# State inspector of coal mines reports

### Section 39, Pages 1141 - 1170

These reports of the Kansas State Mine Inspector mostly concern coal mining, though by 1929 the scope of the reports broadens to include metal mines. The content of individual reports will vary. The reports address mining laws and mining districts; industry production and earnings; fatal and non-fatal accidents; accident investigations and transcripts of oral interviews; labor strikes; mine locations; mining companies and operators; and proceedings of mining conventions. The reports document the political, economic, social, and environmental impacts of more than seventy years of mining in southeastern Kansas.

Creator: Kansas. Inspector of Coal Mines

Date: Between 1884 and 1956

Callnumber: SP 622 K13

KSHS Identifier: DaRT ID: 210191

Item Identifier: 210191

www.kansasmemory.org/item/210191

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## MINERS WIN SCREEN CASE.

COURT OF APPEALS UPHOLDS ATTORNEY-GENERAL BOYLE'S DEFENSE OF ANTI-SCREEN LAW.

The coal-miners have won a second victory in the fight to uphold the constitutionality of the laws known as the anti-screen laws. The Court of Appeals has handed down an opinion sustaining the lower court in declaring the latter law constitutional. A similar decision knocking out scrip will likely follow.

Attorney-General Boyle has gone down to the Cherokee district to see personally to the enforcement of the law. He intends to prosecute this work vigorously, "even if I have to swear out complaints myself," he says.

The opinion, which was very carefully and thoroughly prepared by Judge Milton, was concurred in by all the judges. The court says:

Appellant's counsel, throughout their whole argument, assume that the object of this act is to regulate the rate of wages to be paid by mine operators to their employees. We think this assumption is unwarranted, and that, in so far as the arguments of counsel rest upon it, such arguments are irrelevant to the questions which properly arise in the case. It would hardly be claimed that the act would be valid within the provisions of section 16, article 2, of the state constitution, if the body thereof contained provisions fixing the rate of wages of miners, under the title "An act to regulate the weighing of coal at the mine."

Counsel say that it was clearly the intention of the legislature to punish the act of passing the output of a coal-mine over a screen or other device which should take any part from its value in determining the wages or compensation to be paid the miners, or its value as the measure of the wages to be received; and that where any part of its value as such measure is not only not taken away but is increased by screening (as they claim is true in this case) such an act is not a violation of the law. We cannot agree with this construction of the statute. It was manifestly the intention of the legislature to require that where a screen is used by any mine operator the same shall not be employed prior to the weighing of the coal, if the use of the screen would take from the coal any part thereof which has a money value. It is not an act to prohibit the screening of coal, but it is an act to regulate the weighing of coal before screening. The agreed statement of facts shows that the law was disregarded in this case. It also shows that to comply with the provisions of this law would require the coal company to purchase an extra set of scales; that is, the evidence shows that, while the act has been a law of the state for more than four years, the coal company has made no provision for complying with its terms. It is plain that the company has rested upon its "constitutional rights" while declining to obey a statute. It has asserted its "inalienable right" of contracting in defiance of a law.

We regard this law as being what it purports to be as set forth in its title,

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and that it is intended as a police regulation, general in its application to all owners of coal-mines and laborers who work in such mines. It is not therefore objectionable as being class legislation.

It is a matter of current history with which all citizens are familiar, that serious differences have arisen between mine operators and their employees as a result of the use of devices for screening coal. The reports of the labor bureaus of all the states wherein coal-mines are operated abound in information upon this subject. It is evident that the legislature regarded the weighing of coal at the mine before screening as being properly subject to, and requiring, regulation. Of course, where screens are not used the entire output of coal produced by each miner is weighed. Where screens are employed such output is required to be weighed, if the effect of the screening would be to remove a portion—having value—of such output. The tendency of such a law would be to prevent possible fraud and imposition by the mine owner, and to place operator and operative upon a more nearly equal basis in respect to their mutual relations and interests than would otherwise exist.

Counsel for appellant says: "It need not be argued to this court that where different propositions are open to the choice of men, whether they be miners or wood choppers, it will be presumed that the proposition most favorable to them will be accepted," and that it must be presumed in this case that the miners agreed to that proposition which insured or promised to them the best wages. The objection to this view is the assumption that an option was presented to the miners as to the basis of their contracts. As already noted, the coal company had made no provision for weighing coal before screening the same, from which it is clear that the assumed option could not have been exercised. Until proper provision is made for weighing the coal the miner cannot exercise a choice. In the way provided by this statute, and in no other way, will an equitable basis be reached. As stated by the supreme court in the case of Holden v. Hardy, *supra*, proprietors of coal-mines and their operatives do not stand upon an equality and their interests are to a certain extent conflicting.

But, as we view this act, it is by no means an innovation or a legislative novelty. Not only is it not novel or at variance with present legislation elsewhere, but the principle involved has been expressed in other statutes of this state for many years, and has been embodied in the laws of some of the older states for almost a century.

If statutes may be enacted for the benefit of the buyer who is otherwise without protection from fraud and imposition, laws may be enacted to protect the seller who would otherwise be liable to imposition and fraud. The difference in principle between the two instances is too ethereal. The law's consideration and protection are extended to the party occupying the disadvantageous position.

In this case it may be said, that the miner has brought the product of his toil to the market when the car containing the coal he has mined rests beneath the sun which shines not where he delves, just as truly as that the farmer has brought his hay to market when he enters the city where it is to be weighed and delivered to a customer, and where he may be required by ordinance to have it weighed on scales not of his choosing. To weigh coal before it is screened is to preserve the weight of the entire product of the miner's labor. He may be far beneath the surface of the earth, engaged in his arduous task, but if what he produces is properly weighed in accordance with the law and subsequently accounted for he is put upon a basis of equality with the purchaser, the operator of the mine, in matters of contract relating to such product.

We have examined a very large number of the authorities cited, and all of

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those which bear directly upon the questions which we think actually arise in the case, and shall now review the cases cited by counsel which arose under laws concerning the weighing of coal at the mines. The case of Millett v. People (117 Ill. 294) involved the validity of an act the title of which was identical with that here considered. That law required that all coal mined be weighed at the expense of the operator and prior to the screening of the coal. The supreme court, in construing this act, held that it prohibited the making of contracts for computing wages of the miners upon any other basis than that of unscreened coal, and its decision against the constitutionality of the act rests upon such construction.

In conclusion: We have given the important matters here involved much consideration, with the earnest desire to reach a right decision. Our judgment has not been persuaded that this act violates either the letter or the spirit of the constitution of this state or that of the United States. We are unable to affirm that the legislature has not "adopted the statute in the exercise of a reasonable discretion." Guided by the rule laid down by our supreme court in State v. Barrett (27 Kan. 213), that "the action of the lawmaking power must in all cases be upheld unless its action is manifestly in contravention of the constitution," we hold chapter 188, Laws of 1893, to be constitutional and valid.

The judgment of the trial court is affirmed.

From the Pittsburg *Kansan:*

County Attorney Widby, of Crawford county, is entitled to a great deal of honor for the success of pushing the anti-scrip-and-screen laws through the courts. We would not seek to detract one iota from what Attorney-General Boyle may have done, but we know that Mr. Boyle does not hesitate to award to Mr. Widby the full credit for the victory won.

Right here the Inspector wants to add, that Mr. W. L. A. Johnson, labor commissioner, is entitled to a great deal of credit for his untiring efforts in gathering evidence and urging the pushing of these laws through the courts for their final settlement, so that they might be enforced, and the people receive the benefit that these laws intended they should receive.

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## GLOSSARY OF TECHNICAL MINING TERMS.

The following is a glossary of the terms most frequently used by miners throughout the states:

**After-Damp.** The mixture of gases remaining in a mine after an explosion of fire-damp, which may consist of carbonic-acid gas, carbonic oxide, water vapor (quickly condensed), nitrogen, and, in some cases, free hydrogen, but usually consists principally of carbonic-acid gas and nitrogen, and is therefore irrespirable.

**Air-Pipe** or **Air-Box.** Square boxes made of wooden boards, in sections eight to sixteen feet long, for the conveyance of air into tunnels, etc.; also, iron pipes used for conveyance of compressed air.

**Air-Stack.** A ventilating chimney.

**Airway.** Any passage used for passage of air for ventilation.

**Anemometer.** An instrument used for measuring the velocity of the ventilating current of air.

**Arenaceous.** Sandy rocks are arenaceous when they contain a considerable percentage of sand.

**Argillaceous.** Clayey. An argillaceous rock is one that contains a considerable percentage of clay, or has some of the characteristics of clay.

**Band.** Interstratified rock in coal.

**Brushing.** To cut down the roof of an entry or passageway in the mine, after the coal has been mined away, to make height for mules, etc.

**Bank.** A word often used amongst miners in referring to the coal-mine.

**Battery.** Any structure built of timber or plank to keep the coal in the room, or prevent it from sliding down a chute when not wanted. This is used on pitching veins.

**Bear, to Bear in.** Usually applied to underholing or undermining.

**Bed.** A regular member of a stratified series deposited or formed after the underlying and before the overlying rock.

**Bed-Rock.** The solid rock underlying the soil drift or alluvial deposit.

**Bench.** A natural terrace marking the outcrop of any stratum; a division of a coal-seam separated from the remainder by a parting of slate, shale, iron pyrites, sulphur, or other foreign matter.

**Bit.** A drilling chisel.

**Black Damp, Choke-Damp.** Carbonic-acid gas $= CO_2$; thus distinguished from white damp or carbonic oxide $= CO$.

**Blossom.** Outcrop of a coal-bed or mineral deposit.

**Blower.** A strong discharge of gas from a fissure.

**Blowout, to Blow out.** A blast is said to blow out when it acts like a cannon, throwing out the tamping without bringing down the rock or coal.

**Bone Coal, Bone.** Slaty or argillaceous coal or carbonaceous shale occurring in coal-seams.

**Bottom Lift.** The lowest or deepest lift.

**Bottom.** The landing at the bottom of the shaft or slope; the lowest point of mining operations; the floor-bottom rock, or stratum, underlying a coal-bed.

**Brattice.** A board or plank lining or partition, in any mining passage, to confine air and force it into the working-places. Its object is to keep the intake air from finding its way by a short route into the return airway.

**Brattice Cloth.** A heavy cloth or canvas, often covered with some water-proof material, for temporarily forcing air into the face of the room or entry; also used in place of doors at the entrance of rooms. They are then called "sheets." Such brattice cloth should be uninflammable in gaseous mines; this is not so, however, in many instances.

**Bridle Chains.** Safety chains to support the cage if the middle link should break; when two chains are used in a slope, (instead of attaching the rope by a single chain to the draw-bar of a car,) they are also called bridle chains.

**Bucket.** The piston of a lifting pump; or, a bucket used in sinking shafts.

**Buntings.** Timbers placed horizontally across a shaft to carry the cage guides and column pipes; also to strengthen the shaft timbering.

**Butty.** A partner or comrade working with another in a coal-mine.

**Cage.** A platform on which men and cars are raised to the surface from the mine.

**Cap, Cap-Piece.** A piece of plank put on the top of a prop next to the roof.

**Cap.** The pale bluish elongation of the flame of a safety-lamp, caused by the presence of gas; fire-damp.

**Carbonaceous.** Coaly; containing carbon or coal.

**Carboniferous.** Containing or carrying coal; thus, carboniferous rocks, the Carboniferous formation.

**Cave, to Cave in.** Falls from the roof or sides of the entries or rooms of a mine.

**$CH_4$.** The chemical notation for carbureted hydrogen, or fire-damp.

**Chain Pillar.** A pillar left to protect the top of entry and airway, and running parallel between these passages.

**Charge.** The amount of powder used in one blast or shot.

**Chocks.** Shanties; a building built with logs or props crossing one another to support the roof in a place where an extra creep of the stratum takes place.

**Clanny Lamp.** Safety-lamp invented by Doctor Clanny. This lamp differs from the Davy in having the lower portion of the covering made of glass instead of being wholly gauze.

**Clinometer.** A small pocket instrument, provided with a spirit-level and graduated arc, for measuring the angle of a dip.

**Coal-Measures.** The carboniferous formations.

**Cleavage.** The property of splitting more readily in some directions than others.

**Collar.** The horizontal timber resting upon two upright or inclined legs or props, for the support of the roof in an entry or airway.

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**Colliery.** This term is used to denote not only the mine, but includes also all the structures that make up the plant of the surface; the mine and all its adjuncts.

**Column Pipes.** Cast-iron or wrought-iron pipes through which the water is conveyed from the mine pumps to the surface.

**Conglomerate.** The rock formation, consisting of pebbles and fragments of various rocks cemented together.

**Creep.** A squeeze or crush, forcing the pillars down into the floor or up into the roof, which often gives the miner the impression that the floor is rising.

**Crevice.** A fissure in rock or coal.

**Cribwork.** A structure composed of horizontal frames of timber laid one upon another, built like a log cabin.

**Cribbing.** Timbering a shaft with cribwork; it commonly extends from the surface down to bed-rock.

**Crop.** To come to the surface and crop out.

**Cross-Cut** or **Cross-Heading.** A passage driven for ventilation through the pillar between entry and airway.

**Davy Lamp.** A safety-lamp invented by Sir Humphrey Davy, with a fine wire gauze inclosing the flame; 784 apertures to the square inch; framework brass.

**Dead Air.** The air of a mine is said to be dead or heavy when it contains carbonic-acid gas (black damp), or when the ventilation is sluggish.

**Dead-Work.** Work not in itself productive of enough coal to pay the cost of driving, or producing nothing at all.

**Derrick.** The structure erected for drilling or hoisting process.

**Dip.** The angle of inclination of the coal-seams or mineral bed or vein, measured from a horizontal line.

**Door.** Doors are placed in the passages of mines to prevent the ventilating current from taking a short cut to the upcast shaft.

