

NEW MINES.

The Chicago, Wilmington & Vermilion Coal Company has opened a mine at Orient, Franklin County, which is modern in every respect and is fireproof throughout.

The Old Ben Mining Corporation, No. 9 mine, is located two miles east of West Frankfort and is constructed of fireproof material. This mine is thoroughly modern and will be a great producer.

The Franklin Coal & Coke Company has re-opened the mine formerly known as the Big Muddy-Carterville Mining Company's No. 1 mine.

The following local mines have been opened in Saline County: Thomas E. Osborn, Wilson Henson, Equality; J. Cogdell, Louis Dunn, Henry Biggs, Logan Dunn, Stonefort.

ABANDONED MINES.

The Gallatin Coal & Coke Company's mine, Equality, Gallatin County, was not in operation this year owing to the disaster which occurred there, April 6, 1913. (For description of this see Coal Report of 1913, p. 248.)

CHANGE OF NAME.

Ohio Valley Mining Company, No. 8, to Old Ben Mining Corporation No. 8.

Carroll & Franklin Counties Coal Company to Benton District Coal Company.

Dempson & Wathen Bros. to W. A. Wathen.

R. J. Mitchell to E. P. McCabe.

William Strong to William Gepmer.

Big Creek Coal Company, No. 1, to Saline County Coal Company, No. 6.

Galatia & Saline Coal Company to Galatia Coal Company.

Tanner, Barkus & Company to Lone Star Coal Company.

Syers Bros. to Sam Hazel.

R. L. Clements to Clements & Doolin.

Yates & Land to James Yates.

Mag Hart to Mag Sisk.

James Edwards to Herman McDaniel.

OLD MINE RE-OPENED.

The shaft of the Gallatin County Coal & Coke Company, of Equality, which was completely destroyed by the floods in April, 1913, is being re-opened.

A study of the mine maps led the company's engineers to believe that they would be able to put down a new shaft at a point where they would reach the solid coal adjacent to the old works, and a site was selected with this in view. As all the equipment of the old shaft has been destroyed, new had to be provided before the pumping operations could be commenced. The only point at which pumping was possible was at the old air shaft, and it was so small that pumps could not be lowered and hence, the only available method was by deep well outfit on the surface. Sinking and pumping began in November, 1913, and the hoisting shaft reached the coal December 14, 1913, and connection was made with the old works and the shaft was flooded to the level of the water. Pumping was continued at both the air and the new hoisting shaft and the mine was dewatered about the last of April. The shaft was then opened and the landings made and the making of entries, airways and roads connecting with the workings of the old shaft is now in progress.

The hoisting shaft is elliptical in shape with four divisions, two for hoists and the others for pumping, pipes, air and manways. The shaft is strictly fireproof, the upper 60 feet above the solid rock is lined with reinforced concrete. The tippie and head-frame is entirely of steel; it is a four-track tippie with shaking screens and provision made for all grades of coal now furnished the Illinois trade. Hoisting engines are 24 by 36

first motion; all cages are very heavy and entirely of steel excepting the platforms.

The power plant will consist of three 150 H. P. boilers, two of which are now placed; boiler-house is of steel frame construction with steel roof; power-house is of brick with steel roof; machine-shop is corrugated steel with light wood wall frame with steel truss and purlins and roof. In fact the whole plant is of strictly fireproof construction.

The coal will be mined by compressed air puncher machines, air compression machinery and accessories are already purchased and on the ground. Haulage will be by gasoline motor.

The water supply for boiler and mines is furnished by drainage reservoir 1,200 feet away and water is pumped by gas engine to settling basin and standpipe at shaft.

The old air shaft has been concrete lined from surface to solid material and has steel head-frame.

The ventilating fan is 11 feet in diameter and upper half is cased with steel and lower half with concrete; no timber whatever is used in construction of the ventilating system and the fan is driven by gasoline engine.

The shaft and plant will be lighted with a 400 light electric system.

The powder magazine is located 1,200 feet from the shaft with low hill barrier between, and the construction of the magazine is in accordance with latest practice and is strictly fireproof, foundation and roof being of concrete and the walls of brick.

The railroad in connection with the mine has four loading tracks under the tippie, and storage for 40 empties and for from 40 to 50 loads is provided. The capacity of the mine will be 1,000 tons per day.

Provision has been made to install a new coke plant at a later date should the condition of the coke market warrant it, the Equality coal being known to make a fine grade of coke for zinc, lead, and copper smelting.

PROSPECTIVE MINES.

