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REPORT ON THE  
CENTROID CONSOLIDATED MINES COMPANY

Formerly known as  
CONSOLIDATED ARIZONA MINES

JUBILEE PROPERTY

Ellsworth Mining District  
Wenden, Yuma County, Arizona

THE PROPERTY

The Centroid Consolidated Mines Company was organized April 15, 1936 under the laws of the State of Arizona. The capitalization of the corporation is one million shares par \$1.00 per share. The authorized issue of stock permitted by the Arizona Corporation Commission is 100,000 shares at 10¢ per share and under this permit 57,630 shares have been issued and funds obtained to purchase a sheriff's sale deed for all of the holdings of the Consolidated Arizona Mines, known as the Jubilee group of Mining claims. The sheriff sale deed is dated September 22, 1936.

The Jubilee group of claims comprised an irregularly located group of mining claims named Jubilee 1 to 6 inclusive, Hancock 1 to 6 inclusive and Black Hawk 1 to 3 inclusive making an area of nearly 250 acres of mineral bearing ground.

All of the Jubilee group of mining claims has been surrounded by twenty eight new mining claim locations named Centroid and numbered 1 to 28 inclusive.

The Centroid Consolidated Mines Company holdings include at this time 44 mining claim locations forming a contiguous group located in the Cunningham Pass mineral area, Ellsworth Mining District, nine miles west of the town of Wenden, Yuma County, Arizona.

The Centroid Consolidated Mines Company was organized by William H. Harris recent manager and directing head of the development campaign of the Consolidated Arizona Mines holdings during the years 1933, 1934 and 1935.

DISTRICT DEVELOPMENT

The Ellsworth Mining District has received much development attention during the past fifty years. During the years of boom prices



for copper metal, much prospecting was carried on in this range of hills, stimulated by partially successful copper mining operations first at the Planet Mine and later at Swansea. The early operations were handicapped by lack of railroad transportation, however when the Parker cut-off of the Santa Fe Railroad system was built, the district was made readily accessible.

Since 1915 many attempts have been made to mine the surface oxidized ores of copper, gold and silver for profit in addition to a fairly thorough development in depth in the hope of finding bodies of rich primary ores (sulphide ores). Swansea, Bullard's Mine, Wenden Copper and the Critic have been often in the limelight but as yet are not to be classed as successful mining operations.

The entire district has been fully prospected for its surface showings of gold ores and gold bearing copper ores without finding pay ore shoots of sufficient size to warrant continuous operation except for short periods of time and certainly without profit.

The Cunningham Pass section has attracted the attention of mining companies since the beginning of the war boom era of copper activity. At that time the Jubilee group was the scene of a serious development effort which continued for nearly ten years. This work resulted in sinking an inclined shaft (60 degrees) to a vertical depth of about 250 feet and much prospecting by drifting from the bottom of the shaft. In addition, surface gossan iron outcrops were tested by small shafts, tunnels, trenches and test pits around the entire area. The inclined shaft development is called the Van Eck Workings.

The Van Eck Workings have not been accessible for the past ten or twelve years, but the shaft waste dumps and reject piles indicate extensive diggings. Rejected materials on the waste dumps indicate some evidence of primary mineralization. Waste dumps also show much oxidized iron in the veins cut by the openings from this old incline shaft.

#### OLD MAPS

An old mine plan of this shaft and the workings from the shaft, is available giving valuable information as to the location of these

diggings with respect to the recent development operation conducted by the Consolidated Arizona Mines during the years 1933, 1934 and 1935. The old mine plan unfortunately does not record geological nor mineralogical features and is therefore of little economic value at this time.

The information obtained from the old map has been traced and plotted on plan of the workings inspected in this examination, and is included with this report. The accuracy of this old map cannot be guaranteed, therefore the information it gives can be used only for illustrative purposes.

#### CONSOLIDATED ARIZONA MINES OPERATIONS.

The Consolidated Arizona Mines during the years 1933, 1934 and 1935 resumed the development of the Jubilee group abandoned in 1924 by mine operators from the Jerome district.

This new development campaign directed by Mr. W. H. Harris as manager, with Geologist H. W. Yost, technical adviser, started a new two compartment vertical shaft, approximately 700 feet north of the Van Eck Incline planning a deep development of the veins and mineral showing on the Jubilee group of claims.

The work progressed rapidly. The shaft was sunk 300 feet and at the bottom about 1,200 feet or new openings, cross cuts and drifts were advanced mostly to the south and southwest of the new vertical shaft.

The well known mining engineers have reported on the results obtained in this development campaign.

The Jubilee property was examined for Consolidated Arizona Mines in July 1935 by Mr. George M. Colvocoresses, E. M. of Phoenix, Arizona who recommended in his report that further development of this property be discontinued at once and advised salvaging plant and equipment.

Operations were discontinued and the mine workings began to fill up with water. On January 1, 1937 the water level in the mine workings is said to be forty feet above the 300 foot level of the Vertical Shaft.

A second examination and report on the property was made by



C. H. Dunning, E. M. Phoenix, Arizona for Mr. W. H. Harris. This report is accompanied by a Brunton Compass survey and plan of all the workings on the property. The Dunning report advises further development of the October vein cut 300 feet south of the shaft and a further advance of the South cross cut because the face of this crosscut was about to enter the Horse Whim Vein. According to Dunning's inspection there are good enough mineral showing on the 300 level to warrant carrying on both lateral development to the southwest on the 300 level to warrant carrying on both lateral development to the southwest on the 300 foot level, and a new campaign to develop the property to greater depth.

The map and plan of the workings submitted by Dunning is lacking in detail data of the geological evidence obtained by development work on the 300 level of the Vertical shaft therefore making it impossible to correlate the story of the findings on this level with the ore or mineral showings now observable in accessible workings nearer surface.

To obtain an exact and accurate report of conditions exposed in the underground development work, it would be necessary to unwater the Vertical Shaft Workings.

After a shut down period of 18 months, the task of unwatering the works and retimbering probably caved drifts and crosscuts would entail a considerable expense, probably in excess of \$5,000.00. This expense could be justified only if some new ore exposure would warrant the belief that some geological data had been neglected or had not been observed in previous development campaigns.

#### RECENT DEVELOPMENTS

During the past year leasing operations have been carried on in a small way from an old prospect shaft known as the Horse Whim shaft.

The Horse Whim shaft is located approximately 700 feet south 35 degrees west from the new Vertical Shaft. The old shaft follows a flat dipping silicious iron vein which in places places free gold. The outcrop of this vein is the strong iron showing about 350 feet northwest of the Horse Whim shaft. The old shaft had been sunk to a depth of 185 feet, the dip varying from 37 degrees to 55 degrees. Leasers continued the sinking to 250 feet incline depth after having opened up a small lense of gold bearing copper ore of shipping grade on the 185 level in a drift



driven a distance of 50 feet northwest of the shaft.

By careful mining and considerable sorting of mined material a small car load shipment was sent to the Magma Smelter, a custom smelting plant at Superior, Arizona.

THE ORE SHIPMENT:

Weight Wet      80,260 lbs.      Moisture 3.6%

Dry Weight      77,371 lbs.

Assay

Copper	- 0.91%	Silver	- 0.40 ozs.
Gold	- 0.43 ozs.	Iron	- 24.40 %
Silica	- 53.40 %		

The net return after payment of smelting charges was \$421.62 for the 38,685 Tons. The ore netted \$11.13 per ton.

On the strength of this small shipment of ore, an effort has been made to stimulate renewed interest in the Jubilee property with suggestions that former stock holders of Consolidated Arizona Mines could recoup their losses in Consolidated Arizona Mines by some equitable arrangement to acquire equities in the new Centroid Consolidated Mines Co. for their old stock.

Upon request of Mr. Harry Hawley, President of the Consolidated Arizona Mines an examination was made of the accessible workings on the Jubilee group and other properties in the Cunningham Pass area, January 2, 3, and 4, 1937. The report of this inspection follows:

GEOLOGY:

The area around the Jubilee group of claims is the old Pre-Cambrian rocks of granitic structure, gneiss capped by the old schist. There is throughout all of the area much faulting and some shearing. The faults are marked by arroyos or small draws leading up to gaps in the hills. The major fault of the district marks Cunningham Pass. The fault displacement is not large, probably not exceeding 300 feet. The strike of the fault is N. 35 degrees west. Occasional stains of copper, quartz and specularite outcrop at irregular intervals. In general the major fault is marked by a clay gouge, much sheered but only very sparse signs of mineralization.

Minor faults radiate in all directions from the Cunningham Pass major fault; the more prominent are the step faults which break off the

main range to step down into the valley.

These faults strike East to West parallel to the Cunningham Pass break and are cut by step faults striking N.W. - S.E. dipping eastward at fairly steep angles 50 degrees to 65 degrees.

Between the fault walls there is much sheered material, ground up granite, gneiss, some specularite and a spar filling of calcite and barite. An occasional copper stain is the clue to mineralization.

The granite - gneiss structure was intruded in recent times by dikes and sills of diorite, a semi-basic eruptive rock which shows some iron and copper minerals as sulphides. As a whole, wherever exposed or observed, this intrusive rock usually mentioned in this district as being responsible for ore depositions of value is, to say the least, very meagrely mineralized.

On surface the rock is dense, hard and fresh looking. The reject dumps from all of the prospect shafts show much diorite material, fresh in appearance (unaltered) and although this basic rock shows pyritic mineralization, it is more often a tarnished pyrite (iron sulphide) rather than copper bearing sulphide.

#### VEINS AND ORE OCCURRENCE

The prominent outcrop of the district is the iron blow out or gossan near the top of the hill west of the mining camp location. Much of this iron outcrop is a silicious hematite showing occasional copper stains and is scattered around an area about 200 feet long over a width of thirty or forty feet. The cropping however is composed of scattered blocks of iron vein matter varying in thickness from 18 inches to 4 feet and represents parts of a vein filling which has been eroded away, later breaking off to stop close to its original position.

The vein and the fragments nearby have been trenches and sampled extensively for copper and gold values. The material on the whole is definitely of very low value although selected spots might produce a small tonnage of gold bearing copper ore profitable for a small leasing operation.

A selected sample in the trench above the upper tunnel on this vein assayed: Gold - \$5.60 per ton, Silver -  $\frac{1}{2}$  oz. per ton and Copper



4.38%. At present metal prices, material of this character and value could be shipped to custom smelters at a small profit, but could be worked only by careful sorting done in successful leasing operations. The iron vein has been developed 100 feet vertically below its highest surface outcrop by a tunnel striking N. 26° W. The tunnel follows a vein 18" to 5' wide for a length of 165'. An occasional showing of copper carbonate ore occurs on the footwall of this vein and is a typical secondary product derived from oxidation, leaching and concentration, resultant from spots of primary sulphide ore.

The sample of the best of the material at 145' from the mouth of the tunnel assayed: Gold - \$2.10 per ton, Silver - 4/10 oz. per ton, Copper - 10.74%. The sample represents a ten inch stringer of ore exposed for a length of 14', and a few tons of ore could be profitably extracted here by leasers.

The vein with its strong iron outcrop strikes N. 20° W. and dips east at approximately 45°.

Along its strike to the south east 300 feet from the tunnel entrance, the iron vein has been explored by the Horse Whim shaft, an incline now 250 feet deep. This working is a very crude prospect shaft.

The vein is continuous to the full depth of the shaft, although showing only occasional spots of copper stained material which would carry gold values.

Again the vein can be described as the resultant of the oxidation leaching concentration and final reprecipitation of the values carried downward as erosion progresses. Enriched values from what was once a primary ore low in copper, gold, and silver values.

This secondary concentration is found in the Horse Whim shaft workings on the 185 level in the northwest drift and a prospect raise above this drift. A small lense of gold bearing copper ore is now indicated by the leasing operations.

The Horse Whim shaft was sunk 65 feet deeper and now at the 250 foot depth on the incline, a drift has been advanced 60' to the northwest. The ore lense is nearly 30' long with 3' of vein matter showing spotted values in gold and copper. Sample 7 assayed: Gold 17%, Silver - Trace,



Copper - 0.76%. Further development by raising to the old 135 level will expose a small tonnage of ore which after careful mining and sorting will permit shipping up to 150 tons of ore.

The face of the drift going northwest shows nothing of value. Sample 6, assayed: Gold - Trace, Silver - 0.0. The ore shoot is an egg shaped lense which tapers off into barren vein material. This example of an ore pocket is common to this district.

From the plan of the mine levels as plotted and shown on the accompanying map, it is reasonable to suppose that some if the development openings fro both the Van Eck and the now Vertical shaft should have cut the extension downward of the Horse Whim ore showing.

This is also shown pictured on Section A - A included with this report.

A careful mapping of the geology of the 300 foot south cross-cut and the southwest crosscut after passing in and out of the October vein would have eliminated any doubts.

#### VAN ECK INCLINE SHAFT

The Van Eck workings from the old incline shaft are also within the downward extension of the Horse Whim vein.

