REPORT

DEPARTMENT OF MINES

OF KENTUCKY

1912

ANNUAL REPORT

OF THE

INSPECTOR OF MINES

OF THE

STATE OF KENTUCKY

FOR THE YEAR 1912

BY

C. J. NORWOOD, Chief Inspector

And the Assistant Inspectors

HEAD OFFICE, LEXINGTON, KY.



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LETTER OF TRANSMITTAL.

His Excellency, JAMES B. MCCREARY,
Governor of Kentucky.

Sir:—I have the honor to submit herewith the report of this office for the calendar year 1912.

Very respectfully,

C. J. NORWOOD,
Chief Inspector of Mines.

PERSONNEL OF THE OFFICE
For the Year 1912.

CHARLES J. NORWOOD,
Chief Inspector of Mines.

THOS. J. BARR, *Assistant Inspector,* Lexington.

W. R. BRASHER, *Assistant Inspector,* Earlington.*

PERRY V. COLE, *Assistant Inspector,* Barbourville.

MOSES D. DANIEL, *Assistant Inspector,* Ashland.†

HUW D. JONES, *Assistant Inspector,* Central City.‡

THOS. O. LONG, *Assistant Inspector,* Earlington.§

GEORGE T. SEARS, *Assistant Inspector,* Central City.¶

H. GEORGE VAN HOOSE, *Assistant Inspector,* Ashland.°

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*Mr. Brasher succeeded Mr. Long, September 1.
†The term of Mr. Daniel expired August 13.
‡Mr. Jones resigned September 30.
§Mr. Long's term expired August 31.
¶Mr. Sears succeeded Mr. Jones, October 1.
°Mr. Van Hoose succeeded Mr. Daniel, August 13.

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I.

MISCELLANEOUS.

On account of expirations of terms, death, and resignations, changes in Assistant Inspectors for three of the inspection districts occurred during the year as follows:

Earlington District: Mr. T. L. Long, who had been appointed in 1908, served until the expiration of his term. He was succeeded by Mr. W. R. Brasher (appointed August 28, 1912). Mr. Brasher has died since the close of the year, however (January 6, 1913), and Mr. H. S. Sizemore has been appointed to fill out his term. The writer feels that the death of Mr. Brasher is a distinct loss to the mining industry of the district. Although he had been in service but a short while, he gave evidence of high ability as an inspector; an able mining man, he was industrious, discreet, and thoroughly trustworthy.

Central City District: Mr. Huw D. Jones resigned to accept a more lucrative position as superintendent for a mining company, his resignation taking effect September 30, 1912. Mr. George T. Sears was appointed to serve out his term, and took up his work October 1, 1912. The ability of Mr. Jones was well recognized throughout his district, and the thorough and impartial manner in which he performed his duties entitles him to high commendation.

Big Sandy District: The term of Mr. M. D. Daniel expired August 9, 1912. Mr. H. G. Van Hoose was appointed to succeed him. Mr. Daniel had been appointed in June, 1911, to fill out the unexpired term of Mr. W. Burke. Competent and faithful, Mr. Daniel made an excellent inspector in every respect.

The counties in which commercial mining operations were conducted during the year 1912, included in the districts under the supervision of the respective Assistant Inspectors, are as follows:

Under Thomas J. Barr: Breathitt, Laurel, Lee, McCreary, Morgan, Perry, and Rockcastle. McCreary county includes mines which are in what were formerly portions of Pulaski, Wayne, and western Whitley.

Under Moses D. Daniel until August 9, 1912; now under H. G. Van Hoose: Boyd, Carter, Floyd, Johnson, Lawrence, Letcher, and Pike. The number of mines in this district requiring inspection, already larger than that in any other district, save that under the charge of Mr. Cole, is growing rapidly.

Under Perry V. Cole: Bell, Harlan, Knox, and the larger part of Whitley (the "Jellico" district). Mr. Cole has more mines under his supervision than has any other Inspector.

Under Huw D. Jones until September 30, 1912; now under George T. Sears: Butler, Daviess, Hancock, Henderson, McLean, Muhlenberg, and Ohio.

Under Thomas O. Long until September 1, 1912; then under W. R. Brasher up to the date of his death, January 6, 1913; now under Henry S. Sizemore: Christian, Henderson, Hopkins, Union, and Webster.

In the writer's report for 1911 attention was called to the need for two additional Assistant Inspectors, as follows: "Two additional Assistant Inspectors are needed. The number of operations in Mr. Cole's district has grown so large that one man cannot give all the mines the close attention they should receive; and with the early establishment of large operations in Letcher county, the opening of shipping mines in Perry, and the rapid growth of mining in the Big Sandy region, a re-arrangement of inspection districts in the Eastern Field will be necessary, and an additional Inspector will be needed for the northern part of the field." The experience of the last year emphasizes the necessity for increasing the staff of Inspectors. Letcher county and Perry county are now well established as mining counties of great importance, additional large operations are under way in Pike county, the preliminary work for additional large operations in Floyd county has been started, and the number of mines in both Harlan and Bell counties is rapidly increasing.

Fatalities for 1912.

There were 42 deaths due to injuries received inside the mines, resulting from 34 separate accidents; 2 fatal accidents in shafts; and 7 deaths resulting from 6 accidents on the surface.

Following is a statement of the causes and the number of deaths due to each cause:

Underground.—

Cause.	Deaths.
Falls of roof	19
Fall of loose coal	1
Mine cars or motor	4
Gas explosion (one accident)	5
Dust explosion (one accident)	5
Caught by shot fired by another miner	1
Electric shock	5
Machine runner taking self-propelling machine down an entry; machine ran away; man raised up and head struck a cross-timber	1
Caught between loaded car and rib at mouth of a room as result of a collision of drivers	1
Total underground	42

In Shaft.—

Cause.	Deaths.
Started across cage at bottom; cage was raised; crushed between cage and brow of shaft	1
Overwinding; gave wrong signal to engineer	1
Total in shafts	2

On Surface.—

Cause.	Deaths.
Struck by empty R. R. car at tipple	1
Coupler fell under moving trip of cars at tipple	1
Trip of empty cars broke in two; got between the two parts and was caught by the loose end	1
Mashed between car and tipple post	1

Explosion of 76 kegs of black powder which were being hauled to powder magazine	2
Leg smashed while unloading a cage from wagon; amputation; died from septic poison	1
Total on surface	7

The five deaths from a dust explosion occurred in the Central Mine of the Central Coal & Iron Company, in Muhlenberg county, in January, 1912. The accident was caused by a blown-out shot together with a blown-through shot. Three of the men were shot firers, two were bonding rail, and should not have been in the mine at the time. Four of the men were killed by the violence of the explosion; the fifth one was not injured, but died from afterdamp while making his way to fresh air. The hole that caused the blown-out shot was a gripping one, 8 feet long, and 3 feet of it was a dead hole; it was charged with 4 feet of powder. The toe was 1 foot and the heel 4 feet. It was not possible for the shot to have been other than a blow-out or a windy one, and no competent shot firer would have fired it had he seen the hole before it was loaded.

The five deaths from an explosion of gas occurred in the mine of the Coil Coal Company, in Hopkins county, at night. The gas was ignited at the face of an entry by a naked light. Provision had been made for carrying the air current to the face by means of brattice cloth, and so long as the ventilating fan was running there was no danger. The fan when running produced an ample amount of ventilation. It had been shut down during the day (Sunday), however, and it was necessary to start it and allow it to run long enough to clear out any standing gas, and dilute the gas coming from the face so as to render it harmless before a naked light could safely be carried to the face. Naked lights exclusively were used in the mine at the time. The shift-leader either failed to start the fan, or, after starting it, did not wait for the current to reach the face and sweep out the accumulated gas, before proceeding to the face. There is evidence that he had on previous occasions failed to start the fan, and since the fan pro-

duced a velocity greater than the rate at which a man ordinarily walks in a mine, it is not improbable that he did not start it on the night of the accident.

In order that the figures for fatality rates may be comparable with those published for other States, it is necessary to add 125,000 tons (on account of the small mines) to the commercial output, thus making the total output of 16,448,904 tons.

The tonnage raised per death underground was 391,402.

The tonnage raised per death inside, in shaft, and on the surface was 322,527.

These tonnages are much larger than the average for the United States.

The deaths in mine, in shaft, and on surface per million tons of coal produced were 3.10.

The deaths per 1,000 persons employed was 1.947.

These rates are much better than the average for the United States, and they compare favorably with the lowest rates published for British and European mines.

Indeed, from the writer's point of view, Great Britain's fatality rate is no better than that of Kentucky, though it is constantly being referred to as a standard which the mining men of this country should strive to reach. In Great Britain, for which the death rate for 1911 per 1,000 persons employed is given as 1.17, and the rate per million tons of coal produced as 4.05, there are 4.06 persons (the average) employed for each 1,000 tons of coal mined. In the United States the average number is about 1.35, and in Kentucky, for 1912, it is 1.59 persons employed for each 1,000 tons raised. Were we to place Kentucky on a parity with Great Britain with respect to number of persons employed per tonnage raised, our death rate per 1,000 persons employed would be far less than that for British mines, and this would hold true for the United States as a whole. For some reason, however, statisticians for insurance companies and experts in other quarters continue to make comparisons of the death rates in the United States with those for Great Britain and Europe in a way that shows to our disadvantage. Were as many persons per 1,000 tons of product raised employed in Kentucky mines as

are employed under like conditions in Great Britain, our death rate per 1,000 persons employed in 1912 would be about 0.76.

The Geological Survey.

By Act of the General Assembly of 1912, the Geological Survey was separated from the office of Inspector of Mines and made an independent organization. A statement concerning the work and publications of the Survey from 1904 to July 1, 1912, while the present writer was director, will be given in the report of this office for 1913. It is desirable to know what disposition is to be made of certain manuscript reports that were turned over for publication in June last, and what the outcome is to be with respect to certain reports that have been in the hands of the Interstate Publishing Company since November, 1911, before making the statement.

II.

STATISTICS FOR 1912.

For statistical purposes the State is divided into three districts as follows: (1) The Western, which includes all counties in the Western Coalfield; (2) The Southeastern, which, for 1912, includes Bell, Harlan, Knox, Laurel, Rockcastle, McCreary and Whitley counties; (3) the Northeastern, which, at present, includes Boyd, Breathitt, Carter, Floyd, Johnson, Lawrence, Lee, Letcher, Morgan, Perry, and Pike counties.

The statistics reported by this office refer only to mines that produce what is termed commercial coal. The aggregates given are made up from reports made to the office monthly by the mine operators, except with respect to selling values and tonnage mined by machine; figuress for the latter items are reported at the end of the year. The ton used is that of 2,000 pounds.

Output of Coal.

The production of commercial coal for the calendar year amounted to 16,323,904 tons. This was an increase of 2,399,093 tons over the output for 1911, and an increase of 1,403,893 tons over that for 1910, which up to the present year was the largest in the history of coal mining in the State.

The production by districts was as follows:

District.	Tons.
Western, 10 counties producing	7,795,904
Southeastern, 6 counties producing	5,182,829
Northeastern, 11 counties producing	3,345,171
Total	16,323,904

The output for 1911 was 13,924,811 tons. The figures for 1912 show gains for each district as follows: For the Western District, 836,363 tons; for the Southeastern, 734,446; for

the Northeastern, 828,284 tons. The Western District fell 632,848 tons short of its production for 1910. The Southeastern and Northeastern Districts each show gains over 1910. The latter districts will each continue to gain, but by far the larger increase will be in the Northeastern one; great tonnages will be sent out from mines in Johnson, Floyd, and Pike counties, in the Levisa Fork-Tug Fork areas of the Big Sandy drainage, and from Letcher and Perry counties in the North Fork region of the Kentucky River drainage.

Assuming that adequate railroad facilities for moving the tonnage will be provided, it may reasonably be expected that within less than ten years over 20,000,000 tons of coal will be produced in the Northeastern district alone.

In order that statistics of the coal output of Kentucky may be approximately comparable with those for Illinois, Indiana, and some other States, it is necessary to add to the commercial tonnage approximately 125,000 tons for the production of the small mines. Such an addition indicates an output of about 14,150,000 tons by Kentucky mines in 1911, and about 16,450,000 tons in 1912.

Output by Counties.

The output of commercial coal by counties, arranged according to districts, for the calendar years 1911 and 1912, was as follows:

Western District.—

County.	1911.	1912.
Butler	1,598	1,408
Christian	34,351	60,139
Daviess	73,233	77,161
Hancock	1,740	.....
Henderson	219,166	218,850
Hopkins	2,165,892	2,537,858
McLean	115,257	113,675
Muhlenberg	2,225,662	2,321,324
Ohio	736,705	657,135
Union	479,948	588,309
Webster	905,989	1,220,045
Totals	6,959,541	7,795,904

Southeastern District.—

County.	1911.	1912.
Bell	2,063,797	2,191,303
Harlan	25,814	384,427
Knox	773,310	831,484
Laurel	245,422	200,885
McCreary (a)	.....	543,244
Pulaski (b)	71,029	.....
Wayne (b)	104,486	.....
Whitley	1,164,525	1,031,486
Totals	4,448,383	5,182,829

(a) McCreary County was created by the Legislature of 1912. It includes the commercial mines that formerly were reported as in Pulaski and Wayne Counties, and some that were in Whitley County.

(b) The coal mines reported for 1911 are now in McCreary County.

Northeastern District.—

County.	1911.	1912.
Boyd	111,631	97,388
Breathitt	15,746	17,071
Carter	35,116	84,149
Floyd	248,142	426,770
Johnson	800,416	911,087
Lawrence	52,416	66,838
Lee	48,408	45,024
Letcher	none	198,316
Morgan	73,686	85,198
Perry	none	1,400
Pike	1,131,326	1,419,930
Totals	2,516,887	3,345,171

Disposition of the Product.

The disposition of the coal produced by the commercial mines was as follows:

	Tons.
Shipped from mines	15,120,887
Sold locally and used at mines	932,457
Coked at ovens in vicinity of mines	270,560
Total	16,323,904

The figures for the amount of coal turned into coke do not include the coal shipped to Ashland ovens from Pike county mines. Such coal is reported with the "shipped."

Between 67 and 68 per cent. of the coal was mined by machine.

Selling Value of the Coal.

The returns were not sufficient to make an accurate determination of the average selling value o. b. at the mines; for example, the largest producing company in the Northeast District gave no figures at all. The figures received, however —and they represent the larger number of producing mines— indicate an average selling value, based on run of mines, for the State, of about 94 cents at the mine. It is possible that complete returns would show an average selling value of about $1.01.

The selling values for the respective districts indicated by the returns received by this office are as follows:

District.	Selling Value.
Western	$0.9350
Southeastern	1.0781
Northeastern	1.0932
Average for the State	$0.9373

As explained above, it is to be understood that these figures are only approximately correct. Unfortunately, whether a company shall report its selling value to this office is entirely within its discretion, and a few of them fail to make such report even though Inspector gives assurance that the individual returns will be held in confidence.

Output by Companies for 1912.

Following is a statement of the output of individual companies for the calendar year 1912, as made up from reports received from the companies, and including amounts sold locally, used at the mines, and converted into coke, as well as tonnages shipped.

Western District.

Butler County.—

	Tons.
I. T. Foster, Woodbury	475
J. E. Gidcomb (Topmiller Mine), Morgantown	935
Total	1,408

Christian County.—

Brent Hart Mining Co., Mannington	21,900
Empire Mining Co., Empire	27,825
D. F. Shrum, Lessee Petersburg Mine, Mannington	10,414
Total	60,139

Daviess County.—

Fern Hills Coal Co., Owensboro	29,739
Fulkerson & Son (ran one month), Owensboro	320
J. Lee Rudy, Owensboro	10,729
J. M. Rudy (Buckman Mine), Owensboro	7,236
Maglinger Coal & Mining Co., Owensboro	4,298
Overstreet & Rudy, Owensboro	19,047
Wilson & Ellis, Owensboro	5,792
Total	77,161

Henderson County.—

Corydon Coal Co. and predecessor (Magnolia Mine), Corydon	14,077
John Archbold Coal Co., Bluff City	23,626
Nicholson Mg. & Mfg. Co., Henderson	8,010
Panama Coal Co., Robards	29,450
Peoples Mining Co., Henderson	31,089
Pittsburg Coal Co., Baskett Mine, Baskett	66,439
Pittsburg Coal Co., Spottsville Mine, Baskett	30,015
Smith Mills C. & M. Co., Smith Mills	4,522
Utopia Coal Co., Hebbardsville	8,000
Wm. Hayes & Son, Zion	3,622
Total	218,850

Hopkins County.—

Carbondale Coal & Coke Co., Dawson Springs	69,124
Coil Coal Co., Madisonville	36,685
Crabtree Coal & Mining Co., Ilsley	104,372

	Tons.
Gaines Coal Co., Providence	868
Kington Coal Co., Mortons Gap	241,120
Luton Coal Co., Providence	17,922
Nebo Consolidated C. & C. Co., Nebo	59,486
Nortonville C. & C. Co. (two mines), Nortonville	161,852
Reinecke Coal Mining Co., Madisonville	213,014
Rose Creek Coal Co., Nebo	96,322
St. Bernard Mining Co. (eight mines), Earlington	1,172,214
Stirling C. & C. Co., Daniel Boone	107,745
Sunset Coal Co., Madisonville	131,486
Victoria Coal Co., Madisonville	125,648
Total	2,537,858

McLean County.—

Consolidated Coal Co. (11 months), Island	8,650
Green River Coal Co., Livermore	5,630
Green River C. & C. Co., Island	73,474
Memphis Mining Co., Island	14,474
O'Neill Coal Co., Island	11,447
Total	113,675

Muhlenberg County.—

Advance Coal Co., Hillside	53,415
Beech Creek C. M. Co., Beech Creek	115,780
Bevier Coal Co., Cleaton	136,048
Black Diamond Mining Co., Drakesboro	106,447
Central C. & I. Co., Central Mine, Central City	147,780
Crescent Coal Co., Bevier	216,028
Dovey Coal Co., Mercer	11,412
Elk Valley C. Co. and Continental Fuel Co., (two mines), Drakesboro	61,107
Gibraltar Coal Mining Co., Mercer	137,370
Greenville Coal Co. (Powderly and Martwick Mines), Greenville	193,180
Hendrie Coal Co., Beech Creek	11,413
Hillside Coal Co. (Hillside and Oakland Mines), Greenville	70,955
Holt Coal Co., Central City	90,984
Kentucky Midland Coal Co., Central City	66,233
Lam Coal Co., Bevier	148,077
Lam-Woodburn C. Co. (Morgan Mine), Mercer	15,341
Muhlenberg C. Co. (Radiant and Browder Mines), Browder	103,767
Nelson Creek Coal Co., Nelson	72,172
Rock Island Coal Co. and others (Moody Mine), South Carrollton	3,772

	Tons.
Sunrise Coal Co., Drakesboro	1,794
W. G. Duncan Coal Co. (three mines), Greenville	558,249
Total	2,321,324

Southeastern District.

Bell County.—

Black Mountain Coal Co., Burchfield	1,351
Chenoa-Hignite Coal Co., Pineville	41,601
Clear Fork Coal & Coke Co., Fonde	333,100
Climax Coal Co. (Edgewood & Shamrock), Shamrock	23,874
Coleman Mining Co. (Fox Ridge), Cary	49,510
Columbia Coal Co., Middlesboro	37,669
Continental Coal Corporation (12 mines), Pineville	730,989
East Jellico Coal Co., Tinsley	109,454
Elk Coal Co., Tinsley	36,481
Ferndale Coal Co., Ferndale	9,595
Greasy Creek Coal Co., Tinsley	24,100
Gravity Coal & Brick Co. (Brick Dale), Middlesboro	1,423
Hignite Coal Mining Co., Shamrock	56,035
Home Coal Co., Middlesboro	3,562
Log Mountain Coal & Coke Co. (5 mines), Chenoa	113,266
Luke & Drummond Coal Co., Logmont	13,407
Mary Moore Coal Co., Excelsior	7,783
Monarch Coal & Coke Co., Middlesboro	32,557
Moss Coal Co., Middlesboro	1,689
Mountain Lake Coal Co., Middlesboro	14,322
New Bell Jellico Coal Co., Bell Jellico	108,123
New Straight Creek Coal Co. (Blanche Mine), Blanche	59,371
Pioneer Coal Co., Kettle Island	33,888
Ralston Coal Co., Ralston	17,377
Sagamore Coal Co., Logmont	40,347
Southern Mining Co. (3 mines), Varilla	128,900
Stony Fork Coal Co., Middlesboro	77,278
Winona Coal & Coke Co., Gravity	84,109
Yellow Creek Coal Co., Middlesboro	142
Total	2,191,303

Harlan County.—

Blackwood Coal & Coke Co. (Kentucky extension), Blackwood, Va.	13,000
Clover Fork Coal Co., Kitts	41,424
Harlan Town Coal Co., Harlan	31,220
Stonega Coal & Coke Co. (Kentucky extension), Stonega, Va.	43,354
Wallins Creek Coal Co., Wallins Creek	68,025
Wilhoit Coal Co., Day	40,686
Wisconsin Steel Co. (2 mines), Benham	146,718
Total	384,427

Knox County.—

	Tons.
Anchor Mining Co., Warren	9,811
Brush Creek Mg. & Mfg. Co., Warren	39,869
Camp Coal Co. and predecessor (Ingles), Elys	17,295
Dean Coal Co., Artemus	2,483
Dean Jellico Coal Co., Anchor	500
Interstate Coal Co. (Warren Mine), Warren	108,209
Interstate Coal Co. (Trosper Mine), Trosper	36,391
Matthews Jellico Coal Co., Elys	81,224
New Hughes Jellico Coal Co. and predecessor, Elys	59,429
North Jellico Coal Co. (3 mines), Wilton	409,965
Ostend Jellico Coal Co., Grays	1,871
Power Coal Co., Artemus	3,329
Sneed & Meguire Coal Co., Grays	17,189
Trosper Coal Co., Trosper	41,376
Tunnel Jellico Coal Co. and others (Charlton Mine), Barbourville	2,543
Total	831,484

Laurel County.—

Acme Coal Co., Pittsburg	56,771
Center Bros. (Crescent Mine), Viva	5,021
East Bernstadt C. Co. and Litton C. Co. (Star Mine), East Bernstadt	6,035
Ideal Block Coal Co., Lily	34,791
John Centers (Cross Mountain Mine), East Bernstadt	2,568
Litton & Masters (Cross Mountain Mine), East Bernstadt	2,810
McNeill Bros., Lessees New Victoria C. Co., Pittsburg	20,661
New Laurel Coal Co., Pittsburg	32,757
New and Old Diamond Coal Cos. (New Diamond Mine), East Bernstadt	15,928
Robinson Creek Coal Co. (3 months), Lily	5,276
Wild Cat Coal Co. (Standard Mine), for 11 months, Viva	18,267
Total	200,885

McCreary County.—

Eagle Coal Co., Barren Fork	53,392
Indian Creek Coal Co., Indian Head	36,551
McCreary County Coal Co., Barthell	2,664
Peters & Souleyret (Cogar Creek), Flat Rock	7,525
Stearns Coal Co. (all mines), Stearns	422,912
West Jellico Coal Co., Silerville	20,200
Total	543,244

Whitley County.—

	Tons.
Acme Blue Gem Coal Co., Gatliff	7,267
Bon Jellico Coal Co., Williamsburg	8,837
Burk Hollow Coal Co., Jellico, Tenn	16,318
Campbell Coal Mining Co., Coalmont	24,247
Cooke Jellico Coal Co., Jellico, Tenn	45,713
East Tennessee Coal Co., Jellico, Tenn	14,573
El Coal Co., Gatliff	19,865
Falls Branch Jellico Coal Co. (Kentucky extension), Wooldridge, Tenn	23,538
Gatliff Coal Co., Gatliff	312,173
Imperial Jellico Coal Co., Rockhold	62,535
Jellico Coal Mining Co., Mountain Ash	110,447
Mahan Jellico Coal Co., Packard	164,093
Main Jellico Mountain Coal Co., Kensee	52,343
Mammoth Blue Gem Coal Co., Gatliff	19,304
Mount Morgan Coal Co., Williamsburg	38,382
Peerless Coal Co., Wofford	30,302
Pleasant View Jellico Coal Co., Pleasant View	5,179
Procter Coal Co., Red Ash	46,565
Sunbeam Coal Co., Jellico, Tenn	7,152
Watts Jellico Coal Co., Wofford	22,653
Total	1,031,486

Northeastern District.

Boyd County.—

Ashland Iron & Mining Co. (Rush No. 12), Rush	3,932
Big Run Coal Co. (Princess Mine), Princess	27,917
Clere, D. R., Coalton	23,060
East Fork Coal Co., Princess	2,379
Hammond, Geo. W., Rush	11,932
Princess Coal Co., Princess	1,316
Wurts, C. F. (Lessee, A. I. & M., No. 8), Ashland	17,152
Wurts, Wm. (Lessee, Winslow No. 12), Ashland	100
Wurts, Wm. (Owner), Ashland	9,600
Total	97,388

Breathitt County.—

Henry, Davis & Co., Jackson	17,071

Carter County.—

	Tons.
Chatfield Coal Co. (Morning Glory Mine), Rush	10,126
Davy's Run Coal Co., Denton	16,428
Estate of N. Thayer (Lost Creek), Riverton	16,832
General Refractories Co., Hitchens	12,087
Norton Branch Plastic Clay Co., Kilgore	15,316
Strother & Reynolds (Meadow Branch), Kilgore	13,360
Total	84,149

Floyd County.—

Beaver Pond Coal Co., Prestonsburg	34,070
Cedar Point Coal Co. (Jewell Mine), Emma	28,158
Cliff Coal Co., Cliff	50,937
Colonial Coal & Coke Co., Prestonsburg	51,114
Mary Luck Coal Co., Auxier	29,079
Middle Creek Coal Co., Prestonsburg	55,214
North East Coal Co. (No. 7 Mine), Paintsville	100,115
Preston Coal Co. and others, Emma	21,790
Prestonsburg Coal Co., Prestonsburg	56,293
Total	426,770

Johnson County.—

Consolidation Coal Co. (4 mines), West Van Lear	560,519
Fluhart Colliers Co., Whitehouse	63,397
North East Coal Co. (Mines 1, 2 and 3), Paintsville	219,783
Royal Collieries Co. (Tibbals), Lower Greasy	41,423
Sandy River Coal Co., Williamsport	14,603
Yellow Chief Coal Co. (Meek Mine), Meek	11,357
Total	911,087

Lawrence County.—

Louisa Coal Co., Torchlight	58,184
Peach Orchard Coal Co., Peach Orchard	8,654
Total	66,838

Lee County.—

Bastin Coal Co. (Lee Gem), Idamay	13,946
Big Hill Coal Co. and Bastin Coal Co., Idamay	17,553
J. C. Richardson Coal Co., Beattyville	13,525
Total	45,024

Letcher County.—

	Tons.
Consolidation Coal Co. (Jenkins and McRoberts), Jenkins	198,316

Morgan County.—

Clearfield Lumber Co. (Road Fork), Clearfield	6,277
Kentucky Block Cannel Coal Co., Cannel City	55,654
Lee Coal Co. (No. 1), Clearfield	9,952
North Fork Cannel Coal Co., Loveland	13,315
Total	85,198

Perry County.—

Raccoon Coal Co., Hazard	400
Bowan & Speaks, Hazard	1,000
Total	1,400

Pike County.—

Allburn Coal & Coke Co., Matewan, W. Va.	51,010
Big Branch Coal Co., Lookout	38,472
Borderland Coal & Coke Co., Borderland, W. Va.	307,494
Burnwell Coal & Coke Co., Sprigg, W. Va.	104,349
Elkhorn Consolidated Coal & Coke Co., Hellier	106,356
Greenough Coal & Coke Co., Hellier	48,573
Henry Clay Coal & Coke Co., Lookout	23,388
Huffman (T. N.), (Chloe Mine), Pikeville	4,600
Kewanee Coal Mining Co., Kewanee	30,509
Keyser Coal Co., Mossy Bottom	46,326
Mitchell Coke Co., Hellier	22,009
Majestic Collieries Co., Majestic	155,741
Marrowbone Coal & Coke Co., Lookout	1,429
Pond Creek Coal Co., Stone	36,416
Shelby Coal Mining Co., Shelbiana	20,017
Steele Coal Co. (Cabin Branch and Steele), Pikeville	90,202
Thacker Coal Mining Co., Rose Siding, W. Va.	66,288
Turkey Gap Coal & Coke Co. (Freeburn), Edgarton, W. Va.	181,503
Vulcan Coal Co., Vulcan, W. Va.	77,248
Total	1,411,930

Production of Coke.

Disregarding the output of the Ashland ovens of the Ashland Iron & Mining Company, which was not reported in the

statistics for 1911, the production of coke for 1912 shows a net gain of 96,722 tons over that for 1911.

The production according to districts was as follows:

District.	Total Ovens.	Coke.
Western	175	35,893
Southeastern	500	90,945
Northeastern	160	65,778
Totals	855	192,616

The production according to counties for 1911 and 1912, respectively, was as follows:

Eastern Field.—

	1911.	1912.
Bell County	none	5,000
Harlan County	120	85,945
Pike County	23,066	29,961
Coked at mines	23,186	120,906
Ashland ovens, Pike County coal	.....	35,817
Total for Eastern Field		156,723

Western Field.—

	1911.	1912.
Hopkins County	35,336	35,631
Union County	1,555	262
Total for Western Field	36,891	35,893

The production according to companies was as follows:

Company and County.	1911.	1912.
Elkhorn Con. C. & C., Pike	10,252	28,893
Marrowbone C. & C., Pike	12,814	1,068
Coked at mines	23,066	29,961
Ashland ovens, Pike County coal	.....	35,817
		65,778
Continental C. C., Bell	none	5,000
Wisconsin Steel, Harlan	120	85,945
		156,723
Ohio Valley C. & M., Union	1,555	262
St. Bernard Mining, Hopkins	35,336	35,631
Total for 1912		192,616

The Marrowbone ovens turned out no coke after January. The Ohio Valley ovens were idle until December. The output of the Continental Coal Corporation was produced during the latter part of the year.

The Mitchell Coke Company, in Pike county, was succeeded by the Allegheny Coke Company July 26, 1912. Neither company turned out any coke, but the Allegheny Company is building 150 ovens. The Wisconsin Steel Company, in Harlan county, will add 100 ovens to its plant during the coming year, making a total of 400 ovens at Benham. The Kentucky Semet Solvay Company is completing a plant of by-product ovens near Catlettsburg.

All the coke made at the St. Bernard ovens is made from washed slack and pea. About 2.25 tons of the coal are required for the production of one ton of coke. Crushed coal is used for the ovens in the Eastern Field. From 1.5 to 1.6 tons of coal are required for the production of one ton of coke at those ovens.

Companies, Employes, Etc.

The tonnage of commercial coal for 1912 was produced by 239 mining concerns, operating 317 mines, distributed as follows:

District.	Companies.	Mines.
Western	93	118
Southeastern	87	109
Northeastern	59	90
	239	317

The average number of persons employed at the commercial mines was 25,936, of whom 20,368 worked underground. They were distributed as follows:

District.	Total Employes.	Employes Inside.
Western	10,866	9,211
Southeastern	10,091	7,127
Northeastern	4,979	4,030
	25,936	20,368

It is estimated that about 250 to 300 persons are employed at the small mines, 95 per cent. of whom probably worked underground.

The average number of 10-hour days worked was about 199.

The amount of black powder consumed at the mines can only be stated approximately. Where the miner furnishes his ammunition, a portion of it is purchased from other than "company" stores, and there is no means for ascertaining what the aggregate of such purchases may be. The monthly reports of the operators show a consumption of not less than 258,478 kegs (3,231 tons) during the year. The amounts reported according to districts were as follows:

District.	Kegs of B. P.
Western	118,328
Southeastern	88,520
Northeastern	51,630
	258,478

In the Eastern Field, especially in the Northeastern District, a large part of the blasting is done with "permissible" explosives. Such powder is also used, though only to a comparatively small extent, in the Western Field.

III.

ADDRESSES OF COAL MINING COMPANIES.

WESTERN DISTRICT.

Butler County.

Aberdeen Coal Mining Co.	Morgantown.
I. T. Foster	Woodbury.
J. F. Gidcomb (Topmiller Mine)	Morgantown.

Christian County.

Brent Hart Mining Co.	Mannington.
Empire Coal Co.	Empire.
D. F. Shrum, Lessee Petersburg Coal Mg. Co.	Mannington.

Daviess County.

Fern Hills Coal Co., R. R. No. 4	Owensboro.
Fulkerson & Son	Owensboro.
J. Lee Rudy	Owensboro.
J. M. Rudy	Owensboro.
Maglinger Coal & Mining Co.	Owensboro.
Overstreet & Rudy, R. R. No. 4	Owensboro.
Wilson & Ellis (New Bon Harbor)	Owensboro.

Henderson County.

Corydon Coal Co. (Magnolia Mine)	Corydon.
John Archbold Coal Co.	Bluff City.
Nicholson Mining & Manufacturing Co.	Henderson.
Panama Coal Co.	Robards.
Peoples Mining Co.	Henderson.
Pittsburg Coal Co. (Baskett Mine)	Baskett.
Pittsburg Coal Co. (Spottsville Mine)	Baskett.
Smith Mills Coal & Mining Co.	Smith Mills.
Utopia Coal Co.	Hebbardsville.
Wm. Hayes & Son	Zion.

Hopkins County.

Carbondale Coal & Coke Co., R. R. No. 4	Dawson Springs.
Coil Coal Co.	Madisonville.
Crabtree Coal Mg. Co.	Ilsley.
Gaines Coal Co. (P. O. in Webster)	Providence.
Kington Coal Co.	Mortons Gap.
Luton Coal Co. (P. O. in Webster)	Providence.
Nebo Consolidated Coal & Coke Co.	Nebo.
Nortonville Coal & Coke Co.	Nortonville.
Reinecke Coal Mining Co.	Madisonville.
Rose Creek Coal Co.	Nebo.
St. Bernard Mining Co.	Earlington.
Stirling C. & C. Co.	Daniel Boone.
Sunset Coal Co.	Madisonville.
Victoria Coal Co.	Madisonville.

McLean County.

Consolidated Coal Co. (Karnes Mine)	Island.
Green River Coal Co.	Livermore.
Green River Coal & Coke Co.	Island.
Memphis Mining Co.	Island.
O'Neill Coal Co.	Island.

Muhlenberg County.

Advance Coal Mg. Co. (Peerless Mine)	Hillside.
Beech Creek Coal Co.	Beech Creek.
Bevier Coal Co.	Cleaton.
Black Diamond Mining Coal Co.	Drakesboro.
Central Coal & Iron Co. (Central Mine)	Central City.
Crescent Coal Co.	Bevier.
Dovey Coal Co.	Mercer.
Elk Valley Coal Mining Co.	Drakesboro.
Gibraltar Coal Mg. Co.	Mercer.
Greenville Coal Co. (Martwick Mine)	Nelson.
Greenville Coal Co. (Powderly Mine)	Powderly.
Hendrie Coal Co.	Beech Creek.
Hillside Coal Co. (Hillside and Oakland Mines)	Greenville.
Hillside Coal Co. (Morgan Mine)	Mercer.
Holt Coal Co.	Central City.
Kentucky Midland Coal Co.	Midland.
Lam Coal Co.	Bevier.
Muhlenberg Coal Co. (Radiant and Browder Mines)	Drakesboro.
Nelson Creek Coal Co.	Mercer.
Rock Island Coal Co. (Moody Mine), (leased to Gordon Mining Co. in 1912, surrendered June 19, 1912)	South Carrollton.
Sunrise Coal Co.	Drakesboro.
W. G. Duncan Coal Co.	Greenville.

Ohio County.

Broadway Coal Mg. Co.	Simmons.
Central Coal & Iron Co. (Render Mine)	McHenry.
Fordsville Block Coal Co.	Fordsville.
Martin & Pollock Coal Co.	Cromwell.
McHenry Coal Co. (Echols Mine)	Echols.
McHenry Coal Co. (McHenry Mine)	McHenry.
Rockport Coal Co.	Rockport.
Taylor Coal Co.	Taylor Mines.
Williams Coal Co.	McHenry.

Union County.

Alabama Coal & Coke Co. (Waverly No. 1)	Waverly.
Bell Union Coal & Coke Co.	Curlew.
Crittenden Coal & Coke Co. (Davis Mine)	Sturgis.
Hercules Coal Co. (Thomas Mine)	Morganfield.
Morganfield Coal & Mg. Co.	Morganfield.
Ohio Valley oal & Mg. Co.	DeKoven.
Penn Coal Co.	Sullivan.
River & Rail C. & C. Co. (Davidson Mine)	Morganfield.
Uniontown Coal & Mg. Co. (Uniontown No. 2)	Uniontown.
West Kentucky Coal Co.	Sturgis.

Webster County.

Clifty Consolidated Coal Co. (Blackwell Mine)	Clay.
Diamond Coal Co., R. R. 2	Providence.
Fairmont Mining Co.	Wheatcroft.
Harris Coal Co. (Monroe Mine)	Providence.
H. D. Hill (L. Wright Mine)	Providence.
Highland Mining Co.	Providence.
Jenkins Coal Co.	Providence.
Lamb Coal Co.	Providence.
Leeper Coal Co.	Providence.
Providence Mining Co.	Providence.
Ruckman Coal Co. (Dupont Mine)	Providence.
R. L. Forsythe (Forsythe Mine)	Providence.
Sebree Mining & Development Co.	Sebree.
St. Bernard Mining Co. (Shamrock)	Earlington.
Webster County Coal Co.	Providence.
West Kentucky Coal Co. (Mines 3, 4, 5, 6 and 7)	Sturgis.

SOUTHEASTERN DISTRICT.

Bell County.

Black Mountain Coal Co.	Burchfield.
Chenoa-Hignite Coal Co.	Pineville.
Clear Fork Coal & Coke Co.	Fonde.
Climax Coal Co.	Shamrock.
Coleman Mining Co.	Cary.
Columbia Coal Co.	Middlesboro.
Continental Coal Corporation (12 mines)	Pineville.
East Jellico Coal Co.	Tinsley.
Elk Coal Co.	Tinsley.
Ferndale Coal Co.	Ferndale.
Gravity Coal & Brick Co.	Middlesboro.
Greasy Creek Coal Co.	Tinsley.
Hignite Coal Mining Co.	Shamrock.
Home Coal Co.	Middlesboro.
Log Mountain Coal & Coke Co. (5 mines)	Chenoa.
Luke & Drummond Coal Co.	Logmont.
Mary Moore Coal Co.	Excelsior.
Monarch Coal & Coke Co.	Middlesboro.
Moss Coal Co.	Middlesboro.
Mountain Lake Coal Co.	Middlesboro.
New Bell Jellico Coal Co.	Bell Jellico.
New Straight Creek Coal Co.	Blanche.
Pioneer Coal Co.	Kettle Island.
Ralston Coal Co.	Ralston.
Sagamore Coal Co.	Logmont.
Southern Mining Co. (3 mines)	Varilla.
Stony Fork Coal Co.	Middlesboro.
Winona Coal & Coke Co.	Gravity.
Yellow Creek Coal Co.	Middlesboro.

Harlan County.

Blackwood Coal & Coke Co. (Kentucky extension)	Blackwood, Va.
Clover Fork Coal Co.	Kitts.
Harlan Town Coal Co.	Harlan.
Stonega Coal & Coke Co. (Kentucky extension)	Stonega, Va.
Wallins Creek Coal Co.	Wallins Creek.
Wilhoit Coal Co.	Day.
Wisconsin Steel Co.	Benham.

Knox County.

Anchor Coal Co.	Warren.
Brush Creek Mg. & Mfg. Co.	Warren.
Camp Coal Co.	Elys.
Dean Coal Co.	Artemus.

Dean Jellico Coal Co.	Anchor.
Diamond Jellico Coal Co.	Corbin.
Interstate Coal Co.	Trosper and Warren.
Matthews Jellico Coal Co.	Elys.
New Hughes Jellico Coal Co.	Elys.
North Jellico Coal Co.	Bertha and Wilton.
Ostend Jellico Coal Co.	Grays.
Power Coal Co.	Artemus.
Snead & Meguire Coal Co.	Grays.
Trosper Coal Co.	Trosper.
Tunnel Jellico Coal Co.	Barbourville.

Laurel County.

Acme Coal Co.	Pittsburg.
Center Brothers	Viva.
East Bernstadt Coal Co. (Star Mine)	East Bernstadt.
Hawkins, J. A. (Black's Jellico)	Pittsburg.
Ideal Block Coal Co.	Lily.
John Centers	East Bernstadt.
Litton and Masters	Viva.
McNeill Brothers (New Victoria)	Pittsburg.
New Laurel Coal Co.	Pittsburg.
Old Diamond Coal Co.	East Bernstadt.
Robinson Creek Coal Co.	Lily.
Wild Cat Coal Co. (Standard Mine)	Viva.

McCreary County.

Eagle Coal Co.	Barren Fork.
Indian Creek Coal Co.	Indian Head.
McCreary County Coal Co.	Barthell.
Peters & Souleyret	Flat Rock.
Stearns Coal Co.	Stearns.
West Jellico Coal Co.	Silerville.

Rockcastle County.

Allnite Coal & Lumber Co. (developing)	Johnetta.
Ky. Portland Cement & Coal Co. (developing)	Pine Hill.

Whitley County.

Acme Blue Gem Coal Co.	Gatliff.
Bon Jellico Coal Co.	Williamsburg.
Burk Hollow Coal Co.	Jellico, Tenn.
Campbell Coal Mining Co.	Coalmont.
Cooke Jellico Coal Co.	Jellico, Tenn.
East Tennessee Coal Co.	Jellico, Tenn.
El Coal Co.	Gatliff.

Falls Branch Jellico Coal Co. (Kentucky extension)	Wooldridge, Tenn.
Gatliff Coal Co.	Gatliff.
Imperial Jellico Coal Co.	Rockhold.
Jellico Coal Mining Co.	Mountain Ash.
Mahan Jellico Coal Co.	Packard.
Main Jellico Mountain Coal Co.	Kensee.
Mammoth Blue Gem Coal Co.	Gatliff.
Peerless Coal Co.	Wofford.
Pleasant View Jellico Coal Co.	Pleasant View.
Proctor Coal Co.	Red Ash.
Sunbeam Coal Co.	Jellico, Tenn.
Watts Creek Jellico Coal Co.	Wofford.

NORTHEASTERN DISTRICT.

Boyd County.

Ashland Iron & Mining Co. (Rush No. 12)	Rush.
Big Run Coal Co. (Head Office, Winchester)	Princess.
Clere, R. R.	Coalton.
East Fork Coal Co.	Princess.
Hammond, Geo. W.	Rush.
Wurts, C. F., Lessee A. I. & M., No. 8	Ashland.
Wurts, Wm.	Ashland.

Breathitt County.

Henry, Davis & Co.	Jackson.

Carter County.

Chatfield Coal Co. (P. O. in Boyd)	Rush.
Estate of N. Thayer (P. O. in Greenup)	Riverton.
General Refractories Co.	Hitchens.
Norton Branch Plastic Clay Co.	Kilgore.
Strother & Reynolds (Meadow Branch Mine)	Kilgore.

Floyd County.

Beaver Pond Coal Co.	Prestonsburg.
Cedar Point Coal Co.	Emma.
Cliff Coal Co.	Cliff.
Colonial Coal & Coke Co.	Prestonsburg.
Mary Luck Coal Co.	Prestonsburg.
Middle Creek Coal Co.	Prestonsburg.
North East Coal Co., No. 7 Mine (P. O. in Johnson)	Paintsville.
Preston Coal Co.	Emma.
Prestonsburg Coal Co.	Prestonsburg.

Johnson County.

Consolidation Coal Co. (4 mines)	West Van Lear.
Fluhart Collieries Co.	White House.
North East Coal Co., Mines 1, 2 and 3	Paintsville.
Royal Collieries Co.	Lower Greasy.
Sandy River Coal Co.	Williamsport.
Yellow Chief Coal Co.	Meek.

Lawrence County.

Louisa Coal Co.	Torchlight.
Peach Orchard Coal Co.	Peach Orchard.

Lee County.

Bastin Coal Co. (Lee Gem Mine)	Idamay.
Big Hill Coal Co.	Idamay.
J. C. Richardson Coal Co.	Beattyville.

Letcher County.

Consolidation Coal Co. (12 mines)	Jenkins.

Morgan County.

Clearfield Lumber Co.	Clearfield.
Kentucky Block Cannel Coal Co.	Cannel City.
Lee Coal Co.	Clearfield.
North Fork Cannel Coal Co.	Loveland.

Perry County.

Bowman & Speaks	Hazard.
Raccoon Coal Co.	Hazard.

Pike County.

Allburn Coal & Coke Co.	Matewan, W. Va.
Allegheny Coke Co.	Hellier.
Big Branch Coal Co.	Lookout.
Borderland Coal Co.	Borderland, W. Va.
Burnwell Coal & Coke Co.	Sprigg, W. Va.
Elkhorn Consolidated Coal & Coke Co.	Hellier.
Greenough Coal & Coke Co.	Hellier.
Henry Clay Coal & Coke Co.	Lookout.
Kewanee Coal Mining Co.	Kewanee.

Keyser Coal Co.	Mossy Bottom.
Majestic Collieries Co.	Majestic.
Marrowbone Coal & Coke Co.	Lookout.
Pond Creek Coal Co. (7 mines)	Stone.
Shelby Coal Mining Co.	Shelbiana.
Steele Coal Co.	Pikeville.
Thacker Coal Mining Co.	Rose Siding, W. Va.
T. N. Huffman	Pikeville.
Turkey Gap Coal & Coke Co.	Edgarton, W. Va.
Vulcan Coal Co.	Vulcan, W. Va.

IV.

DESCRIPTIVE LIST OF FATALITIES.

The following descriptive notes are based on reports received from the mining companies, or on data gathered by representatives of this office at the time of the accident.

Bell County.

Clear Fork Coal and Coke Company.—(1) R. L. Clark, a miner; age 32. May 3. Killed by a fall of slate. Wife and three children.

(2) Bell Carr, occupation not given; age 23. Killed instantly by fall of slate, August 30. Wife and three children.

Continental Coal Corporation, Rim No. 4 Mine.—Two men were fatally injured by the explosion of 76 kegs of 3F powder while the latter was being hauled in mine cars to the powder house (outside the mine), on September 20. They were:

(1) Clay Johnston, a coupler; age 22; who died five hours after injury.

(2) J. M. Lewis, foreman; age 45; who died 30 hours after injury.

Haulage was by electric motor, and it is supposed that the explosion was caused by electric current.

At the same time David Disney, motorman, was badly burned on arms, shoulders, and back of head. Lost about eight weeks.

East Jellico Coal Company.—Hillery Jackson, a miner; age 27. October 25. Fatally injured by fall of slate. Wife and two children.

Log Mountain Coal Co., No. 1 Mine.—George Fuson, occupation not given; age 27. Fatally injured by fall of slate March 22. Died March 24. The only external indications

were laceration over right eye, small punctures of skin in middle of the forehead, and hemorrhage from nose and ears. No family.

Southern Mining Company, Varilla Mine.—C. C. Wilder, miner; age 21. Head mashed (by fall of roof?) June 28. No family.

Winona Coal and Coke Company.—W. B. Looper, miner; age 45. November 28. Killed by fall of parting. Company says: "Should have pulled parting down. Was warned to do so, and was paid 10 cents per car more in his room for pulling same down." Wife.

Boyd County.

Big Run Coal Company, Princess Mine.—Sherman Gullett, motorman; age 26. February 29. Killed by fall of slate in entry while hauling out a trip. Wife and child.

Henderson County.

Peoples Mining Company.—John Hyatt, yard foreman; age 46. While unloading a new cage from a wagon, March 13, the cage slipped from skids and mashed one of his legs. He died from blood poisoning following amputation. Wife and two children.

Hopkins County.

Coil Coal Company.—John Nance, occupation not given; age 40. Attempted to cross the cage at the bottom of the shaft on February 20; cage started up, and he was fatally crushed between the cage and the brow of the shaft. Was married; no report as to children.

Same Company and Mine.—This mine makes sufficient explosive gas to render very thorough ventilation necessary, at times requiring the use of brattice to carry the air to within ten or twelve feet of some of the working faces.

At about 7:05 Sunday night, April 21, an explosion of gas occurred at the face of the first south entry off the west main, killing five men, namely: John Hollowell, night foreman, who left a wife and child; and Herschel Petrie, William Hughes, Leslie Clements, and Charles New (colored men), all laborers and unmarried.

At the time, the development of the mine was small, all but two of the working places being entries and room-necks. Air was carried to within ten or twelve feet of the entry faces by means of cloth brattice, and so long as the ventilating fans were running and proper attention paid to keeping it up to the faces the gas was so thoroughly diluted as to render it harmless. During a shut-down of the ventilating fan, however, gas would accumulate in dangerous quantity at the faces of entries, rendering it necessary to run the fan some minutes before workmen using open lights could safely go to such places. A rule of the mine required that, after the fan had been started, a preliminary examination should be made of all the working places and a test for gas made by a designated person at least thirty minutes before any workman should go to his working place. The rule, if strictly followed, seems to have been adequate. But, as stated, on the date named an explosion occurred.

Mr. Thos. O. Long, Assistant Inspector for the district, was notified within a few minutes after the explosion, and reached the mine soon thereafter. He at once started work necessary to be done in order to permit entrance to the mine and for the establishment of ventilation. This work was done under great disadvantages and was not completed until Monday morning, the 22d.

The present writer was not notified of the disaster until nearly five hours after its occurrence Sunday night, but then gave such aid as could be rendered in the way of advice over long distance telephone, and left for the mine on the first train available, which was on Monday morning, the 22d.

Mr. H. D. Jones, Assistant Inspector for the Central City District, was also notified late Sunday night, and he reached the mine at about 8:30 o'clock Monday morning.

Mr. Long and Mr. Jones succeeded in entering the mine Monday morning, but found conditions such, after exploring the main entry short distances east and west of the hoisting shaft, that they deferred further efforts at exploration until better ventilation could be provided, and the roof at the bottom of the shaft and near thereto, from which all supports

had been blown away or damaged, be made secure by timbering.

The writer reached Madisonville at about 4:30 Monday afternoon and took charge of the recovery work, leading and directing the work continuously until about 6:00 p. m. Wednesday, when the last of the two dead men were located in the sump of the hoisting shaft, beneath an immense amount of wreckage. Removal of this wreckage was a difficult job, and the men could not be reached and hoisted out until near midnight Thursday. On Friday morning provision was made for maintaining ventilation throughout the mine, to serve during the work of cleaning up and restoration of permanent timbering, etc., and the mine was turned over to the company.

The writer is of opinion that the explosion was caused by the night foreman—one of whose duties was to start the fan and make the preliminary examination—going with a companion direct to the face of the first south entry off the west main, where gas had accumulated during a shut-down of the ventilating fan for a period of about eight hours, with an open light, either immediately after starting the fan and arriving at the face before there had been time for the gas to be sufficiently diluted and swept out by the fresh air, or without having started the fan at all, on the supposition that there would not be sufficient gas to be dangerous. Statements have been reported to the writer within recent time that tend to support the possibility that the fan was not started, as, according to report, had been the case on some other occasions (with the same man as night foreman) without harmful result.

Two things are certain: First—If Hollowell had promptly started the fan upon reaching the shaft bottom and had waited thirty minutes, or perhaps even twenty minutes, before going to the face of the entry, no explosion would have occurred, for the fan (as had been determined during inspections made by Mr. Long) produced an abundance of air for both sides of the mine, and the distance from the fan to the face of said entry was not far. Second—If safety lamps, in proper condition and properly handled, had been used instead of open lights for making the preliminary examination, there would have been no explosion.

An inquiry concerning the explosion and the underground management of the mine was held by Hon. R. B. Bradley, County Judge, the examination of witnesses being conducted by Hon. G. W. Sypert, County Attorney. Much general information was elicited, but it does not seem necessary to include the voluminous report here.

Much credit is due Mr. Long and Mr. Jones for the efficient and courageous manner in which they performed their work. High commendation is also due to all other members of the recovery parties for their faithful and courageous conduct under trying circumstances. Unfortunately, the writer now has only the names of A. A. Sams, who voluntarily came from Evansville to render such aid as he might, Oscar O'Bannon, James Cardwell, Lee Galloway, Mosco Haley, and Dick Davis (colored).

Following is the report of Assistant Inspector Long concerning the explosion, to which reference is made for various details:

Report of Thos. O. Long:

"The mine is opened by a shaft which is 285 ft. deep to the top of the No. 11 seam of coal. The hoisting shaft and air shaft are each 9'x15' in size, and are about 200 ft. apart. The shafts were completed about August 1, 1911, and the shafts were connected underground about November 15, 1911. The underground excavations were not very large, as there were only two wide rooms in the mine; all other working places were entries and room-necks.

"A four-foot fan, driven by a small electric motor, was located at foot of the fan shaft. This fan was operated as a forcing fan, and the east and west sides of the mine were ventilated by separate splits of the ventilating current.

"The mine generated marsh-gas, which was handled and rendered harmless by running a line of brattice from the last open breakthrough in the entries to near the face of each entry, thereby causing the ventilating current to travel within 10 or 12 feet of the working faces.

"Day and night shifts had been used constantly. The chief duty of the night shift was the loading of coal which was used to coal the engines of the L. & N. Railroad. The

storage capacity for the coal being limited on the surface, rendered necessary the loading and hoisting of coal on the night shifts, hence the necessity of a crew of men being in the mine on Sunday night.

"It was customary, when all the men left the mine, to stop the fan and open a door in the brattice, so that a current of natural ventilation always existed between the hoisting shaft and the air shaft while the fan was not in operation. This being the practice, the fan was stopped at 11 a. m. Sunday, the 21st, when all the men on that shift came out of the mine, and the door in the brattice was left open.

"The night shift, which consisted of night foreman, Joseph Hollowell, and four colored men, namely, Leslie Clements, Charles New, Will Hughes, and Herschel Petrie, entered the mine about 7 p. m. Sworn testimony by several witnesses was that the night foreman had been given orders to wait half an hour after starting the fan before venturing into the recesses of the mine, and, according to belief of the Mine Inspectors, Hollowell, in company with Charles New, walked to the fan as soon as the mine was entered, the other three miners waiting at the foot of the hoisting shaft until Mr. Hollowell had made a trip over the mine. Instead of waiting the required half-hour before going further back into the mine, Hollowell and the negro evidently began the trip over the mine immediately after starting the fan. Going to the west side of the mine, they encountered the gas which had accumulated at the head of the first south entry off the west side, and the gas was set afire by their open lights. The testimony was that the men had not been in the mine more than 15 minutes before the explosion took place.

"The force of the explosion was so great that one man, Will Hughes, was blown out of the mine and was found the next morning, at daybreak, on top of the tip house; this man was the cager, and was either on or near the cage when the explosion occurred. One of the cages was lodged in the top of the head frame and the other cage evidently was lifted a portion of the way, if not all the way, to the top, and went back to the bottom of the shaft.

"I was notified, by telephone message, of the explosion

about fifteen minutes after it occurred, and taking the rescue apparatus went to the scene of the accident immediately.

"The rescue work was started by placing a 'steam blower' in the hoisting shaft, thereby creating a ventilating current between the hoisting shaft and the air shaft. The air shaft was explored, and it was found that the sixteen lower ladders in the man-way were blown away and the foot of the air shaft filled with debris. The 'steam blower' was then changed to the air shaft, which reversed the ventilating current, making the hoisting shaft the downcast for the ventilation; this was done in order to explore the hoisting shaft, which was found to be clear except the debris at foot of same.

"It was decided to enter the mine by the hoisting shaft, and work was started on the derrick rigging and the connection of a small hoisting engine so that parties could be lowered into the mine by the use of a rope and tub. Owing to the downpour of rain this work was carried along slowly and was not completed until Monday morning.

"Prof. C. J. Norwood, Chief Inspector of Mines, was notified of the accident about midnight, and he reached the mine at 5 p. m. Monday, the 22d.

"Mr. H. D. Jones, Assistant Inspector of Mines, of Central City, Ky., was notified of the accident about 1:30 a. m., and reached the mine at 8:30 a. m., Monday, the 22d.

"Mr. Jones and myself, using the oxygen helmets, were lowered into the mine about 9 a. m. on the 22d, and made a landing on top of the debris at foot of the hoisting shaft; it was then necessary to get a ladder to place down in the debris so as to get down into the mine.

"Owing to the great amount of debris in the shaft, it required quite an amount of time to get enough debris moved to enable anyone to get into the mine.

"After entering the mine, the exploring was done by Mr. Jones and myself, using the helmets. This work was not carried very far until we decided that we would have to abandon the helmet work and restore the ventilation, and timber everywhere, as the roof was falling continuously. The roof is limestone, with about 14 inches of gob occurring between the lime-

stone and the coal. When this gob is this thick the lower two or three inches is black slate and when timbered properly can be held up very easily; this had been done, and the knocking out of all the timbers by the force of the explosion made the working under this gob very dangerous.

"Prof. Norwood, reaching the mine at 5 p. m., on Monday, the 22nd, took charge and continued the rescue work throughout Monday night, exploring the west side of the mine, and finding the bodies of night foreman, Joseph Hollowell and the negro, New, at the head of the first south entry off the west side of the mine. The entire west side of the mine was explored without finding any of the remaining bodies.

"Tuesday morning a new crew was organized, with Prof. Norwood still leading, and the work of exploring the east side of the mine was carried out without finding the remaining bodies. It was then decided that the next most likely place to search was the sump at foot of the hoisting shaft. Work on cleaning out the debris from the sump was started Tuesday night and carried on continuously. This debris consisted of about 100 feet of the mid-wall and guides of the hoisting shaft, numerous props and timbers, two mine cars, water and steam pipes, and one of the cages.

"By 6 p. m. Wednesday evening enough of the debris had been moved to enable prodding under the water with an iron rod, and in this manner the two remaining bodies were located, under all the wreckage, which had to be removed to get the bodies out.

"The bodies, being those of Leslie Clements and Herschel Petrie, were hoisted out of the mine about midnight Thursday night.

"Before leaving the mine Friday temporary brattices of curtain cloth were constructed, so that when the inspectors left the entire mine was being ventilated."

Nortonville Coal and Coke Company.—Ben Gardner, machine runner; age not given. Came in contact with live wire, carrying 250 volts direct current, while operating machine, and was killed instantly. Februtry 15.

St. Bernard Mining Company, Arnold No. 11 Mine.—Thos. Farmer, handling railroad cars at tipple; age about

25. Stepped from behind the tipple in front of an empty railroad car that was being dropped to mine below. Both legs were run over below the knees; death resulted a few hours later. Occurred June 18. Wife, but no children.

JOHNSON COUNTY.

Consolidation Coal Company, mine 152.—(1) Fred Collinswort, miner; age 27. February 21. Electrocuted by coming in contact with live wire. Unmarried.

(2) Albert Murphy, laborer; age 18. June 28. Instantly killed by slate fall "while trespassing inside mine."

(3) George Hays, miner; age 22. July 3. Killed by slate fall.

(4) John Parker, miner; age 20. September 20. Killed by fall of slate. This accident was investigated by Assistant Inspector Van Hoose, who reported as follows:

"He was loading coal in a room with his father, when a piece of slate fell, catching him and killing him instantly by breaking his neck.

"I got notice from the company and immediately went to the mine and investigated it, and found that the accident occurred in room 16 off third left entry, which room adjoins the one in which a man was killed in the month of July of this year.

"This accident was caused by a 'kettle bottom' falling out right over the roadway, and immediately over the end of the car where young Parker was working, starting in at a feather edge from the row of props following the roadway and extending out 5½ feet over the road and to a feather edge again; it was circular in shape, being about 5½ feet each way, and starting in at a feather edge, and about 11 inches in center, and then to a feather edge again. The thing is one that one would hardly pay any attention to where the top is considered good, but the top in this part of the mine is pretty bad; the company has a crew of men in there all the time looking after the top, and it seems as though they are trying to keep a close watch on it.

"I found plenty of props in the place where the men were at work, but it would be hard to prop the piece unless it was cross-timbered overhead."

Consolidation Coal Company, Mine 153.—George McFarland, wire man; age 21. February 12. Run over by a trip of empties while attempting to board same, and was killed. Wife.

