

T. H. McGHIE, District Manager.

THE DISTRICT MANAGER, State Coal-mines, Reefton, to the UNDER-SECRETARY, Mines Department, Wellington.

12th May, 1950.

SIR,—

I have the honour to submit my annual report on the workings of the Burke's Creek, Garvey Creek, Central, and Burnwell State Coal-mines for the year ended 31st March, 1950.

BURKE'S CREEK COLLIERY

Coal-winning.—The gross output for the year was 19,284 tons, a decrease of 1,177 tons 10 cwt. when compared with the figures for the previous year. After allowing for the quantity used on works (377 tons), there remained for disposal a net output of 18,907 tons.

Taking into account stocks at the beginning and end of the year, the following statement shows details of the coal disposed of during the year:—

	Tons	cwt.	qr.	Tons	cwt.	qr
1st April, 1949—						
Stock in bin and yard	100	4	1			
Stock on dump	40	0	0			
				140	4	1
Add net output for year				18,907	0	0
				19,047	4	1
31st March, 1950—						
Less stock on hand	63	15	3			
Less stock on dump	40	0	0			
				103	15	3
Total disposed of				18,943	8	2

Disposals

	Tons.	cwt.	qr.			
Shipped	112	15	0			
Railed to Canterbury, &c.	16,090	0	1			
Local and mine sales	1,966	2	0			
Sales to workmen and free issues ..	774	11	1			
				18,943	8	2

The gross output of the colliery since its acquisition by the State on 3rd June, 1946, totals 74,120 tons.

Days Worked.—The colliery worked 236 days out of a possible 240 ordinary working-days. The difference is accounted for as follows: 1 day, breakdown of fan; ½ day, dispute *re* house coal; ½ day, breakdown of main winch; 1 day, clothes in bathhouse damp; 1 day, tribute late P. C. Webb.

Employees.—In connection with coal-winning, the average number of persons employed in and about the mine was 85 men and 5 boys, made up as follows—Underground: Coal-hewers, 18; deputies, shiftmen, and truckers, 47. Surface: 20 men and 5 boys.

Coal-hewers' Average Daily Earnings.—The coal-hewers' average daily earnings (gross) were £3 4s. 5d. per day, and after deducting stores (explosives) their net return was £3 1s. 4d., an increase of 4s. 3d. per day when compared with the previous period.

Daily Output.—The average daily output was 81 tons 14 cwt., and the coal-hewers' average daily output was 4 tons 3 cwt. 3 qr., as compared with 85 tons 10 cwt. and 5 tons 5 cwt. 2 qr. respectively for the previous period. The total number of hewer shifts for the year was 4,618.

Deficiencies.—There were no payments made under the minimum-wage clause during the year.

Accidents.—No serious accidents were reported at the Burke's Creek Colliery during the year.

Stone-dusting.—This work was carried out regularly in the dry portions of the mine.

Underground Workings.—The output for the period was obtained from development of the Alpine Section in the Bayne Area and from the extension of the Main Dip workings.

North-east Section—Bayne Area: The development levels at 144 ft. datum were extended to and stopped at the north-east boundary of the Bayne Area. A pair of rise headings were driven to the south-east for exploratory purposes and for the development of panels adjacent to the boundary. Development in this section (the Alpine) has proved the existence of two sharp north and south synclinal folds, approximately 10 chains

apart, associated with some faulting. The dips vary from 70 degrees to reverse grades within a few chains, necessitating the sinking of an exploratory dip from the crest of a pitching anticline, driving contour haulages around the troughs, and modification from time to time of the layouts for the sections.

On account of the folding of the strata, steep dips, and variation in grade, the output from development work has been low and handling costs high. The seam in the section is from 8 ft. to 12 ft. in thickness and of excellent quality.

Dip Extension: The Main Dip was extended to 10 ft. below datum and crossed by a level 200 ft. in length for sumpage. From 55 ft. and 20 ft. datums, pairs of levels were driven to the north-east and south-west for 9 and 11 chains respectively in coal of good quality up to 12 ft. in thickness, and an average grade of 1 in $2\frac{1}{2}$.

Floor heave is troublesome in this section and the roof and sides are difficult to hold. Although all places are driven narrow, in some cases only 4 ft. inside timber, heave, plus roof and side pressure, necessitate the ripping of the floor and the retimbering of the levels within a few weeks of driving.

Preparations are in hand for the sinking of dips to determine the extent of workable coal below the north-east and south-west levels and for the development of dip panels.

In view of the results of drilling ahead of the dip workings, further extension of the Main Dip is deferred pending the results of dip sinking and panel development below the present bottom levels.

Main Haulage: Subsidiary haulages below the 144 ft. datum have been eliminated by the extension of the Main Dip haulage to the 20 ft. datum level. Turnouts and laybyes on each side of the dip are under construction in preparation for coal from panel development on each side of the Main Dip.

Reconditioning: The reconditioning of the main return airway in the lower section of the mine was continued. When experienced shiftmen are available for this work, the upper portion will be continued.

Pumps: An additional turbine pump, 300 g.p.m. was installed and other pumps re-arranged to give more effective service.

A winch, previously used for the Slant Dip, was installed in the Alpine Section, Bayne Area, to lower coal from the crest of the anticline to the main haulage level. A small winch and pump were installed to sink an exploratory dip from the 332 ft. datum of the Main Heading, Alpine Section.

Coal-drills: Two electrically-driven and two compressed-air-driven coal-drills were installed in the Alpine and Dip Extension Sections respectively.

Underground Cables: A 0·1 three-core underground feeder has been laid from the underground substation at the 144 ft. level to the Dip Extension, and a new three-core 7·064 cable laid into the Alpine Section, Bayne Area.

Surface Plant.—A shed, 8 ft. by 20 ft., for the storage of wire ropes, and an iron rack, 17 ft. by 10 ft., were erected during the period.

Screen Buildings.—The screen building and shelter shed for the tippler are completed and awaiting installation of the plant.

Electrical Equipment.—The 150 kVA. transformer was replaced by a 200 kVA. unit and a 300 amp. O.C.B. installed in the main substation.

Railway Extension. The railway between Reefton Station and the terminus at the old screening plant has been reconditioned by the staff of the New Zealand Railways. The extension of the track to the new screening plant is held up on account of shortage of staff and urgent work on the main line south of Reefton.

Drilling.—Three holes at 12-chain intervals on the line of the strike of the seam, and 8 to 10 chains ahead of the mine workings, were drilled through the coal measures to basement. This drilling indicates a thinning of the coal seams from north-east to south-west and an absence of workable coal ahead of and to the west of the Main Dip.

A fourth hole 31 chains ahead of the Main Dip failed to penetrate the "Old Man" gravels and was abandoned at a depth of 420 ft.

Garvey Creek Colliery

Coal-winning.—The gross output for the year was 14,693 tons, an increase of 2,133 tons 10 cwt. when compared with the figures for the previous year. After allowing for the quantity used on works (98 tons), there remained for disposal a net output of 14,595 tons. In addition, 187 tons 3 qr. was won by the contractors from the south-east Side Opencast, making a total net output of 14,782 tons 3 qr. for disposal.

Taking into account the stocks at the beginning and end of the year, the following statement shows details of the coal disposed of during the year:

	Tons	cwt.	qr.	Tons	cwt.	qr.
1st April, 1949—						
Stock in bin and yard	128	16	1			
Add net output for year ..	14,782	0	3			
				14,910	17	0
31st March, 1950—						
Less stock in bin and yard				277	16	2
Total disposed of				14,633	0	2

Disposals

	Tons	cwt.	qr.			
Shipped	3,980	6	3			
Railed to Canterbury, &c. ..	10,456	18	2			
Railway sales	12	10	1			
Local and mine sales	38	15	0			
Sales to workmen and free issues ..	144	10	0			
				14,633	0	2

The gross output from the colliery since its inception totals 34,325 tons 10 cwt. 3 qr.

Days Worked.—The colliery worked 233 days out of a possible 240 ordinary working-days. The difference is accounted for as follows: 5½ days, dispute *re* transport; ½ day, dispute *re* payment of averages; 1 day, tribute to late P. C. Webb.

Employees.—In connection with coal-winning, the average number of persons employed in and about the mine was 40 men, made up as follows—Underground: Coal-hewers, 10; deputies, shiftmen, and truckers, 26. Surface: 4 men.

Coal-hewers' Average Daily Earnings.—The coal-hewers' average daily earnings (gross) were £4 2s. 7d. per day, and after deducting stores (explosives) their net return was £3 17s. 8d., an increase of 7s. 11d. when compared with the previous period.

Daily Output.—The average daily output was 65 tons 17 cwt. 3 qrs. and the coal-hewers' average daily output was 5 tons 14 cwt. 1 qr., as compared with 54 tons 1 cwt. and 5 tons 6 cwt. respectively for the previous period. The total number of hewer shifts for the year was 2,536.

Deficiencies.—There were no payments made under the minimum-wage clause during the year.

Accidents.—No serious accidents were reported at the Garvey Creek Colliery during the year.

Stone-dusting.—This work was carried out regularly in the dry portions of the mine.

Development.—North-west Side: The four superimposed levels between the 1,300 ft. and 1,500 ft. datums have now advanced to the vicinity of the outcrops in Morris Creek. The driving of the two upper levels is completed; No. 3 Level holed through on the outcrop on the north side of Morris Creek, while No. 4 Level was approximately 1 chain short of holing into Morris Creek.

The two lower levels will be continued until No. 2 holes through on the south side of Morris Creek and No. 1 contacts the Morris Creek fault.

Nos. 2, 3, and 4 Levels are to be used as access to a block of shallow coal in Morris Creek suitable for opencasting. The stripping of this block is to be commenced in the near future.

The development work in this section has proved a rectangular block of rise coal 38 chains on the base and 216 ft. to the rise in which the seam varies from 15 ft. to 50 ft. in thickness. It contains stone and shale inclusions of varying thicknesses and concentration, which, in places, are of appreciable width. The coal is soft, but clean and of good quality. The average thickness of extractable coal in the block approximates 18 ft.

Upper Block : Two levels, the lower of which has been commenced, are to be driven at the 1,694 ft. and 1,744 ft. datums to provide access and haulage from a triangular block of coal on the crest of the ridge, the major portion of which will be won by opencasting. These levels are in hard coal of good quality. As was the case during the driving of the lower prospecting levels at 1,300 ft. datum, irregular inclusions of stone in the seam appreciably affect normal progress and coal-winning. These drives will be completed early in the spring and opencasting will be commenced from the north-west side of the ridge.

South-east Side : The driving of a new access from the surface along the footwall to No. 1 South-east Level is completed. One pair of men is now employed in this level driving a tunnel in stone along the footwall to prove the extent of the pinch out and thinning of the seam on which development in coal to the south-east has been stopped.

Opencasting—South-east Opencast : The contractors have removed 32,487 cubic yards of overburden from the crest of the ridge and exposed the seam down to No. 6 Level. A short access road was constructed to the portal of No. 1 South-east Level, and a bin of 50 tons capacity completed.

A steam-driven slack dragline is in position at the road head for hauling the coal from the upper portion of the opencast to the road bin.

Plant.—The incline on the north-west side between 1,300 ft. and 1,680 ft. levels, average grade 36°, is completed, and a 50 horse power winch installed for haulage of material and men to the top section.

The installation of the conveying plant between the 1,680 ft. level and the holding bin at 1,300 ft. is now completed and operating satisfactorily.

A coal-holding bin of 15 tons capacity was constructed on the 1,680 ft. level at the head of the incline to feed coal to a two-stage retarder conveyor, 730 ft. in length, installed on the south side of incline haulage.

At the foot of the incline a 30 in. horizontal belt conveyor, 60 ft. in length, receives coal from both the lower section of the mine and from the retarder, and delivers to a trimming scraper conveyor, 25 ft. in length, over the road bin.

A circular saw and power-driven drill-press were installed in the mine workshop.

Mine-buildings.—A carpenters' shop, 22 ft. by 12 ft., was completed and a shelter shed erected over the circular saw.

Magazine : A new magazine for explosives was completed.

Railway Siding.—The formation for the railway siding on the north side of the Reefton Station was completed, and a turnout and 3¼ chains of track laid to a new loading-bank, 80 ft. in length, which was built on the south end of the yard for the loading of unscreened coal.

Screening Plant.—Excavation for the site of a hopper to receive coal transported by road is completed and the approach ramps built up to formation height.

The concrete foundations for the screening plant are in and the steel framework for the building is completed.

Central Colliery

Coal-winning.—The gross output for the year was 4,329 tons and, after allowing for waste (25 tons) and the quantity used on works (10 tons) and the quantity raised from dump (126 tons), there remained for disposal a net output of 4,420 tons.

Taking into account the stocks at the beginning and end of the year, the following statement shows details of the coal disposed of during the year:—

	Tons	cwt.	qr.	Tons	cwt	qr.
1st April, 1949—						
Stock in bin and yard	49	14	3			
Add net output for year	4,420	0	0			
				4,469	14	3
31st March, 1950—						
Less stock on hand	21	15	3			
Less stock on dump	85	0	0			
				106	15	3
Total disposed of				4,362	19	0

Disposals

	Tons	cwt.	qr.			
Shipped	408	14	3			
Railed to Canterbury, &c.	3,780	16	0			
Railway sales	8	8	1			
Local and mine sales	137	0	0			
Sales to workmen and free issues ..	28	0	0			
				4,362	19	0

The gross output of the colliery since its acquisition by the State on 21st March, 1949, totals 4,404 tons.

