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Report on the fourth radiological survey of Oakdale Colliery, June/July 1970

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INSTITUTE OF OCCUPATIONAL MEDICINE
PNEUMOCONIOSIS FIELD RESEARCH

REPORT ON THE FOURTH RADIOLOGICAL SURVEY
OF OAKDALE COLLIERY (JUNE/JULY 1970)

by

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REPORT ON THE FOURTH RADIOLOGICAL SURVEY
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1. INTRODUCTION

This colliery is situated in South Wales and is one of the ten selected for further study from the twenty-five original P.F.R. pits. Previous surveys were carried out in 1954, 1958 and 1964.

2. METHODS

Each man had a full-size chest x-ray and a Questionnaire on his respiratory symptoms and smoking habits was completed. Tests of ventilatory capacity (F.E.V._{1 sec} and F.V.C.) were also carried out.

3. RESULTS

The number of men employed at the colliery during the fourth survey was 1251. 821 men were employed at the time of the third survey in 1964. Ninety-one per cent of the working population were persuaded to attend for examination. 493 of the original 1787 men formed the "survivor" population and have been x-rayed on all four surveys. Details of these changes are given in the Appendix.

Table 1 gives the prevalence of pneumoconiosis in the underground and surface workers by age group.

In view of the possibility of difference in reading standards inter-survey comparisons should be made with caution. Nevertheless Table 2 indicates that the overall prevalence of pneumoconiosis has varied markedly from one survey to another. It should, however, be remembered that there have been substantial changes in the composition of the groups from which the figures were derived.

Table 3 shows that the prevalence of pneumoconiosis in the "survivor" population has increased from the third survey. The size of this increase is approximately the same as occurred during the earlier inter-survey periods. This is a disappointing result. The implementation of the new standards for airborne dust should, however, allow the problem to be tackled more effectively from now on.

MEDICAL SURVEY - 4TH

Period of Survey 16.6.70-10.7.70 - 19 Days.

3rd Medical Survey 8.6.64-22.7.64 32 Days.
 2nd " " 23.6.58-18.7.58 and 11.8.58-27.8.58 33 Days.
 1st " " 10.2.54-17.3.54 26 Days.

Defined Colliery Population
 Number X-Rayed
 Percentage X-Rayed

Underground	Surface	Both
972	279	1251
890	250	1140
91.6	89.6	91.1

TABLE 1
 RESULTS BASED ON "FIELD" READINGS

Category	Underground							Surface							Total Underground and Surface			
	Age Group 1970						Total		Age Group 1970						Total		No.	%
	15-24	25-29	30-34	35-44	45-54	55-64	No.	%	15-24	25-29	30-34	35-44	45-54	55-64	No.	%		
0	107	51	59	137	201	127	682	76.6	42	15	17	44	56	47	221	88.4	903	79.2
1				8	52	44	104	11.7					6	7	13	5.2	117	10.3
2					21	31	52	5.8					3	3	6	2.4	58	5.1
3					4	10	14	1.6									14	1.2
P.M.F.				1	15	22	38	4.3					4	6	10	4.0	48	4.2
Other than 0				9	92	107	208	23.4					13	16	29	11.6	237	20.8
Defined Population X-Rayed	107	51	59	146	293	234	890	91.6	42	15	17	44	69	63	250	89.6	1140	91.1
Not X-Rayed	21	5	7	6	20	23	82	8.4	3	2	1	4	9	10	29	10.4	111	8.9
Total Population	128	56	66	152	313	257	972	100.0	45	17	18	48	78	73	279	100.0	1251	100.0

TABLE 2
 PREVALENCE OF PNEUMOCONIOSIS - "TOTAL" POPULATION

Prevalence of pneumoconiosis by survey for all men employed at the colliery.*

Category	1st M.S.		2nd M.S.		3rd M.S.		4th M.S.	
	No.	%	No.	%	No.	%	No.	%
0	1174	65.7	1365	74.5	1495	85.8	903	79.2
1	316	17.7	230	12.6	104	6.0	117	10.3
2	174	9.7	138	7.6	62	3.6	58	5.1
3	54	3.0	41	2.2	14	0.8	14	1.2
P.M.F.	69	3.9	57	3.1	67	3.8	48	4.2