The Van Eck Incline diggings cut across the October vein. Much of the waste rock on the dump shows diorite with a sprinkle of iron pyrite also a little chalcopyrite.

Two samples were gathered up on the dumps at the Incline shaft.

Sample 8. - Primary ore, specularite and pyrite assayed: Gold - 70¢ per ton; Silver - 3/10 oz.; Copper - 0.76%.

Sample 9. - Massive specularite with pyrite and chalcopyrite assayed: Gold - \$1.05 per ton; Silver - 4/10 oz.; Copper - 2.44%.

#### MAIN VERTICAL SHAFT

The location of this new working shaft would have been well placed if ore had been known to exist in the old Van Eck workings. It would appear that more attention should have been given to finding the continuation downward of the strong vein showing exposed in the upper tunnel just under the outcrop.

The fractured zone in the gneiss just northeast of the iron

vein and south of the diorite dike shows some copper staining and is probably the most favorable zone in the entire group for finding something of mineral value. This is marked Area B on the plan.

The waste dump at the Vertical shaft shows vein filling of specularite and barite. Sample 1 - Gold - 35¢; Silver - Trace; Copper - 0.10%. This material is slightly pyritic.

Sample 2. The diorite dike shows pyritic vein matter with a sparfilling which assayed: Gold - \$0.17; Silver - Trace - Copper 1.59%. This sample was selected from the waste dump at Vertical shaft.

Sample 3, picked off the waste dump, is an example of the Specularite (iron oxide) encountered in massive form at some point in the main crosscut from the Vertical shaft. This material assayed: Gold - \$0.17; Silver - Trace.

The diary or mine log from the Manager's day book reports daily showings of mineral but very few assays were run of the materials out in the development work. It is therefore inferred that the mineralization showed only traces of copper, if any. During the period July to October, several dikes of diorite were cut, each accompanied by some copper mineralization on the form of chalcopyrite and bornite but no assays were made of these showings.

While drifting on the October vein, November to December 1934, 12 samples were assayed showing traces of copper up to 1.2% copper.

One sample of a footwall streak assayed 2.10% copper dated November 25, 1934.

It is reasonably sure that the showing of copper gold ores must have been very poor indeed in spite of one entry in the log that between November 11 and 17, the October vein was being drifted on daily and reported to show mill ore. Mill ore for this mine would require not less than a 3% copper content and it is certain from the looks of the reject piles at the shaft, that nothing of that character was ever found in any of the workings.

#### NEARBY PROSPECTS

Just over the Cunningham pass, west of the Jubilee group,



are located many shafts, tunnels and workings of all sorts where prospecting and development work has been carried on during the past 25 years.

The most extensive of these explorations is the Little Giant property developing the west continuation of the main Cunningham Pass fault. The reject dump indicates more than 1,500 feet of development openings. Some low grade copper bearing pyritic material was observed. The property has been abandoned.

The Critic and Wonder properties, situated west and south of the Little Giant, were not visited.

#### SUMMARY AND CONCLUSION

Waste and reject piles around the several shafts sunk to develop the surface exposures of veins around the Jubilee group of claims are stock piles of very lean oxidized or pyritic vein or sheer zones with only very occasional indications of copper ores. Ore areas of any consequence would be marked by stronger depositions of oxidized copper ores or the gangue material resulting from leaching out of copper bearing pyrite. The vein matter would in that event show more iron type of gangue, accompanied by silicious porous gossan. The surface gossan outcrops are dense and tight jaspery iron with localized spots showing a little copper staining, indicating an original very low copper content in the primary sulphide.

The enriched spots found so sparingly are truly the kind found by leaching secondary concentration and the lenses, pockets or small kidneys of these secondary ores will never make enough tonnage to justify a mining operation large enough to warrant other than a small time leasing job.

The Jubilee group of claims formerly under development by the Consolidated Arizona Mines has been sufficiently prospected to date to prove that at no time in the future will a sufficient tonnage of gold bearing copper ore be found to make this property a successful mining venture.

Respectfully submitted,  
(Sgd) Arthur Houle, E.M.





Phone 570

802 AMERICAN NATIONAL INSURANCE BLDG.  
GALVESTON, TEXAS

July 11, 1935.

OFFICERS

BEN SASS  
President.  
Galveston, Texas.  
Ben Blum Co.

George M. Colvocoresses, Esq.,  
Phoenix, Arizona.

T. R. HANCOCK,  
Vice-President.  
Galveston, Texas.  
President Tosco Steamship Lines.

Dear Sir:

V. J. HARRIS,  
Vice-President.  
Wenden, Arizona.  
Member Ninth Arizona Legislature.

You may recall that in June 1934 we exchanged some letters upon the subject of an examination and report by you upon certain mining property in which I was interested, located about nine miles North of Wenden, Arizona and known to us as the Jubilee property:

W. B. HARRIS,  
Secretary.  
Superintendent of Mine.

since that time, namely, on May 16th, 1935 Mr. Sass who was the President at time has deceased and I have been elected by the Board in his place:

JULES BLOCK,  
Treasurer.  
Galveston, Texas.  
Exporter of Metals.

it, thus, has become possible for me to gratify my desire of many months to have you examine the property and make to us such a report as is outlined in your letter of June 29th, 1934.

DIRECTORS

PETER GENGLER,  
Galveston, Texas.  
Pres. Peter Gengler Grocery Co.

The object of the present, therefore, is to ask whether you would still undertake such an examination upon the terms and conditions named in that letter.

M. J. SASS,  
Galveston, Texas.

HERMAN BORNEFELD,  
Galveston, Texas.  
Of the firm Fowler & McVitie.  
Steamship Agents.

Mr. W. B. Harris is the Secretary and General Manager of the Corporation, resident on the property:

C. D. TELLEFSON,  
Galveston, Texas.  
Merchant and Cattle Dealer.

his wife, Mrs. Virginia J. Harris, is Vice-President of the Corporation and resides on the property with her husband: their son Robert W. Harris is, as far as I am aware, also resident on the property:

E. A. SIMS,  
Galveston, Texas.  
Public Accountant.

V. H. JANACK,  
Rosenberg, Texas.  
Merchant.

H. BERNAU,  
Galveston, Texas.  
Physical Director.

Harris was in Galveston for some weeks terminating with his departure for Arizona on May 9th, 1935:

Consulting Engineer—  
H. W. YOST,  
Phoenix, Ariz.

he was instructed by the Board, at a meeting of May 8th, 1935 at which he was present, to return to Arizona and endeavor to interest some mine owners or capitalists, but instead of doing that, on his return to Arizona he employed an engineer to go on the property and make a report:

Counsel—  
JUDGE JOHN NEETHE,  
Galveston, Texas.  
CHAS. B. WARD,  
Phoenix, Ariz.

I enclose herein a printed form which purports to be a copy of the report made by the engineer, Mr. Dunning:

Depository—  
W. L. Moody & Co.,  
Galveston, Texas.

Mr. Dunning is unknown to us and frankly would not have been employed by us under any circumstances, and the report is to us without value and I have enclosed it herein in order that you may be aware that examination was made, by whom it was made, and the fact that a report and a letter was prepared and submitted following that examination:

Phoenix National Bank,  
Phoenix, Ariz.



Phone 570

802 AMERICAN NATIONAL INSURANCE BLDG.  
GALVESTON, TEXAS

OFFICERS

George M. Colvocoresses, Esq.

2

July 11, 1935.

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CHAS. B. WARD,  
Phoenix, Ariz.

Depository—  
W. L. Moody & Co.,  
Galveston, Texas.  
Phoenix National Bank,  
Phoenix, Ariz.

I know nothing of the forms which reports of this kind should take, but I have been surprised at the report because I was not able to find in it any mention of the character of mine we were supposed to have, for it is not stated anywhere in the report that I could find, that what we have is a tin mine, a gold mine, a silver mine, a copper mine, an iron mine, or any other kind of a mine:

(based upon the statements made in your letter to me of June 29th, 1934) I naturally expected to learn from the report that samples had been taken from certain places on the property and being assayed they showed so and so, but there is no statement in the report of Mr. Dunning that he took samples, or that having taken them assays were made of them.

There is another statement in the report which attracted my attention, and that is, about the source for the water to operate the mill which he recommends should be erected:

Dunning speaks of a certain property known as the Black Reef which makes about twenty five thousand gallons of water per day, which he says would be ample for the kind of mill he recommends, namely, a fifty ton mill, because a fifty ton mill would only use about ten thousand gallons a day under certain conditions, but the trouble about that is that the Black Reef is not owned by our Corporation, and, therefore, it would be, it seems to me, impossible to count upon water belonging to somebody else as a supply for the operation of a mill, the erection of which was recommended:

the other source of supply he mentions, namely, the Horse Whim Shaft, is owned by us but that source would not supply ten thousand gallons per day:

in addition to that, if Dunning's recommendations were carried out to dig downward in the Horse Whim and stope upward in our South Shaft, the water in the Horse Whim Shaft would soon come into our Southern extension and unless impounded in some way would be distributed on the land and thus be lost.

I also enclose the map which Harris sent us with the report as being made by Dunning.

Harris has always answered my interrogatories about water and endeavored to allay my doubts by assuring me that Artesian



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802 AMERICAN NATIONAL INSURANCE BLDG.  
GALVESTON, TEXAS

George M. Colvocoresses, Esq.,

3

July 11, 1935.

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Depository—  
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Galveston, Texas.

Phoenix National Bank,  
Phoenix, Ariz.

wells sunk in the plain immediately adjoining the Jubilee property would inevitably produce water in generous and constant supply, and he said he entertained this belief because the town of Wenden was situated on the same plain and got its water by the drilling of Artesian wells, and he, therefore, felt that on the extension of the same plain water could also be obtained.

During the development work done at Jubilee, samples have been sent to us at sundry times which we have sent away to Denver and New Orleans for assay, and the returns have shown that the samples contained gold in varying amounts and copper in varying amounts, but I have never been satisfied that we have anything at Jubilee that would warrant development upon a big scale and I want to have these doubts resolved once and for all, so that if we really have nothing we may abandon the proposition and cease to contribute money to its attempted development:

if on the other hand we have something, then I believe that with your report to this effect we would be able to raise the money necessary to do what you believed being done would result in profits to the stockholders.

It, therefore, will be apparent to you that if upon the conclusion of your initial examination as named in your letter of June 29th you did find that we had something of value, then we would want you to make the second examination named in the same letter.

I have today written Mr. Harris that it was the intention of the Board to cause examination of the Jubilee property by an engineer of our selection, so that I have not mentioned your name, and I have requested Mr. Harris to extend to that engineer all the facilities of the property and to lend him any aid that he required, and I have asked him to acknowledge receipt of the letter by return mail and tell me that my request would have compliance:

I enclose a carbon copy of My letter to Mr. Harris.

Harris has been on the property for a long time and has been in the past given a far freer hand than now in the opinion of the Board is compatible with the best interests of the Corporation:

he and his family have resided on the property so long





Phone 570

802 AMERICAN NATIONAL INSURANCE BLDG.  
GALVESTON, TEXAS

George M. Colvocoresses, Esq.,

4 July 11, 1935.

OFFICERS

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Galveston, Texas.

HERMAN BORNEFELD,  
Galveston, Texas.  
Of the firm Fowler & McVitie.  
Steamship Agents.

C. D. TELLEFSON,  
Galveston, Texas.  
Merchant and Cattle Dealer.

E. A. SIMS,  
Galveston, Texas.  
Public Accountant.

V. H. JANACK,  
Rosenberg, Texas.  
Merchant.

H. BERNAU,  
Galveston, Texas.  
Physical Director.

Consulting Engineer—  
H. W. YOST,  
Phoenix, Ariz.

Counsel—  
JUDGE JOHN NEETHE,  
Galveston, Texas.  
CHAS. B. WARD,  
Phoenix, Ariz.

Depository—  
W. L. Moody & Co.,  
Galveston, Texas.  
Phoenix National Bank,  
Phoenix, Ariz.

that I imagine he has found it difficult to regard the property as anything but his own private possession: the removal of that impression, if it is held, is inevitable under the present management: notwithstanding these circumstances it is incredible to me that Mr. Harris would offer any objection or opposition to your presence on the property, armed as you will be by a letter authorizing you to make the examination.

It has been a great comfort to us to learn from your letter of June 29th, 1934 that if you made an examination there would be nothing personal about it, it would be of the property without regard to those who were connected with it and would truly reflect what you found to be the fact, for that is the kind of an examination we want.

I await with interest your kind reply saying whether or not it would be agreeable to you to make the examination upon the terms and conditions stated in your letter of June 29th.

HHSr:MEW

Yours truly,

*Harry Hatten*  
HARRY HATTEN  
President.

June 8th, 1936

Mr. Harry Hawley  
c/o Consolidated Arizona Mines  
802 American National Insurance Bldg.  
Galveston, Texas

RE: JUBILEE MINE

Dear Mr. Hawley:

I returned to Phoenix this morning after a mining trip in the northern part of the state and find your letter of June 3rd with enclosures.