Days Worked.—The colliery worked 239 days out of a possible 240 ordinary working-days. The difference is accounted for as follows: 1 day, tribute to late P. C. Webb.

Employees.—In connection with coal-winning, the average number of persons employed in and about the mine was 20 men, made up as follows—Underground: Coal-hewers, 6; deputies, shiftmen, and truckers, 12. Surface: 2 men.

Coal-hewers' Average Daily Earnings.—The coal-hewers' average daily earnings (gross) were £3 0s. 7d., and after deducting stores (explosives) their net return was £2 18s. 1d., an increase of 4s. 6d. when compared with the previous period.

Daily Output.—The average daily output was 18 tons 13 cwt. and the coal-hewers' average daily output was 3 tons 8 cwt. 1 qr., as compared with 8 tons 6 cwt. 3 qr. and 5 tons 17 cwt. 1 qr. respectively for the previous period. The total number of hewer shifts for the year was 1,251.

Deficiencies.—There were no payments made under the minimum-wage clause during the year.

Accidents.—No serious accidents were reported at the Central Colliery during the year.

Stone-dusting.—This work was carried out regularly in the dry portions of the mine.

Underground Workings.—The output was obtained during the period from sinking on the North Development Dip, the driving of necessary cut-throughs to the return and the extension of return headings.

Dip Extension: The North Dip was extended 274 ft. for the period in coal of variable quality containing stone intrusions. The seam showed a thickness of 12 ft., but at one stage thinned to 4 ft.

Two development levels have been extended north-east for a distance of 5 chains with the necessary cut-throughs for ventilation. These levels are to serve as intake and return for the proposed panel sections, and it will be necessary to drive a further distance of approximately 5 chains before the first panel will clear the adjoining lease. The coal is of a friable nature, and the seam maintains its normal height of 12 ft.

A new return section, 850 ft. in length, has been driven to bypass a badly fallen portion of the old return known as Clark's Level. The bypassed section was then sealed off.

Main Haulage Extension to the Surface: This heading has been driven on a rising grade a distance of 270 ft. The seam maintained a height of 8 ft. for a distance of 200 ft. and then gradually thinned down to 1 ft. of coal and 2 ft. of shale. It was necessary to rip 3 ft. 6 in. of mudstone to maintain height.

The distance to drive to the surface is 200 ft., and the intervening country consists of mudstone and surface gravels.

Main Sump: Included in the Dip Extension is a distance of 90 ft. From this dip levels will be broken away for the purpose of forming a main sump.

Reconditioning: Reconditioning of the main haulage roads has been carried out practically for their total length except for the stone drive which crosscuts the seam.

Winches: A 35 h.p. winch has been installed on the surface and a 10 h.p. winch underground.

Electric Cables: The main feeder underground has been replaced with a cable of higher carrying-capacity and a heavier cable run to the Bottom Dip Section.

Telephones: Three telephones have been installed in the underground workings connecting with one on the surface.

Surface Buildings.—A bicycle-shed has been erected to hold fifteen cycles. A building, 14 ft. by 12 ft., of rough timber has been erected to serve as a store.

Screening Plant.—An 18 in. belt conveyor has been installed to transport the small coal to the bin from the screen.

Burnwell Colliery

Coal-winning.—The gross output from 1st May, 1949, when the colliery was purchased by the State, to 31st March, 1950, was 3,386 tons 10 cwt. After allowing for the quantity used on works (10 tons), there remained for disposal a net output of 3,376 tons 10 cwt.

Taking into account the stock at the end of the period, the following statement shows details of the coal disposed of during the period:—

	Tons	cwt.	qr.	Tons	cwt.	qr.
Net output for period 31st March, 1950 ..	..			3,376	10	0
Less stock on hand	20	10	1			
Less stock on dump	145	0	0			
				165	10	1
Total disposed of	..			3,210	19	3

Disposals

	Tons	cwt.	qr.			
Shipped	482	18	0			
Railed to Canterbury, &c.	2,681	14	3			
Local sales	46	7	0			
				3,210	19	3

The gross output from the colliery since its purchase by the State on the 1st May, 1949, totals 3,386 tons 10 cwt.

Days Worked.—The colliery worked 221 days out of a possible 222 ordinary working-days. The difference is accounted for as follows: 1 day, tribute to late P. C. Webb.

Employees.—In connection with coal-winning, the average number of persons employed in and about the mine was 16 men, made up as follows—Underground: Coal-hewers, 5; deputies, shiftmen, and truckers, 11.

Coal-hewers' Average Daily Earnings.—The coal-hewers' average daily earnings (gross) were £3 2s. 3d. per day, and after deducting stores (explosives) their net return was £2 17s. 6d.

Daily Output.—The average daily output was 15 tons 6 cwt. 1 qr. and the coal-hewers' average daily output was 7 tons 19 cwt. 3 qr. The total number of hewer shifts for the period was 318.

Deficiencies.—There were no payments made under the minimum-wage clause during the period.

Accidents.—Two serious accidents occurred at this colliery. On 6th October, 1949, a trucker suffered a compound fracture of third metatarsal of the third toe, which was subsequently amputated. The accident occurred when a timber-jack slipped. On 13th February, 1950, a miner severed his left thumb as the result of an axe being deflected in the course of timbering.

Stone-dusting.—This work was carried out regularly in the dry portions of the mine.

This mine was acquired by the State on 1st May, 1949, and on account of deterioration in the outbye and older portion of the mine and the large tonnage of coal standing in pillars, further development to the east was stopped and preparations made to extract the coal already developed. The undeveloped area to the south-east of the existing mine will be developed at a later date from the Reddale Valley. Clearing of falls and the reconditioning of the main haulage to regain access to the inbye portion of the mine delayed the resumption of normal coal-winning for some weeks after the mine was acquired. On several occasions subsequent to the reconditioning of the haulage, normal coal-winning has been interrupted by heatings and falls on the haulage in the vicinity of the mine portal—a total of fourteen weeks' normal coal-hewing being lost from these causes. An appreciable tonnage of fallen coal was recovered during these periods.

The output for the period was obtained from clearing falls of coal during the reconditioning of the haulage roads and from the formation, splitting, and extraction of pillars in the inbye section of the mine.

Heatings.—Two areas in the older portion of the mine and adjacent to the mine mouths were sealed off by the erection of stoppings.

Return and Intake Airways.—The outbye portion of the intake roadways, which was driven in surface gravels, was unloaded of portion of the overburden and enlarged. The outlet of the return has since been treated in a similar manner.

Bins and Screening Plant.—New timber supports were placed under the holding bin and the structure was held together with wire-rope ties from side to side to prevent further settlement and bulging respectively.

A petrol-driven winch was installed near the mine mouth for the purpose of hauling timber and mine stores from the road head. A tram, 4 chains in length, has been laid from the mine mouth to the road head to facilitate haulage of supplies and timber.

I have, &c.,

R. T. H. DALE, District Manager.

From the SUPERINTENDENT, State Coal-mines, Greymouth, to the UNDER-SECRETARY, Mines Department, Wellington.

SIR,— 22nd June, 1950.

I have the honour to submit my annual report on the workings of the Liverpool, Strongman, Blackball, Wallsend, Dobson, and Paparoa State coal-mines for the year ended 31st March, 1950.

LIVERPOOL COLLIERY

Coal-winning.—The gross output for the year was 100,036 tons 17 cwt., an increase of 6,922 tons 17 cwt., when compared with the figures for the previous year. After allowing for waste (1,441 tons 17 cwt.) and the quantity used on works (1,195 tons), there remained for disposal a net output of 97,400 tons.

Taking into account the stocks at the beginning and end of the year, the following statement shows details of the coal disposed of during the year :—

	Tons	cwt.	qr.	Tons	cwt.	qr.
1st April, 1949 —						
Stock in bin and yard	2,458	17	1			
Stock on wharf	715	8	2			
				3,174	5	3
Add net output for year ..	97,400	0	0			
Add surplus stocks	2,000	0	0			
				99,400	0	0
				102,574	5	3
31st March, 1950—						
Less stock in bin and yard ..	2,933	17	3			
Less stock on wharf	..					
				2,933	17	3
Total disposed of	..			99,640	8	0

Disposals

	Tons	cwt.	qr.			
Shipped	49,012	11	0			
Railed to Canterbury, &c.	44,056	12	0			
Railway sales	908	18	2			
Local and mine sales	4,879	12	1			
Sales to workmen and free issues ..	782	14	1			
				99,640	8	0

The gross output from the colliery since its inception totals 4,547,262 tons 14 cwt.

Days Worked.—The colliery worked 226 days out of a possible 240 ordinary working-days. The difference between the ordinary days worked, 226, and the possible number of working-days is accounted for as follows: 6 days, deaths and funerals of workmen; 1 day, death of P. C. Webb; 2 days, slip on railway incline; 2 days, mechanical breakdown; 1 day, miners did not work; 1 day, international football match; 1 day, trucking dispute.

Employees.—In connection with coal-winning, the average number of persons employed in and about the mine was 304 men and 13 boys, made up as follows—Underground: Coal-hewers, 72; deputies, shiftmen, and truckers, 173. Surface: 59 men and 13 boys.

Coal-hewers' Average Daily Earnings.—The coal-hewers' average daily earnings (gross) were £3 15s. 4d., and after deducting stores (explosives) their net return was £3 11s. 8d., a decrease of 5d. per day when compared with the previous year.

Daily Output.—The average daily output was 442 tons 13 cwt. and the coal-hewers' average daily output was 6 tons 13 cwt., as compared with 443 tons 8 cwt. and 6 tons 17 cwt. respectively for the previous year. The total number of hewer shifts for the year was 15,030.

Deficiencies.—There were no payments made under the minimum-wage clause during the year.

Accidents.—On 27th April a deputy was struck by falling coal and died from his injuries before reaching the hospital. On 12th July a miner was struck by a falling prop, receiving head and shoulder injuries.

Stone-dusting.—Work under this heading was continued during the year. The number of samples taken from the Liverpool Colliery and analysed was 504. In addition, 208 samples from co-operative mines and 128 samples from other State coal-mines were also analysed.

Underground Workings.—Anderson Dip Section: Three pairs of miners engaged in reopening old roadways and extracting pillars. The bottom 6 chains of James Dip have been sealed and flooding of this area is taking place.

Two pairs of miners reopening or splitting for new roadway to extract pillars, Kennedy's Dip. It was found to be too costly to reopen level to prove fault in Kennedy's Dip as the proving of this fault can be done from the Morgan Seam below.

Kimbell East: One pair of miners opening up old No. 1 Bank in preparation for pillar-extraction, or, if future prospecting proves worth while, Ramage's Seam, a block of coal between the Kimbell and Top Mine, could be worked from this bank.

Kimbell West: Four pairs of miners extracting pillars in old fire area. The dip section has been worked out and is being flooded.

Morgan West Rise: Pillar-extraction is taking place by two pairs of miners in No. 3 Bank, three pairs in No. 2½ Bank, and one pair in No. 2 Bank.

Morgan West Level: The driving of this level has been continued in stone with a view to crossing a known fault to allow of prospecting above and below by boring. However, the width of faulted ground has been extensive and it is not practical to bore until more settled strata has been reached.

Morgan West Dip: Both East and West Levels are in good coal, thickness of coal in West Level approximately 14 ft. Thickness of coal in East Level—7 ft. coal on roof, 1 ft. stone and 12 ft. to 14 ft. coal on floor. Four pairs of miners developing. A prospecting dip off East Level, after being driven approximately 4 chains, flattened and appears to be rising. This place is stopped at present whilst a return airway is being driven, thickness of coal, 10 ft.

Morgan East Dip: Top Panel finished and sealed. No. 1 Panel: 1 pair of miners extracting pillars. No. 2 Panel: Three pairs of miners extracting pillars. The east side of this panel has been driven on to a fault. Boring is being carried out in this area and so far two holes have proved a 5 ft. and 4 ft. seam in each hole at approximately the same depth—134 ft. Coal appears dirty. Two pairs of miners developing East Heading in dirty coal which is expected to improve.

West Level Morgan East Dip: Six pairs of miners developing. Thickness of coal, 20 ft. to 25 ft.

Cust's Dip 4A Section: Three pairs of miners developing. Thickness of coal, 20 ft.

East Level Main Dip 4A: One pair of miners developing. This level has been driven approximately 12 chains, the last 2 chains in dirty coal. 3 ft. dirty coal on roof, 2 ft. stone and 3 ft. 10 in. coal on floor.

West Level 4A Main Dip: Two pairs of miners developing. Thickness of coal, 20 ft.

Main Dip 4A: This dip has been driven a further 4 chains, grade 1 in 2, thickness, 20 ft. At present one pair of miners employed putting a cut through for air whilst the dip face, which is very gassy, is standing.

