

## The Hardscrabble Mine

For the information of the investing public we present the report and recommendations of Mr. William Kemp, who is an engineer of prominence, well-known to many men throughout the United States. The reputation of this man and the standing of those who recommend him are such as to leave no doubt as to his qualifications as an expert or his integrity as a mining engineer. Mr. Kemp lives at Tuscon, Arizona, and we will be glad to have any one who is interested write him about this property.

This mining property is situated in the Magdalena Mining Distriet, Socorro county, New Mexico, two miles from the town of Magdalena, which is the nearest railroad station of the Santa Fe Railroad.
The altitude of the mine is 7 ,500 feet above sea level. It is reached by good wagon road and an incline gravity tramway about twelve hundred feet in length.

## DESCRIPTION OF THE

## PROPERTY

This group of mining claims embraces an are. of one hundred acres of lode claim locations, consisting of five full locations named as follows:
The Hardscrabble, Margeret, Belle, A. R. Lee and the A. R. Lee Extension. The Hardscrabble and the Belle are patented.
The improvements belonging to the property are an incline gravity tramway about 1,200 feet long, ore bins, steel ore cars, ore shoots and three main tunnels.

The adjacent mines are the Nitt, Graphic and the Kelly mines, belonging to the Tri-Bulmines, belonging to the Tri-Bul-
lion Mining Company. The lion Mining Company. The pany and the Empire Zinc Company are in the same mineral formation and the mines of the district have produced about eighteen millions of dollars worth of metals in the shape of zinc ore, lead silver ore, and copper sulphide ore. All these classes of ore have been and are being produced in the Hardscrabble mine at the present time, and the mine has a record of having produced $\$ 500,000.00$ worth of shipping ore.

## DEVELOPMENT WORK

This mine is situated on the west side of a steep mountain, an ideal location for the cheap production of ore thru tunnels. The ore bodies occur in a limestone formation surrounded by granite and porphyry and quartzite. The limestone has a general strike of northeast and southwest, and a dip of about 60 degrees to the southeast from the horizonal. A large instrusive dyke has cut the granite and ore formation and faulted the southwest copper sulphide ore bodies after they were formed. This is plainly shown in the workings of No. 2 level, and I believe it will be necessary to
crosscut southeast and run some drifts southwest to get the large copper sulphide ore body which belongs to the large outcrop of gossan showing on the surface. The ore is formed in deposits in the limestone and varies from 20 to 100 feet in width except in No. 2 workings where the copper sulphide body occurs between the granite and rhyolite.
The length of the limestone outcrop on the Hardscrabble is about 1,250 feet in length and several hundred feet wide. About eighteen hundred feet of work have been done on the three levels in this limestone and only about 450 feet of the entire length have 450 feet of the entire length have
been explored and there is good been explored and there is good
reason to believe that further exreason to believe that further ex-
ploration of the limestone to the ploration of the limestone to the
northeast would open up valuable ore bodies of lead and silver and zine. In the upper workings the ore was all oxidized material and was composed of lead carbonate ore carrying silver values and high grade carbonate of zinc and large bodies of gossan carrying large bodies of gossan carrying
some carbonate of copper and silsome carbonate of copper and sil-
ver values. These gossan or limestone bodies are in some places one hundred feet wide and several hundred feet long and at one time were copper sulphide ore bodies which have been oxidized and leached of the copper contents. In the second level the most valuable ore is the copper most valuable ore is the copper
sulphide which shows twenty feet sulphide which shows twenty feet
and varies from 5 per cent copper up to 16 per cent copper and from 8 ounces silver up to 24 ounces silver per ton.

No. 1 level, which is the northeast part of the workings, about 750 feet of drifting and stoping have been done and all the lead carbonate and zine carbonate ore carbonate and zinc carbonate ore
stoped out, but on the bottom of stoped out, but on the bottom of
No. 1 stope there is a large body of lead zinc sulphide ore varying from 15 to 20 feet wide and about 100 feet long as far as developed, which assays lead 15 per cent, zinc 20 per cent and 10 ounces silver per ton. This ore has not silver per developed to any extent but been developed to any extent but Ibelieve it will make a arge ore
body and continue down to a great depth.

No. 3 level is 375 feet in length and is 127 feet below No. 2 level The first 250 feet of this level passed thru a hard granite formation cut by rhyolite about 200
feet wide showing a little copper sulphide after which it passed thru faulted and crushed ground and showing some calcite streaks carrying small quantities of galena and chalcopyrite which indicates the existance of sulphide ore bodies at this depth.

## RECOMMENDATIONS

I would advise further development in No. 2 level. I would extend the southeast drift (powder tunnel) 100 feet further in under the southwest outcrop and then run crosscuts to the southwest run crosscuts to the sounwest fifty feet apart until the unaltered
granite is found. I think that the granite is found. I think that the
northeast drift in the same level, northeast drift in the same level,
should be pushed ahead under should be pushed ahead under No. 1 workings which means only 200 feet of drifting and run cuts southeast and northwest. In No. 3 level I would continue in a southeast direction until I got to southeast direction unaltered granite and any the unaltered granite and any
further work would have to be further work would have to be
decided on in No. 3 level from results found in No. 2.

## CONCLUSION

This Hardscrabble ground is so well mineralized and has been producing such high grade ore that I think it is well worth while to spend $\$ 50,000$ on further de velopment; in fact the showing justifies this expenditure, and I believe the outlay will be well repaid in the production of copper sulphide ore carrying good silver values.

I have not given any copies of the ore shipments from this property as it would take up too much space and these can be seen at the Bank of Magdalena, Magdalena, New Mexico.
A blue print of the Hardscrabble workings accompanies this report.
(Signed
WM. KEMP, M. E. Tueson, Arizona

## TO ANY ONE CONCERNED

Mr. William Kemp has been in our employ for the past six years as Examining Mining Engineer and has examined many properties for us.

We have found him painstaking in his examinations and conservative in his conclusions. We consider his judgement as excellent in estimating a mine or a prospect.
(Signed) CHARLES BRIGGS, President, Calumet \& Arizona Mining Company.

The sale of Magda Mining Company stock is progressing satisfactorily. We are only offering $\$ 50,000$ worth of preferred stock at present, with a bonus of one share of common stock with each share sold, this offer will not be repeated and the stock, at the present rate of sale, will be gone soon. If you are favorably impressed with our offer, investigate and act at once.

## The Magda Mining Company



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