Northeast Coal Company, Mine 1.—C. C. Whisman, miner; age 56. June 22. Company's report is: "Mr. Whisman was passing through one of our main entries on his way from his home to our tipple to procure a keg of powder. He was traveling in the direction opposite from his working place and about 5:45 a. m., fifteen minutes before our time to begin work. He was caught by a slate fall on the main entry, sustaining injuries which caused his death at about 9:00 p. m. on that same date. It is our custom to send a man ahead of all moving trips in the morning, to examine entries, and Mr. Burke, who was on such trip of inspection, met Mr. Whisman at point of accident, and only one sentence had passed between them when the slate fell which injured him. We are unable to explain why Mr. Whisman traveled from his home to the tipple by way of this entry, as it was a beautiful morning, and there was a splendid road leading from his home to the tipple on the outside, which is as short as by way of the entry." Wife and five children.

KNOX COUNTY.

Brush Creek Mining and Manufacturing Company.—James Jones, machine coal loader; age 23. October 14. Killed instantly by fall of slate.

Interstate Coal Company, Warren Mine.—(1) Ed Neil, motorman; age 29. July 22. Killed instantly, inside mine, by coming in contact with live wire carrying 250 volts. Wife and one child.

(2) Louis Magyar, trapper; age 16. August 16. Fell between cars while jumping on loaded trip. Leg mashed, necessitating amputation. Died soon after operation.

(3) Forest Elliott, machine runner; age 38. September 24. Fatally injured by head striking a cross-timber in an entry, down which he was taking his machine. The company says: "This man was taking his machine down an entry; the machine getting beyond his control, we presume, in his excitement, he raised up and his head struck a cross piece or cap."

(4) Wm. Suthers, coupler on motor; age 19. September 5. Fatally injured by getting against a live wire.

(5) Yank Satmire, slate loader; age not given. December 5. Run over by motor, at a point about fifty feet inside from the drift mouth, and leg broken, necessitating amputation. Died about eight hours after the operation, from shock and loss of blood.

North Jellico Coal Company, Bertha Mine.—Walter Tuggle; age 19. Killed instantly by fall of slate while at work for J. M. McClellan, pulling stumps on the McClellan entry.

LAWRENCE COUNTY.

Louisa Coal Company.—(1) Elijah Hammond, tipple foreman; age 38. February 23. Fatally mashed between car and tipple post. (An outside accident.) Wife and nine children.

(2) John Parker, miner; age 52. October 17. Wife and four children. This accident was investigated by Assistant Inspector Van Hoose, who reported as follows:

"I went to the mines of the Louisa Coal Company, at Torchlight, this morning (October 21), and investigated the death of John Parker, who was killed by a kettle bottom on Thursday, October 17.

"Parker and a man by name of Anse Stafford were working in room 6 on sixth east entry off main entry. Parker was "scrapping" some bottom that was left by an electric machine, and was sitting on a shovel within three feet of the face of the coal, when the kettle bottom fell out, striking him on the back and breaking it in three places, and tearing the ribs loose from one side of the spine. The room was considered good, and I thoroughly examined the top all around; it was perfectly solid, and the props were just twelve feet back from the face of the coal, and all under good, solid top. The diameter of the kettle bottom was 6 feet. It was 12 inches thick in the center, but in the extreme center the dimensions were 24 by 24 by 12 inches, and the while thing shaped like a hat; the thick part was all in the center and rather flat on the top, then thinning out like a hat brim. It was not very heavy; the weight was all in the center, and would not have hurt the man,

in my opinion, if he had been standing up on his feet; but the fact that he was sitting down gave the slate farther to fall, and the force killed him.

"Anse Stafford, the man who was with him when he was killed, says that they had always thought the slate of the best, and that they had always examined the place thoroughly at all times; that the place was safe when they started to work, and must have drawn loose suddenly, as they did not know it was there.

"The condition of the place and the shape it was in shows them to be good, experienced miners, and miners that do not ordinarily take chances. From the center of the kettle bottom to the face of the room is only 5 feet, and I believe that if the slate was loose they did not know it, and anyone would have considered the place in excellent shape and the roof first class.

"The company has abandoned that portion of the mine that has a fire clay roof. The accident happened in No. 3 Mine."

Laurel County.

No fatal injury occurred to any mine employe in this county, but one man (John Elliott, 74 years of age), in no way connected with the operation, was killed by a run-away trip at the tipple of the Ideal Block Coal Company in July.

McCreary County.

Eagle Coal Company.—Lum Childress, miner; age 18. August 12. Killed outside the mine. Company's report is: "Trip of empty cars broke loose from engine; several cars remained coupled to engine. Childress got between the cars and was caught by the loose trip, and died from injuries in about an hour."

Stearns Coal Company, Mine 1 at Barthell.—Charles Crabtree, miner; age 45 to 50. September 5. Instantly killed by a fall of slate in a room. The company says: "There was a roll in the roof beginning about 3 feet from the room-end in the north and extending diagonally across the room from right to left. It was 8 feet long and 2 feet 10 inches wide and 1 foot thick." Wife and three or four children.

MUHLENBERG COUNTY.

Central Coal and Iron Company, Central Mine.—On January 17, between the hours of 5 and 6 p. m., after all persons other than three men acting as shot firers and two men who were bonding track, had left the mine, an explosion occurred while shot firing was in progress, and the five men indicated were killed.

One of the five probably was killed outright, and three of them quickly, if not at once. The fifth man, who was in a part of the mine distant from the seat of the explosion, died solely from the effects of afterdamp, which did not reach him until some time after the death of the other men. The men killed were:

William Matthews, miner, but acting as shot firer; age 45. Wife and three children. His injuries consisted of a small incised wound on right side of head and a deeper one on the back of the head, and burns on face and hands. He doubtless died from burns and afterdamp.

Eric Lunquist, miner, but acting as a shot firer; age 43. Wife and two children. His injuries consisted of extensive burns, covering face, neck, hands, and arms. He doubtless died from burns and afterdamp.

Ira Allen, tracklayer and bonding track at the time of the explosion; age 30. Wife and two children. His injuries consisted of a contused flesh wound on back of head and burns on face. At the time of the explosion it was erroneously reported that one of his legs was broken.

David Doss, cager, but assisting Allen in bonding track; age 22. Not married. His injuries consisted of a deep incised wound on forehead, above right eye, and one on back of head, and burns on face. He seemed to have been blown against a tool truck (locally called "dummy") on the east side of the lyeway—though he may have jumped or blindly run in that direction and struck the truck—and may have died outright as the result of concussion of the brain. At the time of the explosion it was erroneously reported that his skull was fractured.

George Ruby (colored), miner, but acting as a shot firer; age 35. Wife and one child. His body showed no marks of

any sort of injury anywhere. He died solely from afterdamp.

The Central Mine is laid out in two districts with respect to the shaft, known as the north and south side, respectively. At the time of the explosion, and for some time prior thereto, operations were confined to workings on the south side.

The main entry on the south side is known as the main southwest entry. For the sake of brevity, it will here be referred to as the main south. From this main south entry a system of double entries, with 20-foot to 30-foot pillars, are broken off to the east and to the west, the last pair on the east being the third and fourth east, and the last on the west being the third and fourth west, the latter pair being about 400 feet ahead of the former. At the time of the explosion, the face of the main south was about 885 feet beyond the fourth east and about 495 feet beyond the fourth west.

The third and fourth west entries are long, but only a few rooms and room-necks had been opened on them, the last one (a neck) being about 400 feet from the main south. On the third west there were six short rooms—one of them up 80 feet, one up 105 feet, and four up 40 to 60 feet, and two necks. On the fourth west there were six short rooms—one of them up 80 feet, two up about 60 feet, and three up 25 to 45 feet—and five necks.

The parallel air course for the main south is on the east side of said entry and is known as the main south back entry. The face was 910 feet beyond the fourth east entry. The last breakthrough that had been made between this back entry and the main south was 60 feet back from the face of the back entry and 30 feet back from the face of the main south. In the stretch of 840 feet between the fourth east and said breakthrough 22 rooms had been turned from this back entry, or air course, the rooms being driven eastwardly to meet rooms coming westwardly from the first south off the fourth east. All rooms back of the fourteenth were through, and of the last nine three or four were through to those coming from said first south. Room 22, about 10 feet back from the last breakthrough to the main south, had simply been necked. Room 21, about 45 feet back from said breakthrough, was up about 20 feet. Room 20 was up about 50 feet. Room 19

was up 65 feet, with a breakthrough near the face that opened into a room (which met room 18) coming from the first south off the fourth east.

On the main south entry, at about 560 feet back from the last breakthrough into the back entry, is a three-track lyeway, one track of which is in the main entry, one in a roundabout on the west, and one in the back entry on the east, this part of the back entry being now used as an air course. The lyeway is about 320 feet long, the outbye end being opposite the third east entry and the inbye end about 60 feet back from the third west entry.

The visible and flame effects of the explosion were confined to the workings toward the head of the main south entry —though not extending to the head either of the main south or of the back entry—including about 200 feet of the main south back entry (or air course); about 760 feet of the main south entry, from the last breakthrough hitherto mentioned to a point on the lyeway; and about 425 feet of the third and fourth west entries, respectively. The afterdamp, however, was carried through all the west side workings that were open to the air current, and doubtless into some of the east side workings.

Some of the printed accounts of the explosion greatly exaggerated its violence. As already indicated, no bodies were mangled in any way; and comparatively little damage was done to the mine—no more than an expenditure of about $200 would cover. No one outside of the mine had any intimation that anything unsual had occured until the night crew went on at 6 o'clock, since neither fan nor hoisting shaft was affected in any way, and no more smoke issued from the upcast than might be expected at shooting time; and the night crew learned of it only because one or two of the men went to the lyeway to get the tool-car (or "dummy") to use it where work was to be done nearer the shaft end of the main south entry.

Shooting was being done, theoretically, on the "half-solid," but actually, as a rule, practically on the solid.

The explosion was caused by a windy shot in room 21 on the main south back entry, probably aided by a blown-through

shot that occurred in room 19 on the same entry; or it may have been started by the blown-through shot and been reinforced by the windy; the places are so near together, and there are so many uncertainties connected with blasting as it is carried on in coal mines generally, that it is difficult to judge as to which hole went off first. The windy and the blown-out shots were both due to very badly pointed, heavily charged holes, that were excessively long for the work they were expected to do.

The hole that caused the windy shot in room 21 was in a corner and was a gripping one, 8 feet long, charged with 4 feet of powder. Three feet of the hole was dead, leaving a toe of only 1 foot and a heel of 4 feet. It was not possible for the shot to have been other than a blown-out or windy one, and no competent shot firer would have fired it had he seen the hole before it was loaded.

The blown-through shot had been drilled in the face of the breakthrough between room 19 and the room coming from the first south entry off the fourth east into which room 18 had broken. The hole was between 8 and 9 feet long, so well as could be determined when the examination was made, and it was charged with 4 feet of powder. Commencing about 7 feet to the right of the rib corresponding to the left rib of said room, the hole was drilled diagonally, and ended with the point within 4½ feet of the left rib of that room. The shot blew the toe out, and the blast swept the floor of the room into which it entered almost as if a broom had been used.

That the windy set fire to dust in front of it is beyond reasonable question; the blown-through shot also may have set fire to some dust.

Flame issued from room 21 (and possibly from room 19 or 18), traveled up the back entry, against the ventilating current, to the last breakthrough between the back entry and the main south, through breakthrough into the main south, and down the latter to a point within 100 feet of the outer end of the lyeway—a total distance of about 760 feet from the breakthrough referred to. Flame also spread into and traveled the fourth west entry and traveled thence through the sixth breakthrough (an open one) into the third west at about

400 feet from the mouth. The course of the blast was then out the third west into the main south again.

Doubtless some entry dust was picked up in the progress of the flame, but it seems probable that entry dust did not play the major part in the progress of the explosion. Dust was doubtless picked up in the rooms on the fourth west, however, and clouds of dust were raised where stoppings of slate and slack were blown out. Practically no gray coke was found, and the amount of coal char was comparatively small. An exceedingly fine sooty dust was the preponderating material found, suggesting that in the progress of the explosion blasting powder (a keg or kegs) was fired by the intense heat. Considerable powder, in kegs, was distributed in that part of the mine where there was marked violence; seven unexploded but battered kegs of powder were found that came from the zone of greatest violence, and there must have been a larger number of kegs containing powder there before the explosion.

There was little violence in the main south back entry; none back of room 18. Explosive violence was greatest in the fourth west, which, however, expended itself in blowing out all but one of the slate and slack stoppings in the breakthroughs between the fourth and third west. There was no disturbance in any of the rooms beyond the mouths of the room-necks.

There were five closed breakthroughs between the fourth and third west entries. The material used for stoppings was slate, slack and some clay. The first breakthrough was not disturbed. The stopping of the second was blown completely across the third west into the neck of room 3 of the third west, and piled chiefly on the right rib of the neck. With the material a battered keg of powder was found, together with pieces of a box from which the keg probably came. A car standing just within the room was twisted across the track, but there was no sign of disturbance beyond the car. The third stopping was blown to the center of the track of the third west; some of it was landed on the right rib of room 5 of the latter entry. The fourth stopping, for one-third of its height, was blown into the third west. This breakthrough is just beyond room 7 (in about 25 feet) of the fourth west,

and just back of a room-neck (No. 7) of the third west; and here the evidences of greatest violence were found. In the fourth west, just back of room 7, two cars, partly filled with coal, were found jammed side by side lengthwise the entry, practically filling it, with a third car just ahead of them twisted across the track at the neck of the room; and in the third west, just beyond the breakthrough (and opposite the No. 7 room-neck on said entry) a car that had contained coal was upended and twisted across the track. The stopping of the fifth breakthrough, for about one-half its height, was blown into the third west, and in a peculiar way. The material did not cross the entry at right-angles, but flowed around the left-hand corner of the breakthrough on the third west side, like a stream making a sharp bend. The sixth breakthrough was an open one. Pieces of a broken box and five empty powder kegs (apparently old ones) were found in it, on the third west side. On the fourth west side considerable char was found on the inner rib (the left one looking from the fourth west) of this breakthrough, near the corner next to the fourth west—just where flame coming up the fourth west and turning into said breakthrough would impinge against the rib of the breakthrough. No char, soot, or disturbance was noted in either entry beyond this breakthrough.

Flame entered all the rooms on the fourth west, but did no harm.

All the holes that had been loaded in the rooms were still standing, though the paper "flags" on the fuse of some of them were scorched, and in at least two instances the fuse was so highly heated that "tar" had spewed out of them.

There was no disturbance in any of the rooms of the third west beyond the room-necks. All the holes that had been loaded were still standing, and there was no evidence of flame at any of the room faces; indeed, flame does not seem to have entered these rooms farther than the necks, if at all, and there was apparently less flame in the entry itself than in the fourth west.

In the closed breakthrough between the main south and its back entry, opposite the mouth of the fourth west, a large amount of debris, chiefly slate and slack, was found tightly

filling the breakthrough from a line parallel with the main south and about 3 feet from the latter—piled against the stopping of the breakthrough. In addition to slack and slate, fragments of a box and a battered can of powder into which a hole had been knocked were found, together with pieces of timber, two broken shovels, some tools, and several battered powder kegs. On the left side of the main south, opposite the mouth of the third west, a small amount of debris was found piled against the rib, reaching to a height of about two feet; this consisted chiefly of slack and dust, together with a battered can, top of a powder keg, some small sticks, paper, and two picks with handles broken. The evidences of violence opposite the fourth west were much greater than opposite the third west.

Except at the points just named, and which seem to be connected with effects in the west entries, there was little violence in the main south entry except at the inner end of the lyeway. There some cars of coal were blown about—one of them upended toward the shaft bottom, with a lot of debris, consisting chiefly of slack and dust, jammed under it, and a battered keg of powder jammed under one side of it. And there it was that David Doss was killed, while bonding rail.

Toward the outer end of the lyeway, about 160 feet toward the shaft from where Doss was found, and about 140 feet from the outer end of the lyeway, a mule which had been hitched to a train of eight empty cars was found dead, with hair slightly singed—more at tail end than at head. The animal's head was turned toward the shaft. It seems probable that the mule died from afterdamp rather than from flame.

The explosion died out completely within a few feet beyond where the mule lay—apparently not more than two or three car-lengths toward the shaft. The blast was so weakened by the time it reached this point (possibly due to the greater space afforded by the three-track lyeway, and the consequent cooling of gases) that the cars to which the mule was hitched were not moved.

The two shot firers for the main south workings, William Matthews and Eric Lunquist, were found on the main south between the fourth west entry and the last breakthrough into

the back entry. They were lying flat, face downward, with face buried in arms, head toward the shaft. They were on the way from the face of the entry after igniting the shots in the back entry. Ira Allen, who was bonding track, was found on the middle track of the lyeway, about 200 feet from the outer end. He was lying flat, with face buried in his arms, head toward the shaft. The position of David Doss has been stated.

As already stated, the death of George Ruby was due solely to afterdamp. Neither flame nor violent blast reached any of the places on the entries for which he was shot firer, namely, the first west and the two pairs of south entries (the fifth-sixth and seventh-eighth) going from it toward the third west. Nothing whatever occurred in any of the places for which he was shot firer to cause an explosion. As was determined by careful examination, all the shots fired by Ruby were good ones. He was overtaken by afterdamp, coming from the zone of explosion, as he proceeded down the first west toward the main south. It is a matter of speculation whether Ruby might not have lived if he had not tacked come curtains across the mouth of the first south (not working) off the first west. He evidently saw some smoke coming out of that entry as he was approaching or passing it, and he took time to hunt curtain cloth and nails and close up the mouth of the entry. This threw the afterdamp behind him as he proceeded down the first west toward the main south and he was overtaken by the poisonous gas. He crawled (as evidences showed) to within about 300 feet of a ventilating door that, if he could have reached it and opened it, would have admitted him to fresh air. The question arises, if Ruby had not closed the mouth of the first south, but had remained for a time at a point on the first west back of that entry (through which the smoke and gas were coming) would he have gotten out alive?

W. G. Duncan Coal Company, Graham Mine.—(1) W. J. Thompson; occupation and age not given. October 7. Killed by fall of slate. Wife and two or three children.

(2) Albert Campbell (colored), occupation not given; age 19. October 16. Killed by being caught between loaded car and rib as result of a collision at mouth of fifth west entry coming into the first north.

Pike County.

Allburn Coal and Coke Company.—Fred Ramey, mining engineer; age about 25. October 7. Died as result of electric shock received as result of coming in contact with an electric wire carrying 500 volts. Gave evidence of life from about 9:15 a. m. until 3:00 p. m.

On October 8 Assistant Inspector Van Hoose, who at the time of the accident was at the Majestic Collieries, went to the mine and investigated the matter. Following is his report:

"On October 8 I went to the mine of the Allburn Coal and Coke Company to investigate the death of Fred Ramey, a mining engineer, who was shocked to death by an electric wire in the mine. The information that I received was about as follows: Fred Ramey, age 25 years, employed by N. H. Manakee, of Williamson, W. Va., in company with Mr. Farrow, another mining engineer, was measuring rooms on the fourth left entry. They had proceeded to room 6 on the fourth left and Mr. Farrow went to the face of the room carrying the tape, leaving Mr. Ramey at the room neck. When he had carried the end of the measuring tape to the face of the room, he called to Mr. Ramey to wind the tape up. Mr. Ramey was sitting on a pile of cross-ties in the room-neck, and when Mr. Farrow called to him he immediately raised up to obey the order, and, while having the steel tape in his hands, straightened up against the trolley wire, which was on the same side of the entry with the room neck, and received the full current in his body. The wire carries 500 volts, and at the point where Ramey was killed is only 4 feet 2 inches above the rail. The supposition is that Mr. Ramey had his foot on the steel rail at the time he was shocked, but this is not definitely known; but whether he did or not was of little importance, as the steel tape completed the short circuit, and he was immediately shocked into unconsciousness. His hands were burned where he held the tape, also his back where it came in contact with the wire. A young boy by the name of Hall was with Ramey at the time he was shocked, but Hall was so excited that he knew nothing of the particulars. It was stated at the mine that they tried to resuscitate

Mr. Ramey by the usual methods by "pumping" his arms, etc. I learned that there were signs of his heart beating up to 3 o'clock in the afternoon. Since the accident occurred about 9 o'clock in the morning, it might have been possible to have saved him if we could have gotten to him with the pulmotor, though the doctors say not, as he was of a nervous temperament and had a very weak heart."

Majestic Collieries Company.—George Feher, miner; age 45. May 13. Killed by slate fall. Married, but family in Hungary.

Union County.

W. T. Drury, Waverly Mine.—Elliott Sutton, occupation not given; age about 23. January 30. He and others had congregated in a room that was being worked by Ed Powell. They were lying on a pile of gob, waiting for 4 o'clock to come, when a pot rock, weighing about 25 pounds, fell from the roof and struck Sutton on the abdomen. Peritonitis followed, and he died on February 5. Wife, but no children.

Ohio Valley Coal and Mining Company.—Clarence Bohannon, driver; age about 25. January 9. Was found dead under his car. Coroner's jury decided that he came to his death by being run over by a loaded car.

Webster County.

Clifty Consolidated Coal Company.—Ben Brantly, miner; age not given. May 1. Gave wrong signal to hoisting engineer and was pulled to the top of the tipple. Wife, but no children.

Highland Mining Company.—Clarence Givens, coupler; age 16. October 15. Fell under a trip of moving mine cars. Injured at 8:30 a. m. and died at 11 noon. The accident occurred on the tipple.

Whitley County.

Jellico Coal Mining Company.—John Creekmore, electric machine runner; age 31. March 21. "Accidentally killed by a shot fired by another miner." Wife and one child.

Main Jellico Mountain Coal Company.—Dave Caddell, miner; age 40. On August 21 one of his legs was mashed by a fall of slate in his room. He died from septic poison October 15. Wife and eight children. (It is a question as to just how deaths due to septicemia some time after an injury should be classed.)

Watts Creek Jellico Coal Company.—W. W. Blankenship, mine helper; age 18. January 15. Killed by "falling coal." In the company's report the cause of the accident is given as "carelessness," but in what way there was any "carelessness" connected with it is not indicated.

Part II.

Reports of the Assistant Inspectors, According to Districts

EASTERN DISTRICT No. 1.

Report of Perry V. Cole.

Barbourville, Ky.

PROF. C. J. NORWOOD,

Chief Inspector of Mines,

Lexington, Ky.

Dear Sir:—Following is my annual report for the year 1912. All the mines in the district except one are opened by drift, and therefore I am omitting the statement as to the plan of opening, in describing each individual mine, with the exception of said mine.

PERRY V. COLE,
Assistant Inspector of Mines.

BELL COUNTY.

BURCHFIELD COAL COMPANY.

P. O., Burchfield, Ky.
Shipping point, Burchfield, Ky.
Transportation, L. & N.

Officers: Sam Bennett, President; H. B. Jones, General Manager; J. D. Cain, Superintendent.

Working Toms Creek coal seam, about 6 feet thick, with parting about 3 feet. Mine started operation in 1912, but on account of some mistakes in building incline and other troubles, it has shipped very little coal during year. Mr. Cain has been remodeling the incline and doing other improvements, and in future they expect to get a good output of coal.

Coleman Mining Company.

Sales Office, Louisville.

P. O., Cary, Ky.
Express Office, Pineville, Ky.
Transportation, L. & N.

Officers: D. Scanlon, President; George Land, Vice President; G. T. Ryder, Secretary and Treasurer; C. R. Coleman, General Manager.

Fox Ridge Mine.—(Wm. Heath, Mine Foreman.)—

This mine is driven on one entry and air-way system and room and pillar. It has a gradual dip of about 3% toward the center of the mine. Coal seam from 36 to 44 inches and clear of partings—good roof of slate and sandstone. Blasting is done with black powder after coal has been undercut by air punchers. Mine is generally wet and fuse is used for blasting; very little, if any, is shot on the solid. So far as I know no limit is put on the amount of powder allowed taken into the mine. As the mine is generally wet, it would not be considered dangerous from dust. Has a small trace of Methane, but not enough to be indicated on the Davey safety lamp. It is indicated only by the hissing noise produced when passing through water—sometimes can be lighted at a fresh bore-hole. Coal is gathered and hauled by electric locomotives, no mules being used. Mine has a daily capacity of about 250 tons. This mine has electric machines composed of the following: 2 electric punching machines, 3 Harrison punchers, 2 five-ton electric locomotives.

Inspected October 4.—Was unable to get air reading off center main on any of right hand entries. Found a little gas on seventh and eighth right and center main, but could not register it on Davey lamp; therefore, since mine was wet all over I did not consider it dangerous from gas. Company preparing to install a new fan. Advised them to let me know when it came as it might be best for them to use both old and new fan.

Columbia Coal Company.

P. O., Middlesboro, Ky.
Express Office, Middlesboro, Ky.
Transportation, L. & N.

Officers: E. G. Vowell, President and General Manager; J. E. Eavens, Secretary.

(G. W. Sharp, Mine Foreman.)

Mine is double entry room and pillar system. Coal is gathered by mules and hauled by electric locomotives, the power of which is furnished by the Yellow Creek Coal Company, about a mile from the mine. Coal is about 6 feet thick, and has three partings, varying anywhere from 1 inch to 3 feet. The coal is undercut by electric machines and is shot by black powder, although some coal is cut on the solid. In some cases where the parting is thick, dynamite is used. Both squibs and fuse are used. They have an incline of about 1,000 feet over which the coal it let down direct to the tipple. Water is handled by steam pump and syphon, and fan is run by steam. Following is the mining machinery used at this mine: Two 3½-ton Goodman locomotives, two Sullivan electric long-wall machines, type K. Capacity is about 300 tons daily.

Inspected February 8.—Ventilation, drainage, timbering and other conditions generally satisfactory.

Inspected July 3.—Ventilation and drainage satisfactory; drainage only fair.

Clear Fork Coal and Coke Company.

P. O., Fonde, Ky.
Express Office, Fonde, Ky.
Transportation, L. & N.

Officers: J. D. Templin, President; G. P. Morrison, Vice President and General Manager; B. T. Milan, Secretary and Treasurer.

Fonde Mine.—(Peter Derr, Mine Foreman.)—

Mine is worked on double entry room and pillar system. A few mules are used for gathering the coal inside the mines and it is then hauled outside by electric locomotives. This

coal is now nearly altogether hauled and gathered by electric locomotives. Incline about 1,500, over which the coal is let down direct to tipple. This coal is about 5½ feet thick and has no parting. Although this company has electric machinery, the coal is all undercut with pick and shot sometimes on the solid. The coal is not very hard to shoot and requires about 3 or 4 shots to the room. Squibs are generally used. The mine is generally dry and has good solid roof and bottom of slate. The mine dips from the drift mouth toward the center of the mine, and the water is handled by syphon.

Inspected February 28.—Ventilation, drainage and timbering satisfactory.

Continental Coal Corporation.

P. O., Wallsend, Ky.
Express Office, Wallsend, Ky.
Transportation, L. & N.

Officers: Earle Martin, President; W. L. Moss, Vice President and General Manager; S. O. LeSueur, Secretary and Treasurer; H. M. Conner, General Superintendent (with offices at Wallsend, Ky.).

This company owns and operates several different mines, owning both the real estate and equippage, and has four division superintendents, covering the mines as follows: The group of mines at Four Mile, known as the Black Raven, Black Bear, N. 1, No. 3, No. 4, No. 5, are in charge of H. S. Silvers; the mines known as Arjay, Geraldine, Glendon, Cary and Castro are in charge of W. L. Stalsworth; the Barker Mines Nos. 2 and 3, Hugh Stokes; and the Wallsend Mine are in charge of Thos. Reese. Output, 4,000 tons daily.

This company is probably doing more business than any other company in Southeastern Kentucky, and they are increasing their output each year. For the last year they have been ably managed by Mr. W. L. Moss. They have a First Aid department and have established a first class hospital for the benefit of their employes. Taken altogether, this company seems to take unusual interest in the welfare of their men. Doubtless they will do more business in the year 1913 than

they have ever done. This company has also started running their coke ovens, after having closed them down for some time.

Arjay Mine.—(Saul Booze, Mine Foreman.)—

P. O., Arjay, Ky.
Shipping Point, Pineville, Ky.
Transportation, L. & N.

This mine was started on double entry and was later changed to the single entry pillar system and air course. The coal seam is the Straight Creek, about 40 inches thick, and has no parting. The roof is good except for some loose draw slate which sometimes gives some trouble. No mining machinery is used, the coal being undercut with picks and shot with black powder. The coal is gathered and hauled with mules to the knuckle and let down a short incline to tipple. The mine is generally dry and might be considered dangerous from dust; what water they have is handled by ditch and syphon. Some shooting is done on the solid and fuse is used. Their capacity is about 700 tons daily. Most of the coking coal used by the company comes from this mine.

Inspected May 14, 1912.—Ventilation, drainage and timbering generally satisfactory.

Inspected September 24.—Conditions generally satisfactory.

Barker Mine No. 2.—(Will Dean, Mine Foreman.)—

P. O., Straight Creek, Ky.
Shipping Point, Pineville, Ky.
Transportation, L. & N.

This seam of coal is anywhere from 32 to 45 inches thick, with no partings. Roof is slate which generally stands well. Haulage is by electricity and some mules are used for gathering purposes. Coal is hauled direct from inside of mine to tipple, which is almost on a level with the driftmouth. No incline is used, the coal being dumped direct into the cars from this tipple, which is equipped with the latest and best machinery. Daily output about 1,000 tons, including output of No. 3 mine, which is dumped over the same tipple. When

shooting is done it is after the coal has been undercut by electric and punching mining machines, and black powder is used. As far as I have been advised, there is no limit to the amount of powder carried into the mines. A great deal of this coal is not shot by powder nor undercut by machines, but, on account of crushed condition of coal, is digged with picks. There is no solid shooting at this mine. Water is generally handled by pumps, both electric and air. Mining machinery as follows: One Westinghouse electric generator, 800 Amp.; one Westinghouse generator, 600 Amp.; one Ingersoll-Sargent air compressor, 26¼x30; 20 Ingersoll punching machines; two Ingersoll rock machines; two Goodman breast machines; one room and pillar chain Sullivan machine; three 4-ton Baldwin-Westinghouse mine locomotives; three 6-ton Baldwin locomotives. Mine is ventilated with four electric fans, two of which are used inside as helpers or boosters.

Inspected May 9.—Several doors and brattices were leaking badly; also there was some loose slate. Company was informed of this and instructed to give more attention. Drainage and timbering fair.

Inspected May 31.—Ventilation and timbering satisfactory; drainage poor.

Inspected September 25.—Ventilation not satisfactory; doors, brattices and curtains all in bad condition. Talked with mine foreman and superintendent of mines, and both agreed to do their best to have mine in better condition immediately.

Barker Mine No. 3.—(William Simpson, Mine Foreman.)—

This mine works same seam of coal as No. 2 from a separate opening, and employs a separate mine foreman. Coal is somewhat larger than at No. 2, and in some places has a parting near the top, but is generally clean. Roof is part slate and part stone, and is very good, except where there is some trouble from draw slate. Coal is gathered to siding by mules and hauled directly to tipple by electric locomotives, using the same machinery as that in No. 2. The same officers and same plan of mine as that of mine No. 2 are used, with the exception of the mine foreman.

Inspected May 10.—Only a few men were at work in mine

when inspected, therefore, I could not get the exact condition mine would have been in had all the men been at work. However, ventilation was very good, as good as could have been expected with so small a fan. Timbering and drainage satisfactory.

Inspected September 28.—Conditions fairly satisfactory. Since this inspection they have installed a new and larger fan.

Black Bear Mine.—(R. P. Carnes, Mine Foreman.)—

P. O., Rim, Ky.
Shipping Point, Four Mile.

Mine worked on double and single entry room and pillar system. Coal seam from 38 to 40 inches thick, and has no parting. Is usually shot on the solid, fuse being used, and no restrictions as to amount of powder allowed carried into mine. The mine is usually dry and shot firers are employed to fire shots after the holes have been loaded and tamped by the miners. No machinery is used and the coal is hauled by mules to the knuckle and let over an incline of about 500 feet direct to the tipple. They have an output of about 200 tons daily, including the output of the No. 5 mine.

Inspected May 23.—The part of mine known as Cub was not properly ventilated. The furnace and stack were not in good condition. Your plan of using two furnaces and stacks and reversing the air in summer and winter is good, since it is much easier to carry air from drift mouth up the regrade in winter and the reverse in summer. No. 5 was satisfactory; also the old mine.

Inspected October 21.—Ventilation, drainage and timbering generally satisfactory.

Black Raven.—(Mike Donahue, Mine Foreman.)—

P. O., Rim, Ky.
Shipping Point, Four Mile, Ky.

Worked on single entry room and pillar system. Coal seam is about 38 inches and has no parting. Good roof, mostly sandstone. Has electric haulage from inside of mine to drift mouth, where it is hoisted up a short incline to tipple. Blast-

ing is done with black powder after the coal has been undercut by electric machines; very little, if any, coal is shot on the solid, and from 3 to 4 shots are fired in a room. Roof is shot with dynamite. Mine is generally dry and what water they have is handled with electric pumps. Electric power-plant is situated near the No. 4 mine, consisting of the following: Three 150 H. P. Atlas boilers; one 100 k. w. Jeffrey Generator; one 100 k. w. Goodman generator. Have three Jeffrey electric machines, 16 A. Fan is run by electricity.

Inspected May 24.—Air was not well maintained. Mine foreman said it would be better when they got connection between eighth and ninth right entries, which lacked only about 15 feet. Company was instructed to pay more attention to keeping doors closed and finish fan house.

Inspected October 17.—More than sufficient air entering the mine, but on account of brattices and other things it was not well distributed. In some places air was more than 60 feet behind working places. Company notified of this and instructed to give more attention to these defects.

Castro Mine.—(Jas. Hyatt, Mine Foreman.)—

P. O., Cary, Ky.
Shipping point, Pineville, Ky.

This mine is working the Straight Creek seam of coal, which is about 34 to 40 inches at this mine, and has no parting. It is worked on one entry and air-way room and pillar system. The roof is good, being mostly of sandstone. The entire haulage is done by mules from the inside to the knuckle, where the coal is let down an incline of about 150 feet to the tipple. Blasting is done partly on the solid and partly after it has been mined by picks. No mining machinery is used at this mine. Black powder and fuse are used and dynamite for blasting the roof. The mine is generally wet and considered safe from dust. Drainage is by syphon.

Inspected January 25.—Mine was sufficiently ventilated, using furnace ventilation. Company warned to keep brattices and air-stoppings tight, since a mine of this kind is hard to ventilate with a furnace. Advised them to install a good fan. Timbering was satisfactory; drainage poor.

Inspected October 16.—Ventilation was not quite as good as it should be, owing to a furnace being used for ventilating, wherein a fan would be much better. Timbering satisfactory; drainage poor.

Cary Mine.—(Thos. L. Caton, Mine Foreman.)—

P. O., Cary, Ky.
Shipping Point, Pineville, Ky.

This mine works the Straight Creek Coal seam and is run on the double entry room and pillar system. The roof, which is very good, is generally slate. Haulage is by mules from the inside of the mine to the knuckle, where it is let down a 150-foot incline to tipple. Blasting is partly on the solid, and partly after having been undercut with picks. Water is handled by natural drainage and syphon. Their capacity is about 400 tons per day. In addition to their old mine there are two other openings, known as No. 2 and No. 3, which are run by the same foreman and management.

Inspected May 17.—Ventilation, drainage and timbering generally satisfactory.

Inspected October 15.—All conditions generally satisfactory, except in No. 3 mine, where the foreman was a little careless in keeping doors closed. However, he agreed to be more careful in the future.

Cub Mine.—

This mine is a part of the Black Bear Mine and run on the same plan, and coal dumped over same tipple.

Inspected October 21.—Could not get air reading on account of door being left open near furnace, allowing air to short-circuit to furnace. Drainage was poor. Company notified of same.

Geraldine Mine.—(E. E. Hughes, Mine Foreman.)—

P. O., Cary, Ky.
Shipping Point, Pineville, Ky.

This mine also works the Straight Creek coal seam, at this place about 40 inches thick, and no parting. Shooting

is done on the solid and undercut, as no machinery is used—neither for haulage nor mining. Water is handled by natural drainage and syphon. This mine is generally dry and has had some trouble from dust in the past, but is not considered dangerous. Rooms are driven about 25 feet wide and usually about 3 shots to the room are used. Haulage is by mules to knuckle, and there let down an incline of about 150 feet to tipple. Output about 150 tons daily.

Inspected May 14.—Air was rather weak, but well distributed. However, furnace was not doing satisfactory work. Advised them to install a fan.

Inspected October 14.—Ventilation not as good as should be, on account of furnace. Other conditions generally satisfactory.

Glendon Mine.—(R. B. Moss, Mine Foreman.)—

P. O., Cary, Ky.
Shipping Point, Pineville, Ky.

This mine is working same seam as Straight Creek, and at this place it is about 40 inches thick, and no parting. Shooting is done on the solid and undercut, as no machinery is used for haulage or mining. Water is handled by natural drainage and syphon. Haulage is done by mules direct to knuckle and from there let down an incline about 250 feet to tipple. Capacity about 300 tons per day.

Inspected January 24.—Ventilation not satisfactory—at no place in mine was air as strong as the law requires. Curtains were used on main entrance instead of doors. Company given 20 days in which to get mine in lawful condition.

Inspected February 13.—Conditions some better, although mine was not yet in lawful condition. Company advised to install a good fan, since the mine is a good one and hard to properly ventilate with a furnace. They were also instructed to put in doors instead of curtains. Company instructed to keep at mine until conditions were satisfactory.

Rim No. 4.—(Mr. Clark, Mine Foreman.)—

P. O., Rim, Ky.
Shipping Point, Four Mile, Ky.

This is a separate seam from the Straight Creek, being about two or three hundred feet above the Straight Creek seam, and about 5½ to 6 feet high, and has two or three partings, varying in thickness up to 5 or 6 inches. Blasting is done with black powder after the coal has been undercut with machinery—electric. On account of the parting, the shooting is pretty heavy, and about 4 shots are used to the room. So far as I was advised, there is no limit set on the amount of powder allowed carried into the rooms. Both squibs and fuse are used. The roof is good, being of solid slate. Water is handled by syphon and ditch. A few mules are used for gathering purposes, and the coal is then hauled to the outside by electric locomotives to the knuckle, and let down incline about 300 feet to tipple. They have four Jeffrey breast machines, 16 A.; two 5-ton Goodman locomotives for haulage. General description of power plant was given in describing Black Raven Mine. There are two other mines run in connection with the No. 4 mine—known as No. 1 and No. 3.

Inspected May 30.—All conditions generally satisfactory.

Inspected October 17 and 18.—Ventilation, drainage and timbering satisfactory.

Rim Mine No. 5.—

This mine is run in connection with the Black Bear Mine, and coal is dumped over same tipple.

Wallsend Mine.—(Jas. Dixon, Mine Foreman.)—

P. O., Wallsend, Ky.
Shipping Point, Wallsend, Ky.
Transportation, L. & N.

Working Straight Creek coal seam. Coal is not quite as thick as usual, being about 32 inches, and absolutely clean. The roof is good, solid, generally of slate, and stands well except in places that have been affected by an old squeeze which

has been on the mine for years. The general haulage is by electric locomotives, although some coal is gathered by mules. The coal is hauled to the mouth of the mine and there it is hoisted up the tipple by a cable. Blasting is done with black powder after being undercut by machinery. Some of the coal is digged altogether by picks. Mine is generally dry, and what water is used is handled by electric pumps. Squibs are used for lighting shots. Capacity about 300 tons daily.

Inspected June 13.—There was not enough air entering the mine, and what there was not well distributed. Several plans were discussed with the foreman, who seems to be a very capable man. He was instructed to have better ventilation before proceeding further with the mine, and the plan of bettering it was left for him to decide.

Chenoa Hignite Coal Company.

P. O., Chenoa, Ky.
Shipping Point, Chenoa.
Transportation, L. & N.

Officers: Wm. Ayres, Vice President; W. H. Hollingsworth, Secretary; F. G. Burnett, Manager.

(A. J. Hyden, Mine Foreman.)

This mine works the lower Hignite seam, which is practically a clean coal and about 4 feet thick. The company has installed an electric plant and the coal is undercut by machinery. Drainage is natural and by syphon, and so far has not produced much water. Haulage is mostly by electric locomotive down an incline about 2,200 feet to tipple. Output about 150 tons per day.

Inspected June 25.—Ventilation, drainage and timbering satisfactory.

Inspected November 6.—All conditions generally satisfactory.

East Jellico Coal Company.

P. O., Tinsley, Ky.
Shipping Point, Four Mile, Ky.
Transportation, L. & N.

Officers: A. G. Corbett, President; John C. Berlin, Vice President; I. M. Shannon, Treasurer; R. G. Yingling, Secretary; M. G. Yingling, General Manager.

(Squire Nolan, Mine Foreman.)

This mine works what is known as the Dean seam, which is about 6 feet thick, with a small parting near the center 4 to 6 inches, composed of a hard slate substance which runs very nearly uniform and is characteristic of the Dean seam. The coal is generally undercut by punching machines and shot with black powder, and squibs generally used. No roof is taken down in this mine as it is high enough for haulage by mules. The roof is mostly slate and is not altogether safe. Water is handled by natural drainage and syphon. Coal is hauled by electric locomotives direct from the mines to knuckle where it is let down an incline about 1,500 feet direct to tipple. Capacity about 700 tons.

Inspected January 4.—Mine not in operation day of inspection, therefore, could not get correct inspection.

Inspected June 8.—Ample air entering the mine, but not well distributed. Company advised to install a larger fan.

Fan has been installed since that inspection.

Elk Coal Company.

P. O., Tinsley, Ky.
Shipping Point, Four Mile, Ky.
Transportation, L. & N.

Officers: D. B. Logan, President; W. J. Cunningham, Secretary and Treasurer.

(Geo. Luke, Mine Foreman.)

Working the Dean seam. Blasting is generally done on the solid and black powder is used—no machinery. Part of coal is mined by picks before shooting. The mine is generally damp and not considered dangerous from dust. Powder is

carried into mine at convenience of the miners and both squibs and fuse are used. Water is handled by ditch and syphon. Coal is gathered and hauled by mules to knuckle and let down an incline about 1,500 feet direct to tipple. Output about 250 tons daily.

Inspected January 4.—Mine not in operation day of inspection. However, company was preparing to build a new shaft and stack, which were very necessary to ventilation.

Inspected June 8.—Mine not running at full capacity and no fire in furnace. Therefore, could not ascertain exact condition mine would have been in had furnace been fired. However, the furnace is not properly built and would not have done good work if it had been fired. Matter was discussed with foreman and left to him to improve it.

Edgewood Consolidated Company.

(Changed to Climax Coal Company.)

P. O., Shamrock, Ky.
Shipping Point, Same.
Transportation, L. & N.

A. H. Thrasher.
(M. L. George, Mine Foreman.)

Working Edgwood seam, the Hignite seam, and Shamrock Mine, all in connection. This seam is about 40 inches and has a small parting near the top which makes the coal very hard to shoot; therefore, holes are generally drilled by day labor and blasting done by black powder after having been undercut by machinery—electric. From 3 to 4 holes are fired in a room, and squibs and fuse both used. The roof is of good, solid slate and stands well. Where roof is taken it is generally done with dynamite. Water is handled by syphon, natural drainage and electric pumps. Mine is generally wet and only in a very few places considered dangerous from dust. The haulage is by electric locomotives from the inside of the mine to the knuckle. Incline is about 2,600 feet from coal seam to tipple.

The Hignite is about 200 feet above this and has a thickness of about 5½ feet and several small partings. Coal is

hauled by electricity to mouth of mine and let down an incline to main mine. Electric machinery is used.

The Shamrock is handled by same incline as Edgewood. Coal is about 36 inches and has a small parting near the center. Blasting is done with black powder after coal has been undercut by electric machinery. Same electric power is furnished at this mine as at the Edgewood.

Machinery employed at these mines as follows: One 150 H. P. Atlas boiler; one 150 k. w. Goodman generator; three Sullivan G. E.; six low vein machines; three ½-ton Goodman electric locomotives; two ventilating fans, run by electricity. Capacity of all three mines, about 300 tons. This company has changed during the year, and, therefore, officers are all new. During the first part of year no coal was shipped on account of reconstruction work.

Inspected July 15.—Mine showed general improvement, both inside and outside. Was pleased to note this.

Ferndale Coal Company.

P. O., Ferndale.
Shipping Point, Ferndale.
Transportation, L. & N.

Officers: J. C. Knuckles, President; Mrs. J. C. Knuckles, Vice President.

(Sandy McDonald, Mine Foreman.)

This mine is worked on the single entry room and pillar system, and coal is about 3 feet high, with small parting near top of about 2 inches. Roof is of slate and very good. The coal is hauled from inside the mine direct to outside to tipple, which is on a level with drift mouth. No mining machinery is used, and the coal is mined by pick and shot with black powder, and since the coal is soft, very little powder is required for shooting. The mine is generally dry, the water they have being drained by natural drainage. Output about 80 tons per day.

Inspected June 5.—The part of mine known as Old Mine was in satisfactory condition, but the new part was not well ventilated. Air was not well up to working places, in some places the breaks being as much as 100 feet ahead of air.

This was discussed with foreman, and he was instructed to discontinue driving main heading until air was caught up.

Greasy Creek Coal Company.

P. O., Tinsley.
Shipping Point, Four Mile.
Transportation, L. & N.

R. B. Beard, President and General Manager.
(Wes McBrayer, Mine Foreman.)

This is a new mine which began operation about the first of year 1912. It is principally owned by R. B. Beard, of Jellico, Tenn., with some other parties interested and connected with company. At present I do not have names. Mine is located on what is known as Greasy Creek road, leaving the main line of L. & N. near Four Mile. The Dean seam is worked, about 5 feet, and 6 or 8 inch parting near bottom in addition to regular Dean parting. They have an air compressor, and most of the coal is undercut by air punchers. Fan is run by compressed air. Haulage is by mules to knuckle and from there down an incline of about 1,200 feet direct to tipple.

Hignite Coal Mining Company.

P. O., Shamrock, Ky.
Shipping Point, Middlesboro, Ky.
Transportation, L. & N.

Officers: A. E. Helburn, General Manager; N. J. Reynolds, Superintendent.

(Fisher Davis, Mine Foreman.)

This mine works the Poplar Lick seam and also the Hignite seam. The system of working is by one entry room and pillar, and coal is about 4 feet thick, with a small parting of cannel coal of a low grade. This parting of cannel coal is separated from the other and put aside, and in case the market is lively, it is taken up and shipped. The mine has a good, solid roof of stone and stands well. Shooting is usually done on the solid and black powder, and sometimes dynamite, is used. The mine is wet, and, therefore, there is no danger

from blown-out or windy shots. There is no limit to the amount of powder allowed carried into the mine. Haulage is by mules to tipple, which is arranged with a long chute, so as to carry the coal down to a railway switch. Output about 300 tons daily.

Inspected March 28.—Part of mine called Klondike fairly well ventilated, but part called Deer Hollow very poorly aired. This was on account of stack not being built high enough and the air blew down it. Company instructed to build it higher.

Inspected July 12.—Sufficient air entering the mine, but not well distributed. This was partly due to bad curtains. The system of airing the mine is good, and if a good furnace was built at each stack and care taken, the mine could be run for a long time without a fan. Mine was in much better condition than at last inspection.

Luke and Drummond.

P. O., Logmont, Ky.
Shipping Point, Middlesboro, Ky.
Transportation, L. & N.

Officers: George Luke, President; Hugh Drummond, Manager.

(Thos. Lowe, Mine Foreman.)

Coal is worked on one entry airway room and pillar system, and is about 40 inches thick, and is generally clean, although there are some places where they have small parting. The roof is some better than last year's inspection. Coal is gathered by mules and hauled to outside, where it is dumped into chutes and emptied into monitors and let down a short incline about 100 feet direct to tipple. Capacity about 200 tons daily. Mine generally wet, and not dangerous from dust. Following machinery is employed: One 5-ton Goodman electric locomotive; one CE 6 Shortwall machine, one 150 k. w. generator; three Harrison punchers.

Inspected February 17.—Ventilation not satisfactory. Company notified to stop men until better ventilation could be secured.

Inspected July 9.—There was general improvement in

this mine since last inspection. Air was sufficient and fairly well distributed. Some doors were needed; this was told to foreman.

Log Mountain Coal Company.

P. O., Harrison, Ky.
Shipping Point, Chenoa, Ky.
Transportation, L. & N.

Officers: S. G. Segliman, President; J. M. Tinley, General Manager; Alex Tinley, Superintendent.

Mine 52 (Clear Creek No. 1).—(John Gampher, Mine Foreman.)—

Work Poplar Lick seam of coal, double entry room and pillar system, using split air and overcast. Coal seam about 4 feet thick, with a parting of about 6 inches, generally soft, having the nature of fire clay. Mining done mostly with picks, and very little powder used. Mine not considered dangerous from dust. Water handled by syphon and natural drainage. Coal hauled by mules and let down from knuckle to tipple by an incline about 1,200 feet. Have an output of about 200 tons daily.

Inspected June 24.—Conditions generally satisfactory.

Inspected November 6.—Mine not in as good a condition as it should be. Curtains and brattices were in bad condition and doors were not kept closed on second left. Company instructed to give attention to this.

Mine No. 53 (Poplar Hignite).—(Will Queener, Mine Foreman.)—

Inspected November 7 and June 26.—Ventilation, drainage and timbering satisfactory.

Mine No. 54.—

Inspected June 26.—Ventilation fairly good, except on third left. Other conditions generally satisfactory.

Inspected November 8.—Ventilation, drainage and timbering generally satisfactory.

Mine No. 1.—(Isaac Jane, Mine Foreman.)—

Inspected February 6.—Ventilation satisfactory when fire

is kept in furnace and brattices kept up. Timbering satisfactory; drainage some better than usual.

Inspected June 27.—Conditions generally satisfactory.

Inspected November 9.—General improvement in mine—much work had been done toward cleaning up.

Magnet Coal Company.

P. O., Four Mile, Ky.
Shipping Point, Four Mile, Ky.

Officers: J. N. Sharp, President; J. C. Hoskins, Manager, Secretary, and Treasurer; I. Glickman, Vice President.

Located on Greasy Branch of L. & N., about a mile and a half from Four Mile station; working Dean seam, which is about 5 feet thick at this place, containing the regular Dean parting near the center. They have no mining machinery at present and have run no coal during the year 1912. However, they are now ready and will doubtless ship coal all through the year 1913. Haulage is by mules to the knuckle to an incline about 1,200 feet direct to tipple.

Mountain Lake Coal Company.

P. O., Middlesboro, Ky.
Shipping Point, Middlesboro, Ky.
Transportation, L. & N.

Officers: W. T. Nicholson, President; J. S. Victor, Secretary and Treasurer; W. S. Williams, Superintendent.

(W. S. Williams, Mine Foreman.)

This seam is known as Turner seam and is about one mile from Middlesboro. Seam from 5 to 6 feet thick, with a parting near center of 12 inches. Worked on double entry room and pillar system. Has slate roof, which stands very well when properly timbered. No machinery is used and coal is blasted on the solid or after coal has been undercut with picks. As parting is composed of slate, it usually requires quite an amount of black powder or dynamite. Rope haulage is used in part of mine, since the mine has a general dip from drift mouth toward center of mine. Mine not dangerous from dust.

Coal is gathered by mules and hauled to outside with ropes and let down an incline about 1,200 feet direct to tipple. Capacity about 250 tons per day.

Visited February 15.—Could not inspect on account of mine not being in operation, and fan not running.

Inspected July 15.—Amount of air entering mine was sufficient, but since it was only natural ventilation, it is not lawful for over five men. Company notified to take all men off over five or have artificial ventilation.

Moss Coal Company.

P. O., Middlesboro, Ky.
Shipping Point, Middlesboro, Ky.

Officers: Ray Moss, President and General Manager; J. G. Moss, Secretary and Treasurer.

(Mr. Payne, Mine Foreman.)

This is a new mine which commenced shipping coal about the first of October, 1912. It is located on the L. & N., three miles north of Middlesboro. It is opened by shaft about 30 feet from surface to coal. Coal seam is about 36 inches, generally clear of partings. Coal is of old Barner seam, and no machinery, being digged by picks, and very little powder used except for slate.

New Bell Jellico Coal Company.

P. O., Bell Jellico, Ky.
Shipping Point, Four Mile, Ky.
Transportation, L. & N.

Officers: Floyd Day, President; W. E. Cassidy, Vice President; W. McC. Johnson, Secretary and General Manager; T. D. Cassidy, Treasurer.

(John Cox, Mine Foreman.)

Working Dean seam, about 6½ feet at this place, with a parting near center of about 6 inches. Worked on double entry room and pillar system. Part called old side coal is shot on solid; the part called new side mined by machinery, using black powder for shooting. Squibs and fuse used for

firing and shots. Mine damp and not dangerous from dust. Haulage done entirely by mules, and let down an incline about 1,500 feet to tipple. Capacity about 500 tons per day from two openings.

Inspected January 5.—Conditions generally satisfactory.

Inspected June 6.—Ventilation, drainage and timbering satisfactory in old mine; new mine conditions satisfactory, except stronger timbering is needed.

New Straight Creek Coal Company.

P. O., Blance, Ky.
Shipping Point, Pineville, Ky.

This mine has changed hands during the year and is now in charge of the old Big Hill people. M. Gibson is in charge as Superintendent, and Mart Lunce, Foreman. The headquarters and main office are at Pittsburgh, Pa., and officers same as original Big Hill people.

The regular St. Creek seam is worked, about 40 inches thick, and clean. Roof good—composed of slate and some stone. Mine has general dip of 4% from drift mouth to center of methane. Mine machinery as follows: Two 150 H. P. coal is shot on solid. Right hand work safe; left rather dry and somewhat dangerous from dust. Mine shows small trace of Methan. Mine machinery as follows: Two 150 H. P. boilers; one 150 k. w. generator, run by 250 H. P. Atlas machine; two Goodman 6-ton locomotives; one Goodman breast machine; one Jeffries 16A machine; one Jeffries shortwall 17A machine. Fan run by steam.

Inspected January 25.—Mine not in satisfactory condition. Air was not up with all entries, and brattices and doors were bad—timbering also not good. There was some complaint from miners both as to the condition of mine and the oil used.

Inspected February 13.—Mine was idle on account of miners' strike. I made this trip in accordance with a 20-day notice. Foreman was busy having men clean up mine, so I gave more time.

Inspected May 6.—Ventilation generally improved since

last inspection. However, air was not quite satisfactory on No. 18 on account of fall on airway. There was no regular air course on this entry. Company was instructed to get air on before working men on it.

Inspected October 3.—Company has installed a fan and mine is generally improved. However, on some places men were working more than 60 feet ahead of air. Company was warned to be careful of ventilation and notice brattices and curtains, since there is always a slight trace of gas.

Pioneer Coal Company.

P. O., Kettle Island, Ky.
Shipping Point, Pineville, Ky.

Officers: C. S. Niel, General Manager; Alex Frost, Superintendent.

(J. C. Glancy, Mine Foreman.)

This mine is principally owned by the people who are interested in the North Jellico Coal Company. Head office is at Louisville. Mine is located on the right fork of Straight Creek, about 4 miles above the Barker Mine of the Continental Coal Company. They work the Straight Creek coal seam, about 42 inches clean coal. Company has an electric plant, and haulage is done mostly by electricity. Most of mining is done by electric mining machine. Opened by drift, and has no incline, as the coal is about tipple height above railroad. This company owns in fee about 5,000 acres, and they are making preparations to do a very large coal business.

Inspected May 18.—Ventilation, drainage and timbering generally satisfactory.

Inspected October 2.—All conditions generally satisfactory.

Ralston Coal Company.

P. O., Middlesboro, Ky.
Shipping Point, Middlesboro, Ky.

Officers: John Ralston, President; R. L. Ralston, Vice President; Chas. E. Ralston, Secretary; H. M. Ralston, Superintendent.

(Frank Shelby, Mine Foreman.)

Working lower Hignite seam, which is smaller at this mine than usual, being only about 40 inches. It is clear of partings and good coal. Roof and bottom good when properly taken care of. Blasting with black powder after coal has been undercut with machinery. Mine not dangerous from dust, as it is wet. Water handled by ditch and syphon—squibs are generally used. The following machinery is used: One Ingersoll air compressor; four Ingersoll punchers. No coal shot on solid.

Inspected March 25.—Conditions generally improved over last inspection. A new fan has been installed and they are prepared to furnish good air. Drainage not entirely satisfactory.

Inspected April 23.—Conditions satisfactory, except ventilation. In some places air was too far behind working places. Company notified of this.

Inspected July 11.—Ventilation and timbering satisfactory; drainage poor.

Southern Mining Company.

P. O., Clear Fork, Ky.
Shipping Points, Wasiota, Calmar, Te Jay.
Transportation, L. & N.

Officers: A. Gatliff, President; T. B. Mahan, Vice President; E. C. Mahan, Secretary and Treasurer; N. B. Perkins, General Manager; W. R. Ballou, Superintendent.

Wasiota Mine.—(D. B. Farris, Mine Foreman.)—

Coal seam about 50 inches with very little parting. Roof not very good on account of coal being near top of mountain, with little covering. Floor of soft clay and sandstone. Mine equipped with electric plant composed of the following machinery: Main unit 500c2 steam turbine alternating current generator, 2,300 v.; G. E. generator Curtiss Turbine; one 6 T. G. E. locomotive; three Sullivan shortwall mining machines. Coal is gathered to a siding inside mine by mules. There is one locomotive for haulage, hauling coal to knuckle, and from there it is let down an incline about 2,000 feet di-

rect to tipple. Output about 350 tons daily. Double entry system is used and coal is undercut by machinery.

Inspected March 30.—Ventilation generally satisfactory; other conditions satisfactory.

Inspected September 11.—Company has good fan, but it was not working well. Drainage not very good. Company instructed to put mine in better condition.

Te Jay Mine.—(Mr. Littlewood, Mine Foreman.)

Mine equipped with the very latest machinery. Began shipping coal early in year of 1912. Coal is about 5 feet, generally clear of partings. Working same seam as their Waisota seam. Coal is generally hauled by electric machines. This company has almost unlimited acreage to work and may be expected to produce large quantities of coal. There has been a large sum of money spent in equipping this mine—it is probably one of the best equipped mines on this road.

Crane Creek Mine at Clear Fork.—(L. Castle, Mine Foreman.)

J. E. Adair, Superintendent.

This mine is located on a spur road, leaving the main road at Colmar, and is about 6 miles off the Waisota and Black Mountain road. The coal seam worked at this mine is somewhat different from their other coal, about 4 feet thick, and generally clean, but soft. Mining is all done by picks, no machinery being used. Coal is hauled by mules to knuckle and from there let down an incline about 500 feet to tipple. Output about 300 tons daily.

Inspected September 12.—Sufficient air entering the mine, but not well distributed. Also air was not well up with working places. Company notified of same and instructed to put brattices or curtains on all entries and be more careful of ventilation.

Stony Fork Coal Company.

P. O., Middlesboro, Ky.

Officers: John Ralston, President; H. M. Ralston, Vice-President; Chas. E. Ralston, Secretary and Treasurer.

(M. J. Cottrel, Mine Foreman.)

Working Poplar Lick seam of coal, which is somewhat thicker at this mine than the average of this seam. It is about 5½ feet with very little parting, although there is a small parting about 2 feet from bottom about 8 or 10 inches thick. Coal is either shot on solid or mined with picks. No mining machinery is used at this mine. Not considered dangerous from dust, as the mine is wet, although there is always some danger where black powder is used. Haulage done by wire ropes, both inside and out. The coal is hauled to outside by ropes pulled by drum and steam and let down an incline to tipple. The grade is such that the loads will just pull the ropes and not pull the empties back. Therefore, empties are hauled by steam to drift mouth and on into mine.

Inspected March 26.—Conditions generally satisfactory.

Sagamore Coal Company.

P. O., Logmont, Ky.

Officers: W. T. Murray, President; T. B. Murray, Secretary.

(Thos. Williamson, Mine Foreman.)

Poplar Lick seam of coal, which varies in this mine from 4 feet to 7 feet in thickness. Partings also vary from 18 to 20 inches to almost nothing. On the average about 6 inches. Mining is done by machinery. Blasting done with black powder after coal has been undercut with electric machinery. Mine is damp. Coal gathered by mules and hauled by electric locomotives direct to tipple, drift mouth being about tipple height. Water handled by electric pumps. Output about 300 tons per day.