STRONGMAN COLLIERY

Coal-winning.—The gross output for the year was 97,248 tons 14 cwt., an increase of 12,061 tons 9 cwt. when compared with the figures for the previous year. After allowing for waste (2,492 tons 14 cwt.) and the quantity used on works (496 tons), there remained for disposal a net output of 94,260 tons.

Taking into account the stocks at the beginning and end of the year, the following statement shows details of the coal disposed of during the year:—

	Tons	cwt.	qr.	Tons	cwt.	qr.
1st April, 1949						
Stock in bin and yard	153	19	3			
Stock on wharf	580	3	3			
				734	3	2
Add net output for year ..	94,260	0	0			
Add surplus stocks	850	0	0			
				95,110	0	0
				95,844	3	2
31st March, 1950						
Less stock in bin and yard ..	983	12	2			
Less stock on wharf	960	4	2			
Less stock on dump	195	0	0			
				2,138	17	0
Total disposed of				93,705	6	2

Disposals

	Tons	cwt.	qr.			
Shipped	60,317	11	3			
Railed to Canterbury, &c.	17,550	10	1			
Railway sales	2,889	9	0			
Local and mine sales	8,824	6	0			
Sales to workmen and free issues ..	4,123	9	2			
				93,705	6	2

The gross output from the colliery since its inception totals 995,875 tons 6 cwt.

Days Worked.—The colliery worked 233 days out of a possible 240 ordinary working-days. The difference between the ordinary days worked, 233, and the possible number of working-days is accounted for as follows: 4 days, deaths and funerals of workmen; 1 day, death of P. C. Webb; 1 day, tonnage dispute; 1 day, shortage of wagons.

Employees.—In connection with coal-winning, the average number of persons employed in and about the mine was 267 men and 5 boys, made up as follows:—Underground: coal-hewers, 73; deputies, shiftmen, and truckers, 132. Surface: 62 men and 5 boys.

Coal-hewers' Average Daily Earnings.—The coal-hewers' average daily earnings (gross) were £3 14s. 6d., and after deducting stores (explosives) their net return was £3 10s. 7d., a decrease of 1s. 2d. per day when compared with the previous year.

Daily Output.—The average daily output was 417 tons 8 cwt. and the coal-hewers' average daily output was 6 tons 5 cwt., as compared with 396 tons 4 cwt. and 6 tons 1 cwt. respectively for the previous year. The total number of hewer shifts for the year was 15,510.

Deficiencies.—There were no payments made under the minimum-wage clause during the year.

Accidents.—No serious accidents were reported at the Strongman Colliery during the year.

Stone-dusting.—Work under this heading was continued during the year. The total number of samples taken from the Strongman Colliery and analysed was 456.

Underground Workings.—Main East Heading: Main Heading advanced 3 chains. The average thickness of the coal is 13 ft. There are seven pairs of miners in this section.

South Sections : Developing work towards the Bob Fault has been completed, and pillar-extraction commenced with seven pairs of miners.

No. 1 South Section : Pillar-extraction has proceeded in the western portion of this panel with two pairs of miners.

No. 3 North Section : Two headings are proceeding north. Five pairs of miners are engaged in this section. Coal, 20 ft. thick.

No. 2 North Section : No. 3 Panel has been completed. No. 4 Panel stopped on thinning coal a distance of 48 chains from north of main drive. No. 2 North Heading has advanced 4 chains, average thickness of coal, 10 ft. Three pairs of miners employed. Serious faulting has occurred in this section cutting off some of the working-places.

Fault : Four pairs of miners have been engaged developing between No. 2 North and Doherty Fault. Average thickness of coal, 20 ft.

New Seam No. 2 North : Three pairs of miners are engaged developing. Average thickness of coal, 9 ft.

Slant Dip Section : Three pairs developing to the west, 5 chains down the Slant Dip, average thickness of coal, 9 ft. Panel between Slant Dip and Bob Fault completed. Three pairs engaged developing along the bottom of the panel towards the Bob Fault. Main Dip advanced 3 chains with an average thickness of 12 ft. of coal. Two pairs of miners employed.

Rise Panel Section : This section was stopped on thinning coal a distance of 25 chains from No. 2 Dip.

Blackball Colliery

Coal-winning.—The gross output for the year was 69,860 tons 3 cwt., a decrease of 924 tons 14 cwt. when compared with the figures for the previous year. After allowing for waste (1,831 tons 3 cwt.) and the quantity used on works (394 tons), there remained for disposal a net output of 67,635 tons.

Taking into account the stocks at the beginning and end of the year, the following statement shows details of the coal disposed of during the year :—

	Tons	cwt.	qr.	Tons	cwt.	qr.
1st April, 1949—						
Stock in bin and yard	1,471	8	0			
Stock on wharf	46	19	0			
				1,518	7	0
Add net output for year				67,635	0	0
				69,153	7	0
31st March, 1950—						
Less stock in bin and yard	2,332	1	0			
Less stock on wharf						
				2,332	1	0
Total disposed of				66,821	6	0

Disposals

	Tons	cwt.	qr.			
Shipped	26,650	14	0			
Railed to Canterbury, &c.	18,764	13	0			
Railway sales	16,445	8	0			
Local and mine sales	3,320	1	0			
Sales to workmen and free issues	1,640	10	0			
				66,821	6	0

The gross output from the colliery since it was taken over by State Coal-mines on 5th July, 1941, totals 482,988 tons 17 cwt.

Days Worked.—The colliery worked 235$\frac{2}{7}$ days out of a possible 240 ordinary working-days. The difference between the ordinary days worked, 235$\frac{2}{7}$ and the possible number of working-days is accounted for as follows: $\frac{4}{7}$ day, union meetings; 1 day, protracted union meeting; $\frac{1}{7}$ day, referendum on military training; $\frac{1}{7}$ day, international football match; $\frac{2}{7}$ day, general election day; 1$\frac{4}{7}$ days, funerals of former workmen; 1 day, bins full.

Employees.—In connection with coal-winning, the average number of persons employed in and about the mine was 184 men and 3 boys, made up as follows—Underground: Coal-hewers, 52; deputies, shiftmen, and truckers, 106 men and 1 boy. Surface: 26 men and 2 boys.

Coal-hewers' Average Daily Earnings.—The coal-hewers' average daily earnings (gross) were £3 8s. 1d., and after deducting stores (explosives) their net return was £3 4s., an increase of 1s. 6d. per day when compared with the previous year.

Daily Output.—The average daily output was 296 tons 18 cwt., 1 qr. and the coal-hewers' average daily output was 6 tons 3 cwt. 3 qr., as compared with 291 tons 19 cwt. 3 qr. and 6 tons 10 cwt. 3 qr. respectively for the previous year. The total number of hewer shifts for the year was 11,285.

Deficiencies.—The total amount paid under the minimum-wage clause was £4 8s.

Accidents.—On 4th July, 1949, a miner was caught by a fall of coal and suffered a fractured right leg and back injuries.

Underground Workings.—During the year twenty-six pairs of miners were employed giving an average daily output of approximately 300 tons. Six pairs of miners were employed on single shift, the others on double shift, giving ten pairs on backshift, the least miners required to keep the backshift running efficiently.

The screened-coal average has been approximately 37 per cent., and the seam generally is not conducive towards a high percentage of screenings due to the changeable nature of the seam, which may be hard and bright one day and soft and friable the next.

Two local heatings were sealed off during the year. One in the 4 Box Pillar Section and the other in the Sump Section. Neither of these heatings occurred through the extraction of pillars, but were the result of heavy falls in old roadways which were inaccessible and which could not be cleared in time to prevent combustion taking place.

Crow's Nest and Slant Dip: Good outputs have been maintained from these sections during the year. The coal, although friable, is of good quality. A 2-acre panel was formed at the bottom of the Slant Dip and the pillars are now being extracted. A connection was also made with the old south drive to ease the air restrictions on the main drive. This roadway will serve as a new return airway at some future date.

No. 2 South and Dunn's Dip: Considerable development work has been carried out in these areas during the year. Dunn's Dip, which was standing on thin coal, was driven on a dip of 1 in 4 for 4 chains when the coal thickened to 15 ft. The seam is soft and friable and the conditions wet, but the prospects are bright as the seam has been definitely proved between Dunn's Dip and the Slant Dip. The No. 2 South Heading was standing for a considerable period on thin coal and the roadways to this place had all caved in, but the falls were cleared and the face extended for 5 chains when the seam started to dip and the coal-seam thickened to 14 ft. The seam in this area is also soft and friable, but the thickness of the seam suggests that it is worth while developing this area which will be easy to ventilate and provide transport for the coal.

Perrin's Dip and Sump: Perrin's Dip was opened during the year, but after extending for 3 chains it was found that it was almost impossible to keep the places open due to heavy floor heave and thinning of the seam. A small panel was then formed in very uneven floor conditions with the seam still thinning, and it was then decided to extract the standing pillars back to the Sump Dip where two seals will completely isolate this area.

No. 3 South and Main Dip: The Main Dip was extended sufficiently to allow a 3-chain barrier between the Sump Dip and new heading to the south. These headings have now been driven for 7 chains in good hard coal in very wet conditions, and after extending for another 3 chains a panel can be opened to the rise bearing towards Perrin's Dip. In the No. 3 South Heading the seam was level for 2 chains, dipped on a gradient of 1 in 4 for 3 chains, is on a rise gradient for the next 1½ chains, and is again dipping at the face.

Main Dip: This dip was extended a further 11 chains during the year under the usual Blackball conditions. A white sandstone intrusion followed the line of the dip for 5 chains and had to be cut in every crosscut to the back airway. It is interesting to note that this intrusion is again showing in the Main Dip face after being absent during the driving of the last 4 chains. A large area has also been opened on the north side of the Main Dip and two headings are being driven in this direction, the coal has been well proved in this area and production will be maintained for a considerable period. The coal is of a hard bright nature, and a coal-cutter will be employed to undercut the coal.

North Dip: A large panel has been formed in this area, and will be the best natural sump yet found in the mine. There is at present storage for approximately 1,500,000 gallons of water with plenty of scope for extension if required.

Main Drive: Ten chains of the main drive were ripped and 12 ft. bars of tramway rails with 8 ft. concrete legs were erected. It should also be noted that three hundred tramway rails were used on the main roads in six months, as well as railway rails which have been coming to hand in small lots of fifty at a time.

Installations: Coal-drilling machines were installed throughout the mine. A coal-cutter in Perrin's Dip: a coal-cutter in the North Dip: a new 90 h.p. pump in the Bealey sump; a new 200 h.p. pump in the borough sump; two centrifugal pumps, each 25 h.p. in the North Dip sump: a 32 h.p. endless rope haulage in the Main Dip.

Difficult mining conditions, which have persisted over the previous years because of excess water and the very changeable nature of the seam, still prevail especially in the developing places. With the increased length of roadways to upkeep, and the increasing number of large plant installations being made as the mine extends, only increased production can combat the rise which will take place in overhead costs and keep them at a reasonable figure. To overcome this rising cost, development will have to be slightly retarded as these places are generally dips yielding low outputs, and the miners therefrom will be shifted to bords where much larger outputs should be obtained.

Wallsend Colliery

Coal-winning.—The gross output for the year was 55,839 tons 18 cwt. 3 qr., a decrease of 113 tons 5 cwt. 2 qr. when compared with the figures for the previous year. After allowing for waste (1,639 tons 18 cwt. 3 qr.) and the quantity used on works (1,420 tons), there remained for disposal a net output of 52,780 tons.

Taking into account the stocks at the beginning and end of the year, the following statement shows details of the coal disposed of during the year :—

	Tons	cwt.	qr.	Tons	cwt.	qr.
1st April, 1949—						
Stock in bin and yard	1,543	5	2			
Stock on wharf	399	11	0			
				1,942	16	2
Add net output for year				52,780	0	0
				54,722	16	2
31st March, 1950—						
Less stock in bin and yard ..	1,395	0	3			
Less stock on wharf	445	16	0			
				1,840	16	3
Total disposed of				52,881	19	3

Disposals

	Tons	cwt.	qr.			
Shipped	27,303	7	0			
Railed to Canterbury, &c.	11,514	12	0			
Railway sales	12,845	13	0			
Local and mine sales	1,209	7	3			
Sales to workmen and free issues ..	9	0	0			
				52,881	19	3

The gross output from the colliery since it was taken over by the State Coal-mines on 22nd February, 1943, totals 378,746 tons 0 cwt. 3 qr.

Days Worked.—The colliery worked 221½ days out of a possible 240 ordinary working-days. The difference between the ordinary days worked, 221½, and the possible number of working-days is accounted for as follows : 2¼ days, union meetings ; ½ day, referendum on military training ; ½ day, international football match : ⅔ day, election day ; 2 days idle after protracted union meetings ; 4 days, power failures ; 1 day, funeral of former workman ; 1 day, fault in mine-cage ; 2⅔ days, fault in winding wheel at top of shaft ; 3 days, fault in auxiliary shaft ; 1 day, bins full ; 1 day, death of P. C. Webb.

Employees.—In connection with coal-winning, the average number of persons employed in and about the mine was 155 men and 4 boys, made up as follows—Underground : Coal-hewers, 41 ; deputies, shiftmen, and truckers, 85 men and 1 boy. Surface : 29 men and 3 boys.

