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GEORGE M. COLVOCORESSES
MINING AND METALLURGICAL ENGINEER
1108 LUHRS TOWER
PHOENIX, ARIZONA

Office Copy

July 2nd, 1936

Mr. H. W. Gould
c/o H. W. Gould & Co.
Mills Building
San Francisco, California

RE: UNIDA AND GOLDEN GATE MINING CLAIMS

and
Dear Sir:

Following your instructions I have made a preliminary examination of the mining properties known as the Unida and Golden Gate and beg to submit the following report. My guide was Nick Oberan of Wickenburg and the statements which are quoted below were made by him or were contained in a few brief reports which he showed me, but I was handicapped by the fact that none of the assay maps, complete reports or other essential data was available for actual inspection.

PROPERTY AND LOCATION

I understand that Mr. Brunton has a survey map showing the correct relative locations of all the claims. No copy of this was locally available but the attached blue print of a sketch covers the situation as the same was described to me by Nick Oberan and partially checked while going over the surface and from the Government township map showing the patented claims. Another print represents roughly the workings on the Blue Mally and Rocky Mountain Veins.

The Unida Group with a total area of about 208 acres comprises the following patented claims:

Sitting Bull
Rocky Mountain
Unida
Blco Nelly
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and the unpatented claim, Ohio.

The Golden Gate group comprises eight unpatented claims as follows:

Albert #1 to #4 incl.
Golden Gate #1 to #4 incl.

There is also the Albert #5, now known as the Franklin D. which is at present under lease and option to other parties who are said to be in default on their contract so that this would probably be included in any deal made by Oberan. Area of this group including Franklin D. is about 180 acres.

The Unida group, according to a local Attorney, is owned by some eastern people who have given full authority to Nick Oberan. The Golden Gate Claims are the property of Oberan and his wife. It is possible that there are some attachments or liens held by local people and all the titles should be examined before any development is undertaken.

The property is located in the Black Rock Mining District near the southern border of Yavapai County about ten miles northeast of Wickenburg which is on the Prescott-Phoenix branch of the Santa Fe Railway. The elevation is from 3000' to 3800', surface is rugged with sparse semi-desert vegetation, the climate is hot and dry. Domestic water is obtained locally from springs and wells in or near the King Solomon Wash, but for any large

supply it would be necessary to put in a pumping plant along the Hassayampa River and run a pipe line for a distance of one and one-fourth miles to the Unida Camp or over two miles to the Golden Gate, the lift would be about 1000 feet. An electric power line crosses the Ohio Claim at the north edge of the group.

GEOLOGY

The country rock is mainly pre-Cambrian Bradshaw granite and Yavapai schist intruded by porphyritic dykes of diorite, andesite, syenite, and rhyolite with which the veins are generally associated. The dykes and veins are pre-Tertiary and the filling in the latter is mainly quartz or silicified rock with specular hematite, presumably resulting from the oxidation of pyrite and sometimes carrying gold, also silicates, oxides and carbonates of copper. No detailed geological study of this district seems to have been made, but it is probable that the minerals were deposited from circulating solutions derived from deep seated magmas.

The commercial ore bodies are generally confined to the zone of secondary enrichment above the permanent water level which is supposed to lie some 400 to 600 feet below the lower portions of the surface. From experience with other similar ore deposits in this section I doubt if the primary ores will prove sufficiently rich to be commercial, but there is ample room for a large tonnage of ore between the surface and the water level.

HISTORY

The Unida Mine, once operated by the Arizona Gold and Copper Company, was extensively developed from about 1895 to 1913 and subsequently was involved in litigation for several years but recently a little work has been done by Oberan and leasers and a small tonnage of the better grade ore was shipped to smelters, of

which shipments only partial records are now available and show an average of about 0.35 oz. gold, less than 1 oz. silver, and 5% copper.

The Golden Gate Claims were partially developed by a man named Jones and later by Oberan or associates. From here, also, a few shipments of picked ore were made ^{at} intervals but I could obtain no record of these and no systematic development of large scale production has been attempted. On the Unida Claims there are a number of old buildings, some of which would be worth repairing. The equipment, except for some rails and cars, is quite worthless.

UNIDA ORE SHOWINGS AND WORKINGS

Across the Unida Claims and striking generally north-west--southeast are five veins of which the two principal ones, some 1200' apart, are known as the Bloo Nelly (on the northeast) and the Rocky Mountains (on the southwest). The dip varies from 45 to 60 degrees to the southwest. The Bloo Nelly vein with a width of about 6', half of which is supposed to be the pay streak, has been developed by three adit levels with connecting raises and it is said that a short distance below the portal of the lower adit a shaft was sunk some 70' in ore---this is now caved.

The adits and most of the raises were open and examined and it is evident that there is no continuous occurrence of pay ore but that the higher values are confined to somewhat irregular shoots in the vein. I was told that these workings had been thoroughly sampled on at least two occasions and that assay maps were in the possession of Mr. Brunton.

J. G. Johannes, who claimed to have sampled the vein at

5' intervals, estimated the positive ore at 35,000 tons with average value 0.81 oz. gold, 1 oz. silver and 3.9% copper. He also estimated that there were 115,000 tons of probable ore of similar grade. Victor J. Pimental states that the dump at #2 adit contains 2000 tons of ore which carries 0.827 oz. gold per ton and estimates the developed ore in the vein at from 40,000 to 50,000 tons of similar grade.

Frank Giroux, whom I know to be a reliable man, cut a number of samples at various points in the workings which showed a wide variation of values from \$1.00 to \$50.00 per ton. I could not learn that he made any estimate of tonnage or average value.

Without making a thorough sampling, which would require several days, it is obviously impossible for me to make any accurate estimate of tonnage or value, but I could see no grounds for accepting the figures of Johannes and Pimental and feel quite certain that only a very limited quantity of pay ore could be measured at present, although this would tend to increase with a better market for copper.

Although the records of shipments and some of the samples show that good gold values are found in spots yet this vein appealed to me as of doubtful value and I believe that no further investigation is warranted here at present.

On the Rocky Mountain vein development was started by a vertical shaft 365' deep and now caved, from which it is said that some \$27.00 ore (old price) was produced, but apparently this came from a small parallel vein and the shaft would have to be sunk some 80' to 100' deeper in order to cut the Rocky Mountain Vein.

Further up the hill there is an inclined shaft which follows down along the vein for a distance of 296' and is said to have been in ore all the way, while on the 200' level some 100' of drifting followed a 6' vein in which there was a pay streak $2\frac{1}{2}$ ' wide that ran close to 1 oz. in gold.

The shaft cannot be examined, but it is tapped about 80' below the collar by an adit which followed the vein and below which a little stoping was done. Here I cut a sample over a width of 28" which carried Au. 0.11 oz. and Ag. 0.3 oz., representing a value of only \$4.00, which is not encouraging. There is only a little copper oxide in this vein. The ground water in the shaft and stope stands about 10' below the adit.

It is difficult to form any opinion concerning a vein where the outcrop is oxidized and very little of the underground exposure can actually be seen. My general impression gained from the surface and the adit was rather favorable but I think that the quoted values are greatly exaggerated. If this information regarding values can be confirmed by reliable data and assay maps (said to be in Brunton's possession)/^Iwould recommend that the shaft and stope should be partially drained and sampled and if results proved satisfactory development work should be resumed at this point,--the upper adit extended further along the vein, the shaft retimbered and unwatered, and the 200' level extended in both directions, which might later be followed by further sinking both the incline and vertical shafts. It will be noted

that nearly all of this work will presumably be in ore and could be carried in at comparatively small expense after a suitable plant had been provided, but here again there is serious danger that the values will be confined to pockets and standing by itself I do not consider the showings attractive nor do I advise anything more than a careful investigation of all available data for the present.

GOLDEN GATE ORE SHOWINGS

Across the Albert and Golden Gate claims are apparently found the southern extensions of the Unida Vein system which here bends to a more southerly strike. There are also a great number of porphyry dykes cutting through the granite in a northerly-southerly direction while more or less at right angles to these there are at least two iron stained quartz ledges of substantial width. The western ledge can be traced up a ridge for over one-half mile and the surface float often shows visible specks of free gold with the iron oxide and in the honeycombs of the quartz. Here an adit was run in on the hillside nearly 100' and the ledge was out for some 50' developing what appeared to be a narrow vein from which I cut a sample 40" in width which showed values of only \$0.17 in gold and silver. I was told that from this adit there had been produced 15 tons of sorted ore which carried 5 oz. gold per ton, but a grab sample which I took from several little piles of reject ran only .05 oz. gold and a trace of silver, again failing to confirm the statement of values.

Some 1500' further to the west is found another ledge of quartz very heavily stained with iron and showing a little copper. From a short crosscut adit I cut samples over a width of

25 feet which showed only a trace of gold and silver.

Some distance further to the north along this iron quartz ledge the outcrop is very prominent for both a width and length of some 300' and a shaft (now caved) was sunk 50' besides a number of shallow pits and trenches resulting, it is said, in the production of a considerable quantity of ore with fair values in gold, silver, and copper. I was given to understand that at one time an engineer examining this showing had estimated that it contained some 120,000 tons of \$8.00 ore (at old price of gold) and although there is no basis for any such estimate, except as a possibility, I believe that there are chances of developing a large ore body. Merely as an indication of the value of this material my grab samples from the various dumps showed a trace of silver, .09 oz. gold and 4.40% copper. These samples with a value of \$11.00 per ton were the most encouraging which I obtained and call for some further investigation in this locality which appeared to be the best showing on the property.

The possibilities of proving up a large tonnage of low grade gold-copper ore on these claims are certainly attractive and appear to^{have} appealed to a number of different engineers in the past but no definite estimates regarding grade or tonnage^{of} ore could possibly be made without carrying on a substantial amount of drilling in the quartz ledges and this will involve a large outlay, for it must be done in a thorough manner in order to have any value.

Prior to reaching any definite decision in this regard I suggest that a strong effort should be made to obtain all of the data previously secured by other engineers, among whom

I might mention Beckwith, representing the Inspiration Copper Co., Ed Holderness and Cecil Smith, of the American Smelting and Refining Co., Charles Smith, H. H. Armstrong, and G. G. Schurmann. It is apparent that these people did no drilling or other underground development but some of them have trenched and sampled the surface in places and their records should be most important, although it must be borne in mind that there is always a chance for a concentration of values near the surface and especially along the veins and stringers through which circulating waters have freely penetrated and it will only be after large sections have been drilled or substantial blocks of ground have been mined and tested that a reliable estimate of average values can be made.

The mining of these wide ledges could be done very cheaply for a certain depth and a block of ground 300 feet square and 100 feet deep would contain over 700,000 tons of ore and could, I believe, be quarried and milled on a large scale at a working cost of less than \$2.00 per ton (an estimate that must be made unduly liberal because of the comparatively high cost of water), after the large initial investment had been made for proper development, mining and milling equipment and water supply. There are good mill sites along King Solomon Wash and ample room for tailing disposal.

