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REPORT ON THE MINING PROPERTY
of the
DRIPPING SPRINGS COPPER COMPANY

located at

DRIPPING SPRINGS, GILA COUNTY, ARIZONA.

by

A. L. Waters, E. M.

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Dripping Springs Copper Co., (Now Dripping Springs Mines Consolidated.)
312 Story Bldg.,
Los Angeles, Calif.

Gentlemen:

I have spent two weeks studying that part of your property located at Dripping Springs Ranch, and beg to report as follows:

CONCLUSIONS:

This property warrants extensive and energetic development. Ray ore carrying good values in copper and gold is outcropping on the surface at many points and a large force of men could be employed immediately opening up ore which is now exposed at twelve entirely distinct locations. An exploration shaft on the big outcrop north of the Gulch on "Giant No. 1" Claim will open up an extensive ore body. The main tunnel going South-west on the same vein will probably be in high grade ore inside of 200 feet as there is good ore on the surface at that distance from the tunnel mouth. The big iron and copper contact deposits on the Mammoth and Adjuster Claims contain rich gold and copper ore, will start to produce ore within a week's time after starting energetic operations there. The Flush of Gold claim is down 113 feet and nearly full of water. High grade gold ore has been taken out here and I am advised on trustworthy authority that there is a very rich copper glance ore carrying gold in the bottom of the shaft. Sulphide ore will be mined at comparatively shallow depths which will greatly simplify treatment methods and reduce operating costs. The long ridiculed promoter's dream that the ore will widen and improve with depth will prove a fact on your property, because, in every instance where exposed, the veins are wider and the ore of better grade the further below the high ridges it is exposed. The best ore on any particular vein is in the deepest gulches. The main extraction and drainage tunnel which was started on the 25th of January will cut some of these veins 500 feet below their outcrops and could be continued into the Pinal Development Company and Troy ground at a depth of 800 to 1000 feet below the surface. In the near future all ore from these properties and from others in the immediate district should be treated at a reduction plant built near the mouth of your main tunnel. A railroad survey has been made from Christmas station, the present railroad terminal, within 50 feet of the mouth of this main tunnel. Active development of the district is all that is needed to have the railroad extended to your property, which is the natural site for a town and reduction works to supply the district. Surface and geological conditions are all favorable for development of a valuable producer on this property at a minimum expenditure of time and money.

LOCATION:

The property is located in Gila County, Arizona, on the West side of Dripping Springs Valley. It is about half way between the great copper mining district at Ray and the big Christmas mine now being operated by the American Smelting and Refining Company. By air line Ray is 7 miles west and Christmas is 9 miles east. Christmas is the present railroad terminal and the extensive smelting plant of the American Smelting and Refining Company at Hayden, is about ten miles from Christmas on the same rail line. This smelter was built to treat the concentrates from the Ray Mine but is treating all other ores produced in the district and according marked consideration to

all of the smaller producers within its sphere of influence. The entire district from Ray to Christmas is extensively mineralized and has been a producer of very rich gold and copper ores for many years past. Starting at the west and glancing eastward we have the Ray, Ray Hercules, Troy, Rattler, Pinal Development, Dripping Springs Copper, Frenchmans, Hayward, Cowboy, Los Soldier, London and Arizona, Christmas, Capital alone with careful and honest management is all that is needed to make this district one of the most profitable in this section of Arizona.

NATURAL RESOURCES:

A good county road connects your camp with the Arizona Eastern Railroad terminal at Christmas. Word has reached here to-day that the Government has given the Company permission to build its railroad on to San Carlos through the Gila River Box Canyon. This would bring the railroad two miles nearer and eliminate every up grade from your mines to the railroad. A survey has been made by the Railroad connecting your camp with their Gila River Line at Christmas. Development of the district should bring the railroad in immediately as there are no construction problems to meet.

The elevation of 3000 feet above sea level insures a splendid climate which results in cool nights in summer and no serious freezes in winter.

Your Columbia Group of Claims contain and control four fine springs which break out of the solid rock at various points at an horizon about 200 feet above the mouth of the main tunnel.