Coal-hewers' Average Daily Earnings.—The coal-hewers' average daily earnings (gross) were £3 19s. 11d., and after deducting stores (explosives) their net return was £3 16s. 10d., an increase of 7s. 9d. per day when compared with the previous year.

Daily Output.—The average daily output was 252 tons 10 cwt. and the coal-hewers' average daily output was 7 tons 0 cwt. 1 qr., as compared with 236 tons 7 cwt. 2 qr. and 6 tons 19 cwt. 3 qr. respectively for the previous year. The total number of hewer shifts for the year was 7,962.

Deficiencies.—There were no payments made under the minimum-wage clause during the year.

Accidents.—No serious accidents were reported at this colliery during the year.

Underground Workings.—No. 1 Section : Coal-production from this section was won from pillar-extraction only. The thickness of the seam is approximately 10 ft. This section is nearing completion.

No. 1A Section: This section is situated north-east of No. 1 Section and has for some years been abandoned. To gain access to this section it was necessary to clear and retimber approximately 20 chains of roadway through old workings adjacent to No. 1 Section. A small area of solid coal adjacent to the fault, where the thickness of the seam is approximately 10 ft., is being developed prior to extracting pillars.

Rise Working Between Shaft and Tyneside.—This section, which has been sealed off for some years, is now being reopened and ventilated for the purpose of surveying and determining the position of the present Wallsend workings in relation to the Tyneside. No further development will be done in this direction until the Tyneside has been dewatered.

An overcast was constructed near the shaft bottom to provide ventilation for the above section.

Old No. 2 Section: Approximately 4 chains of dip workings have yet to be dewatered to allow the fault in the dip heading to be prospected. The haulage road is being repaired as the water is lowered.

Very little coal has been won from this section for the year as the work done has been confined to the forming of haulage roads only.

No. 1 Slant Dip: Coal-production from this section has been won from pillar-extraction only. The thickness of the seam is 10 ft. This section is also nearing completion.

No. 2 Slant Dip: Coal-production from this section was won from pillar-extraction. This section is now completed. The Extension Section and B. Section have also been completed, and extraction is now confined to the haulage roadside pillars, two pillar widths on each side of the haulage road.

Preparations are being made to extract pillars from the six-box section.

Extensive repairs have been carried out on the storage bins and auxiliary shaft poppet heads.

A new picking belt, slack-conveyor, and slack-elevator were installed during the year.

Dobson Colliery

Coal-winning.—The gross output for the year was 74,276 tons 4 cwt. 2 qr., an increase of 5,154 tons 14 cwt. 3 qr. when compared with the figures for the previous year. After allowing for waste (2,198 tons 3 cwt. 2 qr.) and the quantity used on works (330 tons 1 cwt.), there remained for disposal a net output of 71,748 tons.

Taking into account the stocks at the beginning and end of the year, the following statement shows details of the coal disposed of during the year:—

	Tons	cwt.	qr.	Tons	cwt.	qr.
1st April, 1949—						
Stock in bin and yard	2,182	6	3			
Stock on wharf	444	5	0			
				2,626	11	3
Add net output for year ..	..			71,748	0	0
				74,374	11	3
31st March, 1950—						
Less stock in bin and yard ..	2,770	1	3			
Less stock on wharf	171	18	0			
				2,941	19	3
Total disposed of	..			71,432	12	0

Disposals

	Tons	cwt.	qr.	
Shipped	48,125	12	0	
Railed to Canterbury, &c.	15,150	19	0	
Railway sales	3,167	8	0	
Local and mine sales	2,348	13	0	
Sales to workmen and free issues ..	2,640	0	0	
				71,432 12 0

The gross output from the colliery since it was taken over by the State Coal-mines on 22nd February, 1943, totals 451,547 tons 7 cwt. 1 qr.

Days Worked.—The colliery worked 234 days out of a possible 240 ordinary working-days. The difference between the ordinary days worked, 234, and the possible number of working-days is accounted for as follows: $2\frac{3}{7}$ days, union meetings; 1 day, protracted union meeting; 1 day, power failure; $\frac{1}{7}$ day, referendum on military service; $\frac{1}{7}$ day, international football match; $\frac{2}{7}$ day, election day; 1 day, death of P. C. Webb.

Employees.—In connection with coal-winning, the average number of persons employed in and about the mine was 230 men and 5 boys made up as follows—Underground: Coal-hewers, 60; deputies, shiftmen, and truckers, 136. Surface: 34 men and 5 boys.

Coal-hewers' Average Daily Earnings.—The coal-hewers' average daily earnings (gross) were £3 13s. 10d., and after deducting stores (explosives) their net return was £3 10s. 2d., an increase of 2s. 7d. per day when compared with the previous year.

Daily Output.—The average daily output was 317 tons 8 cwt. 1 qr. and the coal-hewers' average daily output was 6 tons 0 cwt. 2 qr., as compared with 294 tons 17 cwt. and 5 tons 18 cwt. 2 qr. respectively for the previous year. The total number of hewer shifts for the year was 12,329.

Deficiencies.—There were no payments made under the minimum-wage clause during the year.

Accidents.—No serious accidents were reported at this colliery during the year.

Underground Workings.—Fifth West Section: This section in good coal about 12 ft. thick on the normal regular Dobson grade, was worked by twelve pairs of miners and has advanced about 5 chains to the dip. The workings are limited to the west by a faulting which is being met by levels as the dip workings extend down. Some underground drilling was done on this fault but no coal was found.

No. 2 Dip Section: Also in good regular coal similar to Fifth West. Is worked from the stone drive through the 30 ft. No. 2 Dip fault and has advanced ten chains to the west in coal below the Fifth West Section. Eight pairs of miners employed. Towards the end of the year a lower connection was made through the fault and this will be re-graded for a better haulage of the No. 2 Dip Section coal to the terminus of the main endless-rope haulage.

No. 1 Dip Section: This was advanced 10 chains to the dip by eight pairs of miners on this steep irregular development. The quality and thickness is normal but the grade has increased to 1 in 2, and the whole section appears to be under the influence of a steep roll which may possibly develop into a fault as the dips go down.

These dips are driven cross-measure to minimize the haulage grade and are now 16 chains away from Borehole No. 254, which proved 13 ft. of coal and which is actually the largest known unworked part of the field. It is interesting to note that these dip faces are now 1,700 ft. below sea-level and approximately a quarter of a mile past the Dobson Power-station.

Viaduct East Section: Approximately three pairs of miners worked this steep difficult East Section. This side, for reason of its difficulties, has always lagged behind.

General—Regarding Sections: The active development has always proceeded in the more favourable sections while the more difficult No. 1 and Viaduct Sections have not been persevered with to the same extent, and as the larger part of the remaining

field appears to be to the south and east, it is obvious that efforts will have to be made with this more costly development before the easier sections cut out. Not only are they more costly because of steepness and irregularity, but also because there is a serious deterioration in the roof condition, with its added cost of timber and allowances. Also, the larger pillar requirement makes for difficulty in ventilation with the resulting increase of gas, heat, and dust, to the extent that most future development will, before long, have to be done by working all faces to the dip.

Drilling: During the year several angle holes were drilled from underground to test the Fifth West fault, but no workable coal was cut. This appears to be a main faulting, but as soon as a drill is available further tests will be made.

Haulage—Power, &c.: After adjustments the main No. 1 Dip haulage with the recent extension worked well. The increased loading at the bottom has caused more rope-lift in depressions and continual regrading is going on, particularly in the places subject to floor heave. In general, work is proceeding on the scheme to land all coal at the bottom of this rope-road extension.

The success of future lower haulage depends entirely on electrical power extension.

Underground Maintenance and Repair: Timbering maintenance, an increasing and costly item, is being continued, and the greater crush as more acreage is left behind in pillars, calls for higher costs for labour and timber. Concrete stoppings have been advanced right up to the main sections and, in addition, crushed stoppings have been repaired.

Paparoa Colliery

Coal-winning.—The gross output for the year was 31,216 tons 11 cwt., an increase of 3,565 tons 6 cwt., when compared with the figures for the previous year. After allowing for waste (591 tons 11 cwt.) and the quantity used on works (125 tons), there remained for disposal a net output of 30,500 tons.

Taking into account the stocks at the beginning and end of the year the following statement shows details of the coal disposed of during the year:—

	Tons	cwt.	qr.	Tons	cwt.	qr.
1st April, 1949—						
Stock in bin and yard	1,029	8	0			
Stock on wharf	49	1	0			
				1,078	9	0
Add net output for year				30,500	0	0
				31,578	9	0
31st March, 1950—						
Less stock in bin and yard	1,410	10	0			
Less stock on wharf						
				1,410	10	0
Total disposed of				30,167	19	0

Disposals

	Tons	cwt.	qr.			
Shipped	10,185	6	0			
Railed to Canterbury, &c.	11,437	18	0			
Railway sales	6,952	11	0			
Local and mine sales	1,409	9	0			
Sales to workmen and free issues	182	15	0			
				30,167	19	0

The gross output from the colliery since it was taken over by the State Coal-mines on 25th April, 1947, totals 83,755 tons.

Days Worked.—The colliery worked 230 days out of a possible 240 ordinary working-days. The difference between the ordinary days worked, 230, and the possible number of working-days is accounted for as follows: $1\frac{3}{7}$ days, union meetings; 2 days, protracted union meetings; $\frac{2}{7}$ day, extra wet days; 1 day, dispute *re* miner working Saturday and union member acting as deputy; 2 days, disputes *re* wet-time places; 1 day, fan stoppage in West Section and flooding in Aerial Section; 1 day, international football match; $\frac{1}{7}$ day referendum on military training; $\frac{1}{7}$ day, cavil day; $\frac{1}{7}$ day, power-cut; $\frac{2}{7}$ day, general election day; $\frac{4}{7}$ day, death of P.C. Webb.

Employees.—In connection with coal-winning, the average number of persons employed in and about the mine was 79 men and 5 boys made up as follows—Underground: Coal-hewers 17; deputies, shiftmen, and truckers, 38 men and 1 boy. Surface: 24 men and 4 boys.

Coal-Hewers' Average Daily Earnings.—The coal-hewers' average daily earnings (gross) were £3 12s. 11d., and after deducting stores (explosives) their net return was £3 11s. 1d., an increase of 5s. 2d. per day when compared with the previous year.

Daily Output.—The average daily output was 135 tons 14 cwt. 2 qrs. and the coal-hewers' average daily output was 9 tons 7 cwt. 2 qr., as compared with 116 tons 10 cwt 3 qr. and 9 tons 1 cwt. 3 qr. respectively for the previous year. The total number of hewer shifts for the year was 3,328.

Deficiencies.—There were no payments made under the minimum-wage clause during the year.

Accidents.—No serious accidents were reported from this colliery during the year.

Underground Workings.—The output for the year from both sections of the Paparoa Mine, was derived mainly from pillar-extraction.

In the Aerial Mine a stone drive of 7 chains has been driven from the landing at the mouth of the mine to the level in the Waterfall Creek area. This drive is being prepared for a battery locomotive which will haul coal from the Waterfall Creek area where the coal is of a very good quality.

The fan at the Aerial Mine was shifted to a position approximately 2 chains north of the old site. When the fan was installed in the new position the air reading showed an increase of 18 per cent.

Owing to a slip, the fan at Soldiers' Creek in the West Mine was shifted 30 ft. back from the face of the hill and a new fan drift erected. This has proved satisfactory.

The high-tension power-line from Middle Flat to Soldiers' was completed and the power connected up in September.

Preparations are being made to develop a section in No. 2 Seam in the West Mine from the top tunnel.

I have, &c.,

C. J. STRONGMAN, Superintendent.

The DISTRICT ENGINEER, Works Department, Dunedin, to the PERMANENT HEAD, Works Department, Wellington.

(NOTE.—Wangaloa Opencast is operated by the Works Department on behalf of the State coal-mines.)

12th April, 1950.

I have to report on the Wangaloa Opencast as follows:—

Work on stripping of overburden and winning of coal has continued throughout the year with the usual seasonal fluctuations, and in spite of very wet winter conditions coal tallies were maintained at a high level during the winter months when the demand was high and a total coal output of 41,110 tons 13 cwt. was achieved. Approximately 170,000 cubic yards of overburden were removed during the year.

For the first half of the year the plant used for stripping overburden was two tractor-carryall units, one tractor and bulldozer, one tractor and rooter in the main cut, while one 1½ cubic yard dragline with two tractors and athey wagons were engaged in the "swamp area." In October two Tournapull units were introduced. In spite of minor hold-ups, excellent work has been done on a long uphill lead, and coal in now assured for the coming winter.

The stripping has consisted of a very "tight" conglomerate requiring continuous use of the rooter.

Access roads have given little trouble and 159 cubic yards of maintenance gravel have been spread and 102 cubic yards of crushed rock.

The Hudswell Diesel loco. at the bins has been replaced by a small steam loco. which has given very little trouble.

The mine buildings and camp are in good condition and have been painted and repaired during the slack coal period in the summer months.

A. G. PARK, District Engineer.

The DISTRICT MANAGER, State Coal-mines, Ohai, to the UNDER-SECRETARY, Mines Department, Wellington.

SIR,— 16th June, 1950.