The essential point then is to determine whether such a block or blocks of ground will contain average values to the extent of say \$4.00 or better, and unless the data previously obtained is very discouraging I believe that the present showings justify a further investigation which would include the checking of titles and surveys, careful measurements and trench sampling of surface exposures and

such underground openings as could be cleaned out without great expense. The cost of this preliminary work may be estimated at about \$2000.00 and the time involved three to four weeks. If results of this investigation were favorable, an area containing some 90,000 square feet might be checkerboard drilled and thoroughly sampled to a depth of 100' for an additional outlay of not over \$15,000.00 and the future program could then be based on positive and reliable data.

METALLURGY

Until large representative samples of average ore can be obtained and thoroughly tested any definite comment on this point would be premature, but I am quite familiar with the treatment of ores of similar character and have made some investigations of my samples from this property in a local laboratory.

It is apparent that much of the gold is closely associated with the hematite and some of it is "rusty", being coated with a film of iron-oxide so that simple amalgamation would not give satisfactory results while the copper values in silicates and oxides would be difficult to save by flotation and the presence of copper would render the cyanide method inapplicable for recovery of the gold.

Previous tests by a combination of leaching out the copper and then floating the gold are said to have yielded high recovery, but this is ^acomplicated and expensive procedure which should be avoided if possible.

On a very similar ore with which I am acquainted the best recovery was obtained by chloridising-volatilization, but this again is comparatively expensive.

It is my present opinion that some special method of conditioning the ore will be required followed by flotation with carefully selected reagents whereby probably 80% of the gold and copper can be recovered in concentrates and this recovery can later be considerably improved if the extra expense of so doing proves to be justified.

Special tests on the best method of treatment should be made concurrently with any further development of the ore body.

OUTSIDE PROPERTIES

If any extensive operations were contemplated on these two groups of claims it would be important to acquire all or a large part of the area which separates them (see attached sketch) and if it is decided to make any extended examination I advise that a quiet effort should first be made to tie up these outside claims under option. I took occasion to walk over a considerable portion of this ground and noted the more or less continuous outcrop of the veins and there is always a chance that shoots of pay ore might be found at any point along the mineralized area. I particularly noted the shaft on the Franklin D. in which I was told that a narrow but high grade vein had been proved up at a depth of 80' and also the 200' shaft (now caved) on the San Francisco, from which I know that some high grade ore was mined in the past,--apparently from an extension of the Unida Vein--which lies between the Blue Nelly and the Rocky Mountain. My sample from the rejects left on the dump ran 0.25 oz. gold and 0.2 oz. silver.

Except in the case of one or two of these claims which are involved in litigation I believe that all of this property could now be optioned on very reasonable terms which are certain to

be advanced as soon as there is any sign of activity in their vicinity.

CONCLUSION

Being entirely ignorant of the terms on which this property is offered for sale or lease I will start off by saying that both of these groups must, in my opinion, be considered merely as prospects and that they do not justify any large purchase price nor any cash payment whatever beyond a small monthly compensation to the owner while the exploration is in progress.

If a reasonable bond and lease can be secured I feel that some further investigation and expenditure is justified and this should first consist in carefully checking all of the existing data which can be obtained from any reliable source especially the assay maps and reports of engineers who have previously investigated.

The Golden Gate group--because of the possibility of developing large bodies of low grade ore is, in my judgment, the most attractive portion of the property and yet it is evident that this has never made a sufficiently strong appeal to other parties to warrant its development, and it may be that their conclusion would be confirmed by an examination of records which could be obtained from them, and if these should conclusively condemn the property there would be no need to go any further. Otherwise I anticipate that a thorough examination and sampling of the outcrops and easily accessible workings will cost approximately \$2500.00, including engineering expense, checking of titles and metallurgical tests on representative lots of ore. The information thus obtained would enable one to form a definite opinion as to the advisability of drilling one or more blocks of ground which would probably call for an additional outlay of at least \$15,000.00 before it would

serve to determine the value of a sufficient tonnage to justify the installation of a plant and mining procedure.

I therefore recommend, subject to your obtaining satisfactory terms of lease and purchase;

(a) That all of the data now in the possession of Mr. Brunton or other parties with whom you are in contact should be very carefully checked and evaluated and at the same time that as much additional data as possible should be obtained from outside sources,- particularly the results of previous sampling on the Golden Gate Claims.

(b) Subject to a favorable result from (a) I recommend that the titles and property lines should be checked and if these are in order that a careful investigation should next be made of all of the surface exposures and accessible underground openings on the Golden Gate group, especially the iron stained quartz ledge where the pits and shafts indicate that a large body of gold and copper ore may be proved to exist.

Representative samples of this ore should be tested in a well equipped metallurgical laboratory to permit the selection of the best available method of treatment and estimates of costs and recovery.

Some further work on the Rocky Mountain vein may later be in order but can best be deferred until conclusions are reached regarding the Golden Gate.

(c) If the results of (b) should prove satisfactory the development of tonnage should follow through systematically drilling the most promising area or areas.

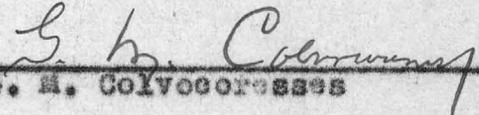
The cost of (a) is rather indefinite but should be comparatively small.

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The cost of (b) may be estimated at \$2500.00.

The cost of (c) will probably not be less than \$15,000.00 and may be increased to a much higher figure depending on the extent and success of the drilling campaign.

Yours very truly,


C. H. Colvocoresses

RE: UNIDA AND GOLDEN GATE MINING CLAIMS.

BY G. M. COLVOCORESSES.

July 2nd, 1936.

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GEOLOGY:

The country rock is mainly pre-cambrian Bradshaw granite and Yavapai Schist intruded by porphyritic dykes of diorite, andesite, syenite, and rhyolite with which the veins are generally associated. The dykes and veins are pre-Tertiary and the filling in the latter is mainly quartz or silicified rock with specular hematite, presumably resulting from the oxidation of pyrite and sometimes carrying gold, also silicates, oxides and carbonates of copper. No detailed geological study of this district seems to have been made, but it is probable that the minerals were deposited from circulating solutions derived from deep seated magmas.

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UNIDA ORE SHOWINGS AND WORKINGS:

Across the Unida Claims and striking generally north-west-southeast are five veins of which the two principal ones, some 1200' apart, are known as the Bloo Nelly (on the northeast) and the Rocky Mountains (on the southwest). The dip varies from 45 to 60 degs. to the southwest. The Bloo Nelly vein with a width of about 6', half of which is supposed to be the pay streak, has been developed by three adit levels with connecting raises and it is said that a short distance below the portal of the lower adit a shaft was sunk some 70' in ore--- this is now caved.

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that there were 115,000 tons of probable ore of similar grade. Victor J. Pimental states that the dump at #2 adit contains 2000 tons of ore which carries 0.827 oz. gold per ton and estimates the developed ore in the vein at from 40,000 to 50,000 tons of similar grade.

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Although the records of shipments and some of the samples show that good gold values are found in spots yet this vein appealed to me as of doubtful value and I believe that no further investigation is warranted here at present.

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Farther up the hill there is an inclined shaft which follows down along the vein for a distance of 296' and is said to have been in ore all the way, while on the 200' level some 100' of drifting followed a 6' vein in which there was a pay streak $2\frac{1}{2}$ ' wide that ran close to 1 oz. in gold.

The shaft cannot be examined, but it is tapped about 80 ft. below the collar by an adit which followed the vein and below which a little stoping was done. Here I cut a sample over a width of 28" which carried Au. 0.11 oz. and Ag. 0.3 oz., representing a value of only \$4.00 which is not encouraging. There is only a little copper oxide in this vein. The ground water in the shaft and stope stands about 10' below the adit.

It is difficult to form any opinion concerning a vein where the outcrop is oxidized and very little of the underground exposure can actually be seen. My general impression gained from the surface and the adit was rather favorable, but I think that the quoted values are greatly exaggerated. If this information regarding values can be confirmed by reliable data and assay maps (said to be in Brunton's possession) I would recommend that the shaft and stope should be partially drained and sampled and if results proved satisfactory development work should be resumed at this point, the upper adit extended further along the vein, the shaft retimbered and unwatered, and the 200' level extended in both directions, which might later be followed by further sinking both the incline and vertical shafts. It will be noted that nearly all of this work will presumably be in ore and could be carried on at comparatively small expense after a suitable plant had been provided, but here again there is serious danger that the values will be confined to pockets and standing by itself I do not consider the showings attractive nor do I advise anything more than a careful investigation of all available data for the present.

GOLDEN GATE ORE SHOWINGS.

Across the Albert and Golden Gate claims are apparently found the southern extensions of the Unida Vein system which here bends to a more southerly strike. There are also a great number of porphyry dykes cutting thru the granite in a northerly-southerly direction while more or less at right angles to these there are at least two iron stained quartz ledges of substantial width. The western ledge can be traced up a ridge for over one-half mile and the surface float often shows visible specks of free gold with the iron oxide and in the honeycombs of the quartz. Here an adit was run in on the hillside nearly 100' and the ledge was cut for some 30' developing what appeared to be a narrow vein, from which I took a sample 40" in width which showed values of only \$0.17 in silver and gold. I was told that from this adit there had been produced 15 tons of sorted ore which carried 3 oz. gold per ton, but a grab sample which I took from several little piles of reject ran only .05 oz. gold and a trace

of silver, again failing to confirm the statement of values.

Some 1500 feet further to the west is found another ledge of quartz very heavily stained with iron and showing a little copper. From a short crosscut adit I cut samples over a width of 25 feet which showed only a trace of gold and silver.

Some distance further to the north along this iron quartz ledge the outcrop is very prominent for both a width and length of some 300' and a shaft (now caved) was sunk 50' besides a number of shallow pits and trenches resulting, it is said, in the production of a considerable quantity of ore with fair values in gold, silver, and copper. I was given to understand that at one time an engineer examining this showing had estimated that it contained some 120,000 tons of \$8.00 ore (at old price of gold) and although there is no basis for any such estimate, except as a possibility, I believe that there are chances of developing a large ore body. Merely as an indication of the value of this material my grab samples from the various dumps showed a trace of silver, .09 oz. gold and 4.40% copper. These samples with a value of \$11.00 per ton were the most encouraging which I obtained and call for some further investigation in this locality which appeared to be the best showing on the property.

The possibilities of proving up a large tonnage of low grade gold-copper ore on these claims are certainly attractive and appear to have appealed to a number of different engineers in the past but no definite estimates regarding grade or tonnage of ore could possibly be made without carrying on a substantial amount of drilling in the quartz ledges, and this will involve a large outlay, for it must be done in a thorough manner in order to have any value.

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in places and their records should be most important, altho it must be borne in mind that there is always a chance for a concentration of values near the surface and especially along the veins and stringers thru which circulating waters have freely penetrated and it will only be after large sections have been drilled or substantial blocks of ground have been mined and tested that a reliable estimate of average ^{values} can be made.