Inspected February 16.—Sufficient air entering mine, but not well distributed. Foreman seemed to have difficulty in keeping doors closed—did not employ enough travkers. Also breaks are very small. This was all gone over with foreman, and suggestions made as to the best way of putting mine in proper condition.

Inspection July 9.—Ventilation, drainage and timbering satisfactory.

Winona Coal Company.

P. O., Gravity, Ky.
Transportation, L. & N.
Shipping point, Middlesboro, Ky.

Officers: C. S. McManus, President; W. E. Cable, Secretary; Y. H. McManuel, Treasurer; C. B. Flint, Superintendent.
(H. B. Broughton, Mine Foreman.)

Work Winona seam from 4 to 5 feet with a parting near top of about 6 inches. Good roof of slate. Haulage by mules direct to mine tipple, which is about on level with drift mouth. More mules are used in this mine than any other mine in district. Mine generally low. Since it is damp there is small danger from dust. Water is handled by steam pumps. Coal is shot on solid, about 4 shots to room. Both squibs and fuse are used. Output about 400 tons daily.

Inspected February 7.—Some doors and curtains out of repair. Also water and mud were very bad. Company told to take steps immediately to improve them. Timbering satisfactory.

Inspected July 5.—Timbering satisfactory, drainage poor. Ventilation fairly satisfactory.

HARLAN COUNTY.

Wallins Creek Coal Company.

P. O., Wallins, Ky.
Shipping point, Wallins, Ky.
Transportation, L. & N.

Officers: F. D. Wood, President and General Manager; S. G. Gray, Secretary and Treasurer.
(Wm. Miller, Mine Foreman.)

This mine works Wallins Creek coal seam about 9 feet, with a parting about 8 inches near the bottom composed of slate. However, they are working the coal only above the parting, leaving the coal only about 7 feet thick. Coal is shot with black powder after having been undercut with electric machinery. Haulage is by mules to knuckle and there let down an

incline about 2,600 feet to base of mountain; from there it has a down grade of about 6% about 3,000 feet to tipple. Loaded cars run down this grade by gravity and empties are taken back by steam to base of mountain. Mine is generally dry. What water the mine has is handled by ditch and syphon. Mine is worked on double entry room and pillar system. Output about 400 tons per day.

Inspected May 7.—Conditions generally satisfactory.

Wilhoit Coal Company.

P. O., Wilhoit, Ky.
Transportation, L. & N.

Officers: R. Wilhoit, President; M. J. Moss, Vice President; D. B. Cornett, General Manager.

(Walter Harman, Mine Foreman.)

Mine located on Ewing Creek, about 5 miles west of Harlan Town, working what is supposed to be Harlan seam. It is about 44 inches with no partings. Have electric plant put in in 1912. Roof and bottom very good. Worked on double entry room and pillar system. Coal mined with picks and shot with black powder, and quite an amount is required since it is hard to shoot. Both squibs and fuse are used. Mine is generally wet. Incline about 900 feet direct to tipple. Output about 300 tons.

Inspected April 27.—Some carelessness shown on part of mine foreman in allowing work ahead of air, and more than one break left open. Air was not well taken care of. I also noticed some slate that I did not consider absolutely safe. Foreman's attention called to this.

Inspected July 19.—Conditions generally improved over last inspection. However, company was advised to install a fan.

Wisconsin Steele Company.

Head Office, Chicago, Ill.

P. O., Benham, Ky.
Shipping point, Benham, Ky.
Transportation, L. & N.

Officers: H. T. Perkins, President; Sam Hale, Vice President.

(Harry Fallon, Mine Foreman.)

Working Kellioka (Keokee) seam of coal about 5½ feet thick. Almost clear of parting. All the coal is made into coke, none being shipped. Mine worked on 3 and 4 entry system, with complete split-air to all parts of mine. Coal is undercut by electric mining machinery. Mine generally damp. Output about 600 tons. One of best equipped mines in State.

Inspected April 25.—Sufficient air entering mine, and fairly well distributed. Although some places were working ahead of air, and some entry doors were not kept closed. Notice of this given to company.

Inspected August 21-22.—Ventilation, drainage and timbering generally satisfactory. However a small amount of methane was found, although not enough to be dangerous. Company was told to be careful about working ahead of air.

Harlan Town Coal Company.

P. O., Harlan, Ky.
Shipping point, Harlan, Ky.
Transportation, L. & N.

Officers: J. K. Griffin, President; W. R. Griffin, Vice President; Ben A. Martin, Secretary and Treasurer.

(John Petry, Mine Foreman.)

This mine is located about ½ mile above Harlan Town and is on Clover Fork. Began shipping coal June, 1912. Have electric plant. Coal is undercut by machinery and hauled by electric locomotives. Working the Harlan Coal seam, about 5½ feet, and has a parting about 6 inches near bottom. Fairly good slate roof. Output 250 tons daily.

Inspected July 17.—Conditions generally satisfactory.

Clover Fork Coal Company.

P. O., Harlan, Ky.
Transportation, L & N.

Officers: B. W. Whitfield, President and General Manager; Gaius Whitfield, Vice President; A. F. Whitfield, Secretary and Treasurer.

(J. W. Johnson, Mine Foreman.)

Mine located about one mile above Harlan, with coal about 4 feet thick and no parting. Worked on solid, and black powder is used. No machinery, coal all hauled by mules. Good roof, mine rather dry, but not dangerous from dust. This mine began operation about June, 1912. Output about 200 tons daily.

Inspected July 17.—Conditions fairly good; furnace under way.

There are some new companies in Harlan that have just started work. These will be reported in 1913.

Harlan Coal Mining Company.

P. O., Harlan, Ky.
Transportation, L. & N.

Officers: K. U. Meguire, President; F. F. Sneed, General Manager; L. M. Farmer, Superintendent; Carl Jengbluth, Secretary and Treasurer.

This mine is located about 2½ miles above Harlan Town on Clover Fork, on the lease land from T. J. Asher. They have not yet shipped any coal, but are putting in very expensive equipments. Also conveyor to carry coal across the river. Doubtless by the first of year they will be able to ship coal. Their first work will be in Harlan coal seam which is about 4 feet thick and clear of partings. This company controls by lease and option of sale about ten or eleven thousand acres of good coal land. They are expecting to make several openings on this land in the near future.

KNOX COUNTY.

Anchor Coal Company.

P. O., Anchor, Ky.
Shipping Point, Anchor, Ky.
Transportation, L. & N. and Cumberland Railways.

This mine has just recently started up after having been closed down for some time, and I am not informed as to the present officers. Bart Rogers is foreman. Mine is located on Cumberland R. R., about 3 miles above Warren. They are working the Dean seam of coal which is only 4 feet with very little or no parting. Coal is shot from powder or mined with picks, and as coal is hard quite an amount of powder is required. Mine is a little dangerous from windy or blown-out shots, since so much powder is used. They have a good equippage. Haulage is done by mules from inside mine to knuckle and let down an incline about 600 feet to tipple. Water is handled by ditch and syphon. Mine generally damp.

Inspected April 3.—Mine not in operation day of inspection, therefore could not ascertain exact condition. However, drainage and timbering were very good.

Inspected November 12.—Conditions generally satisfactory considering number of men employed.

Dean Jellico Coal Company.

P. O., Anchor, Ky.
Transportation, L. & N. and Cumberland.

Officers: J. M. Robison, President; R. W. Cole, Secretary and Treasurer; A. J. Crowley, General Manager.

(Robt. Mattingly, Mine Foreman.)

Working Dean seam about 4 feet. Began shipping coal about first of October, 1912. Coal has little parting. Coal shot from powder or mined with picks. Haulage is done by mules from inside of mine to knuckle and there let down a short incline direct to tipple. Water handled by ditch and syphon. Output about 80 tons daily.

Inspected April 3, as Gibson Carr Co.—Conditions satisfactory, as far as equippage, and work have progressed.

Inspected November 12.—Sufficient ventilation for num-

ber of men employed. However, furnace and stack working very poorly and would need changing if more men were worked. Timbering and drainage satisfactory.

Cottingim-White Coal Company.

P. O., Barbourville, Ky.
Shipping Point, Barbourville, Ky.
Transportation, L. & N.

J. H. Cottingim, President, General Manager and Superintendent.

(Geo. Taylor, Mine Foreman.)

Working Barbourville Blue Gem seam of coal. About 24 inches thick and clear of partings. This mine has several different openings from surface, working from 5 to 10 men at each different opening. Coal generally sold to people living in town of Barbourville, with a capacity of about 40 tons daily. Coal is mined with picks, very little shooting being done in mines, except for the purpose of taking slate, and dynamite is mostly used for that.

Inspected March 6.—Ventilation not satisfactory. Timbering good, drainage fair. Company instructed to improve ventilation.

Dean Coal Company.

P. O., Artemus, Ky.
Shipping Point, Artemus, Ky.
Transportation, L. & N.

Officers: Hugh Stanford, President; H. W. Smith, Vice President; W. R. Campbell, Secretary and Treasurer.

(W. B. Kinder, Mine Foreman.)

This is a new mine which has been in operation only a month and a half. It is located on Cumberland R. R. about a mile from Artemus. Working the Dean seam of coal, which is about 5½ feet here, with parting near center—parting about 4 or 5 inches. They have no mining machinery at present, coal being either shot on solid or undercut with picks. Haulage is by mules to knuckle and let down an incline about 1,500 feet direct to tipple. Present capacity about 100 tons per day.

INTERSTATE COAL COMPANY.

Head Office, Herndon, Tenn.

P. O., Warren, Ky.
Shipping Point, Warren, Ky.
Transportation, L. & N. and Cumberland.

Officers: S. R. Jennings, President and General Manager; J. Fred Johnson, Treasurer; P. V. Hogan, Auditor; C. R. Luttrel, Superintendent.

Mine No. 4.—(S. R. York, Mine Foreman.)—

Working Dean seam of coal about 6 feet thick at this place, with two and sometimes three partings, varying from 1 to 18 inches. Parting generally composed of slate and near the bottom. All coal undercut with electric machinery and afterwards shot with black powder, and considerable powder is required since coal is hard. Mine usually damp and not considered dangerous from dust. Water handled by natural drainage and electric pumps. Output 700 tons. Mining machinery as follows: Five 150 H. P. boilers, two Thompson Rhyan 200 K. W. generators, two Jeffrey shortwall mining machines, one Sullivan shortwall, five Goodman breast machines.

Inspected March 13.—Ventilation, drainage and timbering satisfactory.

Inspected September 9.—Conditions generally satisfactory. However, company was advised to be careful to take down loose slate.

Mine No. 1, Trosper.—(S. R. Yorke, Mine Foreman.)—

Working same seam as No. 4, although it is not so large here, being only about 54 inches with parting of about 3 or 4 inches. Good bottom and solid slate roof. Mine worked on double entry and pillar system. Coal undercut with electric machinery and shot down with black powder. Mine generally damp, although in some places it is dry. Haulage by electric locomotives. A few mules are used for gathering purposes. Water handled by syphon or electric pumps. Incline is about 2,000 feet direct to tipple. Capacity about 200 tons. Mining machinery as follows: One 6 ton Goodman locomotive for haulage, two Goodman breast machines, one Sullivan long-

wall, one Jeffrey shortwall. All the coal is cut by machinery. Powder is furnished from No. 4 mine.

Inspected March 14.—Ventilation and timbering satisfactory. Drainage a little poor. As a usual thing drainage is good at this mine.

Inspected September 10.—Ventilation and timbering satisfactory; drainage a little improved.

Matthews Jellico Coal Company.

P. O., Elys, Ky.
Shipping Point, Elys, Ky.
Transportation, L. & N.

Officers: John G. Matthews, President and General Manager; Wm. Lock, Vice President.

(Geo. Clutts, Mine Foreman.)

This mine is owned and controlled almost entirely by John G. Matthews. The seam is supposed to be Jellico coal about 42 inches thick with a parting near bottom about 4 inches. Worked on double entry room and pillar system. Entire haulage by mules. Have an incline of about 1,000 feet direct to tipple. Coal is undercut with picks and shot with black powder, no machinery being used. Coal supposed to be shot on solid. Mine damp and not dangerous from dust. Drainage by syphon and ditch. Capacity about 400 tons.

Inspected March 11.—Conditions generally satisfactory.

Inspected June 17.—Ventilation good except on 4th entry, which had two breaks open. Timbering and drainage satisfactory.

Inspected October 7.—Conditions generally satisfactory.

New Hughes Jellico Coal Company.

P. O., Elys, Ky.
Shipping Point, Elys, Ky.
Transportation, L. & N.

Officers: A. M. Decker, President; Pitzer D. Black, Vice President; R. N. Cornett, Secretary and Treasurer.

(L. C. Cairnes, Mine Foreman.)

Working what is called Jellico coal seam, with thickness

varying from 3 to 5 feet, with no parting. Good slate roof—bottom not so very good. Coal undercut by mining machinery and blasted. Not very much powder is used, since coal is easily broken down. Some shot on solid. Mine damp and not considered dangerous from dust. Mining machinery as follows: One 150 H. P. Atlas boiler, one McEwing engine, 137 H. P., driven by one belted Goodman generator, one Goodman low veined breast machine, type 1905, one Goodman breast machine, capacity 14 tons per shift; one Sullivan shortwall machine CE 6, 35 tons per shift; one 6 ton Goodman electric locomotive. Fan driven by electricity. Water handled with syphon. Capacity 350 tons daily.

Inspected June 15.—Mine not in operation on this day, but I went through mine with foreman, and approved of plan to split air. Timbering and drainage satisfactory.

Inspected October 8.—Advised foreman to put brattices or curtains on 4th entry as air was not good there. Other conditions satisfactory.

North Jellico Coal Company.

P. O. Wilton, Ky.
Shipping Point, Woodbine, Ky.
Transportation, L. & N.

Officers: C. S. Nield, General Manager; Alex. Frost, Superintendent.

Wilton Mine.—(Chas. Frost, Mine Foreman.)—

Working Jellico coal seam, about 40 inches with no parting. Haulage by locomotives direct to tipple which is on a level with drift mouth. Has good slate roof. Coal undercut with electric machinery and shot with black powder. Some coal is mined with picks. Some entries are somewhat dry and might be considered somewhat dangerous from dust. Water is handled by electric and steam pumps. Almost complete locomotive haulage; very few mules used. Machinery as follows: Power house.—A set of Babcock & Wilcox water tube boilers 1100 H. P., one 200 KW D. C. generator directly connected to 350 H. P. reciprocating engine, one 150 KW D. C. generator directly connected to a 300 H. P. Curtis steam tur-

bine, one 75 KW A. C. generator connected to 150 H. P. Curtis steam turbine, one Norwalk 24x26 air compressor, steam driven mining machine, one 8-ton general electric locomotive, one 8-ton Jeffrey locomotive, four 7-ton Jeffrey locomotives, six Morgander electric chain coal cutting machines, three electric longwall machines, ten Harison air punchers, one 50 H. P. motor for fan, nine stationary motors ranging from 2 to 30 H. P. for driving fans, pumps and sawmills.

Inspected June 19.—Conditions satisfactory.

Bertha Mine.—(F. J. Heron, Mine Foreman.)—

Controlled by the same officers as control the Wilton Mine. Jellico coal seam, about 40 inches with no parting. Working on one entry airway room and pillar system. Good slate roof an dbottom. Coal undercut with punching machines and blasted with black powder. Squibs used in firing shots—roof sometimes taken down with dynamite. Some parts of mine dry but not dangerous. Coal gathered with mules and hauled with electric locomotives direct to tipple. This tipple is on what is known as the Bertha side of North Jellico Coal Co. Capacity 600 tons. The power to run machinery generally from Wilton Mine. However, they have a plant on this side and the following machinery: Three sets of return flue boilers 150 H. P. each, 65 KW. sub. generators directly connected to A 85 H. P. induction motors, Norwalk air compressors 22x24 steam driven, four Sullivan air punching machines, two Ingersols, sixteen Harrisons, four Jeffrey locomotives, 8 tons each.

Inspected June 22.—Mine in fairly good condition as far as inspection was carried. On account of lack of time I did not get to give as much attention as usual.

Inspected November 19.—Ventilation, timbering and drainage satisfactory.

Olive Hill Mine.—(Harrison Steele, Mine Foreman.)—

Working same seam and description as Wilton and Bertha Mines. However, a different system is used in working this mine. It is worked on room and pillar retreating system. All entries and airways were driven through boundary line or outcrop before any work was done. Haulage is by electricity, coal being tipped on tipple near Wilton Mine and billed from Wilton. The system employed at this mine is one of the best

in district. Coal is undercut by electric machinery—they also have one or two pneumel electric punching machines, and working with success. The coal is nearly level, with almost no grade in entire mine—with the exception of a few local dips. Mine generally damp, air supplied by two electric fans and a complete split-air system. In fact this mine is in excellent condition and is an almost perfect mine. Mining machinery as follows: Four low Sullivan longwall room and pillar machines; one pneumel electric punching machine, 7.5 H. P.; three Harrison air punching machines; two 7-ton Jeffrey locomotives; one 8-ton General electric locomotive. Power furnished from Wilton power plant.

Inspected June 21.—Ventilation, drainage and timbering satisfactory.

Inspected November 20.—One fan out of repair. Therefore air was not quite as good as usual. However, it was fairly satisfactory.

Cannel Ridge Mine.—(Geo. Barton, Mine Foreman.)—

Working Jellico coal seam almost as described in other mines of this company. Worked on double entry room and pillar system; undercut with machinery and black powder used. Coal hauled with electricity and tipped at new tipple near Wilton, the same as Olive Hill. Not very many men are employed here, and it is run in connection with Olive Hill. With the exception of their not employing retreating system, conditions are nearly same as Olive Hill.

Inspected June 21.—Split system did not seem to be working as it was intended, since air was good on right hand work and not satisfactory on left hand work.

Inspected November 20.—Ventilation much improved over last inspection. Other conditions satisfactory.

Hurricane Ridge Mine.—(Charlie Frost, Mine Foreman.)—

Mine about ½ mile southeast of Wilton, Jellico seam about 40 inches clear of parting. Coal tipped at same tipple as Wilton. Like Olive Hill this mine was built to work on room and pillar retreating system; all entries and airways driven before rooms are turned. Haulage entirely by electricity. Coal mined by electric machinery—power furnished by plant of Wilton Mine.

Inspected June 20.—Ventilation very much improved. Timbering and drainage satisfactory.

Inspected November 21.—Conditions satisfactory except on one entry where air was not up to working places.

Power Coal Company.

P. O., Trosper, Ky.
Transportation, Cumberland and L. & N.

Owned and operated by Phillip Francis of Jellico.

This mine has not run continually during the year. It is the Dean seam, with a parting of about 6 inches to 2 feet, composed of fire clay and slate. Mining done with picks, using black powder, no machinery being employed. Mine generally wet and not dangerous from dust. Water handled by ditch and syphon. Capacity about 40 tons per day. Not many men employed.

Inspected September 16.—Ventilation natural, but only five men employed, therefore sufficient.

Ostend Jellico Coal Company.

P. O., Gray, Ky.
Transportation, L. & N.

Operated by W. M. Howard.

This mine has done very little business during year—not enough to require a certificated mine foreman. The Jellico coal seam is worked about 36 inches thick with an 8-inch parting near center, altogether making 36 inches. Located on Lynn Camp. Coal shot with black powder, haulage by mules, water handled by ditch and syphon.

Inspected March 5.—Conditions very much better than on previous inspections. Fairly good for size of mine and number of men.

Snead & Meguire.

Head Office, Louisville, Ky.

P. O., Gray, Ky.
Shipping Point, Gray, Ky.

(P. M. Wilburn, Mine Foreman.)

Working Jellico coal seam about 44 inches thick with a small parting near center. This mine has no regular system of working—around the outcrop of Bertha Mine. Coal digged with picks, very little powder used. Haulage by mules from mine to drift mouth—then hauled by steam locomotive about a mile, let down an incline about 300 feet and hauled from there with mules to tipple. Water handled with syphon and ditch. Generally wet with no danger from dust.

Inspected March 19.—Mine not in operation day of inspection. Could not ascertain condition it would have been in had it been running. However, it seemed that they would have trouble ventilating, as almost all work is cut to outcrop, and no entries driven very far until they are broken through to some work outside.

Trosper Coal Company.

P. O., Trosper, Ky.
Transportation, L. & N.

Officers: W. T. Bradley, President and General Manager; Wm. Ellison, Vice President; S. W. McComb, Secretary.

(F. M. Angel, Mine Foreman.)

Working Dean seam of coal, about 6 feet, with parting near center of 6 inches. Roof not very good and requires a great deal of attention. Coal shot with black powder after having been undercut with punching machines. However, some coal is shot on solid. Mine wet and continually having trouble with water. Water handled with syphon and ditch and sometimes air pumps. Haulage by mules from inside mine to knuckle and let down an incline about 1,200 feet. They have an air compressor and the following machinery: Three Ingersol and three Sullivan punching machines.

Inspected March 14.—Entries driven ahead of air on New Side. Also furnace was not working well on account of accumulation of ash and cinder. Care for this would give sufficient air. Other conditions satisfactory.

Inspected September 10.—Ventilation good except on McComb entry. Foreman explained that they would have this entry satisfactory as soon as work was completed.

Tunnel Jellico Coal Company.

P. O., Barbourville, Ky.
Shipping Point, Gray, Ky.
Transportation, L. & N.

Officers: Jesse Turner President; J. D. Turner, Vice President; W. C. Black, Manager.

This mine works only a few men with no certificated mine foreman. They are working the Jellico seam, which is very thin, being about 36 inches with a parting of from 1 to 24 inches. Owned by John A. Black, of Barbourville, Ky., and leased to the above parties. Mining is done with picks, no machinery being used. Blasting done with black powder. Mine generally wet. Entire haulage done by mules from inside of mine direct to tipple, which is about on level with drift mouth. Water handled by natural drainage and steam pumps. Output 40 tons.

Inspected March 6.—Conditions generally good as far as I could get into mine. However, water had been allowed to stand in many places and I did not thoroughly inspect.

Brush Creek Mining & Manufacturing Company.

P. O., Wheeler, Ky.
Shipping Point, Brush Creek, Ky.

Officers: E. B. Siler, President; L. M. Scott, Vice President; W. B. Siler, Secretary; R. L. Wheeler, General Manager.

(Geo. Sharp, Mine Foreman.)

Mine located about two miles above Cumberland mines of Interstate Coal Co. on the Cumberland R. R. They are working the Dean seam, about 5 feet, with a small parting. Have

no machinery. Coal is mined with picks or shot on solid, and requires considerable powder as coal is hard. Some danger from heavy shooting.

Inspected April 4.—Ventilation and timbering satisfactory; drainage fair.

Inspected November 13.—Conditions satisfactory.

WHITLEY COUNTY.

Acme Blue Gem Coal Company.

P. O., Gatliff, Ky.
Transportation, L. & N.

Officers: C. Perkins, President; C. A. Denham, Vice President; A. Scott, Secretary and Manager.

(A. A. Scott, Mine Foreman.)

Working B. G. seam of coal, about 26 inches, with good sanstone roof, very hard. Bottom generally taken as it is softer than top. Most of mining done with picks, and very little powder used in coal although considerable powder and dynamite is used for taking bottom. Haulage with mules from inside mine to tipple, which is about on level with drift mouth.

Inspected April 18—Ventilation sufficient for number of men employed. However, it would have to be increased as more men are employed.

Inspected September 21.—Ventilation, drainage and timbering satisfactory.

Bon Jellico Coal Company.

Head Office, Knoxville, Tenn.

P. O., Williamsburg, Ky.
Shipping Point, Williamsburg, Ky.
Transportation, L. & N.

Officers: Arthur Groves, President; F. M. Haynes, Vice President; Wm. J. Everett, Secretary and Treasurer; E. B. Taylor, General Manager.

(Geo. Brown, Mine Foreman.)

This company commenced operation about Nov. 28, 1911,

constructing 3 miles of standard gauge railroad, connecting with L. & N. near Savoy, Ky. They have also constructed about 3,500 feet of tramway, 1,250 feet of incline and have driven 6 outside entries from off tramway. Something like 40 men are employed, 7 inside day men and 15 outside men. Began shipping coal in November, 1912, and expect to get out 500 tons per day, with about 75 men.

Inspected August 30.—As far as mine was advanced it was in good condition. Company cautioned about some mistakes common to most mines.

Burke Hollow Coal Company.

P. O. Jellico, Tenn.
Transportation, L. & N.

Officers: S. B. Snyder, President; T. T. Pace, Vice President; Frank Snyder, General Manager.

(Geo. Smith, Mine Foreman.)

Work Blue Gem coal seam with a thickness of about 24 inches. Mining is with picks, with some shooting with black powder, especially in taking top. Haulage is by mules from inside the mine to knuckle and there let down an incline about 1,000 feet direct to tipple. Water handled with ditch and syphon. Fan run by gasoline. No machinery used. Output about 100 tons per day.

Inspected February 22.—Some brattices needed repair and some doors should be put in place of curtains. When this is done, mine will be in satisfactory condition. At this inspection they did not employ a certificated mine foreman. Notified them of this and told them to secure one immediately if they ran on.

Inspected December 20.—Air not very good on 2nd right entry, caused by lack of good brattices and curtains. Ventilation good other places. Timbering good, drainage fair.

Cook Jellico Coal Company.

P. O., Jellico, Tenn.
Transportation, L. & N.

E. S. Helburn, President, Secretary and General Manager.

(Will Provins, Mine Foreman.)

Work Jellico coal seam, about 38 inches, with no parting. Worked on double entry room and pillar system. Very good slate roof—bottom somewhat soft. Haulage by steam after coal has been gathered by mules. Incline about 1,200 feet direct to tipple. Blasting on solid with black powder. Coal undercut with picks in some places. No limit to amount of powder carried into mine. Mine generally damp and roadway inclined to be muddy. Water handled by natural drainage and syphon. Capacity about 300 tons per day.

Inspected December 19.—Mine not in operation day of inspection. However, I went over mine and it seemed to me that it could not be properly ventilated with one fan in the position theirs is in, and so many openings to outside. Will call again soon.

East Tennessee Coal Company.

P. O., Jellico, Tenn.
Transportation, L. & N.

Officers: E. J. Davis, President and Treasurer; W. E. Davis, General Manager; F. C. Richmond, Secretary.

(W. L. Potter, Mine Foreman.)

Work Blue Gem coal seam, which is about 24 inches thick, and worked on single entry system. Roof and bottom both of slate and both good. Haulage by mules to knuckle and down an incline about 300 feet to base of mountain and hauled by engine. Coal tipped over old tipple. Very little shooting is done as coal is digged with picks. Roof shot with dynamite. Fuse used in slate shooting. Water handled by syphon and electric pumps. Mine generally damp. Capacity about 100 tons per day.

Inspected February 23.—Ventilation fairly good, although

they have no artificial ventilation. This is not lawful where there are more than 5 men. Company was instructed to build a stack or furnish a fan. Timbering and drainage satisfactory.

Inspected December 20.—Conditions generally satisfactory.

El Coal Company.

P. O., Gatliff, Ky.
Transportation, L. & N.

P. E. Bennett, President and General Manager.
(John Rudolph, Mine Foreman.)

Work double entry room and pillar system—Jellico coal seam about 40 inches. Usually clear of partings, but in one entry has about 6 inches near center. Haulage by mules to knuckle and let down incline about 500 feet to tipple. Roof inclined to be soft, requiring careful attention. Is usually cross-timbered. Coal mined with picks and shot with black powder—squibs generally used. No limit to amount of powder allowed carried into mine. Mine generally wet. Capacity about 150 tons per day. Water handled by natural drainage and syphon and steam pumps. No machinery used in this mine.

Inspected April 18.—Mine generally in bad condition. Ventilation not good, some slate falls, also timbering and drainage poor. Fan requires new blades. Company given notice of this and instructed to improve mine immediately.

Inspected September 21.—Mine not in satisfactory condition. Roof bad—will not stand good timbering. Air was behind working places.

Gatliff Coal Company.

P. O., Gatliff, Ky.

Officers: A. Gatliff, President; J. B. Gatliff, General Manager; Jack Burnes, Superintendent; N. A. Archer, Secretary and Treasurer.

Mine No. 1.—(John Jones, Mine Foreman.)—

Working Jellico seam about 40 inches thick with no parting. Double entry room and pillar system. Roof not very

good, requiring careful timbering. Haulage, mules direct to tipple. They have a double tipple, connecting Mine No. 1 and Mine No. 2, one on one side of hollow and the other on the other side. Blasting done with black powder after having been undercut with air machines. Squibs are used and not very much powder, as coal is easily broken down, after having been undercut. No limit to amount of powder allowed carried into mines. Mines rather dry, but not dangerous, as it is well managed and no heavy shooting. Water handled by natural drainage, steam and air pumps.

Inspected April 16.—Ventilation very much improved since last inspection. Other conditions generally satisfactory.

Inspected September 19.—Conditions generally satisfactory.

Mine No. 2.—(John Jones, Mine Foreman.)—

Working Jellico coal seam, practically the same as No. 1, already described. However, coal is some better and holds thickness better. Same machinery used as at No. 1. Coal hauled by mules to siding and from there to tipple with gasoline engines. Coal shot with black powder after having been mined with machinery. Machinery as follows: Three 150 H. P. Erie boilers; one Norwalk compressor; twenty Harrison punching machines; two Ingersols. Fan run by steam.

Inspected April 17.—Ventilation fairly good. Other conditions satisfactory.

Inspected September 20.—Conditions generally satisfactory.

Mine No. 3.—(Richard Kensee, Mine Foreman.)—

Work Jellico coal seam very much like No. 1 and No. 2. Have separate tipple and tramway. Incline about 300 feet. Haulage by gasoline engine. Blasting done on solid, or undercut with picks. Water handled with syphon or ditch.

Inspected April 17.—Ventilation, drainage and timbering generally satisfactory.

Inspected September 17.—Improvements. Conditions satisfactory.

Imperial Jellico Coal Company.

P. O., Rockhold, Ky.
Transportation, L. & N.

Officers: J. C. Hoskins, General Manager; John Morgan, Superintendent.

Mine No. 1.—(John Marshall, Mine Foreman.)—

Working Jellico coal seam, double entry room and pillar system. Coal about 40 inches and almost clear of partings. Slate roof not very good, requiring careful timbering. Coal gathered by mules and hauled to knuckle with electric locomotives, and let down an incline about 500 feet direct to tipple. Blasting done with black powder after being undercut with puncher and electric machines, and not very much powder required. Mine generally damp and not considered dangerous from dust. Water handled by natural drainage and air pumps. Capacity about 250 tons per day. Mining machinery as follows: Two Goodman; one Ingersol electric plant; one 150 H. P. Atlas boiler; one 238 H. P. McEwing engine; one 5-ton Goodman locomotive; seven Ingersol punching machines; two Goodman electric breast machines.

Inspected May 21.—Running mine with natural ventilation. Foreman claimed that it was only for a few days until fan was repaired, but they were warned to be careful, as this is unlawful.

Inspected November 22.—Mine not in operation. However, as far as I examined conditions seemed satisfactory.

Mine No. 2.—(L. C. Chaffin, Mine Foreman.)—

Mine nearly exact conditions as No. 1, and using same tipple. However, they use a different foreman. Incline and output same.

Inspected May 21.—Conditions generally satisfactory.

Inspected November 22.—Ventilation, drainage and timbering satisfactory.

Jellico Coal Mining Company.

P. O., Mountain Ash, Ky.
Shipping Point, Mountain Ash, Ky.

Officers: Arthur Groves, President; John Surgenor, Superintendent.

(J. Jenkins, Mine Foreman.)

Jellico seam of coal about 36 inches with no parting. Good roof, partly of slate and mostly of stone. Haulage by mules to siding inside mine, and hauled by electric locomotives about one mile to knuckle and let down incline about 1,000 feet to tipple. Coal undercut with punching machines and blasted with black powder. Squibs and fuse both used. No limit to amount of powder taken into mine. Dynamite used for shooting slate or bottom. Mine rather dry but not dangerous. Capacity about 600 tons per day. Machinery as follows: One Norwalk compressor, 28x30; three Erie 150 H. P. boilers; one 100 k. w. generator driven by McEwing engine; three 6-ton Jeffrey locomotives; one Sullivan room and pillar machine; eighteen Whitcomb puncher machines; two Ingersol Rand puncher machines; three Sullivan breast machines. All fans and pumps run by electric machines. This is a very extensive operation and the mines are worked in sections, employing from 2 to 3 mine foremen. Sections called 2 Main, 3 Main, Brace Sode, and Tackett.

Inspected April 11 and 12.—Conditions generally satisfactory, except on Cash entry where air was not very good.

Main Jellico Mountain Coal Company.

P. O., Kensee, Ky.

Officers: T. C. du Pont, President; J. H. Barker, General Manager and Superintendent.

Mine No. 1.—(Frank Cox, Mine Foreman.)—

Working Jellico coal seam, about 42 inches and clean. No advancing work is done, all the work being robbing work. Coal generally mined with picks, with some black powder used. Mine damp or wet and not dangerous from dust.

Inspected February 29.—Conditions generally satisfactory.

Inspected December 16.—Ventilation, drainage and timbering satisfactory.

Mine No. 2.—(Frank Cox, Mine Foreman.)—

Mine and conditions generally the same as No. 1, although in working this mine is newer. Both are doing robbing work and have an incline about 1,000 feet and tipped on same tipple. Output about 300 tons for both mines.

Inspected February 29.—Air entering mine was ample, but not well distributed. The foreman claimed that this was due to a curtain being down. Timbering satisfactory, drainage poor.

Inspected December 16.—Conditions generally satisfactory. Foreman was cautioned about the danger in drawing stumps and pillars, and warned to be careful.

Mahan Jellico Coal Company.

P. O., Packard, Ky.
Transportation, L. & N.

Officers: T. B. Mahan, President; C. G. Ellison, Vice President; Gorman Jones, Secretary.

Mine No. 1.—(C. M. Davis, Mine Foreman.)—

Work Jellico coal seam, about 38 inches and no parting. Double entry room and pillar system. Roof is mixture of stone and slate, and not extra good. Haulage by mules to knuckle and down an incline 100 feet. Blasting done after having been undercut by punching machines. Black powder and both squibs and fuse are used. No limit to the amount of powder allowed taken into rooms. Water is handled with drainage and syphon and steam or air pumps. Capacity 700 tons for both mines. Machinery as follows: One Norwalk air compressor, 26x30; eighteen Harrison machines, and two Sullivans.

Inspected April 15.—Conditions generally satisfactory.

Mine No. 2.—(Dave Martin, Mine Foreman.)—

Same vein of coal, about 42 inches and no parting. Worked on double room and pillar system. Roof very good—a mixture

of slate and stone. Haulage by mules to knuckle and let down incline about 200 feet to tipple. Blasting done after being undercut by air machines. Black powder, and both fuse and squibs used. No limit to amount of powder taken into mine. Dynamite is used in entries, for taking top and bottom. Machinery same as No. 1 Mine.

Inspected April 15.—Ventilations not very good, other conditions generally satisfactory.

Mammoth Blue Gem Coal Company.

P. O., Gatliff, Ky.
Transportation, L. & N.

Sol Smith, President and General Manager.

(J. C. Rogers, Mine Foreman.)

Blue Gem seam of coal, about 26 inches with sandstone roof. Bottom somewhat softer and generally shot instead of roof. Worked on single entry room and pillar system. Haulage by mules to tipple, which is about 100 feet above R. R. Coal let down by chutes. Mining done with picks, no blasting being done. Capacity about 150 tons per day.

Inspected April 19.—Furnace and stack too far away from where men are at work. A fan should be installed. Other conditions fair.

Inspected September 21.—Sufficient air entering mine but not well distributed. Also some breaks were left open. Company notified of this and requested to straighten up.

Peerless Coal Company.

P. O., Woofford, Ky.
Shipping Point, Wofford, Ky.

Harry E. Bullock, General Manager.

(Will Risdon, Mine Foreman.)

Working Jellico coal seam, about 3 miles south of Williamsburg. This was formerly the Jewel Jellico Coal Co. Coal seam about 42 inches with small parting near bottom of about 3 or 4 inches composed of soft substance. Coal generally

mined with electric machinery. Haulage is by locomotive to knuckle and there down an incline 800 feet to tipple.

Inspected August 27.—Conditions very good, although drainage was poor. A new fan was installed.

Procter Coal Company.

P. O., Red Ash, Ky.
Transportation, L. & N.

Officers: Chas. Finley, President; Jas. F. Grinstead, Vice President; F. W. Finley, Secretary and Treasurer; Philip Francis, Superintendent; S. K. Dossit, Cashier.

(F. S. Foster, Mine Foreman.)

Working Jellico coal seam, about 45 inches and generally clean. Mining mostly robbing work and done with picks. When shooting is done it is with black powder—squibs being used. Roof not very safe in some places on account of long standing and weight. Water handled by ditch and gasoline pumps. Mine generally wet—not dangerous from dust. Some black damp. No mining machinery used. Capacity about 150 tons per day. This company also has a new opening called Grinstead No. 2, opened in 1912. Only a few men are employed. Both mines are run on same plan and in connection with each other. In fact they are not separate mines.

Inspected February 24.—Ventilation and drainage satisfactory; timbering fair.

Inspected December 17.—Conditions fairly satisfactory, except on 8th left of old mine, where they were more than 60 feet ahead of air.

Sunbeam Coal Company.

P. O., Jellico, Tenn.
Transportation, L. & N.

Officers: S. Darty, President; Chas. Vermillion, General Manager and Mine Foreman.

Jellico Blue Gem coal, about 34 inches thick and clear of parting. Worked on single entry room and pillar system. Very good slate roof and bottom. Work mostly robbing work

with only a few men. Mining with picks. Haulage by mules to knuckle and let down an incline about 1,200 feet.

Inspected February 23.—Mine not in operation day of inspection on account of water. However, as far as I could examine conditions seemed very much as usual, good for a B. G. mine.

Watts Creek Coal Company.

P. O., Wofford, Ky.
Transportation, L. & N.

Officers: R. B. Roberts, President; Samuel Werner, Vice President; I. H. Roberts, Secretary; Geo. Huettel, General Manager and Treasurer.

(L. H. Middlebrook, Mine Foreman.)

Jellico coal seam, including parting about 9 inches near center, composed of slate or shell. Coal mined with picks, and black powder or dynamite used for blasting. Mine generally damp—water handled by ditch and syphon. Capacity about 150 tons per day. No mining machinery used, the entire haulage being by mules to knuckle and there let down an incline about 1,200 feet direct to tipple.

Inspected August 27.—Company had built a new furnace, wherein a fan would be better. Timbering satisfactory, drainage fair.

EASTERN DISTRICT NO. 2.

Reports of M. D. Daniel and H. G. Van Hoose.

As stated in Chapter I., the term of Mr. Daniel expired in August, and he was succeeded by Mr. Van Hoose. Each Inspector made a general report covering the part of the year for which he was responsible.

MR. DANIEL'S REPORT.

Ashland, Ky., August 10, 1912.

HON. CHARLES J. NORWOOD,
Chief Inspector of Mines,
Lexington, Ky.

DEAR SIR:—The following is a report of my work as Assistant Inspector for the Second Eastern District, covering the period from January 1 to August 13, 1912. This report is submitted to you at this time by reason of the expiration of my term of office, and my retirement from the duties of Assistant Inspector.

There has been a wonderful advancement made in the development of the Eastern and Southeastern Kentucky coal fields in the past year. There have been added to the work two very important new coal fields, that of the Consolidation Coal Company, operating in the Elkhorn Big Vein, at Jenkins, Letcher county, and the new Pond Creek Coal Company, on Pond Creek, Pike county, who will be ready to ship coal by the first of January, 1913. Both of these operations will add a large tonnage to the output of the State. The Consolidation Coal Company will have seven or more large, well equipped mines in the Letcher county field, and the Pond Creek Coal

Co. will have eight large mines in the Pond Creek field in Pike county. The mines of both these large companies will be equipped with all the latest labor-saving devices and safety appliances, a more detailed account of which appears later on in this report.

It is the spirit of the coal operators in this district to try to comply with the State Mining Laws, and to make their mines as safe as possible, and reduce the number of accidents to the lowest possible minimum. The co-operation of the mine officials with the Assistant Inspector in this respect has been greatly appreciated.

In conclusion I wish to thank the operators, mine officials, and the miners for their hearty co-operation in trying to keep conditions up to the best possible standard in and around the mines. Also to thank you, as Chief Inspector of the Department, for your prompt assistance, able advice, and courteous treatment at all times in connection with the carrying out of my work.

Very truly yours,
M. D. DANIEL,
Assistant Inspector of Mines.

BOYD COUNTY.

ASHLAND IRON & MINING COMPANY.

P. O., Ashland, Ky.

Sam Seaton, Superintendent, Rush, Boyd County, Ky.

Mine No. 3.—

This is a drift mine in the No. 6 seam of coal, having an average height of four feet, with a sandstone top, and clay and slate bottom, the ventilation is produced by a furnace, which is of sufficient capacity to air it properly. However, the mine was not in operation at the last inspection, and had not been operated for some time. The brattice and doors were all well constructed and in good condition. The mine is located fifteen miles from Ashland on the C. & O. and A. C. & I. Rys. The mine is reached by a switch about two miles in length up Rush Creek, and leaves the main lines at Rush station. No mechanical methods of any kind are employed in the mining.

Big Run Coal Company.

P. O. Princess, Boyd Co., Ky.

George McNeal, Superintendent.

Big Run Mine.—(Henry Hennecke, Mine Foreman.)—

A drift mine in the No. 6 vein of coal, located 10 miles west of Ashland, on the C. & O. and A. C. & I. Rys. This mine is practically worked out, and was soon to be abandoned, as there was only a small amount of pillar work being done when the last inspection of the mine was made. But the company is opening up new mines in the same vein of coal, just across the hill on Big Run Creek, and will have them ready for operation in the very near future.

Clere Mine.

P. O. Coalton, Boyd Co., Ky.
F. H. Clere, Superintendent.

Operated by F. H. Clere, under lease from the Ashland Iron & Mining Co. A small drift mine in the No. 7 seam of coal, ventilated by a furnace. The mine is located on the C. & O. and A. C. & I. Rys. They work about twenty miners, all pick work.

C. F. Wurts.

P. O. Ashland, Ky., R. F. D. No. 1.

Cinton Mine No. 8.—

Operated by C. F. Wurts, under lease from the A. C. & I. Co. A small drift mine in the No. 7 seam, located on the A. C. & I. Ry., 3 miles west of Ashland; about fifteen to twenty men are employed; all pick work. The mine is ventilated by a furnace, which gives very good results. The roof is very bad and requires the very best of care to avoid accidents.

Chatfield Coal Company.

P. O., Ashland, Ky.

Morning Glory Mine.—(Harrison Hall, Mine Foreman.)—A small drift mine in the No. 7 seam of coal, located about eighteen miles west of Ashland on the C. & O. Ry. Ventilation is produced by means of a furnace, which gives ample ventilation. Timbering, drainage and the general condition of the mine very good. The mining is all pick work, and about ten to fifteen miners are employed. All conditions satisfactory.

Hammond Mine.

P. O., Coalton, Ky.

George Hammond, Manager.

This is a small drift mine in the No. 7 seam of coal, operated by George Hammond. Employs four to six men; ventilated by a furnace; has not been in operation very much during the present year. Transportation by the A. C. & I. Ry. General conditions of the mine were fair.

Strother Mine.

P. O., Rush, Ky.

(J. P. Strother, Mine Foreman.)

Operated by J. P. Strother and Noah Reynolds. A small drift mine in the No. 7 seam of coal, ventilated by a furnace, employing about fifteen miners, slate and sandstone top, fire clay bottom. General conditions of the mine were very good.

Riley Stevens Mine.

P. O., Princess, Ky.

(Riley Stevens, Mine Foreman.)

This was a small drift, operated in connection with the Big Run Coal Company's mine, under contract by Riley Stevens, employing six to eight men, ventilated by a furnace, which never did give very good results.

Gullett Mine.

P. O. Princess, Ky.

(Allen Gullet, Mine Foreman.)

A small drift mine, operated by Allen Gullett, in connection with the Big Run Coal Co. by contract. Ventilated by a furnace, which gives good ventilation throughout the mine.

Winslow Mine No. 12.

P. O., Ashland, Ky.

Operated by lease from Ashland Iron & Mining Co., by the Wurts Bros. This mine is done and is now closed out.

Wurts Mine.

P. O., Ashland, Ky., R. R. No. 1.

(William Wurts, Mine Foreman.)

This is a small drift mine in the No. 6 seam of coal, operated by William Wurts, ventilated by a furnace, and employing only about six men on pillar work. This mine is also just about done. All conditions in the mine were satisfactory.

Norton Branch Plastic Clay Company.

P. O., Rush, Ky.

(Arch Morris, Mine Foreman.)

This is a coal company operated by Hatcher & Stewart. It is a drift mine in the No. 7 seam of coal, located about four miles west of Kilgore, on the A. C. & I. Ry., and about a mile from the main line up on North Brach. The mine is ventilated by a furnace; about ten miners are employed. This is a new mine, as the old Norton Branch is worked out and done. All conditions very satisfactory.

CARTER COUNTY.

Davys Run Coal Company.

Headquarters, Denton, Ky.

P. O., Denton, Carter Co., Ky.

Officers: L. N. Davis, President, Ashland, Ky.; R. R. Stamper, Vice President, Denton, Ky.; Roll Prichard, Secretary and Treasurer, Denton, Ky.

R. R. Stamper, Superintendent and Mine Foreman.

Davys Run Mine.—

This is a new corporation that has started business during the present year. The mines are located about two and a half miles off the C. & O. on Davys Run Creek, and the coal is brought over the old route for the Straight Creek Mines and dumped over the old tipple at Straight Creek. The mine is a drift in the No. 7 vein of coal, and is ventilated by a furnace, but a fan will be installed at no distant date. Thirty miners are employed, and they have 40 houses.

Estate of N. Thayer.

P. O., Partlow, Carter Co., Ky.

Sturgis Bates, General Agent, Riverton, Ky.

Willard Mines.—(Louis Duncan, Mine Foreman.)—

This mine is operated by the Eastern Kentucky Ry Co., on the estate of N. Thayer. The operations are in the No. 7 vein of coal. The mines are ventilated by a furnace. Fourteen miners, three mules, two drivers, and two day men are employde to produce the coal. The mines are kept in good condition generally, but are inclined to be very dry, it being necessary during the cold season of the year to resort to sprinkling to keep them from becoming too dry.

Olive Hill Firebrick Company.

P. O., Hitchins, Carter Co., Ky.

Clayton Hitchins, Superintendent.

Hitchins Mine.—(Noah Burton, Mine Foreman.)—

Is operated by the above named company. It is a small

drift mine in the No. 6 vein of coal, ventilated by a fan, electrically driven. Most of the coal is consumed by the company at their brick plant near the mine, while some of the output is shipped to Olive Hill for use at their brick plant at that point. Conditions were generally pretty fair, with the exception of the drainage, which during the wet season was not very good. This mine was opened up during the early spring months. It was the intention of the company to install electric mining machinery, as they had electric power at the plant.

This concludes the number of mines in active operation in Carter County, with the possible exception of the Boghead and Lost Creek Cannel Coal Mines, at Grayson, Ky. These mines were never in operation during my time in office as Assistant Inspector. But I understand they are in the market again with Cannel Coal.

FLOYD COUNTY.

Beaver Pond Coal Company.

Headquarters, Prestonsburg, Ky.

P. O., Prestonsburg, Ky.

Officers J. H. Spradlin, President, Prestonsburg, Ky.; F. H. Streitman, Vice President, Cincinnati, O.; C. Y. Ligon, Secretary and General Manager, Prestonsburg, Ky.

(Millard Bradley, Mine Foreman.)

A drift mine in the No. 1 vein of coal. Mining is done by electric chain machines, ventilation is produced by a 10-foot fan, steam driven. The coal is gathered and hauled to the siding by mules, from where it is hauled to the outside by a six ton motor. The coal will only average about three feet in height, with a good sandstone roof. Very little timbering is done in this mine on account of the top standing up so well, theye were instructed, however, to set more timbers in the rooms. All ventilating apparatus was in good condition, and the general conditions of the mine were very good throughout.

Colonial Coal & Coke Company.

Headquarters, Prestonsburg, Ky.

P. O., Prestonsburg, Floyd Co., Ky.

Officers: Edward E. Kaercher, President, Pottsville, Pa.; C. W. Evans, Secretary, Treasurer, Manager and Superintendent, Prestonsburg, Ky.

(Dan Woodruff, Mine Foreman.)

These are drift mines in the No. 1 seam of coal, located one mile east of Prestonsburg. There are two openings, right and left side. The coal will average four feet in height, with slate and sandstone roof and fire clay bottom. Mining is done with electric chain machines, ventilation is produced by a ten foot fan, which has just recently been installed, the coal is gathered by mules and hauled to the outside by a six ton motor. The general condition of the mine is good.

Cliff Coal Company.

Headquarters and Mines, Cliff, Ky.

P. O., Cliff, Floyd Co., Ky.

Morgan Evans, President and General Manager.

(D. C. Evans, Mine Foreman.)

A small slope mine in the No. 1 seam of coal. Mining is done by electric machines, ventilation is produced by a five-foot disk fan; solid sandstone roof, slate bottom. Very little timbering is being done in the mine on account of the roof standing up so well. This is the case in all of the mines of this vicinity. The mine is well ventilated and drainage is good, and taken as a whole, the mine is in good condition throughout.

Middle Creek Coal Company.

P. O., Prestonsburg, Floyd Co., Ky.

Officers: Hiram Harris, President, Middle Creek, Ky.; G. P. Archer, Secretary and Treasurer, Prestonsburg, Ky.; W. S. Wells, General Manager and Superintendent, Prestonsburg, Ky.

(W. J. Wortman, Mine Foreman.)

This is a drift mine in the No. 1 seam of coal. Mining is done with electric machines, gathering and hauling of coal is done by mules, ventilation is produced by an eight-foot fan, steam driven. The height of the coal will average three and a half to four feet, with a good sandstone top and a hard fire clay bottom. On account of the dryness of the coal and the leakage of fine dust through the cars, the haulways usually become pretty dusty, which dust has to be removed frequently and sprinkling resorted to. General conditions of the mine are good.

Prestonsburg Coal Company.

P. O., Prestonsburg, Floyd Co., Ky.

Officers: J. S. Gillespie, President, Tazwell, Va.; Barnes Gillespie, Secretary and Treasurer, Tazwell, Va.; J. W. Alley, Superintendent.

(G. W. Roher, Foreman.)

Mines located at Prestonsburg, Ky., on the Big Sandy Division of the C. & O. Ry. The mines are operated in the No. 1 vein of coal at tipple height; will average three and a half to four feet. The mining is done by electric machines; ventilation is produced by furnaces, which provide ample ventilation throughout the mine. There are two openings, right and left sides; the output is dumped over the one tipple. The mines are well kept up, and always found to be in good condition generally.

North-East Coal Company.

Headquarters, Willkesbarre, Pa.

P. O., Auxier, Floyd Co., Ky.

Officers: A. D. Smith, President, Willkesbarre, Pa.; H. LaViers, General Manager, Paintsville, Ky.; John LaViers, Superintendent.

Mine No. 7.—(David Hudson, Mine Foreman.)—

Located seven miles east of Paintsville, on the Big Sandy Division of the C. & O. Ry. It is a drift mine in the No. 1 vein

of coal, averaging four feet in thickness, with a slate top that has to be well timbered and closely looked after; slate bottom. The mine is ventilated by an eight-foot disk fan, which gives good ventilation. The coal is mined with electric machines, gathered by mules, and hauled to the outside by two electric motors. Timbering, drainage and ventilation always found to be satisfactory.

MARY LUCK COAL COMPANY.

Headquarters, Prestonsburg, Ky.

P. O., Auxier, Floyd Co., Ky.
Mines at Auxier, Floyd Co., Ky.

Officers: R. H. Leete, President, Prestonsburg, Ky.; B. P. Friend, Secretary and Treasurer, Prestonsburg, Ky.; Alex. M. Spradlin, Superintendent, Auxier, Ky.

Mary Luck Mine.—(William Daniel, Mine Foreman.)—

A drift mine in the No. 1 vein of coal, having at the present time a thickness of six feet without a parting, and without any impurities whatever, but this is unnatural for this vein of coal, and seems to have been only a pocket covering three or four acres in extent, and will probably go down to the normal height for this vein of coal at this point, which is about four feet. The mine is ventilated by a furnace, which gives good results. All the coal is shot from the solid. The mine is in good condition.

CEDAR POINT COAL COMPANY.

Headquarters, Woods, Ky.

P. O., Woods, Floyd Co., Ky.
Mines at Woods Station.
Transportation, C. & O. Ry.

Officers: R. W. Brunk, President and Superintendent; W. W. Hall, Vice President, Ashland, Ky.

(John Johnes, Mine Foreman.)

A drift mine in the No. 1 vein of coal, located six miles east of Prestonsburg. The coal will average four feet in thickness, with a four-inch band of bone in it; it has a very good

slate roof. Ventilation is produced by means of a furnace, which never has given very good results. Drainage is not very good. The coal is shot from the solid. About fifteen miners are employed. Two mules haul the coal to the outside.

PRESTON COAL COMPANY.

Headquarters, Emma, Floyd Co., Ky.

P. O., Emma, Floyd Co., Ky.
Mines at Alonzo Station.

Officers: Forest B. Preston, President; Cyrus Preston, Superintendent and General Manager, Emma, Ky.

(John Williams, Mine Foreman.)

A drift mine in the No. 1 vein of coal, four feet in thickness, with a good slate top, ventilated by a furnace, which gives very good results. The mine is comparatively dry. The coal is cut by Harrison punching machines, gathered and hauled to the outside by mules. The general condition of the mine is fair.

JOHNSON COUNTY.

THE CONSOLIDATION COAL COMPANY.

P. O., West Van Lear, Ky.

Officers: Charles F. Ice, Manager; John D. Rogers, Superintendent; A. E. Griffith, Superintendent P. & M. Department; F. A. Vockrodt, Chief Engineer.

The following description of the Consolidation Coal Company's operations at Van Lear, has kindly been furnished by Mr. Charles F. Ice, Manager, at my request.—C. J. N.

Consolidation Mine No. 150.—(Millers Creek No. 1 Seam.)—

(J. W. Estep, Mine Foreman; Jos. Madison, Thomas France, T. H. Beaty, and Frank Huttons, Assistant Mine Foremen.)

This mine is located on the north side of Millers Creek, about one and a half miles east of Van Lear Junction. It is opened by a triple entry, with triple air course for about 1,200 feet with two haulage entries and two air courses from that

point on. The haulage is now done by electric locomotives, except for two or three ponies and mules in pillar work. All coal is undercut by electric mining machines, about eleven of which are now in use. Local dips make the drainage troublesome, although the total quantity handled is not excessive. About twelve electrically driven pumps are in active service.

The mine was developed by two separate openings and the main mine on the east side is ventilated by a 10′x5′ Leplay fan of centrifugal type, driven by a 150 H. P. Westinghouse motor. The west mine is ventilated by a five-foot Stein fan of the disc type, motor driven.

A concrete lined shaft about 40 feet deep is connected with the east mine for use as second opening. The mine is capable of producing 1,200 tons daily.

Consolidation Mine No. 151.—(Millers Creek No. 1 Seam.)—(Ed. Easterling, Mine Foreman.)—

This mine is located on south side of Millers Creek, about two miles from Van Lear Junction. It is operated now on a double entry system, although the development has been retarded on account of an acre of thin coal. Three electric locomotives handle the output. All coal is undercut by five electric mining machines. Three pumps are required. Ventilation is maintained by a seven-foot Stein fan of disc type, motor driven. There are at present three separate openings, including fan way, about five hundred feet apart and a fourth will be ready for use this summer. The mine is capable of producing 500 tons daily.

Consolidation Mine No. 152.—(Millers Creek No. 1 Seam.)—(A. J. Johnson, Mine Foreman; John Petry, Thomas Moran, Eugene Dixon, and Cleve Bulter, Assistant Mine Foremen.)—

This mine is located on the north side of Millers Creek, about two and a half miles from Van Lear Junction. It is opened by triple entries and double air courses, which extend about 1,200 feet and from there on two headings and two air courses. The coal lies below tipple height and the mine cars, after being handled by electric locomotives almost to the pit mouth, are then delivered to the tipple by a chain hoist of

approximately 25° inclination, operated by a 30 H. P. direct current motor.

To facilitate development a pair of entries have been driven from Wolf Pen Branch, which, for the present, constitutes a separate mine; but in approximately one year these will be connected with the main mine workings. The dip of the coal is very irregular and main pumping stations can not be established. Eight electrically driven pumps are in use. Some mules are used but the main haulage, as well as some gathering, is by electric locomotives. The main mine is ventilated by an 18'x5' Leplay fan of centrifugal type, driven by an 18x24 McConnellsville Manufacturing & Mine Supply four valve engine. The Wolf Pen opening is ventilated by a 7' Stein fan of disc type, motor driven. In addition to the main entries there are four other openings to the outside. This mine is capable of producing 1,000 tons daily.

Consolidation Mine No. 153.—(Millers Creek No. 1 Seam.)—(W. H. Adams, Mine Foreman; C. A. Jacoby, J. Jennings, Charles Childers, and J. O. Johnson, Assistant Mine Foremen.)—

This mine is located on the south side of Millers Creek, about three miles from Van Lear Junction. It is opened by triple entries and triple air courses for about 1,200 feet and then by two headings and two air courses from that point on. Most of the development which is the largest of the four mines has been to the dip, this requiring pumping in most of the headings. Sixteen electrically driven pumps are now in service. The haulage is rather heavy and requires electric locomotives. The fan is a duplicate of the 18x5 Leplay fan at Mine No. 152, and now delivers 90,000 cubic feet per minute at 1.0 inches water gauge. Including the main entries, the main now has three separate openings available. This mine is capabale of producing 1,400 tons daily.

The mines of The Consolidation Coal Company on Millers Creek, as described above, utilize power generated at a central power house, located on the east bank of the Big Sandy River, about a half mile from Van Lear Junction. The equipment will be ultimately of 2,000 KW capacity, but now consists of two Parson's turbines and Westinghouse generators (500

KW each), which deliver three phase alternating current at 4,000 volts to a transmission line leading up the creek.

Two brick sub-stations, approximately one mile and two miles, respectively, from the power house are conveniently located so that each may supply two mines with direct current at 250 volts.

Near the central power plant and facing the river are the man office building and dwellings of office and power house employes.

The tipples are arranged so that four grades of coal can be loaded at one time—lump, egg, nut and slack. The track arrangement permits about thirty-five empties above the tipple and same number of loads below.

Each mine has a blacksmith shop, mine foreman's office, sand drying house, locomotive repair house, with wheel pits and necessary storage and oil houses. In addition there is a central shop between Mines Nos. 150 and 151 well equipped to do heavier machine, blacksmith or electric work. All supplies are handled through a supply department, with ample fire proof storage room for present needs of all mines.

In Mr. Daniel's report of inspections of the several mines, which follows, a number of details are added to the information contained in the foregoing.—C. J. N.

CONSOLIDATION COAL COMPANY.

Mines at Van Lear, Ky.

P. O., Van Lear, Johnson Co., Ky.

Mine No. 150.—(J. P. Small, Mine Foreman.)—

A drift mine in the No. 1 vein of coal, having an average height of four feet clean coal, of an excellent quality. The roof is of slate, of very irregular formation, full of slips, etc., which is of a very treacherous character which has to be closely watched and well timbered. The ventilation produced by a Leplay centrifugal fan, with double inlets, driven by a 150 H. P. engine is good. The mining is done with electric machines, gathering of the coal is done by gathering motors, where it

is hauled from the partings to the outside by motors, and an endless rope haulage system. The mines are two and one-half miles off the Big Sandy Division of the C. & O. and are connected with this road by a short line, operated by Millers Creek Railroad Co. No gas is generated in this mine, and it is comparatively free from dust; all ventilating apparatus is kept up-to-date, and the mining law is well observed in the operation of the mine as well as the general laws of safety followed by the company.