**Door Trapper.** A boy whose duty it is to open and close a mine door before and after the passage of a mine-car.

**Downcast.** The passage or airway through which the ventilating current passes into the mine.

**Draw.** To draw the pillars; robbing out the pillars after the room is exhausted.

**Drift.** A level tunnel driven in on the bed from the surface.

**Driving.** Excavating horizontal passages.

**Dump.** The tipple by which the cars are dumped on the slate or slack dump.

**Entry.** A level used for a haulage road, from which rooms are turned.

**Face** or **Working-Face.** The place at which work is being done in a room, entry, or airway.

**Fault.** The place where the stratum is broken by some upheaval and disappears from the continuous line.

**Feeder.** A spring of water encountered in mining operations, or a small blower of gas.

**Fire Board.** A board on which the fire boss indicates by chalk marks where gas is found in different parts of the mine.

**Fire Boss.** A man whose duty it is to examine the workings of the mine for accumulations of explosive gas.

**Fire-Damp.** $CH_4$, light carbureted hydrogen, an inflammable gas, explosive when mixed with air in certain proportions.

**Floor.** The rock underlying the coal-seam.

**Free Coal.** Coal is said to be free when it is loose and easily mined.

**Gang.** A set of miners; a shift.

**Gas.** Fire-damp.

**Gob.** A space from which the coal has been mined and refuse or waste left therein.

**Gob Fire.** Fires originating spontaneously from the heat of decomposed gob.

**Guide.** Vertical timbers fastened to the buntings to steady and guide the cage in a hoisting shaft.

**Head-Frame.** A structure erected over a shaft to carry the sheaves and steady the cage.

**Head-Gear.** That portion of the winding machinery attached to the head-frame.

**Heading.** A term usually given to an entry going to the rise of the vein or cross-heading.

**Hogback.** A short anticlinal axis of limited extent.

**Holding Through.** Driving a passage through to make connections with another part of the workings, or with those of an adjacent mine.

**Incline.** A slope; any inclined plane, whether above or beneath the surface.

**Indicator.** An instrument or device for indicating the position of the cage in the shaft.

**Intake.** A passage by which air enters the mine or downcast.

**Keeps or Keps.** Catches or rests to hold the cage when it is brought to rest at the top or at any intermediate landing (commonly called shuts or fans).

**Lagging.** Small, round timbers, slabs or planks driven in behind the legs and over the collars, to prevent pieces of roof from falling through.

**Landing.** Any place where cars are taken off or put on a cage or slope.

**Latches.** Synonym for switch; applied to split rails or hinge switches.

**Legs.** Props on which the collar rests in entry or other timbering.

**Level.** A horizontal passage in a mine.

**Lift.** The number of entries from which coal is raised in a colliery. This term refers to the number of pump lifts also.

**Long-Wall.** A method of working coal where no pillars are left, and the roof is supported by pack-walls, gob, etc. This method is often adopted where the coal-vein does not exceed four feet.

**Loose-End.** A place mining alongside of a place previously worked out.

**Manhole.** A small place cut back into the side of self-acting planes, slopes, or entries, for the safety of the miners during the passage of the mining cars.

**Manway.** A small passageway used as a traveling way for the miner; also used as an airway for rooms on a pitching vein.

**Measures.** Rocks, or a series of rocks, having some attribute in common; thus, coal-measures, containing coal, etc.

**Narrow-Work.** Entries and airways, cross cuts and cross-headings.

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**Needle.** An instrument or tool placed in a drill hole during the tamping of a charge, to leave on its withdrawal an opening through which the charge can be fired by a squib.

**Outcrop.** That portion of a vein bed or any stratum appearing at the surface or occurring immediately beneath the soil or alluvial debris.

**Outlet.** A passage furnishing an outlet for air (upcast, outtake), for miners, for water, etc.

**Output.** The product of a mine sent to market.

**Overcast.** A passage through which the ventilating current is conveyed over an entry or airway.

**Pack-Wall.** A wall or pillar built of gob to support the roof.

**Parting.** A layer of slate or other matter dividing two benches of a coal-seam.

**Pillar and Room, Pillar and Stall, Stoop and Room, etc.** A method of mining or working out coal.

**Pillar.** A mass of coal left to support the roof.

**Plane.** Usually applied to self-acting inclines; but any slope or incline on which coal is raised or lowered may be called a plane.

**Plat or Plot.** A map of the surface and workings underground, or of either.

**Post.** Any upright timber; applied to timbers used for propping.

**Prop.** A timber set upright, or at right angles to the dip, to support the roof rock.

**Regulator.** A frame with a sliding door to regulate the air passing into any part of the workings.

**Rendrock.** A variety of dynamite.

**Rib.** To take out the pillars, or to reduce by skipping the side of the pillars left to support the roof.

**Safety-Cage.** A cage provided with an automatic safety-catch.

**Safety-Lamp.** A lamp surrounded by a wire gauze, to prevent the direct contact of the flame with explosive gases.

**Sand-Pump.** A sludger; a cylinder provided with a stem (or other) valve, lowered into a drill hole to remove the pulverized rock.

**Scraper.** A tool used for cleaning out drill holes.

**Sheave.** A wheel with a grooved circumference over which a rope is turned, either for the transmission of power or for winding or hauling.

**Sheets**—See BRATTICE CLOTH.

**Silicious.** Containing or having the characteristics of quartz.

**Slack.** Small coal or dust from coal.

**Slides**—See GUIDES.

**Slope.** An inclined passage driven in the bed or vein, opening up the surface.

**Soapstone.** A term incorrectly applied to an unctuous rock.

**Split.** Any division or branch of the ventilating current.

**Sprag.** A short billet of wood or iron used to block the wheels of a mine-car, in place of a brake.

**Spring-Latch.** A spring or automatic switch.

**Stopping.** A brattice, or more commonly a masonry or brick wall, built in a cross-cut, to confine the air or direct it to face of workings.

**Stratum.** Any bed or layer; plural, *strata*.

**Stump.** A small pillar of coal left between the entry and the rooms to protect these passages.

**Sump.** An excavation in the coal or rock made below the level of the entry or shaft bottom to collect the mine water; the ditches or drains empty into it, and the pump draws it from thence.

**Swamp.** A local depression in the coal-bed in which the water collects.

**Trapper.** A door tender in the mine. Almost always a boy.

**Trouble.** A dislocation or fault; any irregularity in a coal-seam.

**Upcast.** The opening or passage through the air goes out of the mine.

**Vein.** This term is often applied to stratified beds, but its use should be restricted to mineral deposits.

**Water-Gage.** An instrument for measuring the ventilating pressure; the term is also used to denote the ventilating pressure in inches.

**Whim.** A horse gin used for hoisting.

**White Damp.** CO (carbonic oxide), a gas that may be present in the after-damp of a fire-damp explosion, or in the gases given off by a mine fire; rarely met with in mines under other circumstances.

**Winding.** Hoisting coal, etc.

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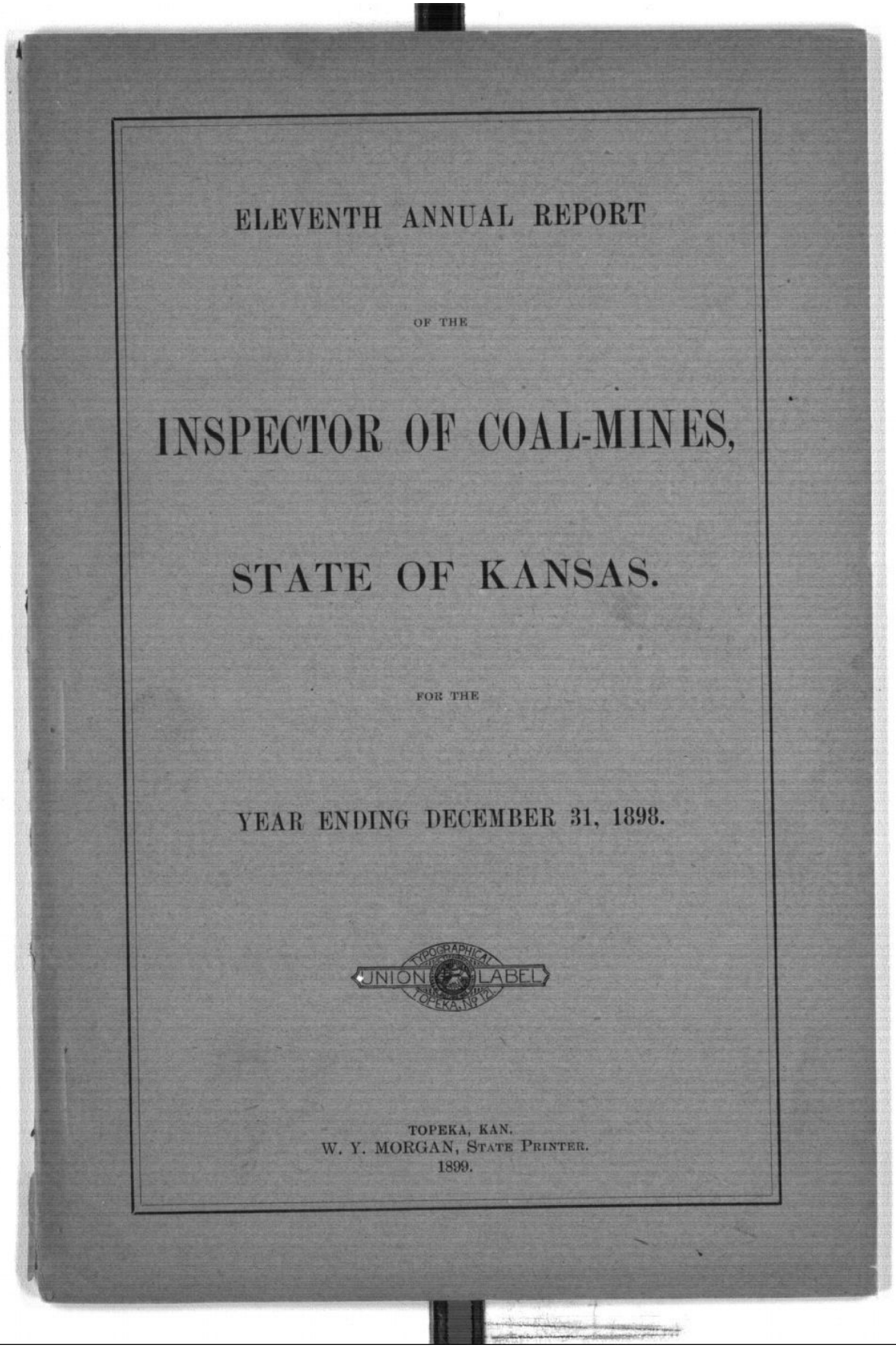

ELEVENTH ANNUAL REPORT

OF THE

# INSPECTOR OF COAL-MINES,

# STATE OF KANSAS.

FOR THE

YEAR ENDING DECEMBER 31, 1898.

TOPEKA, KAN.
W. Y. MORGAN, STATE PRINTER.
1899.

**State inspector of coal mines reports**

# ELEVENTH ANNUAL REPORT

OF THE

# INSPECTOR OF COAL-MINES,

# STATE OF KANSAS.

FOR THE

YEAR ENDING DECEMBER 31, 1898.

TOPEKA, KAN.
W. Y. MORGAN, STATE PRINTER,
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## LETTER OF TRANSMITTAL.

WEIR CITY, KAN., June 1, 1899.

*Hon. J. W. Leedy, Governor:*

SIR—Herewith, in compliance with the mining laws relating to mines and mining, I hand you the Eleventh Annual Report of the State Coal-mine Inspector, for the year ending December 31, 1898.

Very respectfully,

GEO. T. MCGRATH,
*State Inspector.*

## INTRODUCTION.

DURING the year 1898 there were 8122 men and boys employed in and around the coal-mines in Kansas, and they produced 3,860,405½ tons of coal, valued, at the mine, at $4,825,507.27. This indicates an increase in the production of coal in Kansas over the year 1897 of 568,599 short tons. It is the largest production of coal in the history of the state. The next largest was in the year 1894, when the big strike was on in the East. Kansas' production of coal that year was 3,611,214 short tons, valued at $4,899,774, and gave employment to 10,088 men and boys in and around the mines, or 1966 more than were employed during the year 1898. In addition, the selling price of coal at the mine in 1898 was an increase over 1897 of 18 cents per ton, and the miners received more days work during the year. The result was that both the miner and the operator made fair money for their year's work.

This increase is wonderful, as shown by the returns from the coal operators and in the tables of this report. Eighteen counties fell off in their production of coal, while two counties, Crawford and Cherokee, increased over the year 1897 as follows: Crawford, in 1897, produced 1,590,620 tons; Cherokee, 1,061,409 tons; or a total of 2,652,029 tons—70.56 per cent. of the entire output in the state.

For the year 1898, Crawford county produced 1,890,157 tons; Cherokee, 1,309,868 tons; a total of 3,200,025 tons—or 85.46 per cent. of all coal produced in the state. This is an increase of 547,996 tons for Crawford and Cherokee counties during the year 1898 over 1897. These two counties are destined to beat this production, as there are many new shafts in both counties now being sunk which ought to largely increase their production.

One more fact these figures show is the increased selling price of coal at the mine. The operators can very readily pay their miners and mine laborers a reasonable increase of wages.

During the year 1898 there was a total of 51 accidents—17 deaths and 34 non-fatal accidents; or, 227,094 tons of coal was produced for each fatal accident, and 113,544½ tons for each non-fatal accident. Three of the fatal accidents were in mine No. 5, at Chicopee, when the mine exploded, which I reported in full in my report of 1897, and a majority of all other accidents was from premature explosion of

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shots—going back into rooms too soon to fire missed shots. Accidents can be greatly reduced in number if the shot-firer would fire his round on out before going back to fire missed shots.

There were no strikes of any importance during 1898; only a few small local difficulties that were soon settled. This does not include the lead and zinc business of Cherokee county.

Crawford county is the largest coal-producing county in the state. During the year 1898 the coal companies gave employment to 2503 miners and 39 boys; all other employees make a total of 3036. They worked 185 days during the year, and produced 1,989,157 tons of coal, valued at $2,048,831.61. This is an increase over the year 1897 of $482,090.17.