These springs furnish ample water for all domestic and operating purposes and might even furnish power enough to light the camp. It is expected that the main tunnel will develop ample water for milling needs. The Pinal Development Company's Tunnel 800 feet higher up is discharging a heavy flow of water.

There is plenty of mesquite and other wood suitable for domestic use. There is pine timber on the Pinal Mountains ten miles north but heavy mine and construction timbers would be brought by rail from the Pacific Port of San Pedro.

AREA:

In the absence of a careful survey which is to be made at once, it is difficult to state the exact acre of your property. Some locations partly cover earlier locations of other groups and even claims in the same group. The FLUSH OF GOLD Group is located four full claims and ~~two~~ half claims, but slight location errors will reduce this to about four full claims or eighty acres. In the COLUMBIA GROUP there are eleven and three quarter claims or two hundred thirty five acres. The Copper Chief Group which is to be examined and is held by option contains six locations, part of which are fractions and should net about five full claims or 100 acres. So that the total area controlled at this date is close to 415 acres of highly mineralized ground. These properties have clear titles and are all held by legal location and are recorded at the County seat at Globe.

LABOR:

Nearness to the railroad, to the great mining center at Ray, Globe and Miami as well as the beauty and healthfulness of the camp insures an ample supply of the best sort of labor at all times and under the most favorable conditions.

GEOLOGY:

The conditions in all those groups is practically the same. The ore occurs both in fissure veins and along contacts. These fissures have a general strike of South 60° West and a dip of 60° to 80° to the Southeast. There are a few exceptions to this rule. This condition prevails over a district inspected by me some 5 miles long and 2 miles wide from North to South and

probably much further. It appears that the limestones and quartzites which are both ancient sediments laid down in water, were invaded by an intrusion of fluid or plastic diabase which raised them, floated them as it were, on its vast surface. As this cooled it contracted and cracked and the hot solutions and gases were permitted to escape through these fissures from the yet hot areas below. These solutions as they came up lost heat and pressure and deposited their mineral contents along the side of the fissures and, by chemical reactions, when they met the limestones. In this way we have the ore filled fissures in the diabase which will be your most lasting and important ore supply. You also have the contact deposits near the fissures but lying between the bottom of the limestones and the top of the diabase flow and in any open places in the limestones which gave entrance to the solutions. These limestone contacts are exemplified in the important deposits exposed on the North face of the mountain on GIANT No. 1 claim about 200 feet above the Gulch and also in an outcrop of gold copper bearing iron some 12 feet thick and 300 feet long on the MAMMOTH Claim.

The fissures cut through all the formations and show copper ore at all horizons through which they pass regardless of the kind of rocks. There is every evidence that they will widen and improve in value for a considerable distance below the level of the gulch and that ore of value can be followed to great depth. In the Globe district particularly at the Old Dominion Mines, Arizona Commercial and Iron Cap, similar fissures in diabase were sometimes only insignificant discolorations at the surface while at 1200 to 1800 feet some of them have widened to 6 and even 20 and more feet of high grade ore.

A series of granitic (Birdseye) porphyry dykes have cut through the country from East to West practically parallel with the fissure veins. These dykes are from 2 to 100 feet wide and may be traced for miles. Some mineralization is exposed in places at their contact with both the diabase and the limestone but there has not been done sufficient exploration along these contacts to demonstrate their actual economic importance.

DEVELOPMENT:

Practically no development of value was done by the former owners. Their work consisted of shallow pits at the most convenient points for doing the annual assessment work. Every pit that I have visited on the property was on some sort of a vein and showed some ore. No ore had been blocked out. On the Flush of Gold, an inclined shaft is down 113 feet. Very rich ore is said to have been found at the very surface but the shaft is now nearly full of water which must be removed before the actual mineral conditions at that depth can be determined.

The sketch map which I hand you herewith is based upon data obtained with hand instruments only - tape line, pocket transit and aneroid. It will be found to be correct within reasonable limits. It may be safely used as a basis upon which to plan and commence the development of the property and will serve every purpose until correct surveys can be made and a more perfect map prepared.