The mining of these wide ledges could be done very cheaply for a certain depth and a block of ground 300' square and 100' deep would contain over 700,000 tons of ore and could, I believe, be quarried and milled on a large scale at a working cost of less than \$2.00 per ton (an estimate that must be made unduly liberal because of the comparatively high cost of water), after the large initial investment had been made for proper development, mining and milling equipment and water supply. There are good mill sites along King Solomon Wash and ample room for tailing disposal.

The essential point then is to determine whether such a block or blocks of ground will contain average values to the extent of say \$4.00 or better, and unless the data previously obtained is very discouraging I believe that the present showings justify a further investigation which would include the checking of titles and surveys, careful measurements and trench sampling of surface exposure and such underground openings as could be cleaned out without great expense. The cost of this preliminary work may be estimated at about \$2000.00 and the time involved three to four weeks. If results of this investigation were favorable, an area containing some 90,000 sq. ft. might be checkerboard drilled and thoroughly sampled to a depth of 100' for an additional outlay of not over \$15,000.00 and the future program could then be based on positive and reliable data.

METALLURGY: Until large representative samples of average ore can be obtained and thoroughly tested any definite comment on this point would be premature, but I am quite familiar with the treatment of ores of similar character and have made some investigations of my samples from this property in a local laboratory.

It is apparent that much of the gold is closely

associated with the hematite and some of it is "rusty" being coated with a film of iron oxide so that simple amalgamation would not give satisfactory results while the copper values in silicates and oxides would be difficult to save by flotation and the presence of copper would render the cyanide method inapplicable for recovery of gold.

Previous tests by a combination of leaching out the copper and then floating the gold are said to have yielded high recovery, but this is a complicated and expensive procedure which should be avoided if possible.

On a very similar ore with which I am acquainted the best recovery was obtained by chloridizing volatilization, but this again is comparatively expensive.

It is my present opinion that some special method of conditioning the ore will be required followed by flotation with carefully selected reagents whereby probably 80% of the gold and copper can be recovered in concentrates and this recovery can later be considerably improved if the extra expense of so doing proves to be justified.

Special tests on the best method of treatment should be made concurrently with any further development of the ore body.

OUTSIDE PROPERTIES: If any extensive operations were contemplated on these two groups of claims it would be important to acquire all or a large part of the area which separates them (see attached sketch) and if it is decided to make any extended examination I advise that a quiet effort should first be made to tie up these outside claims under option. I took occasion to walk over a considerable portion of this ground and noted the more or less continuous outcrop of the veins and there is always a chance that shoots of pay ore might be found at any point along the mineralized area. I particularly noted the shaft on the Franklin Do. in which I was told that a narrow but high grade vein had been proved up at a depth of 80' and also the 200' shaft (now caved) on the San Francisco, from which I know that some high grade ore was mined in the past---apparently from an extension of the Unida Vein---which lies between the Bloo Nelly and the

9-

Rocky Mountain. My sample from the rejects left on the dump ran 0.25 oz. gold and 0.2 oz. silver.

Except in the case of one or two of these claims which are involved in litigation I believe that all of this property could now be optioned on very reasonable terms which are certain to be advanced as soon as there is any sign of activity in their vicinity. CONCLUSION: Being entirely ignorant of the terms on which this property is offered for sale or lease I will start off by saying that both of these groups must, in my opinion, be considered merely as prospects and that they do not justify any large purchase price nor any cash payment whatever beyond a small monthly compensation to the owner while the exploration is in progress.

If a reasonable bond and lease can be secured I feel that some further investigation and expenditure is justified and this should first consist in carefully checking all of the existing data which can be obtained from any reliable source especially the assay maps and reports of engineers who have previously investigated.

The Golden Gate group---because of the possibility of developing large bodies of low grade ore is, in my judgment, the most attractive portion of the property and yet it is evident that this has never made a sufficiently strong appeal to other parties to warrant its development, and it may be that their conclusion would be confirmed by an examination of records which could be obtained from them, and if these should conclusively condemn the property there would be no need to go any further. Otherwise I anticipate that a thorough examination and sampling of the outcrops and easily accessible workings will cost approximately \$2500.00, including engineering expense, checking of titles and metallurgical tests on representative lots of ore. The information thus obtained would enable one to form a definite opinion as to the advisability of drilling one or more blocks of ground which would probably call for an additional outlay of at least \$15,000.00, before it would

10.

serve to determine the value of a sufficient tonnage to justify the installation of a plant and mining procedure.

I therefore recommend, subject to your obtaining satisfactory terms of lease and purchase:

(a) That all of the data now in the possession of Mr. Brunton or other parties with whom you are in contact should be very carefully checked and evaluated and at the same time that as much additional data as possible should be obtained from outside sources-- particularly the results of previous sampling on the Golden Gate Claims.

(b) Subject to a favorable result from (a) I recommend that the titles and property lines should be checked and if these are in order that a careful investigation should next be made of all of the surface exposures and accessible underground openings on the Golden Gate group, especially the iron stained quartz ledge where the pits and shafts indicate that a large body of gold and copper ore may be proved to exist.

Representative samples of this ore should be tested in a well equipped metallurgical laboratory to permit the selection of the best available method of treatment and estimates of costs and recovery.

Some further work on the Rocky Mountain vein may later be in order but can best be deferred until conclusions are reached regarding the Golden Gate.

(c) If the results of (b) should prove satisfactory the development of tonnage should follow thru systematically drilling the most promising area or areas.

The cost of (a) is rather indefinite but should be comparatively small. The cost of (b) may be estimated at \$2500.00. The cost of (c) will probably not be less than \$15,000 and may be increased to a much higher figure depending on the extent and success of the drilling campaign.

(signed) G. M. Colvocoresses

(1)

Legend of Reports on
Unida Gold Mine, Black Rock Leds
Yavapai Co

Owner - ? locally H. S. Oberon

Site. Located 10 mi N.W. of Wick, on Monte Cristo -
Gold Run Road, good land & hills

Elev for 3240 at lower tunnel & main shaft &
3860 at top of hill outcrop.

Country is mainly granite or granodiorite with
lenses of schist & dykes of rhyolite & andesite or
blue syenite

Claims, Sitting Bull, Rocky Mountain,
Unida, Blood Kelly, Home, Gray Eagle, Laura
Lincoln, Terina, Starlight all patented & Ohio
unpatented, area about 208 acres.

Camp buildings mostly fallen & pieces left but
w 3 building could be made serviceable & house
a ~~small~~ small crew, domestic water can be
obtained from a small spring on the claim with
pump lift of about 250' above camp site. Water
for mill should have to be taken from the ~~Harrington~~
River 1 1/4 miles distant & with lift about 1000' (?)
(at pond near White Mine about 4 mi above lower box.

Five veins run nearly parallel striking to $55^{\circ}W$. The northward vein is known as the Blue Lead & the others are in the. The shafts are in the Rocky Mountain vein which is further southward. There are possibly dikes associated with the vein.

Shafts are in the vein except lower end and values of feet to be fairly, width of vein 6-12' and about 100' or compared to seam 1-3' wide.

Vein brecciated & sampled every 5' & figures at 35000 t of ore. width over width 3' & assay value Au = 0.81, Ag = 1oz, Cu 3.9%, Fe 15%, Lead 40% of which is $O_2 = 0.367$

Estimate an additional tonnage 115000 tons of probable ore. Most of the gold is free & can be saved in plates.

Transport to truck about 1.00 ft

Property is highly recommended & construction of a mill while drifts should be extended.

From Report of J. S. Johannes. Phoenix, Feb 31, 1925

→ Report by Victor J. Pimental, M.E. Oct 9, '31. States that the vein is a brecciated granite altered & silicified. Minerals are oxidized.

Elect power line or pump about 1/2 m from mill site

All ^{old} equip is useless

(3)

Main shaft in under A. - Rock bed vein is 365' dp.
another shaft 296' deep. many test pits + short tunnels

Took 7 cut samples which had. ave of 3.57
width, & ave 0.577, cu 4.16%

Sample of dumped #2 adits, contain 2000 t &
assayed 0.827, ave, sample of rejects from shipment
from Rock bed vein 0.313, vein in shaft is
said to have in ave 1.000, in fact

Cut sample represent 40,000 - 50,000 t of developed
ore in the Bloss belly vein, recovery of 95% of gold
can be made by leaching out the Cu & floating the gold
in the tank. Costs of all plants set @ 5-42 &
5.63/t.

Estimate 40,000 required for leaching & flotation
plant (50t per day) & mining & milling equip

Composite of Perimeter sample should ave = 0.8
& cu 3%

Ed Eisenhauers' tests & cut estimate quoted in separate
sheet

From Brock tested on with Eisenhauers

1 dead. cont. Ave = 0.663.

Cu 4.16%

CaO. 2.20

After leaching this ore for recovery of 95% of Cu the

heads of the leading sand cont. Cu 0.66
Cu 0.23%

Flotation tank cont. Cu 0.01, Cu. loss
Ratio of loss 96 to 1

Respects of prop by which Cobalt gives general impression
Says that the vein dips 45 to 60 to the eastward. Says
that ledge is often 20' wide & talus in shaft for
0.5 to 3.00 g. an.

has hole in shaft since 1913 & how could we
have water & all are unaccounted, Cold long deep shaft
since we can get 2.3 g an & sample of ore in shaft
dumps run from 0.6 to 1.4 g. The 5 ledges of
glauconite outcrop for 4 miles.

Result of various Cu samples - supposed to be representative

				Cu	Ag	Cu	Int	Fe	Al ₂ O ₃	CaO	S
A. S. & R. El Paso	11/17	17	0.26	0.7	7.8	65.5					
Heike Phelps	2/13	23	4.20								
John Deane	5/2	29	0.30	0.1	9.0						
C. S. H. Pratt	10/30	24	1.72								
2 ton machine Co. (25 ton)	7/31	29	0.16	0.7	10.5	52.4	12.2				
Southard Co. (Hull)	3/15	30	0.29	0.27	4.5	51.4	6.83				
Con. Am.	3/3	19	1.18	to	9.7	70.4	6.5				
C. W. Aldrich	4/10	15	2.49		2.4						
"	"	"	2.08		0.84						
Mayma	3/13	30	0.26	0.1	4.83						
Helford Zinc Ore	6/5	12	2.36	5.7	6.02						
Belle & Jack (mills) 4.5 t	4/15	35	1.25								
Serrano	1/25	30	1.20	0.4	7.50						
Mayma	3/12	34	0.87		4.0						
Serrano	4/20	35	1.40	0.3	9.60						
Belle & Jack	4/3	35	0.36	0.56							
Mayma (29 t)	5/23	30	0.40	0.2	2.9	52.5	10.4		55	14	
" 30 t	7/19	34	0.38	0.1	1.95						
" 25 t	7/31	24	0.16	0.7	10.54	52	12				
" 3 t	5/22	30	0.93	0.5	7.75						
" 30 t	9/13	34	0.41	0.3	2.36	66	11.6				

