

Q. What do you say as to Exhibit 79? A. Country rock, pyrrhotite and chalcopyrite.

Q. What do you say as to Exhibit 80, 87, and 92 feet from No. 3 shaft? A. Country rock, pyrrhotite, and chalcopyrite.

Q. What do you say as to Exhibit 81, which is 97 and 102 feet east of No. 3 shaft? A. It is country rock, pyrrhotite and chalcopyrite.

Q. So that the chief ores in this vein that we are considering are clearly chalcopyrite and pyrrhotite. A. With accessory pyrite.

Q. What are the chief ores which you find in the Iron Mask vein? A. Chiefly pyrites, with mixtures of chalcopyrite.

Q. Chiefly pyrite? A. No, pyrrhotite, with a mixture of chalcopyrite.

The Court: That is, they are the same? A. Practically the same, yes.

Q. Now, Mr. King, have you anything further to say as a whole with reference to the ore in that drift? A. Only to repeat its absolute continuity, and like the vein in No. 3, shaft, so far as its metallic contents are concerned, it consists predominantly of pyrrhotite with a little chalcopyrite and occasional masses of pyrite, which seemed to me to be secondary and accessory.

Thereupon the Court adjourned until 2:30 p.m.

(To be continued.)

RECENT PUBLICATIONS.

THE Statistical Year-Book of Canada for 1899. Issued by the Department of Agriculture, Ottawa, 1900.

Section of Mineral Statistics and Mines, annual report for 1898, by E. D. Ingall, M.E., Geological Survey of Canada, 1900.

Descriptive Catalogue of a Collection of the Economic Minerals of Canada at the Paris International Exhibition. Printed by direction of the Canadian Commissioner, 1900.

Report of the Section of Chemistry and Mineralogy, by G. Christian Hoffman, L.L.D., F.I.C., F.R.S.C., Geological Survey of Canada, 1900.

Preliminary Report on the Clays of Alabama. Bulletin No. 6, Geological Survey of Alabama, Jacksonville, Fla., 1900.

TECHNICAL PERIODICALS FOR THE MONTH.

THE JOURNAL OF GEOLOGY.

MANY factors have to be taken into consideration if the stone used for building or other purposes is to prove durable. In the issue of this periodical Mr. E. R. Buckley cites the following points as particularly worthy of notice: 1, colour; 2, composition (mineralogical chemical); 3, strength (crushing transverse); 4, hardness; 5, elasticity; 6, porosity; 7, specific gravity; 8, weight per cubic foot; 9, effect of temperature changes, (a) freezing and thawing in interstitial water, (b) effect of extreme heat; 10 effect of gases (carbonic, sulphuric); 11 quarry conditions.

The information indicated may be obtained from observation at the quarry, inspection of buildings, or other structures made out of the same stone, and from laboratory tests. At the quarry one can ascertain the quantity of stone similar in texture and uniform in colour that is available, also whether the method of quarrying is injurious to the stone.

When estimating the strength and durability of a stone on observation of buildings, one must be careful to take into account among other things: age, size, position and climatic conditions. The effect of exposure can be estimated with wonderful exactitude, from laboratory tests without the aid of the foregoing. Laboratory tests come under these principal heads: chemical, microscopical, physical. Chemical analysis determines whether a building stone contains any detrimental material such as iron or bitumen. This may also be learned, and at less expense by microscopical examination, when, at the same time texture is considered. Physical tests supply the data for 3 to 10 of the above scheme. Few experiments have as yet been made to determine the temperature which different rocks will stand without injury. In large cities the capacity to withstand extreme heat is regarded as essential to a first class building stone.

THE ENGINEERING MAGAZINE.

In the last few numbers of this magazine a discussion covering the question of iron production and supply has been accorded much prominence. The subject is further investigated and elaborated in the August issue in a paper entitled "Industrial Depressions and the Pig Iron Reserve," by Mr. George H. Hull, who has been closely identified with the iron industry of the West and South for many years. Mr. Hull's theory that industrial depression follow abnormal advances in the price of iron, is not new, but the highest commendation is his due for the mass of valuable statistical and other information which in the paper in question, he brings forward in its support. After showing that the depressions of the past in the manufacturing nations of the world have been nearly or quite contemporaneous in their occurrence, Mr. Hull points out that "before iron became of preponderating importance to the industries of nations, there were no industrial depressions except those born of causes apparent at the time, such as pestilence, famine and war. "Iron," he continues, "is acknowledged to be the foundation on which the modern industrial system rests. If that system is disturbed it is most natural to look to the foundation for the cause of the disturbance. If we would appreciate how thoroughly the entire industrial system depends upon iron, let him imagine what the world would be to-day without it—what it would be if we depended upon wood, stone, copper and tin for our implements of agriculture, tools, machinery, vehicles of transportation on land and sea, the vast network of rails on the surface, and the pipes which carry water, gas, etc., under the surface. What proportion of these could have existed without it? It matters little what its price is, provided that price is stable. The industries of a nation depend upon the actions of an aggregation of individuals. When the individual considers an expenditure for a permanent improvement, and finds that improvement will cost 50 per cent. too 100 per cent. more than it would have done a year before, or is likely to do a year later, he acts, and that action is almost invariably a postponement of that improvement. This in a nutshell, is the reason that industrial depressions follow an abnormal advance." And the figures Mr. Hull is able to bring forward certainly prove his conclusion true. Other interesting and timely articles are "China in Regeneration," by John Foord; "Electric Mining Machinery in the British