ASSAYS:

Where a property of great promise like this has numerous shallow pits on exposures of ore, the Engineer may secure almost any sort of value in his samples. Systematic sampling is practically impossible and would mean very little if it were done. I therefore took only such samples as represented shipping ore piled on the dumps where the particular veins had been opened up or on vein exposures which might be suspected of carrying gold. Reference to the sketch map, it is hoped, will make the locations where samples were taken, much clearer. The numbers on the map show where the samples were taken.

No. 1 - Clean ore on dump of open cut on cross vein about 900 feet Northeast of main tunnel mouth, assayed gold 80¢ per ton, silver 7/10 ounces per ton and copper 8%.

No. 2 - Shipping ore on dump of old pit on main (c) vein about 550 feet easterly from the main tunnel. This is the point where it is recommended that a shaft should be started at once as the vein between this point and the tunnel is 8 feet wide in places. The sample contained gold 20¢ per ton, silver 4/10 ounces, copper 27%.

No. 3 - Average sample of vein (c) 4 feet wide directly over main tunnel where first ore is expected to be found in the tunnel. The ore in this shallow cut ~~shows~~ shows oxides, carbonates and sulphides of copper. The sample contained similar gold and silver values to No. 1 and 4.9% copper.

No. 4 & 5 - were taken out of a bog irony outcrop on the west side of the mountain where it may be possible that the "Mammoth" contact deposit passed through the mountain. These two samples gave only traces in gold, silver and copper.

No. 6 - One thousand pounds of sorted ore piled on the dump of the open cut at the north end of the "Mammoth" contact deposit. The sample contained per ton of ore \$1.20 in gold, 1.4 ounces silver and 14.4 copper.

No. 7 - was taken from a small pile of irony ore supposed to have been sorted for treatment from the old caved open cut at the south end of the "Mammoth" deposit. This sample contained per ton \$75.20 in gold, and 0.8 ounces in silver, no copper. The mineralization at this point is strong and well marked and must be carefully exposed and sampled at many points to determine just where these high values are located in the deposit.

No. 8 - is a sample of about 200 lbs. of ore piled on the dumps of a shallow shaft, about 250 feet from the last sample and on an entirely different vein. This sample contained per ton of ore gold 40¢, silver 0.8 ounces, copper 13.23. The vein is strong and invites exploration.

No. 9 - was an average of a quartz vein outcropping 6 to 7 feet wide in a gulch at the extreme southern side of the property. It was thought it might lead to gold or copper and that any values contained at the outcrop which had not been explored would be encouraging. The results were per ton gold 60¢, silver 0.2 ounces, copper a trace only.

No. 10 - ore piled at a shallow shaft sunk 20 feet in an irony vein 2 feet wide and well down the side of the mountain at the south end of the property. The sample contained \$12.20 in gold and 0.7 ounces silver per ton.

No. 11 - was a sample knocked off of the outcrop of a big vein in the diabase 300 feet directly below the "Mammoth" deposit. The vein is 4 to 6 feet wide and no work appears to have been done on it. The slight values contained would encourage the belief that exploration by tunnelling would open up good ore. The sample contained \$1.40 in gold and 0.3 ounces silver per ton.

No. 12 - was a grab sample taken generally from a pile of about 10 tons of ore on the dump of the old open cut working at the North end of the mountain on vein (b). The sample contained per ton 80¢ in gold, 1.2 ounces silver and 12% copper.

Besides the above samples taken by the writer, evidence secured by trustworthy acquaintances is always of additional value as a check. Mr. Fred Roessler took a picked sample of suspected rich ore from the Mammoth open cuts. This sample assayed in Los Angeles contained \$193.00 per ton in gold.

In May 1914, Mr. F. J. Carney made a report on the Columbia Group and took five general samples which averaged for the five, gold 55¢, silver 1.56 ounces, copper 7%.

The drifts on the 50 foot level of the Flush of Gold shaft were sampled before they filled with water, by an eminent engineer. These drifts extend 60 feet on each side of the shaft and a cut was made from one side to the other every five

feet along the drift. The average of all these samples for a width of four feet is stated to have been \$6.40 gold per ton. One small area in the west drift gave 6% copper and rich copper ore is said to have been found in the bottom of the shaft. Samples taken by Mr. Merritt at the cut at the west end of the "Happy Thought" claim gave 9% copper for a width of 18 inches of vein matter.