Selden, Sals Concentrate

lot of zinc

Concentrate
Average of 6 samples

Samples for Golden Gate

Assays	Assay	Cu	Remarks
J. C. Portner, Phil	Albert	0.08	Slump hole dump of Albert T.
" "	Golden Gate	0.17	Slump on Golden Gate, N.E.
" "	" "	3.56	Sacked up on tunnel 99 N. 2
" "	" Sulphur	6.19	Slump on tunnel
" "	Albert	2.41	Cap lens on Albert I
" "	Golden Gate	0.21	Cap across on N. 200

Core Samples

			Cu	Ag	Au	Fe	SiO ₂	Al ₂ O ₃	CaO	S
Magnum	6/21. 307	39t	0.37	0.30	0.9	10.1	68.2	6.0	0.8	0
"	9/8. 34	35t	0.33	,1	1.9	11.6	63.8	6.6	1.0	0
"	4/9. 34	37	0.47	1.05	3.75	12.3	60.6	6.2	1.0	0.4

Sum of 14 samples and sample for Amide alite (?) + Ag = \$13.94 (Magnum)

Channel Sumps in taken in flow including
all the main braker

5775
35
28875
17325
1021 ✓

#	hr	2'	1st	old fine	4.96 =	ps dollar	9.92
2		4	"	"	7.43		29.72
3		4			9.92		39.68
4		4			13.54		55.36
5		3			22.25		96.75
6		4			11.16		44.64
7		4			3.20		12.80

3.57

288.87

ans 11.55-28

ans = 20.21 of the

Can Rocky had claim

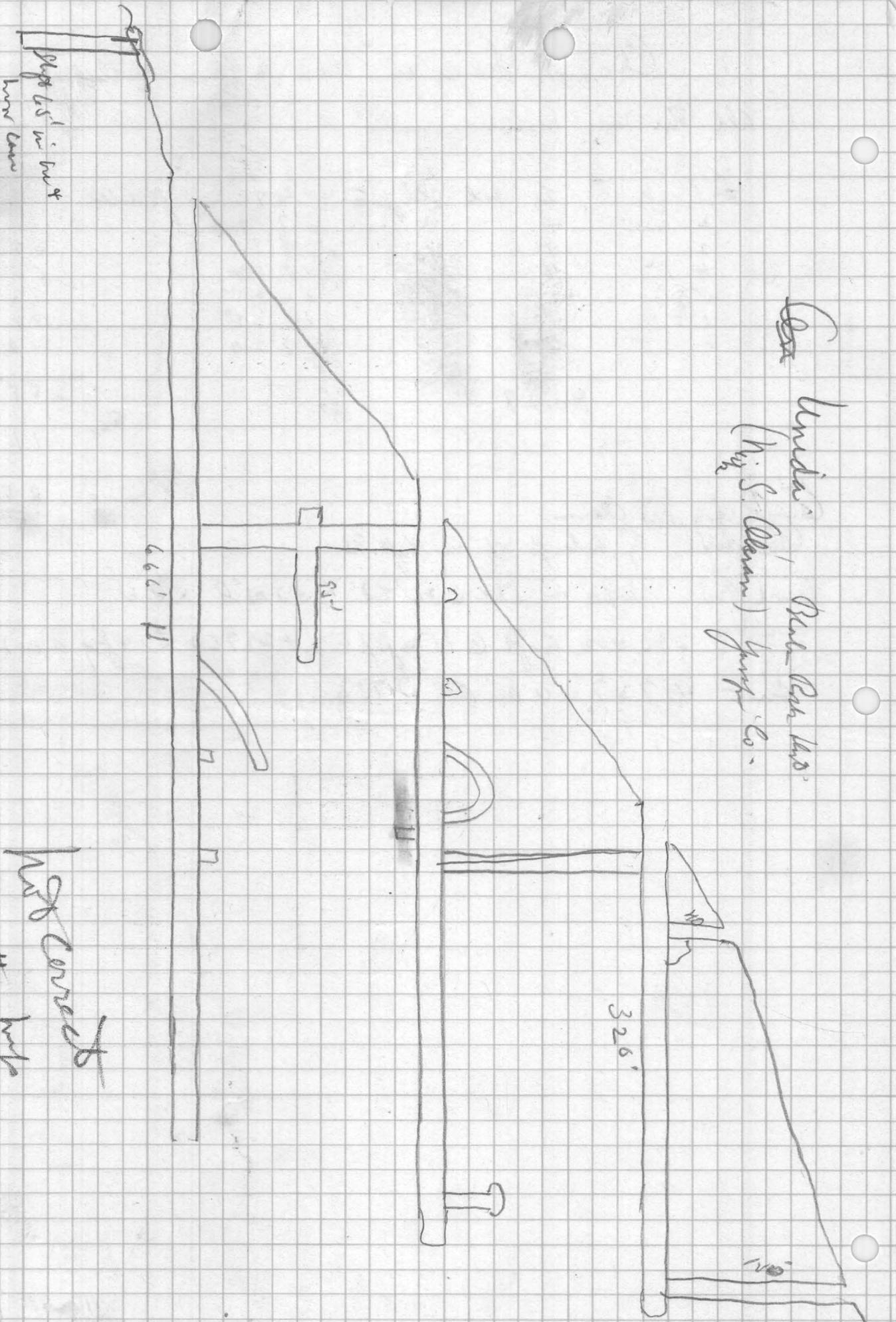
Can deal by outcrop & one shaft ad

ward from 240' = total 636' ad x 3300' l x 3' w.

= 6 296 400 cu ft @ 15 cu ft per ton = 42 976 tons of fig area total

cu = 4.72% & an @ 0.75%

Ex Under ' But But W.D.
(Miss Clemon) Hunt Co.



Sept 15' in but
have been

Not correct
V other map

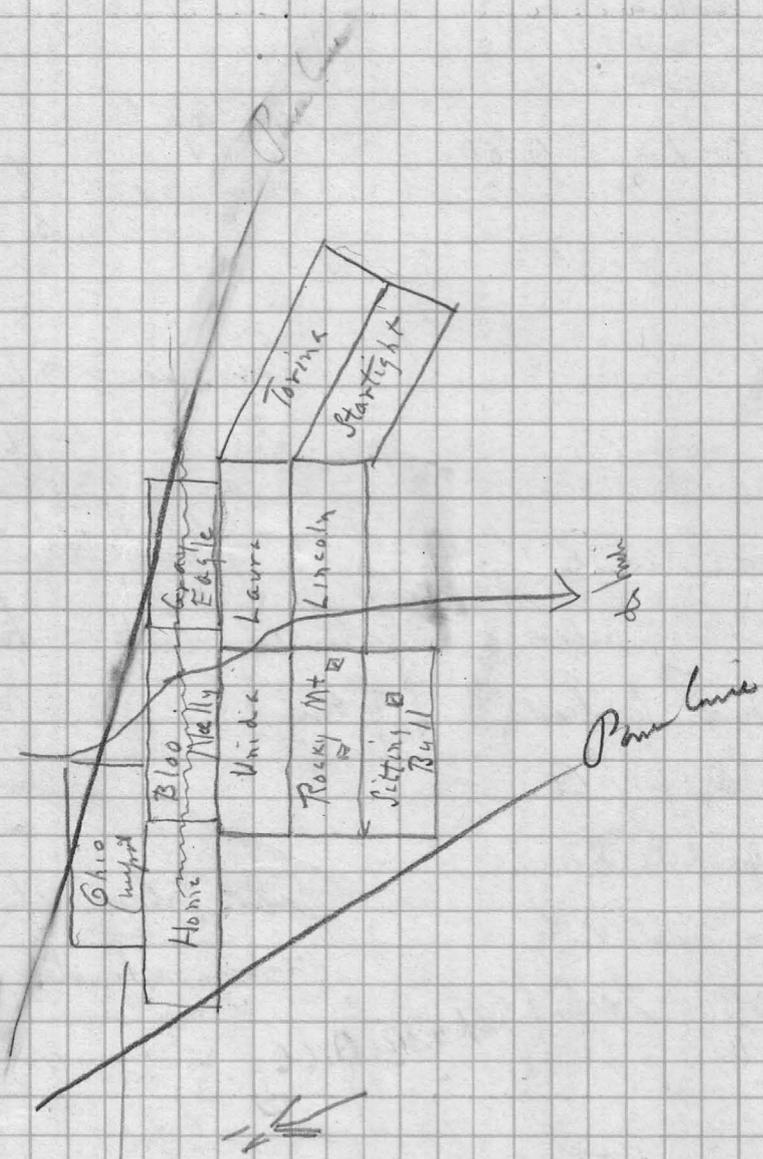
66'

90°

326'

100'

6750'



Sample

1	.40
2	.44
3	.06
4	.52
5	.80
6	.44
7	lost
8	.04
9	.05
10	2.02
11	1.20
12	0.24

Comp # 1-12 = 0.80

Core

Levelled in adits 1, 293' incl

dump

Bottom of upper levels $h = 700'$
 $h = 393$
 $w = 3$

67000

67333

15 cu ft to

Lower levels: $l = 3570$
 $h = 296$
 $w = 2$

529666

663999

Core an = 0.66 g. = 23.10

Core = 4.16 g. 7.90
 @ 9.10

Iron value 3.100

Core contains copper silicates
 & oxides. 20 g. mass
 of 1 cu c made by leaching
 with $H_2SO_4 + HCl$

Estimated costs, mining

Mining	1.00
Mull	1.50
Leach	.50
Total	3.00

after 20 g. gold & 80 mesh
 & after 5- gold & 6
 floated with 1. tail (gold @ 0.66 g = 23.10)

Cost for losses the lost amount &
 minus estimated

Est of cost

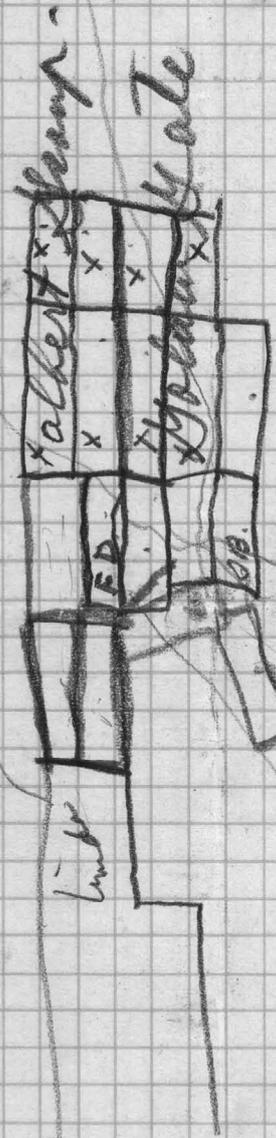
Mining	1.00
Mull	1.50
Acid camp	1.25
Iron "	.39 (dump)
Waste & losses an.	.39
Combined, depn.	.39
Total	4.92