Although I have not visited the Jubilee Mine since I made the examination for you I have kept in touch with the general situation to some extent and you may be interested to know that some time ago a mining engineer named Miles Carpenter took a lease on a portion of the Jubilee; I believe the old Whipsaw shaft, and tried to produce a certain amount of shipping ore. He gave up the attempt very speedily and I was told by one of his associates that the original samples had been salted and that he was thoroughly disgusted with the parties who got him into the venture.

A short time ago a mining operator named Pike, who is developing some other properties in that vicinity, called at my office and told me that he had made a thorough investigation of the Jubilee and was unable to find anything of value and considered the property to be entirely worthless, all of which tends to confirm my own findings.

I have noted with interest the contents of the letter which Mr. Harris is sending to the stockholders dated May 15th and I am wondering if the statement in the second paragraph of that letter is not an out and out falsehood since he states that he had served the company without compensation whereas it appears from your letter that he made claims for a large amount of salary as well as for compensation for his wife and son and secured judgment for this amount against the company.

As far as his criticism of my findings is concerned I do not feel greatly worried on this score and of course I know nothing concerning the samples which he sent to the University of Arizona nor the location from which these were obtained. It is perfectly possible that there is primary ore on the property and that some of this material in very small



2- Mr. Harry Hawley

quantity may carry substantial values but a few samples do not make a mine and it is quite immaterial whether an ore body is primary or secondary unless it will actually pay to work and I am firmly of the opinion that there is no substantial quantity of pay ore in any of the workings which were open at the time of my inspection nor do I believe that any such material has since been developed.

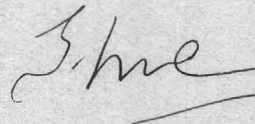
I think you are entirely justified in taking exception to the criticism of your own activity and policy and it will, in my opinion, be a great shame if Harris is able to persuade any of the old Consolidated Arizona Stockholders or others to invest any more money in this most unattractive mining venture.

Our local Federal Attorney, Frank Flynn, is, I believe, quite active in his efforts to prevent mining frauds and to prosecute for misuse of the mails and you may have noted the results of the recent trial of various promoters and officials of the El Oro Mines of New Mexico which was held in Dallas, and one of our local promoters was at the same time sent up for eighteen months on account of a swindle in connection with another property.

I do not believe that there are any <sup>technical</sup> statements in the circular which Mr. Harris issued on May 15th that could be objected to by the Federal authorities, although the inferences and insinuations are certainly most misleading and in your case might be considered as more or less libelous, but I much doubt if you could ever recover any substantial damages from Harris who will probably have no funds unless the stockholders respond to his appeal.

I shall be glad to be kept in touch with the developments in this matter and if at any time I can cooperate towards preventing the loss of any additional money it will always be a pleasure to do so.

Yours very truly,



GMC:DF



*File*

Phone 570

802 AMERICAN NATIONAL INSURANCE BLDG.  
GALVESTON, TEXAS

OFFICERS

February 3, 1937.

BEN SASS  
President.  
Galveston, Texas.  
Ben Blum Co.

T. R. HANCOCK,  
Vice-President.  
Galveston, Texas.  
President Tosco Steamship Lines.

V. J. HARRIS,  
Vice-President.  
Wenden, Arizona.  
Member Ninth Arizona Legislature.

W. B. HARRIS,  
Secretary.  
Superintendent of Mine.

JULES BLOCK,  
Treasurer.  
Galveston, Texas.  
Exporter of Metals.

George M. Colvocoresses, Esq.,  
Phoenix, Arizona.

My dear Mr. Colvocoresses:

I thank you for your kind lines of the 1st instant, upon the subject of the report of Mr. Houle upon the Jubilee:

I have read all that you say with deep interest and believe there is sufficient in your report and that of Mr. Houle to convince the most ardent, even against his will:

certainly I am heartily of your opinion, and with renewed thanks, remain, dear Sir,

Sincerely yours,

HHSr:MEW

DIRECTORS

PETER GENGLER,  
Galveston, Texas.  
Pres. Peter Gengler Grocery Co.

M. J. SASS,  
Galveston, Texas.

HERMAN BORNEFELD,  
Galveston, Texas.  
Of the firm Fowler & McVitie.  
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Galveston, Texas.  
CHAS. B. WARD,  
Phoenix, Ariz.

Depository—  
W. L. Moody & Co.,  
Galveston, Texas.

Phoenix National Bank,  
Phoenix, Ariz.



February 1st, 1937

Mr. Harry Hawley  
Consolidated Arizona Mines  
802 American National Insurance Bldg.  
Galveston, Texas

RE: JUBILEE MINE

Dear Mr. Hawley:

Your letter of January 27th was duly received and I have read with much interest Houle's report on the Jubilee.

Although his discussion of the subject follows somewhat different lines from my own I note that in the main our opinions seem to be very similar and particularly that his conclusion is identical with my own and strongly advises you to discontinue an entirely useless expenditure of money on a most unpromising mining development.

I think that among the main points which both Houle and I have tried to emphasize is the fact that practically all of the pockets and shoots of high grade ore which have been found at or near this property are of secondary origin and under these particular conditions cannot be expected to represent any substantial tonnage in the future as none of them has ever amounted to anything substantial in the past; that the primary ores where found are invariably too low grade to pay for mining and shipping and that there is absolutely no reason to believe that there will be any improvement in this regard or that any pay ore could ever be mined except in small quantities from the secondary pockets or by very careful hand sorting of primary material, which is a prohibitive expense.

I am absolutely in agreement with Houle's summary and conclusion, particularly the last two paragraphs of his report and I therefore feel that any further comment or advice would be superfluous.

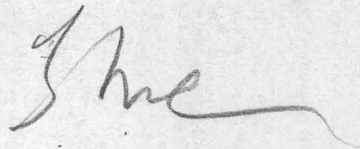
It is a matter of deep regret to me that you and your associates should have expended in the first instance so much money in the attempt to develop the Jubilee property but I presume that you will all feel convinced that it is time to write off your losses on this particular venture even though Harris or some of his local friends may still try to convince you that both Houle and I have been entirely

2- Mr. Harry Hawley

mistaken. It has always been my opinion that two heads were better than one and that in any controversy of this nature it was always wise to employ at least two reputable mining engineers and if you will recall I was really pleased that my work was to be checked over by a first-class man and I have had no doubt from the first as to the conclusions which Houle would reach.

I can only trust that at some future time you may find an opportunity to engage in a more favorable mining venture under proper guidance and eventually recover your past losses and register a substantial profit from an industry with which to date your relations have been decidedly unfortunate.

Yours very truly,



GMC: DF



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*Jubilee mini file*

Galveston, February 6, 1939

PLEASE REFER TO NO.

My dear Mr Colvocoresses:

To hear from you was a great pleasure, and I am especially appreciative of your kind lines of the 2nd instant, enclosing clipping from the Arizona Republican issued in Phoenix on February 1, 1939, concerning Mr Dunning, a so-called mining engineer:

When I saw the report that Harris sent over this man's signature I was convinced that it was fraudulent, and his plea of guilty in Federal Court in Arizona in another case has confirmed my conviction.

I am glad to hear that Mrs Nohlachek finds resources in her property near the hole in the ground known as the Jubilee, but I believe implicitly in the report that you made on the Jubilee and I, therefore, have no expectation that her experience with the Critic will develop at any time in the Jubilee.

With sincere thanks for your kind letter and the thought which prompted it, and with high regard, I remain, Sir

Sincerely yours,

*Harry Hawley*

Harry Hawley

HARRY HAWLEY JUN 21 1935

Consolidated Arizona Mines Company,  
Wenden, Arizona.

Attention Mr. W. B. Harris, Secretary.

Gentlemen:

Pursuant to your request I have made an examination of your mining property near Wenden, and will submit herewith a report on the conditions as I have found them.

#### CLAIMS AND LOCATION:

The property examined consists of fifteen unpatented mining locations, a total of about 250 acres, located in Cunningham Pass, in the Ellsworth Mining District, Yuma County, Arizona. The names of the claims are the Jubilee numbers one to six, the Hancock numbers one to six, and the Black Hawk numbers one to three.

#### TITLE:

Title is by location and is vested in the Consolidated Arizona Mines Company. Surrounding the above group is the Centroid Group, consisting of Centroid numbers one to twenty-eight inclusive, owned by Mr. W. B. Harris, which I have been advised has been offered to your company, and accepted by the Directors, subject to ratification by your stockholders.

#### GEOLOGY:

The general formation in the district and on the claims is a granite gneiss, probably of pre-Cambrian age. It might be explained that gneiss is a granitic rock that has been subjected to the metamorphic action of heat and pressure, after its original consolidation, resulting in a recrystallization of the original mineral constituents in a banded structure.

Following the period of heat and pressure, the cooling of the rock mass causes shrinking, bringing about the settling or subsidence of various areas. This settling took place in blocks of approximate rectangular shape and irregular size, with a main fault plane running north and south through Cunningham Pass, and minor fault planes, between the blocks, in a general east-west direction. Also the subsidence of those blocks on the west side of the main fault, settling downward along the fault under intense pressure, has caused fissures to be opened in these blocks, with a strike approximately parallel to the main fault, and dipping an angle of about 45 degrees toward it. Following this period of faulting, emanations from underlying magmas precipitated silica, iron, and economic minerals in the fault planes and fissures. Where conditions were sufficiently favorable, enough mineral was precipitated to form commercial ore.

The problem for the geologist is thus to locate those areas where a combination of favorable circumstances, each circumstance bringing some mineralization, has resulted in enrichments sufficiently great to form bodies of profitable ore. A vein may be strong and traceable on the surface or underground for miles, but will hardly ever, if ever, be found to be workable for any great length continu-



ously. The ore usually forms in shoots, and these shoots are enriched areas caused by a combination of circumstances. One circumstance is the vein itself. Other circumstances necessary to proper enrichment may be cross faults or cross veins, or a later or more extended period of movement in special areas. That is to say that the depositing of minerals is a very slow process and where a channel of mineralization is kept open or reopened by additional movement, the mineralizing action is prolonged, and the possibility of enrichment much greater.

This is all rather theoretical geology but applies so typically to the conditions at your property that it is well to have these basic principles in mind. At your property we have the main north and south fault through Cunningham Pass about a half mile east of your shaft. Then we have an east and west cross fault just south of your shaft, forming the boundary between two blocks. This fault has been filled by a dioritic intrusion forced up from below, forming a diorite dike, and is now known as the diorite dike. The south crosscut from the 300 level of the shaft cuts this dike and proceeds considerably beyond it. There is a distinct difference in the characteristics of the formation on either side of this dike. Some mineralization accompanied this intrusion but the dike having filled the fault, the fault was no longer a special line of weakness and when further settling took place a new fault zone was opened, parallel to the dike and a short distance south of it. More mineralization accompanied the opening of this channel and this fault zone is known as the "October" vein.

The settling of this block, resisted by friction at its main line of movement, (the Cunningham Pass north-south fault) opened a series of rather flat fractures, striking north and south and dipping toward this fault. The upper one of this series, as far as observed, crops strongly on the surface, has been mined to some extent, and is called the "Horse Whim" vein. A second member of the series is probably the vein on which most of the work was done at the bottom (259 ft.) of the old incline shaft. A third parallel vein shows still further east in a prospect hole, and what would constitute a fourth vein, still further east, is being worked on one of the Centroid claims about a half mile to the north.

As an illustration of how this series of veins was formed, one can imagine a book held in a horizontal position with one end pressed tightly against a wall. With sufficient downward pressure on the end in contact with the wall, to force it downward along the wall, a series of rather flat openings would be formed between the leaves of the book.

All of these openings or veins have been mineralized. Not that their entire area is commercial ore, but shoots of commercial ore have been found, and will be found, along these veins.

The contact of these veins with the east-west fault known as the October Vein makes especially good conditions for the formation of large and important ore bodies. However this fault zone

is so crushed and open that it has become a channel for the downward movement of surface water which has leached out and carried downward much of the valuable minerals originally deposited in the vein material. These minerals will be redeposited at a lower depth, forming a secondarily enriched zone.

We therefore have three conditions, each bringing mineralization or enrichment: first, the east-west fault zone, known as the "October" vein, which in itself was a mineralizing channel; second, the veins of the "Horse Whim" series, dipping rather flat to the east; and third, the secondary enrichment caused by the redeposition of minerals leached out by downward percolating surface waters. If development work can be projected to develop these areas where this triple condition is effective, important orebodies should be opened up.

#### **MINING FACILITIES:**

Your property is unusually accessible and well located for convenience and economical mining. It is only nine miles over an excellent highway to the town of Wenden on the Santa Fe Railroad. Freight rates on ore and concentrates from Wenden to the various custom smelters are reasonable.