The Middle Fork Mining Company, an Illinois corporation, is opening a new mine two miles east of Benton, Franklin County.

This property will have railroad connections with the I. C. R. R., and C. & E. I. R. R., and later on with the Mo. P., and C., B. & Q. The main shaft is a double compartment shaft of two hoistways, 12 feet x 17 feet 6 inches and will be lined with a 12-inch solid concrete wall reinforced with $\frac{3}{4}$ -inch steel rods every 12 inches for a distance of not less than 50 feet both at the top and bottom.

There will be vertical "H" section "I" beams, imbedded half way in the concrete wall with $\frac{3}{4}$ -inch rods passing through, 12 inches apart, to support the steel "I" beams and buntings and also to support the cage guides. That part of the shaft which is not lined with concrete will be walled with 5-inch x 12-inch long leaf yellow pine timbers and faced with asbestos lining material.

The air and escapement shaft will be 12 x 15 feet and will be lined in practically the same way as the main shaft. The main shaft is of a proper size to accommodate a 4-ton car of coal.

The hoist will be designed to hoist two and one-half cars per minute, 10 tons of coal per minute, 600 tons per hour, or 4,800 tons in 8 hours.

A five year contract has been made with the Central Illinois Public Service Company for electric power. A. C. current at 2,300 volts will be furnished, and will be reduced to 220 volts for use on top of ground and to 275 volts for underground service. A. C. current under-cutting machines will be used, also storage battery locomotives for hauling coal underground. All equipment will be modern and installed in the best way suited to properly operate a mine of the capacity mentioned. The coal screening and preparing plant will be designed to properly size and clean six grades of domestic coal.

The Wasson Coal Company of Harrisburg is constructing a new mine west of Carriers Mills, Saline County, which will be known as Wasson Coal Company's Mine No. 2. The mine will be a slope—the first to be attempted on a large scale in the Eleventh District.

No. 5 vein will be worked, which averages 4 feet 10 inches in thickness throughout the acreage to be worked from this mine. At the location of the slope there is but 30 feet of cover over the coal, which makes an ideal condition for the construction of a slope. Twenty feet of solid slate above the coal will form a good substantial roof.

The slope will be pitched on a 25 per cent grade to the level of the coal and will be concreted solidly the entire length. The air and escape-ment shaft will also be concreted.

The entire plant will be electrically equipped and driven. A four track tippie with shaker screens, endless rope or chain haul for hoisting loaded cars, automatic revolving dump and endless rope or chain haul for returning empties to the mine, will be constructed and electric haulage motors and undercutting machines installed.

IMPROVEMENTS.

The Dering Coal Company, of West Frankfort, Franklin County, made extensive improvements at No. 18 mine. The Sullivan compressors and punching machines were taken out and the mine electrified. As the power is bought from the Central Illinois Public Service Company, it was necessary to put in a modern power station. The room used formerly for the compressors was worked over and concrete floors put in, making a very suitable power-house. The Power Company installed three large transformers for reducing the alternating current from 33,000 volts to 2,300 volts for use in the motor generator set.

The company installed a 200 kw. Ridgway Synchronous motor generator set and a 12 panel switchboard 18 feet long. Also three transformers were installed for reducing the A. C. currents from 2,300 to 220 volts for use on pump and fan motors.

The current for haulage and machine circuits is conducted to the air shaft by two 750,000 C. M. W. P. T. B. stranded cable. The current for the fan and motor pump is conducted to the same place by three 4/0 W. P. T. B. cables. In conducting the former to the two panel switchboard on the bottom, two 750,000 C. M. lead and armored cable are used. The latter is conducted to the pump by a three conductor lead and armored cable.

The fan is directly connected by means of a pinion and a 5-foot split gear, to a 50-foot horse power, Westinghouse alternating current motor. The same circuit also feeds a 6-inch by 8-inch Heinson and Hubble triple pump, electrically driven by a 30 horse power Westinghouse 220 volt alternating current motor.

The haulage and machine circuits are so arranged at the bottom switchboard that either or both circuits can be cut off from either section of the mine at any time. The haulage is now taken care of by six 6-ton Goodman single motor locomotives equipped with independent motor driven electric cable reels.

The coal is undercut by 15 6-foot Goodman standard breast machines.

In addition to the above improvements a modern machine-shop was installed, consisting of a Mayer Bros. Little Giant trip hammer, one cutoff saw, one planer, one punch, one lathe 18 inches by 16 inches with shafting, belting and pulleys for same. Also two Herzler & Henninger automatic self-dumping cages, equipped with improved keepers and Brasche automatic empty car releases were added to the equipment.