& recover 78% of Cu from tail for head with 4.16%

Cost of Cu @ 39¢ lb



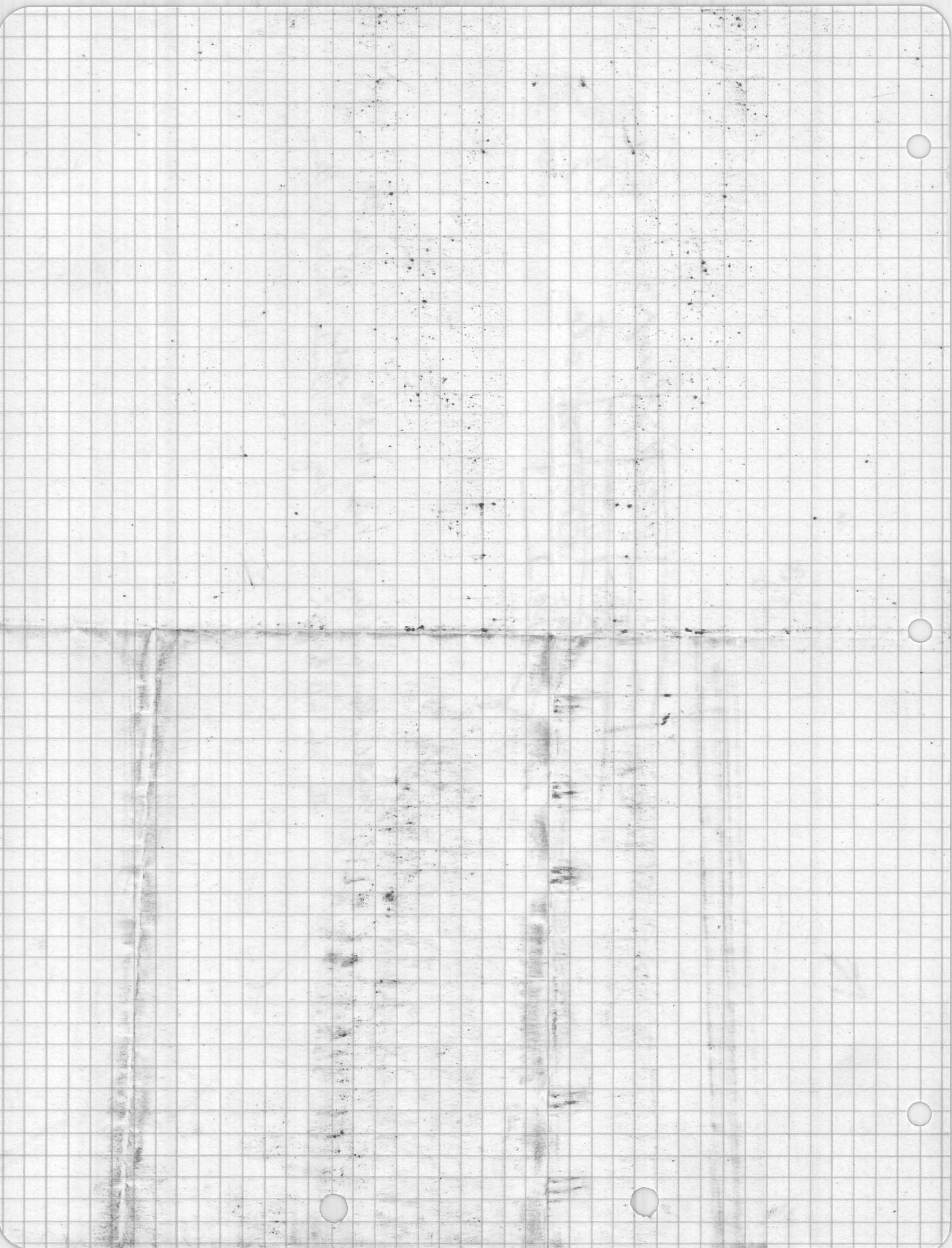
800 ft
Juniata



8 cl.
Albert
John Sale

Franklin R. now belongs to wife & land to
John also
Other who will be used in a few days. Horton wanted them clean





300
 300

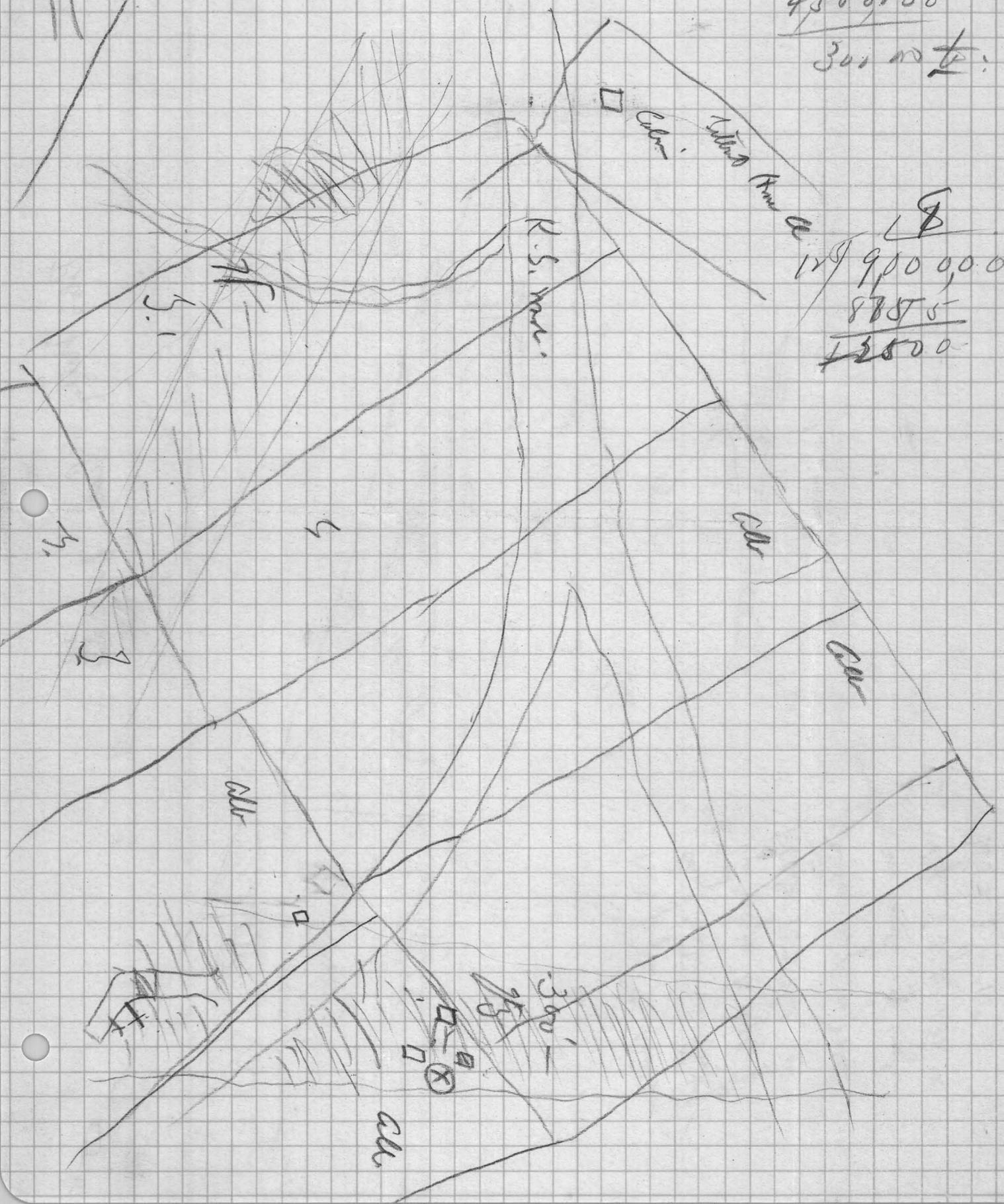
 90000
 50

 430000

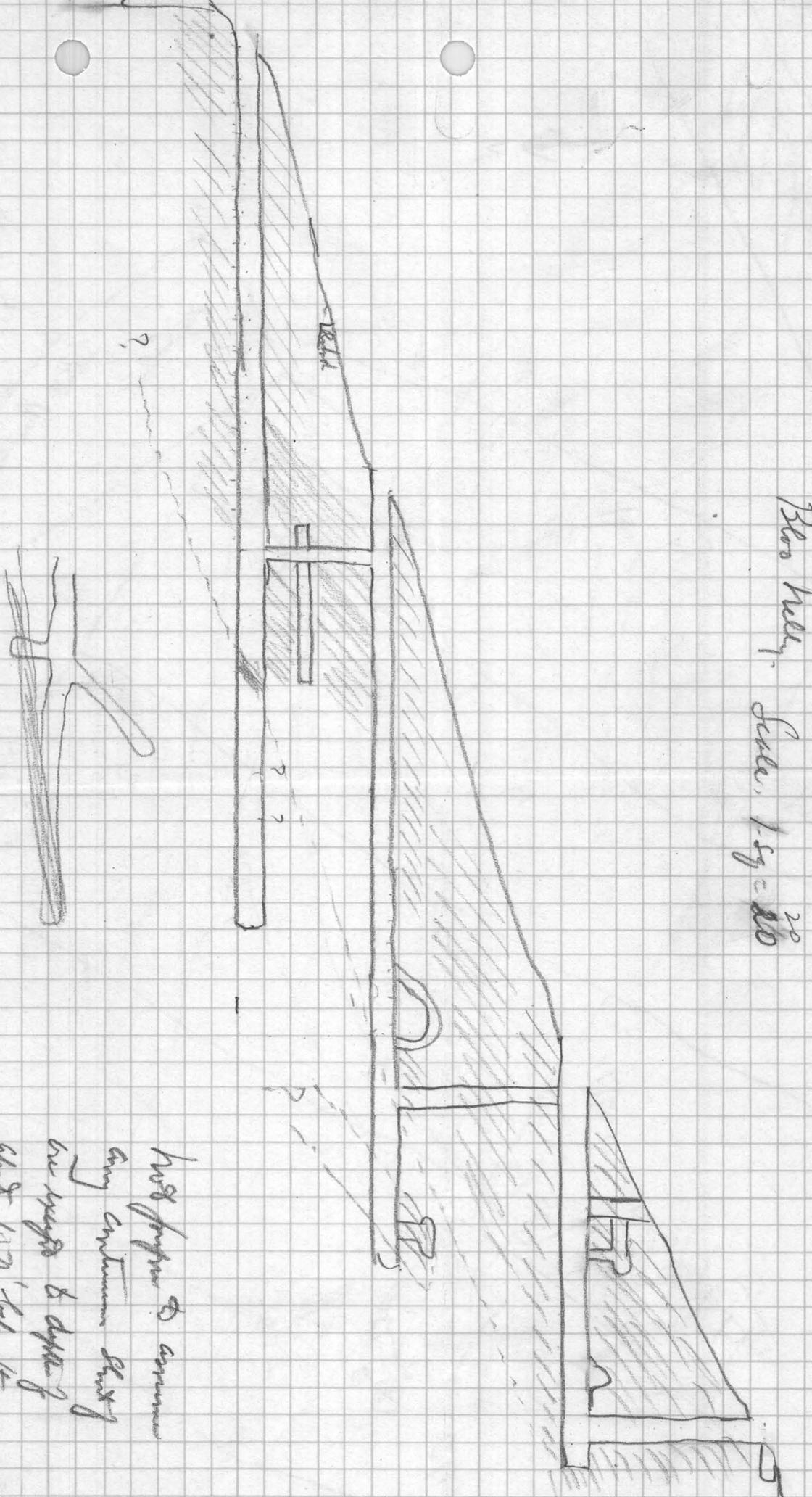
300 m $\frac{1}{2}$:

L\$
 12/9 900,00.00
 8855

 42500

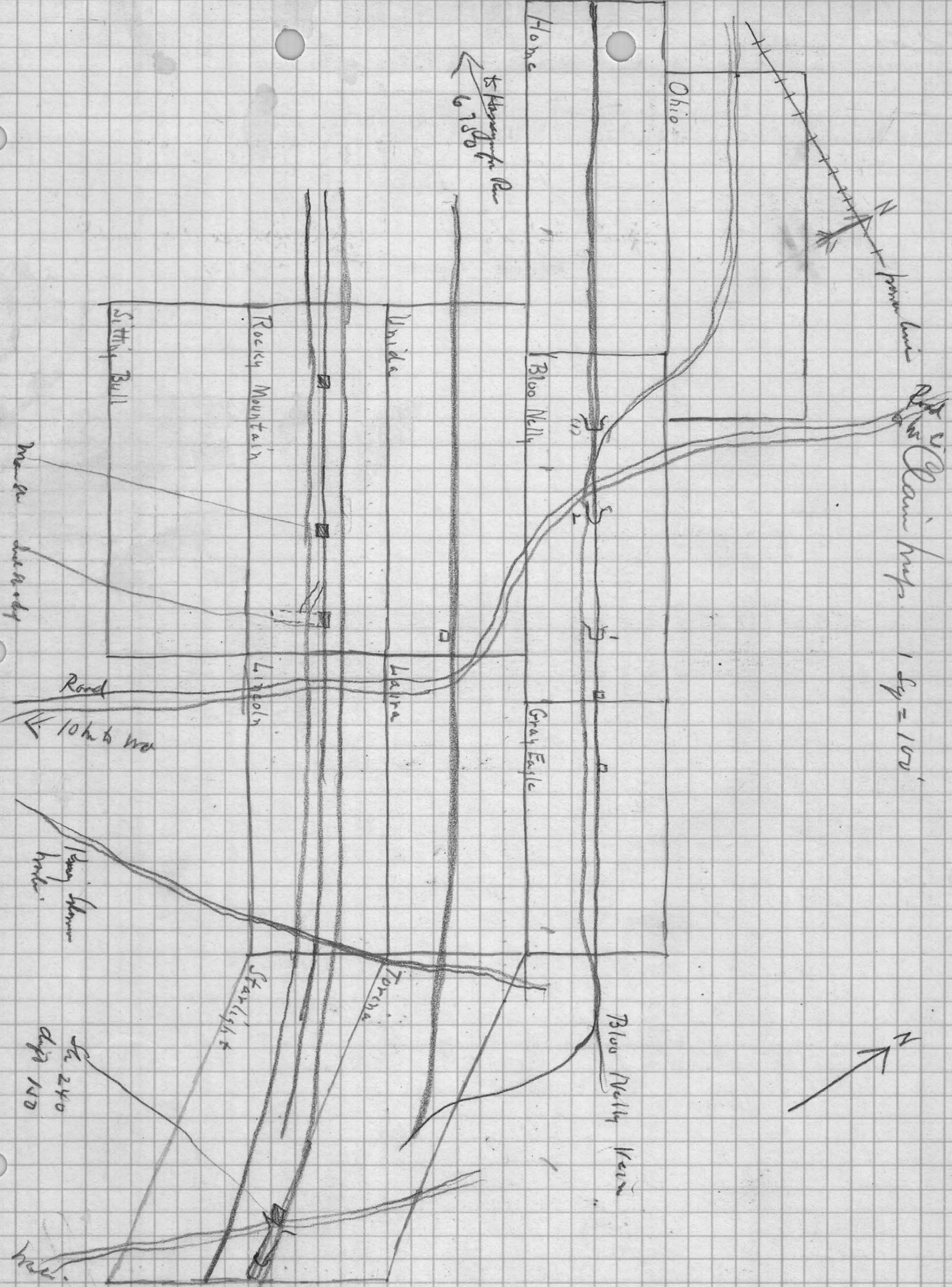
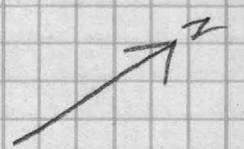


Ben Hill. Scale. 1 sq = 20²⁰



most fossils & corals
 any corals
 see maps & depth of
 about 150' below the
 bottom layer of 120m
 are made of water
 depth & length 1300 x
 150 x 3 1/2 15' =
 +

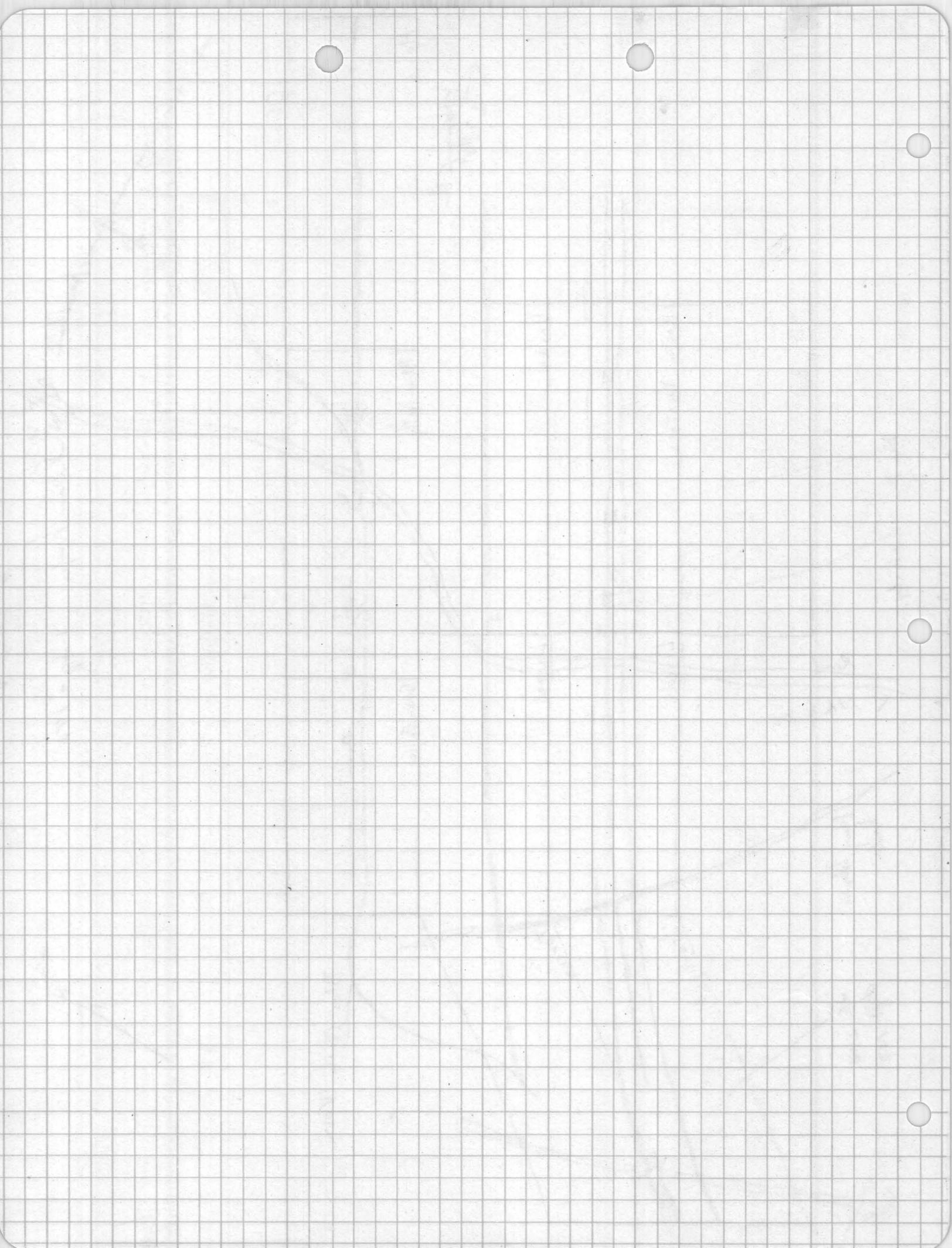
Red ²/₃ of Dean's map 1 sq = 100'



← to ~~Highway~~ River
6780'

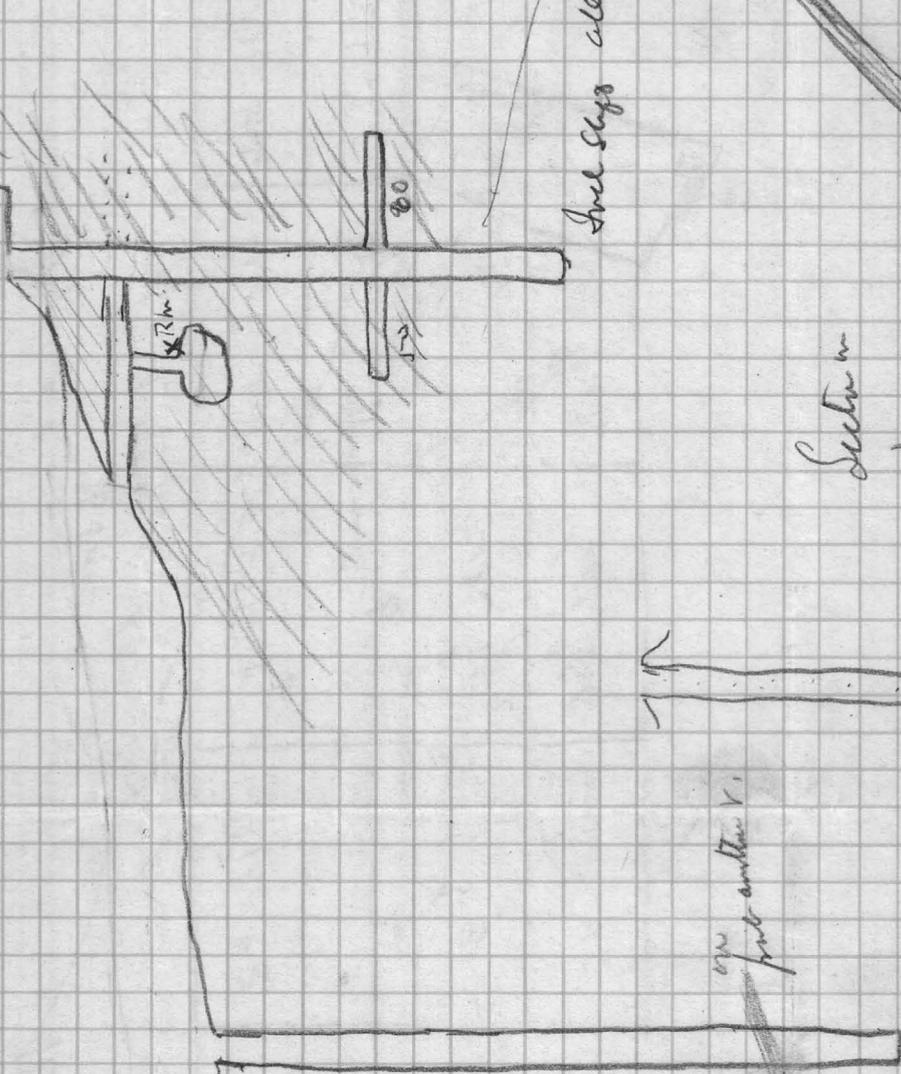
St 240
days 100

100'