RECOMMENDATIONS:

If surface ores of a commercial grade can be opened up, they should be attacked at once, but the work of greatest importance is to open up and block out your ore bodies in rapid and systematic manner. The proposed work is of importance in the following order and locations:

1. Drive the main tunnel along (c) vein with all possible speed.
2. Unwater the FLUSH OF GOLD shaft and sink it to a depth of 300 feet and there drift on the vein 200 feet each way, east and west.
3. Sink by hand on the "c" vein at the big outcrop about 400 feet easterly from the mouth of the main tunnel. If good ore is developed, as I confidently expect, a vertical double compartment shaft should be located to cut this vein on its dip at a depth of 300 feet, with cross cuts every 50 feet and levels every 100 feet. I expect that energetic development of the vein at this point will be indicated by this preliminary work.
4. Sinking the air shaft to connect with the main tunnel and start the main cross cut nearly due south to cut all the veins exposed on the east face of the mountain.
5. Open cuts all along the face of the "mammoth" contact deposit so as to thoroughly expose the formation in order to sample it and determine the future work at this highly important point.
6. A tunnel on vein "b" at north face of the mountain 100 feet above and nearly at right angles to the main tunnel. This tunnel would follow the lime-diabase contact.
7. A prospect tunnel on the big vein well below the Mammoth contact deposits.
8. A tunnel as low down as possible on vein "h" at the extreme South end of the property.

I trust that the foregoing statement of facts may give you the information that you require regarding your property at Dripping Springs and that the recommendations submitted may help you materially in your successful development of this property.

I beg to remain, dear Sirs,

Yours very truly,

(A. L. Waters, B.S. E. M.)

February 1/17
146 S. Van Ness Ave.,
Los Angeles, California.

Phoenix, Arizona, Oct. 20, 1920.

Michigan Securities Commission,
Lansing, Michigan.

Gentlemen:

At the request of C. H. Gowman, General Manager of the Dripping Springs Mines Corporation, I have made an examination of the property of that company located at Dripping Springs, Arizona, for the purpose of presenting to you the present status of that property as an investment security. The examination made was the result of my observations made on numerous visits to the property since last March, the latest visit being within the past week for the purpose of bringing my data up to date.

During the past year, i.e. since the starting of operations under the present management in the Fall of 1919, many things have been accomplished, much work done, and the property has changed from the status of a prospect to the assurance of a mine.

To summarize the work done in the one year period.

2730 feet of development work has been done, not random work, but directed at one purpose, the development of ore.

The geology of the section has been definitely determined, the source and location of prospective ore bodies, etc. so that the work now becomes definitely outlined.

The proving of the ore bodies to be on the diabase-limestone contact has shown adjoining land to be valuable as having the same contact and five additional claims have been added covering that ground.

A complete community has been constructed, all necessary buildings and equipment has been added to make all the work as economical and as expeditious as possible.

One ore body has been uncovered for a length of 180 feet with both faces in ore, a depth of 212 feet with the bottom still in ore and a width of better than 50 feet determined.

Five similar contacts have been uncovered which have not as yet been developed, and which show evidence of opening as large and as good as the one that has been worked.

Sufficient ore has been shipped to show that the average tenor of the ore from the body already opened will run about 4% copper.

As editor of the Arizona Mining Journal, it has been my pleasure to have watched this property closely, as it has been one of the most progressive and promising developments in the southwest during the past year and I have been impressed with their frankness and willingness to give out information, the business-like and miner-like fashion in which the work has been done and I consider it one of the most legitimate propositions in the state today. As differ-

ing from many of the other mines in the non-producing state, they do not hesitate about seeking expert advice when such advice is deemed necessary. The result is that they do not make the mistake common to many properties and do not dissipate the stockholders money unnecessarily.