There is evidently sufficient water in some of the underground workings for all purposes, including a good sized mill. The inclined shaft makes about 1200 to 1500 gallons daily. The Black Reef shaft, 2500 feet to the south makes about 25,000 gallons daily. A fifty ton mill only requires about 10,000 gallons daily, if appliances are used to recover most of the water.

#### **DEVELOPMENT:**

The attached plan map shows the development to date. Your main shaft, 300 feet deep, has been well located for permanent operations, being in the firmer country on the north side of the diorite dike and "October" fault, but is rather far from important objectives for present economical development. A crosscut has been run at the 300 level for 650 feet to the south, cutting the diorite dike at 200 feet, the "October" fault at 300 feet, and what appears to be the Horse Whim vein at 600 feet. A drift was run for 125 feet west on the "October" fault and then turned to the southwest as a crosscut. A drift and crosscut was also run for about fifty feet east along the "October" fault. In this east drift the mineralized condition is much improved and appears to be approaching an enriched condition.

The intersection of the Horse Whim vein and the "October" fault was cut in the "October" drift a short distance west of the main crosscut, but the condition there is so loose and so extensively leached, that further depth would be required on that intersection to expect a consistent ore body.

The incline shaft, also known as the Van Eck working, was sunk many years ago, and no one now in the district is very familiar with just what was done. From the dumps it is evident that considerable ore of excellent grade was encountered. Old maps show an extensive working trending to the



north, parallel to the Horse Whim vein, evidently following a parallel vein of that series. At the collar of the shaft there is a small vein striking east and west and it was naturally assumed that this was the vein on which the work was done. However this vein does not show on the surface for any appreciable distance and was never cut in the south cross cut from the main shaft. It is therefore evident that this apparent vein at the collar of the shaft is merely a short spur from one of the veins of the Horse Whim series, and the old map, showing the long working to the northwest, parallel to the Horse Whim, and no working to the west, parallel to the little vein at the collar, bears out this theory.

This work is at the 259 level, as compared to the collar of the main shaft. Such a vein would not be cut with any of the present workings on your 300 foot level but might be cut very soon by an extension of the east crosscut on the "October" fault, and its presence there may be responsible for the enriched condition which this crosscut appears to be entering.

The Horse Whim shaft and tunnel is also old working from which considerable ore of excellent grade was mined. On the surface above the Horse Whim tunnel there is a large area of strong gozzan, which is an indication of intense mineralization, and the continuation of which, underground, has always been an objective. This gozzan area is important and is an excellent indication, but its shape and size and trend have not been fully understood. It is merely the cropping of the Horse Whim vein at an area on the hillside where the dip of the hillside is the same as the dip of the vein, and as the gozzan is somewhat harder than the country rock, a large area of it has remained plastered on the hillside. This area is in the vicinity of the contact between the "October" fault and the Horse Whim vein, and is an excellent indication of what may be expected when development on that contact reaches a zone below the effects of oxidation and leaching.

#### **DEVELOPMENT ADVISED:**

I would advise continuing the east crosscut along the "October" fault for 300 feet. This should cut the intersection between the "October" fault and the Van Eck vein, a very favorable objective, and the crosscut already appears to be entering an enriched zone. It is possible that the intersection on your present 300 level may be too leached to form consistent ore, as it was at the intersection of the "October" fault and Horse Whim vein, but the present indications in the face of the crosscut are so favorable that the work should be done. Furthermore, much information would be gained that would serve as a more accurate guide for development at a deeper level.

I would also advise the continuation of the south crosscut for at least 300 feet along the Horse Whim vein. The condition in the face of that tunnel is also good and an important ore shoot may be opened at any time along that vein. With the results of that work in hand a further program can be planned, and if further depth is necessary,

a diamond drilling program might be most feasible. The facts that would be disclosed by the above plan of work, would be a direct guide for the location of diamond drill holes.

### CONCLUSION:

Your property has most excellent geological conditions for the formation of large and profitable orebodies. The development already completed has made an excellent showing and tends to prove the theories which the surface conditions indicate.

Further development as outlined is well warranted and advised, and should be carried on step by step, each step serving as a guide for further work.

It is my opinion that further proper development will disclose orebodies of a size and type that will be very profitable.

Respectfully submitted,

CHAS. H. DUNNING,  
Mining Engineer  
Registered State of Arizona  
Certificate No. 295

CHARLES H. DUNNING  
Mining Engineer  
Route No. 1  
Phoenix, Arizona

May 29th, 1935.

Consolidated Arizona Mines Company,  
Wenden, Arizona.

Attention Mr. W. B. Harris, Secy.

Gentlemen:

In further regard to your mines near Wenden it has occurred to me that a mill for the treatment of your own ore, and custom ore from other properties in the district, would be an especially feasible proposition, and I will submit herewith my ideas on such a proposition, as a supplement to my mining report.

Your present development hardly justifies a mill for your own property alone, yet you have some quantity of ore that could be profitably milled, and as your development progresses you will have more. Considerable ore on which a profit could be made will no doubt be taken out in running your development drifts alone, without attempting stopping operations, and proceeds from such ore would help materially in carrying on the expense of a development program.

Furthermore there are many properties within a radius of a few miles of your camp that can produce a quantity of milling grade ore, and are anxious to have some place where they can realize on such ore, and have confidence that they will get a square deal, but which do not have sufficient ore developed, or sufficient finances, to build a mill of their own. A custom mill would therefore be of great benefit to many small owners in the district, and would probably be the means of their developing some important mines.

Modern improvements in metallurgy have made it possible to obtain a high extraction on such ores as occur in that district with comparatively



simple processes, and a reasonable cost. Before attempting to design a mill you should have complete tests made to determine the details of design, but as a general rule it can be stated that most of the ore would be readily amenable to the flotation process, to be followed, possibly, by cyanidation of the tailings on the more oxidized ores.

The proper size for such a mill would be about 50 to 60 tons per day. The construction cost, with all new equipment, would be \$25,000 to \$30,000 exclusive of power plant. The operating cost should not be over \$2.00 per ton, and \$5.00 per ton would be a reasonable charge for handling custom ore.

You apparently have plenty of water for such a plant at the Black Reef shaft, one of the few places in the district where there is sufficient water. In regard to power it would be advisable to install a Diesel-electric plant, and in this case it would be well to make the power unit large enough to take care of your mine requirements also, as sooner or later you will need more power, and more economical power, for your mine work. Such a power plant would cost \$15,000 to \$20,000 complete.

I feel that a milling proposition as outlined above would be of much benefit and profit to yourselves and to others, and trust that you can arrange to carry out such a plan.

Very Truly Yours,

CHAS. H. DUNNING.

#### GENERAL MANAGER'S REPORT:

It is a pleasure to make this report to the stockholders of Consolidated Arizona Mines which is in fact a survey of the labors, trials and loyalty of our deceased President Ben Sass.

We have lost his constant counsel—we have lost his sympathy and understanding, his loyalty and kindness; to which we owe much in this world.

During the Summer of 1933 Ben Sass raised through his personal friends the finance necessary to continue with the development of the Jubilee Copper-Gold Mine. The mine having been shut down for over a year there was much rehabilitation of machinery to be done, and it was well into December of 1933 before the crew actually commenced to sink shaft.

Shaft sinking was continued throughout the winter until July, 1934, when a station was cut on the 300 foot level and cross cutting initiated toward the south.

Cross cutting was continued until October 15th, 1934, when a vein was encountered carrying chalcopyrite, hornite and gold. Much leaching was in evidence. Assays of picked samples in this vein were assayed by the President and returns as high as six per cent copper and twelve dollars in gold were had.

During October, November and part of December, 1934, drifting was prosecuted in the October vein, both east and west with the intent of cutting either a shoot of pay ore or a junction

*Proposed by having denominated by Board of*

*Copied**Copy***REPORT**

on the

**CENTROID CONSOLIDATED MINES COMPANY**

Formerly known as

**CONSOLIDATED ARIZONA MINES****JUBILEE PROPERTY**Ellsworth Mining District  
Wenden, Yuma County, Arizona**THE PROPERTY**

The Centroid Consolidated Mines Company was organized April 15, 1936 under the laws of the State of Arizona. The capitalization of the corporation is one million shares par \$1.00 per share. The authorized issue of stock permitted by the Arizona Corporation Commission is 100,000 shares at 10 cents per share and under this permit 57,630 shares have been issued and funds obtained to purchase a sheriff's sale deed for all of the holdings of the Consolidated Arizona Mines, known as the Jubilee group of mining claims. The sheriff sale deed is dated September 22, 1936.

The Jubilee group of claims comprised an irregularly located group of mining claims named Jubilee 1 to 6 inclusive, Hancock 1 to 6 inclusive and Black Hawk 1 to 3 inclusive making an area of nearly 250 acres of mineral bearing ground.

All of the Jubilee group of mining claims has been surrounded by twenty-eight new mining claim locations named Centroid and numbered 1 to 28 inclusive.

The Centroid Consolidated Mines Company holdings include at this time 44 mining claim locations forming a contiguous group located in the Cunningham Pass mineral area, Ellsworth Mining District, nine miles west of the town of Wenden, Yuma County, Arizona.

The Centroid Consolidated Mines Company was organized by William H. Harris recent manager and directing head of the development campaign of the Consolidated Arizona Mines holdings during the years 1933, 1934, and 1935.

**DISTRICT DEVELOPMENT**

The Ellsworth Mining District has received much development attention during the past fifty years. During the years of boom prices for copper metal, much prospecting was carried on in this range of hills, stimulated by partially successful copper mining operations first at the planet Mine and later at Swansea. The early operations were handicapped by lack of railroad transportation, however when the Parker cut-off of the Santa Fe Railroad system was built, the district was made readily accessible.

Since 1915 many attempts have been made to mine the surface oxidized ores of copper, gold and silver for profit in addition to a fairly thorough development in depth in the hope of finding bodies of rich primary ores (sulphide ores). Swansea, Bullard's Mine, Wenden Copper and the Critic have been often in the limelight but as yet are not to be classed as successful mining operations.

The entire district has been fully prospected for its surface showings of gold ores and gold bearing copper ores without finding pay ore sheets of sufficient size to warrant continuous operation except for short periods of time and certainly without profit.

The Cunningham Pass section has attracted the attention of mining companies



since the beginning of the war boom era of copper activity. At that time the Jubilee group was the scene of a serious development effort which continued for nearly ten years. This work resulted in sinking an inclined shaft (60 degrees) to a vertical depth of about 250 feet and much prospecting by drifting from the bottom of the shaft. In addition, surface gossan iron outcrops were tested by small shafts, tunnels, trenches and test pits around the entire area. The inclined shaft development is called the Van Eck Workings.

The Van Eck Workings have not been accessible for the past ten or twelve years, but the shaft waste dumps and reject piles indicate extensive diggings. Rejected materials on the waste dumps indicate some evidence of primary mineralization. Waste dumps also show much oxidized iron in the veins cut by the openings from this old incline shaft.

#### OLD MAPS

An old mine plan of this shaft and the workings from the shaft, is available giving valuable information as to the location of these diggings with respect to the recent development operation conducted by the Consolidated Arizona Mines during the years 1933, 1934, and 1935. The old mine plan unfortunately does not record geological nor mineralogical features and is therefore of little economic value at this time.

The information obtained from the old map has been traced and plotted on plan of the workings inspected in this examination, and is included with this report. The accuracy of this old map cannot be guaranteed, therefore the information it gives can be used only for illustrative purposes.

#### CONSOLIDATED ARIZONA MINES OPERATIONS

The Consolidated Arizona Mines during the years 1933, 1934 and 1935 resumed the development of the Jubilee group abandoned in 1924 by mine operators from the Jerome district.

This new development campaign directed by Mr. W. H. Harris as manager, with Geologist H. W. Yost, technical adviser, started a new two compartment vertical shaft, approximately 700 feet north of the Van Eck Incline planning a deep development of the veins and mineral showing on the Jubilee group of claims.

The work progressed rapidly. The shaft was sunk 300 feet and at the bottom about 1,200 feet or new openings, cross cuts and drifts were advanced mostly to the south and southwest of the new vertical shaft.

Two well known mining engineers have reported on the results obtained in this development campaign.

The Jubilee property was examined for Consolidated Arizona Mines in July 1935 by Mr. George M. Colvocoresses, E. M. of Phoenix, Arizona who recommended in his report that further development of this property be discontinued at once and advised salvaging plant and equipment.

Operations were discontinued and the mine workings began to fill up with water. On January 1, 1937 the water level in the mine workings is said to be forty feet above the 300 foot level of the Vertical Shaft.

A second examination and report on the property was made by C. H. Dunning, E. M. Phoenix, Arizona for Mr. W. H. Harris. This report is accompanied by a Brunton Compass survey and plan of all the workings on the property. The Dunning report advises further development of the October vein out 300 feet south of the shaft and a further advance of the South cross cut because the face of this crosscut was about to enter the Horse Whim Vein. According to Dunning's inspection there are good enough mineral showings on the 300 level to warrant carrying on both lateral development to the southwest on the 300 foot level, and a new campaign to develop the property to greater depth.