I have the honour to submit my report on the workings of the Mossbank, Black Diamond, Wairaki, Star, Birchwood, and McLean's Opencast State Mines for the year 1st April, 1949, to the 31st March, 1950.

MOSSBANK COLLIERY

Coal-winning.—The gross output for the year was 25,962 tons 9 cwt. 1 qr., a decrease of 387 tons 17 cwt. 3 qr. when compared with the figures for the previous year. After allowing for waste (568 tons 1 cwt. 2 qr.) and the quantity used on works (413 tons 11 cwt. 3 qr.), there remained for disposal 24,980 tons 16 cwt.

The following statement shows details of coal disposed of during the year:—

	Tons	cwt.	qr.	Tons	cwt.	qr.
1st April, 1949—						
Stocks in yard		..				
Add net output for year ..	24,980	16	0			
31st March, 1950—						
Less stocks in yard		..				
Total disposed of ..				24,980	16	0

Disposals

	Tons	cwt.	qr.			
Railed	24,740	16	0			
Local and mine sales	1	0	0			
Workmen and free issues	239	0	0			
				24,980	16	0

The gross output for the colliery since taken over by the State on 2nd October, 1944, totals, 141,407 tons 10 cwt.

Days Worked.—The Mossbank Colliery worked 226 days out of a possible 240 ordinary working-days. The difference between the days worked and the possible number of ordinary working-days is accounted for as follows: 2 days, heating in workings; 2 days, power failures; 1 day, union meeting; 3 days, funerals of ex-members of Miners' Union; 3 days, disputes; 1 day, Easter Tuesday, 1949; 2 days, plant breakdowns.

Employees.—In connection with coal-winning, the average number of persons engaged in or about the mine was 39 men and 2 boys, made up as follows—Underground: Coal-hewers, 15; deputies, shiftmen, and truckers, 14. Surface: 10 men and 2 boys.

Daily Output.—The average daily output was 114 tons 17 cwt. 2 qr. and the coal-hewers' average daily output was 8 tons 0 cwt. 1 qr., as compared with 112 tons 12 cwt. and 8 tons 7 cwt. respectively for the previous year.

Deficiencies.—No payments were made to coal-hewers under the minimum-wage clause.

Coal-hewers' Average Daily Earnings.—The coal-hewers' average daily earnings (gross) were £3 9s. 11d., and after deducting stores (explosives), their net return was £3 5s. 1d., an increase of 9d. per day when compared with the previous year.

Accidents.—Only a few minor accidents occurred during the year under review.

Stone-dusting.—This work was done regularly throughout the year.

Underground Workings.—No development work was done during the year, operations being confined solely to pillar-extraction in the lower part of the mine. The line of pillar-extraction is being maintained at water-level, and water is run into the mine as extraction proceeds.

Two cases of spontaneous heating occurred in the mine, the areas being sealed off and subsequently flooded with water.

The coal was of good quality with a thickness varying from 9 ft. to 24 ft.

Plant.—All plant operated satisfactorily and repairs and maintenance were efficiently carried out by the engineering staff.

Black Diamond Opencast

Coal-winning.—Opencast operations were continued throughout the year. The gross output for the year was 42,241 tons 14 cwt., all of which was available for disposal, an increase of 6,472 tons 12 cwt. by opencasting when compared with the output for the previous year.

The following statement shows details of coal disposed of during the year :—

	Tons cwt. qr.	Tons cwt. qr.
1st April, 1949—		
Stocks in yard	..	
Add net output for year ..	42,241 14 0	
31st March, 1950—		
Less stocks in yard	..	
Total disposed of ..		42,241 14 0

Disposals

	Tons cwt. qr.	
Railed	37,233 8 0	
Local and mine sales	4,942 10 0	
Workmen and free issues	65 16 0	
		42,241 14 0

The gross output for the colliery since taken over by the State on 9th April, 1947, has totalled 93,065 tons 6 cwt. (underground, 488 tons 8 cwt. ; opencast, 92,576 tons 18 cwt.).

Days Worked.—The Black Diamond Opencast worked 204 days out of a possible 240 ordinary working-days. In addition, the opencast worked 3 Saturdays, making the total days worked 207. The difference between the days worked and the possible number of ordinary working-days is accounted for as follows : 1 day, Easter Tuesday, 1949 ; 15 days, stripping ; 4 days, repairs to plant ; 2 days, cleaning up pit ; 7 days, wet weather ; 7 days, heating in old workings.

Employees.—The average number of men employed at the opencast was 20.

Daily Output.—The average daily output was 204 tons 1 cwt.

Workings.—Coal-production was maintained satisfactorily throughout the year. During the year 316,946 cubic yards of overburden were stripped, making a total of 912,941 cubic yards stripped since the commencement of opencasting. The coal has been of good quality throughout with a high percentage of screening.

Plant.—No additional plant units were put into operation during the year. All plant was maintained in good order and condition.

Wairaki Colliery

Coal-winning.—The gross output for the year was 65,634 tons 6 cwt., a decrease of 580 tons 11 cwt. when compared with the previous year. After allowing for waste (1,926 tons 6 cwt.) and the quantity used on works (2,767 tons 7 cwt.), there remained for disposal a net output of 60,940 tons 13 cwt.

The following statement shows details of coal disposed of during the year:

	Tons	cwt.	qr.	Tons	cwt.	qr.
1st April, 1949—						
Stocks in yard						
Add net output for year ..	60,940	13	0			
31st March, 1950—						
Less stocks in yard						
Total disposed of ..				60,940	13	0

Disposals

	Tons	cwt.	qr.			
Railed	55,031	10	0			
Local and mine sales	5,323	5	0			
Workmen and free issues	585	18	0			
				60,940	13	0

The gross output for the colliery since taken over by the State on 27th January, 1945, has totalled 345,727 tons 9 cwt. 2 qr.

Days Worked. The Wairaki Colliery worked 233 days out of a possible 240 ordinary working-days. The difference between the days worked and the possible number of ordinary working-days is accounted for as follows: 1 day, Easter Tuesday, 1949; 3 days, funerals of ex-members of Miners' Union; 3 days, disputes.

Employees. In connection with coal-winning, the average number of persons employed in and about the mine was 105 men and 9 boys, made up as follows—Underground: Coal-hewers, 36; deputies, shiftmen, and truckers, 43. Surface: 26 men and 9 boys.

Daily Output.—The average daily output was 281 tons 13 cwt. 2 qr. and the coal-hewers' average daily output was 8 tons 12 cwt. 2 qr., as compared with 271 tons 19 cwt. and 8 tons 7 cwt. respectively for the previous year.

Deficiencies.—No payments were made to coal-hewers under the minimum-wage clause.

Coal-hewers' Average Daily Earnings.—The coal-hewers' average daily earnings were (gross) £3 17s., and after deducting stores (explosives) their net return was £3 5s. 5d., an increase of 1s. 7d. per day when compared with the previous year.

Accidents.—One serious and several minor accidents occurred during the year under review. On 21st June, 1949, a trucker was knocked down by a rake of full boxes and sustained a fractured right shin.

Stone-dusting.—This work was done regularly throughout the year.

Underground Workings.—No. 1 Mine: The Slant Dip to the west in the area between No. 1 Workings and No. 2 Mine was extended to a point 18½ chains from the turn off on the Old Dip. A downthrow fault was encountered at this point and preparations are being made for pillar-extraction on retreat from this point.

No. 3 Mine: Operations were confined to development work in the following sections:

No. 1 Section: The level in the top seam has been extended to a point 10 chains from the Main Dip in order to drive two additional drives for haulage and ventilation respectively. The bottom section has been sealed off with concrete stoppings.

No. 5 Section: The bottom level has been extended to a point 23 chains from the Main Dip in good quality coal. No. 2 rise panel was driven approximately 6 chains to the rise in the bottom split of the seam but had to be stopped owing to the difficulty in keeping the coal clean because of the stone mixing with the coal.

No. 8 Section: This section has been extended to a point 23 chains from the Main Dip, the coal being of excellent quality.

No. 9 Section: The main road on the west side has been extended to a point 12 chains from the Main Dip in excellent quality coal.

Plant.—The new 175 h.p. hauler at No. 3 Mine and two air-compressors, each of 110 h.p., were installed during the year. Repairs and maintenance were efficiently carried out by the engineering staff.

General.—Repair work was continued in the intake and return airways.

Star Colliery

Coal-winning.—The gross output for the year was 40,636 tons 3 cwt., an increase of 5,945 tons 13 cwt. 2 qr. when compared with the previous year. After allowing for waste (859 tons 19 cwt.) and the quantity used on works (619 tons 9 cwt.) there remained for disposal a net output of 39,156 tons 15 cwt.

The following statement shows details of coal disposed of during the year:—

	Tons	cwt.	qr.	Tons	cwt.	qr.
1st April, 1949—						
Stocks in yard						
Add net output for year	39,156	15	0			
31st March, 1950—						
Less stocks in yard						
Total disposed of				39,156	15	0

Disposals

	Tons	cwt.	qr.			
Railed	38,746	5	0			
Local and mine sales	49	10	0			
Workmen and free issues	361	0	0			
				39,156	15	0

The gross output for the colliery since taken over by the State on 2nd May, 1947, has totalled 113,408 tons 3 cwt.

Days Worked.—The Star Colliery worked 234 days out of a possible 240 ordinary working-days. The difference between the days worked and the possible number of ordinary working-days is accounted for as follows: 1 day, Easter Tuesday, 1949; 2 days, funerals of ex-members of Miners' Union; 1 day, dispute; 1 day, power failure; 1 day, plant breakdown.

Employees.—In connection with coal-winning, the average number of persons employed in and about the mine was 53 men and 1 boy, made up as follows—Underground: Coal-hewers, 19; deputies, shiftmen, and truckers, 18. Surface: 16 men and 1 boy.

Daily Output.—The average daily output was 173 tons 13 cwt. and the coal-hewers' average daily output was 9 tons 5 cwt. 3 qr., as compared with 146 tons 5 cwt. and 8 tons 7 cwt. respectively for the previous year.

Deficiencies.—One payment totalling £9 was made to a party of coal-hewers under the minimum-wage clause.

Coal-hewers' Average Daily Earnings.—The coal-hewers' average daily earnings were (gross) £3 10s. 2d., and after deducting stores (explosives) their net return was £3 3s. 10d., an increase of 1s. 9d. per day when compared with the previous year.

Accidents.—One serious and several minor accidents occurred during the year under review. On 18th January, 1950, a mechanic working underground was caught between full boxes and a wooden stopping and sustained fractured ribs and a contused back.

Stone-dusting.—This work was done regularly throughout the year.

Underground Workings.—Operations were confined to splitting and extraction of pillars varying in height from 30 ft. in the upper part of the mine to 16 ft. adjacent to the southern boundary fault. A heating of coal deep in the goaf occurred in the South-east Dip Section. Three temporary stoppings previously erected were immediately closed and the heated coal subsequently subdued by flooding the small area with water.

Plant.—All working-places were equipped with compressed-air drills during the year. All plant operated satisfactorily and repairs and maintenance were efficiently carried out by the engineering staff.

Birchwood Colliery

Coal-winning.—The gross output for the year was 23,694 tons 11 cwt., an increase of 1,170 tons 10 cwt. when compared with the previous year. After allowing for waste (404 tons 5 cwt.) and the quantity used on works (499 tons 16 cwt.) there remained for disposal a net output of 22,790 tons 10 cwt.

The following statement shows details of coal disposed of during the year :—

	Tons cwt. qr.	Tons cwt. qr.
1st April, 1949—		
Stocks in yard	..	
Add net output for year ..	22,790 10 0	
31st March, 1950—		
Less stocks in yard	..	
Total disposed of		22,790 10 0

Disposals

	Tons cwt. qr.	
Railed	22,394 0 0	
Local and mine sales	49 10 0	
Workmen and free issues	347 0 0	
		22,790 10 0

The gross output for the colliery since taken over by the State on 28th November 1947, has totalled 52,410 tons 13 cwt. 1 qr.

Days Worked.—The Birchwood Colliery worked 228½ days out of a possible 240 ordinary working-days. The difference between the days worked and the possible number of ordinary working-days is accounted for as follows: 1 day, Easter Tuesday, 1949; 2 days, prolonged cavil meetings; 1 day, union meeting; 1 day, heating in workings; 1 day, fall in return airway; 1½ days, funerals of ex-members of Miners' Union; 2 days, disputes *re* bathhouse; 1 day, power failure; 1 day, flooding of access road.

Employees.—In connection with coal-winning, the average number of persons employed in and about the mine was 55 men, made up as follows—Underground: Coal-hewers, 16; deputies, shiftmen, and truckers, 23. Surface: 16 men. No boys were in employment at the colliery.

Daily Output.—The average daily output was 103 tons 12 cwt. 3 qr. and the coal-hewers' average daily output was 6 tons 6 cwt., as compared with 97 tons 1 cwt. and 5 tons 14 cwt. respectively for the previous year.

Deficiencies.—No payments were made to coal-hewers under the minimum-wage clause.

Coal-hewers' Average Daily Earnings.—The coal-hewers' average daily earnings were (gross) £3 14s. 2d., and after deducting stores (explosives) their net return was £3 8s. 1d., an increase of 5s. 3d. per day when compared with the previous year.