Cherokee county is the second largest coal-producing county in the state. During the year 1898 it produced 1,309,868 tons of coal, valued at $1,336,065.36; gave employment for 144 days during the year to 1928 miners and 85 boys; all others make a total of 2548 employees In addition, this county is a large producer of lead and zinc, its product amounting to not less than $4,000,000.

Leavenworth county is the next largest coal-producing county. During the year 1898 it produced in its free mines 254,294 tons of coal, and at the state mine 51,022 tons, making a total of 305,315 tons, valued at $412,175.25; gave employment 181 days to 485 free miners and 28 boys; all other employees make a total of 654 employees in free mines. Two hundred and ninety-eight convicts are employed in and around the state mine. This county fell off in its production of coal for the year 1898 as against 1897.

Osage county produced 179,070 tons of coal, valued at $295,374.80, and gave employment for 178 days to 837 miners and 67 boys; all others make a total of 1201 employees. This county is also falling off each year in its production of coal.

All other counties produced 76,594 tons of coal, valued at $181,527.78, and gave employment off and on during the year to 421 men, in a mixed way, some using teams to scrape the dirt off the coal, while others mined in a "go-as-you-please" way. Shafts, slopes and drifts were worked. But in all of these counties production of coal fell off during 1898, and they have gradually been doing so for several years. The thicker and cheaper-produced coal is gradually closing them down, because they cannot profitably compete with the cheaper coal-fields.

PRODUCTION OF COAL IN KANSAS IN 1898.

| Counties. | Short tons. | Per cent. of total. |
|---|---|---|
| Crawford | 1,989,157 | 51.52 |
| Cherokee | 1,309,868 | 33.94 |
| Leavenworth | 305,316 | 7.91 |
| Osage | 179,070 | 4.64 |
| Bourbon | 30,000 | .77 |
| Linn | 20,633 | .53 |
| Franklin | 6,657 | .17 |
| Atchison | 5,400 | .14 |
| Lyon | 740 | .02 |
| Shawnee | 609 | .02 |
| Cloud | 400 | .01 |
| Ellsworth | 95½ | ..... |
| Elk | 75 | ..... |
| Lincoln | 350 | .01 |
| Russell | 35 | ..... |
| Republic, Labette, Chautauqua, Brown, Coffey | 12,000 | .31 |
| Totals | 3,860,405½ | 99.99 |

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ALL OTHER KANSAS COUNTY COAL-MINES.

| Office No. | Name of operator or company. | Post-office address. | Name or number of mine. | Name of pit boss or underground foreman. | Location of mine. | Has mine railroad connection? | Name of railroad. |
|---|---|---|---|---|---|---|---|
| | **Leavenworth County.** | | | | | | |
| 1 | Leavenworth Coal Company | Leavenworth | Old 1 | Grant Parker | Three-quarters of mile northeast Leavenw. Union depot, Second and Maple streets | Yes. | Mo. Pac., U. P. |
| 2 | The Home-Riverside Coal Mining Co. | Leavenworth | 1. | John Paterson | Leavenworth, one mile south of mine No. 1. | Yes. | Mo. Pac., S. F., U. P. |
| 3 | The Home-Riverside Coal Mining Co. | Leavenworth | 2. | Thomas Graham | Leavenworth, one mile south of mine No. 1. | Yes. | Mo. Pac., S. F., U. P. |
| 4 | State prison mine | Lansing | Prison mine. | Dave Casselman | Lansing | Yes. | Mo. Pac., U. P., S. F. |
| | Totals | | | | | | |
| | **Linn County.** | | | | | | |
| 5 | Seright & Swanson Coal Company | Pleasanton | 1. | Ed. Swanson | 2½ miles east of Pleasanton, | No. | |
| 6 | Mine Creek Coal Company | " | 1. | Geo. S. Brown | 2½ miles northeast of Pleasanton | Yes. | Mo. Pac. |
| | Totals | | | | | | |
| | **Lyon County.** | | | | | | |
| 7 | Kelley & Verlin Coal Company | Neosho Rapids | 1. | Ed. Verlin | 2½ miles east of Neosho Rapids | No. | |
| 8 | Geo. Hendrickson Bro's. Coal Company, | Neosho Rapids | 1. | Walter Hendrickson | | " | |
| 9 | J. M. Fry Coal Company | " " | 1. | J. M. Fry | 3½ miles east of Neosho Rapids | No. | |
| | Totals | | | | | | |
| | **Franklin County.** | | | | | | |
| 10 | S. H. Caple Coal Company | Ransomville | 1. | S. H. Caple | One-third mile northwest of Ransomville | No. | |
| 11 | S. E. Richardson Coal Company | Pomona | Dyer | S. E. Richardson | Two miles south and three-fourths mile west Pomona | No. | |
| 12 | J. H. Ransom & Co. Coal Company | Ransomville or Ottawa | 1. | James Sims | Ransomville | Yes. | Santa Fe. |
| | Totals | | | | | | |



| | | | | | | | |
|---|---|---|---|---|---|---|---|
| | **Atchison County.** | | | | | | |
| 13 | Donald Bros. Coal Company | Atchison | 1. | S. K. Snell | 2¼ miles south of Atchison. | Yes. | Mo. Pac. |
| 14 | Jones Coal Company | " | 1. | J. Maynard | 2½ miles south of Atchison. | No. | |
| | Totals | | | | | | |
| | **Lincoln County.** | | | | | | |
| 15 | L. B. Nelson Coal Company | Denmark | Little Timber | L. B. Nelson | Southwest quarter, sec. 1, S. Denmark nine miles | No. | |
| | **Shawnee County.** | | | | | | |
| 16 | W. A. Eaton Coal Company | Topeka, box 429 | 1. | W. A. Eaton | Three miles west of Topeka, | No. | |
| | **Russell County.** | | | | | | |
| 17 | W. A. Cushing Coal Company | Bunker Hill | 1. | W. F. Cushing | Four miles northeast of Bunker Hill | No. | |
| 18 | N. E. Warner Coal Company | Bunker Hill | 1. | G. T. Warner | Northeast of Bunker Hill | " | |
| | Totals | | | | | | |
| | **Elk County.** | | | | | | |
| 19 | Hutchinson & Emmora Coal Co. | Howard | Jinks | H. G. Emmora | Two miles south and three miles west of Howard | No. | |
| | **Ellsworth County.** | | | | | | |
| 20 | C. W. Kelley | Wilson | Smoky Hill. | C. W. Kelley | 3½ miles southwest of Wilson | No. | |
| | **Cloud County.** | | | | | | |
| 21 | Smith & Jackson Coal Company | Minersville | Smith mine. | Winding Blade | Four miles west of Hollis | No. | |
| 22 | **Bourbon county*** | | | | | | |
| 23 | **All other counties†** | | | | | | |
| | Totals | | | | | | |

*About 100 miners strip and drift coal in and around Fort Scott a few months in the year. There being no regular companies, the total production is estimated, which gives employment to about sixty men and teams to haul and sell around Fort Scott, at three dollars per ton, delivered.

†And small producers of coal not listed, where changes are so often that they do not report to the Inspector. Total production estimated.

ALL OTHER KANSAS COAL-MINES—CONTINUED.

| Office No. | Kind of opening. | Kind of power used. | Horse-power of engine. | Tons of Coal Produced. (2000 pounds to the ton.) Lump. | Nut and slack. | Mine run. | Total | Employees. Miners | Boys | Mule drivers and pushers | Cagers | Fit bosses, track-layers, and road men | Engineers, firemen, and pump men | Weighmen and dumpers | Car trimmers and prop men | Blacksmiths and carpenters | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | Shaft | Steam | 800 | | | 128,639 | 128,639 | 231 | 13 | 11 | 2 | 8 | 9 | 11 | 4 | 5 | 294 |
| 2 | " | " | 750 | 102,045 | 23,610 | | 125,655 | 254 | 15 | 15 | 4 | 16 | 5 | 42 | 5 | 4 | 360 |
| 3 | " | " | 150 | | | | | | | | | | | | | | |
| 4 | " | " | 550 | 29,867 | 15,672 | 5,483 | 51,022 | 206 | ..... | 34 | 6 | 7 | 6 | 27 | 6 | 6 | 298 |
| ... | ..... | ..... | ..... | ..... | ..... | ..... | 305,316 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| 5 | Yes | Horse | ..... | 1,689 | ..... | ..... | 1,689 | 8 | ..... | ..... | ..... | 1 | ..... | 1 | ..... | ..... | 10 |
| 6 | " | Steam | 40 | 18,944 | ..... | ..... | 18,944 | 43 | ..... | 3 | ..... | 1 | 2 | 1 | 1 | ..... | 51 |
| ... | ..... | ..... | ..... | ..... | ..... | ..... | 20,633 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| 7 | Yes | Horse | ..... | 300 | ..... | ..... | 300 | 8 | ..... | ..... | ..... | 1 | ..... | ..... | ..... | ..... | 9 |
| 8 | " | " | ..... | 120 | ..... | ..... | 120 | 7 | ..... | ..... | ..... | 1 | ..... | 1 | ..... | ..... | 9 |
| 9 | " | " | ..... | 320 | ..... | ..... | 320 | 4 | ..... | ..... | ..... | 1 | ..... | ..... | ..... | ..... | 5 |
| ... | ..... | ..... | ..... | ..... | ..... | ..... | 740 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| 10 | Drift | ..... | ..... | 408 | ..... | ..... | 408 | 4 | ..... | 1 | ..... | 1 | ..... | 1 | ..... | ..... | 7 |
| 11 | " | ..... | ..... | 2,216 | ..... | ..... | 2,216 | 20 | ..... | ..... | ..... | 1 | ..... | 1 | ..... | ..... | 22 |
| 12 | Shaft | Horse | ..... | 4,033 | ..... | ..... | 4,033 | 23 | 2 | 1 | ..... | 1 | ..... | 1 | ..... | ..... | 28 |
| ... | ..... | ..... | ..... | ..... | ..... | ..... | 6,657 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| 13 | Drift | ..... | ..... | 3,000 | ..... | ..... | 3,000 | 10 | ..... | ..... | ..... | 1 | ..... | ..... | ..... | ..... | 11 |
| 14 | " | ..... | ..... | 2,400 | ..... | ..... | 2,400 | 12 | ..... | 1 | ..... | 1 | ..... | ..... | ..... | ..... | 14 |
| ... | ..... | ..... | ..... | ..... | ..... | ..... | 5,400 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| 15 | Shaft | Horse | ..... | 350 | ..... | ..... | 350 | 4 | ..... | ..... | ..... | 1 | ..... | ..... | ..... | ..... | 5 |
| 16 | Shaft | Horse | ..... | 609 | ..... | ..... | 609 | 16 | 2 | ..... | ..... | ..... | ..... | 1 | ..... | ..... | 19 |



| | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 17 | Slope | Horse | ..... | 20 | ..... | ..... | 20 | 1 | 1 | ..... | ..... | 1 | ..... | ..... | ..... | ..... | 3 |
| 18 | Drift | ..... | ..... | 15 | ..... | ..... | 15 | 2 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 2 |
| ... | ..... | ..... | ..... | ..... | ..... | ..... | 35 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| 19 | Slope | Horse | ..... | 75 | ..... | ..... | 75 | 4 | ..... | ..... | ..... | 1 | ..... | ..... | ..... | ..... | 5 |
| 20 | Drift | ..... | ..... | 95½ | ..... | ..... | 95½ | 11 | 2 | ..... | ..... | ..... | ..... | 1 | ..... | ..... | 14 |
| 21 | Shaft | Horse | ..... | 400 | ..... | ..... | 400 | 4 | ..... | 1 | ..... | 1 | ..... | 1 | ..... | ..... | 7 |
| 22 | ..... | ..... | ..... | ..... | ..... | ..... | 30,000 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 160 |
| 23 | ..... | ..... | ..... | ..... | ..... | ..... | 12,000 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 40 |
| | ..... | ..... | ..... | ..... | ..... | ..... | 381,910 | 872 | 35 | 67 | 12 | 45 | 22 | 89 | 16 | 15 | 1,373 |

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ALL OTHER KANSAS COAL-MINES—CONCLUDED.

| Office No. | Number of kegs of powder mine used during the year | Number of days mine worked | Average price paid for mining. Lump | Average price paid for mining. Mine run | Estimated value of fixtures | Estimated value of mine | Casualties. Killed | Casualties. Injured | Average selling price of coal at mine. Lump | Nut | Slack | Mine run | Average wages paid day men above ground | Average wages paid day men under ground | Size and depth of shaft, in feet | Remarks. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | ..... | 219 | $0 80 | ..... | $35,000 00 | $30,000 00 | ..... | 1 | ..... | ..... | ..... | $1 36 | $1 75 | $2 25 | 11x12-710 | |
| 2 3 | ..... | 163 | 80 | ..... | 25,000 00 | 20,000 00 | ..... | ..... | $1 60 | $1 25 | $0 60 | 1 15 | 1 75 | 2 25 | 9x14-720 | |
| | ..... | | | | 20,000 00 | 20,000 00 | ..... | ..... | | | | | | | 10x14-720 | |
| 4 | 900 lbs.* | 310 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 1 40 | ..... | ..... | 15x9-713½ | |
| ... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | |
| 5 | ..... | 150 | $0 75 | $0 75 | $100 00 | $1,000 00 | ..... | ..... | $1 25 | $1 25 | $0 25 | $1 25 | $1 00 | $2 00 | 6½x12-50 | |
| 6 | ..... | ..... | 75 | 75 | ..... | 30,000 00 | ..... | ..... | 1 10 | ..... | ..... | 1 00 | 1 50 | 2 00 | 12x 6-90 | |
| ... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | |
| 7 | 80 lbs.* | 80 | $1 75 | $1 75 | $60 00 | $200 00 | ..... | ..... | $2 25 | ..... | ..... | $2 25 | $1 50 | $1 25 | 5x9-18 | |
| 8 | ..... | 78 | 1 75 | 1 75 | 300 00 | 800 00 | ..... | ..... | 2 25 | ..... | ..... | 2 25 | 2 00 | 2 00 | 6x11-25 | |
| 9 | ..... | 120 | 1 75 | 1 75 | 25 00 | 500 00 | ..... | ..... | 2 25 | ..... | ..... | 2 25 | 1 50 | 1 25 | 4x10-27 | |
| ... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | |
| 10 | ..... | 156 | $1 62½ | $1 62½ | $10 00 | $500 00 | ..... | ..... | $3 50 | ..... | ..... | $3 50 | $1 50 | $1 75 | ..... | |
| 11 | ..... | 160 | 1 25 | 1 25 | ..... | ..... | ..... | ..... | 1 75 | ..... | ..... | 1 75 | 1 50 | 1 50 | ..... | |
| 12 | 25 | 300 | 1 20 | 1 20 | 1,500 00 | 5,000 00 | ..... | ..... | 1 80 | ..... | ..... | 1 80 | 1 25 | 1 75 | 6x10-80 | |
| ... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | |
| 13 | ..... | 300 | $1 25 | $1 25 | $1,000 00 | $1,200 00 | ..... | ..... | $3 00 | ..... | ..... | $3 00 | $1 50 | $1 75 | ..... | |
| 14 | ..... | 210 | 1 25 | 1 25 | 100 00 | 300 00 | ..... | ..... | 3 00 | ..... | ..... | 3 00 | 1 50 | 1 75 | ..... | |
| ... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | |
| 15 | ..... | 180 | $2 00 | $2 00 | $100 00 | $500 00 | ..... | ..... | $3 00 | ..... | ..... | $3 00 | $1 25 | $1 50 | 4x10-42 | |
| 16 | ..... | 275 | 1 62½ | 1 62½ | 175 00 | 200 00 | ..... | ..... | 2 62½ | ..... | ..... | 2 62½ | 1 25 | 1 50 | 5x12-31 | |



| | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 17 | ..... | 40 | $1 75 | $1 75 | $25 00 | $50 00 | ..... | ..... | $2 50 | ..... | ..... | $2 50 | $1 00 | $1 25 | ..... | |
| 18 | ..... | 20 | 2 50 | 2 50 | 20 00 | 50 00 | ..... | ..... | 3 00 | ..... | ..... | 3 00 | 1 00 | 1 25 | ..... | |
| ... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | |
| 19 | ..... | 104 | $1 75 | $1 75 | $20 00 | $100 00 | ..... | ..... | $2 50 | ..... | ..... | $2 50 | $1 00 | $1 25 | ..... | |
| 20 | ..... | 50 | 2 00 | 2 00 | 100 00 | 500 00 | ..... | ..... | 3 00 | ..... | ..... | 3 00 | 1 25 | 1 50 | ..... | |
| 21 | ..... | 80 | 1 40 | 1 40 | 225 00 | 150 00 | ..... | ..... | 2 25 | ..... | ..... | 2 25 | 1 25 | 1 50 | 4x6-70 | |
| 22 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 3 00 | ..... | ..... | ..... | |
| 23 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | |
| ... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 1 | ..... | ..... | ..... | $4 658 | ..... | ..... | ..... | |

*Dynamite.

# State inspector of coal mines reports



OSAGE COUNTY COAL-MINES.

| Office No. | Name of operator or company. | Post-office address. | Name or number of mine. | Name of pit boss or underground foreman. | Location of mine. | Has mine railroad connection? | Name of railroad. |
|---|---|---|---|---|---|---|---|
| 1 | Mount Carmel Coal Company | Topeka | 12 | Andrew Anderson | One-half mile south of Santa Fe depot, Scranton | Yes. | A. T. & S. F. |
| 2 | Mount Carmel Coal Company | Topeka | 10 | Thomas Ellwood | One-half mile south of Santa Fe depot, Scranton | Yes. | A. T. & S. F. |
| 3 | Mount Carmel Coal Company | Topeka | 23 | E. Thip | Osage City | " | " |
| 4 | " " " " | " | 24 | Archie Craig | " | " | " |
| 5 | " " " " | " | 27 | James Main | " | " | " |
| 6 | Western Fuel Company | Osage City | 2 | Wm. Jinkens | Two miles east of Osage City | " | " |
| 7 | " " | " | 5 | C. J. Swanson | 1¼ miles east of Osage City | " | " |
| 8 | " " | " | 6 | Chas. Taylor | Osage City | " | Mo. Pac. |
| 9 | Osage City Labor Exch., branch No. 223 | " | 1 | Eric Fellman | One mile northwest of Osage City | No. | |
| 10 | Chapell Coal Company | Scranton | 3 | Geo. Chapell | Two miles east Burlingame | Yes. | A. T. & S. F. |
| 11 | " " | " | 2 | John Goblon | One-half mile west Scranton, | " | " |
| 12 | Hugh Davis Coal Company | Osage City | 1 | | Southeast of Burlingame | No. | |
| 13 | L. J. Boruff Coal Company | Peterton | 2 | L. J. Boruff | Peterton | " | |
| 14 | Poynter Long-wall Mining-machine Co., | Topeka | 5 | M. Thomas | One-half mile east of Burlingame | Yes. | A. T. & S. F. |
| 15 | John D. Jack Coal Company | Burlingame | Sand-bank 3. | J. D. Jack | One-fourth mile south of Burlingame | Yes. | A. T. & S. F. |
| 16 | Hotchkiss Coal and Mining Company | Burlingame | Fair-grounds, | J. Hotchkiss | One-fourth mile south of Burlingame | No. | |
| 17 | Burkville Coal Company | Burlingame | Burkville | D. Rees | One-half mile east of Burlingame | No. | |
| 18 | Ross Coal Company | Burlingame | Ross coal-s'ft, | Alex. Ross | Two miles east of Burlingame | No. | |
| 19 | Thomas Whitcombe | Burlingame | 1 | Thomas Whitcombe | Two miles east and one-half mile north of Burlingame | Yes. | A. T. & S. F. |
| 20 | S. J. Carlson Coal Company | Osage City | 3 | S. J. Carlson | Osage City | No. | |
| 21 | Lars Olson & Co | " | Sunflower | Lars Olson | East of Osage City | " | |
| 22 | The Kansas Coal Company | Lawrence | Kibbe 1. | Ed. Clift | 1¼ miles west of Osage City, | Yes. | Mo. Pac. |
| 23 | H. McFarland Coal Company | Burlingame | 1 | H. McFarland | Burlingame | No. | |
| 24 | John Johnson Coal Company | Osage City | 1 | Charles Marks | One-fourth mile northwest of Osage City | No. | |
| 25 | Wm. Peterson Coal Company | Osage City | 1 | Wm. Peterson | Two miles east of Osage City, | " | |
| 26 | Robert Simpson Coal Company | Burlingame | 2 | R. Simpson | One-fourth mile south of Burlingame | Yes. | A. T. & S. F. |
| 27 | James Taylor Coal Company | Scranton | 1 | James Taylor | Scranton | " | " |
| 28 | J. Cathcart Coal Company | " | 1 | J. Catheart | One mile southeast of Scranton | No. | |
| 29 | T. Noble & Son Coal Company | Scranton | 1 | Wm. Noble | 1½ miles southeast of Scranton | No. | |
| 30 | Ryan & Co. Coal Company | Scranton | 1 | M. W. Ryan | 1½ miles east of Scranton | Yes. | A. T. & S. F. |
| 31 | Belleville Coal Company | " | 1 | Menelaus Ingham | Three-fourths mile west of Scranton | Yes. | A. T. & S. F. |
| 32 | All other producers* | | | | | | |
| | Totals | | | | | | |

*Small strip pits and drifts.
Eight mines have gone out of business since 1897, and others have changed hands.

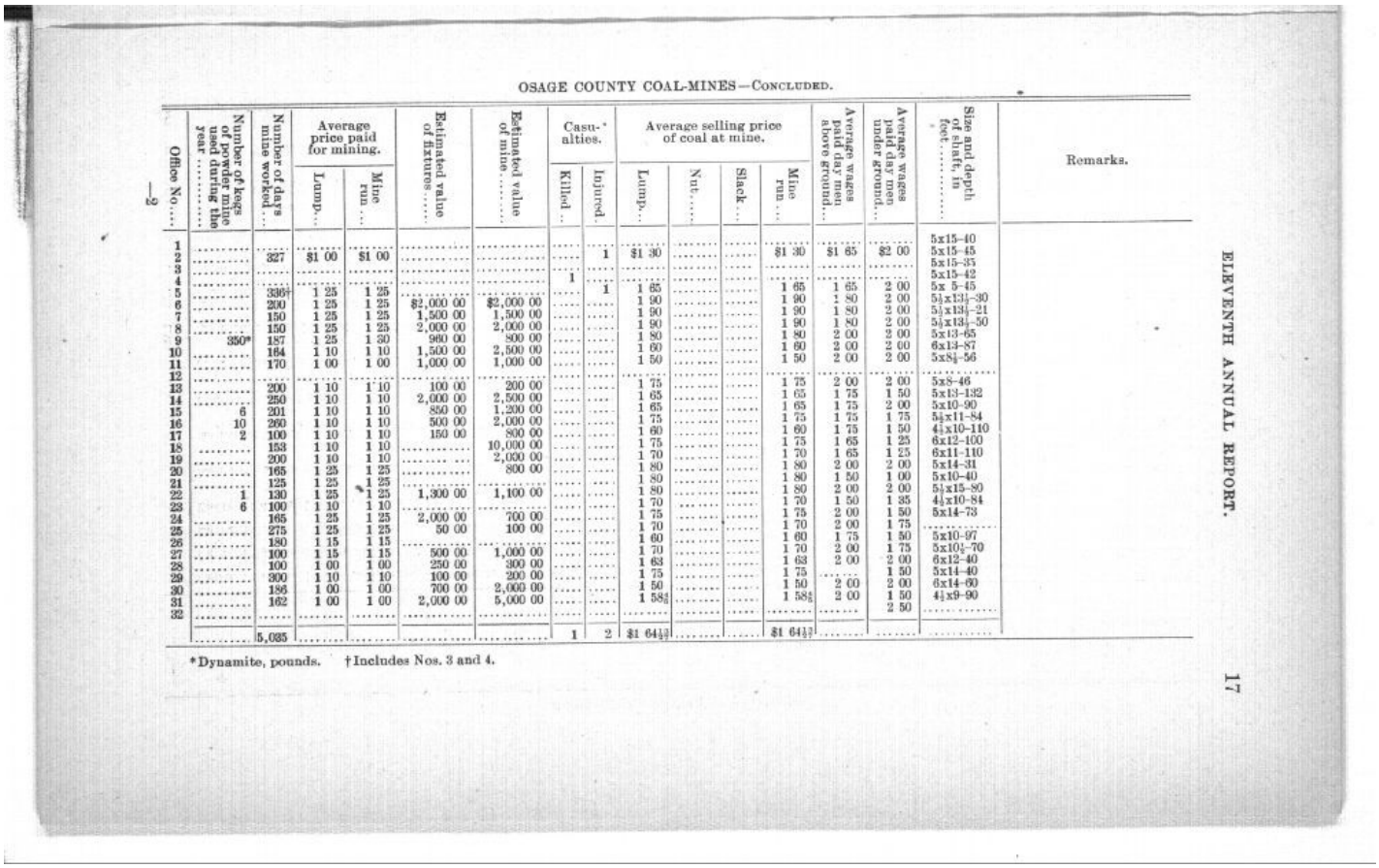
## State inspector of coal mines reports



OSAGE COUNTY COAL-MINES—CONTINUED.