The map and plan of the workings submitted by Dunning is lacking in detail data of the geological evidence obtained by development work on the 300 level of the Vertical shaft therefore making it impossible to correlate the story of the findings on this level with the ore or mineral showings now observable in accessible workings nearer surface.



To obtain an exact and accurate report of conditions exposed in the underground development work, it would be necessary to unwater the Vertical Shaft workings.

After a shut down period of 18 months, the task of unwatering the works and retimbering probably caved deifts and crosscuts would entail a considerable expense, probably in excess of \$5,000.00. This expense could be justified only if some new ore exposure would warrant the belief that some geological data had been neglected or had not been observed in previous development campaigns.

#### RECENT DEVELOPMENTS

During the past year leasing operations have been carried on in a small way from an old prospect shaft known as the Horse Whim shaft.

The Horse Whim shaft is located approximately 700 feet south 35 degrees west from the new Vertical shaft. The old shaft follows a flat dipping silicious iron vein which in places pans free gold. The outcrop of this vein is the strong iron showing about 350 feet northwest of the Horse Whim shaft. The old shaft had been sunk to a depth of 185 feet, the dip varying from 37 degrees to 55 degrees. Leasers continued the sinking to 250 feet incline depth after having opened up a small lense of gold bearing copper ore of shipping grade on the 185 level in a drift driven a distance of 50 feet northwest of the shaft.

By careful mining and considerable sorting of mined material a small car load shipment was sent to the Magma Smelter, a custom smelting plant at Superior, Arizona.

#### The Ore Shipment:

Weight Wet	80,260 lbs	Moisture	3.6%
Dry Weight	77,371 lbs.		

#### Assay

Copper	-	0.91%	Silver	-	0.40 ozs.
Gold	-	0.43 ozs.	Iron	-	24.40 %
Silica	-	53.43 %			

The net return after payment of smelting charges was \$421.62 for the 38.685 Tons. The ore netted \$11.13 per ton.

On the strength of this small shipment of ore, an effort has been made to stimulate renewed interest in the Jubilee property, with suggestions that former stock holders of Consolidated Arizona Mines could recoup their losses in Consolidated Arizona Mines by some equitable arrangement to acquire equities in the new Centroid Consolidated Mines Co. for their old stock.

Upon request of Mr. Harry Hawley, President of the Consolidated Arizona Mines an examination was made of the accessible workings on the Jubilee group and other properties in the Cunningham Pass area, January 2, 3, and 4, 1937. The report of this inspection follows:

#### GEOLOGY

The area around the Jubilee group of claims is the old Pre-Cambrian rocks of granitic structure, gneiss capped by the old schist. There is throughout all of the area much faulting and some sheering. The faults are marked by arroyos or small draws leading up to gaps in the hills. The major fault of the district marks Cunningham Pass. The fault displacement is not large, probably not exceeding 300 feet. The strike of the fault is N. 55 degrees west. Occasional stains of copper, quartz and specularite outcrop at irregular intervals. In general the major fault is marked by a clay gouge, much sheered but only very sparse signs of mineralization.

Minor faults radiate in all directions from the Cunningham Pass major fault; the more prominent are the step faults which break off the main range to step down into the valley.



These faults strike East to West parallel to the Cunningham Pass break and are cut by step faults striking N.W. - S.E. dipping eastward at fairly steep angles 50 degrees to 65 degrees.

Between the fault walls there is much sheered material, ground up granite, gneiss, some specularite and a spar filling of calcite and barite. An occasional copper stain is the clue to mineralization.

The granite - gneiss structure was intruded in recent times by dikes and sills of diorite, a semi-basic eruptive rock which shows some iron and copper minerals as sulphides. As a whole, wherever exposed or observed, this intrusive rock usually mentioned in this district as being responsible for ore depositions of value is, to say the least, very meagrely mineralized.

On surface the rock is dense, hard and fresh looking. The reject dumps from all of the prospect shafts show much diorite material, fresh in appearance (unaltered) and although this basic rock shows pyritic mineralization, it is more often a tarnished pyrite (iron sulphide) rather than copper bearing sulphide.

#### VEINS AND ORE OCCURANCE

The prominent outcrop of the district is the iron blowout or gossan near the top of the hill west of the mining camp location. Much of this iron outcrop is a silicious hematite showing occasional copper stains and is scattered around an area about 200 feet long over a width of thirty or forty feet. The cropping however is composed of scattered blocks of iron vein matter varying in thickness from 18 inches to 4 feet and represents parts of a vein filling which had been eroded away, later breaking off to step close to its original position.

The vein and the fragments nearby have been trenches and sampled extensively for copper and gold values. The material on the whole is definitely of very low value although selected spots might produce a small tonnage of gold bearing copper ore profitable for a small leasing operation.

A selected sample in the trench above the upper tunnel on this vein assayed: Gold - \$5.60 per ton, Silver -  $\frac{1}{2}$  oz per ton and Copper - 4.88%. At present metal prices, material of this character and value could be shipped to custom smelters at a small profit, but could be worked only by careful sorting done in successful leasing operations. The iron vein has been developed 100 feet vertically below its highest surface outcrop by a tunnel striking N. 26 degrees West. The tunnel follows a vein 18 inches to 5 feet wide for a length of 165 feet. An occasional showing of copper carbonate ore occurs on the footwall of this vein and is a typical secondary product derived from oxidation, leaching and concentration, resultant from spots of primary sulphide ore.

The sample of the best of the material at 145 feet from the mouth of the tunnel assayed: Gold - \$2.10 per ton, Silver -  $\frac{4}{10}$  oz. per ton, Copper - 10.74%. The sample represents a ten inch stringer of ore exposed for a length of 14 feet, and a few tons of ore could be profitably extracted here by leasers.

The vein with its strong iron outcrop strikes N. 20 degrees W. and dips east at approximately 45 degrees.

Along its strike to the south east 300 feet from the tunnel entrance, the iron vein has been explored by the Horse Whim shaft, an incline now 250 feet deep. This working is a very crude prospect shaft.

The vein is continuous to the full depth of the shaft, although showing only occasional spots of copper stained material which would carry gold values.

Again the vein can be described as the resultant of the oxidation leaching concentration and final reprecipitation of the values carried downward as erosion progresses. Enriched values from what was once a primary ore low in copper, gold, and silver values.



This secondary concentration is found in the Horse Whim shaft workings on the 185 level in the northwest drift and a prospect raise above this drift. A small lense of gold bearing copper ore is now indicated by the leasing operations.

The Horse Whim shaft was sunk 65 feet deeper and now at the 250 foot depth on the incline, a drift has been advanced 60 feet to the northwest. The ore lense is nearly 20 feet long with 3 feet of vein matter showing spotted values in gold and copper. Sample 7 assayed: Gold 17g, Silver - Trace, Copper - 0.76%. Further development by raising to the old 185 level will expose a small tonnage of ore which after careful mining and sorting will permit shipping up to 150 tons of ore.

The face of the drift going northwest shows nothing of value. Sample 6, assayed: Gold - Trace, Silver - 0.0. The ore sheet is an egg shaped lense which tapers off into barren vein material. This example of an ore pocket is common to this district.

From the plan of the mine levels as plotted and shown on the accompanying map, it is reasonable to suppose that some of the development openings from both the Van Eck and the new Vertical shaft should have cut the extension downward of the Horse Whim ore showing.

This is also shown pictured on Section A - A included with this report.

A careful mapping of the geology of the 300 foot south crosscut and the southwest crosscut after passing in and out of the October vein would have eliminated any doubts.

#### VAN ECK INCLINE SHAFT

The Van Eck workings from the old incline shaft are also within the downward extension of the Horse Whim vein.

The Van Eck Incline diggings cut across the October vein. Much of the waste rock on the dump shows diorite with a sprinkle of iron pyrite also a little chalcopyrite.

Two samples were gathered up on the dumps at the Incline shaft.

Sample 8. - Primary ore, specularite and pyrite assayed: Gold - 70g per ton; Silver - 3/10 oz.; Copper - 0.76%.

Sample 9. - Massive specularite with pyrite and chalcopyrite assayed: Gold - \$1.05 per ton; Silver - 4/10 oz.; Copper - 2.44%.

#### MAIN VERTICAL SHAFT

The location of this new working shaft would have been well placed if ore had been known to exist in the old Van Eck workings. It would appear that more attention should have been given to finding the continuation downward of the strong vein showing exposed in the upper tunnel just under the outcrop.

The fractured zone in the gneiss just northeast of the iron vein and south of the diorite dike shows some copper staining and is probably the most favorable zone in the entire group for finding something of mineral value. This is marked Area B on the plan.

The waste dump at the Vertical shaft shows vein filling of specularite and barite. Sample 1 - Gold - 35g; Silver - Trace; Copper - 0.10%. This material is slightly pyritic.

Sample 2. The diorite dike shows pyritic vein matter with a spar filling which assayed: Gold - \$0.17; Silver - Trace; Copper - 1.59%. This sample was selected from the waste dump at Vertical shaft.

Sample 3, picked off the waste dump, is an example of the Specularite (iron oxide) encountered in massive form at some point in the main crosscut from the Vertical shaft. This material assayed: Gold - \$0.17; Silver - Trace.

The diary or mine log from the Manager's day book reports daily showings of mineral but very few assays were run of the materials cut in the



development work. It is therefor inferred that the mineralization showed only traces of copper, if any. During the period July to October, several dikes of diorite were cut, each accompanied by some copper mineralization on the form of chalcopyrite and bornite but no assays were made of these showings.

While drifting on the October vein, November to December 1934, 12 samples were assayed showing traces of copper up to 1.2% copper.

One sample of a footwall streak assayed 2.10% copper dated November 25, 1934.

It is reasonably sure that the showing of copper gold ores must have been very poor indeed in spite of one entry in the log that between November 11 and 17, the October vein was being drifted on daily and reported to show mill ore. Mill ore for this mine would require not less than a 3% copper content and it is certain from the looks of the reject piles at the shaft, that nothing of that character was ever found in any of the workings.

#### NEARBY PROSPECTS

Just over the Cunningham pass, west of the Jubilee group, are located many shafts, tunnels and workings of all sorts where prospecting and development work has been carried on during the past 25 years.

The most extensive of these explorations is the Little Giant property developing the west continuation of the main Cunningham Pass fault. The reject dump indicates more than 1,500 feet of development openings. Some low grade copper bearing pyritic material was observed. The property has been abandoned.

The Critie and Wendon properties, situated west and south of the Little Giant, were not visited.

#### SUMMARY AND CONCLUSION

Waste and reject piles around the several shafts sunk to develop the surface exposures of veins around the Jubilee group of claims are stock piles of very lean oxidized or pyritic vein or shear zones with only very occasional indications of copper ores. Ore areas of any consequence would be marked by stronger depositions of oxidized copper ores or the gangue material resulting from leaching out of copper bearing pyrite. The vein matter would in that event show more iron type of gangue, accompanied by silicious porous goosan. The surface goosan outcrops are dense and tight jaspery iron with localized spots showing a little copper staining, indicating an original very low copper content in the primary sulphide.

The enriched spots found so sparingly are truly the kind found by leaching secondary concentration and the lenses, pockets or small kidneys of these secondary ores will never make enough tonnage to justify a mining operation large enough to warrant other than a small time leasing job.

The Jubilee group of claims formerly under development by the Consolidated Arizona Mines has been sufficiently prospected to date to prove that at no time in the future will a sufficient tonnage of gold bearing copper ore be found to make this property a successful mining venture.

Respectfully submitted,

(Sgd) Arthur Houle, E. M.  
Arthur Houle, E. M.

Consolidated Arizona Mines Company,  
Wenden, Arizona.

Attention Mr. W. B. Harris, Secretary.

Gentlemen:

Pursuant to your request I have made an examination of your mining property near Wenden, and will submit herewith a report on the conditions as I have found them.

CLAIMS AND LOCATION:

The property examined consists of fifteen unpatented mining location, a total of about 250 acres, located in Cunningham Pass, in the Ellsworth Mining District, Yuma County, Arizona. The names of the claims are the Jubilee numbers one to six, the Hancock numbers one to six, and the Black Hawk numbers one to three.

TITLE:

Title is by location and is vested in the Consolidated Arizona Mines Company. Surrounding the above group is the Centroid Group, consisting of Centroid numbers one to twenty-eight inclusive, owned by Mr. W. B. Harris, which I have been advised has been offered to your company, and accepted by the Directors, subject to ratification by your stockholders.

GEOLOGY:

The general formation in the district and on the claims is a granite gneiss, probably of pre-Cambrian age. It might be explained that gneiss is a granitic rock that has been subjected to the metamorphic action of heat and pressure, after its original consolidation, resulting in a recrystallization of the original mineral constituents in a banded structure.