Accidents.—Only a few minor accidents occurred during the year under review.

Stone-dusting.—This work was done regularly throughout the year.

Underground Workings.—Pillar-extraction was continued in Nos. 3 and 4 Dips throughout the year in coal averaging 6 ft. in height. Minor faultings and stone bands resulted in comparatively low outputs and a correspondingly high proportion of stone mined and filled from working places. In the workings advancing in a south-easterly direction towards the main drives the total distance driven was 10 chains. Faults, splitting of the seam, and stone bands encountered below the drives rendered the seam unworkable and pillar-extraction was commenced in the last quarter of the year. Access to a small block of coal to the north of the Ohai Syndicate's Mine workings was obtained by driving in stone for a distance of 180 ft., and nine single places are now developing approximately 40,000 tons of good coal with an average height of 10 ft.

One case of spontaneous combustion occurred in the vicinity of a fault. All recoverable coal had been won prior to the heating and the area was sealed with three stoppings in a permanent barrier.

Plant.—Compressed-air drills were installed in all working-places during the year. Repairs and maintenance were efficiently carried out by the engineering staff.

McLean's Opencast

Coal-winning.—Opencast operations continued regularly throughout the year, the gross output being 43,689 tons 18 cwt. all of which was available for disposal.

The following statement shows details of coal disposed of during the year :—

	Tons	cwt.	qr.	Tons	cwt.	qr.
1st April, 1949—						
Stocks in yard						
Add net output for year ..	43,689	18	0			
31st March, 1950—						
Less stocks in yard						
Total disposed of				43,689	18	0

Disposals

	Tons	cwt.	qr.			
Railed	43,689	18	0			
Local and mine sales						
Workmen and free issues						
				43,689	18	0

Days Worked.—McLean's Opencast worked 230 days out of a possible 240 ordinary working-days. In addition, the opencast worked on 12 colliery holidays during the Christmas - New Year period.

The difference between the days worked and the possible number of ordinary working-days is accounted for as follows : 1 day, funeral of ex-member of Miners' Union ; 1 day, stripping ; 4 days, wet weather ; 3 days, mechanical breakdowns ; 1 day, Easter Tuesday, 1949.

Employees.—The average number of men employed at the opencast was 14.

Daily Output.—The average daily output was 180 tons 11 cwt.

General.—The total quantity of stripping performed during the year was 126,900 cubic yards. The total quantity of coal won from the area since the commencement of production on 20th December, 1948, has been 52,418 tons 9 cwt. The coal has been of excellent quality throughout.

Plant.—No additional plant units were installed during the year. The engineering staff of the Ministry of Works maintained all plant in an efficient condition.

I have, &c.,
J. McArthur, District Manager.

Colliery Revenue Accounts for the Year Ended 31st March, 1950

——	Kamo.		Wilton.		Mangapehi.		Tatu.		Denniston.		Millerton.		Stockton.		Webb.	
SALES ACCOUNTS	£	£	£	£	£	£	£	£	£	£	£	£	£	£	£	£
Sales of coal, f.o.r. and f.o.b.	74,262		100,880		45,353		49,417		106,888		80,076		35,630		100,205	
Subsidy	81,007		86,112		53,667		52,073		83,489		57,477		28,557		81,456	
	155,269		186,992		99,020		101,490		190,377		137,553		64,187		181,661	
Less N.Z.R. haulage	137		10		72		15		12,225		6,757		4,555		13,046	
Coal sales net, f.o.r.		155,132		186,982		98,948		101,475		178,152		130,796		59,632		168,615
WORKING ACCOUNTS																
Stocks on hand, 1st April, 1949			120		64		49		1,783		2,017		1,112		2,127	
Wages	109,870		130,337		78,828		68,845		166,350		71,114		50,039		108,540	
Materials used	9,121		20,488		8,901		7,438		32,730		9,328		9,118		24,313	
Royalty	3,692		2,119													
Haulage			3,447		5,818										9,020	
Rail and bus fares	1,579		5,124		988		3,763		4,853		719		1,490		3,328	
Electric power	4,377		1,431		2,066		2,263		4,401		1,700					
Coal-miners' Relief Fund	237		358		157		152		316		216		110		308	
Rescue station levy			358		157				316		216		110		308	
Workers' compensation premium	5,740		6,873		4,003		3,542		8,747		3,738		2,929		5,550	
			170,655		100,982		86,052		219,496		89,048		64,908		153,494	
Less stocks on hand, 31st March, 1950			17		126		209		2,318		1,058		1,676		4,714	
Cost of coal sold		134,616		170,638		100,856		85,843		217,178		87,990		63,232		148,780
Gross profit		20,516		16,344				15,632				42,806				19,835
Gross loss						1,908				39,026				3,600		
PROFIT AND LOSS ACCOUNTS																
Rents, postages, printing and stationery, audit fees, and general expenses	1,124		1,507		1,082		903		2,278		1,074		452		1,288	
Salaries	2,765		3,280		2,126		1,716		5,855		2,373		1,918		2,421	
Depreciation	2,435		10,522		7,862		8,687		10,563		3,790		11,777		4,112	
Rates and grants in lieu of rates	446		576		200		365		4,027		5,893		67		445	
Commission			4,727													
	6,770		20,606		11,270		11,671		22,723		13,130		14,214		8,266	
Less rent received	658		1,052		5,089		1,993		1,443		698		359		1,011	
		6,112		19,554		6,181		9,678		21,280		12,432		13,855		7,255
Net profit (transferred to General Profit)		14,404						5,954				30,374				12,580
Net loss (and Loss Account)				3,210		8,089				60,306				17,455		

Colliery Revenue Accounts for the Year Ended 31st March, 1950—*continued*

—	Burke's Creek.		Garvey Creek.		Burnwell.*		Central.		Blackball.		Dobson.		Paparoa.	
SALES ACCOUNTS	£	£	£	£	£	£	£	£	£	£	£	£	£	£
Sales of coal, f.o.r. and f.o.b.	26,700		23,554		4,311		5,641		82,135		109,568		44,123	
Subsidy	27,533		20,992		4,591		6,256		95,782		101,937		43,166	
	54,233		44,546		8,902		11,867		177,917		211,505		87,289	
Less N.Z.R. haulage	210		1,826		224		238		6,857		8,922		2,820	
Coal sales net, f.o.r.		54,023		42,720		8,678		11,629		171,060		202,583		84,469
WORKING ACCOUNTS														
Stocks on hand, 1st April, 1949	142		224		..		31		1,808		2,493		1,336	
Wages	52,359		28,211		7,030		12,504		124,076		158,697		49,584	
Materials used	8,781		7,670		1,683		2,813		24,033		22,719		11,970	
Royalty	..		..		..		31		..		3,414		758	
Haulage	..		5,041		457		539		..		..		..	
Rail and bus fares	1,420		287		..		..		181		1,201		205	
Electric power	1,631		249		45		280		4,575		6,964		979	
Coal-miners' Relief Fund	79		61		14		19		284		300		126	
Rescue station levy	82		63		14		19		284		302		126	
Workers' compensation premiums	2,758		1,479		375		654		6,426		8,166		2,681	
	67,252		43,285		9,618		16,890		161,667		204,256		67,765	
Less stocks on hand, 31st March, 1950	304		927		546		307		6,685		10,616		3,303	
Cost of coal sold		66,948		42,358		9,072		16,583		154,982		193,640		64,462
Gross profit		..		362		..		..		16,078		8,943		20,007
Gross loss		12,925		..		394		4,954		..		..		..
PROFIT AND LOSS ACCOUNTS														
Rents, postages, printing and stationery, audit fees, and general expenses	835		634		80		102		1,054		1,458		706	
Salaries	1,132		1,084		392		402		3,187		3,325		2,587	
Depreciation	6,094		2,087		375		558		4,959		6,628		3,412	
Rates and grants in lieu of rates	472		7		134		27		386		718		166	
Commission	..		..		..		..		..		..		..	
									9,586		12,129		6,871	
Less rent received	..		..		..		..		1,750		711		307	
		8,533		3,812		981		1,089		7,836		11,418		6,564
Net profit transferred to General Profit and Loss Account		..		..		..		..		8,242		..		13,443
Net loss		21,458		3,450		1,375		6,043		..		2,475		..

* From 1st May, 1949.

Colliery Revenue Accounts for the Year Ended 31st March, 1950—*continued*

——	Wallsend.		Liverpool.		Strongman.		Birchwood.		Mossbank.		Star.		Wairaki.	
SALES ACCOUNTS	£	£	£	£	£	£	£	£	£	£	£	£	£	£
Sales of coal, f.o.r. and f.o.b.	74,146		125,914		140,168		28,443		33,265		52,245		81,268	
Subsidy	77,054		143,690		134,236		10,332		11,838		18,505		30,371	
	151,200		269,604		274,404		..		..		..		..	
Less N.Z.R. haulage	4,825		11,570		13,035		..		..		..		..	
Coal sales net, f.o.r.		146,375		258,034		261,369		38,775		45,103		70,750		111,639
WORKING ACCOUNTS														
Stocks on hand, 1st April, 1949	3,302		5,351		965		..		..		..		..	
Wages	111,770		202,981		172,455		40,616		30,698		41,990		82,926	
Materials used	12,396		21,562		20,344		4,118		3,662		3,662		9,638	
Royalty	2,103		..		..		..		..		1,738		1,651	
Haulage	..		..		..		1,084		1,381		2,176		3,096	
Rail and bus fares	1,047		2,834		6,101		..		..		..		621	
Electric power	5,356		6,141		5,934		1,035		839		1,228		1,241	
Coal-miners' Relief Fund	226		419		399		97		106		166		266	
Rescue station levy	226		418		399		97		106		166		266	
Workers' compensation premiums	5,641		10,473		9,158		2,114		1,523		2,175		4,404	
	142,067		250,179		215,755		..		..		..		..	
Less stocks on hand, 31st March, 1950	7,339		10,907		8,068		..		..		..		..	
Cost of coal sold		134,728		239,272		207,687		49,161		38,315		53,301		104,109
Gross profit		11,647		18,762		53,682		..		6,788		17,449		7,530
Gross loss		..		..		..		10,386		..		..		..
PROFIT AND LOSS ACCOUNTS														
Rents, postages, printing and stationery, audit fees, and general expenses	1,203		2,355		1,469		342		404		430		854	
Salaries	2,810		3,360		3,325		971		990		1,307		2,049	
Depreciation	9,550		7,129		11,103		1,727		2,464		2,142		5,618	
Rates and grants in lieu of rates	572		786		765		57		12		18		109	
Commission	..		..		..		..		..		..		..	
	14,135		13,630		..		3,097		3,870		..		8,630	
Less rent received	577		1,194		..		36		30		..		650	
		13,558		12,436		16,662		3,061		3,840		3,897		7,980
Net profit {transferred to General Profit		..		6,326		37,020		..		2,948		13,552		..
Net loss { and Loss Account		1,911		..		..		13,447		..		..		450

Opencast Mines Revenue Accounts for the Year Ended 31st March, 1950

	Hillcrest.*		Kemp's.†		Kimihia No. 1.‡		Waitewhena.		Stockton.		Wangaloa.		Black Diamond.		McLean's.	
SALES ACCOUNTS	£	£	£	£	£	£	£	£	£	£	£	£	£	£	£	£
Sales of coal, f.o.r. and f.o.b.	59,804		14,604		45,436		46,587		134,052		44,900		44,144		69,270	
Subsidy	14,476		3,841		10,786		11,760		29,727		12,333		12,292		12,586	
									163,779							
Less N.Z.R. haulage	..		..		..		..		17,137		..		..		..	
Coal sales net f.o.r.		74,280		18,445		56,222		58,347		146,642		57,233		56,436		81,856
WORKING ACCOUNTS																
Stocks on hand, 1st April, 1949	..		..		..		..		2,111		..		..		..	
Stripping overburden	32,154		17,122		48,022		20,083		94,728		16,539		23,485		35,060	
Excavation and cartage	19,264		6,787				36,936				20,746		12,744		11,391	
Road access and maintenance	152		111		..		4,294		951		1,199		..		..	
Royalty	..		303		..		..		..		..		..		1,945	
Coal-miners' Relief Fund	201		51		150		163		413		171		176		182	
Rescue station levy	201		51		150		..		413		..		176		182	
Bus fares	475		259		..		..		3,273		..		..		..	
Haulage	3,515		883		2,148		..		64,259		..		2,234		2,547	
Sundry coal-winning expenses	5		193		234		..		148		392		45		340	
Restoration of surface	302		76		225		245		620		257		264		273	
	56,269		25,836		50,929		61,721		166,916							
Less stocks on hand, 31st March, 1950	..		..		..		..		4,213		..		..		..	
Cost of coal sold		56,269		25,836		50,929		61,721		162,703		39,304		39,124		51,920
Gross profit		18,011		..		5,293		..		..		17,929		17,312		29,936
Gross loss		..		7,391		..		3,374		16,061		..		..		..
PROFIT AND LOSS ACCOUNTS																
Rents, postages, printing and stationery, audit fees, and general expenses	184		54		202		246		1,759		263		292		245	
Salaries	411		103		306		650		2,444		350		600		710	
Depreciation	9,775		2,499		2,344		3,375		2,668		2,204		1,646		1,127	
Rates	..		..		..		9		891		..		31		3	
	10,370		2,656		2,852		4,280		7,762				2,569			
Less rent received	179		169		473		68		308		..		517		..	
		10,191		2,487		2,379		4,212		7,454		2,817		2,052		2,085
Net profit (transferred to General Profit and Loss Account)		7,820		..		2,914		..		..		15,112		15,260		27,851
Net loss		..		9,878		..		7,586		23,515		..		..		..