| Office No. | Kind of opening. | Kind of power used. | Horse-power of engine. | Tons of Coal Produced. (2000 pounds to the ton.) Lump. | Nut and slack. | Mine run. | Total. | Employees. Miners. | Boys. | Mule drivers and pushers. | Cagers. | Pit bosses, trackayers, and road men. | Engineers, firemen, and pump men. | Weighmen and dumpers. | Car trimmers and prop men. | Blacksmiths and carpenters. | Total. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 96 | 11 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| 2 | Shaft | Horse | ..... | 51,426 | ..... | ..... | 51,426 | 100 | 20 | 6 | 2 | 6 | ..... | 4 | 1 | 1 | 247 |
| 3 | " | " | ..... | ..... | ..... | ..... | ..... | 41 | 6 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| 4 | " | " | ..... | ..... | ..... | ..... | ..... | 74 | 16 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| 5 | " | " | ..... | 31,143 | ..... | ..... | 31,143 | 84 | 4 | ..... | ..... | 6 | ..... | 4 | ..... | 1 | 236 |
| 6 | " | " | ..... | 5,032 | ..... | ..... | 5,032 | 28 | ..... | ..... | ..... | 2 | ..... | 1 | ..... | ..... | 31 |
| 7 | " | " | ..... | 3,804 | ..... | ..... | 3,804 | 28 | ..... | ..... | ..... | 2 | ..... | 1 | ..... | ..... | 31 |
| 8 | " | " | ..... | 4,173 | ..... | ..... | 4,173 | 37 | ..... | ..... | ..... | 1 | ..... | 1 | ..... | ..... | 39 |
| 9 | " | " | ..... | 7,144 | ..... | ..... | 7,144 | 37 | 3 | 3 | 1 | 1 | ..... | 1 | ..... | ..... | 46 |
| 10 | " | " | ..... | 5,300 | ..... | ..... | 5,300 | 24 | ..... | 1 | ..... | 1 | ..... | 1 | ..... | ..... | 26 |
| 11 | " | " | ..... | 5,597 | ..... | ..... | 5,597 | 25 | ..... | 1 | 1 | 1 | ..... | 1 | ..... | ..... | 29 |
| 12 | " | " | ..... | 175 | ..... | ..... | 175 | 1 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 1 |
| 13 | Slope | " | ..... | 320 | ..... | ..... | 320 | 4 | ..... | ..... | ..... | 1 | ..... | ..... | ..... | ..... | 5 |
| 14 | Shaft | " | ..... | 2,600 | ..... | ..... | 2,600 | 20 | ..... | 1 | ..... | 2 | ..... | 1 | ..... | ..... | 24 |
| 15 | " | " | ..... | 4,535 | ..... | ..... | 4,535 | 25 | 1 | 2 | 1 | 1 | ..... | ..... | ..... | ..... | 30 |
| 16 | " | " | ..... | 4,000 | ..... | ..... | 4,000 | 15 | 1 | 1 | ..... | 1 | ..... | 1 | ..... | ..... | 19 |
| 17 | " | " | ..... | 514 | ..... | ..... | 514 | 7 | 1 | ..... | ..... | ..... | ..... | 1 | ..... | ..... | 9 |
| 18 | " | " | ..... | 3,359 | ..... | ..... | 3,359 | 15 | ..... | 1 | 1 | ..... | ..... | 1 | ..... | ..... | 18 |
| 19 | " | " | ..... | 3,400 | ..... | ..... | 3,400 | 13 | ..... | 1 | ..... | 1 | ..... | 1 | ..... | ..... | 16 |
| 20 | " | " | ..... | 3,993 | ..... | ..... | 3,993 | 17 | ..... | ..... | ..... | 1 | ..... | 1 | ..... | ..... | 19 |
| 21 | " | " | ..... | 930 | ..... | ..... | 930 | 9 | ..... | ..... | ..... | 1 | ..... | 1 | ..... | ..... | 11 |
| 22 | " | " | ..... | 2,435½ | ..... | ..... | 2,435½ | 15 | ..... | ..... | ..... | 1 | ..... | 1 | ..... | 1 | 18 |
| 23 | " | " | ..... | 1,500 | ..... | ..... | 1,500 | 18 | ..... | 2 | ..... | ..... | 1 | ..... | ..... | ..... | 21 |
| 24 | " | " | ..... | 2,045 | ..... | ..... | 2,045 | 15 | ..... | ..... | ..... | 1 | ..... | ..... | ..... | ..... | 16 |
| 25 | Drift | " | ..... | 766½ | ..... | ..... | 766½ | 3 | ..... | ..... | ..... | 1 | ..... | ..... | ..... | ..... | 4 |
| 26 | Shaft | " | ..... | 2,446 | ..... | ..... | 2,446 | 14 | ..... | 1 | ..... | 1 | ..... | ..... | ..... | ..... | 16 |
| 27 | " | " | ..... | 1,943 | ..... | ..... | 1,943 | 9 | ..... | ..... | ..... | ..... | ..... | 1 | ..... | ..... | 10 |
| 28 | " | " | ..... | 400 | ..... | ..... | 400 | 3 | ..... | 1 | ..... | ..... | ..... | ..... | ..... | ..... | 4 |
| 29 | " | " | ..... | 6,020 | ..... | ..... | 6,020 | 5 | 1 | ..... | ..... | 1 | ..... | 1 | ..... | ..... | 8 |
| 30 | " | " | ..... | 7,688 | ..... | ..... | 7,688 | 30 | 3 | 2 | ..... | 1 | ..... | 1 | ..... | ..... | 37 |
| 31 | " | " | ..... | 4,381 | ..... | ..... | 4,381 | 25 | ..... | 2 | ..... | 1 | 1 | 1 | ..... | ..... | 30 |
| 32 | ..... | ..... | ..... | 12,000 | ..... | ..... | 12,000 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 100 |
| | Totals | ..... | ..... | 179,070 | ..... | ..... | 179,070 | 837 | 67 | 25 | 6 | 35 | 2 | 26 | 1 | 3 | 1,201 |

## State inspector of coal mines reports





OSAGE COUNTY COAL-MINES—CONCLUDED.

| Office No. | Number of kegs of powder mine used during the year | Number of days mine worked | Average price paid for mining. Lump. | Average price paid for mining. Mine run. | Estimated value of fixtures | Estimated value of mine | Casualties. Killed | Casualties. Injured. | Average selling price of coal at mine. Lump. | Nut. | Slack. | Mine run. | Average wages paid day men above ground | Average wages paid day men under ground | Size and depth of shaft, in feet | Remarks. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | | | | | | | | | | | | | | | 5x15–40 | |
| 2 | | 327 | $1 00 | $1 00 | | | | 1 | $1 30 | | | $1 30 | $1 65 | $2 00 | 5x15–45 | |
| 3 | | | | | | | | | | | | | | | 5x15–35 | |
| 4 | | | | | | | 1 | | | | | | | | 5x15–42 | |
| 5 | | 336† | 1 25 | 1 25 | | | | 1 | 1 65 | | | 1 65 | 1 65 | 2 00 | 5x 5–45 | |
| 6 | | 200 | 1 25 | 1 25 | $2,000 00 | $2,000 00 | | | 1 90 | | | 1 90 | 1 80 | 2 00 | 5½x13½–30 | |
| 7 | | 150 | 1 25 | 1 25 | 1,500 00 | 1,500 00 | | | 1 90 | | | 1 90 | 1 80 | 2 00 | 5½x13½–21 | |
| 8 | | 150 | 1 25 | 1 25 | 2,000 00 | 2,000 00 | | | 1 90 | | | 1 90 | 1 80 | 2 00 | 5½x13½–50 | |
| 9 | 350* | 157 | 1 25 | 1 30 | 960 00 | 800 00 | | | 1 80 | | | 1 80 | 2 00 | 2 00 | 5x13–65 | |
| 10 | | 164 | 1 10 | 1 10 | 1,500 00 | 2,500 00 | | | 1 60 | | | 1 60 | 2 00 | 2 00 | 6x13–87 | |
| 11 | | 170 | 1 00 | 1 00 | 1,000 00 | 1,000 00 | | | 1 50 | | | 1 50 | 2 00 | 2 00 | 5x8½–56 | |
| 12 | | | | | | | | | | | | | | | | |
| 13 | | 200 | 1 10 | 1 10 | 100 00 | 200 00 | | | 1 75 | | | 1 75 | 2 00 | 2 00 | 5x8–46 | |
| 14 | | 250 | 1 10 | 1 10 | 2,000 00 | 2,500 00 | | | 1 65 | | | 1 65 | 1 75 | 1 50 | 5x13–132 | |
| 15 | 6 | 201 | 1 10 | 1 10 | 850 00 | 1,200 00 | | | 1 65 | | | 1 65 | 1 75 | 2 00 | 5x10–90 | |
| 16 | 10 | 260 | 1 10 | 1 10 | 500 00 | 2,000 00 | | | 1 75 | | | 1 75 | 1 75 | 1 75 | 5½x11–84 | |
| 17 | 2 | 100 | 1 10 | 1 10 | 150 00 | 800 00 | | | 1 60 | | | 1 60 | 1 75 | 1 50 | 4½x10–110 | |
| 18 | | 153 | 1 10 | 1 10 | | 10,000 00 | | | 1 75 | | | 1 75 | 1 65 | 1 25 | 6x12–100 | |
| 19 | | 200 | 1 10 | 1 10 | | 2,000 00 | | | 1 70 | | | 1 70 | 1 65 | 1 25 | 6x11–110 | |
| 20 | | 165 | 1 25 | 1 25 | | 800 00 | | | 1 80 | | | 1 80 | 2 00 | 2 00 | 5x14–31 | |
| 21 | | 125 | 1 25 | 1 25 | | | | | 1 80 | | | 1 80 | 1 50 | 1 00 | 5x10–40 | |
| 22 | 1 | 130 | 1 25 | 1 25 | 1,300 00 | 1,100 00 | | | 1 80 | | | 1 80 | 2 00 | 2 00 | 5½x15–80 | |
| 23 | 6 | 100 | 1 10 | 1 10 | | | | | 1 70 | | | 1 70 | 1 50 | 1 35 | 4½x10–84 | |
| 24 | | 165 | 1 25 | 1 25 | 2,000 00 | 700 00 | | | 1 75 | | | 1 75 | 2 00 | 1 50 | 5x14–73 | |
| 25 | | 275 | 1 25 | 1 25 | 50 00 | 100 00 | | | 1 70 | | | 1 70 | 2 00 | 1 75 | | |
| 26 | | 180 | 1 15 | 1 15 | | | | | 1 60 | | | 1 60 | 1 75 | 1 50 | 5x10–97 | |
| 27 | | 100 | 1 15 | 1 15 | 500 00 | 1,000 00 | | | 1 70 | | | 1 70 | 2 00 | 1 75 | 5x10½–70 | |
| 28 | | 100 | 1 00 | 1 00 | 250 00 | 300 00 | | | 1 63 | | | 1 63 | 2 00 | 2 00 | 6x12–40 | |
| 29 | | 300 | 1 10 | 1 10 | 100 00 | 200 00 | | | 1 75 | | | 1 75 | | 1 50 | 3x14–40 | |
| 30 | | 186 | 1 00 | 1 00 | 700 00 | 2,000 00 | | | 1 50 | | | 1 50 | 2 00 | 2 00 | 6x14–60 | |
| 31 | | 162 | 1 00 | 1 00 | 2,000 00 | 5,000 00 | | | 1 58⅓ | | | 1 58⅓ | 2 00 | 1 50 | 4½x9–90 | |
| 32 | | | | | | | | | | | | | | 2 50 | | |
| | | 5,035 | | | | | 1 | 2 | $1 64⅓ | | | $1 64⅓ | | | | |

*Dynamite, pounds. †Includes Nos. 3 and 4.

# State inspector of coal mines reports



CHEROKEE COUNTY COAL-MINES.

| Office No. | Name of operator or company. | Post-office address. | Name or number of mine. | Name of pit boss or underground foreman. | Location of mine. | Has mine railroad connection? | Name of railroad. |
|---|---|---|---|---|---|---|---|
| 1 | Central Coal and Coke Company | Weir City & Kan. City, | 5 | Archy Fulton | One mile northwest of Weir City | Yes. | Memphis. |
| 2 | Central Coal and Coke Company | Weir City & Kan. City, | 6 | Wm. Scott | Three-fourths mile west of Weir City | Yes. | Memphis. |
| 3 | Central Coal and Coke Company | Weir City & Kan. City, | 8 | J. W. Jenkins | Two miles southwest of Weir City | Yes. | Memphis. |
| 4 | Central Coal and Coke Company | Weir City & Kan. City, | 7 | Charles Elliott | One mile north of Scammon, | " | " |
| 5 | " " " | " " " | 11 | Wm. Scott | 2½ miles southwest of Weir City | Yes. | Memphis. |
| 6 | Kansas & Texas Coal Company | Weir City & St. Louis, | 18 | James Duffy | One mile north of Weir City, | " | Frisco. |
| 7 | " " " | " " | 23 | Wm Egley | 1¼ miles northeast of Weir City | Yes. | Frisco. |
| 8 | Kansas & Texas Coal Company | Weir City & St. Louis, | 49 | Pat. Welsh | Weir City | " | Memphis. |
| 9 | " " " | " " | 55 | Dan. Thomyson | 1¾ miles northwest of Weir City | Yes. | Memphis. |
| 10 | Southwest. Coal and Improvement Co. | Parsons | 6 | John Ryan | Mineral | " | M. K. & T. |
| 11 | " " " | " | 7 | Joseph Davison | " | " | " |
| 12 | " " " | " | 8 | Geo. Richardson | " | " | " |
| 13 | J. C. Graham Company | Scammon | 3 | M. L. Walters | Scammon | " | Memphis. |
| 14 | " " | " | Strip pit | John Glogbrook | " | " | " |
| 15 | " " | " | Lone Star | M. L. Walters | " | No. | |
| 16 | Hamilton & Braidwood Coal Company, | Weir City | 1 | Stewart Hamilton | In center of northeast quarter of sec. 28, T. 31, R. 24 | Yes. | Memphis. |
| 17 | Hamilton & Braidwood Coal Company, | Weir City | 2 | Stewart Hamilton | One mile northwest Weir | " | " |
| 18 | J. H. Durkee Coal Company | " | 1 | Joseph Humble | One mile southwest Memphis depot, Weir City | Yes. | Memphis. |
| 19 | J. H. Durkee Coal Company | Weir City | Old No. 1 | Joseph Humble | Three-fourths mile southwest Memphis depot, Weir City | Yes. | Memphis. |
| 20 | J. H. Durkee Coal Company, | Weir City | 5 | Wm. Humble, G. Makin, | 1½ miles northeast of Weir City | Yes. | Frisco. |
| 21 | Weir Bros. Coal Company | Weir City | 2 | L. S Myers | 1¼ miles west of Weir City | " | " |
| 22 | J. R. Crowe | " | 1 | Ed. Kelly | 3½ miles north of Columbus, | " | Memphis. |
| 23 | Bennett & Crowe Coal Company | " | 5 | Henry Helm | One-quarter mile south, one-fourth mile west of Weir City | Yes. | Memphis. |
| 24 | Stone & Dixon Coal Company | Scammon | 16 to 1 | H. W. Dixon | One-fourth mile west of Scammon | No. | |
| 25 | Excelsior Coal Company | Weir City | 1 | C. H. Kemp | One mile south of Weir City, | Yes. | Memphis. |
| 26 | Jo. Bennett Coal Company | " | 7 | Wm. Kirby | Seven blocks south of Frisco depot, Weir City | No. | |
| 27 | W. H. Huntsinger Coal Company | Mineral | 1 | W. H. Huntsinger | Two miles west of Mineral | No. | |
| 28 | W. S. McCormick Coal Company | " | 1 | W. S. McCormick | 1¼ miles south of Mineral | " | |
| 29 | J. H. & J. Jenkins Coal Company | Weir City | 1 | H. Jenkins | 1½ miles southwest of Weir City | No. | |
| 30 | Geo. Robinson Coal Company | Columbus | Robinson 1 | Geo. Robinson | 3½ miles north of Columbus, | " | |
| 31 | From other small producers | | | | | | |
| 32 | Hamilton & Grant Coal Company* | | | | | | |
| | Totals | | | | | | |