Mine No. 151.—(Edward Easterling, Mine Foreman.)—Is a drift mine in the No. 1 vein of coal, having a slate roof that is very rotten and hard to control. The coal will average four feet in thickness. The mine is well ventilated by a seven-foot Stein disk fan. The coal is gathered by mules and ponies and hauled to the tipple by motors. About forty miners are employed at this mine. The mine is always damp, which prevents any accumulation of dust. All conditions satisfactory.

Mine No. 152.—(A. J. Johnson, Mine Foreman.)—Is also a drift mine in the No. 1 vein of coal. The coal is undercut by electric machines during the past year. Quite a number of great improvements have been made at this mine, especially so pertaining to the ventilating system; new concrete overcasts have been built to make the necessary splits. The ventilation is produced by a new 18-foot double inlet centrifugal Lepley fan. The fan is driven by a 150 H. P. McConnellsville engine at 62 R. P. M., furnishes 65,000 cubic feet of air per minute. Arrangements are also made whereby the exhaust steam from the engine can be turned into the intake during the cold season. All permanent stopings are built of concrete, and the general arrangements of the entire ventilating system are of the best. Quite a good deal of trouble is experienced here, as elsewhere in this district, in regard to getting the miners to post their places. General condition of the mine satisfactory.

Mine No. 153.—(Will Adams, General Foreman; Richard Gunter and W. A. Jacoby, Assistant Foremen.)—

Is a drift mine in the No. 1 vein of coal, with about the same general conditions prevailing as at the other mines of this company at this place. The mine is opened up on the triple entry system, with a system of overcasts and separate splits for each entry. All overcasts and permanent stopings are constructed of concrete. The mine is ventilated by an 18-foot double inlet Lepley centrifugal fan, which is forcing about 70,000 cubic feet of air into the mine per minute. The fan is driven by a 150 H. P. engine at 70 R. P. M. The condition of the roof in this mine is a little better than in some of the other mines at this place. The mining is all done by electric machines. Electric power is also employed for all work around and inside the mine, for haulage purposes, etc. A very small showing of gas has been found in one of the headings on the north side, but it is not exuded from the coal, but comes from the bottom, but as this coal field is only a few miles from the oil and gas fields, no doubt there will be gas in greater quantities some day. The mine is well looked after and all laws are lived up to pertaining to the safety of the men and mines. The mine has a production of about 1,200 tons per day. All general conditions are very good.

North-East Coal Company.

Headquarters, Wilkesbarre, Pa.

P. O., Paintsville, Ky.
Transportation, C. & O. Ry.

Officers: A. D. W. Smith, President; Carl B. Metzger, Secretary, Wilkesbarre, Pa.; H. LaViers, General Manager, Paintsville, Ky.

Mines located on Muddy Branch, two and one-half miles east of Paintsville. These operations consist of six mines, operating the No. 1 vein of coal, which has a thickness of four feet on an average.

Mine No. 1.—(P. H. Pfenning, Mine Foreman.)—

Consists of two openings, right and left sides. The mining is all done by electric machines. The coal is gathered by mules and hauled to the outside by motors. The roof is of slate and sandstone, fire clay bottom. Ventilation is produced by a twelve-foot steam driven fan which furnishes a good current of air. All conditions very satisfactory.

Right Side, Mine No. 1.—(P. H. Pfenning, Mine Foreman; Chester Wyatt, Assistant Foreman.)—

On the day of my inspection of this mine, February 15, 1912, there was some complaint from the miners in regard to the ventilation. We found that the door at the mouth of the eighth left was supposed to be opened and closed by the driver as he passed back and forth through it. This he was failing to do, however, which was one cause of the poor ventilation. A trapper boy was to be put at the door. Also the air was short circuiting between the 8th and 9th left entries, through rooms 1 and 2 on the 9th, and through rooms 9 and 10 on the 8th left, which was depriving the men in the heads of these two entries of air. The necessary improvements were instructed to be made, and on subsequent inspections the work was found to have been done. The general condition of the mine was very good.

New Hill Mine.—(P. H. Pfenning, Mine Foreman.)—

This is a small drift mine in the No. 1 vein of coal. It is operated in connection with the No. 1 Mine. It is aired by a small disk fan. It has a sandstone top with about three and a half to four feet of coal. Two electric mining machines are employed to do the mining. The coal is gathered and hauled to the motor by mules. All conditions prevailing in and around the mine are very good.

Plant No. 3.—(T. J. Davis, Mine Foreman.)—

Consists of two mines, right and left openings. Each side is provided with separate ventilating equipment. 12-foot

fans for each mine provide ample ventilation, which is well distributed to the working places. There are several other openings to the outside that could be used in case of emergency. Timbering, drainage and all conditions are well looked after and cared for. The general conditions of the mines are very good.

Plant No. 2.—(Joseph Sinnott, Mine Foreman.)—

Is a drift mine operating in the No. 1 vein. Is located one and one-half miles east of Paintsville, on the river and the main line of the Big Sandy Division of the C. & O. Ry. The coal is cut by electric machines, gathered by mules and hauled to the outside by two motors. Ventilation is produced by a 12-foot fan, which gives good air throughout the mine. All stoppings, bratices, etc., are in good condition, and all things around and inside the mine are in very good shape. The State Mining Laws are closely observed; still there is a tendency on the part of the miners to be negligent about the room posting, and there have been some accidents by slate falls because of this negligence. While this does not apply to this mine in particular, such has been the case at the mines of this company, but the company cannot be blamed for accidents wherein the principal cause lays with the workmen. The mine is in good condition generally.

SANDY RIVER COAL COMPANY.

Headquarters, Chicago, Ill.

P. O., Lower Greasy, Ky.
Location of Mines, Four miles up on Greasy Creek from the C. & O., and is reached by a narrow gauge railroad.

Officers: William Stacy, President, Chicago, Ill.; J. P. Deiter, Secretary and Treasurer, No. 6 North Clark St., Chicago, Ill.; P. H. Williams, Superintendent, Lower Greasy, Ky.

(James Blevins, Mine Foreman.)

The mine is a drift. The coal will average fifty inches in thickness, thirty inches of it being a good grade of cannel coal, while the other part is a good grade of domestic bituminous coal. The roof is of hard sandstone with a fire clay bottom.

Ventilation is produced by means of a furnace, which gives very good results. About twenty-five miners are employed in the mine; all pick work. The coal is gathered and hauled to the outside by mules. The general conditions are very good in the mines with the exception of the large amount of powder used in the charges, as the coal is shot from the solid and being very hard to pull, unusually large charges are placed in the holes.

YELLOW CHIEF COAL COMPANY.

Mines at Meek Station.

P. O., Lower Greasy, Ky.

Officers: A. B. Haring, President, Frenchtown, N. J.; J. S. Osterbrook, Vice President, Easton, Pa.; J. M. Shomon, Secretary, Glen Gardner, N. J.; H. S. Seigfreid, Treasurer, Easton, Pa.; J. M. Lively, General Manager, Lower Greasy, Ky.; R. S. Whitesell, Superintendent.

(John Lusk, Mine Foreman.)

A small drift mine operating in the No. 1 vein of coal, located on the Big Sandy Division of the C. & O. Ry. The coal is cut by punching machines and is gathered and hauled by mules. Ventilation is produced by a furnace, which, aided by numerous openings to the outside, gives a very good current of air through the mines. The coal will average about three and a half feet in height with a good sandstone top. The general conditions inside the mines are very good.

ROYAL COLLIERIES COMPANY.

Headquarters, Columbus, O.

P. O., Lower Greasy, Ky.

Officers: John E. Jones, President, Columbus, O.; E. T. Jones, Vice President, Jackson, O.; James E. Morgan, Secretary and Treasurer, Jackson, O.; Daniel C. Jones, Superintendent.

Royal Colliery Mine.—

Mines located four miles east of White House, on the Big Sandy Division of the C. & O. Ry., at Offutt Siding. It is

a slope mine, operated in the No. 1 vein of coal. The coal will average about four feet in thickness with a good hard slate and sandstone roof, fire clay and slate bottom. Ventilation is produced by a twelve-foot fan, steam driven, at about 60 R. P. M. A separate manway is provided for the men to travel. The mining is done by electric machines; the coal is gathered by mules and hauling is done by motors to the foot of the slope, which is about three hundred feet long. This vein of coal at this point lays about on a level with the bed of the river. The mine is well equipped with all necessary machinery in and around the mine, and the general conditions prevailing are very good. No gas is found in the mine at the time of last inspection on June 26, 1912. Mr. Dan. C. Jones was acting as mine foreman in addition to his duties as superintendent. All conditions satisfactory.

FLUHART COLLIERIES COMPANY.

Headquarters, Wellston, O.

P. O., White House, Ky.

Officers: Theodore Fluhart, President, Dayton O.; W. S. McCloud, General Manager, Wellston, O.

Fluhart Mine.—(W. J. Davis, Mine Foreman.)—

This is a shaft mine in the No. 1 vein of coal and is 110 feet deep at this point, and is also the last point at which this vein of coal is being worked, as it dips in a northwesterly direction, and test wells that have been put down at different points beyond here, show that the coal is not of sufficient thickness to be workable, but in this mine it will average about three and a half to four feet. There is a very fair slate roof over the coal. The ventilation is produced by a twelve-foot fan, the intake being provided for down the main shaft with a split at the bottom for the north and south sides of the mine. Separate manway is provided for traveling purposes, and no one is allowed to ride the cages, which are equipped with safety catches, that are tested from time to time to see that they are working properly. Speaking tubes are provided from the bottom of the shaft to the engineer, so that communication is possible at all times between the engine room and the bot-

tom of the shaft. The mine makes a great deal of water from the south side, which is well taken care of by two large steam pumps, located at the bottom of the shaft. The mining is done by electric machines. The mine is in first class condition and everything around it is very satisfactory.

This concludes the list of mines in Johnson county.

LETCHER COUNTY.

Consolidation Coal Company.

Mines at Jenkins, Ky.

P. O., Jenkins, Letcher Co., Ky.

This new town has been built and the new Elkhorn coal fields opened up inside of the last eighteen months; work was begun on the buildings and the mines were opened shortly after January 1, 1911. At the time of my visit to the place in July, 1912, they had 282 houses completed, with contracts let for 1,000, and 208 still under construction. Five sawmills and three planing mills are in daily operation to cut and supply the lumber that is being used in the building of the houses, tipples and other construction work, and had cut during the time they had been in operation over 15,000,000 feet of lumber. Brick kilns have been constructed and the brick manufactured right on the ground, that have gone into a fine three-story commissary building. An ice plant is also in operation that supplies the town with all the ice that is used. It is a very modern little town in every respect, and is located on the head waters of Elkhorn Creek, six miles over the line from Pike county and reached by the Sandy Valley & Elkhorn Ry., which is 28 miles in length and connects with the C. & O. Ry. at Shelby, Ky., 120 miles south of Ashland.

Tipples.

There are seven very modern tipples completed. Four of them are equipped with screens, and the other three are built for run of mine coal. All of them are equipped with the latest time and labor saving devices known in the business.

Power Plant.

There are three temporary power plants in operation at present, two of them containing three 100 H. P. boilers and two 100 KW generators each; the other contains two 100 H. P. boilers and one 100 KW direct connected generator and engine, and one 75 KW generator and engine. There is a large central power plant under construction. First installation will consist of two 2,000 KW steam turbines and generators and six B. & W. boilers of 430 H. P. each, with condensers, automatic stokers, ash loading equipment, etc. The power will be generated at 4,000 volts at the central plant and transmitted to the sub-station at each mine, where it will be transformed to 250 volts for service in the mines. A concrete dam 45 feet in height has been built across the mouth of Little Elkhorn Creek to supply the power plants. The capacity will be 70,000,000 gallons of water and covers several acres in area. Altogether the work that has been done in the very short time since this company began operation in this field, and considering the remote distance from any transportation facilities, except by wagon teams, it is very remarkable, and has all been carried out under the very efficient management of Mr. John G. Smyth, who is the General Manager in charge of the operations and construction work.

Coal.

The mining operations are in the famous Elkhorn vein of coal. The coal will average nine feet in thickness, with a parting of white slate about the middle of the seam. The mining will be done in this seam of slate. The Jeffrey Mfg. Co. are constructing a specially designed machine mounted on truck for this work. The roof is of slate and has all the appearance of a good solid roof, and one that will stand up very well. All of the coal will be taken in the rooms, while the entries will be driven at maximum height of seven feet and will be arched. The width will be about eight feet, and plenty of room will be allowed on the brake side of the car for a passage way.

Mines.

There are seven mines opened and all of them pretty far along in development. Quite a good deal of permanent work was done in the way of concrete work for the ventilating systems. The mines are all opened on the three and four entry plan, and some of them will have more parallel entries after the work gets a little farther along. Only temporary fans have been installed for the present, but which are of the eight-foot disk type and are of sufficient capacity to insure a good ventilation of the mines for quite awhile yet. The mines are intended to be about one mile apart and are scattered out for about five miles up main Elkhorn Creek. No 7 Mine will practically be two mines, as it is the intention to start No. 208 off this mine also and bring the coal out over this tipple. As this is the last mine up the creek the coal is below the water level at this point.

Walter Shunk, Superintendent.

Mine No. 201.—

A drift mine in the Elkhorn seam of coal, having an average height of nine feet with a slate parting about the middle of the vein that will average from one to twelve inches in thickness. The roof is of slate and sandstone, which will probably stand up very well. It is the intention to try to take all of the coal in the rooms, which will be driven about twenty feet wide. The mining is done with electric machines. Ventilation is produced by an eight-foot Stein disk fan, which gives a good current of air through the mine. Permissible powder, Monobel No. 2, is being used for blasting purposes. Altogether the mine was in good shape and everything pertaining to the operation of the mine was according to the Kentucky State Laws.

Walter Shunk, Superintendent.

Mine No. 202.—(Adam Gross, Mine Foreman, First Class Certificate.)—

Is a drift mine, also in the Elkhorn vein, with about the same general description of development work as has been described before. This mine is ventilated by an eight-foot Stein disk fan. All conditions satisfactory. Inspected July 18, 1912.

W. H. Price, Superintendent.

Mine No. 203.—(C. H. Bice, Mine Foreman, First Class Certificate.)—

Also a drift mine. Main heading was in 1,200 feet; aired by an eight-foot fan; mining done by electric machines. All conditions in the mine were satisfactory. Inspected July 18, 1912.

W. H. Price, Superintendent.

Mine No. 204.—(J. E. Taylor, Mine Foreman, First Class Certificate.)—

Is a drift mine in the Elkhorn vein of coal, just about the same in plan and development as the other mines herein described. Ventilated by an eight-foot Stein disk fan. All conditions were satisfactory. Inspected July 17, 1912.

W. J. Christopher, Superintendent.

Mine No. 205.—(Geo. Christopher, Mine Foreman.)—

Is a drift mine, the same as the others. As all of these mines were started at the same time and on about the same plans, there is not a great deal of difference in any of them. All conditions were satisfactory. Inspected July 17, 1912.

W. J. Christopher, Superintendent.

Mine No. 206.—(Steve J. Gilliam, Mine Foreman.)

Inspected July 17, 1912, and all conditions found to be satisfactory; ventilated by an eight-foot Stein disk fan.

W. J. Christopher, Superintendent.

Mine No. 207.—(George Gaskill, Mine Foreman, First Class Certificate.)—

As the coal at this mine lays below the water level, the plans and arrangement are a little different from the other mines. An endless chain haul is installed here to haul the cars up the incline on to the tipple, otherwise the mine is opened up on the same plans followed in the others. Ventilation produced by an eight-foot disk fan. All conditions were excellent.

This concludes the number of mines under development at Jenkins. And at the time of this inspection and visit, there was quite a great deal of work to be done yet, still it was very remarkable the progress that had been made under difficulties. As there were no railroad facilities to the place, there was a good deal of the heavy machinery to be brought in yet.

Since my visit to the place in July, the road from Shelby, on the C. & O. has been completed and they have got their motors and other heavy equipment in and are shipping quite a lot of coal from the mines, which is a fine grade of domestic and steam coal. The new town of McRoberts, five miles across the mountain from Jenkins, is under development but no work of importance had been done in regard to opening the mines at that place. Transportation from these mines will be over the L. & N. Railway.

LAWRENCE COUNTY.

Louisa Coal Company.

Headquarters, Mount Vernon, O.

P. O., Torchlight, Ky.
Mines at Torchlight, Ky.
Transportation, C. & O. Ry.

Officers: F. S. McConnell, President, Mt. Vernon, O.; G. L. Walkenshaw, General Superintendent, Torchlight, Ky.

This company is operating mines in the No. 3 and 4 veins of coal. The mines are located six miles east of Louisa, on the west side of the Big Sandy River, and the coal is transported over the river on an ariel tramway system, in buckets of 1,000 pounds capacity.

Mine No. 3.—(Geo. W. Chambers, Mine Foreman.)—

Is being worked in the No. 3 vein of coal, which will average four feet in thickness, with a three-inch parting of slate about twelve inches from the bottom. The roof is of slate, of very irregular formation, and is very hard to control, and will average four to six feet before the sandstone comes in. It has always given considerable trouble, and usually has to be taken down up to the solid rock. The mining is done with electric machines. Ventilation is produced by electrically driven disk fans. The gathering of the coal is done by mules and ponies, and hauled to the tipple, which is about one-half mile from the mines, by motors. The mines are usually damp. Ventilation is pretty hard to keep up on account of the character of the roof. The general condition

of these mines has been greatly improved within the last year under the new management.

Mine No. 7.—(Geo. W. Chambers, Mine Foreman.)—

Operated in the No. 4 vein of coal (Upper Vein). This seam will average eight feet in thickness, with a parting of slate twelve inches thick, four feet from the bottom, with another parting of slate near the top of the coal. The top in this mine is also very hard to handle. The mines are worked on the double entry plan, and are ventilated by a disk fan. Mining is done with electric machines. Gathering done by mules. Haulage to the outside by motors. All conditions generally pretty fair.

Crystal Block Coal Company.

P. O., Peach Orchard, Ky.

This company did operate a mine in the Peach Orchard seam of coal, but has not been operating for some time. No inspection of this mine was ever made by myself.

Ben Bow Coal Company.

Is under development, and their mines will be two miles west of Richardson, Ky. They will operate in the Peach Orchard seam.

Peach Orchard Coal Company.

Headquarters, Canton, O.

P. O., Peach Orchard, Ky.
Mines at Peach Orchard, Ky.

Location at the head of a three mile branch line, leaving the Big Sandy Division of the C. & O. Ry., at Richardson, Ky.

Officers: J. C. Welty, President, Canton, O.; Ray Clere, General Manager.

(John Wilson, Mine Foreman.)

This company is operating the Peach Orchard seam of coal, and it is the oldest operating company in this district. There are two mines, but at present only the right hand side is being worked. The mining is done with Harrison punching

machines. Ventilation is produced by a furnace, which gives very good air throughout the mine. The coal will run from five and a half to six feet in thickness, and has several partings of slate and bone coal in it. The general condition of the mine has always been very good.

PIKE COUNTY.

The following mines are located in Pike county, on the N. & W. Ry., and are on the Tug Fork of the Big Sandy River, and as the Tug Fork is the State line for quite a number of miles, most of these operating companies have their mines on the Kentucky side and their stores, offices, etc., on the West Virginia side. The coal from these mines is all transported by the Norfolk & Western Railway.

Allburn Coal & Coke Company.

Headquarters, Matewan, W. Va.

P. O., Matewan, W. Va.
Mines at McCarrs Siding.

W. A. Young, President and General Manager, Matewan, W. Va.

Mine No. 1.—(Gratton Willis, Mine Foreman.)—

Is a drift mine in the Lower Thacker seam of coal; it will average four feet in thickness, and has a good slate top and quite a good deal of it has a solid sandstone top. It is worked on the entry and air course system. Rooms being turned off the air course also. Mining is done with electric machines, and about 35 miners are employed. Ventilation is produced by a six-foot Stein disk fan, that gives a good ventilation through the mine.

Inspected January 9, 1912.—All conditions found to be satisfactory.

Inspected April 11, 1912.—Two automatic doors were found to be torn down, the first one between first and second right, and the second one between main No. 2 and the air course on first right. The air course from the fan to the first automatic door was pretty badly filled up with fallen

slate. Curtain on main No. 1 entry between fifth and sixth left was torn down.

Inspected July 8, 1912.—The general condition of the mine at this inspection was very good, with the exception of being very dry; as the mine does not afford any water scarcely, the haulways get very dry sometimes, making it necessary to resort to sprinkling.

Burnwell Coal & Coke Company.

P. O., Sprigg, W. Va.
Mines located six miles east of Williamson, W. Va.

Officers: E. Barlow, President, Mahoning City, Pa.; E. A. Beddall, Secretary and Treasurer, Pottsville, Pa.; S. A. Beddall, General Manager, Sprigg, W. Va.

This company has four mines opened in the Warfield seam of coal, which has an average thickness of six feet, with a band of bone coal that will average anywhere from six to ten inches in thickness. The roof is of slate, with some sandstone, fire clay and slate bottom.

Mine No. 2.—

Inspected January 10, 1912.—Was working thirteen miners, two machine men, three mules. Was ventilated by a five-foot disk fan. All conditions were found to be satisfactory.

Inspected April 12, 1912.—All conditions satisfactory.

Inspected July 9, 1912.—All conditions very good.

T. A. Beddall, Superintendent.

Mine No. 3.—(Mr. Jennings, Mine Foreman.)—

Inspected January 10, 1912.—Is a drift mine in the Warfield seam of coal. Twentyfour miners were employed, six mules to gather and haul the coal, and one machine for mining.

Inspected April 12, 1912.—Twenty miners were employed. The ventilation is produced by a fan. All conditions were very good.

Inspected July 9, 1912.—All conditions satisfactory.

Mine No. 4.—

Is a drift mine, also in the Warfield seam of coal

Inspected January 10, 1912.—Ventilated by a six-foot disk fan. Working twenty-four miners, six mules, one machine.

Inspected April 12, 1912.—Conditions very good.

Inspected July 9, 1912—There were forty miners, three machines, and seven mules employed. All conditions good.

BORDERLAND COAL COMPANY.

Headquarters, Roanoke, Va.

P. O., Borderland, W. Va.

Officers: Edward L. Stone, President; Ernest B. Fishburn, Secretary and Treasurer, Roanoke, Va.; L. E. Armintrout, General Manager, Borderland, W. Va.

The operations of this company at this point consist of two plants located about one mile apart and operating in the Winefrede seam of coal. The coal is all washed at the tipple.

Plant No. 1.

M. L. Armentrout, Superintendent.

Mine No. 1.—(W. H. Sebastian, Mine Foreman.)—

Is a drift mine in the Winefrede seam of coal, having a thickness of six feet on an average. It is clean coal, with a slate and sanstone roof, fire clay bottom. The gathering of the coal and the hauling to the outside is all done with motors. The coal is hauled to the tipple by a ten-ton steam locomotive, where it is carried over the river on an ariel tramway by two 2-ton buckets. The mining is all done with electric machines in the mines of this company. Ventilation is produced by a twelve-foot fan, which gives a good current of air throughtout the mine. These mines have always been found in good condition and the laws being lived up to in every respect. Mine No. 1 has three other small openings that are connected with the main mine, and the coal is brought through the hill and to the tipple over the same incline.

Inspected January 11, 1912.—Were working fifty-five

miners, two gathering motors, and one main haulage motor, and three machines.

Inspected April 16, 1912.—All conditions satisfactory.

Inspected July 17, 1912.—All conditions satisfactory.

R. G. Claytor, Superintendent.

Big Creek No. 1.—(W. H. Sebastian, Mine Foreman.)—A drift mine in the same seam of coal, aired by a five-foot fan.

Inspected January 12, 1912.—Were working twenty-five miners, one machine, one motor. All conditions satisfactory.

Inspected April 16, 1912.—Thirteen men were employed on room and pillar work. Conditions very good.

Inspected July 10, 1912.—All conditions satisfactory.

R. G. Claytor, Superintendent.

Big Creek No. 3.—(W. H. Sebastian, Mine Foreman.)—Inspected January 12, 1912.—Four men only were working in this mine on pillar work. All conditions at the places were satisfactory.

Inspected April 15, 1912.—Still four men on pillar work.

Inspected July 10, 1912.—All conditions satisfactory.

R. G. Claytor, Superintendent.

Big Creek No. 4.—(W. H. Sebastian, Mine Foreman.)—Inspected January 12, 1912.—Were working ten miners and one machine. Ventilated by a five-foot disk fan. All conditions were satisfactory.

Inspected April 15, 1912.—Only four men were at work in this mine at this time, on stump and pillar work. All conditions were satisfactory.

Inspected July 10, 1912.—Still a few men on robbing work.

Plant No. 2.

Consists of a fine steel tipple and washer, the coal being let down the incline in two ton monitors and transported across the river by an 800-foot link belt conveyor. The mines of this plant are in the Winefrede vein also, and there is a small opening in the Alma vein that lays about 175 feet below the Winefrede vein. They have gone through the hill at

the upper seam and are now opening up on Canoe Branch of Peter Creek.

C. J. Adams, Superintendent.

Mine No. 1.—(Jake Hinkle, Mine Foreman.)—

Is a drift mine in the Winefrede seam of coal, and were working thirty-six miners, four machines. Two 3-ton motors were used for gathering the coal. Ventilation is produced by a six-foot fan. All general conditions were satisfactory.

C. J. Adams, Superintendent.

Alma Vein Mine.—(Lyman Childers, Mine Foreman.)—

Is a small drift mine in the Alma vein (some call this the Lower Thacker vein at this point). They are working about eighteen miners, one machine, one motor. Ventilation by a six-foot fan. The coal will average 45 inches in thickness, with slate and sandstone top and fire clay bottom.

Inspected January 11, 1912.—All conditions found to be satisfactory.

Inspected April 16, 1912.

Inspected July 11, 1912.

C. J. Adams, Superintendent.

Plant No. 2. Opening No. 2.—(Jake Hinkle, Mine Foreman.)—

There is a little bit of robbing work going on here, but about all of the main body of coal is taken out, and only the stumps and pillars left. A very bad rock fault was struck in these mines some little time ago, and it has extended to and through all of the other openings that have been made. Three inspections of the mines have been made this year, and all conditions found to be satisfactory. All mining is done by electric machines. Ventilation by six-foot fans.

Inspected January 11, 1912.

Inspected April 16, 1912.

Inspected July 11, 1912.

Majestic Collieries Company.

P. O., Majestic, Pike Co., Ky.

Officers: W. A. Phillips, President and General Manager, Mt. Carmel, Pa.; A. E. Morgan, General Superintendent, Majestic, Pike Co., Ky.

This operation consists of mines in the Warfield seam of coal, also one new opening in the Upper Thacker vein.

A. E. Morgan, Superintendent.

Bear Branch Mine.—(W. P. Rice, Mine Foreman.)—

A drift mine in the Warfield vein, that will average six and a half to seven feet of coal, having a parting of bone coal about ten inches thick. The roof is of sandstone and slate, fire clay bottom.

Inspected January 4, 1912.—Were working twelve miners, one machine. Three mules were being used to gather and haul the coal to the motor. Ventilation is produced by a six-foot fan, that is driven by a twenty-five horse power motor. All conditions were satisfactory.

Inspected April 8, 1912.

Inspected June 26, 1912.—All conditions were satisfactory.

A. E. Morgan, Superintendent.

No. 2, Lyntrough Mine.—(E. H. Gates, Mine Foreman.)—

A drift mine in the Warfield vein, in the same seam of coal as the other. Working twelve miners, one machine, three mules.

Inspected January 4, 1912.—All conditions were very good.

Inspected April 8, 1912.—Since the inspection was made in January this mine and the old Bear Branch Mine have been thrown together, and are now worked as one mine, and all the coal from Bear Branch will be brought out through the Lyntrough Mine.

Inspected June 26, 1912.—This mine was almost done at this time, as there were only about six miners working on pillar work. All things were in very good shape.

A. E. Morgan, Superintendent.

Mine No. 1, Opening No. 2.—(E. H. Gates, Mine Foreman.)—

Inspected January 4, 1912.—A drift mine in the Warfield seam of coal; working thirteen miners, four day men, and four mules. Ventilated by a fan. All conditions were satisfactory at this inspection.

Inspected April 8, 1912.—All conditions satisfactory.

Inspected June 27, 1912.—All conditions good.

A. E. Morgan, Superintendent.

Thacker Seam Mine.—(E. H. Gates, Mine Foreman.)—

Inspected June 27, 1912.—This is a new mine in the Thacker vein, and lays about 200 feet above the Warfield vein. There is five feet of clean coal, with a slate top and bottom. At the time of this visit the mine was just under development, and was not very far in. Fans will be used for ventilating purposes.

VULCAN COAL COMPANY.

Headquarters, Roanoke, Va.

P. O. Vulcan, W. Va.
Mines at Vulcan, W. Va.

Officers: W. C. Stevenson, President, Roanoke, Va.; A. Stone, Vice President, Roanoke, Va.; Roger Martin, General Manager, Vulcan, W. Va.

Vulcan Mine.—(George Foster, Mine Foreman.)

Inspected January 5, 1912.—This is a drift mine in the Warfield vein of coal. No mining machinery is employed, and the coal is all shot from the solid, which is not a very good practice in this mine, as the mine has a tendency to be dusty. Clay is used for tamping purposes, and the practice of shooting from the solid will soon be discontinued, as they were making preparations to install electric machinery for all general purposes in and around the mine. A furnace has been used for ventilating the mine, which has given pretty good results. This was the first mine to be opened up on the Kentucky side of the river on the N. & W. Ry. The coal will average about five feet in height, with about six to ten inches of bone coal, that has to be thrown away. The coal is gathered and hauled by mules, but lately a gasoline motor has been put into the mine. The coal is brought down off the mountain by an ariel tramway, consisting of a series of twenty buckets of 1,000 pounds capacity each, but these will soon be displaced by two buckets of two tons capacity.

Inspected April 9, 1912.—All conditions were very good.

Inspected June 28, 1912.—All conditions O. K.

TURKEY GAP COAL & COKE COMPANY.

General Office, Ennis, W. Va.

P. O., Edgarton, W. Va.

Officers: W. H. McQuail, President; F. P. Harmon, Secretary; Edward J. McQuail Treasurer; P. P. Kerr, Superintendent.

Mine No. 1.—(Ira Crawford, Assistant Mine Foreman.)—

Is a drift mine in the Warfield vein of coal, which has an average thickness of five feet, including the band of bone coal that is common to this seam. The roof is of slate and sandstone, with slate bottom.

Inspected January 6, 1912.—Were working sixty miners, fifteen mules, four electric, and four punching machines, and one motor. All conditions were very satisfactory.

Inspected April 10, 1912.—All things were in good shape.

Inspected June 29, 1912.—All conditions satisfactory.

P. P. Kerr, Superintendent.

Mine No. 2. Upper Mine.—(James Childress, Mine Foreman.)—

Inspected January 6, 1912.—This mine is in the Upper Thacker vein, having a thickness of four feet eight inches of coal, with a three-inch parting of slate, which lays eight inches from the bottom. The top is of slate and sandstone; slate and fire clay bottom. Twenty-five miners, nine mules were employed in the mine. One ten-ton locomotive was used to haul the coal to the tipple. Ventilated by a six-foot Stein fan, which gives very good results.

Inspected April 10, 1912.—The condition of the ventilating apparatus had been very badly neglected, as there were several brattices behind at different points; the air course from the fan had become stopped up almost with fallen slate. This was ordered to be cleaned out and the other necessary work on brattices be done at once.

Inspected June 29, 1912.—Conditions had been changed considerably since the last inspection was made, with the exception of the air course from the fan to where it comes out on to the main entry at the mouth of No. 6 room. It was still badly stopped up with slate, which was ordered to be taken out at once.

THACKER COAL MINING COMPANY.

P. O., Rose Siding, W. Va.

Officers: J. K. Anderson, President, Williamson, W. Va.; S. G. McNulty, General Manager, Rose Siding, W. Va.

Thacker Mine.—(Wm. Pontious, Mine Foreman.)—

This is a drift mine in the Warfield seam of coal, having a thickness of five feet, with eight inches of bone coal. The top is of sandstone and slate. The mining is done with punching machines. Ventilation is produced by a six-foot disc fan.

Inspected January 8, 1912.—Were working thirty-five miners and ten mules to gather and haul the coal. Conditions very good.

Inspected April 11, 1912.—Not very much of the place was gone over on account of the mine being flooded from the recent heavy rains. That part that was inspected was in very good condition.

Inspected July 8, 1912.—All conditions satisfactory.

Alma Mine.—(Wm. Pontious, Mine Foreman.)—

Is a small drift mine in the Alma vein of coal, and lays 150 feet below the Warfield seam. Only a few men are working this mine, which is ventilated by a small fan. Conditions good.

POND CREEK COAL COMPANY.

Location of Mines, on Pond Creek, south of Williamson, W. Va.

Officers: A. F. Holden, President, Cleveland, O.; T. B. Davis, Vice President, New York; Paul Hardy, General Manager, Holden, W. Va.; Fred Meyers, General Superintendent, Williamson, W. Va.

At the time of my first visit to these mines on June the 24th, they had eight mines under development. The openings are all in the Warfield Gas seam No. 2. The openings are all on the triple or thribble entry plan, and are planned to be up-to-date in every respect. No inclines will be necessary at any of the mines, as all the coal lays at about tipple height. No ventilating machinery had yet been installed, but will be, and no doubt has been put in operation before this time. Electric power will be used for all general purposes in and out of the

mines. The height of the coal will average five feet in thickness, with eighteen inches of draw slate above the coal, with sandstone and slate above. The bottom is of slate and fire clay. There is a streak of bone coal that has to be thrown away; it will average from one inch to five or six. The company had under construction several dwelling houses and a large commissary building. One large central power plant will supply all of the mines.

Mine No. 1.—

Located on Blackberry Fork of Pond Creek, about five and one-half miles south of Williamson, and is in the Warfield Gas seam No. 2. Opened up on the triple entry system, and was in about 250 feet. No ventilating appliances were yet installed, but electrically driven fans were to be put in just as soon as the developments were a little farther along. The height of the coal will average about sixty-two inches, with a small streak of bone coal in it, that will run about one to five inches in thickness. There is an average thickness of eighteen inches of draw slate, with sandstone above that. The bottom is of slate and fire clay. The same general discription will apply to all of the mines of this company in regard to the mines, system of opening, etc. At the time of inspection the openings were only in about 250 feet. As all of them were started at about the same time, there was not much difference in any of them, and no mine foremen with certificates were yet employed, as only six to eight men were working in each mine. Transportation will be by a branch line off the main line of the N. & W. Ry. from Williamson; that will be about twelve miles in length. They expected to be shipping coal by the first of January, 1913.

Inspected June 24, 1912.—All conditions found to be satisfactory.

Mine No. 2.—

Also located on Blackberry Fork of Pond Creek, and about five miles south of Williamson.

Inspected June 24, 1912.—All conditions found to be satisfactory.

Mine No. 3.—

Located on main Pond Creek, about eight miles south of Williamson.

Inspected June 24, 1912.—All conditions found to be satisfactory.

Mine No. 4.—

Located about eight and one-half miles south of Williamson, on Pond Creek.

Inspected June 24, 1912.—All conditions were satisfactory.

Mine No. 5.—

Located about two miles up on Pinson Fork of Pond Creek, and about ten miles south of Williamson.

Inspected June 25, 1912.—All conditions in the mine were satisfactory.

Mine No. 6.—

Located on Pond Creek, about eleven miles south of Williamson.

Inspected June 25, 1912.—Conditions good.

Mine No. 7.—

Located near the head of the creek and about fourteen miles from the mouth of Pond.

Inspected June 25, 1912.—All conditions satisfactory.

Mine No. 8.—

Located just across the creek from Mine No. 7, and the output from both of these mines will be handled over the same tipple.

Inspected June 25, 1912.—All conditions satisfactory.

This concludes the number of mines in Pike county, which are located on the Tug Fork of Big Sandy River, and whose means of transportation is by the Norfolk & Western Railway.

MINES IN PIKE COUNTY ON LEVISA FORK OF BIG SANDY.

The following mines are located in Pike county, and their means of transportation is by way of the Big Sandy Division of the Chesapeake & Ohio Railway.

Big Branch Coal Company.

P. O., Lookout, Pike Co., Ky.

Officers: H. C. Berry, President, Philadelphia, Pa.; J. W. Cockill, General Superintendent, Lookout, Pike Co., Ky.

Big Branch Mine.—(Lee Canady, Mine Foreman.)—

Is located seven miles up on the Marrowbone Branch of the C. & O. Ry. It is a drift mine in the Upper Elkhorn seam of coal, which has a thickness of about four and one-half feet of coal, with a hard sandstone top and slate bottom. The mining is done with Harrison machines, but preparations are being made to install electric machinery for general mining purposes. Ventilation is produced by a seven-foot disc fan, that gives ample ventilation throughout the mine. The coal is all gathered and hauled by mules to the tipple, where it is dumped into a Jeffrey link belt conveyor and carried down the hill to the loading tipple. An average of thirty men are employed in this mine, which is operated on the single entry system, which is much harder to ventilate for a mine of any great extent.

Inspected March 22, 1912.—All conditions satisfactory.

Inspected May 16, 1912.—All conditions satisfactory.

Cabin Branch Coal Company.

Mines at Mossy Bottom, Ky.

P. O., Mossy Bottom, Pike Co., Ky.

Officers: E. B. Wright, President, Mossy Bottom, Ky.; Samuel Sutton, General Superintendent, Mossy Bottom, Ky.

Cabin Branch Mine.—(John Barney, Mine Foreman.)—

Located seven miles west of Pikeville, on the Big Sandy Division of the C. & O. Ry. Operating the No. 5 vein of coal. It is a drift mine, ventilated by a furnace, which on account of the way the mine has been worked, has never given very good results, but as the other mine near it is also owned and operated by the same company, it was the intention to install electric machinery in the Cabin Branch Mine for all general mining purposes. The coal will average about five feet in height, with six to eight inches of slate about the middle of the

vein. The roof is of hard sandstone and stands up well; on this account there is too little posting being done.

Inspected March 28, 1912.—The ventilation was very poor on account of some of the airways being stopped up and others being left open. Instructions were given to build brattices and stoppings, and to open up airways that had become stopped up.

Inspected June 17, 1912.—Former instructions had been complied with in regard to bettering ventilation, and all conditions were very much improved. About thirty-five to forty miners are employed. Coal is gathered and hauled to the tipple by mules.

ELKHORN CONSOLIDATED COAL & COKE COMPANY.

Headquarters, Pikeville, Ky.

P. O., Hellier, Ky.
Mines at Hellier, Ky.

Officers: Fon Rodgers, President, Pikeville, Ky.; Joseph Rogers, Superintendent.

This company are operating both the Elkhorn veins of coal. Most of their output is coked at the mines, there being fifty ovens in operation, while a great deal of it is crushed and shipped for coking purposes at other points.

Mine No. 2.—(M. L. Goodson, Mine Foreman.)—

A drift mine in the Upper Elkhorn seam of coal, located near the head of Marrowbone Creek and on the Marrowbone Branch of line of the C. & O. Ry. The coal will average four feet in thickness, with a slate and sandstone top, fire clay and slate bottom. The coal has a laminated streak near the top. The mining is done by Harrison punching machines. Ventilation is produced by a five-foot fan, which forces a sufficient quantity of air into the mines, but on account of the many leaks that are encountered there is a great deal of waste of air.

Inspected March 21, 1912.—A door was ordered to be put up at the mouth of 3rd right entry, also one to be put up at the mouth of the 2nd left. An average of thirty miners, five drivers, and five mules were employed in the mine.

Inspected June 14, 1912.—Thirty-five men were working in the mine. All conditions were very satisfactory.

Mine No. 1.—(M. L. Goodson, Mine Foreman.)—

A drift mine in the Lower Elkhorn seam of coal, ventilated by a furnace, which furnishes a sufficient quantity of air for the number of men employed.

Inspected March 3, 1912.—A door was ordered to be put up at the mouth of 3rd right entry, in place of the curtain, which could not be made tight enough; also a door at the mouth of the second left entry was ordered. Thirty-three miners were employed on an average. Punching machines are used for cutting the coal.

Inspected May 14, 1912.—Thirty-five men were employed. There was a circulation of 4,000 cubic feet of air. Timbering, drainage and general conditions were satisfactory.

GREENOUGH COAL & COKE COMPANY.

Headquarters, Shamokin, Pa.

P. O., Hellier, Pike Co., Ky.
Mines at Hellier, Ky.

Officers: Edward Brennan, President, Shamokin, Pa.; W. P. Caldwell, Secretary, Shamokin, Pa.; E. F. Moore, Treasurer, Shamokin, Pa.; W. J. Freeman, Superintendent.

(I. S. Wells, Mine Foreman.)

This is a drift mine in the Upper Elkhorn seam of coal, operated on the double entry system. The coal has a general average height of four feet, with a sandstone and slate roof, slate bottom. Mining is done by Harrison punching machines. Ventilation is produced by a six-foot disc fan. Mules are used for gathering and hauling the coal to the outside.

Inspected March 20, 1912.—All conditions were satisfactory.

Inspected May 15, 1912.—Thirty miners were employed. All conditions satisfactory.

HENRY CLAY COAL & COKE COMPANY.

Headquarters, Pottsville, Pa.

P. O., Lookout, Pike Co., Ky.
Mines at Henry Clay Station.
Location, six miles up on Marrowbone Creek.

Officers: E. G. Foust, President; J. W. Cockill, Superintendent.

This company has two mines, operating only the Upper Elkhorn vein at present. The coal will average about three and a half feet thick, with a sandstone roof and slate bottom. The coal has formerly been shot from the solid, but electric machinery is being installed for all general mining purposes. Mules are employed for gathering and bringing the coal to the outside. Ventilation is produced by a furnace, which will be displaced by a fan as soon as the electric power is available.

Mine No. 2, Upper Elkhorn Vein.—(H. S. Boling, Mine Foreman.)—

Working on an average twenty-five men. Four mules are used for hauling the coal. Ventilation by furnace.

Inspected March 22, 1912.—All conditions were satisfactory.

Visited May 16, 1912.—No inspection of the mine was made on this date, as not one was working, the mine being temporarily idle.

Mine No. 1, Lower Elkhorn Vein.—

This mine is not being operated at the present time, consequently no inspections of it were made.

MARROWBONE COAL & COKE COMPANY.

P. O. Lookout, Pike Co., Ky.
Location, five miles up on Marrowbone branch line of the C. & O. Ry.

Officers: J. F. McCracken, President, Edenborn, Pa.; J. J. Christie, General Manager, Lookout, Ky.

Marrowbone Mine.—(E. A. Bertrand, Mine Foreman.)—

Is a drift mine in the Upper Elkhorn vein of coal, but the mine has been closed down since early in the year on account of the tipple being destroyed by fire. Operations had not been resumed up to September 1, 1912.

MITCHELL COKE COMPANY.

Mines at Hellier, Ky.

P. O., Hellier, Pike Co., Ky.
Located at the head of the Marrowbone Branch of the C. & O. Ry.

Officers: T. J. Mitchell, President; J. L. Morgan, General Manager, Hellier, Ky.

(Frank Jones, Mine Foreman.)

This operation consists of one drift mine in the Upper Elkhorn vein of coal, which will average four feet in height. The mining is done by Harrison punching machines. Ventilation is produced by a twelve-foot fan, which furnishes a good circulation throughout the mine. The roof is of slate with some sandstone, which stands up very well. The coal is gathered and hauled to the tipple by mule power. About twenty miners were employed usually. The mines are always found to be in good condition and the laws lived up to in all respects.

KEWANEE COAL MINING COMPANY.

(Successors to the Kewanee Coal Company.)

Headquarters, Pikeville, Ky.

P. O., Kewanee, Pike Co., Ky.
Mines at Kewanee Station.

O. P. Chatfield, President and General Manager, Pikeville, Ky.

(Mont Williamson, Mine Foreman.)

This operation consists of a drift mine in the No. 5 vein of coal, which will average five feet in thickness, with a parting of slate near the center of the vein, that will average eight to ten inches thick. The roof is of slate, that stands up well; bottom of slate and fire clay. The mine is ventilated by a furnace of ample capacity to ventilate the mine, providing the doors, brattices and stopings are kept in good condition. The coal is shot from the solid. Mules are employed for gathering and hauling the coal to the tipple.

SHELBY COAL MINING COMPANY.

Headquarters, Shelbiana, Ky.

P. O., Shelbiana, Pike Co., Ky.
Mines at Shelby Station.

B. L. Blair, General Manager.
(A. J. Younce, Mine Foreman.)

This is a small drift mine in the No. 5 vein of coal, having an average thickness of five feet, with an eight-inch parting of slate in the middle of the vein. The mine is ventilated by a furnace. No mining machinery is employed. The coal is shot from the solid. An average of fifteen miners are employed. The company owns and leases about ten houses.

Inspected March 23, 1912.—All conditions found to be satisfactory.

KEYSER COAL COMPANY.

Headquarters, Mossy Bottom, Ky.

P. O., Mossy Bottom, Pike Co., Ky.
Mines at Keyser Switch.

Officers: Charles M. Keyser, President; J. F. Prindible, Vice President and Secretary, Paintsville, Ky.; C. M. Keyser, Superintendent.

Keyser Mine.—(W. H. Fife, Mine Foreman.)—

Located five miles west of Pikeville, on the Big Sandy Division of the C. & O. Ry. This is a small drift mine in the No. 5 vein of coal, having a thickness of five feet, with a good sandstone top and a fire clay bottom. The mines are worked on the double entry system. Ventilation is produced by means of a furnace.

W. K. STEELE COAL COMPANY.

Headquarters, Mossy Bottom, Ky.

P. O., Mossy Bottom, Pike Co., Ky.
Mines at Mossy Bottom, Ky.

Samuel Sutton General Manager and Superintendent.

(T. J. Askey, Mine Foreman.)

A drift mine in the No. 5 vein of coal, located six miles west of Pikeville, on the Big Sandy Division of the C. & O. Ry. During the present year this company have equipped their mines with electricity, for mining, haulage, and running the fan. The vein of coal at this point is the same as prevails in the other mines near, being about five feet in thickness, with the parting of slate in the center of the vein. The ventilation, timbering and all other conditions in and around the mine were very good and met the requirements of the law.

Inspected March 23, 1912.—All conditions satisfactory.

Inspected May 17, 1912.—All conditions satisfactory.

In May the miners at the mines of the Consolidation Coal Co., Van Lear, Ky., came out on a strike, claiming that the company were not giving them correct weight on their coal at the tipple. At the request of the company, I went to the mines with the test weights, provided by the State for testing the scales. The following is the result of the tests at the four mines:

Test at Mine No. 1, showed the scales to be correct.

Test at Mine No. 2, showed the scales to be 25 pounds in the miners' favor.

Test at Mine No. 3, showed scales to be correct.

Test at Mine No. 4, showed scales to be 20 pounds in favor of the miner.

The following number of barrels of oil were tested and approved:

March 11, 1912.—Five barrels of J. B. Lewis brand. At the plant of the Standard Oil Co., Catlettsburg, Ky. Gravity 23½.

March 11, 1912.—Indian Refining Co., Ashland, Ky. Tested and approved 8 barrels of Rarus brand. Gravity 23½. 5 barrels of Kentucky Test. Gravity 23½.

August 10th, at the plant of the Standard Oil Co., Huntington, W. Va. 23 barrels of Kentucky Test. Gravity 23, approved.

MR. VAN HOOSE'S REPORT.

Ashland, Ky., January 1, 1913.

PROF. C. J. NORWOOD,
Chief Inspector of Mines.

DEAR SIR:—I herewith submit my annual report as Assistant Inspector for the Eastern District No. 2, for the year 1912, commencing on the 13th of August.

I make the report by counties, giving the number of mines in operation when I was appointed Assistant Mine Inspector, together with all new developments since that time.

There has been considerable development in the district during the year, some of the mines being operated on large scale, the purpose being to ultimatly produce a very large tonnage. Among these new operations are the Consolidation Coal Company, at Jenkins and McRoberts, in Letcher county, and the Pond Creek Coal Company, in Pike county. The latter company is operating on the Tug River side of Pike county, on a spur from the Norfolk & Western Railway, at Williamson, W. Va., extending about twelve miles into the interior of the county south of Williamson. A full description of each of these operations will be given later in the report.

Mr. Daniel has furnished me with a copy of his report, made at the expiration of his term of office, which expired August 13th, and I note that he has given many details that I refrain from giving, as he has given them correctly and there is no use of us both explaining them.

Trusting that the report will meet with your approval, I am,

Yours very truly,
H. G. VAN HOOSE,
Assistant Inspector of Mines.

BOYD COUNTY.

Ashland Iron & Mining Company.

P. O., Rush Ky.
Transportation, A. C. & I. Railway.

Sam Seaton, Superintendent.

This is a drift mine in the No. 6 seam of coal, located about one and one-half miles up on Rush Creek from Rush. The mine is ventilated by furnace, which gives sufficient air current for the number of men and mules they are working at the present time. The mine is located on the A. C. & I. Railway, about thirteen miles west of Ashland, Ky..

This mine was inspected by me on November 26th, and found to be in a satisfactory condition.

Big Run Coal Company.

Head Office, Winchester, Ky.

P. O., Princess, Ky.
Transportation, A. C . & I. Railway.

Officers: David S. Gay, President; H. A. Paynter, Secretary and Treasurer; Geo. W. McNeal, of Ashland, Ky., Superintendent.

(Henry Hennecke, Mine Foreman.)

This mine is located in the No. 7 vein of coal, about ten miles west of Ashland, on the C. & O. and A. C. & I. Railroads. The old mine is practically worked out and they have opened up a new mine and expect to begin shipping coal in the near future.

The new mine will be located on Big Run Creek, where the coal is about five feet high, having what is known as the third strata. It appears in all the mines that are operating this seam of coal, and it suddenly disappears when they have this third strata, which is located at the top of the seam. It increases the height of the coal about 14″, but when it disappears it leaves the height of the coal in a great many instances less than 4 feet.

Ashland Iron & Mining Company.

(R. D. Clere, Lessee.)

P. O., Coalton, Ky.
F. H. Clere, Superintendent.

Clere Mine.—

This mine is owned by the Ashland Iron & Mining Co., and R. D. Clere has it under lease and mines and sells the coal to the A. C. & I. Ry. The coal is used principally for coaling steamboats on the Ohio River, and some of it is used in the Ashland Iron & Mining Co.'s furnaces, which are located in Ashland. They are operating the No. 7 seam of coal and the mine is ventilated by furnace.

C. F. Wurts, Lessee.

P. O., Winslow, Ky.

Wurts Mine.—(C. F. Wurts, Mine Foreman.)—

This mine is generally known as Mine No. 8, and is owned by the Ashland Iron & Mining Co., and is located about two and one-half miles west of Ashland, on the A. C. & I. Ry. They are operating the No. 7 seam of coal, and the mine is ventilated by furnace. This is all pick work, but the roof is very bad and requires constant care to avoid accident.
P. O. Coalton, Ky.

Hammond Mine.

(G. W. Hammond, Mine Foreman.)

This is a small mine located between Coalton and Kilgore, Ky., and is operated by G. W. Hammond. They are operating the No. 7 seam of coal and are only employing about ten (10) men. The mine is ventilated by furnace, which gives very good results.

Princess Coal Company.

P. O., Princess, Ky.

C. V. Bartels, Manager and Mine Foreman.

This mine is located at Princess, Ky., and is in the No. 7 seam of coal, which is about 4 feet high. They are only employing about eight (8) men at the present time. The mine is ventilated by furnace. This mine began operation in November and was inspected by me on December 6th, at which time conditions were satisfactory.

East Fork Coal Company.

P. O., Princess, Ky.

(W. M. Dawson, Mine Foreman.)

This mine is owned by J. D. Sturgill, and opened up in the No. 7 seam of coal, on the A. C & I. Railway. They are only employing about ten (10) men, and the mines are ventilated by furnace.

This mine was inspected on December 6th, and was found satisfactory.

P. O., Winslow, Ky.

Wurts Mine No. 12.—(William Wurts, Mine Foreman.)—

This is a small drift mine in the No. 6 seam of coal, and they are only employing about six (6) men. All pillar work in this mine will soon be worked out and abandoned.

CARTER COUNTY.

Strother & Reynolds.

P. O., Kilgore, Ky.

Meadow Branch Mine.—

This is a small mine operated and owned by J. P. Strother and Noah Reynolds. This is the No. 7 seam of coal, about one and one-half miles east of Rush, Ky., on Meadow Branch.

This mine was inspected on October 24th, at which time conditions were satisfactory.

Norton Branch Plastic Clay Company.

P. O., Kilgore, Ky.

Arch Morris, Superintendent.

This mine is owned and operated by J. C. Hatcher, of Kilgore, Ky., and F. L. Stewart, of Louisa, Ky. They are operating the No. 7 seam of coal, and are located about two miles west of Kilgore, on the A. C & I. Railway. The mine is ventilated by furnace, and only from ten (10) to twelve (12) miners are employed. This is a new mine and has not been in operation very long.

It was inspected by me on October 22d, at which time conditions were satisfactory.

Morning Glory Mine.

P. O., Rush, Ky.

Officers: J. W. Kitchen, President, W. W. Hall, Vice President.

(Harrison Hall, Mine Foreman.)

This is a subsidiary of the Kentucky Coal & Coke Co., formerly known as the Chatfield Coal Co., of Ashland Ky. This is a small mine operated in the No. 7 seam of coal, and all the coal will be worked out within the next two months, when the mine will be abandoned.

Davys Run Coal Company.

P. O., Denton, Ky.

Officers: L. N. Davis, President, Ashland, Ky.; R. R. Stamper, Vice President, Denton, Ky.; Rawl Prichard, Secretary and Treasurer, Denton, Ky.

This is a new corporation that started business during the year 1912. The tipple is located about two miles west of Denton, and the mines are located on Davies Run Creek, about three miles south of the C. & O. Railway. The mine is a drift mine in the No. 7 seam of coal and is ventilated by a furnace, and they have about forty miners.

This mine was inspected on October 25th, and all conditions were satisfactory.

Olive Hill Fire Brick Company.

P. O., Hitchins, Ky.
C. S. Hitchins, Superintendent.

(Noah Burton, Mine Foreman.)

This mine is owned and operated by the above named company, and is located at the junction point of the E. K. and the C. & O. Railways, about twenty miles west of Ashland. The mine is located about two miles from the railroad, and the coal is hauled by locomotive over a tram road and dumped into the railroad cars at the tipple. These people have a large fire brick plant in connection with this mine and expect to eventually make a large mine out of it.

Estate of N. Thayer.

P. O., Partlow, Ky.

S. G. Bates, Riverton, Ky., General Agent of this estate.

Lost Creek Mine.—(Louis Duncan, Mine Foreman.)—

This mine is owned by the estate of N. Thayer, and is located on the E. K. Railway, about one and one-half miles from Willard, Ky. This is an old mine and been in operation for quite a number of years. They are still mining some coal along and are employing about fifteen (15) miners. The coal is mined by pick and hauled by mules.

The mine was inspected on November 7, 1912.

FLOYD COUNTY.

Mary Luck Coal Company.

P. O., Auxier, Ky.
Transportation, C. & O. Ry.

This mine is owned by Prestonsburg, Ky., people. The mine is ventilated by furnace, which supplies ventilation for about twenty-four men and two mules. The coal at this place is about 5½ feet thick, being the thickest of any of the No. 1 seam of coal that could be found in this district. There seems to be a pocket at this particular place, being in rather a disc shape pinching out in every extremity to a very thin seam,

leaving the thickest portion in the center which forms a kind of pocket and accumulates water very rapidly. The coal is of a high grade but there does not seem to be very much of it. The coal is all shot from the solid, being hauled by mules, and there are no mechanical appliances of any sort for either mining or hauling.

Cliff Coal Company.

P. O., Cliff, Ky.
Transportation, C. & O. Ry.

This mine is located about one mile west of Prestonsburg, Ky., on the C. & O. Ry: This is the No. 1 seam of coal, which is rather thin at this place, only being about 36″ thick. The coal is mined by electrical machinery and hauled by mules. The mine is ventilated by a 6-foot fan, which gives ample ventilation for all general purposes.

Beaver Pond Coal Company.

P. O., Prestonsburg, Ky.
Transportation, C. & O. Ry.

This mine is located at Prestonsburg, Ky., and operated in the No. 1 seam of coal, which is about 34″. The mine is equipped with electrical machinery both for cutting and haulage purposes. Everything around the mine is modern and up-to-date, and the only trouble seems to be the thinness of the coal. They hope, however, to strike larger coal when they drive the main entry through the mountain and go into another mine on the opposite side. The mine is ventilated by an 8-foot centrifugal fan, which furnishes ample ventilation.

The mine was inspected on September 12th and December 18th, at which times it was found to be in a satisfactory condition in every respect.

Middle Creek Coal Company.

P. O., Middle Creek, Ky.
Trnasportation, C. & O. Ry.

Officers: Hiram Harris, President, Prestonsburg, Ky.; W. S. Wells, General Superintendent, Prestonsburg, Ky.

This is the No. 1 seam of coal, mined by electrical ma-

chinery and hauled by electric motors. This mine is located on the main line of the C. & O. Railway, just opposite Prestonsburg.

This mine was inspected by me on September 12th and again on December 18th, and conditions were found to be satisfactory at both inspections.

Prestonsburg Coal Company.

P. O., Prestonsburg, Ky.
Transportation, C. & O. Ry.

Officers: G. S. Gillespie, President; J. W. Alley, Superintendent.

This mine is being worked in the No. 1 seam of coal and opened up in either mountain on what is known as Towns Branch, a double tipple being used to bring the coal over, which at this point is tipple height. The coal is all mined by chain breast machines, and hauled by motor to the tipple. There are no mules used in these mines, the coal being gathered by motor altogether. These mines have always been ventilated by furnace, but they are installing fans at present, and the furnaces will be discontinued hereafter.

These mines were inspected on September 13th, also on December 19th, at which times conditions were found to be satisfactory.

Colonial Coal & Coke Company.

P. O., Prestonsburg, Ky.
Transportation, C. & O. Ry.

Officers: E. E. Archer, President; Dr. C. W. Evans, Superintendent.

These mines are being operated in the No. 1 seam of coal, having two openings, one on either side of the creek, and a double tipple is being used, by which plan they can transfer the motors or cars to either mine. The coal is mined by longwall chain cutters and hauled by motors. There is a parting in this coal at this point which varies very much in thickness, the normal thickness being about 5″ and running to 18″ in thickness in some portions of the mine. This thickness is unusual,

however, and is only found in a few places. The tipple is equipped with shaker screens and they are prepared to make any grade of coal.

These mines were inspected on September 13th and again on December 19th, at which times everything was satisfactory.

Bull Mountain Coal Company.

P. O., Emma, Ky.
Transportation, C. & O. Ry.

This mine was operated under the name of Preston Coal Co. until November of 1912, at which time it was taken over by W. W. Hall and R. W. Brunk, and operated under the name of Bull Mountain Coal Co. The mine is equipped with a compressed air plant, and the coal is mined by Whitcomb puncher machines. The coal is hauled by mules. Capacity of the mines is about 100-150 tons per day. There is a coaling station in connection with the tipple from which the engines are coaled, and what the engines do not take is shipped as commercial coal.

This mine was inspected by me on September 11, 1912, and again on December 12th, at which times the ventilation in the mines was not very good on account of the brattices not being kept up. The mine has changed hands again and I do not know who is going to operate it.

Cedar Point Coal Company.

P. O., Emma, Ky.
Transportation, C. & O. Ry.

Officers: R. W. Brunk, President; Sarah Brunk, Vice President.

This mine has no mechanical appliances of any sort, the coal being shot from the solid and hauled by mules to the outside, where it is dumped into a chute and then dumped into railroad cars.

This mine was inspected by me on September 11th, at which time conditions were not very good as to ventilation and mud along the haulways. The bratices were down in several places, and there was quite a lot of water throughout the mine, and the general conditions were not of the best.

I inspected this mine again on December 13th and found the conditions referred to in my report of September 11th, improved. They had shot the top in the swags and raised the track, had taken care of the drainage and fixed up the brattices and curtains throughout the mine, which left the general conditions of the mine very satisfactory.

North East Coal Company.