Rocky and thin, 15g = 20'

Section

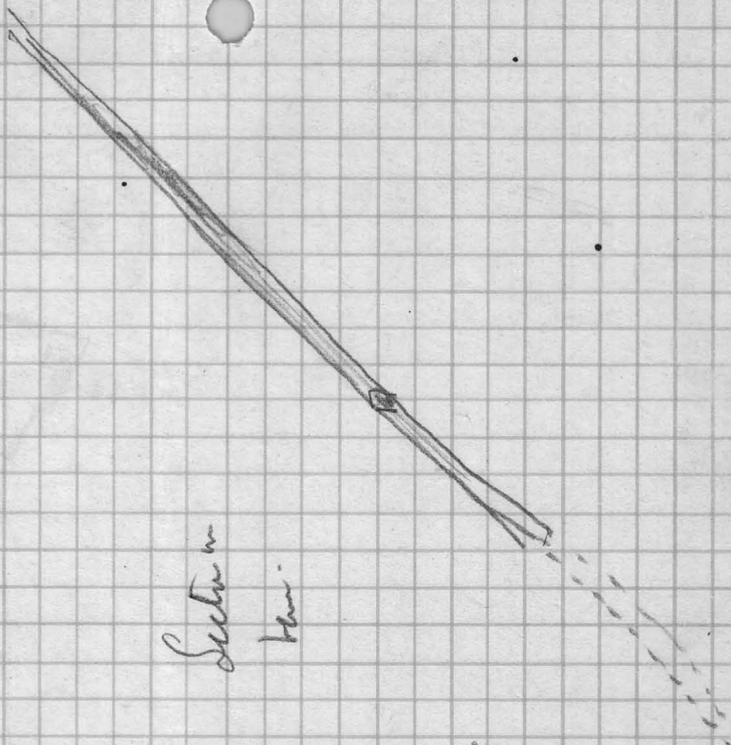
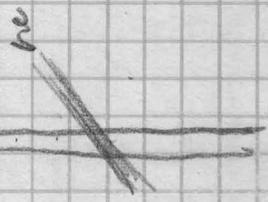


Steel steps all in line



open
first section

Section
thin



In file

GOLDEN GATE

(mines file with UNIDA)

About 10 miles northeast of Wickenburg. 8 unpatented claims.

Has possibilities of developing a large tonnage of low grade ore which could be cheaply mined but water is scarce and metallurgy may present difficulties.

Ore contains gold and copper in iron stained quartz blow outs.

Old work consisted of shafts and pits which are no longer accessible, but there are some exposures in gulches and some of my samples carried over \$3.00 in gold and 4% copper.

A lot of drilling and sampling would be required to determine the average value of any large tonnage, but there is a fair chance of proving up over 1 million tons @ \$4.00 or better and mining and milling might be done for less than \$5.00 per ton. Best treatment seems to be flotation and perhaps cyanide for the tailings. Could be taken over on reasonable terms.

UNIDA & GOLDEN GATE

Note by G. M. C. October, 1937.

The parties for whom I made this examination decided not to proceed further and these properties were idle until the summer of 1937 when they were taken over under bond and lease by a New York promoter or operator who is now cleaning out the workings and preparing for operations. I know nothing of the responsibility of these people, but any constructive work that they carry on at the Golden Gate might have interesting results.

G. M. Colvocoresses

UNIDA & GOLDEN GATE

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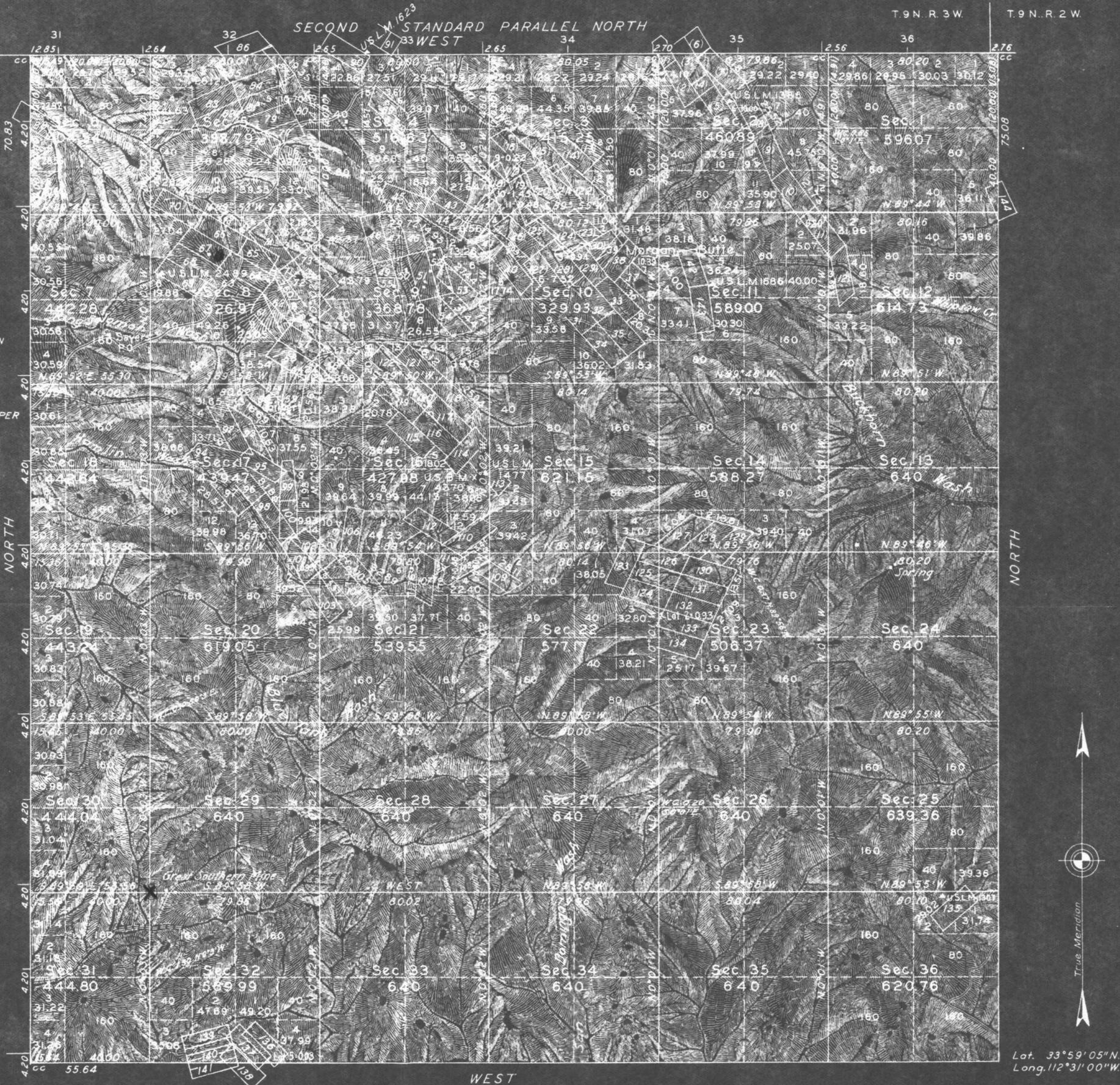
G. M. Colvocoresses

TOWNSHIP N° 8 NORTH, RANGE N° 3 WEST, GILA AND SALT RIVER MERIDIAN, ARIZONA.

PATENTED MINING CLAIMS

No. SUR.	NAME	No. SUR.	NAME
1	1553 BELLAIRS	71	1999 COPPER KING
2	FLYING DUTCHMAN	72	1957 DENIS
3	HOMESTAKE	73	ST LOUIS
4	HOMESTAKE No. 2	74	GRAND
5	HOMESTAKE No. 3	75	ST PAUL
6	LONE STAR	76	YELLOW JACKET
7	1385 AMAZON	77	3921 TEXAS 15
8	SOUTH AMAZON	78	3675 TEXAS 9
9	CONGO	79	TEXAS 5
10	GYPSY	80	TEXAS 3
11	IRON HILL	81	TEXAS 1
12	COLA	82	TEXAS 2
13	4024 HILL TOP	83	TEXAS 7
14	JACK POT	84	TEXAS 6
15	RISING SUN	85	TEXAS 8
16	ELIZABETH	86	TEXAS 4
17	S&J	87	TEXAS ADDITION
18	JENNY LYN	88	2719 NEW YORK
19	GOLD POD	89	1972 BROOKLYN
20	RED BIRD	90	1623 ROSALIND
21	SPRING	91	1973 OLYMPIA EXTENSION
22	MORNING STAR	92	2773 VASHTAI
23	BLACK DIAMOND	93	QUEEN ESTHER
24	GREY EAGLE	94	QUEEN OF SHEBA
25	LITTLE JOHNEY	95	KING SOLOMON No. 1
26	DELAWARE	96	2418 LAWSON
27	1530 AZURITE COPPER	97	OLD HOMESTEAD
28	GREAT SCOTT	98	SCORPION
29	CRAY DICK	99	AMALGAMATED COPPER
30	COPPER PRINCE	100	W.M. BURAGE
31	AETNA	101	NOGI
32	COPPER ZONE	102	BATHOLDI
33	YELLOW KIT	103	METER HILL
34	ATLAS	104	CHADWICK
35	3132 WREN No. 4	105	MONTAI HILL
36	WREN No. 3	106	THE ACCIDENT
37	WREN No. 2	107	2643 BELTA
38	WREN No. 1	108	CYCLE
39	ELsie	109	PERA
40	SAMPSON	110	RAMONA
41	MOUNTAIN CHIEF	111	DEMON
42	4026 COPPER HILL No. 2	112	TEXAS
43	COPPER HILL MINE	113	1477 DENVER No. 3
44	HARVARD	114	TIP TOP
45	4039 CANTON	115	GOLD RING No. 2
46	ALASKA	116	DENVER
47	PRESCOTT No. 2	117	DENVER No. 2
48	EVENING STAR	118	BURRO
49	CLEVELAND	119	DENVER
50	MADELEIN	120	CENTER
51	NORTH STAR	121	GOLD KING
52	SENATE	122	MAMMOTH
53	LUCKY STRIKE	123	2933 HOUSTON
54	COTTONWOOD	124	MARDIS
55	2973 SAN FRANCISCO	125	COPPER KING
56	GOLDEN STATE	126	VICTORIA
57	BUCKHORN	127	KING EDWARD
58	GILBERT HOUSE	128	COPPER PRINCE
59	BULLION	129	OZARK EXTENSION
60	2489 STARLIGHT	130	BLACK HORSE
61	TORINA	131	NEW DEPARTURE
62	LINCOLN	132	MONARCH
63	LAURA	133	WILD ROSE
64	GREY EAGLE	134	JUDGE B.
65	BLOO NELEY	135	1307 TRILBY
66	UNIDA	136	2647A WASHINGTON
67	ROCKY MOUNTAIN	137	DENVER
68	SITTING BULL	138	CARTHAGE
69	HOME	139	LUCK SURE
70		140	SULPHURETT'S
		141	HAZEL
		142	1686 REPUBLIC
		143	HONEY SUCKLE
		144	1198 WASHINGTON

Note: To avoid crowding data on the face of the plat, the patented mining claims are given identifying numbers from 1 to 144, inclusive, the same being enclosed in parentheses where necessary in order that there may be no confusion with the public land lot designations. See table for corresponding names and survey numbers.