Following the period of heat and pressure, the cooling of the rock mass causes shrinking, bring about the settling or subsidence of various areas. This settling took place in blocks of approximate rectangular shape and irregular size, with a main fault plane running north and south through Cunningham Pass, and minor fault planes, between the blocks, in a general east-west direction. Also the subsidence of those blocks on the west side of the main fault, settling downward along the fault under intense pressure, has caused fissures to be opened in these blocks, with a strike approximately parallel to the main fault, and dipp-



ing an angle of about 45 degrees toward it. Following this period of faulting emanations from underlying magmas precipitated silica, iron, and economic minerals in the fault planes and fissures. Where conditions were sufficiently favorable, enough mineral was precipitated to form commercial ore.

The problem for the geologist is thus to locate those areas where a combination of favorable circumstances, each circumstance bringing some mineralization, has resulted in enrichments sufficiently great to form bodies of profitable ore. A vein may be strong and traceable on the surface or underground for miles, but will hardly ever, if ever, be found to be workable for any great length continuously. The ore usually forms in shoots, and these shoots are enriched areas caused by a combination of circumstances. One circumstance is the vein itself. Other circumstances necessary to proper enrichment may be cross faults or cross veins, or a later or more extended period of movement in special areas. That is to say that the depositing of minerals is a very slow process and where a channel of mineralization is kept open or reopened by additional movement, the mineralizing action is prolonged, and the possibility of enrichment much greater.

This is all rather theoretical geology but applies so typically to the conditions at your property that it is well to have these basic principles in mind. At your property we have the main north and south fault through Cunningham Pass about a half mile east of your shaft. Then we have an east and west cross fault just south of your shaft, forming the boundary between two blocks. This fault has been filled by a dioritic intrusion forced up from below, forming a diorite dike, and is now known as the diorite dike. The south crosscut from the 300 level of the shaft cuts this dike and proceeds considerably beyond it. There is a distinct difference in the characteristics of the formation on either side of this dike. Some mineralization accompanied this intrusion but the dike having filled the fault, the fault was no longer a special line of weakness and when further settling took place a new fault zone was opened, parallel to the dike and a short distance south of it. More mineralization accompanied the opening of this channel and this fault zone is known as the "October" vein.

The settling of this block, resisted by friction at its main line of movement, (the Cunningham Pass north-south fault) opened a series of rather flat fractures, striking north and south and dipping toward this fault. The upper one of this series, as far as observed, crops strongly on the surface, has been mined to some extent, and is called the "Horse Whim" vein. A second member of the series is probably the vein on which most of the work was done at the bottom (259) ft. of the old incline shaft. A third parallel vein shows still further east in a prospect hole, and what would constitute a fourth vein, still further east, is being worked on one of the Centroid claims about a half mile to the north.

As an illustration of how this series of veins was formed, one can imagine a book held in a horizontal position with one end pressed tightly against a wall. With sufficient downward pressure on the end in contact with the wall, to force it downward along the wall, a series of rather flat openings would be formed between the leaves of the book.

All of these openings or veins have been mineralized. Not that their entire area is commercial ore, but shoots of commercial ore have been found, and will be found, along these veins.

The contact of these veins with the east-west fault known as the October Vein makes especially good conditions for the formation of large and important ore bodies. However this fault zone is so crushed and open that it has become a channel for the downward movement of surface water which has leached out and carried downward much of the valuable minerals originally deposited in the vein material. These minerals will be redeposited at a lower depth, forming a secondarily enriched zone.

We therefore have three conditions, each bringing mineralization or enrichment: first, the east-west fault zone, known as the "October" vein, which in itself was a mineralizing channel; second, the veins of the "Horse Whim" series, dipping rather flat to the east; and third, the secondary enrichment caused by the redeposition of minerals leached out by downward percolating surface waters. If development work can be projected to develop these areas where this triple condition is effective, important orebodies should be opened up.



#### MINING FACILITIES:

Your property is unusually accessible and well located for convenience and economical mining. It is only nine miles over an excellent highway to the town of Wenden on the Santa Fe Railroad. Freight rates on ore and concentrates from Wenden to the various custom smelters are reasonable.

There is evidently sufficient water in some of the underground workings for all purposes, including a good sized mill. The inclined shaft makes about 1200 to 1500 gallons daily. The Black Reef shaft, 2500 feet to the south makes about 25,000 gallons daily. A fifty ton mill only requires about 10,000 gallons daily, if appliances are used to recover most of the water.

#### DEVELOPMENT:

The attached plan map shows the development to date. Your main shaft, 300 feet deep, has been well located for permanent operations, being in the firmer country on the north side of the diorite dike and "October" fault, but is rather far from important objectives for present economical development. A crosscut has been run at the 300 level for 650 feet to the south, cutting the diorite dike at 200 feet, the "October" fault at 300 feet, and what appears to be the Horse Whim vein at 600 feet. A drift was run for 125 feet west on the "October" fault and then turned to the southwest as a crosscut. A drift and crosscut was also run for about fifty feet east along the "October" fault. In this east drift the mineralized condition is much improved and appears to be approaching an enriched condition.

The intersection of the Horse Whim vein and the "October" fault was cut in the "October" drift a short distance west of the main crosscut, but the condition there is so loose and so extensively leached, that further depth would be required on that intersection to expect a consistent ore body.

The incline shaft, also known as the Van Eck working, was sunk many years ago, and no one now in the district is very familiar with just what was done. From the dumps it is evident that considerable ore of excellent grade was encountered. Old maps show an extensive working

trending to the north parallel to the Horse Whim vein, evidently following a parallel vein of that series. At the collar of the shaft there is a small vein striking east and west and it was naturally assumed that this was the vein on which the work was done. However this vein does not show on the surface for any appreciable distance and was never cut in the south cross cut from the main shaft. It is therefore evident that this apparent vein at the collar of the shaft is merely a short spur from one of the veins of the Horse Whim series, and the old map, showing the long working to the northwest, parallel to the Horse Whim, and no working to the west, parallel to the little vein at the collar, bears out this theory.

This work is at the 259 level, as compared to the collar of the main shaft. Such a vein would not be cut with any of the present workings on your 300 foot level but might be cut very soon by an extension of the east crosscut on the "October" fault, and its presence there may be responsible for the enriched condition which this crosscut appears to be entering.

The Horse Whim shaft and tunnel is also old working from which considerable ore of excellent grade was mined. On the surface above the Horse Whim tunnel there is a large area of strong gozzan, which is an indication of intense mineralization, and the continuation of which, underground, has always been an objective. This gozzan area is important and is an excellent indication, but its shape and size and trend have not been fully understood. It is merely the cropping of the Horse Whim vein at an area on the hillside where the dip of the hillside is the same as the dip of the vein, and as the gozzan is somewhat harder than the country rock, a large area of it has remained plastered on the hillside. This area is in the vicinity of the contact between the "October" fault and the Horse Whim vein, and is an excellent indication of what may be expected when development on that contact reaches a zone below the effects of oxidation and leaching.

DEVELOPMENT ADVISED:

I would advise continuing the east crosscut along the "October" fault for 300 feet. This should cut the intersection between the "October"



fault and the Van Eck vein, a very favorable objective, and the cross-cut already appears to be entering an enriched zone. It is possible that the intersection on your present 300 level may be too leached to form consistent ore, as it was at the intersection of the "October" fault and Horse Whim vein, but the present indications in the face of the cross-cut are so favorable that the work should be done. Furthermore, much information would be gained that would serve as a more accurate guide for development at a deeper level.

I would also advise the continuation of the south crosscut for at least 300 feet along the Horse Whim vein. The condition in the face of that tunnel is also good and an important ore shoot may be opened at any time along that vein. With the results of that work in hand a further program can be planned, and if further depth is necessary a diamond drilling program might be most feasible. The facts that would be disclosed by the above plan of work, would be a direct guide for the location of diamond drill holes.

CONCLUSION:

Your property has most excellent geological conditions for the formation of large and profitable orebodies. The development already completed has made an excellent showing and tends to prove the theories which the surface conditions indicate.

Further development as outlined is well warranted and advised, and should be carried on step by step, each step serving as a guide for further work.

It is my opinion that further proper development will disclose orebodies of a size and type that will be very profitable.

Respectfully submitted,

CHAS. H. DUNNING,  
Mining Engineer  
Registered State of Arizona  
Certificate No. 295

CHARLES H. DUNNING  
Mining Engineer  
Route No. 1  
Phoenix, Arizona

May 29th, 1935.

CHARLES H. DUNNING  
Mining Engineer  
Route No. 1  
Phoenix, Arizona

May 29th, 1935.

Consolidated Arizona Mines Company,  
Wenden, Arizona.

Attention Mr. W. B. Harris, Secretary.

Gentlemen:

In further regard to your mines near Wenden it has occurred to me that a mill for the treatment of your own ore, and custom ore from other properties in the district, would be an especially feasible proposition, as a supplement to my mining report.

Your present development hardly justifies a mill for your own property alone, yet you have some quantity of ore that could be profitably milled, and as your development progresses you will have more. Considerable ore on which a profit could be made will no doubt be taken out in running your development drifts alone, without attempting stopping operations, and proceeds from such ore would help materially in carrying on the expense of a development program.

Further more there are many properties within a radius of a few miles of your camp that can produce a quantity of milling grade ore, and are anxious to have some place where they can realize on such ore, and have confidence that they will get a square deal, but which do not have sufficient ore developed, or sufficient finances, to build a mill of their own. A custom mill would therefore be of great benefit to many small owners in the district, and would probably be the means of their developing some important mines.

Modern improvements in metallurgy have made it possible to obtain a high extraction on such ores as occur in that district with comparatively simple processes, and a reasonable cost. Before attempting to design a mill you should have complete tests made to determine the details of design, but as a general rule it can be stated that most of the ore would be readily amenable to the flotation process, to be followed, possibly, by cyanidation of the tailings on the more oxidized ores.



The proper size for such a mill would be about 50 to 60 tons per day. The construction cost, with all new equipment, would be \$25,000 to \$30,000 exclusive of power plant. The operating cost should not be over \$2.00 per ton, and \$5.00 per ton would be a reasonable charge for handling custom ore.

You apparently have plenty of water for such a plant at the Black Reef shaft, one of the few places in the district where there is sufficiently water. In regard to power it would be advisable to install a Diesel-electric plant, and in this case it would be well to make the power unit large enough to take care of your mine requirements also, as sooner or later you will need more power, and more economical power, for your mine work. Such a power plant would cost \$15,000 to \$20,000 complete.

I feel that a milling proposition as outlined above would be of much benefit and profit to yourselves and to others, and trust that you can arrange to carry out such a plan.

Very truly yours,

CHAS. H. DUNNING.

## REPORT ON JUBILEE MINE

July 20th, 1935.

Dear Sir:

I beg to submit the following report based on my examination of your property on July 17th and 18th, 1935.

### CONCLUSION:

For the past twenty years or more various parties have made serious efforts to develop commercially valuable gold and copper ores in the claims which you now hold, and for this purpose have spent over \$100,000 without finding anything more than a few small pockets or stringers of pay ore. With these trifling exceptions none of the material so far opened up carries an average value of more than \$2.00 per ton, and most of the vein matter and gouge is almost barren.

I consider that the low limit for mill ore in substantial quantity is \$7.00 per ton.

It is my opinion that this venture was based on a mistaken impression regarding the true character of the veins which, in my judgment, can never be expected to contain any substantial quantity of pay ore even at much greater depth and now that their character has been so largely determined, I feel that it would be a great mistake to continue a quite hopeless search for values which do not exist or to increase your present investment and loss. The reasons for this conclusion will be apparent from the balance of this report.

### Location:

The property known as the Jubilee, now owned by the Consolidated Arizona Mines, comprises 15 unpatented mining claims located in a very irregular manner and covering about 250 acres. These claims are said by Mr. Harris to be in good standing with all assessment work done for the current year.

The location is in Cunningham Pass, Yuma County, Arizona, 9 miles by good road north from the town of Wenden on the Parker Branch of the Santa Fe railroad. The names of the claims are Jubilee 1 to 6 inclusive; Hancock 1 to 6 inclusive; Black Hawk 1 to 3 inclusive.

### HISTORY:

Mining in this district dates back for a number of years, but I



could find no record of any work on the Jubilee prior to about 1915, when it was known as the Desert Mine. For a time it was developed by some people from Jerome, Arizona, under the direction of Tom Nagle and R. W. Hollis. This company sank the inclined shaft known as the Van Eck, which was visited on two occasions by engineers in my employ in 1917 and 1918. Considerable development was carried on and a few shipments of sorted ore were made at intervals, but the work was disappointing and was discontinued in 1918, subsequent to which I believe that the property passed through several hands before being acquired by your company in about 1930.