TABLE 3
 PREVALENCE OF PNEUMOCONIOSIS - "SURVIVOR" POPULATION

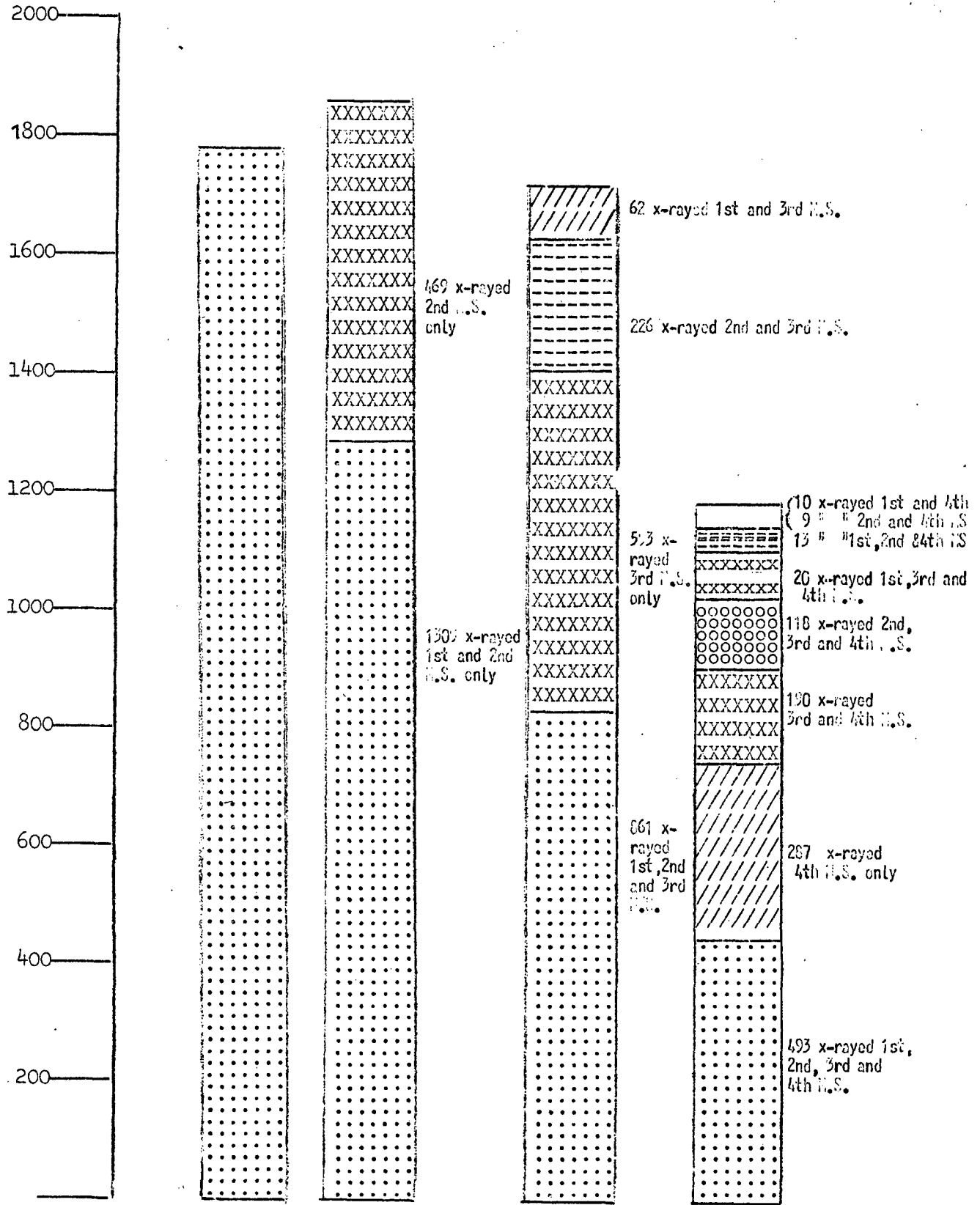
Pneumoconiosis by Category in men x-rayed at all four Medical Surveys.*

Category	1st M.S.		2nd M.S.		3rd M.S.		4th M.S.	
	No.	%	No.	%	No.	%	No.	%
0	384	77.9	371	75.3	363	73.6	348	70.6
1	62	12.6	62	12.6	68	13.8	71	14.4
2	30	6.1	38	7.7	33	6.7	37	7.5
3	7	1.4	11	2.2	10	2.0	9	1.8
P.M.F.	10	2.0	11	2.2	19	3.9	28	5.7

* The readings in Tables 2 and 3 were made at the time of the surveys and comparisons between surveys should be made with caution.

OAKDALE COLLIERY - POPULATION CHANGES

Appendix



Total No. of Men - 1787

1831

1742

1140

Year of Survey - 1954

1958

1964

1970

Left -

425

682

889

Joined -

469

593

287

469 x-rayed
2nd N.S.
only

130 x-rayed
1st and 2nd
N.S. only

62 x-rayed 1st and 3rd N.S.

226 x-rayed 2nd and 3rd N.S.

53 x-rayed
3rd N.S.
only

661 x-rayed
1st, 2nd
and 3rd
N.S.

10 x-rayed 1st and 4th
9 " " 2nd and 4th N.S.
13 " " 1st, 2nd and 4th N.S.

20 x-rayed 1st, 3rd and
4th N.S.

118 x-rayed 2nd,
3rd and 4th N.S.

190 x-rayed
3rd and 4th N.S.

287 x-rayed
4th N.S. only

493 x-rayed 1st,
2nd, 3rd and
4th N.S.

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