The 17 Sullivan 5 T. U. and 4 Sullivan 2 T. T. punching machines, taken out of No. 18 mine, were installed at No. 11 mine, belonging to the same company.

The following are the improvements made by the Old Ben Mining Corporation at their No. 8 shaft, West Frankfort, Franklin County:

New guides placed in shaft changing them from 6x6 to 6x10 timbers and placed them in steel angles from slightly below ground level to top of tippie.

Installed two new Hertzler & Henninger steel cages of all steel construction and containing no wood whatever; relocated scales in tippie to better accommodate weighman and checkweighman; completely refueled five new boilers; built new concrete supply-house, 19 feet by 70 feet; installed

new Hatfield lump loader, using steel construction; a new weigh hopper, new trip hammer for sharpening bits; new idler on generator to run engine over instead of under; put in egg coal conveyor, 256 feet long, to convey the egg coal into rescreening plant, with electric motor to run same; installed two additional 6-ton Jeffrey gathering locomotives; two A-17 Jeffrey mining machines; 85 additional Hertzler & Henninger roller bearing mining cars; timbered 60 feet of bottom on empty side of mine shaft with steel "I" beams, and completely concreted sides; rebuilt fire equipment room at bottom of shaft, 18x20, with concrete sides and floor, and increased depth of sump at the bottom of the main shaft 14 feet.

The West Frankfort Coal Company, West Frankfort, Franklin County, has added to its equipment 1 water heater and boiler, feed pump, 4 mules, 2 haulage motors, 100 mine cars and 5 mining machines; 4 of the machines are of the Morgan-Gardner breast machine type, and one Sullivan continuous cutter. Besides the foregoing the company has doubled the capacity of load and empty yards and made connection with the C., B. & Q. R. R. This gives shipping facilities over both the C., B. & Q., and the C. & E. I. R. R.

The United Coal Mining Company, Christopher, Franklin County, made the following improvements:

AT MINE No. 1.

One 150 K. W. Crocker Wheeler generator; 1 water softening plant; 32 new pit cars; covered boilers with steel jackets.

AT MINE No. 2.

One 500 K. W. Westinghouse turbine; 1 rescreening plant, 5 bins, 200 tons each; 1 10-ton Goodman motor; 1 13-ton Goodman motor; 1 water softening plant; 100 Watt pit cars.

The W. P. Rend Colliers Company, Rend, Franklin County, has made the following improvements:

A new fireproof building, 40 feet by 80 feet, with three compartments, which are used for blacksmith-shop, machine-shop and car repair shop.

A new reservoir covering about 25 acres with an average depth of 3½ feet.

A new picking table for egg coal; 1 new 10-ton Morgan-Gardner motor; 3 new Morgan-Gardner electric chain machines; 1 automatic caging device, made by the Mining Safety Device Company, Bowerston, Ohio; 50 Sanford-Day roller bearing 3-ton mine cars; 6 Canton automatic mine trap doors, made by the American Mine Door Company, Canton, Ohio.

All haulage ways have been timbered with 7-inch "I" beams, 11 feet long.

Both cages have been equipped with automatic device to prevent cage from dumping in shaft.

The bottom is concreted from the shaft 300 feet east, the walls on both ribs being 15 feet in height extending to the lime rock with an average thickness of 24 inches. The west side is concreted a distance of 360 feet, walls an average thickness of 18 inches, also extending to the lime rock. The "I" beams are placed 10 feet apart the entire length of this work and 8 feet above the rail. The entire bottom is lighted with incandescent lamps.

The Sesser Coal Company, Sesser, Franklin County, has made the following improvements:

Installed 75 new pit cars; 1 6-ton Westinghouse gathering locomotive; built a new concrete smokestack, steel reinforced, 150 feet high, lined at the bottom with fire brick; installed 3 new boilers and raised 5 of the old boilers; also remodeled the boiler-room throughout and put coal bunkers overhead for the new boilers; 2 new electric long wall chain machines, 6 feet 6 inches long, class C. E., built by the Sullivan Machinery Company; new power-house entirely of concrete, 14x16x9 feet; new concrete pumping-house, 10x20x10 feet; 1 new Fairbanks-Morse electric pump duplex, 6 inches by 10 inches; building a new reservoir to contain 76,000,000 gallons of water covering about 40 acres; putting in concrete stoppings throughout the mine along main entries; 2 new cages, Bond type.