Mean Magnetic Declination 14°53'E. Area Surveyed 19.147.70 Acres.

LINES DESIGNATED	BY WHOM SURVEYED	GROUP		MILEAGE		WHEN SURVEYED	
		No.	DATE	MLS.	CHS.	BEGUN	COMPLETED
Exterior	Benj. J. Kinsey	155	Oct. 3, 1928	17	23.53	Feb. 23, 1929	Apr. 16, 1929
Subdivisional	"	"	"	58	9.60	Mar. 4, 1929	Apr. 19, 1929
Miscellaneous	"	"	"	26	51.97	Mar. 6, 1929	May 6, 1929

Office of U.S. Supervisor of Surveys
Denver, Colorado, Jan. 30, 1931.
The above plat of Township No. 8 North Range No. 3 West, Gila and Salt River Meridian, Arizona is strictly conformable to the field notes of the survey thereof which have been examined and approved.

Wm. H. Kinsey
U.S. Supervisor of Surveys.

DEPARTMENT OF THE INTERIOR
GENERAL LAND OFFICE
Washington D.C., May 25, 1931

The survey represented by this plat having been correctly executed in accordance with the requirements of law and the regulations of this office, is hereby accepted.

Wm. C. Havell
Assistant Commissioner.

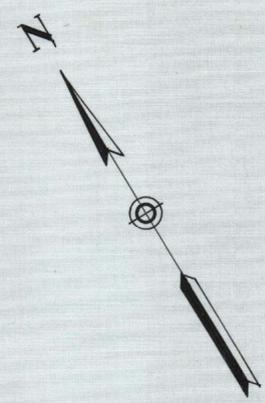
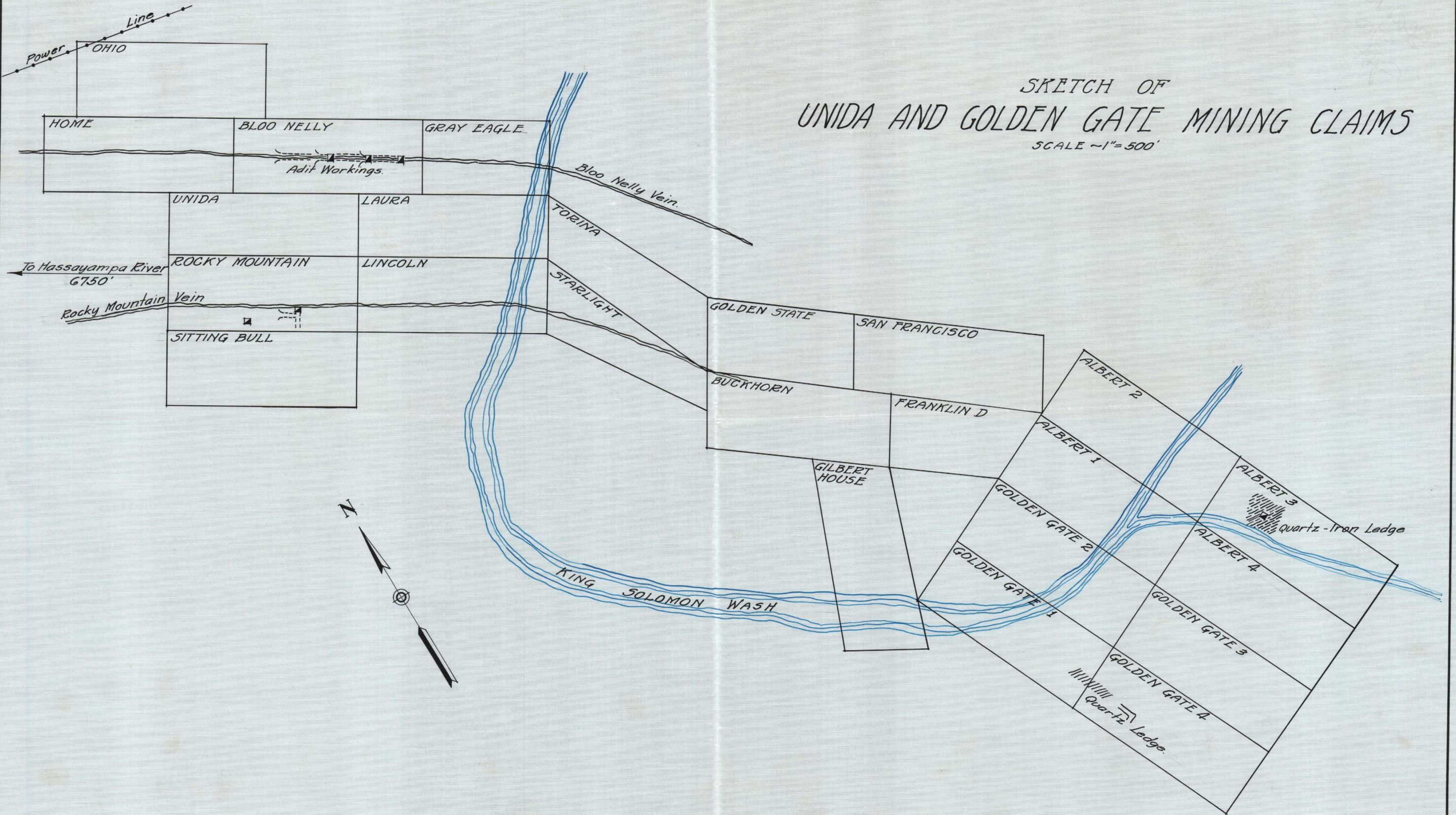
Scanned
3/10 JA

43171

Tommy's map

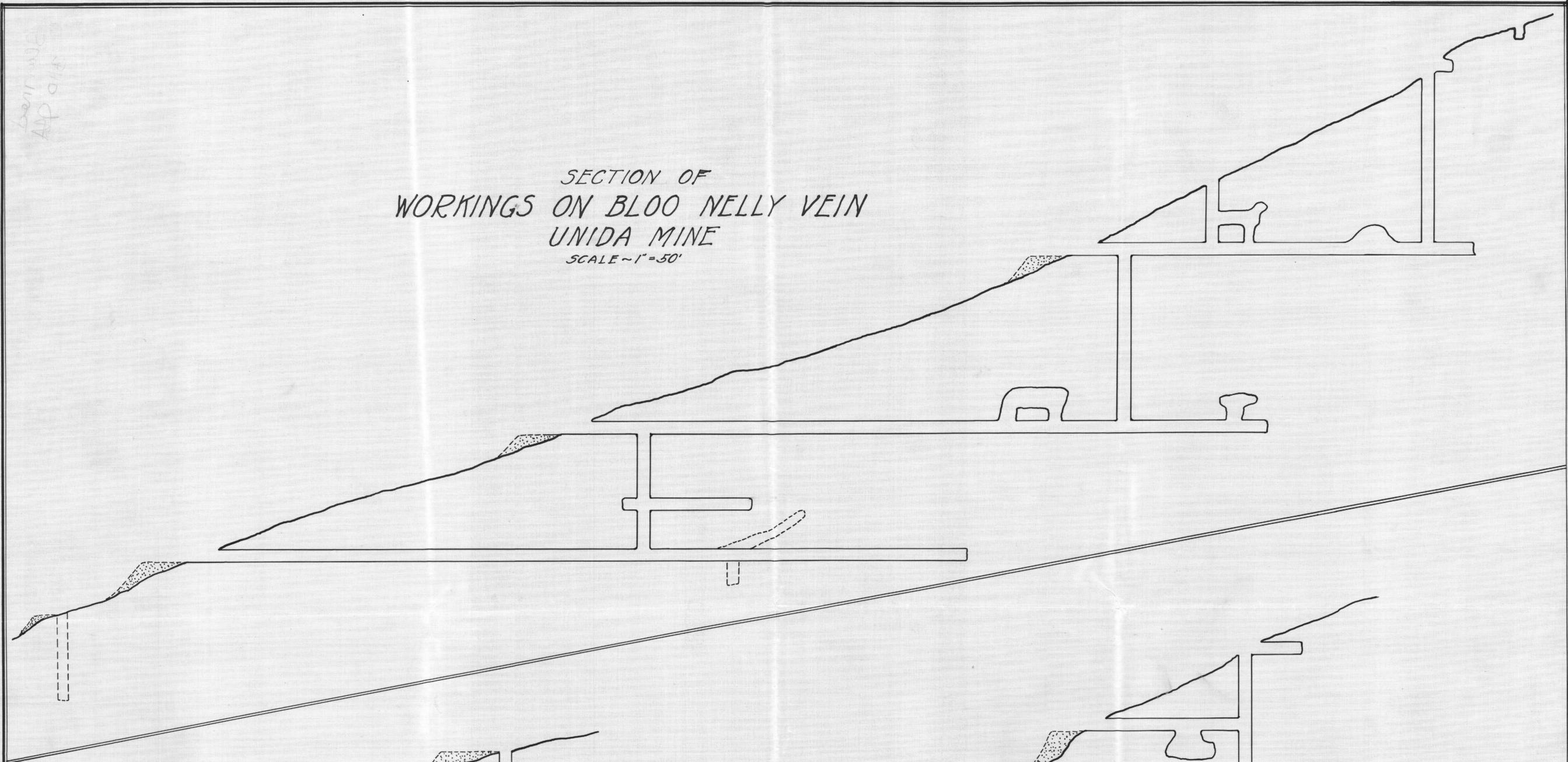
5-91

SKETCH OF
UNIDA AND GOLDEN GATE MINING CLAIMS
SCALE ~1"=500'



2011/10/10
ADD 01/18

SECTION OF
WORKINGS ON BLOO NELLY VEIN
UNIDA MINE
SCALE ~ 1" = 50'



SECTION OF
WORKINGS ON ROCKY MOUNTAIN VEIN
UNIDA MINE
SCALE ~ 1" = 50'