In making a report on the property of the Dripping Springs Mines Corporation it is not necessary to go into detail on some parts as they have been covered elsewhere. The general geology of the district has been covered by the United States Geological Survey and published as Professional Paper No. 115, the Copper Deposits of Ray and Miami, by Frederick L. Ransome. The surface geology of the individual group of claims and the surface work has been covered in a report by Albert L. Waters, mining engineer, who I have the pleasure to know and in whom I have every confidence.

The report of the first striking of ore was recorded by the writer in the March issue of the Arizona Mining Journal and the report of striking the second contact in the August issue of the Journal, both of these reports being from personal observation.

A report was also made on the property by a Mr. Collins in 1919 and all that seems necessary at this time is to record the work that has been done since that report was made. At the time that this last report was made, no ore had been struck except in surface workings and the recommendation of Mr. Collins that a cross-cut tunnel be driven, was being followed.

Geology of the Ore Deposits.

In order that the importance of the tunnel progress might be recognized on its description later in this report it is necessary that the general geology of the ore deposits as determined by the work be given. The ore has been proven to lie along the limestone-diabase contact. The diabase is an intrusion into the lime and is oval in form, being capped and virtually surrounded by the limestone. Evidence also shows that the lime also comes under the diabase except at the place where the diabase entered the limestone mass. Fault fissure veins, which show on the surface in many places cut both the limestone and the diabase, providing watercourses for the passage of mineral bearing solution. The easier solubility of the limestone and the comparatively dense diabase has caused enlargement and enrichment of the limestone at the contact and the dam caused by the diabase impeded the circulating waters so that they dropped their burden at or near the contact.

The veins may be found in both the diabase and in the lime but larger in the latter with very considerable swelling in width at the contact. All veins go through both the lime and the diabase and carrying considerable water. Thus the problems of finding ore becomes the finding of a water bearing vein in either the limestone or the diabase and following it to the contact for the enriched deposit.

These veins carry considerable value even when not enriched but they are not of sufficient size to be worked profitable except at the contacts. More veins were opened in the crosscut tunnel than were exposed on the surface, due probably to the covering of the outcrop by detritus.

Description of Progress of Work in Crosscut Tunnel.

At the time of starting the crosscut tunnel as shown on the

accompanying maps, it was entirely in diabase, for the first 20 feet it was all diabase. At 20 feet the lime was encountered and, while it showed a little mineralization, it was not a water course to the surface and it was improbable that this would develop into an ore body although it is worthy of prospecting at a later date.

After going 200 feet further in the lime, the first real contact was uncovered, this contact being 25 feet in width, running lots of water and was a highly shattered and broken up zone mineralized and leached material. Its closeness to the surface was responsible for the fact that it was leached almost free from copper but this contact at a greater depth will undoubtedly be mineral bearing. At the time this was hit the geology of the ore deposits was not clearly defined and the possibilities of this leached zone were not recognized. For convenience of naming this has been called No. 1.

At a distance of 139 feet from this contact and after having passed through diabase all the way, No. 2 contact was uncovered and this was the first real strike of ore. This strike was described in full in the March issue of the Arizona Mining Journal. This contact has now been opened up for a length of 180 feet, a depth of 212 feet and a width of better than 50 feet. The width that showed in the crosscut being 46 feet, the width 18 feet above this showing 52 feet. This contact consisted of highly leached and porous limonite, hematite, malachite and azurite and was largely a replaced and altered lime.

A heavy flow of water was encountered which interrupted the work for several days. This ore is about 500 feet below the surface and was still in the leached and oxidized zone. This circumstance was rather remarkable and extremely promising for a large enriched zone directly beneath and a considerable zone of sulphides below that. The sulphides began to appear in the more dense parts of the deposit at this depth.

The average value of the first six feet of this 46 feet width ran 6.8% copper while a sample taken all the way across the vein went 4.2% copper. This last assay has been checked by shipments for five carloads of unsorted ore taken out in the course of development of this deposit has shown an average of a little better than 4% copper. It is perfectly possible to ship nine or ten percent ore out of this body by a little sorting but the work so far has only been with a view of developing and determining the size, extent and value of the whole body.