P. O., Auxier, Ky.
Transportation, C. & O. Ry.

This mine is owned and operated by the same people who own the North East Coal Co. at Paintsville, Ky., in Johnson county. They are operating the No. 1 seam of coal, which at this point is a little thicker than the other mines throughout this section operating this same seam of coal. The mine is equipped with all the modern conveniences to get a large output, as well as from an economical standpoint. The coal is mined by electric chain machines, and gathered by mules to side tracks in the mouth of each entry, where it is picked up by motor and hauled to the tipple, crossing a steel bridge which spans the Big Sandy River at this point, bringing the coal to the railroad a distance of about one-half mile from the mine opening. This is a modern steel bridge which connects with the tipple, which is modern in every respect.

This company has only recently come through the mountain from the river, over what is known as Johns Creek, where they span Johns Creek by another steel bridge going into the mountain on the opposite side, thereby opening up another mine which will be first class in every respect. These people expect to increase their output considerably during the coming year. This mine is ventilated by a 10-foot fan, which gives ample ventilation for both men and mules.

This mine was inspected by me on August 19th, also on November 14th, at which times the mine was found to be in perfect condition, both as to ventilation and drainage.

JOHNSON COUNTY.

North East Coal Company.

P. O., Paintsville, Ky.
Transportation, C. & O. Ry.

Henry LaViers, of Paintsville, Ky., General Manager.

This company has three mines at this place, which are called No. 1, No. 2 and No. 3, each one being a separate operation, having separate equipment in the way of power houses, etc., but are all under the same management. They are working the No. 1 seam of coal, which is considered a very high grade domestic coal. They are putting it on the market under the trade name of "Yellow Jacket." It is very highly advertised throughout the Big Sandy and Ohio Valley markets. These mines have a slate roof and fire clay bottom, and the coal is all mined by electrical machinery. The mines are ventilated with 10-foot fans, and each mine has its own separate power plant. The tipples are equipped with shaker screens and all modern appliances which go to make a complete and up-to-date equipment. They have very few accidents at these mines, the company using every precaution toward making the mine safe and furnishing everything the miner requires in the way of props and material, and such other stuff as is necessary to put the mine in a safe condition.

I inspected these mines on September 24th and 25th, and at both times conditions were found to be satisfactory.

Consolidation Coal Company.

P. O., Van Lear, Ky.
Transportation, C. & O. Ry.

Officers: J. H. Wheelright, President; C. F. Ice, Manager, Millers Creek Division; J. D. Rogers, Superintendent.

This company has four mines at this place, namely, 150, 151, 152 and 153. This is the No. 1 seam of coal and has the reputation of being the largest block coal that is mined anywhere in this district. The face and butt slips are very wide, which causes the coal when undermined and shot down to come down in very large blocks, which have to be broken up before being loaded in the mine cars. The top in these mines

is very bad, especially in Mines No. 151 and No. 152, and they have to use a great deal of care to avoid accidents, which is almost impossible to do. There have been several men hurt since they opened up about four years ago. There was a man killed in Mine No. 152 on September 20th of this year. His name was John Parker, white, aged 20 years, who in company with his father was loading coal in room No. 16 off third left entry, and was placing a lump of coal on the rear end of a car when a kettle bottom fell and broke his neck. I made a detailed report of this at the time of the accident, which will give you all the particulars.

The power house of this company is one of the most modern and up-to-date of any of the power houses in this part of the country, being equipped with two very large Westinghouse turbines of 2200 volts each, carrying power to the different mines on high tension wires, where it is reduced by substation at each mine to 250 volts. This voltage is carried into the different mines to operate the mining machines, which are of the longwall type, and the various kinds of motors that are used to haul the coal. The ventilation is furnished by 16-foot fans placed in each mine opening. These people have no particular way of hauling their coal, using both mules and Shetland ponies to gather the coal to the side tracks, where it is picked up by motors and brought to the tip house on the outside, where it is dumped over shaker screens and is prepared for the different sizes that go on the market. These people are prepared to make any grade of coal that one could wish.

These mines were all inspected by me on November 15th and 16th, at which times they were found to be satisfactory with the exception of the bad top, but the company seems to be doing everything in their power to take care of that, and are continually on the watch to avoid, as much as possible, any accidents.

Yellow Chief Coal Company.

P. O., Lower Greasy, Ky.
Transportation, C. & O. Ry.

This mine was inspected my me on September 28th, at which time it was found to be in a satisfactory condition. This

is a small mine and has a compressed air plant, which composes the mechanical equipment. Ventilation is by furnace which affords enough ventilation to supply the mine when they work. This mine did not run regularly and at the present time is shut down, and will possibly remain idle until the spring or summer of 1913.

SANDY RIVER COAL COMPANY.

P. O., Williamsport, Ky.
Transportation, C. & O. Ry.

P. H. Williams, Superintendent.
(J. H. Blevins, Mine Foreman.)

This mine is located about six miles from the railroad on Greasy Creek, and the coal is transported to the railroad by a narow gauge railroad, on which is operated a ten-ton locomotive and several small monitor cars of about ten tons each. The seam of coal is about 4 feet thick, being composed of two different strata, the upper being bituminous coal about 2 feet thick and the lower strata being cannel coal about 2 feet thick. This is considered a very good grade of coal but is being mined under difficulties. It has a very good hard slate roof but the bottom is rather soft, being a fire clay, and when water comes on it, it causes it to heave somewhat, and as there is considerable water in the mine, softens it and causes the roadways and a great many of the working places to be rather muddy.

The coal is shot from the solid and hauled from the working places to the outside by mules. There is no mechanical equipment of any kind other than a drum which lets the coal down an incline about 300 feet long to the tipple, where it is dumped into the ten-ton cars, mentioned above, where it is hauled to the mouth of Greasy Creek and dumped into the railroad cars. Quite a lot of this cannel coal is loaded in box cars and shipped to the northwestern markets.

This mine was inspected by me on September 26th, at which time there were two entries considerably ahead of ventilation. The main entry was 140 feet ahead of air on account of brattices not being kept up. The same conditions existed on the Bowen entry. This work was soon attended to and left the general conditions of the mine in very good shape.

Royal Collieries Company.

P. O., Lower Greasy, Ky.
Transportation, C. & O. Ry.

E. T. Jones, Manager.
(J. W. Smith, Mine Foreman.)

This is a slope mine in the No. 1 seam of coal, and has been known for a number of years as "Tibbals," being operated under the name of Tibbals Coal Co., but has recently changed hands and is now being worked under the name of Royal Collieries Co. It is owned and operated by Jackson, Ohio, people. The mine is electrically equipped, the coal being mined by chain breast machines and hauled by mules to the foot of the slope, where it is pulled up by hoisting engines to the tipple and there dumped into railroad cars.

I inspected this mine on September 26th and found all conditions satisfactory.

Fluhart Collieries Company.

P. O., Whitehouse, Ky.
Transportation, C. & O. Ry.

Officers: Theodore Fluhart, President, Dayton, O.; W. S. McCloud, Manager, Wellston, O.; W. J. Davis, Superintendent and Mine Foreman.

This is a shaft mine 110 feet deep and is operating the No. 1 seam of coal, which at this point is about 3½ feet thick. This mine is equipped with 150 KW generator, which furnishes power to operate several longwall mining machines. The coal is hauled by mules to be put to the bottom of the shaft, where it is hoisted and loaded into railroad cars, going over shaker screens and making all grades of domestic coal. These people do not make any mine run preparation, confining themselves strictly to domestic trade. This is one of the up-to-date mines of this section, everything about the mine being in first class shape and the mine in perfect condition.

I inspected this mine on September 27th.

LAWRENCE COUNTY.

Louisa Coal Company.

P. O., Torchlight, Ky.
Transportation, C. & O. Ry.

Officers: F. S. McConnell, President, Dayton, O.; G. L. Walkinshaw, Superintendent, Torchlight, Ky.

This company is operating two seams of coal, one of them being a splint seam about 3½ feet thick, having a sandstone roof in part of the mines and a soft fire clay bottom that is generally all over the entire workings. Some portions of this mine have a very soft soapstone roof that is very treacherous and has to be watched very carefully to avoid accident.

This mine is very nicely equipped with all the modern appliances for mining coal, having a 150 KW generator and two 150 H. P. boilers that furnish the power to operate several chain cutting machines. All the coal is mined by machines and hauled by electric motor to head house, from where the coal is conducted to the tipple on the opposite side of the river by aerial tramway, having a continuous bucket system which has a carrying capacity of about 500 tons per day.

This company had one man killed on October 17th of this year by a fall of slate. The man, whose name was John Parker, white, aged 52 years, left a wife and several small children. He was sitting at the face of his room (scrapping) bottom coal, which was left by a coal cutter, when a kettle bottom fell from the roof overhead and instantly killed him.

This mine was given two inspections by me, the first being on October 16th, at which time there were some very leaky brattices throughout the mine, but were repaired when I visited them again on December 21st, when all conditions were satisfactory.

Benbow Coal Company.

P. O., Richardson, Ky.
Transportation, C. & O. Ry.

This company is one of the recent new companies opened up in this territory. They are working the top strata of the

Peach Orchard seam of coal. These people have been making preparations for shipping coal since along early in the summer, but have only recently gotten in their railroad siding, and have not as yet shipped any commercial coal to my knowledge.

PEACH ORCHARD COAL COMPANY.

P. O., Peach Orchard, Ky.
Trnasportation, C. & O. Ry.

These people have not shipped any coal since the last of August or the first of September of this year, and were closed down at that time with the intention of abandoning the mine for all time to come. They went into bankruptcy during the month of November and all the equipment is being sold out, from which I gather there will be no more coal mined at this place. This is a very dirty seam of coal, and I doubt very much whether it will ever be opened up again.

LETCHER COUNTY.

THE CONSOLIDATION COAL COMPANY.

ELKHORN DIVISION.

Officers: J. H. Wheelwright, President; John G. Smyth, Manager; Jonathan Jenkins, General Superintendent.

The mines in this division are at Jenkins, on the headwaters of Elkhorn Creek, a tributary of Big Sandy waters, and at McRoberts, on the waters of Wrights Fork, which flows into the North Fork of the Kentucky River. Transportation for the Jenkins mines is afforded by the Sandy Valley & Elkhorn Railroad, about 28 miles in length, which connects with the Chesapeake & Ohio Railway at Shelby, in Pike county, about 120 miles south of Ashland. Transportation for the McRoberts mines is afforded by the Lexington & Eastern Division of the Louisville & Nashville Railroad.

A detailed statement concerning the mines and general plant at Jenkins and McRoberts has kindly been prepared by Mr. L. B. Abbott, Chief Engineer, to which reference is made for full information concerning the operations, but it seems well to preface that account with some notes by the present writer.

AT JENKINS.

Work on the town of Jenkins was begun in July, 1911, and since that time they have completed about 800 of the miners' houses, have built a modern three-story and basement brick department store, a new three-story office building, containing about 30 rooms, organized a National Bank, Young Men's Christian Association, built a brick plant, ice plant, bakery, sawmills and planing mills, and in fact everything that it takes to manufacture the necessaries that it requires to build an up-to-date town.

The mines at this plant include Nos. 201, 202, 203, 204, 205, 206, 207 and 208, are being opened up just now and they hope to be getting some coal out of them within the next 30 days.

Each one of these mines is opened up in the Upper Elkhorn seam of coal, which will average from 7 to 9 feet in height with a slate parting in the center. This parting is cut out by a special machine built by the Jeffrey Mfg. Company of the longwall type, which has a cutter head about 8 feet long. This machine is mounted on a truck in a permanent position, but is raised and lowered automatically by electric current. Gear wheels are so arranged that they work in gears on the inside of four columns which are placed in each corner of the machine, and are cast firmly to the bed of the machine and make the machine very rigid. The machine itself weighs 5 tons and a half, and it never leaves the truck.

The parting in the No. 201 Mine runs from 14 to 20 inches in thickness and the machine cuts on the bottom of the parting from rib to rib and then is raised to the top of the parting, sumped in and cut to the other rib, thereby making an undercut both on top of the parting and underneath it. The slate is then removed and all the dust is scraped out and swept up and loaded in cars and taken to the outside before the coal is shot. By doing this they eliminate, to a great extent, the scattering of dust throughout the mine and the chances for a dust explosion are eliminated to a greater extent than would be if the dust was gobbed throughout the mines. An analysis of this slate dust, made by one of the inspectors employed by

the Consolidation Coal Co., shows there is about 86% ash, 4% moisture and only 10% combustible matter.

The same conditions exist at all the mines, with the exception that the slate at the other mines is not so thick as in Mine No. 201.

These people are taking out about 6 feet of coal and they mean to leave anywhere from 1 foot to 2 feet of coal over head to support the roof, which is of a very poor nature, being more of a clod than a stratified slate.

At the present time these people have, since they began shipping coal, shipped about 200,000 tons of coal or a little more, and expect in the near future to have their output up to an enormous output.

Each mine at this time has its own independant power plant, which furnishes the power for cutting coal and for the haulage, but a central power plant is located in the center of the district, or Jenkins proper, that will furnish all the power to mines at Jenkins and at McRoberts.

Each operation has its own specially built miners' houses, and for every two mines there is a commissary, in addition to the regular and centrally located store at Jenkins. The total number of stores for the mines tributary to Jenkins at this time is five.

A wonderful thing about the Jenkins plant is that the principal part of the work was done without the advantage of railroad facilities. Nothing more remarkable in the way of building a mining town, provided with modern facilities, and developing mines equipped with all necessary machinery and appliances, many miles distant from any railroad terminus, has been accomplished anywhere in this country. All the heavy machinery for the plant and everything that was needed for the construction work was hauled in wagons across the mountains from Hellier, a distance of about 20 miles, over the roughest of roads and the steepest of hills; and when one stops to think of what has been accomplished it seems almost incredible. On the day that the Sandy Valley & Elkhorn road reached Jenkins, there was coal ready to be shipped out on the first train.

The construction of the plant has been under the direct management of Mr. John G. Smyth, Manager, and his able assistant, Mr. Jonathan Jenkins, General Superintendent. The company has a corps of able engineers, under Mr. L. B. Abbott, Chief Engineer, and highly competent Mine Superintendents and Foremen; in fact, the organization is very complete and efficient indeed.

AT MCROBERTS.

The little town of McRoberts, across the divide about three miles from Jenkins, is the present terminus of the Lexington & Eastern Railway, which extends from Lexington by way of Jackson.

A pike road, costing about $30,000, has been built from Jenkins to McRoberts, over which material is hauled back and forth between the two places. It has about 7 per cent. grade on each side of the mountain.

Mines 210, 211, 212, 213, 214, and West 214, are located at this place. For the present, one commissary takes care of them all.

The same seam of coal is being worked here as at Jenkins, and as there is but the one mountain between the two towns, there is some talk of tunneling the mountain and connecting the two by railroad. As to this, however, no authentic information can be given.

Each mine at Jenkins and McRoberts is expected to ultimately produce anywhere from 2,000 to 3,500 tons of coal per day. At the present time there are over 2,000 men on the pay roll of the company.

This completes the list of operations in Letcher county, but within the next twelve months we expect to see several new operations spring into life.

An account of the operations of the Consolidation Coal Company prepared by Mr. Abbott follows:

Brief Account of the Operations of the Consolidation Coal Company.

Prepared by L. B. Abbott, Chief Engineer.*

In April, 1911, The Consolidation Coal Company started development in the Upper Elkhorn seam at the headwaters of Elkhorn Creek and Wright's Fork in Letcher county. A spur extending north from the Pine Mountains, forms a divide between the two branches and also separates the territory under development into two fields, the S. V. & E. R. R. extending from the Big Sandy Division of the C. & O. at Shelby furnishing shipping facilities for the Elkhorn side, while the Wright's Fork side is tapped by the L. & E. R. R.

Elkhorn Operations.

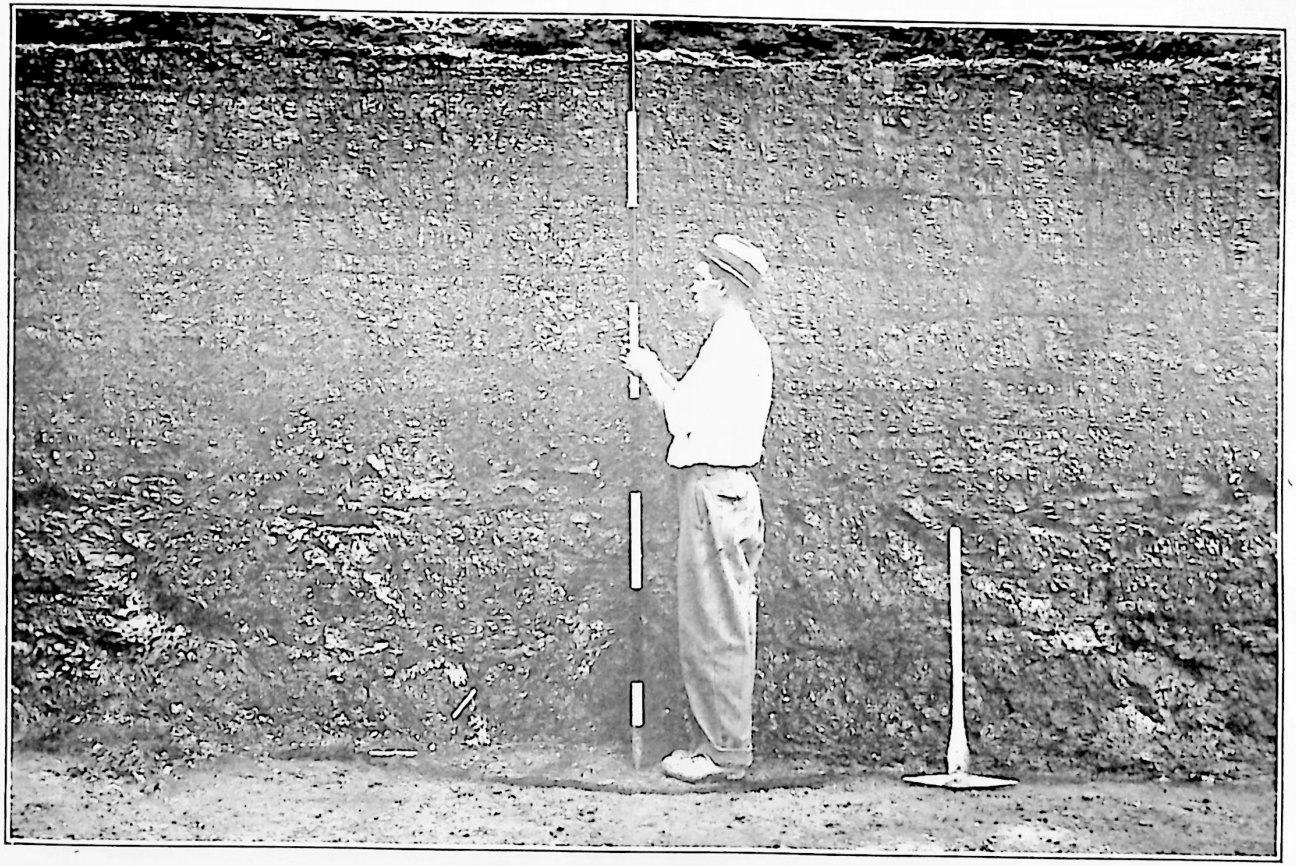
Although development work started in 1911, shipments did not commence until the completion of the S. V. & E. R. R. into the field in July, 1912. By this time, the tipples had been erected and the entries advanced far enough to develop considerable territory.

The most important seam in this section is the Upper Elkhorn with an elevation of 1,576 feet at No. 201 Mine and dipping toward the northwest about one per cent. A characteristic of the seam in this section is the fire clay parting near the center, running from two inches to eighteen inches in thickness. The seam has a shale roof.

Consolidation No. 201 Mine.—

This mine is located on Elkhorn Creek about 2½ miles below Jenkins. It is a drift mine. The main entry system consists of 7 places; an empty haulage road, a load haulage road, a manway and four air courses, two on each side of the haulage roads. The main system extends through the center of the territory assigned to this mine and at intervals of 2,100 feet, face headings are driven from both sides. The face headings consist of five places. One for loaded cars, one for empty cars, a through motor track and two airways, one on each side of the haulage entries. Room headings are turned

*Prepared by request of the Chief Inspector of Mines.



THE ELKHORN SEAM AT JENKINS.

so as to give rooms 350 feet in length. Entries are driven 10 feet wide on 35-foot centers and rooms 15 feet wide on 60-foot centers. A pillar 120 feet in width is left on each side of the main entries and a pillar 100 feet wide on each side of the face headings.

In order to produce clean coal, it is necessary to do the cutting in the clay parting near the center of the seam and a new type of machine has been designed by the Jeffrey Manufacturing Company for this purpose. This machine consists of a shortwall mining machine mounted on a truck, so constructed that the cutting machine may be raised to meet the variation in the parting above the bottom and also turn in a half circle on the truck. After setting the machine at the proper height, to cut the parting, the truck with the machine mounted upon it is pulled forward for the sumping cut. The machine is then turned in an arc across the face and finishes cutting the place when the truck is pulled back to its first position.

Entries are driven seven feet in height, top coal being left up to hold the roof and the sides arched for additional support. The main entries are laid with 40-pound steel, the face and room headings with 30-pound steel and the rooms with 20-pound steel.

Power is supplied from the sub-station located near the pit mouth. The building is frame, covered with corrugated iron and resting on concrete piers. It is equipped with two G. E. 150 KW rotary converters; six 55 KW 40,000 volt single phase transformers; two 300 ampere K 10 oil switches; one 45,000 volt aluminum lightening arrester, and one set of Burk high tension air gap switches, mounted on poles on the outside.

The side tracks connecting the mine opening with the tipple consists of a double track loaded tramroad, 750 feet in length, and a double track empty tramroad of the same length, with a motor run around on the empty track grade.

A ten-ton G. E. electric motor is used for haulage.

Oil for mine cars is stored in a 3,000 gallon Bowser tank near the tipple, this tank being filled from tank cars on the railroad siding.

The tipple is a frame structure on masonry piers. Owing

to the height of the opening above the railroad side track it is necessary to convey the coal from the dump house to the loading baskets by a chute 3′x6′ and 167 feet long. Run of mine or screened coal can be loaded.

Ventilation at the mine is furnished by a 7-foot Fairmont disc fan, driven by a 30 H. P. motor. Preparation is now being made for the installation of the large permanent fan.

Supplies are brought to the track at the tipple from the railroad siding by a plane 700 feet in length equipped with a 25 H. P. Lidgerwood hoist.

Consolidation No. 202 Mine.—

The territory assigned to this mine is being opened on the west bank of Ben's Branch, about two miles below Jenkins. The system of mining is similar to that at No. 201 Mine.

The seam averages 8½ feet in thickness with a fire clay parting in the center. All cutting is done in the parting by machines mounted on trucks.

A 10-ton general electric motor hauls the coal from the mine to the tipple.

A number of local dips occur in the mine and four No. 1 Fairmont pumps are required to keep them free from water.

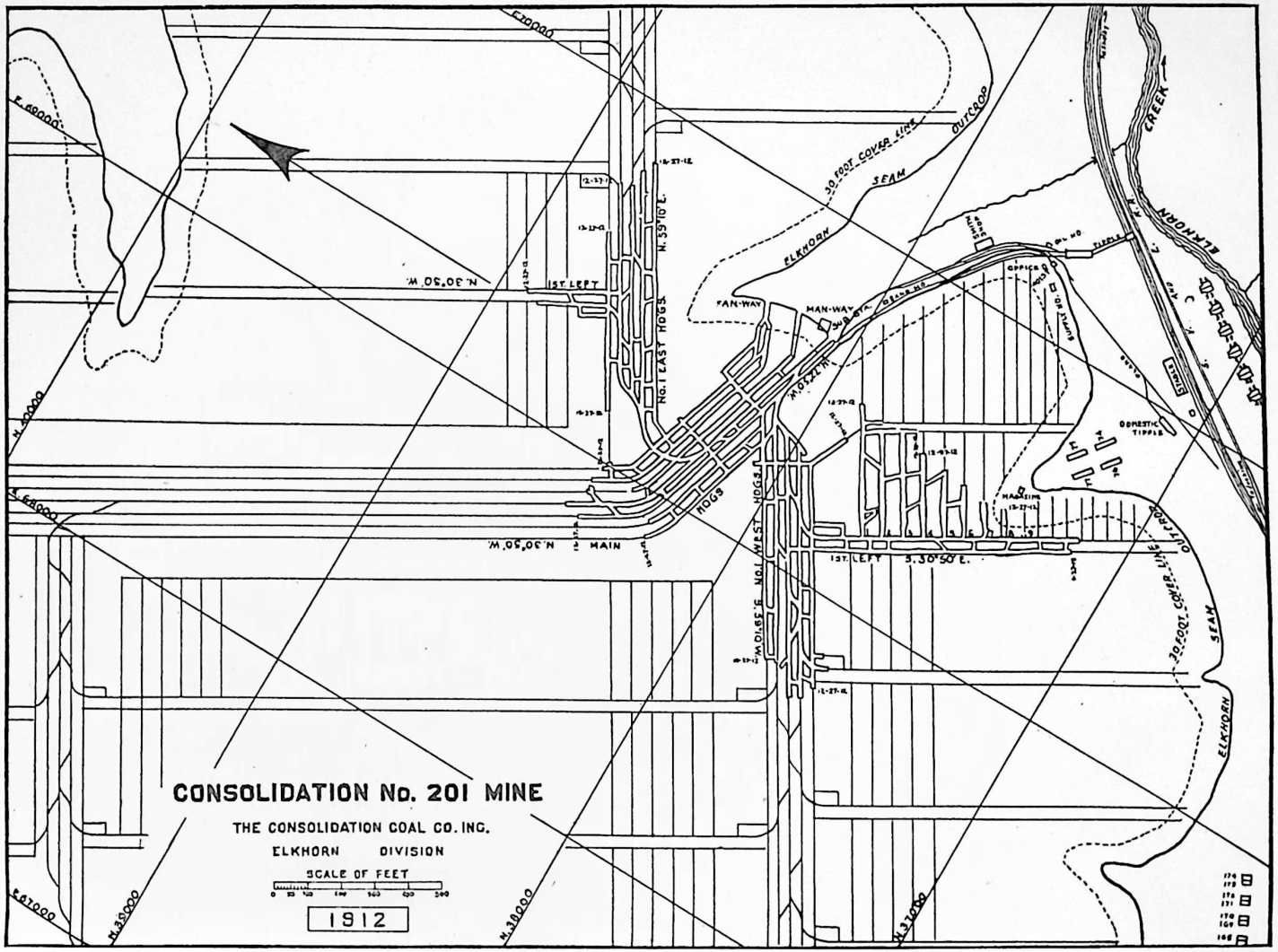
Ventilation is furnished by a 7-foot Fairmont disc fan, the air being conducted through the mine in a continuous current. This fan will be replaced in a short time by a large centrifugal fan.

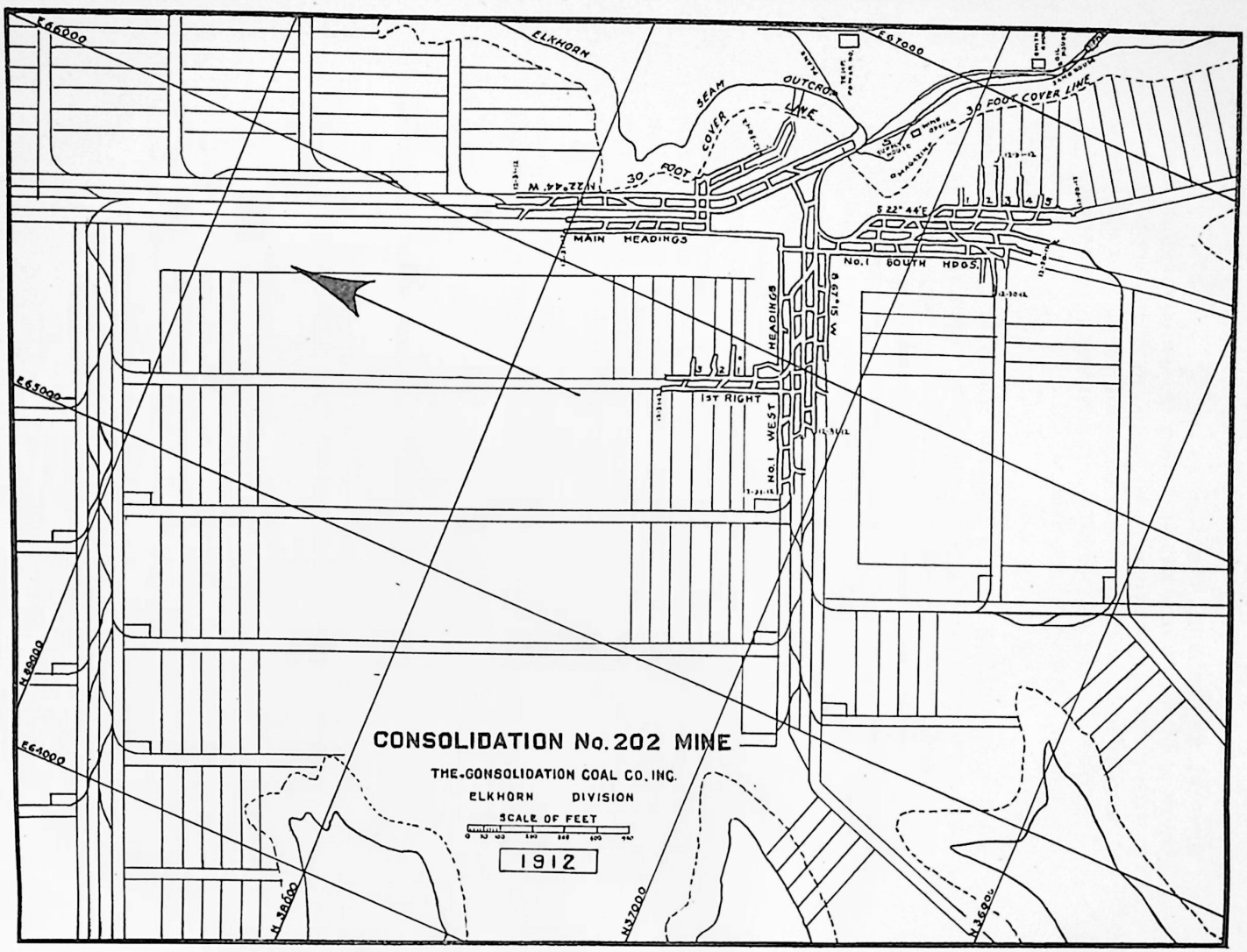
The tipple is located 800 feet from the pit mouth and connected with it by an empty and loaded tramroad with a motor run around. Coal after being dumped over the crossover dump, is conveyed by a chute 3′x6′ and 125 feet long to the loading basket at the bottom.

A 2,000 gallon Bowser tank installed on the empty tram track near the tipple stores the oil for car lubrication. This tank is filled by pumping from a tank car on the railroad side tracks.

The blacksmith shop on the empty tramroad is a frame structure 30′x40′, equipped with a Buffalo blower, drill press, emery grinder and power grindstone.

Power for this mine will be furnished from the sub-station at No. 203.


CONSOLIDATION No. 201 MINE
THE CONSOLIDATION COAL CO. INC.
ELKHORN DIVISION
SCALE OF FEET
1912
ELKHORN CREEK
30 FOOT COVER LINE
ELKHORN SEAM OUTCROP
FAN-WAY
MAN-WAY
OFFICE
DOMESTIC TIPPLE
MAGAZINE
1ST. LEFT
N. 30°50' W.
N. 59°10' E.
NO. 1 EAST HDGS.
NO. 1 WEST HDGS.
MAIN
HDGS
S. 30°50' E.
N. 40000
N. 39000
N. 38000
N. 37000
E. 67000
E. 68000
E. 69000
E. 70000


E 66000
ELKHORN
SEAM
OUTCROP
LINE
COVER
E 67000
30 FOOT COVER LINE
30 FOOT
N 22° 44' W
S 22° 44' E
MAIN HEADINGS
No. 1 SOUTH HDGS.
HEADINGS
N 67° 15' W
1ST RIGHT
No. 1 WEST
E 63000
N 39000
E 61000
N 38600
N 37000
N 35600
CONSOLIDATION No. 202 MINE
THE CONSOLIDATION COAL CO. INC.
ELKHORN DIVISION
SCALE OF FEET
1912

Consolidation No. 203 Mine.—

This is a drift mine located on Joe's Branch, a short distance from Elkhorn Creek and one and one-half miles from Jenkins. The same system of development will be used as described under Mine No. 201. Another drift opening is being driven near the tipple, to develop the territory along the southern outcrop.

Cutting is done by machines in the fire clay parting, which varies in thickness from a few inches to 18 inches in thickness.

Four No. 1 Fairmont pumps are required to keep the mine free from water.

One 10-ton G. E. motor hauls the coal from the mine to the tipple.

Ventilation is at present produced by a 7-foot Fairmont disc fan driven by a 30 H. P. motor. A large fan will be installed in the near future.

The blacksmith and car repair shop is a frame structure 30′x60′, located on the empty tramroad. It is equipped with a Buffalo blower, drill press, power grindstone and two forges.

Other buildings in connection with the plant are the sand house 10′x12′, supply house 12′x24′, foreman's office 12′x20′, powder magazine 12′x18′ and sub-station. The latter has the same equipment as the one at No. 201 Mine. A stable 38′x90′, with 32 stalls has been built along the railroad side track.

The tipple is located 900 feet from the pit mouth and connected with it by a single track loaded and empty tramroad. The tipple is a frame structure on masonry piers. A chute is necessary to convey the coal from the dump house to the loading baskets at the side tracks. The chute is 3′x6′ and 180 feet long. This tipple as well as all other tipples in the field, are equipped with a Phillips crossover dump and car stop.

Consolidation No. 204 Mine.—

Mine No. 204 is located on the outskirts of Jenkins. It is a drift mine with the seam outcropping 88 feet above the railroad. As in the other mines in the field, the main system consists of an empty haulage road, a loaded haulage road, manway and four air courses.

The seam averages 8½ feet in thickness with a fire clay parting in the center from 6″ to 14″ thick. All cutting is done in the parting by machines mounted on trucks.

The haulage roads in the main entries are laid with 40-pound rail, the face and room headings with 30-pound rail and the rooms with 20-pound rail. Top coal is left to hold the roof and the main entries arched for additional support.

Ventilation is produced by a 7-foot Fairmont disc fan. A large 14-foot fan will be installed in a short time.

A 10-ton G. E. motor hauls from the face headings to the tipple, gathering to the face headings being done by mules.

The outside track layout consists of a double track loaded tramroad, a double track empty tramroad and a motor run around. The loaded tracks are laid with 40-pound rail and the empty with 30-pound rail.

The tipple is of wood on concrete piers and consists of a dump house, a chute 3′x6′ and 90′ long and a basket house. It is equipped with Phillips crossover dump and car stop.

The buildings connected with the plant consist of a blacksmith shop 30′x60′, equipped with a Buffalo blower, drill press and power grindstone, mine foreman's office 10′x20′, supply house and sand house. The powder magazine 12′x18′ is well isolated from the plant.

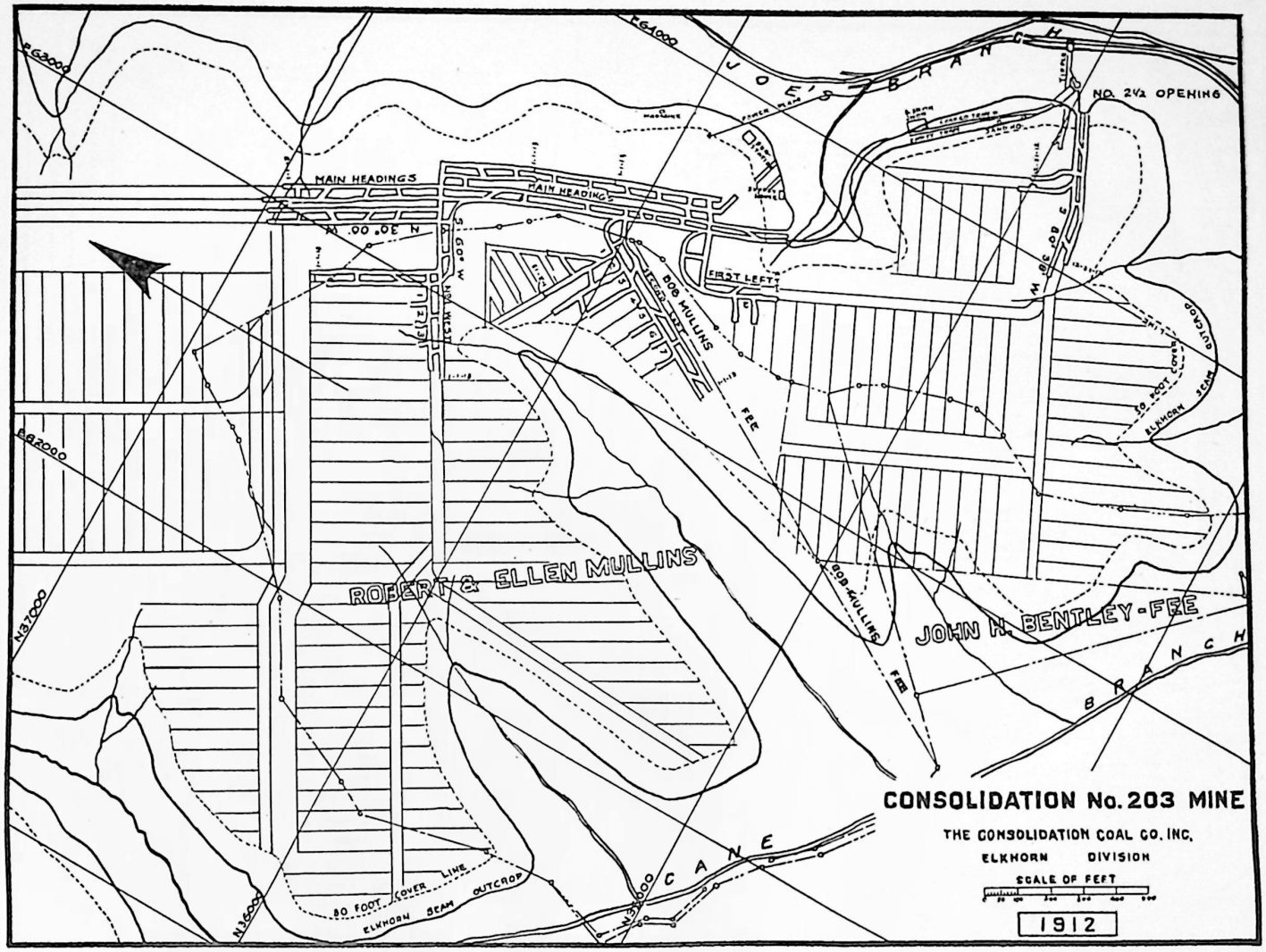
Supplies are brought to the mine from the railroad side tracks on a tramroad with a grade of 5%.

Power for the mine is supplied from the central power plant at Jenkins.

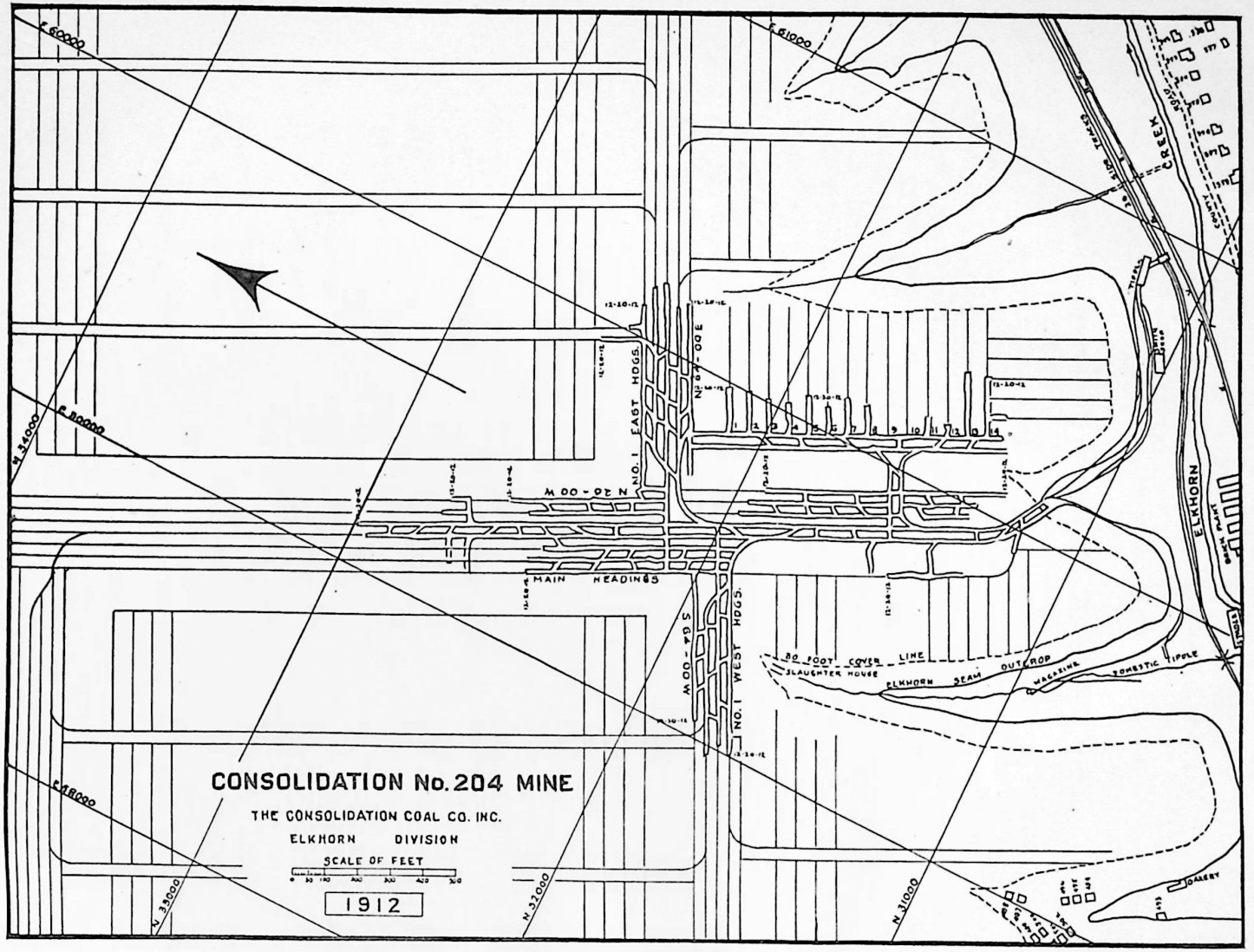
Consolidation No. 205 Mine.—

This opening is located on Elkhorn Creek a short distance west of Jenkins, the seam outcropping at tipple height. The main entry system is driven through the center of the territory with face headings on each side. The method of development is the same as described under No. 201 Mine.

The seam averages 8½ feet in thickness and the fire clay parting 6 inches to 14 inches. Cutting is done ir the parting by machines mounted on trucks. The parting is very hard in some sections and cutting is difficult.



CONSOLIDATION No. 203 MINE
THE CONSOLIDATION COAL CO. INC.
ELKHORN DIVISION
SCALE OF FEET
1912
JOE'S BRANCH
NO. 2½ OPENING
MAIN HEADINGS
MAIN HEADINGS
FIRST LEFT
BOB MULLINS FEE
BOB MULLINS FEE
ROBERT & ELLEN MULLINS
JOHN H. BENTLEY-FEE
BRANCH
CANE
80 FOOT COVER LINE
ELKHORN SEAM OUTCROP
80 FOOT COVER LINE
ELKHORN SEAM OUTCROP
E63000
E64000
E62000
N37000
N36000
N35000


CONSOLIDATION No. 204 MINE
THE CONSOLIDATION COAL CO. INC.
ELKHORN DIVISION
SCALE OF FEET
1912
E 60000
E 61000
E 50000
E 48000
N 34000
N 33000
N 32000
N 31000
NO. 1 EAST HDGS.
NO. 1 WEST HDGS.
N 20-00 W
S 64-00 W
MAIN HEADINGS
80 FOOT COVER LINE
SLAUGHTER HOUSE
ELKHORN SEAM OUTCROP
MAGAZINE
DOMESTIC TIPPLE
ELKHORN
CREEK
BRICK PLANT
DAIRY

Four No. 1 Fairmont pumps keep the mine free from water.

A 10-ton G. E. motor hauls from the face headings to the tipple. Cars are gathered by mules.

Ventilation is furnished by a 7-foot Fairmont disc fan driven by a 30 H. P. motor. Preparations are being made to install a large fan 14 feet in diameter.

A double track loaded and empty tramroad 800 feet long connect the mine opening with the tipple, the former laid with 40-pound rail and the later with 30-pound rail.

The tipple is a frame structure 30′x115′ on concrete piers, loading either run of mine or screened coal. It also provides for loading engine fuel and domestic coal.

Other buildings in connection with this plant are a supply house 12′x24′, a mine foreman's office, sand house and a 32 stall barn, 38′x90′.

Power for this mine is furnished from the sub-station at the central power plant. The equipment is similar to that described under No. 201 Mine.

Consolidation No. 206 Mine.—

The seam at this point outcrops about the elevation of the railroad, necessitating a chain hoist to elevate the cars to the tipple. The method of development is similar to that of No. 201 Mine.

The seam averages 8½ feet in thickness with the fire clay parting from 2″ to 12″ thick. Top coal is left up for roof support and, in addition, the main entries are arched.

In connection with the car hoist, a car feeder and car stop were installed. The car feeder is located about 75 feet from the bottom of the plane and pulls the trip forward after the motor is cut off. The cars are then caught by a car stop which works automatically with the hoist and drops the cars into the chain as desired. The car feeder is driven by a 15 H. P. motor and the car hoist by a 35 H. P. motor.

All coal is cut in the parting by machines mounted on trucks.

A ten-ton G. E. motor hauls from the side tracks to the bottom of the car hoist, the cars being gathered by mules.

A 7-foot Fairmont disc fan provides ventilation.

The blacksmith and car repair shop is a frame building 30'x60'.

Car oil is stored in a 3,000 gallon Bowser oil tank near the tipple.

Power for the operation of the equipment is furnished from the sub-station at No. 207 Mine. A sub-station building has been built at No. 206 plant but the machinery has not yet been installed.

Consolidation No. 207 Mine.—

This is a drift mine located on the right bank of Jim's Branch, a short distance from Elkhorn Creek and two miles from Jenkins. The system of development will be the same as at the other mines in this field.

The seam averages 7 feet in thickness, with a fire clay parting in the middle from 2" to 6" thick.

Coal is cut in the parting by machines mounted on trucks. A ten-ton G. E. motor hauls the coal to the tipple. Gathering is done by mules.

The ventilation is produced by a 7-foot Fairmont disc fan driven by a 30 H. P. motor.

The tramroad connecting the mine with the tipple, consists of two loaded tracks and two empty tracks with a motor runaround.

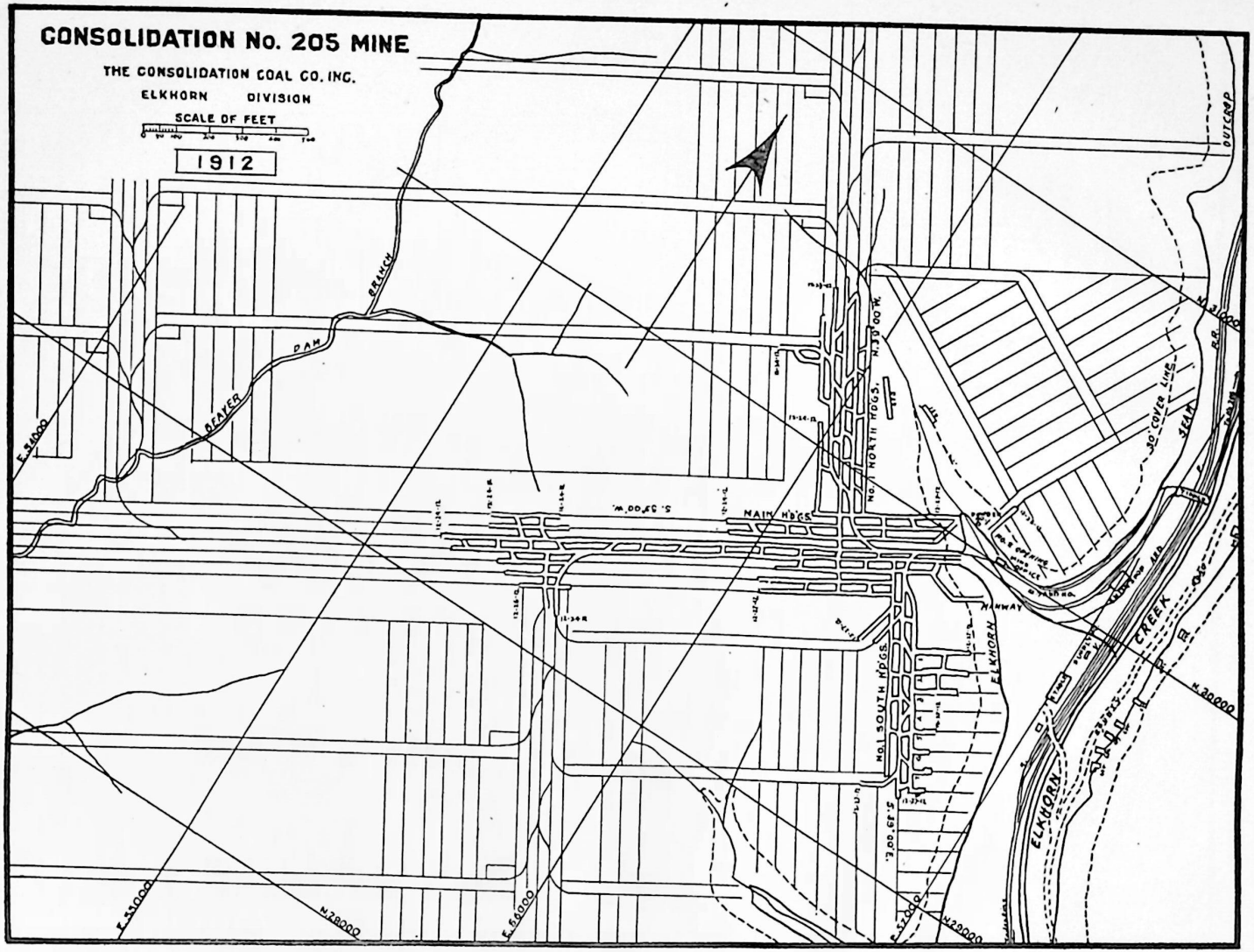
The tipple is a frame structure 30'x60', on masonry piers, loading run of mine coal. It is equipped with a Phillips cross-over dump and car stop.

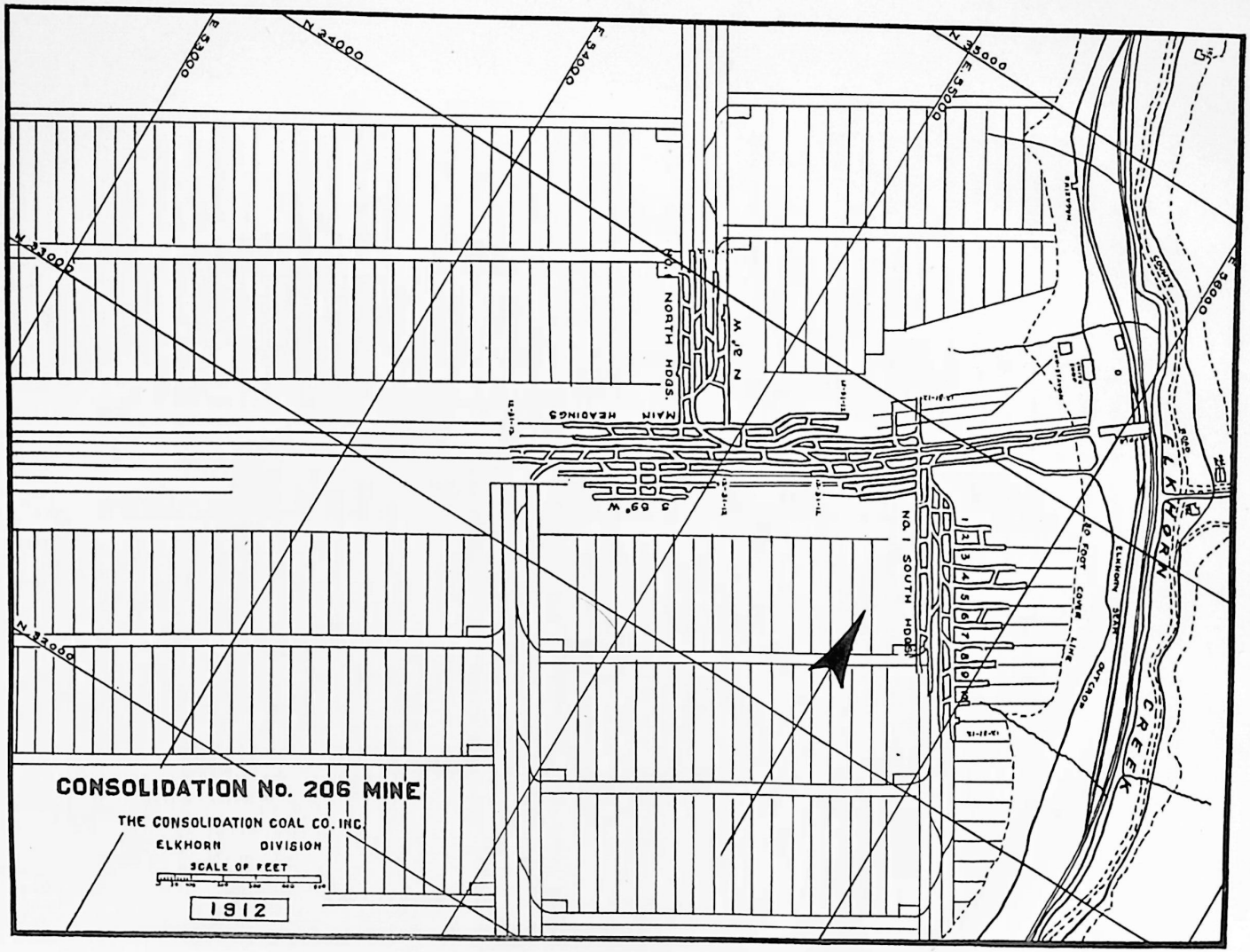
The buildings in connection with the plant consist of a stable 30'x90', a mine foreman's office, a supply house, powder magazine 12'x18', and sub-station. The latter has an equipment similar to the one described under No. 201 Mine.

NORTH FORK OF KENTUCKY RIVER OPERATIONS.

Consolidation Nos. 210, 211, 212 Mines.—

These mines are located on Shea Fork, a small branch of Wright's Fork, and shipments are made over the L. & E. Ry. A railroad spur, 4,100 feet in length, extends from the main line on Wright's Fork up this branch. The side tracks for the mines lie on the west side of the spur and consist of the spur and two tracks above the tipple with a capacity of 75 cars and three tracks below the tipple with a capacity of 70 cars.


CONSOLIDATION No. 205 MINE
THE CONSOLIDATION COAL CO. INC.
ELKHORN DIVISION
SCALE OF FEET
1912
BEAVER DAM BRANCH
MAIN HDGS.
NO. 1 NORTH HDGS.
NO. 1 SOUTH HDGS.
S. 39°00' W.
S. 39°00' E.
ELKHORN CREEK
ELKHORN
HIGHWAY
30' COVER LINE
SEAM
OUTCROP
N. 31000
N. 30000
N. 29000
N. 28000
E. 54000
E. 55000
E. 56000
E. 57000


CONSOLIDATION No. 206 MINE
THE CONSOLIDATION COAL CO. INC.
ELKHORN DIVISION
SCALE OF FEET
1912
N 34000
E 53000
E 54000
N 35000
E 55000
E 56000
N 33000
N 32000
NORTH HDGS.
N 31° W
MAIN HEADINGS
S 69° W
NO. 1 SOUTH HDGS.
1
2
3
4
5
6
7
8
9
10
ELKHORN SEAM OUTCROP
80 FOOT COVER LINE
ELKHORN CREEK
ROAD

Near the junction of Shea Fork and Little Shea Fork, are the main openings for No. 211 and No. 212 Mines. No. 211 is on the left or west side of Shea Fork, developing the territory between Shea and Bottom Forks and No. 212 a short distance below on the right or east side of the fork, developing the territory between the fork and No. 215 Mine.

No. 210 Mine.—

Is a drift mine, the opening being about 900 feet below the tipple. This mine will give quick development to a considerable territory lying along the southern outcrop. Two places will be driven from the outside, one for haulage and one for ventilation.

Room headings will be broken directly off the main heading and from the point these headings are started. The main entry system will consist of five places; a loaded side track, an empty side track, a through haulage road, and two airways, one on each side of the haulage roads. Ventilation will be furnished by a Fairmont disc fan for the present, but the permanent ventilation will be obtained from the large fan to be located near No. 211 main opening.

An outside tramroad 900 feet long will connect the mine with the tipple. This tipple will also load the coal from No. 211 and No. 212 Mines.

The coal has been faced up at opening but no headings will be driven until the completion of the railroad spur.

No. 211 Mine.—

This is a drift opening. The main entry system will consist of seven places, four of which are airways, two on each side of the haulage roads, an empty haulage road, a loaded haulage road and a manway. Face headings will be turned from the main system every twenty-one hundred feet. These headings include two airways, an empty side track, a loaded side track and a through motor track. On both sides of the face headings and extending from one face heading to another, room headings will be turned so as to give rooms 350 feet in length. Entries are driven 10 feet wide on 35-foot centers, and rooms 16 feet wide on 60-foot centers. The main entry system will be protected on each side by pillars 120 feet wide and the face headings by pillars 100 feet wide.

The main headings have been advanced but a short distance and are stopped until the completion of the railroad spur.

The coal will be taken from the mine to the tipple over a tramroad 1,100 feet long laid with 40-pound rail. A car feeder near the tipple will pull the trip forward after the motor is cut off and feed the cars into the dump, the empty cars running back from the tipple by gravity to a side track from where they are picked up by the motor and hauled into the mine.

No. 212 Mine.—

Is located a short distance below No. 211 opening, on the opposite side of Shea Fork. A short trestle across the hollow connects the opening with No. 211 tramroad and thus permits the dumping of coal from both mines over the same tipple.

The main entry system consists of a loaded haulage road, an empty haulage road, two airways and a manway. These places have been faced up and will be driven as soon as there are shipping facilities.

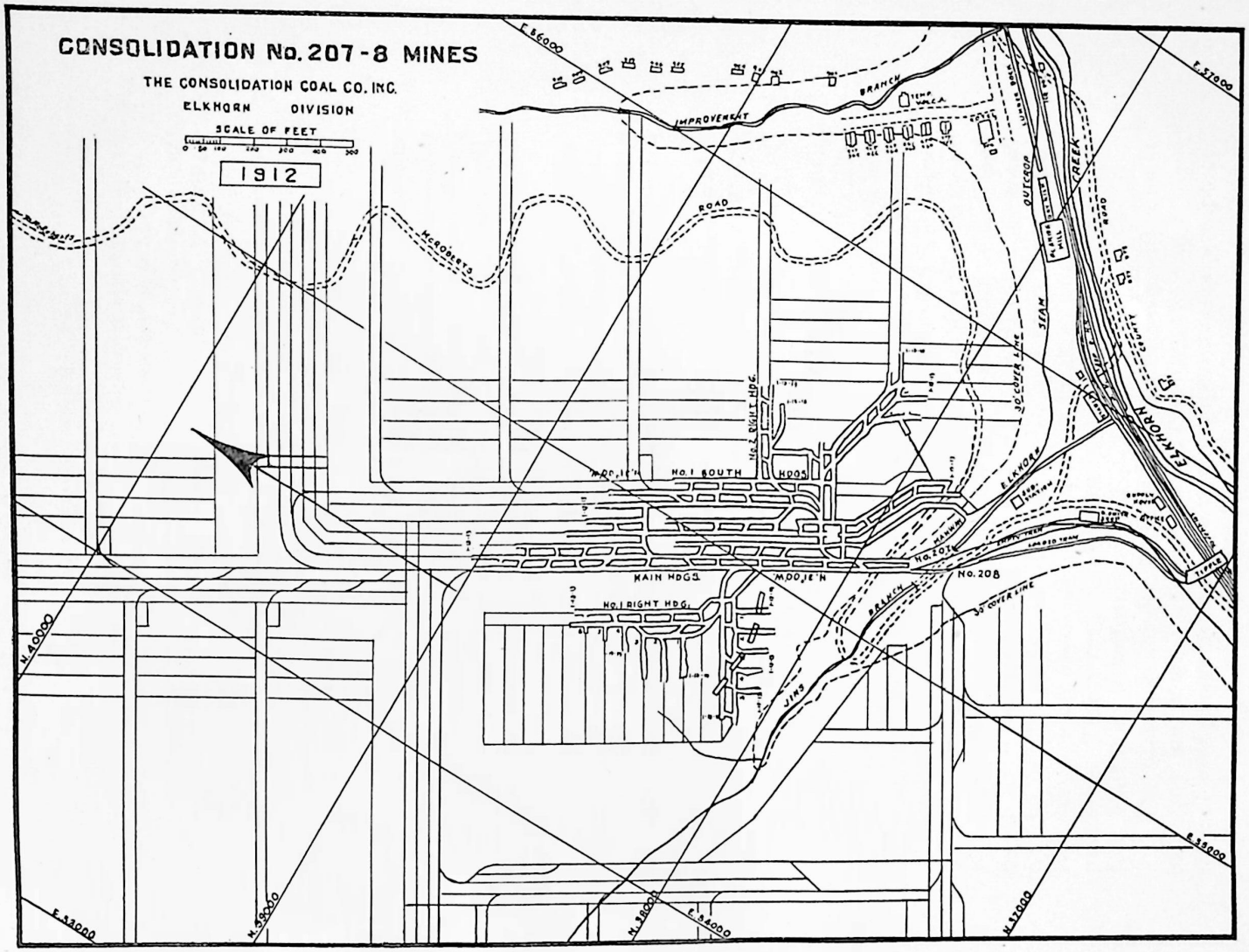
The tipple serving the three mines will be a wooden structure on concrete piers, loading run of mine coal.