* Production commenced April, 1949. † Production ceased June, 1949. ‡ Production No. 1. Area ceased December, 1949.

Depot Trading and Profit and Loss Accounts for the Year Ended 31st March, 1950

——	Auckland.		Wanganui.		Wellington.		Christchurch.		Timaru.		Dunedin.		Invercargill.*	
TRADING ACCOUNTS	£	£	£	£	£	£	£	£	£	£	£	£	£	£
Sales of coal	870,305		32,830		896,345		323,191		66,516		125,332		237,714	
Sales of coke, wood, &c.	..		3,983		24,304		14,216		5,546		3,472		..	
		870,305		36,813		920,649		337,407		72,062		128,804		237,714
Stocks on hand, 1st April, 1949	724		850		2,160		15,784		1,459		2,465		..	
Purchases of coal	564,418		27,371		507,308		230,880		45,457		101,529		230,094	
Purchases of coke, wood, &c.	..		2,533		18,341		7,346		3,466		1,793		..	
Wharfage and marine freights	251,261		79		252,854		..		..		..		..	
Inward charges	24,027		907		100,245		69,364		11,704		12,167		3,598	
	840,430		31,740		880,908		323,374		62,086		117,954		..	
Less stocks on hand, 31st March, 1950	1,993		634		3,989		19,890		500		1,242		..	
Cost of coal, &c., sold		838,437		31,106		876,919		303,484		61,586		116,712		233,692
Gross profit		31,868		5,707		43,730		33,923		10,476		12,092		4,022
PROFIT AND LOSS ACCOUNTS														
Wages: Yard	..		632		2,361		7,264		1,090		1,134		..	
Repairs and maintenance	38		782		219		2,531		222		762		11	
Cartage out	..		945		4,196		5,234		1,697		2,484		..	
Sacks	..		194		167		981		575		532		..	
Advertising	32		31		38		47		32		32		32	
Commission	..		..		361		165		..		..		..	
Rates	..		43		196		37		154		53		..	
Rents, postages, printing and stationery, audit fees, and general expenses	888		294		1,107		1,673		667		1,077		426	
Salaries	1,936		1,251		3,341		4,516		1,978		2,171		919	
Depreciation	..		170		671		1,887		501		896		..	
		2,894		4,342		12,657		24,332		6,916		9,141		1,388
Net profit: To General Profit and Loss Account		28,974		1,365		31,073		9,591		3,560		2,951		2,634

* Operated as a depot from 1st April, 1949.

Blackball Sawmill

Working Account for the Year Ended 31st March, 1950

	£	£
Sales of timber	..	9,334
Stocks on hand, 1st April, 1949	200	
Purchase of logs	1,680	
Bush work	2,705	
Sawing and dressing	3,661	
Repairs and maintenance	113	
Mill yard expenses	378	
Workers' compensation premium	335	
Electric power	72	
Transport from mill	643	
Housing levy	126	
	9,913	
Less stocks on hand, 31st March, 1950	130	
		9,783
Gross loss	..	£449

Profit and Loss Account

	£	£
Depreciation	1,176	
Salaries	709	
General expenses	383	
	2,268	
Less rents received	16	
		2,252
Net loss: To General Profit and Loss Account	..	£2,701

MacDonald Colliery

Profit and Loss Account for the Year Ended 31st March, 1950

	£	£
Royalties received	4,947	
Rents received	200	
		5,147
Less depreciation	..	753
Net profit: To General Profit and Loss Account	..	£4,394

General Profit and Loss Account

Dr.	£	£
Net loss, 1949–50—		
Kemp's Opencast	9,878	
Wilton Colliery	3,210	
Mangapehi Colliery	8,089	
Waitewhena Opencast	7,586	
Denniston Colliery	60,306	
Stockton Colliery	17,455	
Stockton Opencast	23,515	
Burke's Creek Colliery	21,458	
Garvey Creek Colliery	3,450	
Burnwell Colliery	1,375	
Central Colliery	6,043	
Blackball Sawmill	2,701	
Dobson Colliery	2,475	
Wallsend Colliery	1,911	
Birchwood Colliery	13,447	
Ohai Opencast	150	
Wairaki Colliery	450	
		183,499
Interest on loan capital	176,683	
Less remission under section 3, Finance Act, 1943 (3)	176,683	
Net profit carried down		132,852

Cr.	£	£
Net profit, 1949–50—		
Kamo Colliery	14,404	
Hillcrest Opencast	7,820	
Kimihia Opencast	2,914	
Tatu Colliery	5,954	
Millerton Colliery	30,374	
Webb Colliery	12,580	
Blackball Colliery	8,242	
Paparoa Colliery	13,443	
Liverpool Colliery	6,326	
Strongman Colliery	37,020	
Wangaloa Opencast	15,112	
Black Diamond Opencast	15,260	
Mossbank Colliery	2,948	
Star Colliery	13,552	
McLean's Opencast	27,851	
Auckland Depot	28,974	
Wanganui Depot	1,365	
Wellington Depot	31,073	
Christchurch Depot	9,591	
Timaru Depot	3,560	
Dunedin Depot	2,951	
Invercargill Depot	2,634	
MacDonald Colliery	4,394	
		298,342

		Net recoveries—	
		Seddonville Colliery	70
		Waitahu Colliery	231
		Royalties	5,169
		Interest receivable	7,137
			12,607
		Net revenue from hire of plant, buildings, &c.	5,402
	£316,351		£316,351

Profit and Loss Appropriation Account

Dr.	£	*Cr.*	£
Loans Redemption Account	109,376	Net profit for year 1949–50	132,852
Transfer to General Reserve	23,476		
	£132,852		£132,852

Balance-sheet as at 31st March, 1950

Liabilities	£	£
Liability to Consolidated Fund under section 6, National Development Loans Act, 1941		5,440,990
Deposits on contracts		5,564
Debt Redemption Reserve to be applied for redemption of capital		109,376
Sundry creditors		393,339
Reserves—		
General Reserve	216,829	
Accident Insurance Reserve	217,673	
Bad Debts Reserve	2,437	
Restoration Opencast Areas Reserve	5,131	
		442,070

Assets	£	£	£
Collieries—			
Development and Property Accounts	929,939		
Machinery, plant, &c.	845,544		
Buildings	222,348		
Cottages	252,976		
Land	14,725		
Plantations	19		
	2,265,551		
Less provisionally written off	202		
		2,265,349	
Coal deposits: Ohai		114,511	
Purchase shares—			
Linton Coal Co., Ltd.	159,796		
Renown Collieries, Ltd.	170,873		
Taupiri Coal Mines, Ltd.	821,305		
		1,151,974	
Opencast mining—			
Purchase-price	65,556		
Development, preliminary expenses, &c.	38,766		
Plant, machinery, &c.	17,963		
Railway sidings, &c.	17,238		
Buildings and accommodation	55,564		
		195,087	
Blackball sawmill: Plant, buildings, &c.		11,333	
Plant, equipment, &c., on hire	470,468		
Less provisionally written off	10		
		470,458	
Depots: Property Accounts	34,192		
Less provisionally written off			
		34,192	
Head Office furniture, &c.		5,139	
Briquetting: Preliminary expenses		2,009	
Prospecting on State coal areas		22,418	
			4,272,470
Stripping in advance (opencast mines)			221,250

Housing advances to workmen	106,684		
Interest accrued and due	1,135		
			107,816
Miscellaneous advances	22,081		
Interest accrued and due	47		
			22,128
Stores on hand —			
Collieries	659,240		
Blackball sawmill	130		
Spares for mechanical equipment ..	49,101		
Stationery	1,172		
	709,643		
Less provisionally written off	3,149		
			706,494
Coal stocks: Mines and opencasts (bins, wharf, and afloat)	..		63,370
Stocks and stores on hand at depots ..	39,255		
Less provisionally written off	9,541		
			29,714
Investments	..		55,203
Debtors —			
Trade	341,482		
Subsidy unpaid	157,413		
Miscellaneous	2,228		
	501,123		
Less provisionally written off	47		
			501,076
Deposits paid on contracts	..		350
Cash in Receiver-General's Deposit Account ..	..		5,564
Cash in Public Account	217,467		
Imprests outstanding	79,061		
			296,528
Cash in Loans Redemption Account ..	..		109,376
£6,391,339			£6,391,339

State Coal Mines Office, Wellington C. 1,

H. H. GIBSON, Accountant.

W. SULLIVAN, Minister of Mines.

I hereby certify that the attached Revenue and Profit and Loss Accounts of Collieries, Opencasts, and Depots and General Profit and Loss Account and Balance-sheet have been duly examined and compared with the relative books and documents submitted for audit, and correctly state the position as disclosed thereby.—J. P. RUTHERFORD, Controller and Auditor-General.

Statement of Property Accounts as at 31st March, 1950

Underground Mines

——	Huntly Property.	Kamo.	McDonald.	Wilton.	Mangapehi.	Tatu.	Denniston.	Millerton.	Stockton.	Webb.	Burke's Creek.	Garvey Creek.	Burnwell.	Central.
Development and Property Accounts	..	60,655	34,587	27,648	46,230	40,561	245,861	45,600	100,514	1,872	41,515	19,132	5,300	965
Machinery, plant, &c. ..	288	27,468	..	55,397	36,727	40,686	49,654	26,904	190,872	18,160	26,047	15,813	1,739	5,563
Buildings	5,417	5,639	..	11,459	15,962	6,566	24,932	12,738	33,329	3,374	16,405	6,293	293	847
Cottages	8,131	10,670	..	22,169	77,673	36,596	5,662	2,394	8,173	210	7,697	..	..	..
Plantations	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Land	230	5,878	..	3,450	..	..	288	135	650	..	..	..	..	..
	14,066	110,310	34,587	120,123	176,592	124,409	326,397	87,771	333,538	23,616	91,664	41,238	7,332	7,375

——	Pyramid.	Waitahu.	Blackball.	Dobson.	Paparoa.	Wallsend.	Liverpool.	Strongman.	Birchwood.	Morley.	Mossbank.	Star.	Wairaki.	Totals.
Development and Property Accounts	1,288	2,484	2,939	37,325	20,392	13,678	34,004	123,414	29	16,306	3,396	271	3,973	929,939
Machinery, plant, &c. ..	..	..	42,015	56,341	20,814	51,335	48,013	74,769	12,637	..	8,308	8,356	27,638	845,544
Buildings	..	..	5,018	11,998	7,153	9,032	3,204	29,340	2,650	..	1,165	3,190	6,344	222,348
Cottages	..	..	10,357	7,551	4,811	9,160	16,200	..	1,269	1,795	1,084	2,408	18,966	252,976
Plantations	..	..	..	..	..	..	19	..	..	..	..	..	..	19
Land	..	..	..	..	..	20	2,093	..	..	1,981	..	..	..	14,725
	1,288	2,484	60,329	113,215	53,170	83,225	103,533	227,523	16,585	20,082	13,953	14,225	56,921	2,265,551

Statement of Property Accounts as at 31st March, 1950—*continued*

Open-cast Mines

——	Barkers.	Devlins.	Glen Afton.	Hillcrest.	Kimihia.	Waitewhena.	Stockton.	Wangaloa.	Black Diamond.	Ohai.	McLeans.	Totals.
Purchase-price	..	10,105	15	..	3,459	38,574	..	13,381	..	..	22	65,556
Development, preliminary expenses, &c.	..	670	..	411	6,299	16,823	5,685	4,114	1,018	46	3,700	38,766
Plant	2,406	..	..	410	1,588	4,555	2,175	301	4,932	1,263	333	17,963
Railway sidings, &c.	..	..	..	26	13,422	3,790	..	..	..	..	..	17,238
Buildings and accommodation	..	..	..	373	14,544	4,695	18,872	5,046	11,121	737	176	55,564
	2,406	10,775	15	1,220	39,312	68,437	26,732	22,842	17,071	2,046	4,231	195,087

Depots

——	Auckland.	Wanganui.	Wellington.	Christchurch No. 1.	Christchurch No. 2.	Timaru.	Dunedin.	Invercargill.	Totals.
Plant	77	785	2,718	5,133	645	1,020	3,230	90	13,698
Buildings	..	1,854	5,577	3,589	55	1,520	2,179	..	14,774
Cottages	..	..	..	1,275	..	..	..	..	1,275
Land	..	800	..	3,345	..	300	..	..	4,445
	77	3,439	8,295	13,342	700	2,840	5,409	90	34,192

Statement of Receipts and Payments for the Year Ended 31st March, 1950

	£	£
Cash in Public Account, 1st April, 1949	88,737	
Imprests outstanding as at 1st April, 1949	33,014	
		121,751
Proceeds sale of coal, &c. (including subsidy)	4,640,060	
Recoveries, refunds, &c.	54,622	
Revenue from hire of plant, &c.	23,740	
Royalties	5,441	
Royalties under Coal Act, 1948	7,982	
Interest on investments	6,392	
Housing loan repayments	12,808	
Other loan repayments	13,722	
		4,764,767
Realization of investments		19,794
Capital raised		900,000