The limits of this deposit are not yet reached and, in fact, are far away from the present workings. The development work is still going on both to determine length and depth and even now the block shows about 170,000 tons of ore. Assays can be taken that will show extremely high values but the averages are what will make the shipments later on. X

Cutting out stopes have been started and the deposit is now about ready for ore extraction. A shaft is being sunk which is down 45 feet, in order to tap this body at a lower depth.

When this body was reached it became necessary to provide ventilation so that work might progress more expeditiously and with more comfort to the employees. A raise was put up in the ore and connected with a 474 foot tunnel driven 212 feet above the present crosscut level. This was more economical than the driving of the raise straight through to the surface.

After providing for air and developing along the strike

of the contact for a distance of about 180 feet, the work on the main crosscut was taken up again and No. 3 ledge was encountered 165 feet beyond. This ledge was all in diabase with the same on both walls. The vein shows a width of about 10 inches and ran 4.5% copper and 3.9 ounces in silver. This was not the contact, of course and drift has been started to drive to the contact.

Two hundred feet beyond this is No. 4 vein, all in diabase, showing about the same width as the vein on No. 3 with a little higher value. No work has yet been done to follow this vein to the lime.

No. 5 contact was encountered 177 feet further into the hill and, here again, the vein showed entirely in diabase. It did not show as a sheared zone showing rather heavily in sulphides but it was not characteristic of the contact already exposed. The drift was driven further to the east and the contact was soon encountered.

This contact was hit at a distance of about 200 feet to the east and showed up similar to the contact on No. 2 except for the presence of some native copper and red oxide of copper. Sufficient work has not yet been done to determine the extent and value of this contact but the work on No. 2 east has turned so that it is heading directly for the drift on No. 5 east. It is probable that this is a continuation of the contact previously encountered and, if so, indicates that the continuity of the mineralization over the whole of the contact zone rather than merely enrichment near the vein.

No. 6 contact was encountered 96 feet beyond in the main crosscut and the drift was run to the east. The driving was done on a small vein which showed 14% copper assay and showed some peacock copper. This soon opened up into the contact zone but, here again, sufficient work has not yet been done to show the extent or value.

Six definite contacts have been encountered in the length of the main crosscut, only one has been opened up to any extent and work is being done on that ore zone as well as on Nos. 3, 5 and 6 to the east on 2, 3 and 5 and to the west on No. 6. Besides this work the shaft is being sunk with all possible speed.

While good ore has been found on the level of the main crosscut, ore that will pay to ship, the real value of the mine are to come when the enriched zone and the sulphide zone are encountered below. The present work is exploratory proving the presence of ore besides. It was to be expected that this tunnel would have brought the enriched zone and the fact that it has not, the ore still being in the leached state indicates even more for the value of the enriched area below. The depth of this ore is from 450 to 500 feet below the surface and the copper that has evidently been removed from all of that depth promises much for the future of the mine.

Several hundred feet away from the main working is, what is known as C shaft. This shaft is down 180 feet and is on a true fissure contact vein. At 150 feet there is a drift to the east for 125 feet and to the west for 65 feet. While this is on a lime-diabase contact it is not a replacement deposit as in the other cases but rather a filled fissure. Shipments have been made from this place running 4.6% copper, 3.9 ounces silver and \$3.00 in gold. The ore is rather lumpy but these workings are well worthy of further development as they are nowhere more than 100 feet below the creek level.

Development Work Done.

In the past year the development work has been as follows:

C. Shaft	180 Feet
East Drift on C Shaft	125 "
West Drift on C Shaft	65 "
Extension of Crosscut to North	95 "
Main crosscut to No. 2	430 "
Main crosscut No.2 to No.5	542 "
Main crosscut No.5 to No.6	96 "
Main crosscut No.6 to Breast	15 "
West drift on No. 2	95 "
East drift on No. 2	85 "
West drift on No. 5	90 "
East on No. 6	65 "
Upper Ventilating Tunnel	474 "
Raise to Upper Tunnel	212 "
Cutting Out Stopes	125 "

A station for the shaft has been cut 12 feet wide, 40 feet long and 22 feet high and the shaft is now down about 45 feet. The necessary headframe and dumping devices have been constructed. The shaft is 4 x 7 $\frac{1}{2}$ feet in the clear, two compartment.