A barn 38x110 feet containing 40 stalls will house the stock for the three mines. The outside buildings will consist of a supply house, sand house, oil and cement house, rail crib and sub-station. The latter building will contain the following equipment: two G. E. 150 KW rotary converters; six 55 KW 40,000 volt, single phase transformers; two 300 ampere K. 10 oil switches; one 45,000 volt aluminum lightening arrester, and one set Burk high tension horn gap air break switches mounted on poles outside.

Consolidation No. 213 Mine.—

This is a drift mine located in a small hollow a short distance below the main section of McRoberts. The coal outcrops about 130 feet above the railroad on Wright's Fork. The same system of development will be used as described under No. 211 Mine.

The coal averages 7½ feet in thickness with a fire clay parting in the center from two to six inches in thickness.


CONSOLIDATION No. 207-8 MINES
THE CONSOLIDATION COAL CO. INC.
ELKHORN DIVISION
SCALE OF FEET
1912
IMPROVEMENT
BRANCH
ROAD
McROBERTS
OUTCROP
SEAM
CREEK
ELKHORN
ELKHORN
30' COVER LINE
No. 1 SOUTH HDGS
No. 2 RIGHT HDG.
MAIN HDGS
No. 1 RIGHT HDG.
No. 207
No. 208
JIMS
BRANCH
30' COVER LINE
TIPPLE
E. 56000
E. 57000
E. 55000
E. 54000
E. 53000
N. 40000
N. 39000
N. 38000
N. 37000

Ventilation is furnished temporarily by a Fairmont disc fan, which will later be replaced by a 14-foot centrifugal fan.

The coal is cut in the parting by 19 A Jeffrey machines mounted on trucks built at the company shops and Jeffrey turret machines. Top coal is left up to support the roof.

A plane 600 feet in length has been built to bring supplies from the railroad side track to the mine. A temporary tipple has been erected at the foot of the plane and coal will be dumped over it until the completion of the permanent structure.

The tramroad from the main opening to the tipple will be 840 feet long. Near the tipple, a car feeder will be installed which will pull the trip forward after the motor is cut off and feed the cars into the tipple. After dumping, the cars will run back by gravity to the empty side track where they are made up into trips and hauled into the mine.

The tipple will be a frame structure, loading either run of mine or screened coal. On account of the elevation of the mine above the railroad, the coal after being dumped over a Phillips crossover dump in the head house, will be carried down a chute 151 feet long to the loading baskets.

Other buildings to be erected at this mine are a sub-station, supply house, rail crib, oil and cement house, foreman's office, and motor house.

Consolidation No. 214 Mine.—

The openings for this mine are on Tom Bigg's Branch, about 1,300 feet from its juncture with Wright's Fork. The main opening is on the left or north side of the branch and No. 2 opening is on the right or south side. The same system of development will be used as described under No. 211 Mine.

The main entries have advanced 250 feet and the manway 150 feet. The airways, consisting of two openings ten feet wide, have been driven 150 feet. Two additional airways will be driven as far as the first split, and from that point, two airways on each side of the main haulage roads will be provided. Temporary ventilation will be furnished by a 7-foot Fairmont disc fan.

The openings on the south side of the stream will consist of empty and loaded haulage roads, two airways and a manway. These places are all under cover and advancing rapidly.

The main empty and loaded entries are in 200 feet, the manway 100 feet and the fanways, 100 feet.

A trestle built across the valley connects the haulage entries with the empty and loaded tramroads from the main opening, permitting the coal to be dumped over the same tipple. Ventilation will be furnished by a 7-foot Fairmont disc fan until connection is made with the main system.

The coal is cut at both openings, by a 19 A Jeffrey mining machine and a turret machine made by the same company. Three small pumps keep the working faces free from water. Power is furnished by a generator at the band mill.

A tramroad 1,625 feet in length, connects the mine opening with the tipple. A car feeder near the tipple pulls the loaded trips ahead and feeds the cars into the dump, the empty cars running back from the tipple by gravity to a point where they can be reached by the motor and hauled into the mine.

The tipple is a wooden structure on concrete piers. It is completed with the exception of chutes, crossover dump and car stop. Run of mine or screened coal can be loaded over this tipple.

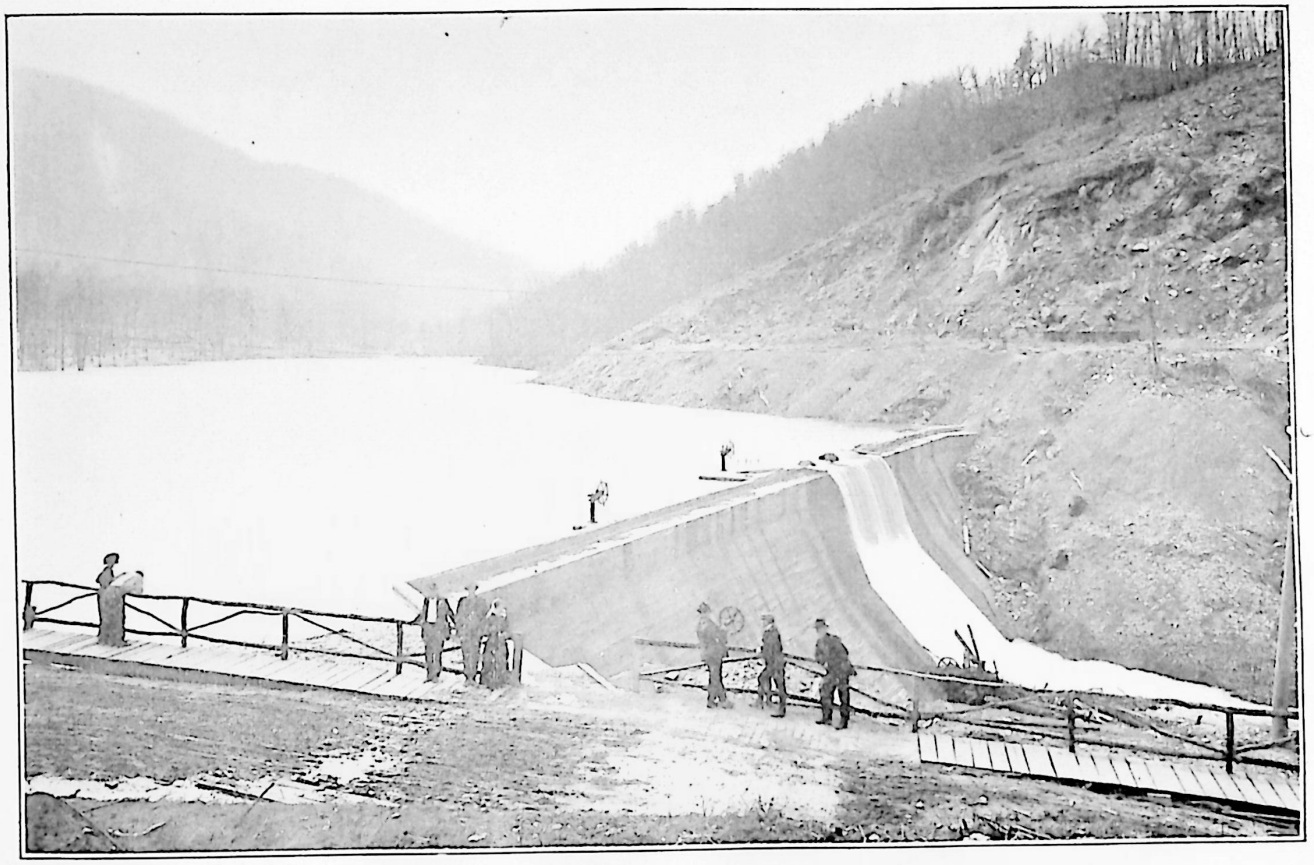
A sub-station for 214 and 215 Mines has been erected near the main opening. It is a frame structure, covered with corrugated iron. The foundations are concrete. No machinery has yet been installed.

Near No. 2 opening, a 40 stall stable 38′x110′ and a blacksmith shop 30′x60′ have been built. The latter is easily reached by tramroad from both openings and the railroad siding. A frame supply house 30′x60′ has been built near the tipple, convenient to the railroad siding and a tramroad to both openings.

Consolidation No. 215 Mine.—

Mine No. 215 is located on Wright's Fork about 1,100 feet below the mouth of Bark Camp Branch and a short distance above the point the Elkhorn seam goes under drainage. The system of mining coal is the same as described under No. 211 Mine.

The opening will be a double slope, 18 feet in width and about 115 feet long, on a pitch of 27%. It has been faced up



DAM ABOVE THE JENKINS POWER PLANT.

on the outside and several sets of timber placed. It is the intention to drive this place from the inside, first taking out the coal under the slope and then shooting down the rock to the required height.

The manway, 130 feet below the main slope was driven on a 25% grade until it intersected the coal, from which point it is following the bottom of the seam. It is now in about 100 feet.

A temporary tipple has been built at the entrance of the manway, the approach to which is on the same grade as the manway. Coal will be loaded over this tipple until the completion of the permanent structure.

All coal has been cut by hand. Machines will be installed as soon as they can be delivered by the manufacturer. A 2-H. P. pump is necessary to keep the mine free from water, power being furnished by the generator at the band mill.

The permanent ventilation system requires a 10'x12' shaft to be located 120 feet in above the main opening. No work has yet been done and the manway will be used temporarily for an airway.

The tipple has been completed except for the chutes, crossover dump, car stop and hoisting machinery. It is a frame structure on concrete piers loading run of mine coal.

The side tracks will consist of a double track below the tipple and a single track and the main line above the tipple. There will be capacity for 50 cars above and 50 cars below the tipple. Grading for the side tracks is nearly completed. Up to January 1, 1913, 1,763 feet of track had been laid with 70-pound steel. This gives ample track for loading at the present time.

Elkhorn Dam.—

This dam is located across the valley of the Little Elkhorn Creek, 360 feet above the central power plant, at a point where the hills converge to a narrow gorge forming a natural basin above. It is of concrete, with large rock amounting to about 38%, embedded in it.

The dam is 290 feet in length at the crest, 42 feet in height from the creek bed to the water table, and contains 4,434 cubic yards of concrete, 3,000 lineal feet of ⅝″ and

1,000 lienal feet of ¾″ reinforcing iron. 1,194 cubic yards of earth and 1,920 cubic yards of rock were removed in preparing the site. The dam rests on a solid rock bed to which it is firmly anchored. The ends are also keyed into solid rock.

Excavation started in September, 1911, concreting in March, 1912, and the structure was completed in August.

Rock and sand for the concrete were obtained at a crusher plant 200 feet below the dam, a small electric hoist hauling the material to the mixer. The concrete was mixed in a 1 cubic yard Milwaukee mixer and deposited in place from buckets handled by a 60-foot derrick in the creek bed and a small derrick on the right bank. An opening, 48″ in diameter, fitted with valves was left in the bottom of the dam to which a reinforced wooden pipe 42″ in diameter will be fitted to carry the water to the power house for boiler use and condensing purposes. The water will be returned in a wooden pipe, also 42″ in diameter, and after passing through the dam will be conducted to a point 900 feet above in reinforced concrete pipe 48″ in diameter which is now being constructed on the ground and will be laid as fast as completed. The dam will not be allowed to fill with water until this pipe is in place.

The reservoir will hold 70,000,000 gallons of water and in addition to supplying the power house, will furnish water for locomotives on the S. V. & E. R. R., a 10″ pipe having been laid from the dam to a stand pipe near the depot for that purpose.

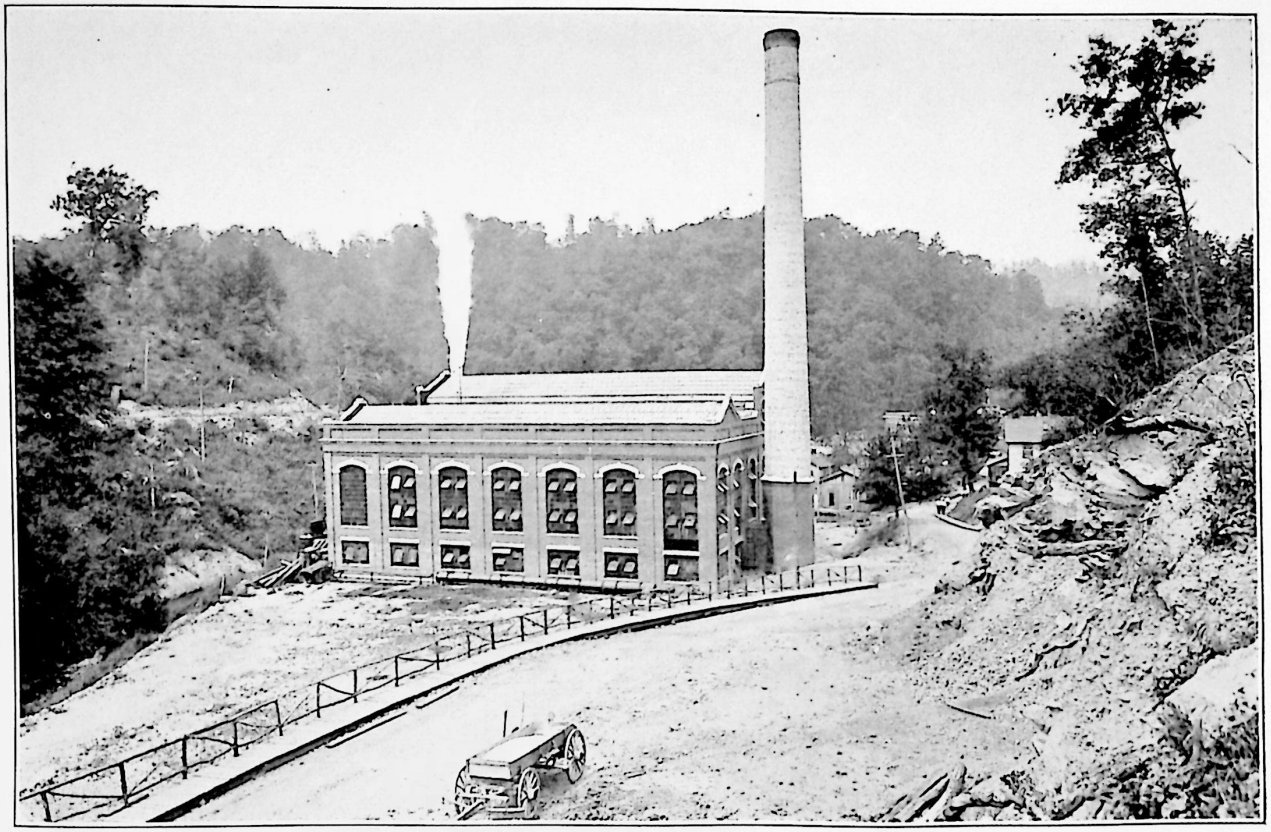
Goodwater Reservoir.—

This reservoir, built entirely of concrete, was started in 1911 and completed early in 1912. It is 140 feet long, 95 feet wide, with a maximum height of 20 feet, and contains 7,050 cubic yards of concrete.

The reservoir impounds the water of Goodwater Branch, a stream flowing from the limestone outcrop on the western slope of Pine Mountain. It has a capacity of 1,200,000 gallons and furnishes the main water supply for the town.

Central Power Plant.—

The most important single building operation carried on during the past year has been the erection of the Central



THE CENTRAL POWER PLANT AT JENKINS.

Power Plant. This is a brick building, embracing the most recent power plant construction. It is 125'x135' and divided into two parts, one for the electrical and generating machinery and one for the boilers.

The foundation walls of the building are built of local sandstone on concrete footers, and the building walls of brick manufactured at Jenkins. The floors are all of concrete arched type construction, and the roof of red concrete tile carried on steel trusses. The stack is 173 feet high, with an internal diameter of 10 feet at the base. It was erected under a contract with M. N. Kellogg Company. When the ultimate mechanical equipment is installed, a second stack will be required.

The boiler plant consists of six "Rust" vertical water tube boilers furnished and erected by the Babcox and Wilcox Company. They are equipped with Foster super heaters and fired by the Murphy type mechanical stokers, manufactured and erected by the Detroit Stoker Company. The stokers are fed from steel bunkers of 20-ton capacity, located directly above each furnace.

Coal is delivered to the bunkers and ashes removed from the ash pit by a link belt bucket conveyor. The hopper of the conveyor is just outside the building and is filled from standard gauge cars that are brought to the power house over a spur from the S. V. & E. R. R.

The generating units installed at present consist of two 2,000 KW A. C. 60 cycle, three phase turbo-generators, made by the General Electric Company and directly connected to Curtis turbines operating under 175-pound steam pressure at 1,800 R. P.M. The turbines are run condensing and a closed type water tube condenser is located directly under each turbine. Current is generated at 2,300 volts and transformed to 40,000 volts for long distance transmission to substations. A 20-ton box crane operates the entire length of the generator room.

A circulating system will bring the water from the lake for condensing purposes. This system, now under construction, consists of a 42" wood stave intake pipe from the dam; a 42" wood stave return pipe to carry the water back to the

dam and a 48″ reinforced concrete continuation of this line extending along the bed of the lake to a point 900 feet above the dam. Circulation from the lake through the condensers and back through the return line will be maintained by centrifugal pumps of 5,000 gallons per minute capacity, one pump to each turbo-generator.

The sub-station equipment for No. 204 and No. 205 Mines is also installed in the Central Power House.

The building is large enough to accommodate three additional generators and turbines with the necessary boilers, which will be installed as required.

PIKE COUNTY.

Kewanee Coal Mining Company.

P. O., Kewanee, Ky.
Transportation, C. & O. Ry.

O. P. Chatfield, President and General Manager.

This is the Upper Elkhorn seam of coal and averages about 5½ feet thick with two partings; one about the center of the seam, which is about 4″ in thickness of the soft fire clay nature, and the other is about 2″ in thickness, and is about 16″ from the bottom of the seam. The coal is all shot from the solid and hauled by mules, no machinery of any kind being used. They have an incline which is about 120 feet long and the coal is let down by means of a monitor. There is a coaling station for railroad trains in connection with the tipple, and the daily output of the mine is about 200-250 tons. The mine is ventilated by furnace, which gives ample ventilation for miners and mules.

This mine was inspected by me on September 31st and again on December 10th, at which times conditions were satisfactory.

Elkhorn Consolidated Coal & Coke Company.

P. O., Hellier, Ky.
Transportation, C. & O. Ry.

These people have two openings, one in the Upper Elkhorn seam of coal and another in the Lower Elkhorn seam.

This seam of coal at this point is a little thinner than the regular Upper Elkhorn seam. The coal in the Lower Elkhorn seam retains its usual thickness which runs from 36-42″ in thickness. In both of these seams there is a streak of bone which is sometimes called "laminated." The coal from the Lower Elkhorn seam or No. 2 Mine is tipple height and is pulled out of the mine by mules and dumped into a chute, which carries it into a crusher, where the coal from the Upper Elkhorn seam is dumped into a 24′ chute, which is about 400 feet long and carried to the tipple, and dumped into the crusher chute, together with the coal from the No. 2 Mine. This coal after crushing is carried to the coke ovens, of which they have a battery of 50. The coal is mined by air machinery at the present time, but the company is installing an electric plant and they hope in the early spring to be using an electric plant for both haulage and cutting. The mines are ventilated by furnace, but they have a fan bought for each one of the mines and hope to have them both in operation at a very early date.

These mines were inspected on September 4th and again on December 11th.

Greenough Coal & Coke Company.

P. O., Hellier, Ky.
Transportation, C. & O. Ry.

This is the Upper Elkhorn seam of coal, which is about 42″ in thickness, and has a streak of "laminated" near the top. The coal is mined by compressed air punchers and hauled by mules. They have a very steep incline which is about 1,100 feet long on which they use a monitor for conveying the coal down the mountain side. The mine is ventilated by fan, which gives ample ventilation.

This mine was found to be satisfactory when inspected by me on September 4th and again on December 11th.

Allegheny Coke Company.

P. O., Hellier, Ky.
Transportation, C. & O. Ry.

These people are mining the Upper Elkhorn seam of coal, but were not running at either of my calls since I have been Inspector, as they shut the mine down along in the early summer until they could build a battery of 100 coke ovens, which is nearing completion, and which they hope to have in operation in a short time. They are also building several new miners' houses and hope to increase their daily output considerably when they start up again. The coal is being mined by compressed air machinery, of which they have a very large plant already installed.

Big Branch Coal Company.

P. O., Lookout, Ky.
Transportation, C. & O. Ry.

J. W. Cockill, General Manager.

This is the Upper Elkhorn seam of coal, which averages about 42″ in thickness. The coal is mined by compressed air and hauled by mules, and conveyed to the railroad cars by Jeffrey conveyor, which is about 1,400 feet long. They are figuring on putting in electric haulage in this mine and will get their power to operate same from the mines of the Henry Clay Coal & Coke Co., which is about one and one-half miles away.

The general conditions of this mine were satisfactory when inspected on September 4th and again on December 12th.

Henry Clay Coal & Coke Company.

P. O., Lookout, Ky.
Transportation, C. & O. Ry.

This mine is owned and controlled practically by the same people as Big Branch Coal Co., and J. W. Cockill is Manager, and lives at the mines.

They are mining the Upper Elkhorn seam of coal and their haulage is by mules at the present time. However, they

expect to have their electric plant installed at an early date and will both mine and haul by electricity. The coal is brought down the mountain side by an incline, of which they have two. The first at the top of the hill is about 300 feet long, then brought around the mountain side by means of a tramroad for about 600 feet and then let down to the tipple by another incline.

Their electric plant when installed will consist of one 150 KW General Electric turbine, together with 1,200 H. P. water tube Babcox & Wilcox boiler.

The mine was given two inspections by me since August. The first was given on September 4th and again on December 12th, at which times the general conditions were satisfactory.

Marrowbone Coal & Coke Company.

P. O., Lookout, Ky.
Transportation, C. & O. Ry.

This company has both the Upper and Lower Elkhorn seam of coal opened up, but have not done any work until the first week in December of this year, owing to the fact that they had a very disastrous fire, burning up their tipple and power plant, causing them to lay idle all this spring and summer. They have 25 coke ovens that were in operation before the fire and were again started during the month of December.

They had just got fairly started on my trip on December 13th and everything was satisfactory.

Shelby Coal Mining Company.

P. O., Shelbiana, Ky.
Transportation, C. & O. Ry.

This mine is located on the C. & O. Railway, 6 miles east of Pikeville, where the B. & O. connects with the C. & O. This is the Upper Elkhorn seam of coal, which is about 5½ feet in thickness with a parting of about 8″ in the center. The mine is ventilated by furnace which gives plenty of ventilation. The mine has a daily output of about 100 tons.

I gave them an inspection on September 5th and again on December 17th, and both times conditions were satisfactory.

Keyser Coal Company.

P. O., Mossy Bottom, Ky.
Transportation, C. & O. Ry.

This mine is located about 5 miles west of Pikeville, on the C. & O. Ry. It is managed by C. M. Keyser, who lives at the mines. They are mining the Upper Elkhorn seam of coal, which has a parting of about 8″. The mine is one of the new ones in this section. It has an output of about 200 tons per day.

This mine was inspected by me on September 6th and again on December 20, 1912.

Steele Coal Company.

P. O., Mossy Bottom, Ky.
Transportation, C. & O. Ry.

Officers: Ed. Wright, President, Dayton O.; Sam Sutton, Superintendent at the mine.

These people are operating two mines on the C. & O. Ry. The first is the Cabin Branch Mine, which was formerly owned by the Cabin Branch Coal Co. This is the Upper Elkhorn seam of coal, and has a thickness of about 5½ feet and about 8″ parting in the center. This parting is a hard fire clay and it is very hard to break in shooting. There is a draw slate in this mine which is not very good, and at both of my inspections, which were on September 7th and again on December 22nd, there was quite a lot of loose slate hanging along the haulways. At some places the entries were pretty wide and there was no propping done alongside the tracks which left considerable open places, giving the slate a chance to fall. The draw slate is of a very hard nature and will hang in large flakes without falling.

On my visit in December, the foreman's attention was called to some very loose slate that was left hanging over the mouth of the dip entry off first north. There was also some loose slate hanging over the mouth of the first west entry, and they were instructed to take this down, as it had

drawn so much that I did not consider it safe to undertake to hold it up by props or cross timbering. The attention of both foreman and superintendent was called to this. These people have an electric plant which does the cutting, but the coal is all hauled by mules.

They also have another mine, known as the Steele Mine, and the property adjoins that of the Cabin Branch Mine, and the coal is the same seam as the Cabin Branch Mine.

The conditions in this mine were satisfactory when inspected by me in both September and December.

PIKE COUNTY (TUG RIVER DIVISION.)

Majestic Collieries Company.

P. O., Majestic, Ky.
Transportation, N. & W. Ry.

This mine is located about two miles south of Cedar, W. Va., on the Kentucky side of Tug River, and they are operating the Warfield seam of coal, which is about 5½ feet in thickness. This seam of coal has a hard bone about 10″ thick that is absolutely worthless and has to be picked out before loading in the railroad cars. The company has two mines opened in this seam of coal which are No. 1 and No. 2. The coal is mined by electric longwall machines and is hauled by electric motor around a tramroad about one-half mile long, where it is dumped over screens on to picking tables, where the bone is picked out and then carried to the tip house down the mountain side by conveyor line which is about 500 feet long.

They have another mine opened up in the Alma seam, which is about 300 feet above the Warfield seam, and the coal is brought down by incline to the trolley line at the lower mine where it is picked up and hauled around to the same tipple where the Warfield coal is dumped. They have also opened up the Thacker seam of coal but are not shipping any from this mine at this time.

This is one of the large operations on the Tug River side of Pike county, and they have about 100 miners' houses and an up-to-date power house, consisting of four 150 H. P. boilers, two 150 KW generators. The haulage plant consists

Borderland Coal Company.

P. O., Borderland, W. Va.
Transportation, N. & W. Ry.

Borderland No. 1.—

This mine is opened in the Winifrede seam of coal, which is about 6 feet high at this particular point and is absolutely clean, with no impurities of any kind being found in it. This is the only place on the Kentucky side of the river that this coal is found, and the Borderland Coal Co. seems to have the entire acreage.

These people have an up-to-date plant, having the mines electrically equipped for hauling and cutting. The mine is located back about one and one-half miles from the river, and is brought down a short incline to a tramroad and hauled around the mountain side by locomotive, where it is dumped into bins and then carried across the river by an aerial tramway of the two bucket system.

All conditions and all equipment around this mine are absolutely first class, and they have an output of about 900 to 1,000 tons of coal per day. After the coal is brought to the tipple it is screened over shaker screen and made into different sizes; then the N. & S. is washed by Jeffrey tub washer, which takes all the impurities out of the fine coal.

In connection with this plant, they have a coaling station in the State of West Virginia, having been built by both the coal company and the railroad company. All the coal that goes into this coaling station is hauled by conveyor line. The fine coal is washed and then mixed with the lump, which gives the railroad company a R. O. M. coal for their engines.

Last inspection at this mine were made on October 9th, 1912, at which time all conditions were satisfactory.

Borderland No. 2.—

This mine was first opened up in the Winifrede seam, but as it is located about one and one-half mile of the Boderland No. 1, the coal seems to have pinched out at this point and they do not have very much of it. There is a large conveyor line which carries the coal from the Kentucky side to the West Virginia side where the tipple and washer are located. The

coal is first let down an incline by a monitor and then dumped into the bins, where it is picked up by the conveyor line. In connection with the conveyor there is a steel bridge crossing the river on which they haul supplies and use for passage way for the men. The washer at this plant has a capacity of 200 tons per day, that was built by the Pittsburg Washer Co., which is of the "Jig" type.

They also have in connection with the mine a lower seam of coal, which is on a level with the conveyor line. The seam is about 3 feet thick and seems to be the Alma seam, but of this I am not quite sure, as there is some argument in regard to the naming of it. It is of small importance, however, as it is a very high grade seam of coal, analyzing very highly, and the only draw back is the fact it is pretty low.

All of the houses and equipment are first class, as were the mines when inspected by me on October 11th.

POND CREEK COAL COMPANY.

General Office, Boston, Mass.

P. O., Stone, Ky.
Transportation, N. & W. Ry.

Fred Meyers, General Superintendent, Williamson, W. Va.

This is one of the largest and will be one of the most up-to-date plants in the State of Kentucky, when the construction work is done. There will be eight separate mines, each one having an equipment of its own, and will be fully equipped with electric cutting machines, motors, electric driven fans, and in fact everything that goes to make an up-to-date mine.

The power for mining purposes, tenement and all building lighting is furnished from a modern power plant, centrally located in respect to the eight mines now opened up. The power plant is equipped with high efficiency machinery throughout, with recording gauges, thermometers, mercury wells on condensor boiler-feed water heater, steam line, etc., and recording wattmeters also intergrading wattmeters on switchboard, steam indicator and such instruments as are necessary for running power plant tests and keeping daily record of plant conditions and efficiencies.

In way of machinery, the plant is equipped with Babcox-Wilcox water tube boilers, Jones' underfeed stokers, mechanical draft, water-feed regulators, coal and ash handling conveyors.

The engine room is equipped with reciprocating engines and mixed pressure turbine, engine exhausting into turbine, turbine running condensing, thus using exhaust steam to good advantage in turbine. One De Laval steam turbine driven exciter, one Crocker-Wheeler motor driven exciter, one De Laval steam turbine condensing pump, one motor driven spray pump, a large cooling pool, 60x150x5 feet, located parallel and near creek furnishing condensing water. When water is low the spray pump is put in operation, pumping the water from hot well overflow through a set of spray nozzles back into the pool, thus cooling the water for circulation through the condensor.

All generators are alternating current, 25 cycle, 2,300 volt, 3-phase, stepped up in power house through transformers to 11,000 volts for transmitting to sub-station at each mine, where it passes through transformers and motor generators to 250-volt direct current for mining purposes in the mines. Synchronous motors are used in these motor-generator sets to increase the power factor. Sullivan chain undercutting mining machines of latest pattern, and General Electric motors for haulage are used in the mine.

Every precaution is used in and around mines and electrical equipment for protection. The high tension wire is fenced off with wire fence, or screen in sub-station and power house; protection boards are used along trolley wire at points where men pass under wire crossing haulage entries in mines. Sub-stations are fire proof buildings, constructed of metal lath and framing, covered with cement plaster, roof and walls, metal sash windows, making a very neat building. All trolley wire outside of mines is supported 6 feet 6 inches above top of rail on approved pipe hangers, thus allowing room for men to pass under wire without coming in contact with it.

Motors in tipples are completely inclosed in metal asbestos lined boxes. All gearings, belting, etc., are protected by railings or covering metal cased. Tipple and fan motors

are operated by 440-volt, alternating, 3-phase circuit, taken off transformers in sub-stations.

Lighting circuits for tenements of respective plants are furnished through these sub-stations at 2,300 volts, at which it is transmitted over pole lines to house lighting transformers, which steps it down to 110 volts for lighting purposes.

The power house building is of stone, steel and cement plaster construction, stone foundation and basement walls, steel framing, metal sash windows, cement plaster walls and roof.

The air compressor in power house is for pumping water from wells into cistern, from which it will be taken by a 500-gallon standard pump and pumped into pipe lines and tank. A 200,000-gallon tank, placed on a hill, gives 80 pounds pressure in water mains for fire protection and water for domestic use at central camp.

Mines No. 1 and No. 2 are located on Blackberry Creek off main Pond Creek and are located about two miles apart. The coal is the Warfield seam, which is, at the present time, being shot from the solid, and the tipples at the present time are temporary, as larger and more up-to-date tipples are now under construction and will be completed in the very near future. This is also the fact of Mines No. 3, No. 4, No. 5, No. 6, No. 7, and No. 8, which are located on main Ponk Creek, and the distance between each of these mines is about one and one-half miles.

The main offices of this company are located about ten miles from Williamson, W. Va., in the interior of the county, in a southernly direction, and are reached by a branch line of the N. & W. Railway at Williamson.

These people have several thousand tons of stock coal at this time, which they are rapidly loading by means of the temporary tipples, and by the time this is all cleaned up they hope to have their permanent tipples ready and their machines going, and when this is done they expect to load from 500-800 tons of coal at each mine, during the year of 1913.

This is the Warfield seam, and at the present time the mines are ventilated by temporary furnaces. They have at the present time about 500 houses completed, and will build

about 500 more in the near future. The work is being pushed every day on this, as they are needing men and consequently have to have houses to take care of them.

These mines were inspected November 4th, at which time all conditions were satisfactory.

Allburn Coal & Coke Company.

P. O., Matewan, W. Va.
Transportation, N. & W. Ry.
W. A. Young, Manager.

(L. R. Roach, Mine Foreman.)

This is a plant opened up by the Pike Collieries Co., several years ago. They are operating both the Warfield and Lower Thacker seam, but since the Allburn Coal & Coke Co. have taken it over they are only operating the Lower Thacker seam, which runs about 4 feet in thickness.

The coal is mined by electric machines and is hauled by motors. The power plant is located about 2½ miles from the mine on Blackberry Creek, and power is transmitted over the hills to the mines. They carry 500 volts on this wire and the machines and motors are all arranged to use this voltage. This makes the voltage very dangerous and the wires have to be watched very close to avoid accident.

There was a man by the name of Fred Ramey, Mining Engineer, killed by coming in contact with this wire on October 7, 1912. They were measuring up the room preparatory to making an extension of the maps, and he, in company with another man were on fourth left entry on No. 6 room. Ramey was at the room neck holding the end of the tape, and after making the measurement he started to wind up the tape, holding same in his hand, and the supposition is that he must have had one foot on the rail and his back came in contact with the wire, which is directly over the rail, a distance of four feet and one inch. He was shocked into unconsciousness at 9 o'clock in the morning, and while to all appearances he was dead, still there were signs of his heart beating up until 3

o'clock in the afternoon. I believe if we could have gotten to him in time with a Pulmotor there would have been a chance to save his life.

The coal at this mine is hauled across the river by electric motor on a steel bridge, and there dumped into railroad cars on the West Virginia side.

The mine was inspected on October 8, 1912, and conditions were found satisfactory.

EASTERN DISTRICT NO. 3.

Reports of Thos. J. Barr.

No yearly report having been received, the following monthly reports of inspections made during the year by Mr. Thos J. Barr, Assistant Inspector of Mines for the Eeastern District No. 3, are presented:

REPORT FOR THE MONTH OF JANUARY.

I have the honor to make the following report of the mines inspected by me during the month of January, 1912, in the order they were inspected, together with a statement of other matters of interest to the office.

STEARNS COAL COMPANY.

P. O., Stearns, Ky.

Mine No. 10.—

Inspected January 24, 1912.—Notice No. 257-Ba.—The mine was in satisfactory condition. The velocity of the ventilating current on the main entry at the "Main Straight" door was 390 feet per minute, and the quantity of air was 11,700 cubic feet per minute. The ventilation was well distributed and the timbering and drainage were satisfactory. In some places too much powder was stored in the breaks between entries and air courses, and this bad practice was called to the attention of the company, with the proper recommendation.

Mine No. 11.—

Inspected January 24, 1912.—Notice No. 258-Ba.—The timbering, drainage and ventilation were satisfactory, and the general condition of the mine was satisfactory, but the bad practice of tamping shot-holes with coal dust has not been stopped, though this recommendation has repeatedly been made.

Mine No. 4.—

Inspected January 25, 1912.—Notice No. 259-Ba.—The mine was in satisfactory condition. On account of the good ventilation, no gas was found at any working place, though before the men engaged in work in the mine entered for work, the gas inspector reported gas in several working places. No dust was present. The No. 3 portion of the mine was in satisfactory condition.

Mine No. 1, South Main.—

Inspected January 26, 1912.—Notice No. 260-Ba.—The timbering, drainage and ventilation of the mine were satisfactory, and the mine is well sprinkled, and this sprinkling is continued day by day.

Mine No. 1, North Main.—

Inspected January 26, 1912.—Notice No. 261-Ba.—The mine was in good condition, and timbering, drainage and ventilation were satisfactory. All shots are tamped with clay, and to quote Mr. Thomas Reynolds, Mine Foreman, "The men halloo for clay before they will for powder." Twenty-six men were employed in the mine.

Mine No. 2.—

Inspected January 26, 1912.—Notice No. 262-Ba.—The mine was in satisfactory condition, and the timbering, drainage and ventilation were satisfactory. This mine is being drawn out, that is, the stumps and pillars are being drawn, and work in this mine is expected to be completed about June 1st.

Wayne Coal Company.

P. O., Worley, Ky.

Sheldon Mine.—

Inspected January 26, 1912.—Notice No. 263-Ba.—At the time of the inspection of this mine the mine was idle and as no fire was on the furnace the ventilation could not be measured. The mine, however, was in good condition, and only six men were employed under ground.

This mine is located in Wayne county, though the post office is in Whitley county.

REPORT FOR THE MONTH OF MARCH.

Following is a report of the mines inspected by me during the month of March, 1912, in the order they were inspected, together with a statement of other matters of interest to the office.

West Jellico Coal Company.

P. O., Silerville, Ky.

West Jellico Mine.—

Inspected March 21.—Notice No. 264-Ba.—The ventilation of the mine was satisfactory, except on south 5th entry where the curtains and stoppings needed some repairs, but the ventilation was not seriously defective The drainage of the mine was very bad, but at the time of the inspection a new pump was being installed, and the indications were that with the capacity of the pump being installed the mine could be properly drained. The timbering of the mine was satisfactory.

On account of the mine being drowned out, nothing east of north 5th entry could be inspected.

Indian Creek Coal Company.

P. O., Indian Head, Ky.

Indian Head Mine.—

Inspected March 22.—Notice No. 265-Ba.—The timbering, drainage and ventilation of the mine were satisfactory, but the mine was not supplied with a second outlet as required by law. Notice was given that in order to operate this mine it would be necessary to not employ more than ten men in the mine or make a second outlet at once. Assurance was given that the second outlet would be made as speedily as possible.

PETERS AND SOULEYRET.

P. O., Flat Rock, Ky.

Douglas Mine.—

Inspected March 22.—Notice No. 266-Ba.—The timbering, drainage and ventilation of the mine were satisfactory, but the mine was not under the supervision of a certificated mine foreman. This matter was promptly made known to the Commonwealth's attorney having jurisdiction in Pulaski county.

EAGLE COAL COMPANY.

P. O., Barren Fork, Ky.

Klondike No. 1 Mine.—

Inspected March 23.—Notice No. 267-Ba.—The ventilation and timbering of the mine were satisfactory, and the drainage, which was bad, was as good as could reasonably be expected.

This mine known as Yamacraw or Carrol Mine was not inspected at this time on account of being drowned out.

ACME COAL COMPANY.

P. O., Pittsburg, Ky.

Acme Mine.—

Inspected March 28, 1912.—Notice No. 268-Ba.—On two entries of this mine the ventilation was satisfactory, but for the remainder of the mine the ventilation was not good. The drainage of the mine was satisfactory and the timbering was in very good condition. Attention was called to a notice given in a previous inspection to construct a second outlet, and which instruction had not been complied with, and notice was again served that this second outlet must be constructed at once.

McNeill Bros. (New Victoria Coal Company.)

P. O., Pittsburg, Ky.

New Victoria Mine.—

Inspected March 28.—Notice No. 269-Ba.—The mine was idle at the time of this visit, on account of the mine being drowned out, and even though the mine had been in condition to operate, no cars could be had for shipping the coal. At the time of the inspection the mine was being drained as rapidly as possible.

New Laurel Coal Company.

P. O., Pittsburg, Ky.

New Laurel Mine.—

Inspected March 28, 1912.—Notice No. 270-Ba.—The ventilation was defective in this mine on account of a fall in the air course. The timbering throughout the mine was satisfactory, and the mine was in better condition than at the time of the previous inspection. 11,500 cubic feet of air was measured in the return.

East Bernstadt Coal Company.

P. O., East Bernstadt, Ky.

Star Mine.—

Inspected March 29.—Notice No. 271-Ba.—This is an old mine which for a number of years was operated by the Star Coal Co., but which has been recently leased to the East Bernstadt Coal Co., and only a small portion of the mine was being operated at the time of the inspection, and the portion being operated was in satisfactory condition for the number of men employed, which was about 10. Notice was given that when more men are employed another outlet will be required. Timbering, drainage and ventilation were satisfactory.

STAR COAL COMPANY.

P. O., East Bernstadt, Ky.

Star Mine No. 2.—

Inspected March 29.—Notice No. 272-Ba.—This is a new mine, located on the old "A. & M." spur that turns off to the east from East Bernstadt, and the mine is located about a mile below "old" Star Mine now operated by the East Bernstadt Coal Co., and is within a quarter of a mile of Diamond Mine. This is the first notice of this mine. It is a small drift, not completely developed, and employes about 10 men. The output will probably never exceed 200 tons per day. The coal is shot from the solid, the haulage is by mules and the ventilation is produced by what is called a furnace, but which is in reality a fire basket hung under a shaft. At the time of the inspection all conditions were satisfactory.

JOHN CENTERS, LESSEE.

P. O., Viva, Ky.

Cross Mountain Mine.—

Inspected March 29.—Notice No. 273-Ba.—As is known this is a small mine employing about 15 men. The timbering, drainage and ventilation were satisfactory.

WILL CENTERS, LESSEE.

P. O., Viva, Ky.

Crescent Mine.—

Inspected March 29.—Notice No. 274-Ba.—This is a mine in every way similar to the Cross Mountain Mine mentioned above. The conditions inside the mine were satisfactory, but at the mouth of the mine, the drainage was very bad.

Wild Cat Coal Company.

P. O., Viva, Ky.

Wild Cat Mine.—

Inspected March 29.—Notice No. 275-Ba.—The mine was drowned out and idle at the time of the inspection and the ventilation was entirely cut off by the water. Though the mine was in a better condition than at the time of the previous inspection, yet the mine was not in a satisfactory condition, and the mere removing of the water would not have put the mine in good condition.

New Diamond Coal Company.

P. O., East Bernstadt, Ky.

Diamond Mine.—

Inspected March 30.—Notice No. 276-Ba.—The amount of ventilation being supplied to the mine at the time of inspection was 17,325 cubic feet per minute, which would have been sufficient for the eighty men usually employed in this mine, but the ventilation was bad on account of the stoppings. This mine in some places becomes very dusty at times, but at the time of this inspection there was very little dust present, and for the most part the mine was damp. The timbering in the rooms was generally not sufficient. There is a second outlet for this mine but at the time of the inspection there was no ladder in the second shaft.

The Pittsburg Mine recently operated by the Pittsburg Coal Co., remains idle and has been allowed to fill with water.

There seems to be no particular activity in the mining business in Laurel county. Though some coal will doubtless be mined in this county for some years, the operations will be small.

REPORT FOR THE MONTH OF APRIL.

Following is a report of the mines inspected by me during the month of April, 1912, in the order they were inspected, together with a statement of other matters of interest to the office.

RICHARDSON COAL COMPANY.

P. O., Beattyville, Ky.

Richardson Mine.—

Inspected April 4, 1912.—Notice No. 277-Ba.—The ventilation of the mine was not sufficient, and in no place except the intake could a reading of the anemometer be had. At the intake, which is the manway, the ventilation measured 4,950 cubic feet, but it was not properly distributed. The squeeze on the main entry is continually taking weight and in my opinion it will finally close the entry, though it may stand long enough to allow the removal of some pillars and stumps in withdrawing from the mine. The roof in first left entry was very bad and notice was given that it will require special watching and attention. The timbering in parts of the mine was not sufficient and the drainage in places in the mine was very bad.

MESS. HENRY & DAVIS.

P. O., Jackson, Ky.

Jackson Mine.—

Inspected April 9, 1912.—Notice No. 278-Ba.—The condition of the mine as to timbering, drainage and ventilation was satisfactory, but in places in the mine too much dust had accumulated, and notice was given to sprinkle the mine or keep the dust loaded out of the mine.

KENTUCKY BLOCK CANNEL COAL COMPANY.

P. O., Cannel City, Ky.

Mine No. 1.—

Inspected April 10, 1912.—Notice No. 279-Ba.—All conditions of the mine were satisfactory except on 8th left entry where the ventilation was too weak.

Mine No. 16.—

Inspected April 10, 1912.—Notice No. 280-Ba.—All conditions satisfactory.

Mine No. 15.—

Inspected April 10, 1912.—Notice No. 281-Ba.—All contions satisfactory.

In looking over the Notice No. 281-Ba., it will be seen that the notice refers to this mine as No. "16," which is a mistake and the notice should have been for No. "15."

Mr. J. J. Watson, who formerly operated the J. J. Watson Coal Co., advises me that he has leased his mine below Cannel City to a company who will shortly begin operation. At present the mine is practically idle, not more than three men at work in it.

The mine formerly operated by Willmore Kendall, at West Liberty, Ky., has been forced to abandon operation on account of the town of West Liberty being supplied with natural gas. This was a wagon mine and supplied coal almost exclusively to the town of West Liberty.

On account of a heavy tide in the Duck Fork, of Sturgeon Creek, the tipple of the Big Hill's Mine No. 2 was washed away, and the mine was idle at the time of the inspection made at Beattyville, and since the Bastin Coal Co. employes a very few men and also being idle at this time, on account of circuit court at Beattyville, the mines at Idamay were not visited at this time.

The Kentucky Block Cannel Coal Co. has erected a tower for a standard drill, and will drill for oil just back of the compressor plant. There are three reasons for drilling back of the compressor plant. First, to get oil. Second, if oil is not gotten to get gas to fire the compressor plant. Third, if neither oil nor gas is obtained it is expected that a good well may be obtained for water to operate the plant. At times the water supply at Cannel City is very limited.

REPORT FOR THE MONTH OF JUNE.

Following is the report of the mines inspected by me during the month of June, 1912, in the order in which they were inspected, together with a statement of other matters of interest to the office.

Stearns Coal Company.

P. O., Stearns, Ky.

Mine No. 2.—

Inspected June 15, 1912.—Notice No. 282-Ba.—This mine is ventilated by a furnace, but at the time of the inspection the mine was idle, and no fire was in the furnace and for that reason the ventilation could not be measured, but the indications were that if the mine had been in operation and a fire in the furnace the ventilation would have been satisfactory. The timbering and drainage were satisfactory.

Mine No. 1, North Main.—

Inspected June 15, 1912.—Notice No. 283-Ba.—The mine was in satisfactory condition. Assistant Inspector Long came into this mine just as the inspection was over, but did not make an examination.

Mines Nos. 4 and 10.—

These mines were inspected by Assistant Inspector of Mines, Mr. Thomas O. Long, on June 13th and 14th respectively, and the report as to the condition of these mines will doubtless be found in his report.

North Fork Cannel Coal Company.

P. O., Loveland, Ky.

Mine No. 2.—

Inspected June 25, 1912.—Notice No. 284-Ba.—This mine has recently all but been drowned out, but at the time of this inspection the drainage was satisfactory. The timbering in the rooms was not at all satisfactory. The ventilation was satisfactory.

Lee Coal Company.

P. O., Clearfield, Ky. (Rowan Co.)

Mine No. 1. (Cannel Mine.)—

Inspected June 25, 1912.—Notice No. 285-Ba.—The timbering in the mine was badly neglected, and the drainage was not satisfactory. The ventilation was in good condition.

CLEARFIELD LUMBER COMPANY.

P. O., Clearfield, Ky.

Road Fork Mine.—

Inspected June 25, 1912.—Notice No. 286-Ba.—All conditions satisfactory.

REPORT FOR THE MONTH OF JULY.

On account of the number of examinations held during the month of July, beginning early in the month and continuing practically throughout the month, and being directed by you to serve as a member of the Board of Examiners, no mines were inspected by me during the month of July.

During the month, however, Assistant Inspector of Mines Perry V. Cole, made a trip of inspection to the mines on the southern road and visited all companies except the Stearns Coal Co., which was inspected by Assistant Inspector Long and myself in June.

REPORT FOR THE MONTH OF SEPTEMBER.

Following is a report of the mines inspected by me during the month of September, 1912, in the order in which they were inspected, together with a statement of other matters of interest to the office.

NORTH FORK CANNEL COAL COMPANY.

P. O., Loveland, Ky.

Mine No. 2.—

Inspected September 6, 1912.—Notice No. 287-Ba.—All conditions satisfactory. This company is contemplating changing their method of shooting in their mine by substituting fuse for squibs.

LEE COAL COMPANY.

P. O., Clearfield, Ky.

Mine No. 1 (Cannel).—

Inspected September 6, 1912.—Notice No. 288-Ba.—All conditions satisfactory.

Clearfield Lumber Company.

This company has been operating the "Road Fork" Mine, which is about worked out, and since there was only "stump work" in the mine at the time of the visit to this vicinity, no inspection. The indications are that the coal which was being removed by this mine was only a small pocket of a few acres, and appears to be on the same horizon as the cannel coal mines of the North Fork Cannel Coal Co. and the Lee Coal Co., though the coal of this mine is bituminous.

It is probable that another bituminous mine will be opened shortly to supply fuel to the Morehead and North Fork Railroad.

Wild Cat Coal Company.

P. O., Viva, Ky.

Wild Cat Mine.—

Inspected September 24, 1912.—Notice No. 289-Ba.—The ventilation of the mine was not good, and has never been in an entirely satisfactory condition, and in addition, some loose slate was hanging in the entry. The mine is being abandoned and it is expected that all stumps that can be gotten will have been drawn by the middle of October, and that a new mine will be opened on the opposite side of the creek and about a quarter of a mile above where the present tipple is located. The new mine will open a small pocket of coal that will probably be worked out within two years.

New Laurel Coal Company.

P. O., Pittsburg, Ky.

New Laurel Mine.—

Inspected September 25, 1912.—Notice No. 290-Ba.—Sixty-six men are generally employed in this mine, and the ventilation supplied to the mine was 14,000 cubic feet per minute, and this was properly distributed. Timbering and drainage satisfactory.

NEW VICTORIA COAL COMPANY.

P. O., Pittsburg, Ky.
New Victoria Mine.—

Inspected September 25, 1912.—Notice No. 291-Ba.—All conditions satisfactory. This mine is now about worked out, and stumps are being drawn and it is expected that the mine will be abandoned within a month.

ACME COAL COMPANY.

P. O., Pittsburg, Ky.

Acme Mine.—

Inspected September 25, 1912.—Notice No. 292-Ba.—The timbering, drainage and ventilation of the mine were satisfactory, but the mine's second outlet which has recently been constructed and which is a shallow shaft, is not supplied with a ladder or other means of escape. Notice was given concerning this matter and assurance that this fault would be remedied at once.

IDEAL BLOCK COAL COMPANY.

P. O., Lily, Ky.

Lily Mine.—

Inspected September 26, 1912.—Notice No. 293-Ba.—Timbering, drainage and ventilation satisfactory, but the sump on third right entry needed covering, and it was directed that this be done.

BASTIN COAL COMPANY.

P. O., Idamay, Ky.

Idamay Mine No. 2.—

Inspected September 27, 1912.—Notice No. 294-Ba.—Only six men were employed in this mine, and the condition of the mine was satisfactory. The matter of removal of the shot firers of this mine was brought up by the company's Superintendent, Mr. Hall, and he was advised that if "permissible" explosives were used in the mine I would recommend the removal of shot firers.

KENTUCKY BLOCK CANNEL COAL COMPANY.

P. O., Cannel City, Ky.

Mine No. 15.—

Inspected September 30, 1912.—Notice No. 295-Ba.—All conditions satisfactory.

Mine No. 16.—

Inspected September 30, 1912.—Notice No. 296-Ba.—All conditions satisfactory.

Mine No. 3.—

Inspected September 30, 1912.—Notice No. 297-Ba.—This mine has been idle for about six years or more and has just recently been opened. At the time of inspection, all conditions were satisfactory.

The well being drilled by the Kentucky Block Cannel Coal Co., and which was noted in the report for April has "come in" and the indication is that it will be a very excellent well.

The Ideal Block Coal Co., successors to Robinson Creek Coal Co., is operating both the Lily Mine and the "Dead Lift", and together they are producing about 300 tons of coal per day.

A company, the title of which I believe is the Kentucky Portland Cement and Coal Co., is beginning operation at Pine Hill, Ky.

REPORT FOR THE MONTH OF OCTOBER.

Following is the report of the mines inspected by me during the month of October, 1912, in the order in which they were inspected, together with other matters of interest to the office.

KENTUCKY BLOCK CANNEL COAL COMPANY.

P. O., Cannel City, Ky.

Mine No. 1.—

Inspected October 1, 1912.—Notice No. 298-Ba.—At the time of this inspection the mine was in good condition, and the timbering and drainage were satisfactory.

When it is stated that the drainage was "satisfactory," it must be borne in mind that this is a cannel coal mine and the roof, coal and bottom all produce water, and it is impossible to maintain a well drained mine. The drainage is as good as could reasonably be expected, hence the drainage is reported as "satisfactory."

As a matter of interest to the office, the Kentucky Block Cannel Coal Co. has just completed an oil well at Cannel City. The well is located just back of the compressor building, and the indications are that it will be a paying proposition, and will most likely result in a new oil field of the State.

REPORT FOR THE MONTH OF DECEMBER.

Following is a report of the mines inspected by me during the month of December, 1912, in the order in which they were inspected, together with other matters of interest to the office.

Stearns Coal Company.

P. O., Stearns, Ky.

Mine No. 10.—

Inspected December 17, 1912.—Notice No. 299-Ba.—The condition of the mine was generally good, but the electric wires which enter the mine at the mouth were not sufficiently protected, and the ventilation was not as good as it should have been, but a new overcast was being constructed and when this is completed and the air current split the ventilation will be improved. The company was instructed to keep the mine damp.

Mine No. 11.—

Inspected December 17, 1912.—Notice No. 300-Ba.—The mine was in satisfactory condition. The only defect noted was an accumulation of coal dust on third right entry. Notice was given not to let dry dust accumulate, but to keep it well sprinkled, and to use clay for tamping all shot holes.

Mine No. 4.—

Inspected December 19, 1912.—Notice No. 301-Ba.—This mine is in connection with No. 3 Mine, and is treated as one mine. The mine is in very good condition, and in places only

minor defects were noted. Very little gas was found, and at that not enough to detect with a safety lamp excepting 11th left entry, room No. 5, where a fall has occurred, quite a lot of gas has accumulated. Notice to rid this place of the standing gas was given, as well as directions as to how this should be done.

Mine No. 1 (South Main).—

Inspected December 20, 1912.—Notice No. 302-Ba.—The ventilation of the mine at the time of the inspection was not satisfactory, due to the poor quality of curtains used throughout the mine, and on account of the use of these curtains where substantial brattices should have been used. Drainage was satisfactory.

Mine No. 1 (North Main).—

Inspected December 20, 1912.—Notice No. 303-Ba.—The timbering, drainage and ventilation of the mine are satisfactory, and the mine is damp.

WESTERN DISTRICT NO. 1.

Report of Geo. T. Sears.

This report also includes inspections made by H. D. Jones.

Central City, Ky., February 1, 1913.

PROF. C. J. NORWOOD,
Chief Inspector of Mines,
Lexington, Ky.

DEAR SIR:—I herewith submit report of mines inspected during the year 1912, with dates of inspections, number of notices, etc. The inspections made by Mr. Jones will be followed by the Serial Number "J," while those made by myself will be followed by the letter "S."

Following the advice of Mr. Jones, and it being late in the year, I have not made any of the mines in Butler, Hancock or Breckinridge counties, they all being small mines, and I would likely have to make them the first of the year to gather up reports for the office. The mines with equipments will be given in this report just as Mr. Jones gave them for 1911, except where changes have been made. This with any change in companies having charge will be made together with new mines that have been opened.

Yours very truly,
GEORGE T. SEARS,
Assistant Inspector of Mines.

BUTLER COUNTY.

ABERDEEN COAL MINE:.

Head Office, Morgantown, Ky.

P. O. Aberdeen, Ky.
Transportation, Green River.

Officers: LeRoy D. Householder, President and General Manager; Cora E. Guffy, Secretary and Treasurer.

This is a drift mine with about one-half mile of tramway to the river. Only work seven to twelve men according to the season. Ventilated by furnace. Coal 3′ 6″ to 3′ 10″ thick. Brush top on entries for mules. Men push out of the rooms. Mine worked on the double entry system on main. Rooms turn both ways off cross-entries. Hard shale roof, hard clay floor.

I. J. Foster.

Office, Foster's Landing.

P. O., Woodbury, Ky.
Transportation, (Wagons to Green River) and Green River.

This is a drift mine, one and a half miles from Green River. Haul coal in wagons to river. Coal 3′ 6″ to 3′ 9″ high. Brush top on entries. Men push out of rooms. Roof of good shale and hard clay floor.

J. W. Gidcomb.

Office at Mines.

P. O., Morgantown, Ky.
Transportation, Green River.

This is a drift mine about two miles up the river from Morgantown. Coal 3′ 6″ to 3′ 9″ high. Brush top on entries for mules. Men push out of rooms. Good shale roof, hard clay floor. Let coal down on incline about 400 feet to the river. Work six to eight men.

Inspected June 26, 1912.—Notice 632-J.—Ventilation, timbering and drainage satisfactory.

J. T. Phelps.

Office at Mines.

P. O., Morgantown, Ky.
Transportation, Green River.

This is a drift mine about one mile above J. W. Gidcomb. Coal 3′ 6″ to 4′ high. Good shale roof. Have tramway about 300 feet to the river. Coal boats and ship to Bowling Green. Work six to eight men in winter season.

I have inspected since my appointment six pair of scales; found one pair incorrect, they adjusted them at once; found the dial on four pair 50 to 75 pounds short, the scale proper was correct. One pair the dial and scales were both correct. Have inspected but one barrel of oil, Green River Coal & Coke Co., from Swift & Co. Approved.

DAVIESS COUNTY.

Fern Hill Coal Company.

Head Office, Owensboro, Ky.

P. O., Owensboro, Ky.
Transportation, City St. Ry. and L. H. & St. L. Ry.

Officers: L. N. Birk, President; H. Morton, Secretary and Treasurer.

Fern Hill Mine.—(E. L. Shell, Mine Foreman.)—

This is a shaft mine, 60 feet deep, worked on double entry system. Coal 4′ 6″ high, has a good shale roof, hard clay floor. Dip 2% S. E. Mines equipped with 12 machines, Sullivan compressor, using three Sullivan 5T 15 type punchers and one Jeffrey air chain machine. One hoisting engine, second motion, two 150 H. P. boilers, brick engine house, boiler room and blacksmith shop. Tipple has self dumping cages, shaker screens and conveyor to storage bins. Output 200 tons per day.

Inspected March 6, 1912.—Notice 598-J.—Ventilation, drainage and timbering satisfactory.

