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# * <br> Weekly Bulletin 

## COPPER STRIKE.

DEVELOPMENT.-The body of copper ore encountered in the tunnel last week has been crossed and proves 6 be emght feet wide and assays of this ore give values of $\$ 16.00$ to the ton. The tunnel work will be pushed. The sinking of the snaft has been commenced and will continue so as to thoroughly explore the ore body and to inorease the dump of pay ore.

To meet cost of development, the sales of Treasury Stock will continue at SIX CENTS per share, payable all cash, or on the installIment plan in twelve monthly payments.

## INSTALLMENT PLAN

2000 Shares at 6 cents per share
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For Prospectus and Further Information, address,

Grizzly Gold Mining Co., Sumpter, Ore.

## CHINESE COAL FIELDS.

Consists of 150 Szure Miles and $\mathbf{3 , 0 0 0 , 0 0 0}$. 030 Metric Tons.
It does not require a very severe nor a very long lasting coal tamine to advance the question of the exhaustion ef fuel supply, from a purely asademic discussion to one of pressing economic importance. The present situation in Gireat Britain btings the matter near enough home to lend a lightened interest to the description of the coal fields around Ise Chou, Shan'si, China, by Noah Field Drake, which was presented at the last meeting of the AmerKan Institute of Mining Engineers and is printed in its "fransactions."
Thedi-trict was tirst adequately examthed by Baron von Rishtoten in 1870 , but the anti-foreign attitude of the Chinese government has sline prevented development, until now its explotation by the Pehin syndicate seems to be at hand, this English-Italian company having concessions to work the coai helds of the Tse Chon region, as well as the shan-si fieds.
The Tse Chou cost area examioed by Mr. Drake lies about $\mathbf{3 0 0}$ miles southwest by west from Shangh, and shows a "mingling of ridges, hilis, narrow, elevated valleys and rough rolltug lands." The rock beds lie comparatively level, with some coasptouous folding and faulting, giving narrow beds of eastward dipping strata and long west-inosthwest dipping areas, in whith the dips are tarely greater than seven or eight degrees, and the average dip of the whole eathicrust block is probably not more thanone or two degrees; 22 to 23 feet is given as the probabie average thickness of the main workable Tse Chou coal bed, though Mr. Dtake had no opportunity to measure its full thiskness nor to examine it, except where it is being mined. At one mine near Hsi Ta Yang, only the lower to feet to 12 feet is being taken out through a shaft 320 feet deep. Mr. Drake was told by the Chinese min-

| ers that the full thickness of the bed is 30 | 300 pounds of coal are hoisted at a time |
| :--- | :--- | :--- |
| feet Chinese, equal to 36 feet English. | in baskets. From the foot of the shaft | Parting streaks of shaly coal are common, but no waste coal is taken out, and the average ash is probably not higher than to per cent. In two mines a couple of

miles northeast of Tse Chou, Mr. Drake miles northeast of Tse Chou, Mr. Drake
sw coal beds from if feet to 23 feet thick, the latter being made up quite uniformly of a lower stratum of three feet of earthy, friable coal, 14 teet of hard, firm, evenly good coal, one inch of carbonaceous shale, and six teet more of good coal. In a mine one and a half miles west of Ta Chi, where the Chinese miners said the bed had a thickness of $231 / 2$ teet, Mr. Drake aw the upper 15 feet only.
The coal "is wonderfuliy bright and glossly throughout. It breaks with a conchoidal fraiture, and is so free from dust that it can often be handled without soting the hands."
The area mapped by Mr. Drake, about 150 -quare miles,contains about 3,000,000,the average thinchomess of the bed and be the average thichness of the bed and 1.5 the average specific gravity. And "it must be remembered that this area is only a little of the takged edge of the great coal fields of shan si. * * Richtolen es timated that the anthracite coal alone of Shan-si amounts to $630,000,000,000$ tons, and that the coal erea of Shan-si is greater than that of Pennsylvania.

The Tse Chou coal is all anthracite. hard enough to support any weight in the blast furnace, uniformly low in sulphur, and comparatively low in ash. The limitations to Chinese engineeting abilty are trikingly apparent in the methods of Tse Chou. The coal is dug, hoisted and ransported without explosive or powder applications. Mining is done with pick and gad; the coal is raised by a man power windlass, which in the larger mines may have a circumference of five feet; a crank at each end, with a long arm, allows four or five men to work atturning it.
tunnels are run through the coal bed, and at intervals large quantities of coal are taken out, leaving room about forty to fifty feet in diameter. Very little coal is taken out through inclines, and none hrough tunnels, though in some cases a horizontal tunnel as long as the vertical haft would cut the coal.
"The output is about 50,000 tons per annum from the Tse Chou area, and it is carried to its market, locally or on the plains 20 miles away, in little carts drawn by oxen, or, for more largely, by pack inimals-mules, donkeys and men. The trails are from 12 feet to 14 teet wide, and paved with stone. By ages of use these stones have been worn until their tops are smooth and spiral shape. Over these rough and steep trails there is during fair weather an almost continuous line of pack animals passing to and fro, and most of Eugheeting Magazine

Rocky Mountain Scenery By Day Light. Day light stop over at Niagara Falls. Through first-class tourist sleeper from Padific Coast weekly for Chicago, Boston, New York and other eastern points via Rio Grande Western (Great Salt lake Route), Denver \& Rio Grande, C. R. I. \& P. and Illinois Central to Chicago, connecting in the Union Depot with Michigan Central's similar car for points east.
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