Equipment

The mechanical equipment of the property consists of:

14 x 14 Chicago Pneumatic hot head compressor, 50 H.P. 300 cubic feet capacity capable of handling five air drills.

10 x 10 Sullivan belt driven compressor, 150 cubic feet capacity being run by a 32 H.P. Fairbanks Morse gas engine.

The two units for a compressed air permit of continuous operation and the lessening of capacity when less air is needed.

An electric light plant, 50 light capacity, furnishes the light for the surface workings and the main crosscut to the shaft. A Novo engine runs the light plant and serves as a starting engine for the big compressor.

There are several smaller engines for pumps and ventilation.

The shaft is equipped with a 16 H.P. Ottawa air hoist, Waugh and Sullivan air drills are used and they now have 2 stopers, 3 jack-hammers and two large machines for drifting.

A 16 H. P. Western hoist is on the C shaft.

For transportation the company uses a 3-1/2 ton Mack truck and a 1 ton Chevrolet.

At both Christmas, the shipping station, and at the mine they have loading bins for ore and oil storage bins permitting of the purchase of oil in carload shipments.

Houses

The buildings consist of 8 houses, boarding house, school house, assay office, change house, power house, blacksmith shop and a garage.

Transportation

The nearest shipping point is Christmas, a distance of 10 miles. Winkelman is 20 miles, Kelvin is 12 miles and Globe is 28 miles. Freight from the mine to Christmas is \$3.50 per ton and the freight from Christmas to the Hayden smelter of the American Smelting and Refining Company is 30 cents per ton. The old state highway from Globe to Kelvin goes through the property and the new highway from Globe to Winkelman is about 4 miles from the camp.

Other Property.

The Dripping Springs Mines Corporation also owns the Pearl Mine which I had the pleasure of examining and recommending its purchase several years ago for other parties. This property is near Mammoth, Arizona. It is a fissure vein in granite and the vein varies in width up to 3 feet wide. This is crossed by numerous other veins and the high grade ore is found at the vein intersection only. It is opened by a shaft 160 feet deep but practically all of the work has been done above the 60 foot level and a number of cars of ore have been shipped from this level that netted \$100. per ton.

There is about 700 feet of work done on the 60 foot level and about 90 feet on the 160 foot level. This property is equipped with a 12 H.P. West Coast Hoist and a pumping plant.

Conclusions and Recommendations.

The progress and findings of the Dripping Springs Mines Corporation have been rather spectacular during the past year and have attracted considerable attention around the state. The property and the management are well thought of both as to the prospective value of their property and their method of doing business. That they have ore, there is no question and the question now becomes the matter of the size of the mine. They are particularly fortunate in that their geology has been so completely exposed as to eliminate useless development.

Depth is what they need to determine whether it is a large mine that will warrant its own railroad and smelter or mill, as the case may be or whether it will be more economical to ship to other points. While they have ore that can be shipped, it cannot make a large profit and it will be profitable later on to handle with other material. The ore is an ideal smelting proposition as it contains heavy iron and lime.

I would not recommend the shipping of ore at this time but I would concentrate all energies on to gaining depth and explore the 6 contacts at greater depth. I personally consider it one of the most legitimate developing propositions that it has ever been my good fortune to see. They are economical and thrifty, have all the ear marks of a large mine and have practically enough exposed to insure returns to the stockholders.

Respectfully submitted,

Charles F. Willis

Consulting Mining Engineer.

PINAL DEVEL. CO.