Inspected April 17, 1912.—Notice 611-J.—Ventilation, drainage not very good, timbering satisfactory.

Inspected August 6, 1912.—Notice 649-J.—Ventilation and drainage and timbering not very good.

Inspected September 25, 1912.—Notice 670-J.—Ventilation and timbering satisfactory. Drainage not very good on main.

Inspected December 4, 1912.—Notice 47-S.—The volume of air entering mine was ample, but not going very far. Bad curtains and bad brattices are the cause, as well choked conditions of air courses. Drainage and timbering very poor.

Gave orders to change these conditions and to take men off of what is called the alley on account of bad air and poor drainage.

Owen Fulkerson Mine.

P. O., Owensboro, Ky., R. F. D. No. 4.

This is a slope mine, working only six men. Hauls coal to town in wagons.

Visited September 13, 1911.—Notice 521-J.—I was there December the 3rd, 1912; they were putting in boilers preparing to start to work. Did not inspect.—S.

Louis Hoback Mine

P. O., Owensboro, Ky.

This is a slope mine, working only three men. Hauls coal in wagons to town. This mine is leased to C. W. Mathis.

Inspected December 3, 1912.—Notice 42-S.—Ventilation and drainage bad. No fire in furnace. Gave orders to keep fire in furnace.

Maglinger Coal Company.

P. O., Owensboro, Ky.

This is a shaft mine 110 feet deep. Has second motion hoisting engine. Small fan run by gasoline engine. Works 6 to 10 men. Hauls coal to town in wagons.

Inspected March 5, 1912.—Notice 597-J.—Ventilation, drainage and timbering satisfactory.

Inspected December 3, 1912.—Notice 44-S.—Ventilation not very good. Drainage and timbering fair.

Overstreet & Rudy.

P. O., Owensboro, Ky., R. F. D. No. 4.

Officers: George Rudy and Overstreet, Owners.
(George Rudy, Mine Foreman.)

This is a shaft mine 65 feet deep, coal 4′ 6″ high, hard shale roof and hard clay floor. Hauls coal to town in wagons.

Works twelve to seventeen men. Hoists coal out of shaft with horses and gin. Ventilated by furnace; gasoline pump.

Inspected March 5, 1912.—Notice 595-J.—Needed some repair work on ventilation. Drainage and timbering satisfactory.

Inspected December 4, 1912.—Notice 45-S.—Ventilation not very good. Drainage and timbering satisfactory.

JOHN M. RUDY.

P. O., Owensboro, Ky.

Buckman Mine.—

This is a slope mine. Hauls up slope with mules. Coal 4′ 6″ high. Hauls coal to town in wagons. Works from nine to twelve ven. Ventilated by furnace.

Inspected March 4, 1912.—Notice 593-J.—Ventilation and timbering satisfactory. Drainage not very good.

Inspected December 3, 1912.—Notice 41-S.—Ventilation and timbering not very good. Drainage very bad. Gave instruction to put mine in a more healthful condition.

WILSON & ELLIS.

P. O., Owensboro, Ky.

New Bar Harbor.—

This is a drift mine. Works six to ten men. Hauls coal to town in wagons. This mine is owned by Mrs. James Wilson.

Inspected December 2, 1912.—Notice 40-S.—Ventilation, drainage and timbering satisfactory.

W. E. OVERSTREET.

P. O., Owensboro, Ky.

This is a shaft mine 87 feet deep. Coal 4′ 6″, has a good shale roof, hard clay floor. Worked on double entry system. Furnace ventilation. Hoists coal with horse power and gin; country market. Works six to ten men.

Inspected December 3, 1912.—Notice 43-S.—No fire in furnace, no reading, very dry. Gave orders to have sprinkling done.

J. Lee Rudy.

P. O., Owensboro, Ky.
Transportation, wagons to Owensboro.

This is a shaft mine 67 feet deep, coal 4′ 6″ high, hard shale roof, hard clay floor. Hoists coal out of shaft with horse power and gin. Has a small upright boiler for pumping water out of mine. Furnace ventilation. Works 10 to 14 men.

Inspected March 5, 1912.—Notice 596-J.—Ventilation and timbering satisfactory. Drainage not very good at lyway.

Inspected December 4, 1912.—Notice 46-S.—Ventilation, drainage and timbering O. K.

McLEAN COUNTY.

Consolidated Coal Company.

Head Office, Central City, Ky.

P. O., Island, Ky.
Transportation, O. & N. Division of L. & N. R. R.

Officers: S. J. Gish, President; D. B. Lam, Jr., Secretary and Treasurer; G. B. Patterson, Manager.

Karnes Mines.—(Robert Davis, Mine Foreman.)—

This is a drift mine. No. 9 coal 4 feet high. Has good shale roof, hard clay floor. Solid shooting holes 5 to 7 feet, powder 2½ to 4 feet to holes. Use squibs and fuse. Ventilated by furnace. Capacity 200 tons per day.

Inspected January 3, 1912.—Notice 574-J.—The ventilating current was ample but was not reaching the working places as it should, due to lack of check curtains. Drainage and timbering satisfactory.

Inspected November 16, 1912.—Notice 35-S.—Ventilation, drainage and timbering satisfactory.

Green River Coal Company.

P. O., Livermore, Ky.
Transportation, Green River.

George Pritchett, President and Manager.

Klondyke Mine.—

This is a drift mine with four openings, natural ventilation. Coal 3½ to 4 feet thick. Has a sandstone roof. Natural

drainage. Coal trammed one-fourth mile to river. Working six men.

Inspected November 16, 1912.—Notice 32-S.—This mine has natural ventilation. Four openings to the mine. The current of air was strong enough the day I was there. Recommended a furnace for the ventilation.

Memphis Mining Company.

Head Office, Charleston, W. Va.

P. O., Island, Ky.
Transportation, O. & N. Division of L. & N. R. R.

Officers: M. T. Roach, President; W. C. Boyer, Vice President; R. H. Richardson, Secretary and Treasurer; C. W. Rodgers, General Manager; James Halstead, Assistant Manager of Mines.

Memphis Mines.—

This is a slope mine, coal 4½ feet high, good shale roof, hard clay floor. Mine equipment: One 300 KW 250 V Allis-Chalmers generator, direct connected 450 H. P.; Ridgeway engine; one 6-ton Jeffrey motor; two 150 H. P. boilers; brick power house and boiler; one 12-foot fan run by electric motor. Capacity 350 tons per day. This mine has been shut down since April 1, 1912. Cause for the shut down not known. No inspection made since that time.

The O'Neil Coal Company.

P. O., Island, Ky.
Transportation, O. & N. Division of L. & N. R. R.

Officers: John O'Neil, President and General Manager; John Penrod, Secretary and Treasurer.

The "Big Four" Mine.—

This is a shaft mine 56 feet deep, No. 9 coal 5 feet high. Has a good shale roof and hard clay floor. Worked on double entry system. Shooting on solid; holes 5 to 7 feet, 2½ to 4 feet powder. Mine equipment: One 45 H. P. boiler; one 32 H. P. Jackson second motion hoisting engine; one 3-inch Riley steam pump. Capacity 125 tons per day.

Inspected November 16, 1912.—Notice 33-S.—Ventilation, timbering and drainage satisfactory.

GREEN RIVER COAL & COKE COMPANY.

Office, Island, Ky.

P. O., Island, Ky.
Transportation, O & N. Division of L. & N. R. R.

Officers: John W. Love, President; E. S. Randle, Secretary, Treasurer and Manager.

(Thos. Blades, Mine Foreman.)

This is a shaft mine 76 feet deep. Coal 4½ feet high. Has a good shale roof and hard clay floor. Dips 1½% southeast. Solid shooting. Holes 5 to 7 feet. Powder 2½ to 4 feet to the hole. Men fire their own shots. Rooms 24 feet wide. One to three holes to the room. Use squibs and fuse for lighting shots. Coal is handled from lyway with tailrope engine 2,000 feet. Ten cars a trip. Mine equipment: One 12x24 hoisting engine, second motion; two 60 H. P. boilers; self dumping cages; shaker screens; one 12-foot fan. Capacity 500 tons per day.

Inspected March 14, 1912.—Notice 602-J.—Ventilation, drainage and timbering not very good.

Inspected July 5, 1912.—Notice 634-J.—Ventilation and timbering fair. Drainage not very good.

Inspected November 15, 1912.—Notice 31-S.—Ventilation not very good on one entry where curtains where torn down. Drainage not very good. Timbering satisfactory.

MUHLENBERG COUNTY.

ADVANCE COAL COMPANY.

P. O., Hillside, K.
Express Office, Greenville, Ky.
Transportation, Louisville Division I. C. R. R.

Woodson Mines.—(William Tyldesley, Mine Foreman.)—This is a shaft mine 72 feet. No. 9 coal 5 feet thick. Worked on the double entry system. Has a good shale roof and hard clay floor. Mine equipment: One 100 KW 250 V Morgan

Gardner generator; one 150 H. P. Skinner engine; one 16x32 Crawford-McCrimmon hoisting engine; two 150 H. P. boilers; four (D) Morgan Gardner chain breast machines; self dumping cages; shaker screens. Air is furnished by the Oakland fan. Capacity 500 tons per day.

Inspected January 5.—Notice 576-J.—The ventilating current was ample and was reaching the working places fairly well. They do not run fan regular enough. (See inspection notice.) Inspected July 2.—Inspection Notice 633-J.—The volume of air was ample. Needed to stop up an open cut and some leaks. Timbering satisfactory.

Inspected October 8.—Notice 8-S.—Ventilation not very good; the air has too far to travel through the old works of Hillside Mines before it reaches Woodson Mines. Recommended new air shaft. Drainage and timbering satisfactory.

Inspected December 23.—Notice 60-S.—Ventilation all right except second west where curtains were torn down, and two bad brattices, one at No. 10 room, and one at No. 6 room. Drainage not very good on 2nd west. Timbering O. K.

Beech Creek Coal Company.

Head Office, Beech Creek, Ky.

P. O., Beech Creek, Ky.
Express Office, Browder, Ky.
Shipping Point, Browder, Ky.
Transportation, O. & N. Division of L. & N. R. R.

Officers: Dr. G. B. Henning, President; L. Z. Kirkpatrick, Vice President; A. D. Kirkpatrick, Secretary, Treasurer and Manager; R. R. Kirkpatrick, Assistant Manager.

(W. H. Chumley, Mine Foreman.)

This company operates two mines, both No. 9 coal. They have abandoned the No. 11 Mine, and have opened No. 9 Mine on the opposite side of switch, with a drift which is on a level with siding. This coal is 6 feet thick, has a good shale roof and hard clay bottom, and is worked on double entry system. Mine is about 800 feet from siding. The coal is hauled about 400 feet outside the mine with mules to the bottom of slope, then up slope to tipple with engine. Cars run back by gravity.

Coal is mined with chain breast machines. Power furnished from No. 1 Mine. Furnace ventilation. Capacity 150 tons per day. 15 men.

Inspected October 7.—Notice 5-S.—Just finishing air shaft. Conditions good.

Beech Creek No. 1.—(W. H. Chumley, Mine Foreman.)—

This is a shaft mine, No. 9 coal 5½ to 6 feet thick, with good shale roof and hard clay bottom, and worked on double entry system. Dip 1% N. W. Capacity 600 tons per day.

Equipment: One 15x30 Crawford-McCrimmon hoisting engine; four 17 A Jeffrey chain breast machines; one Morgan Gardner chain breast machine; one 13-ton motor; self dumping cages; shaker screens; one electric pump; one 12-foot fan.

Inspected July 23.—Notice 641-J.—Ventilation, drainage and timbering satisfactory.

Inspected October 7.—Notice 4-S.—Ventilation, timbering and drainage satisfactory.

I was at this mine December 26th; they were not running. Did not inspect.

Bevier Coal Company.

Head Office, Cleaton, Ky.

P. O., Cleaton, Ky.
Transportation, O & N. Division of L. & N. R. R.

Officers: J. W. Bastin, President; J. C. Brown, Treasurer and General Manager; R. S. Little, Secretary.

Cleaton Mine.—(George Wales, Mine Foreman.)—

This is a shaft mine 70 feet deep working No. 9 coal, and worked on three entry system on main and double on cross entries. Coal 4′ 9″ to 5 feet, with good shale roof and hard clay floor. Dip 1½% N. W. Mine equipment: One 26x30 Norwalk compressor; one 125 KW 250 V Ryan Thompson generator; Ridgeway engine; fifteen Harrison S. W. punch machines; one 6-foot Jeffrey fan, run by electric motor; one 12-foot Cole fan, run by steam; one 10X16 hoisting engine; two 8-ton Jeffrey motors; shaker screens; self dumping cages. Capacity 750 tons.

Inspected January 15.—Notice 577-J.—The ventilation was ample and reaching the working places fairly well. See inspection notice for full readings on each entry. Timbering and drainage satisfactory.

Inspected May 30.—Notice 623-J.—The volume entering was ample, but owing to leaks on main and bad curtains on 5th N and 6th N, was not reaching all the working places as it should. Timbering satisfactory. Drainage not very good on main.

Inspected September 5.—Notice 663-J.—Needed to put some curtains on 6th north so there would not be so much leakage; also put curtain on 5th south; some broken timbers on main.

Inspected October 11.—Notice 11-S.—Volume entering was ample, but was not reaching face of working places as it should on account of leaks in brattices and an open trap door. Timbering and drainage satisfactory.

Inspected December 16.—Notice 55-S.—Ventilation not very good. Drainage and timber satisfactory.

Black Diamond Mining Coapmny.

Head Office, Drakesboro, Ky.

P. O., Drakesboro, Ky.
Transportation, O. & N. Division of L. & N. R. R.

Officers: W. W. Bridges, President; T. A. Isaac, Vice President; F. E. Jones, Secretary.

Pierce Mines.—(Franklin, Mine Foreman.)—

This is a shaft mine 120 feet deep, working No. 9 coal, 5 to 5-6″ thick, with a good shale roof and hard clay floor. Dip 1 to 4½% S. W. Worked on double entry system. Mine equipments: One 100 KW, one 150 KW 250 V Morgan Gardner generator; one 200, two 150 H. P. boilers; one 20x36 Crawford McCrimmon hoisting engine; seven Morgan Gardner chain breast machines; two Goodman breast chain machines; one 10-ton Goodman motor; one 10-ton Morgan Gardner motor; self dumping cages; shaker screens. Capacity 600 tons per day.

Inspected February 5.—Notice 580-J.—The volume of air entering was 18,000 feet, 10,000 less than previous visit. Needed to rush entry back to slope for air course. One-half of 1% gas in several places. Drainage and timbering satisfactory.

Inspected June 14.—Notice 628-J.—The volume of air entering was ample, but owing to open crosscuts and curtains being in bad repair, was not reaching all the working places as it should. Found one-half of 1% gas in several places.

Inspected September 24, 1912.—Notice 652-J.—There was a fall of slate in the main air course which had the air choked so that there was not sufficient air. Gave orders to have it cleaned out so that air could enter, and to rush air course back to slope. Found gas in several places. One and one-half per cent. in 2nd north.

Inspected October 24, 1912.—Notice 19-S.—The volume of air was just sufficient for the number of men, and conditions very bad. Gave orders to rush repair work, double shift night and day.

Inspected November 25, 1912.—Notice 36-S.—The ventilation was not sufficient for the number of men working. They were rushing the air course back to slope as fast as possible. When done will give the air free passage through the main. Preparing to put in new fan.

Central Coal & Iron Company.

Head Office, Central City, Ky.

P. O., Central City, Ky.
Transportation, Louisville Division I. C. R. R., and O. & N. Division of L. & N. R. R.

Officers: T. C. duPont, President; S. A. Yorks, Vice President and Treasurer; John B. McElhinny, Secretary; Huw D. Jones, Superintendent; Sam Danks, Bookkeeper and Chief Clerk.

Central City Mines.—

This is a shaft mine 180 feet deep, worked on double entry system. No 9 coal 4½ to 5 feet thick. Has not as good shale roof as the average No. 9. Shoot on solid. Holes 5 to 7 feet. 2½ to 4 feet powder. One to two shots in room. Use squibs and

Inspected August 19.—Notice 656-J.—The volume of air entering was ample and reaching working places fairly well. Timbering and drainage satisfactory.

Inspected November 11.—Notice 27-S.—Ventilation, timbering and drainage satisfactory.

Graham Mine.—(Arch Pollock, Mine Foreman.)—

P. O., Graham, Ky.

This is a drift mine, worked on three entry system on main, double on cross entries. Good shale roof and hard clay floor. No. 9 coal 4½ to 5 feet. Dips 1½% S. W. Mine equipment: Jeffrey car haul up incline onto tipple; automatic dumps; shaker screens; ten Jeffrey 17A chain breast machines; one 10-ton Jeffrey motor; one 6-ton Jeffrey motor; one electric rotary pump; one electrical centrifugal pump; one 18-foot Crawford-McCrimmon fan. The power house furnishes power for Graham, Skibo and Jarvis. Seven 150 H. P. boilers; two 150 KW Jeffrey generators; two 225 McEwen engines; one 18x36 600 H. P. Corless engine, direct connected to a 300 KW 2,300 volts A. C. Allis-Chalmers generator. Also 110 V exciter.

Inspected January 4.—Notice 575-J.—Ventilation, drainage and timbering satisfactory.

Inspected July 25.—Notice 643-J.—Ventilation and drainage satisfactory. Timbering fair.

Inspected October 15.—Notice 13-S.—Ventilation, drainage and timbering satisfactory.

Skibo Mines.—(Arch Pollock, Mine Foreman.)—

P. O., Graham, Ky.

This is a slope mine on opposite side of tipple from Graham, using the same tipple, the same kind of car haulage and dumps, and over the same screens with Graham. Capacity of Graham and Skibo 2,000 tons per day.

Inspected May 28.—Notice 622-J.—Ventilation and timbering satisfactory. Drainage not very good on 5th and 6th N, and 7th and 8th N.

Inspected August 22.—Notice 658-J.—Ventilation, drainage and timbering satisfactory.

Inspected November 13.—Notice 29-S.—Ventilation, drainage and timbering not very good.

The Dovey Coal Company and the Elk Valley Consolidated Coal Company have been dissolved, the Dovey Mines being purchased by the Hillside Coal Company. The Elk Valley Consolidated Coal Co. was dissolved and formed what is now known as the Muhlenberg Coal Company, and what was known as the Elk Valley Coal Co., and which is now known as the Continental Fuel Co. The Muhlenberg Coal Co., owning the Browder and the Radiant Mines, the Continental Fuel Co., owning the Diamond Block and the Elk Valley Mines.

Muhlenberg Coal Company.

Head Office, Browder, Ky.

P. O., Browder, Ky.
Express Office, Browder, Ky.
Transportation, O. & N. Division of L. & N. R. R.

Officers: T. B. Caldwell, President; C. D. M. Greer, Vice President; R. P. Curry, Secretary and Treasurer; W. R. Lynn, Superintendent and General Manager.

Browder Mines.—James Abercrombie, Mine Foreman.)—

This is a shaft mine 200 feet deep, and coal worked on the double entry system. This shaft went down near a fault, and struck No. 11 coal, which was worked for a while, but which has been abandoned after driving 1,200 feet east struck this fault, and found that No. 9 lay about 27 feet above No. 11. This fault was tunnelled through to No. 9. On an incline of about 3½ or 4%, this coal runs from 4½ to 6 feet thick, and has a good shale roof and hard clay floor. Mine equipment: One 16x30 Crawford-McCrimmon hoisting engine; one 150 KW 250 V Jeffrey generators; one Skinner engine; five 17A Jeffrey chain machines; two 150 H. P. boilers; self dumping cages; shaker screens; one 12-ton Jeffrey motor. Capacity 500 tons.

Inspected February 10.—Notice 584-J.—Ventilation, drainage and timbering satisfactory.

Inspected August 23.—Notice 659-J.—Ventilation, drainage and timbering satisfactory. Found some gas in old work in No. 11 coal.

Inspected October 23.—Notice 18-S.—Ventilation, drainage and timbering satisfactory. ½ of 1% gas in third north, and north blind to main entry.

Inspected November 29.—Notice 39-S.—The ventilation was fair on this inspection but the mine was getting very dry. Gave orders to sprinkle as often as necessary to keep plenty of moisture.

Radiant Mines.—(Will Davis, Mine Foreman.)—

P. O. Drakesboro, Ky.

This is a shaft mine 72 feet deep. No. 9 coal, 5 to 5½ feet. Inclination 1% S. Worked on double entry system, and has a good shale roof and hard clay floor. Mine equipment: One 40 H. P. and one 80 H. P. boilers; one second motion hoisting engine; one 12-foot fan; self dumping cages; shaker screen; 4 H. D. Morgan Gardner chain breast machines. Did get power from Elk Valley. These machines have been transferred to Browder, and this coal is shot on solid holes; 5 to 8 feet, 2½ to 5 feet powder, 1 to 2 holes to room. Men do own shooting, using squibs and fuse. This mine coals engines for O. & N. R. R. Capacity 400 tons per day.

Inspected March 11.—Notice 600-J.—Ventilation, drainage and timbering fairly good. Gave orders to place a certified man in charge.

Inspected June 10.—Notice 630-J.—Ventilation not very good. Timbering and drainage satisfactory.

Inspected October 3.—Notice 3-S.—Ventilation not very good on account of open brattices and bad curtains. Drainage not very good, ditches not open. Timbering fair.

Inspected December 13.—Notice 53-S.—The volume of air entering was ample, but not reaching working places as it should. Open cross cuts, bad brattices and torn curtains, the cause. Drainage not very good, needed to clean ditches. Timbering satisfactory.

CONTINENTAL FUEL COMPANY.

Head Office, Drakesboro, Ky.

P. O., Drakesboro, Ky.
Transportation, O. & N. Division of L. & N. R. R.

Officers: C. A. Rogers, President; J. M. Thompson, Vice President and General Manager.

Diamond Block Mine.—(E. Davis, Mine Foreman.)—

This is a shaft mine 96 feet deep. No. 9 Coal 4½ to 5 feet thick. Has a good shale roof and hard clay floor. Worked on three entry system on main, and double on cross entries. Dip 1½ to 2% S. W. Mine equipment: two 150 H. P. boilers; one 100 KW 250 V Morgan Gardner generator; one 150 H. P. Skinner engine; one 15x30 Crawford-McCrimmon hoisting engine; one 14 feet Crawford-McCrimmon fan; six Morgan Gardner electric chain breast machines; three steam mine pumps; self dumping cages; shaker screens. Capacity 750 tons per day. This mine is just starting to run coal after a shut down for eight months.

Inspected February 7.—Notice 582-J. and 581-J.—These two inspections were made one on each side of the mine. Ventilation not very good. Needed some work done which was mutual.

Inspected December 10.—Notice 50-S.—The volume of air entering mine was ample, and reaching the face of all entries on north side, but not so good on south side. Several falls of slate in air course, and some entries full of water. Gave orders to have mine examined every morning before men go down to work, after they commenced running coal.

Elk Valley Mine.—(Wm. Webb, Mine Foreman.)—

This is a shaft mine 49 feet deep, working No. 9 coal 5½ feet thick. Dip 2% S. Worked on the double entry system. Has a good shale roof and hard clay floor. Mine equipment: two 150 H. P. and one 80 H. P. boilers; one 300 KW 250 V generator; one 300 H. P. Corless engine; one hoisting engine; one 10-ton Morgan Gardner electric motor; one 16-foot fan; one electric pump; six Morgan Gardner chain breast machines; self dumping cages; shaker screens. Capacity 600 tons per day.

Inspected February 13.—Notice 588-J.—Ventilation in bad condition. Drainage and timbering not good. See inspection sheet.

Inspected December 6.—Notice 48-S.—Ventilation, drainage and timbering not very good. Just beginning operation after eight months shut down. Gave orders to reverse fan so the men could get fresh air, that was not coming through the old workings. Some black damp and lots of water.

GIBRALTAR COAL COMPANY.

Head Office, Memphis, Tenn.

P. O., Mercer, Ky.
Transportation, Louisville Division of I. C. R. R.

Officers: R. L. Brown, President; William Kenneday, Vice President; Thomas Rhea, Secretary and Treasurer; J. A. Smith, Superintendent.

Brownsville Mine.—(Warner Rich, Mine Foreman.)—

This is a shaft mine 48 feet deep. Works No. 9 coal 4½ to 5 feet thick. Good shale roof and hard clay floor. Worked on double entry block system. Dip 1% E. Mine equipment: One 150 KW 250 V Westinghouse generator; one 150 H. P. Russell engine; one 16x32 Crawford-McCrimmon hoisting engine; two 150 H. P. boilers; seven Goodman chain breast machines; one 10-ton Jeffrey motor; one 8-foot Crawford-McCrimmon fan; self dumping cages; shaker screens. Capacity 800 tons per day.

Inspected May 15.—Notice 614-J.—Ventilation very good. Need to place regulator so as to send more air to 1st and 2nd E. off 10th S. Drainage and timbering satisfactory.

Inspected October 29.—Notice 23-S.—Very good in every respect. This is the best kept mine in this district.

GREENVILLE COAL COMPANY.

Head Office, Greenville, Ky.

P. O., Greenville, Ky.
Transportation, Louisville Division of I. C. R. R.

Officers: W. A. Wickliffe, President; C. M. Martin, General Manager; M. L. Wickliffe, Secretary and Treasurer; P. R. Wickliffe, Engineer.

Powderly Mine.—(Herbert Myers, Mine Foreman, Powderly, Ky.)—

This is a shaft mine worked on double entry system, working No. 9 coal. Has a shale roof, which is not good in some parts of the mine. Mine equipment: One 250 V Westinghouse generator, run by 2,400 V. A. C. motor. This is set on outside at far end of mine, with wires going down bore hole carrying 250 volts D. C. down into the mine, for machines and motor; one 2,400 V Westinghouse generator, A. C., direct connected to a 400 H. P. Buckeye engine; two 150 H. P. boilers; seven 17 A, one 19 A Jeffrey chain breast machines; one 18-foot Crawford-McCrimmon fan; Jeffrey car haul up slope; automatic dump; shaker screens.

Inspected May 14.—Notice 613-J.

Inspected August 8.—Notice 652-J.

Inspected October 28.—Notice 22-S.

Inspected December 19.—Notice 58-S.—Ventilation, drainage and timbering satisfactory.

Martwick Mine.—(A. C. Mercer, Mine Foreman, Martwick, Ky.)—

This is a shaft mine 160 feet deep. No. 9 coal. Shale roof and hard clay floor. Coal 4′ 9″ thick. Mine equipment: one 175 KW 250 V generator, connected to a McEwen engine; four 17A Jeffrey chain breast mining machines; Crawford-McCrimmon hoisting engine and fan; self dumping cages and shaker screens. This mine is worked on three entry system on main entries, double on cross entries. Main entries driven east and west.

Inspected June 5.—Notice 625-J.—Ventilation, drainage and timbering satisfactory.

Inspected September 17.—Notice 666-J.—The volume of air entering was ample, but owing to poor curtains and open cross cuts, was not reaching working places as it should. Gave orders to remedy same.

Inspected October 30.—Notice 25-S.—The volume of air entering mine was ample, but was not reaching face of all the working places on account of open brattices and bad curtains, fallen slate, etc.

Inspected December 14.—Notice 54-S.—Ventilation not very good. Bad brattices and bad curtains being the cause. Drainage and timbering satisfactory.

HILLSIDE COAL COMPANY.

Head Office, Greenville, Ky.

P. O., Greenvile, Ky.
Transportation, Louisville Division of I. C. R. R.

J. W. Lam, President and Manager.

This company operates three mines; Hillside, Oakland and Dovey.

Hillside Mine.—(Clarence Arnold, Mine Foreman, Hillside, Ky.)—

This is a shaft mine 70 feet deep. No. 9 coal 5 feet thick. Worked on the double entry system. Dip 1% N. E. Good shale roof and hard clay floor. Mine equipment: Two D. and one HD Morgan Gardner chain breast machines; one hoisting engine, second motion; shaker screens; one 6-foot fan. Get electrical power from Oakland. Capacity 300 tons per day.

Inspected July 8.—Notice 635-J.—Ventilation not very good. Drainage and timbering satisfactory.

Inspected October 8.—Notice 7-S.—Ventilation bad. Ordered fan put in instead of a poorly constructed furnace. Timbering and drainage fair.

Inspected December 23.—Notice 61-S.—Ventilation and drainage satisfactory. Timbering fair. At this inspection they had put a 6-foot fan at the furnace shaft, and it was doing good work. The mines are in good shape.

P. O., Greenville, Ky.

Oakland Mine.—(Jesse Arnold, Mine Foreman.)—

This is a shaft mine 72 feet deep. No. 9 coal 5 feet thick, and worked on double entry system. Dip 1% N. E. Good shale roof and hard clay floor. Mine equipment: One 100 KW 250 V Morgan Gardner generator; one 125 H. P. Skinner engine; one 150 H. P. and one 40 H. P. boilers; three H. D. Morgan Gardner chain breast machines; one D chain breast

machine; one electric pump; shaker screens. Capacity 400 tons per day.

Inspected August 27.—Notice 660-J.—Ventilation, drainage and timbering satisfactory.

Inspected October 2.—Notice 21-S.—Ventilation, drainage and timbering satisfactory.

P. O., Mercer, Ky.

Dovey Mine.—(Burel Wylie, Mine Foreman.)—

This is a shaft mine 110 feet deep. No. 9 coal 5 feet high, and has a good shale roof and hard clay bottom. Worked on double entry system. Dip 1½% N. W. Mine equipment: One 15x30 Crawford-McCrimmon hoisting engine; one 12-foot Crawford-McCrimmon fan; one 26x30 Norwalk compressor; eight puncher machines; two 150 H. P. boilers. Men employ shot firers.

Inspected June —.—Notice 624-J.—Cleaning up and preparing to go to running. See inspection sheet.

Inspected December 11.—Notice 51-S.—The volume of air entering mine was ample and distributed fairly well, but mixed with a considerable amount of black damp. Just starting up after a shut down on account of having no water, since June. Gave orders to run fan nights as well as days until mine was cleared of foul air.

Holt Coal Company.

Head Office, Central City, Ky.

Shipping Point, Cleaton, Ky.
Transportation, O. & N. Division of L. & N. R. R.

Officers: W. F. Holt, President; B. B. Holt, Vice President; N. A. Holt, Secretary; E. W. Holt, Manager.

(W. C. Webb, Mine Foreman.)

This is a shaft mine 130 feet deep. No. 9 coal worked three entries on mains and double on cross entries. Has a shale roof, which is not as good as the average No. 9 coal of this district. Hard clay floor. Dips 1½% N. W. Mine equipment: One Norwalk and one Sullivan compressor; one Ottomwa hoisting engine; one 16-foot Ottomwa fan; two 150

H. P. boilers; two 100 H. P. boilers; thirteen J. N. Sullivan, two B. W. Harrison, and one Ingersoll punch machines; self dumping cages; shaker screens; conveyor for boiler fuel. Capacity 800 tons per day.

Inspected July 25.—Notice 644-J.

Inspected October 10.—Notice 10-S.—Ventilation, drainage and timbering satisfactory on east side of mines; on the west not very good on account of repair work being done, curtains being down, etc.

Inspected December 16.—Notice 56-S.—Ventilation and drainage not very good. Timbering fair.

Kentucky Midland Coal Company.

P. O., Midland, Ky.
Express Office, Central City, Ky.
Transportation, Ky. Midland R. R. to Central City, and connect with I. C. R. R.

Officers: Glenn M. Averil, President; G. B. Henger, Vice President; M. M. Wheeler, Secretary; William Hughes, Superintendent.

This is a shaft mine. No. 9 coal 4½ to 5 feet thick. Has a shale roof not as good as the average No. 9 in this district, and a hard clay floor. Mine equipment: One 125 KW 250 V Goodman generator; one 16x30 Skinner engine; one 18x36 Danville hoisting engine; four 19A Jeffrey chain breast machines; one 10-foot Jeffrey fan, run by an electric motor; two 150 H. P. boilers; brick engine and boiler rooms; brick blacksmith shop and bath room; steel tipple; self dumping cages; shaker screens.

Inspected May 24.—Notice 619-J.—Ventilation, drainage and timbering satisfactory. Found ½ of 1% gas in 2nd west and blind south side and 1st east north side.

Inspected September 10.—Notice 664-J.—Ventilation not very good. Gas in several places. See notice.

Inspected October 17.—Notice 14-S.—Ventilation not very good. See inspection notice.

Inspected November 27.—Notice 38-S.—Ventilation and timbering very poor. Gave them 20 days' notice.

Inspected December 20.—Notice 59-S.—The ventilation has been improved since last inspection, but it is only temporary work. Gave orders to continue cleaning and timbering air courses so as to maintain ventilation.

Lam Coal Company.

P. O., Bevier, Ky.
Express Office, Bevier, Ky.
Transportation, O. & N. Division of L. & N. R. R.

Officers: Thos. E. Sumner, President; H. Sumner, Vice President and General Manager; Wm. McCandless, Secretary and Treasurer.

(Bob Mitchell, Mine Foreman.)

This is a drift mine, elevating coal up incline to tipple. No. 9 coal, worked on double entry system. Has a good shale roof and hard clay floor. Coal 5 feet thick. Mine equipment: One 150 KW 250 V Goodman generator; one 150 and one 60 H. P. boilers; six type D. 1906 Goodman chain breast machines; one 8-ton Goodman motor; one 14-foot Crawford-McCrimmon fan; Wagner-Palmrose car haul; automatic dump; shaker screen. Capacity 900 tons per day.

Inspected June 20.—Notice 631-J.—Ventilation and drainage not very good.

Inspected October 4.—Notice 3-S.—Volume of air entering was ample, but was not reaching face of all the working places as it should. Needed a considerable amount of repair work done. Drainage not very good.

Morgan Mine.

The R. Morgan Coal Company has leased this mine to J. W. Lam, of Greenville, Ky., and D. A. Woodburn, of Central City, Ky.

P. O. Mercer, Ky.
Transportation, Louisville Division of I. C. R. R.

Officers: J. W. Lam, President; D. A. Woodburn, Secretary and General Manager.

Morgan Mine.—(D. A. Woodburn, Mine Foreman.)—

This is a shaft mine. No. 9 coal 5 feet thick. Has a good shale roof and hard clay floor. Worked on double entry system. Mine equipment: One 100 KW 250 V Goodman generator; one McEwen engine; one Littlefield hoisting engine; one Jeffrey motor; one 150 and two 60 H. P. boilers; four Jeffrey chain breast machines; self dumping cages, shaker screens. Capacity 350 tons per day.

Inspected September 3.—Notice 661-J.—Ventilation, drainage and timbering satisfactory. ½ of 1% gas in 6th N. main.

Inspected October 29.—Notice 23-S.—Ventilation fair under circumstances. Still cleaning up and doing repair work after a long shut down. Drainage and timbering satisfactory.

Nelson Creek Coal Company.

P. O., Nelson, Ky.
Express Office, Central City, Ky.
Transportation, Louisville Division of I. C. R. R.

Officers: R. S. Lytle, President; J. W. Bastin, Secretary and General Manager.

Nelson Mine.—(Jas. Bastin, Mine Foreman.)—

This is a shaft mine 180 feet deep. No 9 coal 4½ to 5 feet thick. Has a very poor shale roof and hard clay floor. Three entry system on main and double on cross entries. The tipple and power house with all outside equipment, except the fan, were burned on the 17th of December, 1912. The loss was covered by insurance. The company is making preparations to rebuild the plant.

Rock Island Coal Company.

P. O., South Carrollton, Ky.
Express Office, South Carrollton, Ky.
Transportation, O. & N. Division of the L. & N. R. R.

Officers: R. W. Browder, President; W. W. Browder, Vice President; M. A. Summers, Secretary, Treasurer and General Manager.

This is a shaft mine 270 feet deep. No. 9 coal 4′ 9″ thick. Has a good shale roof and hard clay floor. Shoot on solid. Bore holes 5 to 7 feet. 2½ to 4 feet powder. Use squibs and fuse. Mine has but one outlet, so does not work but ten men. Mine equipment: Two 100 H. P. boilers; one second motion hoisting engine; one 8-foot fan. (A small compressor and three Harrison punch machines, which are now out of use.)

Inspected March 19.—Notice 606-J.—Needed to cut a cross cut between two rooms. Timbering satisfactory. Drainage not very good at bottom.

Inspected October 25.—Notice 20-S.—The volume of air was just sufficient for the number of men at work. ½ of 1% gas in north blind entry.

Sunrise Coal Company.

P. O., Drakesboro, Ky.
Transportation, O. & N. Division of L. & N. R. R.

Officers: Dan H. Foutz, President; John W. Collins, Vice President and General Manager.

This is a drift mine, working No. 11 coal. Coal 6 to 6′ 6″ thick, with very bad roof, and worked on double entry system. This mine shut down in March, 1911, and has never resumed work.

Hendrie Coal Company.

P. O., Beech Creek, Ky.
Express Office, Browder, Ky.
Transportation, O. & N. Division of L. & N. R. R.

Officers: John Hendrie, President and Treasurer; John H. Trathen, Vice President and General Manager; D. D. Duncan, Secretary.

This is a drift mine, working No. 9 coal. Furnace ventilation. Double entry system. This mine is opened on a level with tipple, 1,350 feet north of Beech Creek switch, and one-half mile southeast of Beech Creek Mine. Mule haul from mine to tipple; hand dump; bar screens; one electric chain breast machine. Get power from Beech Creek plant.

Inspected October 7.—Notice 6-S.—Ventilation, drainage and timbering satisfactory. Was at this mine December 26th, but they were not working, so did not make inspection.

OHIO COUNTY.

Broadway Coal Mining Company.

Head Office, Memphis, Tenn.
P. O., Simmons, Ky.
Express Office, McHenry, Ky.
Transportation, Louisville Division of I. C. R. R.

Officers: W. W. Simmons, President; Alexander Allison, Vice President; C. H. Albright, Secretary and Treasurer; George Burton, Superintendent.

Simmons Mine.—(Chas. Hendrie, Mine Foreman.)—

This is a shaft mine 65 feet deep. No. 9 coal 4½ to 5 feet high. Worked three entries on main. Worked on double entry system. Has a good shale roof and hard clay floor. Mine dips ½% N. W. Mine equipment: One Thompson Ryan genèrator; one 100 KW 800 A. M. P. 250 V direct connected to McEwen engine; five 150 H. P. boilers; one Ingersoll-Sargent 24x36 compressor; eighteen Ingersoll H 4 punch machines; Leitchfield hoisting engine; one 10-ton Goodman motor; one Crawford-McCrimmon 12-foot fan; self dumping cages; shaker screens. Capacity 750 tons per day.

Inspected March 18, 1912.—Notice 605-J.—The volume of air entering, but owing to curtains being in such bad repair, was not reaching the working places as it should. Gave the necessary instructions to remedy same at once. Timbering satisfactory.

Inspected July 22, 1912.—Notice 640-J.—The volume of air entering was ample, but was not reaching the working places as it should. Gave instructions in regard to curtains, etc.

Inspected September 23, 1912.—Notice 668-J.—They had not complied with my instructions of July 22nd. Gave them a 20 days' notice. See instruction notice.

Inspected October 18, 1912.—Notice 15-S.—Ventilation not very good; defective brattices and bad curtains being the

cause. They are complying with Mr. Jones' requirements as fast as possible in regard to man-way. Will soon have mine in good shape. Drainage and timbering satisfactory.

Central Coal & Iron Company.

Head Office, Central City, Ky.

P. O., McHenry, Ky.
Shipping Point, McHenry, Ky.
Transportation, Louisville Division I. C. R. R.

Officers: T. C. duPont, President; S. A. Yorks, Vice President and Treasurer; John B. McElhinny, Secretary; Simon Jones, Superintendent.

New Render Mine.—(Edward Gywn, Mine Foreman.)—This is a slope mine. No. 9 coal 4″ to 5 feet high. Good shale roof and hard clay floor. Worked on triple and double entry system. Mine equipment: One electric hoist for pulling car up slope to tipple; four Jeffrey chain breast 17A machines; one electric pump; shaker screens. Ventilated by furnace. Dip 1½% S. E. Gets power from McHenry. Capacity 500 tons per day.

Inspected November 12, 1912.—Notice 28-S.—Ventilation, drainage and timbering satisfactory.

This mine is just starting to work. Has been shut down (for the want of power) since the plant at McHenry was destroyed by fire.

Kimbley Coal Company.

P. O., Centertown, Ky.

Transportation, M. H. & E. R. R.

Chas. McChesney, President and Manager.
(Balus Baker, Mine Foreman.)

This is a drift mine. No. 11 coal 6″ high. Has a soft shale from 6 to 12 inches between the coal and rock. From 1 to 3 inches soapstone 2 feet from floor. Mine equipment: One 150 H. P. boiler; one 20x22 Ingersoll compressor; four Harrison punch machines; one second motion hoist engine to pull cars up slope to tipple; self dump; shaker screens; furnace ventilation.

Visited June 7, 1912.—Notice 627-J.—Did not inspect, just making connection between air shaft and mine. Entry driven 300 feet.

Inspected November 20.—Notice 35-S.—Ventilation, drainage and timbering satisfactory.

Martin-Pollock Coal Company.

P. O., Cromwell, Ky.
Transportation, Green River.

Officers: A. R. Pollock and Henry Martin (Owners).

High View Mine.—

This is a drift mine. No. 9 coal. Tramway from mines to river one-half mile. They coal boats and ship to Bowling Green. River transportation. Works 14 men.

Inspected July 29, 1912.—Notice 664-J.—They are putting in a new furnace. When this is done the ventilation should be improved. Need to put up some check curtains to force air up in rooms. Drainage not very good. Timbering satisfactory.

McHenry Coal Company.

Head Office, Central City, Ky.

Officers: T. C. duPont, President; S. A. Yorks, Vice President and Treasurer; John B. McElhinny, Secretary; Huw D. Jones, Superintendent.

This company operates two mines in Ohio county; McHenry and Echols.

McHenry Mine.—(Thos. Gaddis, Mine Foreman.)—
P. O., McHenry, Ky.
Transportation, Louisville Division of I. C. R. R.

This is a slope mine. No. 9 coal 4′ 6″ to 6 feet high. Good shale roof. Dips 1 degree S. W. Capacity 800 tons per day.

This plant with all outside equipments was burned on the 19th of September, 1912, and has not been rebuilt, only a small power house to furnish power for New Render.

Echols Mine.—(William Garrett, Mine Foreman.)—

P. O., Echols, Ky.
Express Office, Rockport, Ky.
Transportation, Louisville Division of I. C. R. R.

This is a shaft mine 120 feet deep. No. 9 coal 4′ 9″ high. Has good shale roof and hard clay floor. Worked on double entry system. Mine equipment: One 100 KW 250 V link belt generator; one 135 H. P. McEwen engine; one hoisting engine; one 150 and one 125 H. P. boilers; five 17A Jeffrey chain breast machines; one 8-ton Jeffrey motor; one 16 F. P. Crawford-McCrimmon fan; shaker screens. Capacity 600 tons per day.

Inspected March 15, 1912.—Notice 604-J.—Ventilation, drainage and timbering satisfactory. Needed to clean some mud off of landing in air shaft.

Inspected July 16, 1912.—Notice 637-J.—Ventilation, drainage and timbering satisfactory.

Inspected October 9, 1912.—Notice 10-S.—Ventilation, drainage and timbering satisfactory. This mine is one of the best ventilated and drained mines in this district.

ROCKPORT COAL COMPANY.

Head Office, Rockport, Ky.

P. O., Rockport, Ky.
Transportation, Louisville Division of I. C. R. R.

Officers: H. L. Tucker, President; Chas. Driechs, Vice President; P. O. McKinney, Secretary and Treasurer.

(William Russell, Mine Foreman.)

This is a shaft mine 120 feet deep. No. 9 coal 4′ 6″ to 5 feet thick. Has a good shale roof and hard clay floor. Worked three entry on main, two cross entries. Dip ½ to 1% N. Mine equipment: One 100 KW 250 V Morgan Gardner generator; one 135 H. P. Skinner engine; two 150 H. P. boilers; four HHD Morgan Gardner chain breast machines; one 5-ton Morgan Gardner motor; one 16x32 Crawford-McCrimmon hoisting engine; one 12-foot McCrimmon fan; self dumping cages; shaker screens. Capacity 450 tons per day.

Inspected July 18.—Notice 638-J.—The volume of air entering was ample, but was not reaching the face of working places. Open brattices and bad curtains the cause. Timbering and drainage satisfactory.

Inspected October 14, 1912.—Notice 12-S.—Ventilation not very good. Defective brattices, bad curtains and falls of slate in air courses being the cause. Timbering and drainage not very good.

TAYLOR COAL COMPANY OF KENTUCKY.

Head Office, Louisville, Ky.

P. O., Taylor Mines, Ky.
Express Office, Beaver Dam, Ky.
Transportation, Louisville Division of I. C. R. R.

Officers: J. B. Speed, President; I. P. Bernard, Superintendent; M. M. Bardwell, Secretary and Treasurer; George Smith, General Foreman.

(John Veller, Mine Foreman.)

This is a drift mine. No. 1 Mine is now worked out and only No. 2 is working. Motors pull coal out to tipple where it is hoisted up to be dumped into railroad cars or gons. This is No. 9 coal 5 feet high, and has a good shale roof. Dips 2 degrees S. W. Mine equipment: Three Babcock and Wilcox boilers; one Ingersol & Rand 24x27, and one 24x27 Sullivan compressors; two 275 KW 250 V General Electric generators; two 150 H. P. Ball engines; three 250 H. P. Babcock and Wilcox boilers; one Otis elevator engine; self dumping cages, and shaker screens. Capacity 1,150 tons per day. This mine has thirteen HH Sargent punch machines; thirteen H4 Sargent punch machines; two TT Sullivan punch machines; one 10-ton Westinghouse motor; two 10-ton Jeffrey motors; two 8-foot Sulivan fans, run by compressed air.

Inspected May 16, 1912.—Notice 615-J.—Ventilation, drainage and timbering satisfactory.

Inspected August 16, 1912.—Notice 655-J.—Ventilation fair. Needed some curtains put up on main entry. Drainage satisfactory.

Inspected October 22, 1912.—Notice 17-S.—Ventilation, drainage and timbering satisfactory.

Inspected December 27, 1912.—Notice 62-S.—Ventilation, drainage and timbering satisfactory.

Williams Coal Company.

Head Office, Louisville, Ky.

P. O., McHenry, Ky.
Transportation, Louisville Division of I. C. R. R.

Officers: I. P. Bernard, President; F. M. Sackett, Vice President; N. M. Bardwell, Secretary and Treasurer; George Smith, General Manager; Mr. Frazier, Superintendent.

(Andrew Thorpe, Mine Foreman.)

This is a shaft mine 43 feet deep, used for hoisting coal only. Men, mules and all supplies go in at slope. No. 9 coal 4½ feet high. Has a good shale roof and hard clay floor. Worked on the double entry system. Mine equipment: One Sullivan 275 H. P., one Norwalk 175 H. P., one Ingersoll & Rand 150 H. P. Compressors; two 100 KW 250 V General Electric generator; two 150 H. P. Ball engines; twenty-seven H4 Sargent punch machines; one 5-ton Jeffrey, and two 10-ton Westinghouse motors; four Babcock and Wilcox 150 H. P. boilers; two 6-foot Sullivan fans, run by electric motors; all pumps run by air; Otis elevator engine for hoisting coal; self dumping cages; shaker screens; coal conveyor to boiler room. Capacity 1,200 tons per day.

Inspected May 17, 1912.—Notice 616-J.—Ventilation good. Needed to repair a couple of curtains on 4th west. Some broken timbers between the 3rd N. lyway and main north.

Inspected August 21, 1912.—Notice 657-J.—Ventilation satisfactory. Drainage not very good on main west and main south. There was some broken timbers on the third N. lyway that needed replacing with new ones.

Inspected October 21, 1912.—Notice 16-S.—Conditions fair except on the 9th S. where they were lifting bottom preparing to lay motor track; had curtains too short.

WESTERN DISTRICT NO. 2.

Reports of Thos. O. Long and W. R. Brasher.

As stated in Chapter I., Mr. Long's term expired August 31st, when he was succeeded by Mr. Brasher. The latter became so ill in December—dying January 6, 1913—that he was unable to submit a report for that month. There is, therefore, no general report covering inspections made in this district for the year, and the following monthly reports made by the respective Inspectors are given.

Mr. Long's Reports.

REPORT FOR THE MONTH OF JANUARY.

ST. BERNARD MINING COMPANY'S GROUP OF MINES.

Mine No. 11.—

P. O., Earlington, Ky.

Inspected January 2.—Inspection Notice No. 689.—Ventilation defective at head of west 6th and 7th. Instructions issued that room No. 8 on east "I" entry should be pushed through to east "H" entry with all possible speed so as to afford proper area for the ventilating current, thereby permitting the proper ventilation of the working at head of north 66 and 67. Attention of the Mine Foreman was called to the seemingly unnecessary overcharge of powder used in the right rib drill holes of the rooms, and instructions issued to reduce this charge as much as two inches.

Arnold Mine.—

P. O., Earlington, Ky.

Inspected January 3.—Inspection Notice No. 690.—Ventilation and timbering satisfactory. Instructions issued to reduce the ventilation at head of west 7th entry to about 5,000 cubic feet of air; to give special attention to the sprinkling

of all haulage roads and dry places in the mine; to turn the exhaust steam from the fan engine into the intake ventilating current for the purpose of heating this current as much as possible, and assisting in keeping the mine moist and damp. Attention of the Assistant Foreman was called to the seemingly overcharge of powder used in the blasting of the drill holes placed on the right rib of rooms.

Sisk Mine (Arnold No. 11).—

P. O., Earlington, Ky.

Inspected January 3.—Inspection Notice No. 691.—Ventilation and all conditions very satisfactory.

Diamond Mine.—

P. O., Morton's Gap, Ky.

Inspected January 4.—Inspection Notice No. 692.—Ventilation excellent. Instructions issued to sprinkle all dry places in the mine, especially the 9th and 11th west; to leave two open breakthroughs at heads of entries where more than 10,000 cubic feet of air was traveling on date of inspection; to turn the exhaust steam from the fan engine into the intake ventilating current for the purpose of heating this current and assisting in making the mine moist and damp. Attention was called to the heavy shooting of the drill holes placed on the right ribs of rooms.

Fox Run Mine No. 4.—

P. O., St. Charles, Ky.

Inspected January 5.—Inspection Notice No. 693.—Ventilation and all conditions satisfactory. Instructions issued to run the ventilating machinery for the north side of the mine at not more than 40 revolutions per minute.

Mine No. 9.—

P. O., Earlington, Ky.

Inspected January 6.—Inspection Notice No. 694.—Ventilation and all conditions satisfactory. Instructions issued to leave two open breakthroughs at head of brattice lines

shown the Mine Foreman, where more than 10,000 cubic feet of air was traveling the head of the brattice lines.

Hecla Mine.—

P. O., Earlington, Ky.

Inspected January 8.—Inspection Notice No. 695.—Ventilation and all conditions satisfactory.

NORTONVILLE COAL & COKE COMPANY.

Mine No. 1.—

P. O., Nortonville, Ky.

Inspected January 9.—Inspection Notice No. 696.—Ventilation was sufficient. Instructions issued to renew all curtains throughout the mine and keep same in first class shape at all times.

Mine No. 2.—

P. O., Nortonville, Ky.

Inspected January 9.—Inspection Notice No. 697.—Ventilation not sufficient on the 4th and 6th north for the number of persons employed on these entries. The proposed new airway (which was being driven) from the 4th north to the 6th north should be pushed to completion as speedily as possible, so as to afford a larger area for the air to travel and thereby increasing the ventilation on the above mentioned entries. Instructions issued to renew all curtains and keep same in first class shape at all times.

STIRLING COAL & COKE COMPANY.

Daniel Boone Mine.—

P. O., Daniel Boone, Ky.

Inspected January 10.—Inspection Notice No. 698.—Ventilation defective at head of 3rd south entry owing to the poor condition of the curtain at mouth of this entry. Sufficient amount of ventilation was entering the mouth of this entry. Instructions issued to repair the curtain at mouth of 3rd south; to push the proposed new air way from the 4th south

to the 3rd south as much as possible, so as to increase the ventilation at head of 3rd south entry; to turn the exhaust steam from the fan engine into the intake ventilating current for the purpose of heating this current as much as possible and assist in keeping the mine moist and damp; to sprinkle all dry places in the mine and keep same in a well dampened condition at all times.

KINGTON COAL COMPANY.

Mine No. 2.—

P. O., Morton's Gap, Ky

Inspected January 11.—Inspection Notice No. 699.—Ventilation not sufficient for the number of persons employed on the 7th and 8th west entries. There were two open breakthroughs in the brattice line between room 10 and 11 on 8th west. Instructions issued to increase the ventilating current on the 7th and 8th west; close rear breakthroughs in brattice lines promptly. Attention of Mine Foreman was called to the heavy shooting of the right rib drill holes in rooms.

Mine No. 1.—

P. O., Morton's Gap, Ky.

Inspected January 11.—Inspection Notice No. 700.—Ventilation, drainage and timbering satisfactory. The cleaning up of the fine coal and machine cuttings is very satisfactory and should be carried on until the mine is cleaned entirely of all fine coal and other matter. Attention of the Mine Foreman was called to the seemingly overcharge of powder used in the drill holes placed on the right ribs of rooms, and instructions issued to reduce this charge of powder as much as two inches.

CARBONDALE COAL & COKING COMPANY.

Mine No. 2.—

P. O., Dawson Springs, Ky.

Inspected January 16.—Inspection Notice No. 701.—Ventilation and all conditions satisfactory.

Mine No. 1.—

P. O., Dawson springs, Ky.

Inspected January 16.—Inspection Notice No. 702.—Some curtains shown the Mine Foreman needed repairing which was ordered done. Otherwise all conditions were satisfactory.

CRABTREE COAL MINING COMPANY.

Mine No. 9.—

P. O., Ilsley, Ky.

Inspected January 17.—Inspection Notice No. 703.—Ventilation weak at head of 9th east and defective at head of 11½ west on account of poor condition of curtains. Instructions issued to increase the ventilating current on 9th west to about 2,500 cubic feet of air and to improve the ventilation at head of 11½ west by maintaining first class curtains on this entry. Quite an improvement was noticed in the general ventilation of the mine, and aside from the above defects all conditions were satisfactory.

PETERSBURGH COAL MINING COMPANY.

(Shrum & Ezell, Lessees.)

Sory Mine.—

P. O., Mannington, Ky.

Inspected January 18.—Inspection Notice No. 704.—Ventilation sufficient and fairly well conducted. Instructions issued to place curtains on main east entry between rooms 1 and 2, and 9 and 10, as was shown the Mine Foreman.

BRENT HART MINING COMPANY.

Terry Mine.—

P. O., Mannington, Ky.

Inspected January 18.—Inspection Notice No. 705.—Ventilation sufficient, but not properly conducted owing to the need of curtains. The Mine Foreman was instructed to place a curtain on 1st east at mouth of 1st northeast, also on 1st and 2nd east and on the 3rd east at point indicated.

EMPIRE COAL & COKE COMPANY.

Empire Mine.—

P. O., Empire, Ky.

Inspected January 19.—Inspection Notice No. 706.—Ventilation sufficient, but not very well conducted along the working faces owing to the poor condition of curtains. Instructions issued to repair the curtain at mouth of 8th west and keep same in first class shape at all times, also the curtains on the 7th west, thereby increasing the ventilation on the 7th west entry.

REPORT FOR THE MONTH OF FEBRUARY.

THOMAS COAL COMPANY.

Thomas Mine.—

P. O., Morganfield, Ky.

Inspected February 8.—Inspection Notice No. 707.—Ventilation satisfactory and properly distributed. Attention of the Mine Foreman and Mining Committee was called to the carelessness of some one or two miners that were working under loose gob without same being timbered. Instructions issued to repair curtains on the 2nd north; to either take the gob down or timber same while working under it; to turn the exhaust steam from the mine pumps into the intake ventilating current.

MORGANFIELD COAL & MINING COMPANY.

Lloyd Mine.—

P. O., Morganfield, Ky.

Inspected February 8.—Inspection Notice No. 708.—Ventilation satisfactory except at head of 1st south where the ventilating current was not strong enough to turn the anemometer. Quite a loss of the ventilating current was noticed on the main west entry. The Mine Foreman was instructed to maintain a good double curtain on the main west entry between the 1st south and the lyway on the main west entry. This curtain would turn this loss of ventilating current into

the 2nd south and improve the ventilation on the 1st and 2nd south entries very much. Curtains needed repairing on the 4th and 5th north entry.

UNIONTOWN COAL & MINING COMPANY.

Uniontown Mine.—

P. O., Uniontown, Ky.

Inspected February 9.—Inspection Notice No. 709.—Ventilation and all conditions satisfactory. The Mine Foreman and the hoisting engineer were instructed to run the ventilating machinery at not less than 50 revolutions per minute.

DRURY COAL COMPANY.

Waverly Mine.—

P. O., Waverly, Ky.

Inspected February 10.—Inspection Notice No. 710.—Ventilation sufficient and satisfactory. Instructions issued to turn the exhaust steam from the mine pumps into the intake ventilating current.

WEST KENTUCKY COAL COMPANY.

Mine No. 1.—

P. O., Sturgis, Ky.

Inspected February 14.—Inspection Notice No. 711.—Ventilation, drainage, timbering and cleaning up of machine cuttings all very satisfactory.

Mine No. 2.—

P. O., Sturgis, Ky.

Inspected February 14.—Inspection Notice No. 712.—Ventilation weak on the 3rd west and 2nd east. This was thought to be due to the fact that the mine was idle on date of inspection and the cages were left suspended in the hoisting shaft, which is the outlet for the ventilating current, during almost the entire time of inspection, as the fan was running at the usual rate of speed. There were three open breakthroughs

at head of 3rd east and main north entries. Instructions issued to close rear breakthroughs promptly. Improvement was noticed in the cleaning up of the fine coal and machine cuttings.

OHIO VALLEY COAL & MINING COMPANY.

Mine No. 9.—

P. O., DeKoven, Ky.

Inspected February 15.—Inspection Notice No. 713.—Ventilation not strong enough to turn the anemometer at head of 1st rise off 6th east. Otherwise, ventilation was satisfactory and sufficient. Instructions issued to split the intake ventilating current on the 3rd rise off 6th east so as to equally distribute the ventilating current on the 1st, 2nd and 3rd rise entries. Curtains needed repairing on the rise entries off 7th west, also on the rise entries off 6th west. Improvement was noticed in the cleaning up of the fine coal and machine cuttings.

PENN COAL COMPANY.

Sullivan Mine.—

P. O., Sullivan, Ky.

Inspected February 15.—Inspection Notice No. 714.—Ventilation satisfactory. Several brattices shown the Mine Foreman needed repairing. Instructions issued to make breakthroughs not less than 10 feet in width; to prohibit the use of "casters" for the purpose of placing powder in the drill holes; to prohibit the handling of loose powder with the lighted lamps on the heads or caps of the miners.

BELL-UNION COAL & COKE COMPANY.

Bell-Union Mine.—

P. O., Curlew, Ky.

Inspected February 21.—Inspection Notice No. 715.—This mine was visited on February 7th, but was not inspected on account of a break down to the electric machinery which caused the mine to be idle from the 21st of January, to February 14th. Ventilation sufficient but not properly distributed on account of there being three open breakthroughs at head

of 4th west. Instructions issued to close rear breakthroughs in brattice lines; to repair the curtains on 4th and 5th west entries; to open the mouth of 6th west entry; to place some additional braces on the ladder in the fan shaft.

West Kentucky Coal Company.

Mine No. 8.—

P. O., Sturgis, Ky.

Inspected February 22.—Inspection Notice No. 716.—All conditions satisfactory. This company has recently built a steel tipple at this mine, which was constructed by Allen & Garcia, and equipped with shaker screens and cages by the Eagle Iron Works. Other machinery as follows: One 150 H. P. Walton boiler; one set second motion Crawford-McCrimmon hoisting engines; one 100 KW 250-volt Westinghouse generator, direct connected to a Ball engine. The mouth of the slope is timbered with steel timbers.

Cahaba Coal Company.

Corydon Mine.—

P. O., Corydon, Ky.

Inspected February 23.—Inspection Notice No. 717.—Sufficient ventilation was entering the west side of the mine, but it was not properly distributed on account of several leaky brattices which were shown the Mine Foreman with instructions to make the main west entry brattice line as near air tight as possible. Several working places were noticed that were ahead of the air on account of breakthroughs not being made at proper distance. Instructions issued to make breakthroughs not more than 60 feet apart in entries and rooms.