	£	£	£
Collieries and opencasts—			
Capital expenditure—			
Purchase of shares—			
Birchwood Coal Co., Ltd.	17,215		
Linton Coal Co., Ltd.	159,789		
Renown Collieries, Ltd.	170,873		
Taupiri Coal Mines, Ltd.	14,058		
		361,935	
Expenditure on—			
Buildings	34,589		
Cottages	40,881		
Plant	518,380		
Land	3,490		
		597,340	
Mines development	71,079		
Boring and prospecting	3,937		
Opencast development, &c.	23,791		
		98,807	
			1,058,082
Revenue expenditure—			
Audit fees		810	
Briquetting		23	
Bus and rail fares		39,573	
Coal Miners' Relief Fund		5,079	
Compensation		47,935	
Electric power		52,143	
Fire insurance		3,209	
General expenses		9,152	
Haulage—			
New Zealand Railways		116,255	
Private railway-lines		87,226	
Opencast coal-mining*		536,104	
Postages		4,248	
Printing and stationery		1,982	
Public Service Superannuation Fund		3,549	
Rates		15,523	
Rent		1,136	
Rescue station levy		5,229	
Royalty		4,148	
Salaries		119,918	
Stores		496,535	

Travelling-expenses	1,857		
Wages	1,847,212		
Working-expenses, Blackball Sawmill ..	13,534		
			3,412,380
Depots—			
Auckland	289,473		
Wanganui	21,782		
Wellington	378,923		
Christchurch	139,041		
Timaru	22,109		
Dunedin	28,879		
Invercargill	4,654		
Coal purchased	14,822		
			899,683
Housing loans	25,588		
Other loans	4,676		
Repayment of loan capital: Sinking Fund instalment	109,375		
			139,639
Cash in Public Account, 31st March, 1950 ..	217,467		
Imprests outstanding, 31st March, 1950—	£		
State coal-mines	205		
High Commissioner	78,856		
	79,061		
			296,528
£5,806,312			£5,806,312

* Includes expenditure normally classed as deferred revenue expenditure.

TABLE SHOWING THE POSITION OF THE STATE COAL-MINES ACCOUNT FROM INCEPTION TO THE 31ST MARCH, 1950

Name of Works.	Total Capital Expenditure.	Total Amount of Depreciation Written Off.	Assets as per Balance-sheet, 31st March, 1950.	Net Profits.	Net Losses.	Liabilities as per Balance-sheet, 31st March, 1950.
UNDERGROUND MINES	£	£	£	£	£	£
Kamo	118,527					
Less sales, transfers, &c. ..	422					
	118,105	7,795	110,310	5,619	..	..
Wilton	180,418					
Less sales, transfers, &c. ..	9,664					
	170,754	50,631	120,123	..	37,568	..
McDonald	93,595					
Less sales, transfers, &c. ..	1,281					
	92,314	57,727	34,587	9,695	..	..
Shares Renown Collieries, Ltd.	170,873	..	170,873	..	..	..
Shares Taupiri Coal Mines, Ltd.	821,305	..	821,305	..	..	..
Mangapehi	234,240					
Less sales, transfers, &c. ..	7,222					
	227,018	50,426	176,592	..	11,375	..
Tatu	190,696					
Less sales, transfers, &c. ..	18,255					
	172,441	48,032	124,409	..	23,915	..
Denniston	349,808					
Less sales, transfers, &c. ..	1,996					
	347,812	21,415	326,397	..	60,306	..
Millerton	94,759					
Less sales, transfers, &c. ..	..					
	94,759	6,988	87,771	50,490	..	..
Stockton	399,168					
Less sales, transfers, &c. ..	10,428					
	388,740	55,230	333,510	..	18,687	..
Webb	32,617					
Less sales, transfers, &c. ..	2,152					
	30,465	6,875	23,590	7,565	..	..
Burke's Creek	122,906					
Less sales, transfers, &c. ..	13,754					
	109,152	17,498	91,654	..	24,159	..
Garvey Creek	44,508					
Less sales, transfers, &c. ..	100					
	44,408	3,170	41,238	..	14,445	..

TABLE SHOWING THE POSITION OF THE STATE COAL-MINES ACCOUNT FROM INCEPTION TO THE 31ST MARCH, 1950—*continued*

Name of Works.	Total Capital Expenditure.	Total Amount of Depreciation Written Off.	Assets as per Balance-sheet, 31st March, 1950.	Net Profits.	Net Losses.	Liabilities as per Balance-sheet, 31st March, 1950.
UNDERGROUND MINES—*continued*	£	£	£	£	£	£
Burnwell	7,707					
Less sales, transfers, &c. ..	..					
	7,707	375	7,332	..	1,375	..
Central	7,933	558	7,375	..	6,043	..
Pyramid	1,288	..	1,288	..	..	..
Blackball	102,462					
Less sales, transfers, &c. ..	13,766					
	88,696	28,369	60,327	..	54,703	..
Dobson	158,769					
Less sales, transfers, &c. ..	11,869					
	146,900	33,685	113,215	..	37,129	..
Paparoa	62,349					
Less sales, transfers, &c. ..	113					
	62,236	9,066	53,170	13,443	..	..
Wallsend	140,824					
Less sales, transfers, &c. ..	4,660					
	136,164	52,977	83,187	..	31,418	..
Liverpool	463,428					
Less sales, transfers, &c. ..	31,496					
	431,932	328,497	103,435	..	24,661	..
Strongman	365,360					
Less sales, transfers, &c. ..	52,072					
	313,288	85,765	227,523	..	19,932	..
Birchwood	24,372					
Less sales, transfers, &c. ..	3,755					
	20,617	4,032	16,585	..	31,835	..
Shares Linton Coal Co., Ltd.	159,796	..	159,796	..	..	..
Morley	80,082					
Less sales, transfers, &c. ..	60,000					
	20,082	..	20,082	..	..	..
Mossbank	48,568					
Less sales, transfers, &c. ..	25,026					
	23,542	9,589	13,953	5,016	..	..

TABLE SHOWING THE POSITION OF THE STATE COAL-MINES ACCOUNT FROM INCEPTION TO THE 31ST MARCH, 1950—*continued*

Name of Works.	Total Capital Expenditure.	Total Amount of Depreciation Written Off.	Assets as per Balance-sheet, 31st March, 1950.	Net Profits.	Net Losses.	Liabilities as per Balance-sheet, 31st March, 1950.
UNDERGROUND MINES—*continued*	£	£	£	£	£	£
Star	45,671					
Less sales, transfers, &c. ..	25,885					
	19,786	5,561	14,225	23,737	..	..
Wairaki	87,853					
Less sales, transfers, &c. ..	15,550					
	72,303	15,382	56,921	34,470	..	..
OPENCAST MINES						
Barker's	2,406	..	2,406	..	..	..
Devlin's	10,775	..	10,775	..	..	..
Glen Afton	14,513	14,498	15	..	23,755	..
Hillcrest	10,995	9,775	1,220	7,820	..	..
Kemp's	47,304	47,304	..	..	110,705	..
Kimihia	55,196	15,884	39,312	78,951	..	..
Waitewhena	84,335	15,898	68,437	..	36,529	..
Stockton	31,169	4,437	26,732	88,489	..	..
Wangaloa	36,508	13,666	22,842	56,165	..	..
Black Diamond	24,859	7,788	17,071	25,612	..	..
Ohai	21,462	19,416	2,046	36,134	..	..
McLean's	6,315	2,084	4,231	29,124	..	..
DEPOTS						
Auckland	219					
Less sales, transfers, &c. ..	142					
	77	..	77	68,069	..	..
Wanganui	7,670					
Less sales, transfers, &c. ..	413					
	7,257	3,818	3,439	183	..	..
Wellington	29,647					
Less sales, transfers, &c. ..	2,030					
	27,617	19,322	8,295	125,406	..	..
Christchurch	34,360					
Less sales, transfers, &c. ..	1,291					
	33,069	19,027	14,042	52,159	..	..
Timaru	3,541					
Less sales, transfers, &c. ..	..					
	3,541	701	2,840	5,033	..	..
Dunedin	6,753					
Less sales, transfers, &c. ..	..					
	6,753	1,344	5,409	3,317	..	..

TABLE SHOWING THE POSITION OF THE STATE COAL-MINES ACCOUNT FROM INCEPTION TO THE 31ST MARCH, 1950—*continued*

Name of Works.	Total Capital Expenditure.	Total Amount of Depreciation Written Off.	Assets as per Balance-sheet, 31st March, 1950.	Net Profits.	Net Losses.	Liabilities as per Balance-sheet, 31st March, 1950.
DEPOTS—*continued*	£	£	£	£	£	£
Invercargill	90					
Less sales, transfers, &c. ..	..					
	90	..	90	2,634	..	..
MISCELLANEOUS						
Briquetting; Preliminary expenses	2,009	..	2,009	..	..	..
Prospecting on State coal reserve	63,426					
Less transfers, sales, &c. ..	40,092					
	23,334	916	22,418	..	..	..
Plant, buildings, &c., on hire	547,483					
Less transfers, sales, &c. ..	13,558					
	533,925	63,467	470,458	19,387	..	..
Seddonville Colliery ..	38,243					
Less transfers, sales, &c. ..	549					
	37,694	37,694	..	..	36,458	..
Waitahu Colliery	2,484	..	2,484	231	..	..
Blackball Sawmill	13,325	1,992	11,333	..	3,133	..
Head Office furniture, &c. ..	5,139	..	5,139	..	..	..
Royalties from 1st April, 1928	..	..	..	98,970	..	..
Taxation	..	..	..	..	51,929	..
Interest on investments ..	..	..	..	31,817	..	..
Coal deposits, Ohai ..	117,191	2,680	114,511	..	..	..
Huntly, buildings	14,066	..	14,066	..	..	..
COMPLETED WORKS						
Point Elizabeth Colliery ..	98,210					
Less sales and loss by fire ..	2,291					
	95,919	95,919	..	147,583	..	..
James Colliery	74,495					
Less sales, transfers, &c. ..	6,250					
	68,245	68,245	..	2,970	..	..
Dunedin Depot	2,023					
Less sales of plant ..	641					
	1,382	1,382	..	..	4,248	..
Briquette Works	16,135					
Less sales of plant ..	2,065					
	14,069	14,069	..	..	22,661	..
Charming Creek: Prospecting	5,957	5,957	..	..	5,545	..

TABLE SHOWING THE POSITION OF THE STATE COAL-MINES ACCOUNT FROM INCEPTION TO THE 31ST MARCH, 1950—*continued*

Name of Works.	Total Capital Expenditure.	Total Amount of Depreciation Written Off.	Assets as per Balance-sheet, 31st March, 1950.	Net Profits.	Net Losses.	Liabilities as per Balance-sheet, 31st March, 1950.
COMPLETED WORKS—*cntd.*	£	£	£	£	£	£
Hulks Property	4,034					
Less sales	1,949					
	2,085	2,085	..	1,787	..	..
Beehive Opencast	..	..	..	..	411	..
Office furniture	190					
Less sales	17					
	173	173	..	..	173	..
Discounts	..	..	..	13	..	..
Cash lost (highway robbery)..	..	..	..	..	89	..
Transfer to Accident Insurance Reserve	..	..	..	..	2,960	..
Refund, Mines Department ..	..	..	..	..	5,000	..
Runanga Water-supply ..	..	..	..	..	5,000	..
Stores sales	..	..	..	463	..	..
Grand total	6,042,409					
Less losses, sales, transfers	380,755	..	..	..	..	..
	5,661,654	1,389,184	4,272,470			
Total profit and loss ..	..	..	..	1,032,352	706,147	..
Balance: Profit over losses..	..	..	..	..	326,205	..
				1,032,352	1,032,352	
Capital expenditure brought forward	..	..	4,272,470	..	..	..
Investments	..	..	55,203	..	..	..
Stocks on hand, less provisionally written off	..	..	799,578	..	..	..
Sinking Fund investment ..	..	..	109,376	..	..	..
Sundry debtors	..	..	722,326	..	..	..
Cash in Public Account ..	..	..	296,528	..	..	..
Cash in Receiver-General's Deposit Account	..	..	5,564	..	..	..
Housing advances to workmen and accrued interest	..	..	107,816	..	..	..
Miscellaneous advances ..	..	..	22,128	..	..	..
Deposits paid on contracts ..	..	..	350	..	..	..
Loan Account	..	..	..	..	..	5,440,990
Bad Debts Reserve ..	..	..	..	..	..	2,437
Sinking Fund	..	..	..	109,376	..	109,376
General Reserve	..	..	..	216,829	..	216,829
Deposits held on contracts ..	..	..	..	..	..	5,564
Accident Insurance Reserve..	..	..	..	..	..	217,673
Restoration Opencast Areas Reserve	..	..	..	..	..	5,131
Sundry creditors	..	..	..	..	..	393,339
	..	..	6,391,339	326,205	..	6,391,339

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