COPPER CHIEF GROUP

COLUMBIA

GROUP

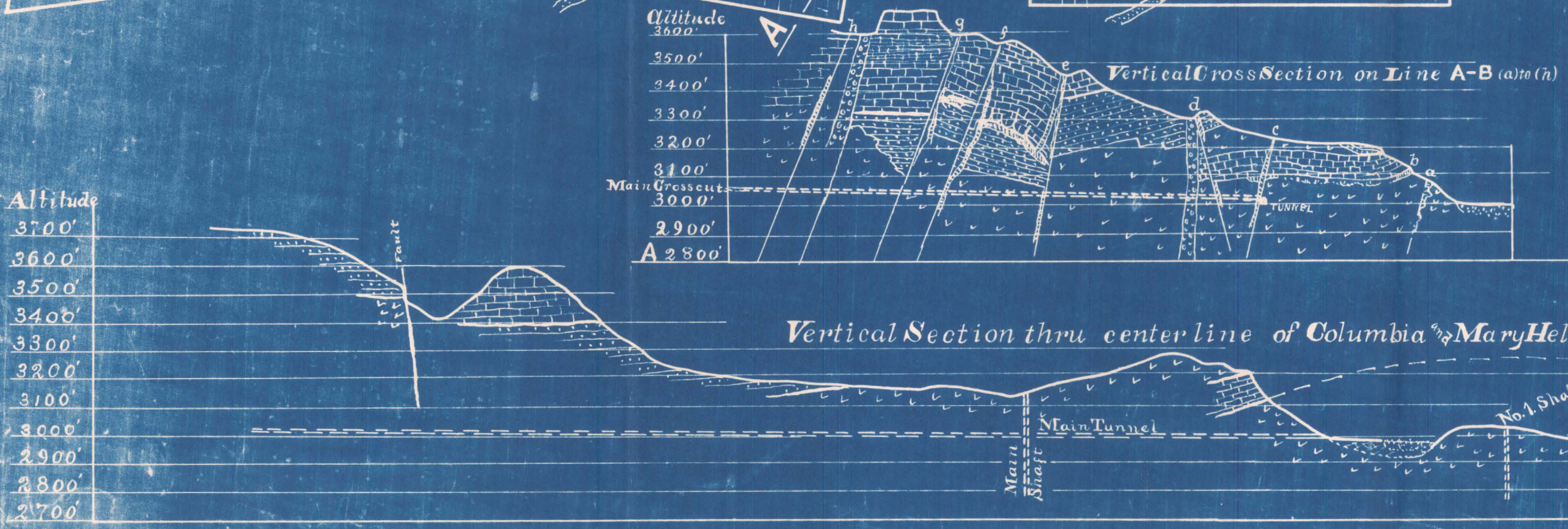
FLUSH OF GOLD GROUP

SKETCH MAP OF THE PROPERTY OF THE DRIPPING SPRINGS COPPER CO. SEVEN MILES EAST OF RAY PINAL CO. ARIZONA.

Scale 1 in = 400 ft. Feb 1 1917. A. Waters, E.M.

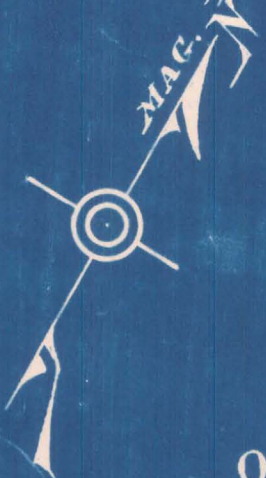
Shot when 14 cars
arriving #1250
have been shipped

Shaft 100'
Drift 100'
Average 12' wide
8 - Gold



SIGNS

Diabase	Granite	Quartzite	Limestone	Veins	Gulches



Globe 24 miles

BULL PUP EXTENSION

NEGLECTED

FLUSH OF GOLD

HAPPY THOUGHT

ADJUSTER

COLUMBIA 2

GIANT 3

MARY HELEN 2.

LAST CHANCE

GIANT NO. 1.

GIANT 2

MARY HELEN

COLUMBIA

Dripping Springs Wash

Proposed Main Tunnel

House

Flat

Flat

NEGLECTED

FLUSH OF GOLD

Rocky

Flat

BULL PUP

AGUA FRIA MAMMOTH

ADJUSTER 2.

CONTOUR

Proposed Main Crosscut

Proposed Main Tunnel

Proposed Main Crosscut

Proposed Main Tunnel

Proposed Main Crosscut

Proposed Main Tunnel

Proposed Main Crosscut

Proposed Main Tunnel

Proposed Main Crosscut

Proposed Main Tunnel

Proposed Main Crosscut

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