#### GEOLOGY:

The country is mainly granitic rock, that is granite, gneiss and similar rocks often with a schistose structure. They are pre-Cambrian in age and have been intruded by basic eruptives mainly diorite. An extensive fault seems to follow the line of Cunningham Pass and toward this many smaller faults and shear zones trend from various directions. The rocks have been greatly metamorphosed and in the faults and shear zones as well as in the veins there is much gouge and the filling is often a brecciated country rock associated with specular hematite and sometime with copper, quartz and spar. The gold and copper values when present appear to have been derived from the leaching and concentration of sulphides contained in the basic intrusive rocks, but the great percentage of the veins carry only iron and other minerals of no commercial value, and the character of the oxidised material will always indicate what may be expected at greater depth. Gold, silver and copper are the only commercially valuable minerals found in this district.

#### DEVELOPMENT WORK AND ORE OCCURENCE:

Some distance west of the present camp at the Jubilee there exists a heavy out-crop of goethite or iron oxide which outlines a fairly strong vein that doubtless first attracted the attention of prospectors. The goethite itself appears to be barren of values, but a short distance below the out-crop an adit tunnel was run in the hillside to the N.W. and following along the vein for a distance of some 60 feet or more. Near the portal of this adit the vein shows some stains of copper and is said to have panned gold. I sampled this showing, as well as some of

material which had been mined on the dump and obtained an assay of gold 0.06 oz. per ton, value \$2.10 per ton.

This vein strikes about North 20 degrees West and continuing along the out-crop toward the South-east one comes upon the Horse Whim shaft approximately 300 feet from the tunnel and some 70 feet lower in elevation. At this point the vein dips about 32 degrees to the Northeast and the shaft has been sunk on the dip of the vein for a distance of 200 feet giving it a vertical depth of close to 100 feet. At the bottom of the shaft drifts have been run along the vein some 50 feet to the Southeast and about 40 feet to the Northwest. The Southeast drift was filled to the top with ore recently mined and could not be inspected, but in the face of the Northwest drift two miners were working at the time of my visit, and here I took two samples, the first representing the total width of the vein, about 5 feet, and containing \$0.35 gold value per ton and the second representing only a small stringer of the hanging wall section of the vein, about 12 inches in width and obviously containing the richest ore. This assayed \$10.85 per ton in gold.

A third sample was taken from the muck pile in the other drift, and should be fairly representative of the unsorted ore which has been mined during the past few weeks. This sample contained gold \$1.65, silver \$0.07, copper 0.5%. This would, I think, represent the average grade of ore from this vein and it is quite worthless for either shipping or milling.

A fourth sample was taken in the shaft about 40 feet on the incline below the collar, this was cut the full width of the vein about 4 feet and assayed gold \$.0.35 per ton.

Equipment at this shaft consisted of a head-frame and a small blower. Air for drilling is obtained from the main shaft.

The Horse Whim shaft is a very poor piece of mining work, changing its incline frequently and with insufficient head room. If any further mining or development were to be done at this point, it should be straightened out, enlarged and equipped with rails, hoist and a proper skip, but since it is apparent that the exposed ore is of no value and no further development is recommended, this is of no practical importance.



About 450 feet East and a little South from the Horse Whim shaft is found the incline or Van Eck shaft which is said to have been sunk to a depth of 325 feet, with a slope of approximately 55° to the Northeast, this would make the vertical depth of the shaft about 270 feet. This vein will be referred to as the Van Eck.

This shaft could not be inspected since both the bad air and condition of the timbers make it impossible to descend but I have found a report from one of my engineers who visited the drift at the bottom in 1917, and noted that for a length of 30 feet there was a shoot of ore carrying chalcopyrite as well as hematite. Apparently some of the better grade material was then being sorted out and shipped, but no large body of ore was to be seen. By 1918 the operators of the mine had been discouraged and all work was discontinued.

I was told by Mr. Harris that your company had recently spent a considerable amount of money in an effort to re-open this shaft and continue the development, but that due to heavy ground and other difficulties, your efforts proved unsuccessful. It is my opinion that there would be no justification for renewing this attempt.

The equipment of this shaft consists of a head-frame and a little hoist from which the engine has been removed. The shaft appears to be closely lagged and as far as I could see down, it looked to be in fair condition, but I was informed that the timbers were badly crushed in near the bottom and that the drifts were all caved.

The main shaft is sunk something over 600 feet North and slightly East of the Horse Whim shaft and over 500 feet nearly north of the Van Eck incline. It was evidently put down on the theory that by Cross-cutting to the South, the downward extensions of both the Horse Whim and Van Eck veins would be encountered and accordingly at a depth of 300 feet a long across cut was run out South 20 degrees West for a total distance of 600 feet.

The equipment at this shaft consists of a substantial head-frame some 36 feet high, and hoisting is done with a bucket and cross head. The power plant contains a 25 H. P. Fairbanks-Morse singel drum oil engine hoist with 3/4 inch cable, a Chicago Pneumatic portable compressor

from which the air is piped to the Horse Whim shaft, a Buffalo blower and Novo gas engine. The shaft has a hoisting compartment 4'-6" square, and a man-way 4'-6" by 3'. The entire shaft is well timbered and in good shape, and all of the operating equipment in the plant appears to be in good condition and well suited for the purpose for which it was installed. There is a change house and shower bath, oil and water tanks, a good blacksmith shop, and other accessory equipment. The buildings are constructed of wooden frame with corrugated iron.

The rock in the vicinity of the shaft is a siliceous phase of the much altered gneiss. On the cross-cut which is driven at the 300 feet level the diorite dike which appears on the surface was duly encountered about 200 feet from the station but the vein which on the surface would appear to carry some traces of copper has evidently pinched out along the contact and is not noted in the cross-cut.

About 60 feet further to the South a strong fault or shear zone was met and this is known as the October vein, but may quite possibly represent an extension of the Horse Whim vein, although if such is the case, it has flattened considerably between this point and the surface.

Along the line of this fault and the heavy gouge which accompanies it drifts were run to the Southeast for a distance of 75 feet and to the Southwest for a distance of about 300 feet. In the East drift I cut two samples; the first representing a width of 3 feet of iron stained material on a hanging wall of the fault and this showed \$1.75 per ton. From the West drift I also cut two samples; the first being from the gouge along the fault starting about 50 feet from the main cross cut and extending for an additional 50 feet. This showed \$0.17 gold. The second sample taken in a similar manner from the gouge between the main cross cut and a point 30 feet beyond showed \$1.75 gold per ton. It will be noted that the fault appears to dip about 35 degrees in the approximate direction North 30 degrees East, so that it may well be the extension of the Horse Whim vein.

The further extension of the cross cut for a distance of 300 feet beyond the drifts mentioned shows nothing at all except country rock with occasional slips and fault planes of no size or extent and it does



appear possible that any other veins have been cut in this extension of the cross cut. Near the breast of the cross cut there is a fairly well defined slip, but it contains no indications of ore and since this extension should have intersected the Van Eck vein, it is my opinion that this vein has probably pinched out altogether before reaching the level of the crosscut.

The surface equipment at the camp is very complete and in good condition. It comprises living accommodations for 30 or more men, a well equipped office, large boarding house, garage etc., all apparently in good shape.

To sum up my conclusions I can only say that it appears to me that your expectations of developing a gold-copper mine have so far been entirely unfulfilled, and that there is hardly the slightest hope that they will ever be realized.

The Cunningham Pass district and also a large portion of this section of Arizona contain great masses of granitic rocks in which there are many veins containing specular hematite generally with lime and brechia, together with quartz and some other minerals. Most of these veins are quite worthless, but at some points local conditions have affected their mineralization with copper, as at Swansea and Planet, and elsewhere also with gold as at the Critic Mine and Bullards Peak. None of these peculiar conditions causing the deposition of valuable metals seem to be present at the Jubilee mine and although some copper and gold were found near the surface, this appears to have been due to the effect of descending solutions which did not penetrate to any great depth nor mineralize the veins or faults which (except in pockets and stringers) are merely filled with wall rock, gouge and iron, all quite worthless.

I understand that it was the theory of the engineers who originally advised development of this property that you would find the extension of the Critic Vein, but I can see no grounds for such an assumption, since the Critic vein would normally pass some distance to the North of your claims, also the dip of the Critic vein is much steeper than any of your veins, except the Van Eck. As a matter of fact the

Critic Vein is faulted near the line of the Bullard property and the extension has never been found, so far as I know, either to the East and South. Also the mineralization at the Critic Mine is vastly different from that at the Jubilee and even though the Critic vein might have extended over to your property there would be no assurance that it would carry pay values unless a shoot of similar ore had actually been found on these claims.

I further assume that the cross cut from the shaft was intended to intersect the vein which is noted on the surface along side the diorite dike, but which, as mentioned above, has evidently pinched out at shallow depth. It was also intended to encounter the Van Eck vein which has not been found, and the Horse Whim vein which very probably is represented by the faulting in the cross cut noted as the October vein, but where no pay ore appears to exist.

Mr. Harris is of the opinion that the development work has been done too near the surface, and advises the continuance of the 300 foot level to the South and East for a considerable distance, probably in the hope of finding the Van Eck vein, and then believes that you should sink the shaft for another 300 feet and repeat the cross cutting and drifting on the 600 foot level on the theory that you would then find primary sulphide ores which he believes could carry good values in gold and copper. His estimate of the cost of all this work is \$30,000, which seems reasonable, but I must strongly advise against any such expenditure, both because I do not believe that any of the veins are likely to be found at a depth of 600 feet, and mainly because even if they should be found at that depth, I can see no reason for thinking that they will carry pay ore in any substantial quantity, basing this opinion both on the history of the mine to date, and on the geology of this particular district with which I have been familiar for over 20 years, and in which I do not know of a single instance where a vein which was not commercially mineralized in the upper 300 feet has ever made pay ore at greater depth.

In as much as there is practically no ore to be found in the mine at present, suitable either for shipping or milling, there is certainly no reason for considering the erection of a mill as advised by



others, and the construction of custom mill at the Jubilee where there is no ore, very little water, and with no other producing mines in its vicinity, would appear to be about the surest way of losing money that could be devised.

I was shown a letter from Mr. Yost, your former engineer, written in May and stating that in his opinion the development had been a disappointment and recommending that the property be abandoned. I am regretfully obliged to entirely agree with this statement and recommendation, even though it implies that you and your associates will now lose a large part of your investment. It is of course possible that other engineers might disagree with me and that other investors might take over the property and your equipment as it stands, but failing such an arrangement I can only advise that you should endeavor to salvage as much as possible from your plant and machinery either by moving this to some other locality or by disposing of it to some other company. I cannot see the slightest ground for advising any further development whatever on any portions of the Jubilee mine which I visited, and I believe that I saw everything which had attracted interest to date, and I therefore regretfully but strongly advise that you entirely abandon this very hopeless mining venture.

Yours very truly,

(Signed) G. M. Colvocoresses

GMC:MW



802 AMERICAN NATIONAL INSURANCE BLDG.  
GALVESTON, TEXAS

Phone 570

*A. 3/11/36*

March 6, 1936.

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President.  
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Member Ninth Arizona Legislature.

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Phoenix, Ariz.

Counsel—  
~~JUDGE JOHN NEWMAN,~~  
Galveston, Texas.  
CHAS. B. WARD,  
Phoenix, Ariz.

Depository—  
W. L. Moody & Co.,  
Galveston, Texas.

Phoenix National Bank,  
Phoenix, Ariz.

G. M. Colvocoresses, Esq.,  
Phoenix, Arizona.

Dear Sir:

At the risk of surfeiting you with correspondence about the Jubilee Mine near Wenden, I beg to advise that in conversation, on the 5th instant, with one of the local stockholders of the Consolidated Arizona Mines, namely, Mr. H. O. Meyer, of 2109 Market Street, he advised me that, without consulting anybody he had, for his own satisfaction, recently written to Mrs. Nohlachek to cause her to tell him what she thought of the Jubilee, and he produced her reply, a copy of which I took with his permission:

I now enclose that copy and I send it to you because you will note from it that she again states what she stated in her letter to me, of which I sent you a copy, that you had examined the property but that you had only been there a short time, and that you only examined the main shaft workings, and I do not send you the letter because I believe that she is correctly informed, because I do believe that she is not correctly informed, and I do believe that the examination you made of the property was thorough and was not confined to certain particular parts of the property but embraced all of what was shown you as composing the property, based upon which you made the report, with which I am perfectly and entirely satisfied, but I send you the letter because I have believed that you would not like someone well known in Arizona, engaged in the mining business, making the statement repeatedly to anyone who would listen, that the examination you made of the property was not of such a character as would permit you to form an opinion of the value of the property, and I have believed that you would like to know that such statements about you were being made by those residing in your State, for while they find no credence in me they might find credence in others, who otherwise might ask you to examine some property of theirs, and I am unwilling to retain within my own breast the knowledge that statements are being made about your professional work which do not truly reflect the facts.

I am taking no other steps about the letter from Mrs. Nohlachek to Mr. Meyer, than to write you this letter.





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Galveston, Texas.  
Exporter of Metals.