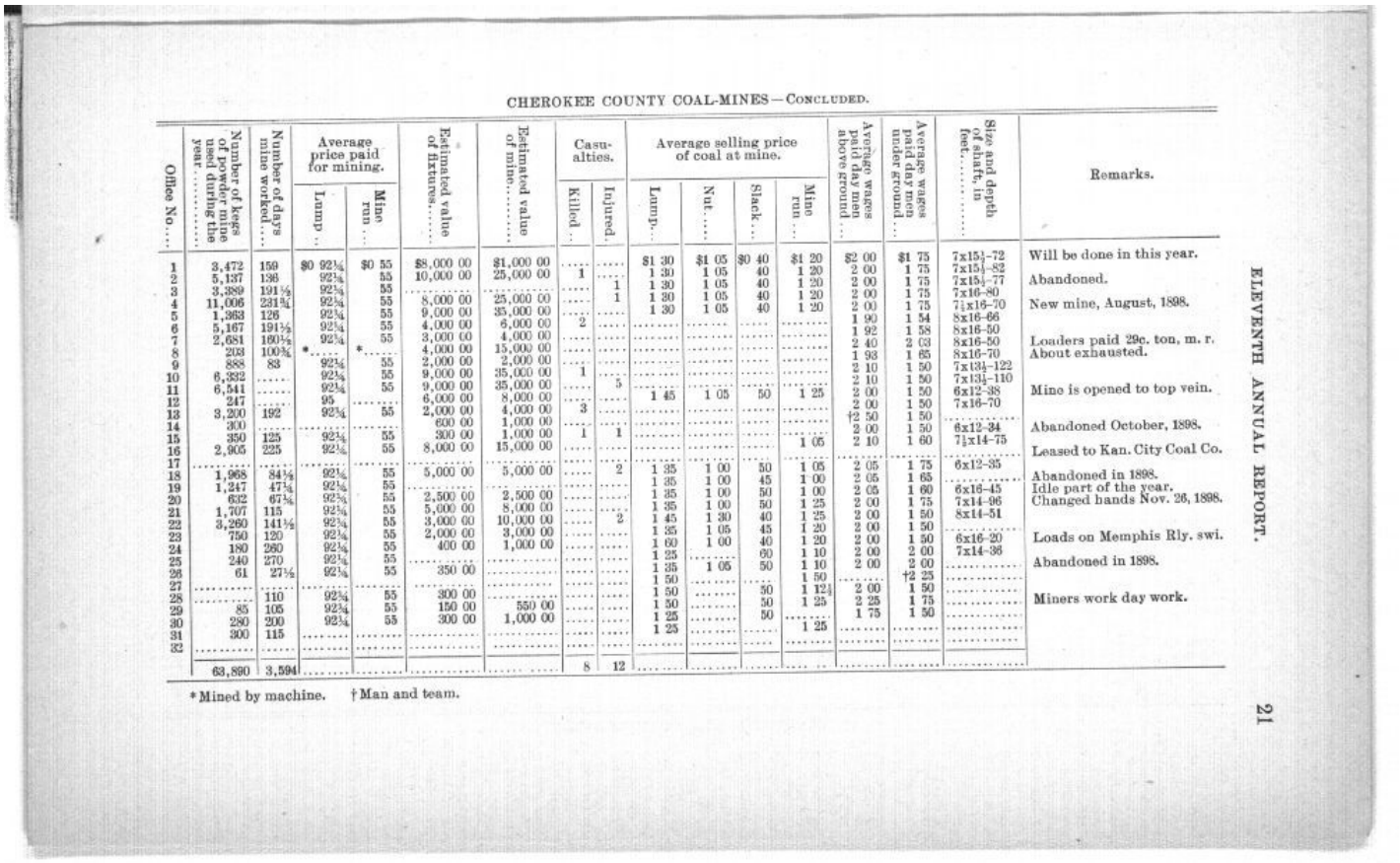
*Leased by Commercial Coal Company.

NOTE.—There are three new mines that will be in operation in 1899, namely: Midland Coal and Smelting Company, Eastern Coal and Coke Company, and J. R. Crowe Coal Company. Others are making preparations to sink new shafts.

CHEROKEE COUNTY COAL-MINES—CONTINUED.

| Office No. | Kind of opening. | Kind of power used. | Horse-power of engine. | Tons of Coal Produced. (2000 pounds to the ton.) Lump. | Nut and slack. | Mine run. | Total. | Employees. Miners. | Boys. | Mule drivers and pushers. | Cagers. | Pit bosses, trackmen and road layers. | Engineers, firemen, and pump men. | Weighmen and dumpers. | Car trimmers and prop men. | Blacksmiths and carpenters. | Total. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | Shaft | Steam | | | | 55,528 | 55,528 | 45 | | 6 | 1 | 3 | 2 | 2 | 2 | 1 | 62 |
| 2 | " | " | | | | 86,420 | 86,420 | 160 | 15 | 15 | 2 | 5 | 3 | 3 | 5 | 3 | 211 |
| 3 | " | " | | | | 66,359 | 66,359 | 42 | | 8 | 1 | 3 | 3 | 3 | 4 | 3 | 66 |
| 4 | " | " | 80 | 111,239 | 92,983 | | 204,222 | 230 | 13 | 18 | 2 | 4 | 3 | 4 | 6 | 3 | 292 |
| 5 | " | " | | | | 23,923 | 23,923 | 120 | 5 | 8 | 1 | 5 | 3 | 3 | 5 | 3 | 153 |
| 6 | " | " | | 67,018 | | 68,819 | 135,837 | 140 | | | | | | | | | 192 |
| 7 | " | " | | 53,780 | | 36,448 | 90,228 | 95 | | | | | | | | | 131 |
| 8 | " | " | | 6,459 | | 4,731 | 11,190 | 24 | | | | | | | | | 50 |
| 9 | " | " | | 9,229 | | 7,638 | 16,867 | 56 | | | | | | | | | 75 |
| 10 | " | " | | 36,906 | 27,666 | 26,253 | 90,825 | 110 | 3 | 10 | 2 | 3 | 4 | 6 | 4 | 3 | 153 |
| 11 | " | " | | 61,258 | 33,108 | 7,681 | 102,045 | 117 | 4 | 9 | 2 | 3 | 4 | 6 | 4 | 2 | 156 |
| 12 | " | " | | 9,617 | 1,007 | 20 | 10,644 | 30 | 1 | 4 | | 5 | 2 | 2 | | 1 | 45 |
| 13 | " | " | 45 | | | 43,200 | 43,200 | 60 | 6 | 6 | 1 | 1 | 1 | | 3 | 1 | 79 |
| 14 | Strip pit | Horse, steam, | 15 | | | 7,960 | 7,960 | 18 | | | | | | | | | |
| 15 | Shaft | " " | 15 | | | 4,000 | 4,000 | 10 | | 1 | | | | 1 | 1 | | 13 |
| 16 | " | Steam | 60 | 27,299 | 25,501 | 5,281 | 58,081 | 75 | 6 | 9 | 1 | 2 | 3 | 3 | 6 | 1 | 106 |
| 17 | " | " | | | | | | | | | | | | | | | |
| 18 | " | " | 30 | 17,769 | 14,496 | 3,811 | 36,076 | 110 | 6 | 8 | 2 | 2 | 3 | 3 | 4 | 2 | 140 |
| 19 | " | " | 30 | 13,190 | 9,100 | 800 | 23,090 | 110 | 8 | 7 | 3 | 3 | 3 | 1 | 6 | 2 | 143 |
| 20 | " | " | 30 | 5,974 | 3,000 | 1,850 | 10,824 | 35 | 3 | 3 | 2 | 2 | 2 | 2 | 3 | 1 | 53 |
| 21 | " | " | 60 | 6,250 | 8,177 | 7,499 | 21,926 | 48 | 7 | 5 | 2 | 2 | 2 | 2 | 4 | 1 | 74 |
| 22 | " | " | 50 | 21,291 | 38,443 | 5,769 | 65,503 | 150 | | 12 | 2 | 2 | 2 | 1 | 6 | 1 | 180 |
| 23 | Slope | " | 65 | 6,930 | 5,670 | | 12,600 | 50 | 2 | 4 | | | | 1 | | | 64 |
| 24 | Shaft | Horse | | | | 4,800 | 4,800 | 6 | 1 | | | | | 1 | | | 8 |
| 25 | " | " | | 3,000 | 1,000 | 1,000 | 5,000 | | 3 | 1 | | 1 | | 1 | 2 | | 8 |
| 26 | Slope | Steam | 12 | 975 | 1,035 | 50 | 2,060 | 13 | | 1 | 1 | 1 | 2 | 1 | | | 21 |
| 27 | Strip pit | | | 54 | | | 54 | 1 | | | | | | | | | |
| 28 | Shaft | Horse | | | | 2,233 | 2,233 | 6 | | | | | | | | | |
| 29 | " | " | | 10,060 | 6,080 | 11,050 | 27,170 | 6 | | 1 | 1 | | 1 | 1 | | | 10 |
| 30 | " | " | | 2,831 | 1,372 | | 4,203 | 6 | | 1 | | | | 1 | | | 8 |
| 31 | | | | | | 13,000 | 13,000 | 55 | | | | | | | | | 55 |
| 32 | | | | | | | | | | | | | | | | | |
| | | | | | | | 1,309,868 | 1,928 | 85 | | | | | | | | 2,548 |

# State inspector of coal mines reports



CHEROKEE COUNTY COAL-MINES—CONCLUDED.

| Office No. | Number of kegs of powder mine used during the year | Number of days mine worked | Average price paid for mining: Lump | Average price paid for mining: Mine run | Estimated value of fixtures | Estimated value of mine | Casualties: Killed | Casualties: Injured | Average selling price of coal at mine: Lump | Nut | Slack | Mine run | Average wages paid day men above ground | Average wages paid men under ground | Size and depth of shafts in feet | Remarks. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 3,472 | 159 | $0 92½ | $0 55 | $8,000 00 | $1,000 00 | .... | .... | $1 30 | $1 05 | $0 40 | $1 20 | $2 00 | $1 75 | 7x15½-72 | Will be done in this year. |
| 2 | 5,137 | 136 | 92¼ | 55 | 10,000 00 | 25,000 00 | 1 | .... | 1 30 | 1 05 | 40 | 1 20 | 2 00 | 1 75 | 7x15½-82 | |
| 3 | 3,389 | 191½ | 92¼ | 55 | ..... | ..... | .... | 1 | 1 30 | 1 05 | 40 | 1 20 | 2 00 | 1 75 | 7x15½-77 | Abandoned. |
| 4 | 11,006 | 231¾ | 92¼ | 55 | 8,000 00 | 25,000 00 | .... | 1 | 1 30 | 1 05 | 40 | 1 20 | 2 00 | 1 75 | 7x16-80 | |
| 5 | 1,363 | 126 | 92¼ | 55 | 9,000 00 | 35,000 00 | .... | .... | 1 30 | 1 05 | 40 | 1 20 | 2 00 | 1 75 | 7½x19-70 | New mine, August, 1898. |
| 6 | 5,167 | 191½ | 92¼ | 55 | 4,000 00 | 6,000 00 | 2 | .... | ..... | ..... | ..... | ..... | 1 90 | 1 54 | 8x16-66 | |
| 7 | 2,681 | 160½ | 92¼ | 55 | 3,000 00 | 4,000 00 | .... | .... | ..... | ..... | ..... | ..... | 1 92 | 1 58 | 8x16-50 | |
| 8 | 203 | 100¾ | * ..... | * ..... | 4,000 00 | 15,000 00 | .... | .... | ..... | ..... | ..... | ..... | 2 40 | 2 03 | 8x16-50 | Loaders paid 29c. ton, m. r. |
| 9 | 888 | 83 | 92¼ | 55 | 2,000 00 | 2,000 00 | .... | .... | ..... | ..... | ..... | ..... | 1 93 | 1 65 | 8x16-70 | About exhausted. |
| 10 | 6,332 | ..... | 92¼ | 55 | 9,000 00 | 35,000 00 | 1 | .... | ..... | ..... | ..... | ..... | 2 10 | 1 50 | 7x13½-122 | |
| 11 | 6,541 | ..... | 92¼ | 55 | 9,000 00 | 35,000 00 | .... | 5 | ..... | ..... | ..... | ..... | 2 10 | 1 50 | 7x13½-110 | |
| 12 | 247 | ..... | 95 | ..... | 6,000 00 | 8,000 00 | .... | .... | 1 45 | 1 05 | 50 | 1 25 | 2 00 | 1 50 | 6x12-38 | Mine is opened to top vein. |
| 13 | 3,200 | 192 | 92¼ | 55 | 2,000 00 | 4,000 00 | 3 | .... | ..... | ..... | ..... | ..... | 2 00 | 1 50 | 7x16-70 | |
| 14 | 300 | ..... | ..... | ..... | 600 00 | 1,000 00 | .... | .... | ..... | ..... | ..... | ..... | †2 50 | 1 50 | ..... | |
| 15 | 350 | 125 | 92½ | 55 | 300 00 | 1,000 00 | 1 | 1 | ..... | ..... | ..... | ..... | 2 00 | 1 50 | 6x12-34 | Abandoned October, 1898. |
| 16 | 2,905 | 225 | 92½ | 55 | 8,000 00 | 15,000 00 | .... | .... | ..... | ..... | ..... | 1 05 | 2 10 | 1 60 | 7½x14-75 | |
| 17 | ..... | ..... | ..... | ..... | ..... | ..... | .... | .... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | Leased to Kan. City Coal Co. |
| 18 | 1,968 | 84⅓ | 92¼ | 55 | 5,000 00 | 5,000 00 | ..... | 2 | 1 35 | 1 00 | 50 | 1 05 | 2 05 | 1 75 | 6x12-35 | |
| 19 | 1,247 | 47¼ | 92¼ | 55 | ..... | ..... | .... | .... | 1 35 | 1 00 | 45 | 1 00 | 2 05 | 1 65 | ..... | Abandoned in 1898. |
| 20 | 632 | 67¾ | 92¼ | 55 | 2,500 00 | 2,500 00 | .... | .... | 1 35 | 1 00 | 50 | 1 00 | 2 05 | 1 60 | 6x16-45 | Idle part of the year. |
| 21 | 1,707 | 115 | 92¼ | 55 | 5,000 00 | 8,000 00 | .... | .... | 1 35 | 1 00 | 50 | 1 25 | 2 00 | 1 75 | 7x14-96 | Changed hands Nov. 26, 1898. |
| 22 | 3,260 | 141½ | 92¼ | 55 | 3,000 00 | 10,000 00 | ..... | 2 | 1 45 | 1 30 | 40 | 1 25 | 2 00 | 1 50 | 8x14-51 | |
| 23 | 750 | 120 | 92¼ | 55 | 2,000 00 | 3,000 00 | .... | .... | 1 35 | 1 05 | 45 | 1 20 | 2 00 | 1 50 | ..... | |
| 24 | 180 | 280 | 92¼ | 55 | 400 00 | 1,000 00 | .... | .... | 1 60 | 1 00 | 40 | 1 20 | 2 00 | 1 50 | 6x16-20 | Loads on Memphis Rly. swi. |
| 25 | 240 | 270 | 92¼ | 55 | ..... | ..... | .... | .... | 1 25 | ..... | 60 | 1 10 | 2 00 | 2 00 | 7x14-36 | |
| 26 | 61 | 27½ | 92¼ | 55 | 350 00 | ..... | .... | .... | 1 35 | 1 05 | 50 | 1 10 | 2 00 | 2 00 | ..... | Abandoned in 1898. |
| 27 | ..... | ..... | ..... | ..... | ..... | ..... | .... | .... | 1 50 | ..... | ..... | 1 50 | ..... | †2 25 | ..... | |
| 28 | ..... | 110 | 92¼ | 55 | 300 00 | ..... | .... | .... | 1 50 | ..... | 50 | 1 12½ | 2 00 | 1 50 | ..... | |
| 29 | 85 | 105 | 92¼ | 55 | 150 00 | 550 00 | .... | .... | 1 50 | ..... | 50 | 1 25 | 2 25 | 1 75 | ..... | Miners work day work. |
| 30 | 280 | 200 | 92¼ | 55 | 300 00 | 1,000 00 | .... | .... | 1 25 | ..... | 50 | ..... | 1 75 | 1 50 | ..... | |
| 31 | 300 | 115 | ..... | ..... | ..... | ..... | .... | .... | 1 25 | ..... | ..... | 1 25 | ..... | ..... | ..... | |
| 32 | ..... | ..... | ..... | ..... | ..... | ..... | .... | .... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | |
| | 63,890 | 3,594 | ..... | ..... | ..... | ..... | 8 | 12 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | |

*Mined by machine. †Man and team.

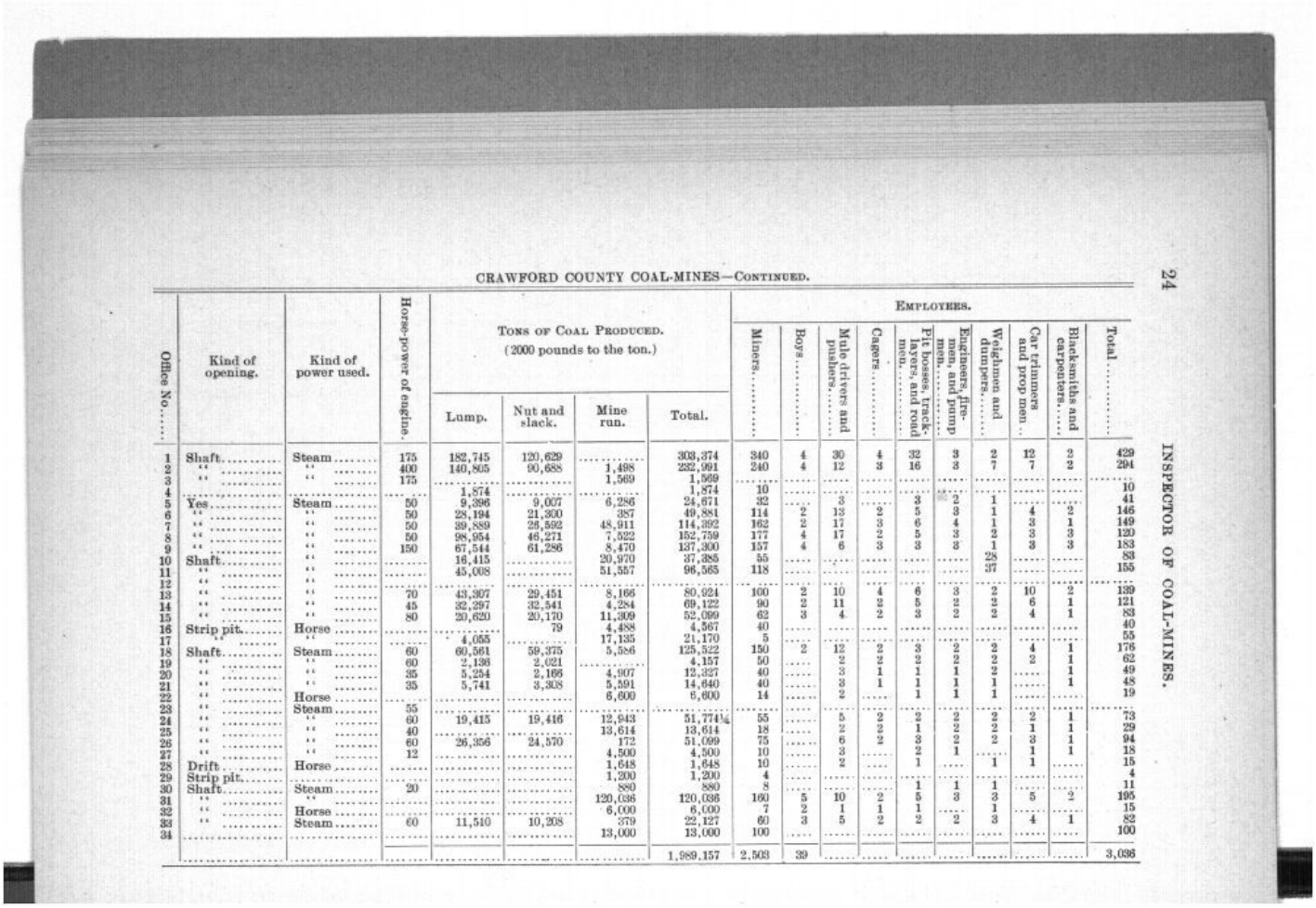
# State inspector of coal mines reports



CRAWFORD COUNTY COAL-MINES.

| Office No. | Name of operator or company. | Post-office address. | Name or number of mine. | Name of pit boss or underground foreman. | Location of mine. | Has mine railroad connection? | Name of railroad. |
|---|---|---|---|---|---|---|---|
| 1 | Mount Carmel Coal Company | Topeka | 1 | P. McCall | Frontenac | Yes. | Santa Fe. |
| 2 | " " " " | " | 5 | Ed. Flynn | Chicopee | " | " |
| 3 | " " " " | " | 6 | John O'Leary | 1½ miles west of Frontenac. | " | " |
| 4 | " " " " | " | Strip pit. | | One-half mile north of Frontenac | No. | |
| 5 | Western Coal and Mining Company | Pittsburg and St. Louis | 2 | Phil. Roeser | South of Fleming | Yes. | Mo. Pac. |
| 6 | " " " " | " " " | 3 | John St. John | Fleming | " | " |
| 7 | " " " " | " " " | 4 | Ed. Roberts | Northeast of Yale | " | " |
| 8 | " " " " | " " " | 5 | Ed. Roberts | South of Yale | " | " |
| 9 | " " " " | " " " | 7 | J. W. Gardner | South of Fleming | " | " |
| 10 | Kansas & Texas Coal Company | " " | 20 | John Barrowman | 1¼ miles west of Pittsburg | " | Frisco. |
| 11 | " " " | " " | 37 | Wm. Egly & Barrowman, | Three-fourths mile northwest of Litchfield | Yes. | Mo. Pac. and Memphis. |
| 12 | Kansas & Texas Coal Company | Pittsburg and St. Louis | 54 | J. W. Barrett | Six miles southwest Pittsburg | Yes. | Frisco, Memphis. |
| 13 | The Wear Coal Company | Pittsburg | 2 | W. C. Kirkwood | Four miles south Pittsburg. | " | Memphis. |
| 14 | " " " | " | 5 | Wm. McKinley | One mile southeast Frontenac | Yes. | Santa Fe, Mo. Pac. |
| 15 | The Wear Coal Company | Pittsburg | 6 | J. Kirkwood, sr | One mile north of Pittsburg. | Yes. | Santa Fe. |
| 16 | " " " | " | Strip pit. | Contract work | Four miles south Pittsburg, | " | Memphis. |
| 17 | Pittsburg & Midway Coal Mining Co. | Midway | 3 | J. E. Bevins, contractor | One-fourth mile south of Midway | Yes. | Memphis, Santa Fe, Frisco. |
| 18 | Pittsburg & Midway Coal Mining Co. | Midway | 4 | Thomas R. Jones | Three-fourths mile northwest of Midway | Yes. | Santa Fe, Frisco, Memphis. |
| 19 | Pittsburg & Midway Coal Mining Co. | Midway | 5 | W. M. Morgan | One-half mile northeast of Midway | Yes. | Memphis. |
| 20 | W. A. Swan Coal Company | Pittsburg | 1 | R. Ratliff | 1½ miles west of Pittsburg. | No. | |
| 21 | Pittsburg Coal and Coke Company | " | 2 | V. Gladis | Six miles southwest Pittsburg | Yes. | Memphis. |
| 22 | W. M. Walker Coal Company | Pittsburg | 1 | J. H. Walker | 1½ miles northeast K. C. P. & G. depot, Pittsburg. | No. | |
| 23 | Midland Coal and Smelting Company | Bruce | 1 and 2 | Geo. Wallace | One-half mile east of Bruce. | Yes. | Memphis. |
| 24 | Weir Junction Coal Company | Weir City | Schwab | J. G. Schwab | Three miles north of Weir City | Yes. | Memphis. |
| 25 | W. H. Miller Coal Company | Mulberry | 1 | J. Mathews | Two miles northwest Mulberry | Yes. | Memphis. |
| 26 | Arnott & Co | Pittsburg | 1 | D. Arnott | 1½ miles south Frontenac. | Yes. | Santa Fe, K. C. P. & G. |
| 27 | Lewis Coal Company | Coalvale | 1 | C. Hanna | Coalvale | No. | |
| 28 | A. Bell Coal Company | Coalvale | 1 | A. J. Bell | Three-fourths mile northeast of Coalvale | Yes. | Memphis. |
| 29 | C. R. Smith | Cherokee | Maplewood | C. R. Smith | 4½ miles southwest Cherokee | No. | |
| 30 | Eureka Coal Company | Pittsburg | 1 | John H. Anderson | Northwest of Frontenac | " | |
| 31 | Central Coal and Coke Company | Nelson | 9 | Rob. Gilchrist | One-half mile west Nelson. | Yes. | K. C. P. & G. |
| 32 | Wilson Brothers Coal Company | Pittsburg | 1 | R. Wilson | One mile northeast of Pittsburg | No. | |
| 33 | Kansas Commercial Coal Company | Kansas City | Fuller mine | C. Newlands | Fuller | Yes. | K. C. P. & G. |
| 34 | All other producers (estimated) | | | | | | |
| | Totals | | | | | | |

# State inspector of coal mines reports

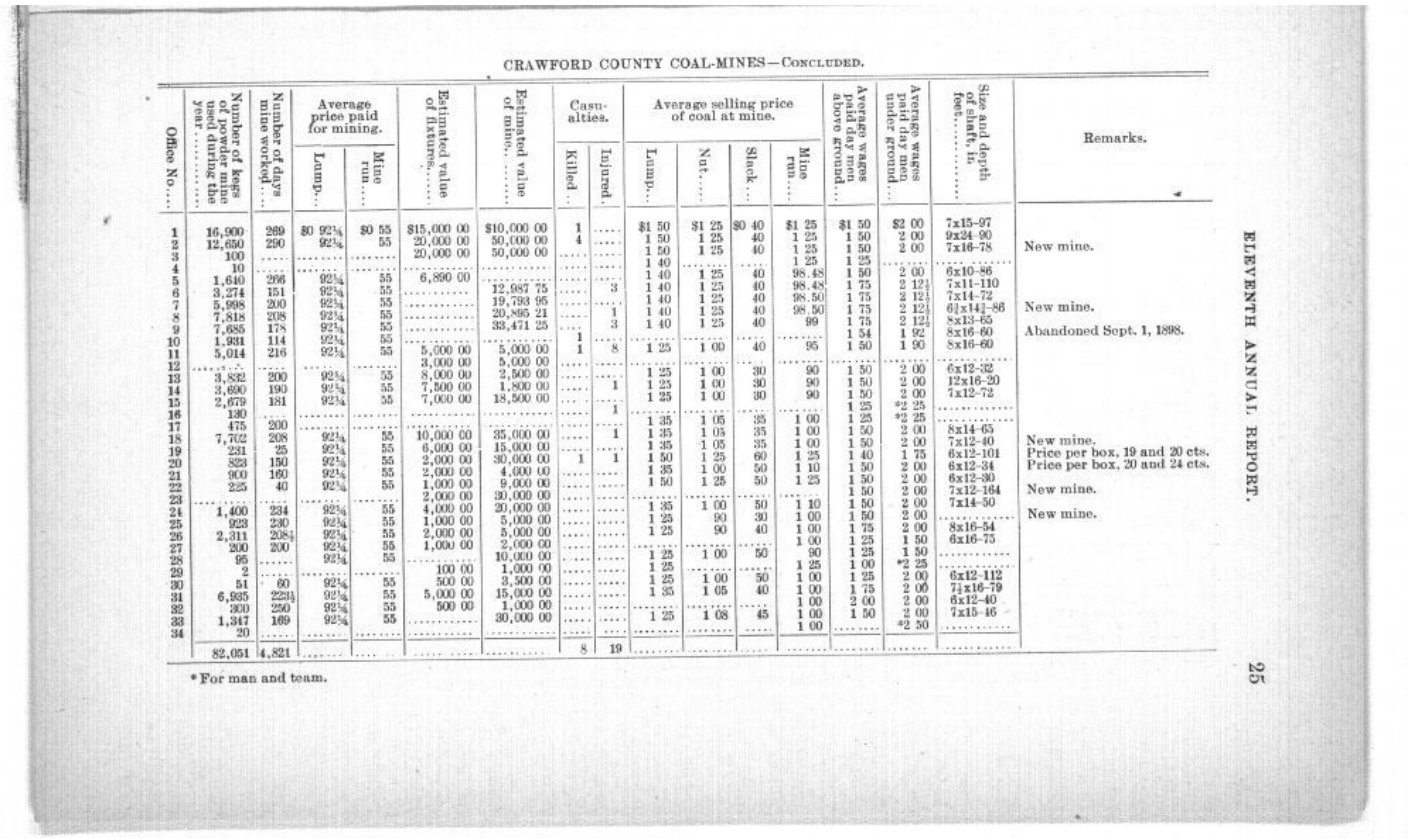




CRAWFORD COUNTY COAL-MINES—CONTINUED.