Zion Coal Company.

Zion Mine.—

P. O., Zion, Ky.

Inspected February 24.—Inspection Notice No. 718.—The last open breakthrough at head of 2nd south should be cleaned out and kept open properly so as to allow a suffi-

cient space for the ventilating current. Otherwise all conditions satisfactory.

NEBO CONSOLIDATED COAL & COKE COMPANY.

Davidson City Mine.—

P. O., Nebo, Ky.

Inspected February 27.—Inspection Notice No. 719.—Ventilation satisfactory. Quite a marked improvement was noticed in the timbering and handling of top and making of breakthroughs. Improvement also noticed in the drainage. Attention was called to the small piles of fine coal and machine cuttings along the ribs of rooms and entries, with instructions that special effort must be made to keep the mine free from any accumulation of fine coal and machine cuttings.

ROSE CREEK COAL COMPANY.

Coil City Mine.—

P. O., Nebo, Ky.

Inspected February 28.—Inspection Notice No. 720.—Ventilation weak at head of main west entry. Otherwise, ventilation satisfactory. Quite an amount of fine coal and machine cuttings were noticed in the rooms and entries. Instructions issued to give special attention to the thorough cleaning up of fine coal and machine cuttings; to place a curtain between room 21 and 22 on 3rd south.

CRITTENDEN COAL & COKE COMPANY.

Davis Mine.—

P. O., Sturgis, Ky.

Visited February 22.—This mine was visited on above date, but was not inspected on account of being idle and no one around the mine.

REPORT FOR THE MONTH OF MARCH.

Reinecke Coal Mining Company.

Reinecke Mine.—

P. O., Madisonville, Ky.

Inspected March 4.—Inspection Notice No. 721.—Ventilation, timbering, handling of gob and cleaning up of machine cuttings satisfactory. Some changes regarding the future ventilation of the 15th west were recommended to the Mine Foreman.

Victoria Coal Company.

Victoria Mine.—

P. O., Madisonville, Ky.

Inspected March 5.—Inspection Notice No. 722.—Ventilation defective at head of 20th west. A leakage of the ventilating current was noted on the 18th west motor road. Instructions issued to increase the ventilation on the 20th west; to turn the leakage mentioned above into the regular route traveled by the ventilating current, thereby assisting in increasing the ventilation at head of 20th west; to clean out and retimber the 13th east from the face of same to the 3rd north entry. Quite an improvement was noticed in the cleaning up of the fine coal and machine cuttings. Aside from the above defects in ventilation, all conditions were satisfactory.

Sunset Coal Company.

Royal Mine No. 11.—

P. O., Madisonville, Ky.

Inspected March 6.—Inspection Notice No. 723.—Ventilation satisfactory, and sufficient ventilation was traveling all brattice lines in the room work. ½ of 1% of gas registered in hole in room No. 4 on 6th west. ½ of 1% of gas registered in hole in roof in room No. 6 on 9th east. The ventilation of the above mentioned places for the purpose of cleaning out these pockets of gas was being done in a satisfactory manner. Sprinkling, handling of gob, timbering and cleaning up of fine coal and machine cuttings satisfactory.

Coil Coal Company.

Coil Mine.—

P. O., Madisonville, Ky.

Inspected March 6.—Inspection Notice No. 724.—Ventilation sufficient and satisfactory and well distributed. ½ of 1% of gas registered at head of 1st west. Sprinkling, timbering, handling of gob and cleaning up of fine coal and machine cuttings satisfactory.

River and Rail Coal & Coke Company.

Uniontown Mine.—

P. O., Morganfield, Ky.

Visited February 9.—Not inspected on this date on account of mine not in operation on account of the mine pumps breaking down and the water rising in the air shaft and cutting off the ventilation. This water was pumped out by placing a small steam boiler at top of the fan shaft and furnishing steam for a pump which was let down the air shaft to the water. The mine closed down on January 12, 1912, and resumed operations on March 4th.

Inspected March 9.—Inspection Notice No. 725.—Ventilation sufficient, but not very well conducted to all working faces on account of there being two open breakthroughs at head of 4th southwest and 2nd southeast entries. Instructions issued to close rear breakthroughs in all brattice lines promptly; to retamp and refill gob brattices on 4th northwest which were shown the Mine Foreman; to place a curtain between room 9 and 10 on 2nd southwest, also between room 1 and 2 on 4th southwest; to see that breakthroughs are made not more than 60 feet apart in all working places; to give special attention to the cleaning up of fine coal and machine cuttings.

SMITH MILLS COAL & MINING COMPANY.

Smith Mills Mine.—

P. O., Smith Mills, Ky.

Inspected March 12.—Inspection Notice No. 726.—Sufficient ventilation was entering the 3rd north entry for all the persons employed underground, but owing to the poor condition of the curtain between the 3rd and 4th north there was not enough of this ventilating current traveling head of entry to enable a reading of the anemometer. Instructions issued to keep curtains in first class condition at all times.

PEOPLES MINING COMPANY.

Peoples Mine.—

P. O., Henderson, Ky.

Inspected March 13.—Inspection Notice No. 727.—Ventilation satisfactory and sufficient. Instructions issued to retimber room No. 1 on 5th north so as to prevent any roof falls in this room as it is to be used for the air way for some time in the future; to see that the water near the 2nd outlet is kept pumped out as much as possible and that the weekly trips through this route are maintained. Otherwise conditions were satisfactory.

J. L. NICHOLSON & COMPANY.

Nicholson Mine.—

P. O., Henderson, Ky.

Inspected March 13.—Inspection Notice No. 728.—Sufficient ventilation entering the 2nd south, but owing to some leaky brattices and poor curtains, shown the Mine Foreman, not enough air was traveling head of 2nd south to enable a reading of the anemometer. Instructions issued to retamp the gob brattices and keep curtains in first class condition at all times, and if necessary curtains should be doubled on the curtain frames.

PANAMA COAL COMPANY.

(Successors to Southern Coal & Transportation Co.)

P. O., Robards, Ky.

Robards Mine.—

Inspected March 14.—Inspection Notice No. 729.—Ventilation defective at head of 4th south entry, otherwise ventilation was satisfactory. The Mine Foreman was instructed to make some changes in the route for the ventilating current for the 4th south so as to increase the ventilation at head of this entry. Also to place a curtain between rooms 5 and 6 on 3rd north. Otherwise conditions were satisfactory.

UTOPIA COAL COMPANY.

P. O., Hebbardsville, Ky.

Utopia Mine.—

Inspected March 15.—Inspection Notice No. 730.—The steam jet which is used for furnishing ventilation for this mine did not afford ventilation strong enough on either the 1st or 2nd east to enable a reading of the anemometer. It looks as if the area excavated that requires ventilation has become larger than the jet is able to furnish ventilation for, and the power of the steam jet will have to be increased or install a ventilating fan. Other conditions satisfactory.

PITTSBURGH COAL COMPANY.

P. O., Baskett, Ky.

Baskett Mine.—

Inspected March 21.—Inspection Notice No. 731.—North side of mine. Ventilation satisfactory and sufficient. Instructions issued to place a curtain between rooms 9 and 10 on 6th west; place a curtain between rooms 4 and 5 on 5th west; place a curtain at the crossover switch to the 3rd east.

South side of mine. Ventilation not strong enough to turn the anemometer at head of the 2nd east. Quite a leakage was noted on the main south, also on the 1st west entries. The Mine Foreman was instructed to place curtains at points shown, on

the main south and 1st west entries so as to take up the leakage shown on these entries and make same travel the east entries; to place a curtain between rooms 1 and 2 on 1st east; to place a curtain between rooms 12 and 13 on 2nd east; also, to make breakthroughs not more than 60 feet apart and full width.

P. O., Spottsville, Ky.

Spottsville (Green River) Mine.—

Inspected March 22.—Inspection Notice No. 732.—Ventilation sufficient and satisfactory. Instructions issued to retamp all the gob brattices shown the Mine Foreman and to see that all the miners use fire clay or other non-inflammable material for tamping of shots.

P. O., Baskett, Ky.

Baskett Mine Track Scales.—

Inspected March 23.—Inspection Notice No. 733.—Scales cleaned and beams examined to see that same had free play and were not binding at any point. A railway car was half loaded and the test weights added to the car. Scales checked accurately. Car fully loaded and weights added and scales checked accurately. Scales cleared and accurately balanced and the weights were added and shifted from one point to another about on the scales and each time registered accurately the weight of the "test weights," which was 850 pounds. Scales pronounced O. K.

ALABAMA COAL & COKE COMPANY.

(Successors to Drury Coal Co.)

P. O., Waverly, Ky.

Waverly Mine.—

Inspected March. 26.—Inspection Notice No. 734.—Ventilation satisfactory and well distributed. The exhaust steam which is being turned into the intake air current is giving the results desired, namely, the moistening of the roof and ribs of all working places and entries.

SEBREE MINING & DEVELOPMENT COMPANY.

P. O., Sebree, Ky.

Sebree Mine.—

Inspected March 27.—Inspection Notice No. 735.—Ventilation defective at head of 10th north and weak at head of 4th north. Instructions issued to increase the ventilation at the points named. However, this condition was no doubt brought about by the caving of the fan shaft and filling the shaft bottom with debris which was being cleaned away as speedily as possible; to repair curtains and keep same in first class condition at all times. Otherwise conditions were satisfactory.

ST. BERNARD MINING COMPANY.

P. O., Earlington, Ky.

Mine No. 11.—

Inspected March 28.—Inspection Notice No. 736.—Ventilation satisfactory. Curtains shown the Mine Foreman needed repairing. Quite a number of rooms were noticed as having as many as two breakthroughs started without either being finished and often some coal in the third breakthrough. Instructions issued to finish all breakthroughs promptly and keep same properly cleaned out. Otherwise conditions were satisfactory.

Hecla Mine.—

P. O., Earlington, Ky.

Inspected March 29-30.—Inspection Notice No. 737.—Ventilation weak at head of 5th west entry, otherwise ventilation satisfactory. Instructions issued to increase the ventilation on 5th west; to close rear breakthrough in brattice line between rooms 16 and 17 on 10th east; to repair curtains on the 10th east; to maintain a curtain at mouth of 8th west to prevent the loss of the ventilating current that is at present traveling the mouth of this entry; to maintain first class curtains in the entry pillar of the 5th west entry.

Arnold Mine.—

P. O., Earlington, Ky.

Inspected March 30.—Inspection Notice No. 738.—Ventilation and timbering satisfactory. Quite an amount of fine coal and machine cuttings were noticed in the rooms. Instructions issued to clean up all fine coal and machine cuttings; to turn the full exhaust of the fan engine into the intake air current.

Mine No. 9.—

Was called to this mine on the morning of the 29th inst., on account of a fire which was located in an overcast in the manway at what was known as the "Mercer entry." The fire was started by an electric light wire. A line of water hose was run from the boiler plant to the fire, which was only about 700 feet inside the mine, and the fire was extinguished in about four hours.. Damage done was burning of the overcast and the mine idle for one day.

REPORT FOR THE MONTH OF APRIL.

West Kentucky Coal Company's Mines.

Mine No. 4.—

P. O., Wheatcroft, Ky.

Inspected April 3.—Inspection Notice No. 739.—Ventilation satisfactory except at head of 4th east, where the ventilating current should be increased to about 2,500 cubic feet of air. Instructions issued to pay special attention to the cleaning up of fine coal and machine cuttings; to see that the powder is carried on the drill cars in covered boxes. Timbering satisfactory.

Mine No. 3.—

P. O., Wheatcroft, Ky.

Inspected April 3.—Inspection Notice No. 740.—Ventilation sufficient and satisfactory. There were two open breakthroughs in the brattice line between rooms 6 and 7 on 4th west. All rear breakthroughs in brattice lines should be closed promptly. Drainage should be improved on the main motor

haulage road. Cleaning up of fine coal and machine cuttings satisfactory.

Mine No. 6.—

P. O., Wheatcroft, Ky.

Inspected April 3.—Inspection Notice No. 741.—Ventilation and all conditions satisfactory. Quite an improvement was noticed in the cleaning up of fine coal and machine cuttings.

Mine No. 5.—

P. O., Wheatcroft, Ky.

Inspected April 4.—Inspection Notice No. 742.—Ventilation, drainage and timbering satisfactory. Instructions issued to give special attention to the cleaning up of fine coal and machine cuttings. Quite an amount of machine cuttings were noticed in the rooms on main east; this accumulation must not be permitted.

Mine No. 7.—

P. O., Wheatcroft, Ky.

Inspected April 4.—Inspection Notice No. 743.—Ventilation should be increased to about 2,500 cubic feet of air at head of 2nd west. Otherwise ventilation was satisfactory. Instructions issued to open breakthroughs in all working places to full width; to give special attention to the cleaning up of fine coal and machine cuttings in all working places and must not be permitted to accumulate in small piles along the ribs. Sprinkling must not be neglected. The cleaning up of the fine coal and machine cuttings in the air courses, also the timbering of same is approved and should be carried out in all entries. All the coal is blasted by the use of the Dupont permissible explosive "Monobel No. 2," which is fired by the use of an electric battery and is done by shot firers at night. This permissible explosive seems to be satisfactory as there has not been a mine fire caused by the blasting of coal since the permissible has been in use.

CLIFTY CONSOLIDATED COAL COMPANY.

P. O., Clay, Ky.

Clifty Mine.—

Inspected April 5.—Inspection Notice No. 744.—Ventilation should be increased to about 2,000 cubic feet of air at head of 1st west entry. Otherwise ventilation satisfactory. There were two open breakthroughs in the brattice line between rooms 7 and 8 on 3rd south. Instructions issued to close rear breakthroughs in brattice lines promptly. Other conditions satisfactory.

DIAMOND COAL COMPANY.

P. O., Providence, Ky.

Diamond Mine.—

Inspected April 6.—Inspection Notice No. 745.—Ventilation, drainage, timbering and all conditions satisfactory.

PROVIDENCE MINING COMPANY.

P. O., Providence, Ky.

Mine No. 2.—

Inspected April 9.—Inspection Notice No. 746—Owing to the poor condition of the brattices at head of 8th east, the ventilating current entering this entry did not reach the face of said entry. The brattices near the head of the entry had been blown down by the heavy shooting of the miners in turning room necks and short rooms. Instructions issued to keep brattice lines as near air tight as possible. There were three open breakthroughs in brattice line between rooms 3 and 4 on 10th west. The rear breakthroughs were ordered closed. Otherwise ventilation and other conditions satisfactory.

JENKINS COAL COMPANY.

P. O., Providence, Ky.

Wanless Mine.—

Inspected April 9.—Inspection Notice No. 747.—Ventilation sufficient, but not properly distributed along the working faces. The Mine Foreman was instructed to repair the cur-

tains at points shown; close rear breakthroughs shown, and close the rear breakthroughs between the north entries.

PROVIDENCE MINING COMPANY.

P. O., Providence, Ky.

Mine No. 1.—

Inspected April 10.—Inspection Notice No. 748.—Ventilation sufficient except at head of 2nd west entry. There were two open breakthroughs in brattice line between rooms 10 and 11 on 2nd north cut off entry; two open breakthroughs at head of 2nd west; curtains needed repairing on 2nd north cut off. Instructions issued to close rear breakthroughs in brattice lines mentioned above; to repair curtains mentioned; to repair the brattices on 2nd east and 2nd west; to make breakthroughs not more than 60 feet apart and not less than 10 feet in width, in all working places.

LEEPER COAL COMPANY.

P. O., Providence, Ky.

Leeper Mine.—

Inspected April 10.—Inspection Notice No. 749.—Ventilation, drainage, timbering and all conditions satisfactory.

HIGHLAND COAL COMPANY.

P. O., Providence, Ky.

Highland Mine.—

Inspected April 10.—Inspection Notice No. 750.—Ventilation, drainage, timbering and all conditions satisfactory.

PROVIDENCE MINING COMPANY.

P. O., Providence, Ky.

Mine No. 3.—

Inspected April 11.—Inspection Notice No. 751.—Ventilation sufficient and satisfactory. The method adopted in cleaning up of the fine coal and machine cuttings is approved and should be continued. Curtains needed repairing on the 1st southeast entry. Otherwise all conditions satisfactory.

RUCKMAN COAL COMPANY.

P. O., Providence, Ky.

Ruckman Mine.—

Inspected April 11.—Inspection Notice No. 752.—Ventilation sufficient and satisfactory. Room No. 1 on 8th east should have a curtain line established so as to convey the ventilating current to face of same.

WEBSTER COUNTY COAL COMPANY.

P. O., Providence, Ky.

Webster County Mine.—

Inspected April 12.—Inspection Notice No. 753.—Ventilation, sprinkling, handling of gob and timbering and all conditions satisfactory.

ST. BERNARD MINING COMPANY'S GROUP OF MINES.

Shamrock Mine.—

P. O., Providence, Ky.

Inspected April 13.—Inspection Notice No. 754.—Instructions issued to use double curtains at points on the main south and 1st northeast entries, where shown the Mine Foreman. Otherwise ventilation and all conditions satisfactory. The fan house for this mine was burned down on the morning of 10th inst.; the fire was caused by the burning of a sage field nearby. The fan house was immediately rebuilt and operations were begun on the 12th inst.

Sisk Mine.—

P. O., Earlington, Ky.

Inspected April 16.—Inspection Notice No. 755.—Instructions issued to place a curtain between rooms 4 and 5 on 20th east. Otherwise all conditions were satisfactory.

Diamond Mine.—

P. O., Mortons Gap, Ky.

Inspected April 17.—Inspection Notice No. 756.—Instructions issued to place a curtain between rooms 20 and 21 on 13th west, also between rooms 11 and 12 on 2nd south. Otherwise ventilation and all conditions satisfactory.

Fox Run Mine No. 4.—

P. O., St. Charles, Ky.

Inspected April 18.—Inspection Notice No. 757.—Ventilation and all conditions satisfactory.

Mine No. 9.—

P. O., Earlington, Ky.

Inspected April 20.—Inspection Notice No. 758.—Ventilation and all conditions satisfactory.

SUNSET COAL COMPANY.

Royal Mine No. 11.—

P. O., Madisonville, Ky.

Inspected April 29.—Inspection Notice No. 759.—6th west: 6,880 cubic feet of air traveling head of entry. ½ of 1% of gas registered in a hole in roof at face of room No. 4. 1% of gas registered in a hole in roof at face of room No. 5. This entry has not been operated for several weeks, and when work is again started, you will see that the entry is thoroughly sprinkled and examination made with a safety lamp for gas in all working places and that any accumulations are properly removed by being ventilated sufficiently. 8th west: 6,726 cubic feet of air traveling head of entry. Main south: 11,838 cubic feet of air traveling head of entry. Several places on the main south, which were shown the Foreman, need to be timbered more properly, also some timbering needed on the 1st south. 9th east: 11,001 cubic feet of air traveling head of entry. ½ of 1% of gas registered in a hole in roof at face of room No. 1. Room No. 1 has been stopped until proper ventilation can be supplied at face of same so as to clean out the gas. 4th

and 6th east: 7,326 cubic feet of air traveling head of entry. ½ of 1% of gas registered in a hole in roof at face of room No. 20. Room No. 20 has been stopped until a breakthrough can be made from room No. 21 to room No. 20, at face of room No. 20, so as to clean out this gas.

General.—Sufficient ventilation was traveling all brattice lines in the room work. Handling of gob was satisfactory. Timbering satisfactory except at points mentioned on main south. Several curtains, shown the Mine Foreman, needed repairing, and you must see that a sufficient supply of curtain material is always on hand. I would suggest that you paint the curtain material with coal tar and dry thoroughly before taken into the mine. This will lengthen the life of the curtains very much.

It was noticed that the pipes used for sprinkling purposes were not close enough to the face of the entries to enable the proper sprinkling of the tight places in the heads of entries You will see that the water pipes are kept sufficiently close to the face of the entries so as to enable the sprinkling of all tight places at all times.

You will see that your safety lamps are kept in first class shape at all times and have the "fire boss" make his examinations with a safety lamp and report each morning where and how much gas is found. The Davy lamp equipped with a "Beard-Mackey" indicator should be used for testing for gas.

Put the exhaust steam from the fan engine into the intake current.

Your Mine Foreman has been notified of the above and you will see that all the instructions contained herein are fully carried out.

St. Bernard Mining Company.

P. O., Earlington, Ky.

Nesbit Mine.—(A. R. O'Bannon, Mine Foreman.)—

Inspected April 29.—Inspection Notice No. 760.—Ventilation and all conditions satisfactory. This mine, which has been recently opened by this company is located about one mile north of the city of Earlington, near the air compressor plant and under a large farm known as the "Nesbit Farm."

The mine is opened on the south crop line of the No. 11 seam of coal, by a "drift" on the pitch of the coal seam, the main entries being driven north. The coal averages 6 feet in thickness, having the limestone roof and clay parting in the coal seam which are common to the seam in this field. At present only about ten persons are employed underground. Ventilation is furnished by a small "booster" fan driven by a small electric motor and located at the mouth of the "man-way" on the second opening, which is also a drift opening.

MINES VISITED, BUT NOT INSPECTED.

Harris Coal Company.

P. O., Providence, Ky.

Monroe Mine.—

Visited April 9.—Not inspected on account of there being only three persons employed underground and the mine is being abandoned and only about two months' work for this small number of men.

Luton Coal Company.

P. O., Providence, Ky.

Luton Mine.—

Visited April 12.—A 10-foot direct connected Crawford-McCrimmon fan was being installed on above date. A 6 machine Ingersoll-Rand air compressor has been installed and the coal is being undercut by a "5-T-U" Sullivan air puncher machine.

R. L. Forsythe.

P. O., Providence, Ky.

Forsythe Mine.—

Visited April 12.—Not inspected on account of not being in operation since the 5th inst. Operations being suspended on account of the high waters and the I. C. R. R. not being able to furnish cars.

REPORT FOR THE MONTH OF MAY.

Nebo Consolidated Coal & Coke Company.

P. O., Nebo, Ky.

Davidson City Mine.—

Inspected May 6.—Inspection Notice No. 761.—Ventilation defective at head of the 8th west and 9th east entries on account of poor curtains and brattices, which were shown the Mine Foreman, who was instructed to repair same and keep same in first class condition at all times. Instructions were also issued to give more attention to the proper making of breakthroughs in the room work; to clean up numerous small piles of machine cuttings along the ribs of the rooms; to clean up all fine coal and machine cuttings in every working place more thoroughly and properly.

Rose Creek Coal Company.

P. O., Nebo, Ky.

Coil City Mine.—

Inspected May 7.—Inspection Notice No. 762.—Instructions issued to increase the ventilation at head of main west entry to about 2,000 cubic feet of air. Attention was called to the loss of ventilation between room No. 1 on the 2nd east and the head of the 2nd east entry. Otherwise ventilation was satisfactory. Other instructions issued as follows: To timber several places on the 2nd south entry that were shown the Mine Foreman; improve the drainage on the main east motor haulage road; to clean up a fall of slate in the 3rd southwest entry near the last open breakthrough at head of entry; to give more attention to the proper making of breakthroughs with reference to the distance and width.

Reinecke Coal Mining Company.

P. O., Madisonville, Ky.

Reinecke Mine.—

Inspected May 9.—Inspection Notice No. 763.—½ of 1% of gas registered in a hole at face of 1st south. ½ of 1% of gas registered at face of room No. 15 on 10th west. ½ of 1%

of gas registered in a hole in roof at face of room No. 80 on 7th west. The ventilation of the above mentioned places where gas was registered was being handled satisfactorily. Several trap doors shown the Mine Foreman needed repairing. Other conditions satisfactory.

Nortonville Coal & Coke Company.

P. O., Nortonville, Ky.

Shaft Mine No. 1.—

Inspected May 10.—Inspection Notice No. 764.—The following instructions were issued: Place a curtain between rooms Nos. 10 and 11 on 1st east; place a curtain between rooms 1 and 2 on 1st northeast entry; place a curtain between rooms 5 and 6 on 1st west; construct a brattice line between rooms 01 and 02 on the 2nd west entry; close rear breakthroughs in brattice lines between rooms 1 and 2 on 2nd west air course, also between rooms 19 and 20 on 5th east. The above work being completed, ventilation should be very satisfactory as a sufficient amount of ventilation was traveling the head of all entries.

Mine No. 2.—

This mine was closed down on March 5, 1912, and has been abandoned by the present management.

Kington Coal Company.

P. O., Mortons Gap, Ky.

Mine No. 2.—

Inspected May 11.—Inspection Notice No. 765.—All conditions satisfactory.

Mine No. 1.—

Inspected May 11.—Inspection Notice No. 766.—All conditions satisfactory. A 10-ton Jeffrey electric motor has recently been installed in this mine and is doing very satisfactory work. This motor is used to haul the coal from the different lyways to the tipple.

Carbondale Coal & Coke Company.

Mine No. 1.—

Inspected May 13.—Inspection Notice No. 767.—There were two open breakthroughs in the brattice line between rooms 10 and 11 on 2nd east. Orders issued to close rear breakthroughs in brattice lines promptly. Otherwise all conditions satisfactory.

Mine No. 2.—

Inspected May 13.—Inspection Notice No. 768.—All conditions satisfactory.

Stirling Coal & Coke Company.

P. O., Daniel Boone, Ky.

Daniel Boone Mine.—

Inspected May 14.—Inspection Notice No. 769.—Sufficient ventilation was traveling the head of all entries. The following instructions were issued: Place a curtain between rooms 8 and 9 on 5th north; close rear breakthrough in brattice line at head of 4th south entry; repair trapdoor at mouth of room No. 4 on 4th west, and construct a brattice line between rooms Nos. 3 and 4 on this entry. Other conditions satisfactory.

Crabtree Coal Mining Company.

P. O., Ilsley, Ky.

Mine No. 9.—

Inspected May 16.—Inspection Notice No. 770.—All conditions satisfactory.

Brent Hart Mining Company.

P. O., Mannington, Ky.

Terry Mine.—

Inspected May 17.—Inspection Notice No. 771.—Sufficient ventilation was recorded on all entries, but not distributed very good on account of two open breakthroughs at head of main south, 4th east and 2nd east entries. Instructions issued

to close rear breakthroughs in brattice lines; place curtains where shown the Foreman; to comply with the Mining Laws regarding the employment of a certificated Mine Foreman. A certificated Mine Foreman was employed 5 days after date of inspection.

PETERSBURGH MINING COMPANY.

(D. F. Shrum, Lessee.)

P. O., Mannington, Ky.

Sory Mine.—

Inspected May 17.—Inspection Notice No. 772.—Timbering, drainage and all conditions satisfactory.

EMPIRE COAL COMPANY.

P. O., Empire, Ky.

Empire Mine.—

Inspected May 18.—Inspection Notice No. 773.—A loss of 5,400 cubic feet of air was shown the Mine Foreman with instructions to repair the brattices shown, which would recover this loss of ventilation. Otherwise all conditions satisfactory.

MORGANFIELD COAL MINING COMPANY.

P. O., Morganfield, Ky.

Lloyd Mine.—

Inspected May 23.—Inspection Notice No. 774.—Quite an improvement was noticed in the drainage. Ventilation and all conditions satisfactory.

RIVER AND RAIL COAL & COKE COMPANY.

P. O., Morganfield, Ky.

Uniontown Mine.—

Inspected May 24.—Inspection Notice No. 775.—Sufficient ventilation was recorded as traveling head of all the entries, but not very well distributed on account of the need of cur-

tains. The following instructions were issued: Place a curtain between rooms 1 and 2 on 3rd north off west; place a curtain between rooms 1 and 2 on 4th north off west; place a curtain between rooms 1 and 2 on 3rd south off west; place a curtain between rooms 1 and 3 on 4th south off west; place a curtain between rooms 13 and 14 on 4th south off west; place a curtain between rooms 13 and 14, and repair the curtain at room No. 3 on 1st south off east. Give more attention to the proper making of breakthroughs in the room work. See that all breakthroughs are made not more than 60 feet apart in all working places.

UNIONTOWN COAL MINING COMPANY.

P. O., Uniontown, Ky.

Uniontown Mine.—

Inspected May 24.—Inspection Notice No. 776.—Ventilation and all conditions satisfactory.

THOMAS COAL COMPANY.

P. O., Morganfield, Ky.

Thomas Mine.—

Visited May 23.—Visted this mine on above date but no inspection was made on account of the mine being closed down since April 1, 1912, and it was not expected to resume operation until some time during the fall months.

REPORT FOR THE MONTH OF JUNE.

STEARNS COAL COMPANY.

P. O., Yamacraw, Ky.

Mine No. 10.—

Inspected June 13.—Inspection Notice No. 777.—Ventilation satisfactory and sufficient. Throughout the trip through the mine I did not find a drill hole tamped with fire clay or other non-inflammable material. The following instructions were issued: The use of wet coal, slack and drill dust for

tamping of shots must be prohibited absolutely; see that shot firers do not fire shots that have been prepared and tamped with drill dust or wet slack. It was suggested that the curtains be painted with coal tar, as this treatment would double the life of all curtains.

P. O., Stearns, Ky.

Mine No. 4.—

Inspected June 14.—Inspection Notice No. 778.—Ventilation sufficient and satisfactory except at head of the 6½ left entry, where the ventilating current did not reach the face of the entry on account of poor condition of curtains. The following instructions were issued: Clean out the pile of gob in the north air course to the 1st east main; to give special attention to the cleaning up of the fine coal and machine cuttings, especially the electric chain machine cuttings; to improve the hanging of the electric wires; to use heavier curtain material or paint the material that is used at present with coal tar.

P. O., Stearns, Ky.

Mine No. 1. South Main.—

Inspected June 15.—Inspection Notice No. 779.—Ventilation satisfactory and sufficient. The following instructions were issued: Construct two brattices and a curtain at points shown the Mine Foreman on 3rd north and 4th south entries off 1st east; see that all the shots are tamped with fire clay or other non-inflammable material; also, instruct the shot firers to fire only the shots that are prepared in this manner. Owing to the fact that there are so many curtain brattices in the mine I would suggest that all curtains be painted with a heavy coat of coal tar. This would make a much better brattice and double the life of the curtain material.

COIL COAL COMPANY.

P. O., Madisonville, Ky.

Coil Mine.—

Inspected June 20.—Inspection Notice No. 780.—Ventilation satisfactory and sufficient and very nicely distributed.

½ of 1% of gas registered at face of room No. 1 on 2nd south off west. The following instructions were issued: Have the fire boss post conspicuously at the face of every working place the date of each visit made by him to any and all working places; see that nothing but fire clay or other non-inflammable material is used in the tamping of any and all shots; see that the machine cuttings and the face of any and all working places are thoroughly sprinkled before the firing of any shots each and every time the working place is shot; see that the water pipe lines are kept close to the face of all entries so that sprinkling may be done in a thorough manner; post conspicuously at the mouth of any unused room or entry a sign of warning to warn persons from entering any place that may not be properly ventilated; give special attention to the thorough cleaning up of fine coal and machine cuttings and do not permit the accumulation of such in small piles along the ribs of rooms and entries.

Prof. C. J. Norwood, Chief Inspector of Mines, while in charge of the rescue work at the Coil Mine after the explosion which occurred April 21, 1912, issued verbal instruction to Mr. W. D. Coil, President of the Coil Coal Co., as follows: "Carry on all work in the heading of each entry by the use of a safety lamp, and do not permit the use of an open light beyond the last open breakthrough in any entry. Run the ventilating fan as an exhaust fan, making the hoisting shaft the down cast for the ventilation."

On above date of inspection I find that the fan had not been completed sufficiently to enable the use of the exhausting system of ventilation; that safety lamps were not being used at the head of any entry in the mine; that the mine was not being looked after by a certificated Mine Foreman; all of which is in direct violation to the Chief Mine Inspector's orders and the Mining Laws of Kentucky. The Mining Laws of the State and the Chief Mine Inspector's orders must be fully carried out and strictly adhered to. I shall visit this mine within the next six days to see that the above orders and instructions are being followed, and if not, I shall take proper proceedings against the Coil Coal Company to see that such is being done. Let this warning be sufficient.

This mine resumed operations after the explosion about June 1st.

Victoria Coal Company.

P. O., Madisonville, Ky.

Victoria Mine.—

Inspected June 21.—Inspection Notice No. 781.—Quite an improvement was noticed in the ventilation since the previous inspection and the ventilation was satisfactory. There was not any gas registered in any working place on this inspection and all conditions were satisfactory.

West Kentucky Coal Company.

P. O., Sturgis, Ky.

Mine No. 1.—

Inspected June 25.—Inspection Notice No. 782.—Ventilation and timbering satisfactory. No gas was registered. The following instructions were issued: To place curtains on the 2nd and 3rd east entries at points shown the Mine Foreman; to clean up the haulage roads on the cross entries, as quite an amount of fine coal and dust had accumulated on each haulage road; to have the fire boss post conspicuously the date of each visit to all working places at face of same.

Mine No. 2.—

Inspected June 25.—Inspection Notice No. 783.—Ventilation sufficient, but it was recommended that the ventilation be increased at head of 3rd east to about 5,000 cubic feet of air. ½ of 1% of gas registered at head of 4th west air course entry; this entry was 80 feet ahead of the 4th west main. The following instructions were issued: To stop the 4th west air course entry until the main was within 60 feet or less to the face of the air course entry; to repair the brattices on the 3rd east entry which were shown the Mine Foreman; see that the fire boss uses a safety lamp to make tests for gas, and that he reports every morning any gas that may be found; also, that he post conspicuously at face of all working places the date of each visit.

Ohio Valley Coal Mining Company.

P.O., DeKoven, Ky.

Mine No. 9.—

Inspected June 26.—Inspection Notice No. 784.—Ventilation sufficient and satisfactorily distributed. The following instructions were issued: Place a curtain between rooms Nos. 1 and 2 on 3rd rise off 6th east; place a curtain brattice on the 4th rise off 6th east at point shown the Mine Foreman; repair the brattices on 6th east; give special attention to the cleaning up of the fine coal and machine cuttings at all times. Too much stress cannot be laid upon the importance of thoroughly cleaning up this material.

West Kentucky Coal Company.

P. O., Sturgis, Ky.

Mine No. 8.—

Inspected June 26.—Inspection Notice No. 785.—Ventilation sufficient and satisfactory. Special attention should be given the proper care of the roof which at present is very dangerous, owing to the fact that it does not give any warning before falling. All working places should be timbered as closely as possible to the face of same, and when the roof sounds loose on testing, it should be taken down rather than trying to support same with timbers.

Crittenden Coal & Coke Company.

P. O., Sturgis, Ky.

Davis Mine.—

Inspected June 27.—Inspection Notice No. 786.—Ventilation sufficient, but not very well distributed owing to poor curtains and leaky brattices. Instructions issued as follows: Place a curtain between rooms 25 and 26 on 4th west and repair the brattice line on this entry as was shown the Mine Foreman; clean out the fall of slate in the 4th east air course entry at the dip switch, also retamp all the gob brattices on this entry and make the breakthroughs larger and not less

than 10 feet in width; see that the breakthroughs in the room work are made properly; see that the trap door on the 4th west is trapped continuously.

Alabama Coal & Coke Company.

P. O., Waverly, Ky.

Waverly Mine.—

Inspected June 28.—Inspection Notice No. 787.—Ventilation sufficient and satisfactory. Instructions issued as follows: Place a curtain between rooms Nos. 4 and 5 on 1st east off south; place a curtain or brattice on the main south air course entry between 3rd and 4th west and clean out the gob at mouth of 4th west; prohibit the use of "cracker shots" in the narrow work, as this is a very dangerous method of shooting; attention is again called to the fact that some of the miners are using wet coal slack and dust for tamping purposes; this must be strictly prohibited and fire clay or other non-inflammable material used for tamping shots.

REPORT FOR THE MONTH OF JULY.

Coil Coal Company.

P. O., Madisonville, Ky.

Coil Mine.—

Inspected July 8.—Inspection Notice No. 788.—Ventilation satisfactory and sufficient. The requirements contained in report No. 780-L had been carried out except the running of the ventilating fan as an exhaust fan, which had not been completed so as to run the fan in this manner, and the use of safety lamps at heads of entries as directed to be done by the Chief Inspector of Mines. Instructions issued to post warnings at mouths of old rooms and other places that were not used, also that safety lamps must be used until the Chief Inspector of Mines saw fit to countermand this order, which would not be done until the Chief could have an opportunity to inspect this mine again.

Smith Mills Coal & Mining Company.

P. O., Smith Mills, Ky.

Smith Mills Mine.—

Inspected July 9.—Inspection Notice No. 789.—The current of air that was traveling the 3rd north entry was not strong enough to turn the anemometer at head of this entry. The Mine Foreman was shown some brattices that needed repairing, some repairs to be done in the air shaft, also in the fan house so that a larger volume of air could be sent into the mine. A portion of the haulway near the foot of the hoisting shaft needs to be retimbered. The mouths of rooms that have been worked out should be timbered properly so as to prevent any falls of roof from coming out on the entry.

Panama Coal Company.

P. O., Robards, Ky.

Robards Mine.—

Inspected July 10.—Inspection Notice No. 790.—Ventilation sufficient and satisfactorily distributed. Instructions issued to construct a line of brattices between rooms No. 7 and No. 8 on 2nd south and place a trap door on this entry between rooms No. 6 and No. 7; to repair the brattices on the 4th south; to repair the brattices on 3rd north and to place trap doors at mouth of 3rd north, 4th south, and main east at the junction of these entries.

The above instructions will not be necessary until operations are resumed, as the curtains that are in place are sufficient for what time the mine is idle.

Coil Coal Company.

P. O., Madisonville, Ky.

Coil Mine.—

Inspected July 13.—Inspection Notice No. 791.—Ventilation was sufficient. ½ of 1% of gas registered at face of room 4 on 1st south. This inspection was made in connection with the Chief Inspector of Mines, Prof. C. J. Norwood, and he issued the following instructions: "By keeping the curtain

brattices up to within 15 feet of the face of all entries, the use of safety lamps may not be necessary unless a clay slip is encountered, then these should be gone through by the use of safety lamps, as there is where the most gas is likely to be found; special attention should be given to the brattices, the cleaning up of all fine coal and machine cuttings, and the thorough sprinkling of the mine at all times.

"The above instructions regarding the use of safty lamps may be carried out provided a Mine Foreman is placed in charge that will follow the instructions of the Assistant Inspector in every detail."

On this inspection it was found that the instructions concerning the placing of "warning boards" had not been carried out. This must be done.

Corydon Coal Company.

(Successors to the Cahaba Coal Co.)

P. O., Corydon, Ky.

Corydon Mine.—

Inspected July 15.—Inspection Notice No. 792.—Main east: 750 cubic feet of air traveling the air course to this entry at the junction of the 3rd north. This entry is fallen very badly and will have to be cleaned up before the east side is operated again. There was enough air traveling head of the main west entry to turn the anemometer. There were several curtains needed and ordered placed, and the entry to the air shaft from the west side must be pushed every day until a connection is made. The underground force must be reduced until this connection is made to not more than ten men or clean up the falls around the air shaft so as to afford proper ingress and egress.

Pittsburgh Coal Company.

P. O., Spottsville, Ky.

Spottsville (Green River) Mine.—

Inspected July 16.—Inspection Notice No. 793.—Ventilation sufficient and satisfactorily distributed. Instructions issued to timber the 1st south more closely to the face of same;

two open breakthroughs at face of 3rd south off main west; the rear one must be closed. Otherwise all conditions satisfactory.

P. O., Baskett, Ky.

Baskett Mine.—

Inspected July 17.—Inspection Notice No. 794.—There was not enough air traveling head of 2nd south east entry to turn the anemometer. A leakage of 1,540 cubic feet of air was measured coming out the mouth of this entry. A curtain should be placed at mouth of this entry on the main south so as to pick up this leakage and send same up the 2nd south east entry. Otherwise ventilation satisfactory.

Attention was again called to the fact that breakthroughs must be made properly and not more than 60 feet apart, in all working places. Some repairs must be made on the ladder way in the air shaft so as to make same safe for travel at all times.

Zion Coal Company.

P. O., Zion, Ky.

Zion Mine.—

Inspected July 18.—Inspection Notice No. 795.—Ventilation and timbering satisfactory. A number of places were noticed in the partition between the air compartment and hoisting compartment of the shaft that needed repairing.

Peoples Mining Company.

P. O., Henderson, Ky.

Peoples Mine.—

Inspected July 19.—Inspection Notice No. 796.—Ventilation sufficient and satisfactorily distributed. The method of cleaning up the main air course entry is approved and should be continued until same is entirely worked over. See that weekly trips are made to the second outlet, and that this passage way is kept open at all times.

J. L. Nicholson & Company.

P. O., Henderson, Ky.

Nicholson Mine.—

Inspected July 19.—Inspection Notice No. 797.—2,208 cubic feet of air traveling the 1st west entry. Owing to the poor condition of this entry and the brattices and curtains this current did not reach the face of this entry strong enough to turn the anemometer. The cleaning up of the 1st west must be continued and the brattices should be retamped and refilled and the curtains repaired. The curtain cloth should be of a heavier material and painted with a coat of coal tar. You have now passed the 15,000 square yards excavation limit as provided by the Mining Laws and you must see that the underground force is not more than 10 persons at any time until a second outlet is made.

Sebree Mining & Development Company.

P. O., Sebree, Ky.

Sebree Mine.—

Inspected July 20.—Inspection Notice No. 798.—Ventilation not sufficient at head of the 10th north entry. The retimbering of the air shaft should be done as soon as possible; the cleaning of the main air course entry should be pushed as much as possible, and the breakthrough at head of the 8th north must be cleaned out.

Coil Coal Company.

P. O., Madisonville, Ky.

Coil Mine.—

Inspected July 23.—Inspection Notice No. 799.—Ventilation sufficient and satisfactorily distributed. Verbal instructions were given the Mine Foreman (Mr. James Cardwell) pertaining to the use of safety lamps in this mine, when needed, how to be used, what the duty of the fire boss consists of and other general instructions.

REPORT FOR THE MONTH OF AUGUST.

Utopia Coal Company.

P. O., Hebbardsville, Ky.

Utopia Mine.—

Inspected August 9.—Inspection Notice No. 800.—Sufficient ventilation was traveling the main west entry for the number of persons employed underground. The Mine Foreman was shown some brattices that needed to be refilled and retamped. Otherwise conditions were satisfactory.

John Archbold Coal Company.

P. O., Bluff City, Ky.

Bluff City Mine.—

Inspected August 10.—Inspection Notice No. 801.—Ventilation sufficient and satisfactory. Some breakthroughs near the head of 6th east that were shown the Assistant Foreman needed refilling and retamping, also the curtain on this entry needed repairing. The 6th east air course entry needs to be cleaned out at a point near the head of the entry; this was also shown the Foreman. Otherwise conditions were satisfactory.

Nebo Consolidated Coal & Coking Company.

P. O., Nebo, Ky.

Davidson City Mine.—

Inspected August 12.—Inspection Notice No. 802.—The ventilation should be increased on the 9th west by the repairing of the brattices and curtains and the making of breakthroughs regularly and properly, which was all pointed out to the Mine Foreman. Instructions issued to see that all the fine coal and machine cuttings were thoroughly cleaned up after every shot. Timbering satisfactory.

ROSE CREEK COAL COMPANY.

P. O., Nebo, Ky.

Coil City Mine.—

Inspected August 13.—Inspection Notice No. 803.—Quite a loss of ventilation was noted between the head of room No. 1 on the 3rd east and the head of 3rd east entry. Instructions issued that this loss of ventilating current should be picked up and carried to the head of the 3rd east entry. There were two open breakthroughs at head of the 34th entry, the rear one should be closed. The Mine Foreman was shown some timbering and drainage work that should be done on the 2nd south motor haulage road.

REINECKE COAL MINING COMPANY.

P. O., Madisonville, Ky.

Reinecke Mine.—

Inspected August 14.—Inspection Notice No. 804.—Ventilation sufficient and satisfactorily distributed. ½ of 1% of gas registered at head of 10th west air course entry. ½ of 1% of gas registered at head of main south entry. The clearing out of the gas in the entries mentioned above was being done satisfactorily. Other conditions satisfactory.

SUNSET COAL COMPANY.

P. O., Madisonville, Ky.

Royal Mine No. 11.—

Inspected August 15.—Inspection Notice No. 805.—Ventilation sufficient and satisfactorily distributed. Timbering and all conditions satisfactory.

MOSER MINING COMPANY.

P. O., Henderson, Ky.

Keystone Mine.—

Inspected August 16-17.—Inspection Notice No. 806.—This mine has not been operated for over three years, but the condition of the roof was found to be good; only some two or

three falls of roof and not any gas was found at any point and only very little work will be required to put this mine in first class shape. When operations are started the west entry should be pushed with all possible speed to the 2nd outlet shaft, which is only about 400 feet from the face of this entry. Ventilation was satisfactory.

The mine has been leased to and is to be operated by Mr. M. M. Moser, formerly the Superintendent of the Peoples Mining Co., of Henderson, Ky.

MR. BRASHER'S REPORTS.

REPORT FOR THE MONTH OF SEPTEMBER.

ST. BERNARD MINING COMPANY.

P. O., Earlington, Ky.

Mine No. 11.—
Inspected September 2.—Inspection Notice No. 1.—All conditions satisfactory.

The Sisk Mine.—
Inspected September 2.—Inspection Notice No. 2.—All conditions satisfactory.

VICTORIA COAL COMPANY.

P. O., Madisonville, Ky.

Victoria Mine.—
Inspected September 4.—Inspection Notice No. 3.—Instructions given to increase the ventilation on the 18th east. There was not enough air to turn the anemometer; owing to bad brattices and curtains the air did not reach the head of entry. Other conditions satisfactory.

ST. BERNARD MINING COMPANY.

P. O., Earlington, Ky.

The Hecla Mine.—
Inspected September 5.—Inspection Notice No. 4.—All conditions satisfactory.

Nisbet Hill No. 11 Opening.—
Inspected September 5.—Inspection Notice No. 5.—All conditions satisfactory.

Coil Coal Company.

P. O., Madisonville, Ky.

Coil Mine.—

Inspected September 6.—Inspection Notice No. 6.—Room No. 1 on 2nd south off west was found to be full of gas, caused by break in brattice line near mouth of room. This brattice line was repaired and the gas driven out while I was present. Instructions were issued to renew this brattice line and post warning boards at mouth of room and entry. Other conditions satisfactory.

St. Bernard Mining Company.

South Diamond Mine.—

Mortons Gap.

Inspected September 12.—Inspection Notice No. 7.—All conditions satisfactory.

P. O., Earlington, Ky.

Mine No 9 —

Inspected September 12.—Inspection Notice No. 8.—All conditions satisfactory.

St. Charles.

Fox Run Mine.—

Inspected September 13.—Inspection Notice No. 9.—All conditions satisfactory.

P. O., Earlington, Ky.

Arnold Mine.—

Inspected September 14.—Inspection Notice No. 10.—Two breakthroughs were found open at 13 east heading. The rear one was ordered closed up. Other conditions satisfactory.

CRABTREE COAL MINING COMPANY.

P. O., Ilsley, Ky.

Mine No. 9.—

Inspected September 16.—Inspection Notice No. 11.—East 10 and 13, and west 13. There was not enough air on these entries. Brattices and curtains needed repairing. Instructions were issued to that effect. Other conditions satisfactory.

CARBONDALE COAL & COKE COMPANY.

P. O., Dawson, Ky.

Mine No. 2.—

Inspected September 17.—Inspection Notice No. 12.—No. 1 opening.—Not enough air on 4th west for 6 men that were working on this entry. Curtains on main north entry were ordered repaired to conduct the air into the west.

No. 2 opening.—There was enough air for the men working in this opening, near the furnace. In the east and north headings there was not enough for the men working. Curtains and brattices need repairing. Otherwise conditions satisfactory.

STIRLING COAL COMPANY.

P. O., Daniel Boone, Ky.

Daniel Boone Mine.—

Inspected September 17.—Inspection Notice No. 13.—There was not enough air traveling the south side of this mine. A trap door was ordered placed on main east near 5th south to conduct the air to the south side of the mine. Other conditions satisfactory.

KINGTON COAL COMPANY.

P. O., Mortons Gap, Ky.

Mine No. 1.—

Inspected September 18.—Inspection Notice No. 14.—All conditions satisfactory.

NORTONVILLE COAL & COKE COMPANY.

P. O., Nortonville, Ky.

Mine No. 1.—

Inspected September 19.—Inspection Notice No. 15.—On south side of right heading the air was not sufficient for the men that were working on this entry. Instructions were given to repair brattices and curtains in this part of the mine that conducted the air to this entry. Otherwise conditions satisfactory.

Mine No. 2.—

Inspected September 19.—Inspection Notice No. 16.—All conditions satisfactory.

PETERSBURG COAL COMPANY.

(D. F. Shrum, Lessee.)

P. O., Mannington, Ky.

Sory Mine.—

Inspected September 20.—Inspection Notice No. 17.—Instructions were given to repair all brattices and curtains and to force the air to the south headings. Otherwise conditions satisfactory.

BRENT HART MINING COMPANY.

P. O., Mannington, Ky.

Terry Mine.—

Visited September 20.—Inspection Notice No. 18.—No inspection; mine shut down on 15th of August, and will remain for at least 30 days more for repairs. Visited but not inspected.

EMPIRE COAL COMPANY.

P. O., Empire, Ky.

Empire Mine.—

Inspected September 20.—Inspection Notice No. 19.—All conditions satisfactory.

REPORT FOR THE MONTH OF OCTOBER.

West Kentucky Coal Company.

Mine No. 3.—

Mine Office, Wheatcroft.

Inspected October 1.—Inspection Notice No. 20.—Instructions were given to repair curtains and brattices, and to place a trap door across main entry at mouth of 5th west entry. Otherwise conditions satisfactory.

Mine No. 6.—

Mine Office, Wheatcroft.

Inspected October 1.—Inspection Notice No. 21.—All conditions satisfactory.

Mine No. 4.—

Mine Office, Wheatcroft.

Inspected October 1.—Inspection Notice No. 22.—3rd and 5th west there was not enough air at head of entry to turn anemometer. Instructions were given to repair curtains and brattices on these entries.

Mine No. 7.—

Mine Office, Clay.

Inspected October 4.—Inspection Notice No. 23.—2nd south off 2nd right 1½% gas was found in head of this entry. Instructions were given for danger board to be placed in mouth of entry until gas was cleared away.

Mine No. 5.—

Mine Office, Wheatcroft.

Inspected October 2.—Inspection Notice No. 24.—Instructions were given to place a trap door across main dip entry at mouth of northeast entry. There was not enough air

traveling this entry to turn the anemometer. 2nd south entry curtains and brattices need repairing.

FAIRMONT MINING COMPANY.

P. O., Wheatcroft, Ky.

Fairmont Mine.—

Inspected October 3.—Inspection Notice No. 25.—All conditions satisfactory.

CLIFTY CONSOLIDATED COAL COMPANY.

P. O., Clay, Ky.

Clifty Mine (Blackwell.)—

Inspected October 3.—Inspection Notice No. 26.—Instructions were given to repair curtains and brattices on 1st south entry. There was not enough air traveling head of entry to turn anemometer.

DIAMOND COAL COMPANY.

P. O., Providence, Ky.

Diamond Mine.—

Inspected October 4.—Inspection Notice No. 27.—4th west entry brattices need repairing.

WEBSTER COUNTY COAL COMPANY.

P. O., Providence, Ky.

Webster County Mine.—

Inspected October 8.—Inspection Notice No. 28.—Ventilation, timbering and drainage satisfactory.

LAMB COAL COMPANY.

P. O., Providence, Ky.

Lamb Mine.—

Inspected October 8.—Inspection Notice No. 29.—All conditions satisfactory.

PROVIDENCE MINING COMPANY.

P. O., Providence, Ky.

Mine No. 3.—

Inspected October 8.—Inspection Notice No. 30.—Curtains and brattices need repairing on all entries in this mine.

RUCKMAN MINING COMPANY.

P. O., Providence, Ky.

Ruckman Mine.—

Inspected October 9.—Inspection Notice No. 31.—All conditions satisfactory.

JENKINS COAL COMPANY.

P. O., Providence, Ky.

Wanless Mine.—

Inspected October 9.—Inspection Notice No. 32.—Instructions were given to repair all curtains and brattices. There were two open breakthroughs at head of entry; the rear one must be closed.

LEEPER COAL COMPANY.

P. O., Providence, Ky.

Leeper Mine.—

Inspected October 10.—Inspection Notice No. 33.—All conditions satisfactory.

HIGHLAND MINING COMPANY.

P. O., Providence, Ky.

Highland Mine.—

Inspected October 10.—Inspection Notice No. 34.—All conditions satisfactory.

ST. BERNARD MINING COMPANY.

P. O., Earlington, Ky.

Mine Office, Providence.

Shamrock Mine.—

Inspected October 10.—Inspection Notice No. 35.—All conditions satisfactory.

PROVIDENCE MINING COMPANY.

P. O., Providence, Ky.

Mine No. 2.—

Inspected October 11.—Inspection Notice No. 36.—Curtains and brattices need repairing in all entries. 2nd left off main dip there were two open breakthroughs; the rear one should be closed.

LUTON COAL COMPANY.

P. O., Providence, Ky.

Luton Shaft Mine.—

Inspected October 11.—Inspection Notice No. 37.—All conditions satisfactory.

R. L. FORSYTHE.

P. O., Providence, Ky.

Forsythe Slope Mine.—

Inspected October 12.—Inspection Notice No. 38.—Whitsell entry curtains and brattices need repairing.

NEBO CONSOLIDATED COAL & COKING COMPANY.

P. O., Nebo, Ky.

Davidson City Mine.—

Inspected October 15.—Inspection Notice No. 39.—7th west and 9th west curtains and brattices need repairing.

ROSE CREEK COAL COMPANY.

P. O., Nebo, Ky.

Coil City Mine—

Inspected October 16.—Inspection Notice No. 40.—Middle south curtains and brattices need repairing.

REINECKE COAL MINING COMPANY.

P. O., Madisonville, Ky.

Reinecke Mine.—

Inspected October 17.—Inspection Notice No. 41.—10th and 12th west and 2nd south and 14th east curtains and brattices need repairing.

SUNSET COAL COMPANY.

P. O., Madisonville, Ky.

Royal Mine No. 11.—

Inspected October 18.—Inspection Notice No. 42.—All conditions satisfactory.

COIL COAL COMPANY.

P. O., Madisonville, Ky.

Coil Mine.—

Inspected October 18.—Inspection Notice No. 43.—All conditions satisfactory.

VICTORIA COAL COMPANY.

P. O., Madisonville, Ky.

Victoria Mine.—

Inspected October 22.—Inspection Notice No. 44.—14th east brattices need repairing near heading.

MORGANFIELD COAL & MINING COMPANY.

P. O., Morganfield, Ky.

Lloyd Mine.—
Inspected October 24.—Inspection Notice No. 45.—All conditions satisfactory.

RIVER AND RAIL COAL & COKE COMPANY.

P. O., Morganfield, Ky.

Union Town Mine.—
Inspected October 25.—Inspection Notice No. 46.—All conditions satisfactory.

UNIONTOWN COAL & MINING COMPANY.

P. O., Uniontown, Ky.

Uniontown Mine.—
Inspected October 25.—Inspection Notice No. 47.—All conditions satisfactory.

WEST KENTUCKY COAL COMPANY.

P. O., Sturgis, Ky.

Mine No. 2.—
Inspected October 29.—Inspection Notice No. 48.—4th east and 4th west there were two open breakthroughs; the rear one should be closed. 3rd west curtains and brattices need repairing.

Mine No. 1.—
Inspected October 29.—Inspection Notice No. 49.—All conditions satisfactory.

Mine No. 8.—
Inspected October 29.—Inspection Notice No. 50.—All conditions satisfactory.

BELL UNION COAL & MINING COMPANY.

P. O., Curlew, Ky.

Bell Union Mine.—
Inspected October 30.—Inspection Notice No. 51.—All conditions satisfactory.

OHIO VALLEY COAL & MINING COMPANY.

P. O., DeKoven, Ky.

Mine No. 9.—
Inspected October 31.—Inspection Notice No. 52.—All conditions satisfactory.

HERCULES COAL COMPANY.

P. O., Morganfield, Ky.

Thomas Mine.—
Visited October 24.—Had been closed down for ten weeks.

CRITTENDEN COAL & COKE COMPANY.

P. O., Sturgis, Ky.

Davis Mine.—
Visited October 30.—Had been shut down for eight weeks and will remain so for some time.

REPORT FOR THE MONTH OF NOVEMBER.

ALABAMA COAL & COKE COMPANY.

P. O., Waverly, Ky.
Waverly Mine.—
Inspected November 11.—Inspection Notice No. 53.—Ventilation satisfactory except at the head of the 1st east off north, where there was not enough air traveling to turn the anemometer. Instructions issued to repair the curtains and brattices on this entry.

Utopia Coal Company.

P. O., Hebbardsville, Ky.

Utopia Mine.—

Inspected November 12.—Inspection Notice No. 54.—2,765 cubic feet of air traveling this entry, 1st and 2nd right, but was sluggish at head of same. Instructions issued to repair the curtains and brattices on the main entry, also on the 1st and 2nd right entries. Otherwise conditions satisfactory.

Zion Coal Company.

P. O., Zion, Ky.

Zion Mine.—

Inspected November 12.—Inspection Notice No. 55.—Ventilation, timbering and drainage satisfactory.

John Archbold Coal Company.

P. O., Bluff City, Ky.

Bluff City Mine.—

Inspected November 13.—Inspection Notice No. 56.—6th east: Not enough air traveling the head of this entry to turn the anemometer. Curtains and brattices needed repairing on this entry. Otherwise conditions satisfactory.

Pittsburgh Coal Company.

P. O., Baskett, Ky.

Spottsville Mine.—

Inspected November 14.—Inspection Notice No. 57.—Ventilation satisfactory except at head of main west and 1st and 2nd south off 1st northwest entry. Instructions issued to repair the curtains and brattices that were shown the Mine Foreman on these entries.

P. O., Baskett, Ky.

Baskett Mine.—

Inspected November 14.—Inspection Notice No. 58.—North side, 4th east and main north heading. Not enough air traveling these entries to turn the anemometer. Curtains and brattices needed repairing. South side, main south heading. Not enough air traveling head entry to turn the anemometer. Curtains and brattices needed repairing on this entry.

J. L. Nicholson & Company.

P. O., Henderson, Ky.

Nicholson Mine.—

Inspected November 15.—Inspection Notice No. 59.—Ventilation, timbering and drainage satisfactory.

Peoples Mining Company.

P. O., Henderson, Ky.

Peoples Mine.—

Inspected November 18.—Inspection Notice No. 60.—Ventilation satisfactory except at head of the 4th south entry. Instructions issued to repair the curtains and brattices on this entry. Otherwise conditions satisfactory.

Moser Mining Company.

P. O., Henderson, Ky.

Keystone Mine.—

Inspected November 18.—Inspection Notice No. 61.—Ventilation, timbering and drainage satisfactory.

Smith Mills Coal & Mining Company.

P. O., Smith Mills, Ky.

Smith Mills Mine.—

Inspected November 19.—Inspection Notice No. 62.—1,500 cubic feet of air entering the main north entry, but this was not strong enough at head of entry to turn the anemometer. Instructions issued to repair the curtains and brattices.

Corydon Coal Company.

P. O., Corydon, Ky.

Corydon Mine.—

Inspected November 19.—Inspection Notice No. 63.—There was not enough air at the head of the entries to turn the anemometer; the airways had fallen in. A new entry was being driven to the air shaft, which lacked about 6 feet being through to the shaft, which when completed would furnish excellent ventilation. Otherwise conditions satisfactory.

Panama Coal Company.

P. O., Robards, Ky.

Robards Mine.—

Inspected November 20.—Inspection Notice No. 64.—Ventilation satisfactory except at head of 2nd south, where there was not enough air to turn the anemometer. Curtains and brattices needed repairing on this entry. Otherwise conditions satisfactory.

Sebree Coal Company.

P. O., Sebree, Ky.

Sebree Mine.—

Inspected November 21.—Inspection Notice No. 65.—Ventilation satisfactory except at head of 4th north. Brattices needed repairing and airways needed cleaning out. Instructions issued to maintain a good ventilation at all times and in all working places.