| Office No. | Kind of opening. | Kind of power used. | Horse-power of engine. | Tons of Coal Produced. (2000 pounds to the ton.) Lump. | Nut and slack. | Mine run. | Total. | Employees. Miners. | Boys. | Mule drivers and pushers. | Cagers. | Pit bosses, track-layers, and road men. | Engineers, firemen, and pumpmen. | Weighmen and dumpers. | Car trimmers and prop men. | Blacksmiths and carpenters. | Total. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | Shaft | Steam | 175 | 182,745 | 120,629 | | 303,374 | 340 | 4 | 30 | 4 | 32 | 3 | 2 | 12 | 2 | 429 |
| 2 | " | " | 400 | 140,805 | 90,688 | 1,498 | 232,991 | 240 | 4 | 12 | 3 | 16 | 3 | 7 | 7 | 2 | 294 |
| 3 | " | " | 175 | | | 1,569 | 1,569 | | | | | | | | | | |
| 4 | | | | 1,574 | | | 1,874 | 10 | | | | | | | | | 10 |
| 5 | Yes | Steam | 50 | 9,396 | 9,007 | 6,286 | 24,571 | 32 | | 3 | | 3 | 2 | 1 | | | 41 |
| 6 | " | " | 50 | 28,194 | 21,300 | 387 | 49,881 | 114 | 2 | 13 | 2 | 3 | 3 | 1 | 4 | 2 | 146 |
| 7 | " | " | 50 | 39,889 | 28,592 | 48,911 | 114,392 | 162 | 2 | 17 | 3 | 6 | 4 | 1 | 3 | 1 | 149 |
| 8 | " | " | 50 | 98,954 | 46,271 | 7,522 | 152,759 | 177 | 4 | 17 | 2 | 5 | 3 | 2 | 3 | 3 | 120 |
| 9 | " | " | 150 | 67,544 | 61,286 | 8,470 | 137,300 | 157 | 4 | 6 | 3 | 3 | 3 | 1 | 3 | 3 | 183 |
| 10 | Shaft | " | | 16,415 | | 20,970 | 37,385 | 55 | | | | | | 28 | | | 83 |
| 11 | " | " | | 45,008 | | 51,557 | 96,565 | 118 | | | | | | 37 | | | 155 |
| 12 | " | " | | | | | | | | | | | | | | | |
| 13 | " | " | 70 | 43,307 | 29,451 | 8,166 | 80,924 | 100 | 2 | 10 | 4 | 6 | 3 | 2 | 10 | 2 | 139 |
| 14 | " | " | 45 | 32,297 | 32,541 | 4,284 | 69,122 | 90 | 2 | 11 | 3 | 5 | 2 | 2 | 6 | 1 | 121 |
| 15 | " | " | 80 | 20,620 | 20,170 | 11,309 | 52,099 | 62 | 3 | 4 | 2 | 3 | 2 | 2 | 4 | 1 | 83 |
| 16 | Strip pit | Horse | | | 79 | 4,488 | 4,567 | 40 | | | | | | | | | 40 |
| 17 | " | " | | 4,055 | | 17,135 | 21,170 | 5 | | | | | | | | | 55 |
| 18 | Shaft | Steam | 60 | 60,561 | 59,375 | 5,586 | 125,522 | 150 | 2 | 12 | 2 | 3 | 2 | 2 | 4 | 1 | 176 |
| 19 | " | " | 60 | 2,136 | 2,021 | | 4,157 | 50 | | 2 | 2 | 1 | 1 | 2 | 2 | 1 | 62 |
| 20 | " | " | 35 | 5,254 | 2,166 | 4,907 | 12,327 | 40 | | 3 | 2 | 1 | 1 | 2 | | 1 | 49 |
| 21 | " | " | 35 | 5,741 | 3,308 | 5,591 | 14,640 | 40 | | 3 | 1 | 1 | 1 | 1 | | 1 | 48 |
| 22 | " | Horse | | | | 6,600 | 6,600 | 14 | | 2 | | 1 | 1 | 1 | | | 19 |
| 23 | " | Steam | 55 | | | | | | | | | | | | | | |
| 24 | " | " | 60 | 19,415 | 19,416 | 12,943 | 51,774¼ | 55 | | 5 | 2 | 2 | 2 | 2 | 2 | 1 | 73 |
| 25 | " | " | 40 | | | 13,614 | 13,614 | 18 | | 2 | 2 | 1 | 2 | 2 | 1 | 1 | 29 |
| 26 | " | " | 60 | 26,356 | 24,570 | 172 | 51,099 | 75 | | 6 | 2 | 3 | 2 | 2 | 3 | 1 | 94 |
| 27 | " | " | 12 | | | 4,500 | 4,500 | 10 | | 3 | | 2 | 1 | | 1 | 1 | 18 |
| 28 | Drift | Horse | | | | 1,648 | 1,648 | 10 | | 2 | | 1 | | 1 | 1 | | 15 |
| 29 | Strip pit | | | | | 1,200 | 1,200 | 4 | | | | | | | | | 4 |
| 30 | Shaft | Steam | 20 | | | 880 | 880 | 8 | | | | 1 | 1 | 1 | | | 11 |
| 31 | " | " | | | | 120,036 | 120,036 | 160 | 5 | 10 | 2 | 5 | 3 | 3 | 5 | 2 | 195 |
| 32 | " | Horse | | | | 6,000 | 6,000 | 7 | 2 | 1 | 1 | 1 | | 1 | | | 15 |
| 33 | " | Steam | 60 | 11,510 | 10,208 | 379 | 22,127 | 60 | 3 | 5 | 2 | 2 | 2 | 3 | 4 | 1 | 82 |
| 34 | | | | | | 13,000 | 13,000 | 100 | | | | | | | | | 100 |
| | | | | | | | 1,989,157 | 2,503 | 39 | | | | | | | | 3,036 |

# State inspector of coal mines reports



CRAWFORD COUNTY COAL-MINES—CONCLUDED.

| Office No. | Number of kegs of powder used during the year | Number of days mine worked | Average price paid for mining. Lump | Average price paid for mining. Mine run | Estimated value of fixtures | Estimated value of mine | Casualties. Killed | Casualties. Injured | Average selling price of coal at mine. Lump | Nut | Slack | Mine run | Average wages paid day men above ground | Average wages paid day men under ground | Size and depth of shaft, in feet | Remarks. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 16,900 | 289 | $0 92½ | $0 55 | $15,000 00 | $10,000 00 | 1 | .... | $1 50 | $1 25 | $0 40 | $1 25 | $1 50 | $2 00 | 7x15–97 | |
| 2 | 12,650 | 290 | 92½ | 55 | 20,000 00 | 50,000 00 | 4 | .... | 1 50 | 1 25 | 40 | 1 25 | 1 50 | 2 00 | 9x24–90 | |
| 3 | 100 | .... | .... | .... | 20,000 00 | 50,000 00 | .... | .... | 1 50 | 1 25 | 40 | 1 25 | 1 50 | 2 00 | 7x16–78 | New mine. |
| 4 | 10 | .... | .... | .... | .... | .... | .... | .... | 1 40 | .... | .... | 1 25 | 1 25 | .... | .... | |
| 5 | 1,640 | 266 | 92½ | 55 | 6,890 00 | .... | .... | .... | 1 40 | 1 25 | 40 | 98.48 | 1 50 | 2 00 | 6x10–86 | |
| 6 | 3,274 | 151 | 92½ | 55 | .... | 12,987 75 | .... | 3 | 1 40 | 1 25 | 40 | 98.48 | 1 75 | 2 12½ | 7x11–110 | |
| 7 | 5,998 | 200 | 92½ | 55 | .... | 19,793 95 | .... | .... | 1 40 | 1 25 | 40 | 98.50 | 1 75 | 2 12½ | 7x14–72 | |
| 8 | 7,818 | 208 | 92½ | 55 | .... | 20,895 21 | .... | 1 | 1 40 | 1 25 | 40 | 98.50 | 1 75 | 2 12½ | 6½x14½–86 | New mine. |
| 9 | 7,685 | 178 | 92½ | 55 | .... | 33,471 25 | .... | 3 | 1 40 | 1 25 | 40 | 99 | 1 75 | 2 12½ | 8x13–65 | |
| 10 | 1,931 | 114 | 92½ | 55 | .... | .... | 1 | .... | .... | .... | .... | .... | 1 54 | 1 92 | 8x16–60 | Abandoned Sept. 1, 1898. |
| 11 | 5,014 | 216 | 92½ | 55 | 5,000 00 | 5,000 00 | 1 | 8 | 1 25 | 1 00 | 40 | 95 | 1 50 | 1 90 | 8x16–60 | |
| 12 | .... | .... | .... | .... | 3,000 00 | 5,000 00 | .... | .... | .... | .... | .... | .... | .... | .... | .... | |
| 13 | 3,882 | 200 | 92½ | 55 | 8,000 00 | 2,500 00 | .... | .... | 1 25 | 1 00 | 30 | 90 | 1 50 | 2 00 | 6x12–32 | |
| 14 | 3,690 | 190 | 92½ | 55 | 7,500 00 | 1,800 00 | .... | 1 | 1 25 | 1 00 | 30 | 90 | 1 50 | 2 00 | 12x16–20 | |
| 15 | 2,679 | 181 | 92½ | 55 | 7,000 00 | 18,500 00 | .... | .... | 1 25 | 1 00 | 30 | 90 | 1 50 | 2 00 | 7x12–72 | |
| 16 | 130 | .... | .... | .... | .... | .... | .... | 1 | .... | .... | .... | .... | 1 25 | *2 25 | .... | |
| 17 | 475 | 200 | .... | .... | .... | .... | .... | .... | 1 35 | 1 05 | 35 | 1 00 | 1 50 | 2 00 | 8x14–65 | |
| 18 | 7,702 | 208 | 92½ | 55 | 10,000 00 | 35,000 00 | .... | 1 | 1 35 | 1 05 | 35 | 1 00 | 1 50 | 2 00 | 7x12–40 | New mine. |
| 19 | 231 | 25 | 92½ | 55 | 6,000 00 | 15,000 00 | .... | .... | 1 35 | 1 05 | 35 | 1 00 | 1 50 | 2 00 | 6x12–101 | Price per box, 19 and 20 cts. |
| 20 | 323 | 150 | 92½ | 55 | 2,000 00 | 30,000 00 | 1 | 1 | 1 50 | 1 25 | 60 | 1 25 | 1 40 | 1 75 | 6x12–34 | Price per box, 20 and 24 cts. |
| 21 | 900 | 160 | 92½ | 55 | 2,000 00 | 4,000 00 | .... | .... | 1 35 | 1 00 | 50 | 1 10 | 1 50 | 2 00 | 6x12–30 | |
| 22 | 225 | 40 | 92½ | 55 | 1,000 00 | 9,000 00 | .... | .... | 1 50 | 1 25 | 50 | 1 25 | 1 50 | 2 00 | 7x12–164 | New mine. |
| 23 | .... | .... | .... | .... | 2,000 00 | 30,000 00 | .... | .... | .... | .... | .... | .... | 1 50 | 2 00 | 7x14–50 | |
| 24 | 1,400 | 234 | 92½ | 55 | 4,000 00 | 20,000 00 | .... | .... | 1 35 | 1 00 | 50 | 1 10 | 1 50 | 2 00 | .... | New mine. |
| 25 | 923 | 230 | 92½ | 55 | 1,000 00 | 5,000 00 | .... | .... | 1 25 | 90 | 30 | 1 00 | 1 50 | 2 00 | .... | |
| 26 | 2,311 | 208½ | 92½ | 55 | 2,000 00 | 5,000 00 | .... | .... | 1 25 | 90 | 40 | 1 00 | 1 75 | 2 00 | 8x16–54 | |
| 27 | 200 | 200 | 92½ | 55 | 1,000 00 | 2,000 00 | .... | .... | .... | .... | .... | 1 00 | 1 25 | 1 50 | 6x16–75 | |
| 28 | 95 | .... | 92½ | 55 | .... | 10,000 00 | .... | .... | 1 25 | 1 00 | 50 | 90 | 1 25 | 1 50 | .... | |
| 29 | 2 | .... | .... | .... | 100 00 | 1,000 00 | .... | .... | 1 25 | .... | .... | 1 25 | 1 00 | *2 25 | .... | |
| 30 | 51 | 60 | 92½ | 55 | 500 00 | 3,500 00 | .... | .... | 1 25 | 1 00 | 50 | 1 00 | 1 25 | 2 00 | 6x12–112 | |
| 31 | 6,935 | 223½ | 92½ | 55 | 5,000 00 | 15,000 00 | .... | .... | 1 35 | 1 05 | 40 | 1 00 | 1 75 | 2 00 | 7½x16–79 | |
| 32 | 300 | 250 | 92½ | 55 | 500 00 | 1,000 00 | .... | .... | .... | .... | .... | 1 00 | 2 00 | 2 00 | 6x12–40 | |
| 33 | 1,347 | 169 | 92½ | 55 | .... | 30,000 00 | .... | .... | 1 25 | 1 08 | 45 | 1 00 | 1 50 | 2 00 | 7x15–46 | |
| 34 | 20 | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | 1 00 | .... | *2 50 | .... | |
| | 82,051 | 4,821 | .... | .... | .... | .... | 8 | 19 | .... | .... | .... | .... | .... | .... | .... | |

*For man and team.

ELEVENTH ANNUAL REPORT. 25