G. M. Colvocoresses, Esq.,  
2.

As I understand it, Mrs. Nohlachek was not present at the time you visited the property to examine it, and I think she has been filled to the brim with statements about the casual, debonair, Rooseveltian manner in which you performed a serious work, and I am opposed to statements reflecting upon professional work without knowledge, based upon biased verbal statements.

With high regard, believe me, Sir,

Sincerely yours,

*Harry Hawley*  
HARRY HAWLEY

HHSr:MEW

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CHAS. B. WARD,  
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Depository—  
W. L. Moody & Co.,  
Galveston, Texas.  
Phoenix National Bank,  
Phoenix, Ariz.

Copy of a letter to:

Mr. H. O. Meyer,  
2109 Market Street,  
Galveston, Texas.

Critic Mine,  
Wenden, Arizona;  
February 27th 1936.

My dear Mr. Meyer:-

Your letter of the 24th just received and I am glad to write you just what I think about the Jubilee. As you know I was one of the locators of the property, had I been fortunate enough to have had only my husband as partner in the property, I undoubtedly would not have sold my interest as both my husband and I had always considered it the best property in the district aside from our own. I am still of the same opinion and do not see why after spending the money your company have and made the progress you have, you should consider giving it up simply because Mr. Yost an engineer of a limited reputation, and at a time of anger, should condemn it, Mr. Colvocoresses a man of some reputation, being connected for many years with the Humboldt Smelter, I understand spent only a very short time on the property and only examined the main shaft workings which is impossible to examine thoroughly without taking a great deal of time as it is so thoroughly timbered where the best ore is that it is impossible to make a complete examination without seeing what is back of these timbers.

However we who have mined most of our lives pay very little attention to what an engineer says aside from the geology of a property, for what one engineer condemns, another favors, and the very best mines in the country have been turned down and pronounced valueless by our most eminent engineers.

You know what your assays have run, if you are not satisfied with these, come here and take more yourself then you will know, however our best mines are not always the high grade ones, but ones that have large tonnage of low grade ore as all ore has to be eventually milled, I think you have a very large low grade mine, but there has also been some very good high grade ore from there and some very fine gold values and right now with the copper situation improving every day as it is doing I can see no reason for discouragement no matter what an engineer says. Did not a Mr. Dunning make an examination also?

I believe in the mine, and certainly regret Mr. Sass is not with us as I feel sure he would not have let the property lapse.

Sincerely,

(Sgd) Rhoda Hatch Nohlecek.





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Physical Director.
- Consulting Engineer—  
**H. W. YOST,**  
Phoenix, Ariz.
- Counsel—  
**JUDGE JOHN NEETHIE,**  
Galveston, Texas.  
**CHAS. B. WARD,**  
Phoenix, Ariz.
- Depository—  
**W. L. Moody & Co.,**  
Galveston, Texas.
- Phoenix National Bank,  
Phoenix, Ariz.



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GALVESTON, TEXAS

June 3, 1936.

36

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Phoenix National Bank,  
Phoenix, Ariz.

George M. Colvocoresses,  
Phoenix, Arizona.

Dear Sir:

I write you again upon the subject of Consolidated Arizona Mines, particularly the Jubilee property, nine miles North of Wenden, upon which the work was concentrated:

Mr. Harris represented to us that large sums of money were owing to different suppliers, giving us merely a lump sum and declining to list the names of those whom he said were creditors of the Corporation, and declining to send us the bills which he stated were outstanding, although repeated requests were made therefor:

these claims, undoubtedly at his solicitation, were assigned to him and he brought suit against the corporation in the Superior Court of Maricopa County, located at Phoenix, the style of which was W. B. Harris v. Consolidated Arizona Mines:

the number given to this suit was 42379 A:

we had notice of the suit, but we had no money, and following the receipt of your report that the property was without value, we made no effort to attend to the trial either by one of the officers of the Corporation, or by attorney:

I obtained from the clerk of the court a certified copy of the Judgment which was for the plaintiff and was dated Phoenix, October 28th, 1935, signed M. T. Phelps, Judge:

the Judgment was for \$42,446.09, in which sum was included a claim by Mr. Harris for back salary in the sum of \$34,800.00, \$3,000.00 for Mrs. Harris, his wife, and \$200.00 for Robert W. Harris, his son.

Since that time we had nothing further from the matter until the receipt of the enclosed two pages of printed matter dated Wenden, May 15th, 1936, signed W. B. Harris, General Manager.

I think that the reference to me is highly defamatory





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2.

and if I believed that Mr. Harris was possessed of means I would be inclined to take the matter to court, for the printed matter has been addressed to quantities of people, of whom a number have come to my office with smiles at the accusation directed to me, and left their copies with me.

There is a reference also in the printed matter to you, although your name is no more mentioned than is my own, and I thought for this reason, notwithstanding the fact that you must be thoroughly surfeited with the subject of the Jubilee Property, that you would like to see the printed matter.

DIRECTORS

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Phoenix, Ariz.

The impression which the printed matter has made upon me is that it is the last desperate effort of Mr. Harris to cause capital to be placed in his hands in order that some work which he seems to have in mind may be further prosecuted at Jubilee.

None of the old stockholders in the Consolidated Arizona Mines, with whom I have spoken have evinced the slightest disposition to buy any of the stock offered in the printed matter.

Believing as I do, based upon your report, that the Jubilee property is without value, I think that it is wrong to attempt to persuade people to put out their money to be spent in digging about at that particular location, and privately and for your personal information, I have sent a copy of the printed matter to the United States District Attorney at Phoenix, in order that if he wished to do so he might determine for himself whether it was proper to use the United States Mills in what I believe to be a thoroughly visionary effort.

With high regard, believe me, Sir,

Sincerely yours,

*Harry Hawley*  
HARRY HAWLEY

HHSr:MEW

*Re Mills Corp.  
Pitts*

Wenden, Arizona

May 15, 1936

To the Stockholders of Consolidated Arizona Mines:

This letter is written you in full appreciation of the investment you have made in Consolidated Arizona Mines, and in an effort to save you a proportionate interest in the investment made by you in the mining properties of Consolidated Arizona mines.

As you know the writer has been in charge of all work done on our property for many years without compensation. As general manager of all work done at the mine I have had but one interest, that of the stockholders. We have gone through the initial expense and carried on the work to the point where I fully believe that we have every indication of a rich mine.

Perhaps you have seen and heard of several great mining ventures that were at the stage of success, after years of development, and were then closed down for a few months and later relocated through manipulations of those that were on the inside. If this is the plan of the present president of the company I am frank to say that I desire to prevent this being carried out.

For more than a year last past I have not had the cooperation of the present president of the organization; and during this time he has seemingly done all in his power to work against the corporation without offering a single constructive suggestion with reference to the development of its properties. He has even gone to the extent of obtaining a report condemning the property based on a two day examination of the property and also based on erroneous conclusion concerning the geology of the property.

The geologic facts determine whether or not we have a right to anticipate the uncovering of a rich mine. The geology of a mine is a premise that enters into every conclusion of the report. If the premise is false the conclusions are necessarily false. A conclusion is no stronger than the premise upon which it is based.

Reduced to its last analysis the statement in the report on geology might be condensed into a single statement, that the gold and copper ores we have found are secondary ores; that is, they have leached down from somewhere and are not primary ores which come up from somewhere in depth. Fortunately, the ore itself tells its own story as to whether or not it is primary or secondary ore.

In order that there might be no doubt regarding the matter I submitted samples of our ore to the Bureau of Mines of the University of Arizona and to a like bureau in one of our neighboring states. The first report is as follows:

"Your letter, check, and rock samples dated May 1 (File No. 13421) have come. The sulphide in the rock is chalcopyrite and it is primary. Any gold and copper values present would not have been derived from the leaching and concentration of sulphides contained in the basic intrusive rocks which might be adjacent, but were deposited from ascending solutions. It was not necessary to make a polished surface of your material, so I am returning your check to you."

The second bureau states:

"I feel that it is perfectly certain, however, that the gold and copper values are not present as a result of the leaching by surface water of these basic rocks, but owe their origin to solutions which have come from somewhere in depth. In other words, this deposit is primary."



Wenden, Arizona

May 15, 1936

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Reduced to its last analysis the statement in the report on geology might be condensed into a single statement, that the gold and copper ores we have found are secondary ores; that is, they have leached down from somewhere and are not primary ores. It is not until we know where in depth the leaching has taken place that we can tell its own story as to whether or not it is primary or secondary ore.

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"Your letter, check, and rock samples dated May 1 (File No. 13421) have come. The sulphide in the rock is chalcopyrite and it is primary. Any gold and copper values present would not have been derived from the leaching and concentration of sulphides contained in the basic intrusive rocks which might be adjacent, but were deposited from ascending solutions. It was not necessary to make a polished surface of your material, so I am returning your check to you."

The second bureau states:

"I feel that it is perfectly certain, however, that the gold and copper values are not present as a result of the leaching by surface water of these basic rocks, but owe their origin to solutions which have come from somewhere in depth. In other words, this deposit is primary."

The original of each of these reports, dated May 6, 1936, and May 8, 1936, respectively, are at the office of the mine and open for inspection.

We must, therefore, conclude in the light of the statements made by the Bureau of Mines of our leading universities in the mining region that the foundation premise on which the report is made is erroneous, and that the president of the company has been circulating among the stockholders conclusions based on an erroneous report.

In my opinion as a result of this attitude and action on the part of the president, at the present time the corporation is wrecked and the investment of its 1200 stockholders lost unless proper effort is made to redeem the investment or to affect new control through some sort of a reorganization.

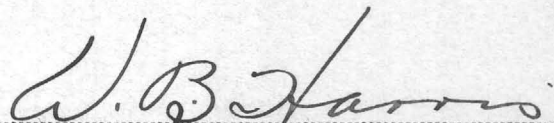
The Sheriff of Yuma County has sold all of the assets of Consolidated Arizona Mines. The purchaser offers the following plan which amounts to an opportunity for reorganization, and gives to those stockholders who have invested money in the development of the mine an opportunity to share in its future development.

The plan involves a new corporation of \$100,000 capital stock, divided into, 1,000,000 shares of par value of 10c. For every three shares which you own in Consolidated Arizona Mines you may take one share of this new stock and pay therefor 10c on the following terms: 25% on or before June 15, 1936, balance in three equal monthly payments, July, August, and September. Women and children may make their own terms. Stock will not be issued until September, at which time sheriff's deed will issue to all mining property once held by Consolidated Arizona Mines, and at which time title to all of said property will be vested in the new company.

The above plan is simple, straight forward, fair to everybody, economical, and one that will admit of final success. Stockholders of Consolidated Arizona Mines unable to pay for their investment under the foregoing plan may write the undersigned, and whatever it is possible to do without interfering with the rights of other stockholders will be done. Books will be closed on June 15, 1936. After June 15 there will be no stock available.

I trust that you will take the opportunity that has been presented for saving your investment. The development of the mine will go on. After a rich mine is developed the writer would regret as much as you, yourselves, any failure on your part to take your present opportunity to preserve your investment to its success.

Very truly yours,



W. B. HARRIS,  
General Manager.



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Very truly yours,



W. B. HARRIS  
General Manager.



Phone 570

802 AMERICAN NATIONAL INSURANCE BLDG.  
GALVESTON, TEXAS

February 17, 1936.

OFFICERS

BEN SASS  
President.  
Galveston, Texas.  
Ben Blum Co.

T. R. HANCOCK,  
Vice-President.  
Galveston, Texas.  
President Tosco Steamship Lines.

V. J. HARRIS,  
Vice-President.  
Wenden, Arizona.  
Member Ninth Arizona Legislature.

W. B. HARRIS,  
Secretary.  
Superintendent of Mine.

JULES BLOCK,  
Treasurer.  
Galveston, Texas.  
Exporter of Metals.

DIRECTORS

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Galveston, Texas.  
Pres. Peter Gengler Grocery Co.

M. J. SASS,  
Galveston, Texas.

HERMAN BORNEFELD,  
Galveston, Texas.  
Of the firm Fowler & McVitie.  
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H. W. YOST,  
Phoenix, Ariz.

Counsel—  
~~JUDGE JOHN NEETINE,~~  
Galveston, Texas.  
CHAS. B. WARD,  
Phoenix, Ariz.

Depository—  
W. L. Moody & Co.,  
Galveston, Texas.

Phoenix National Bank,  
Phoenix, Ariz.

George M. Colvocoresses, Esq.,  
Phoenix, Arizona.

Dear Sir:

Upon the subject of the property of the Consolidated Arizona Mines at Jubilee, some of the Directors here die very hard and finally asked me to write Mrs. Nohlachek, with whom you are probably acquainted, because she at one time sent an optimistic telegram to the then President of the Company, namely, Mr. Ben Sass, and at their request I did write Mrs. Nohlachek and enclose herein a copy of my letter dated January 23rd:

I also enclose copy of her reply thereto dated Wenden, February 12th, together with the sheet bearing certain figures which accompanied her letter and to which she refers.

The letter from Mrs. Nohlachek bore no signature but it is dated at the Critic Mine and the envelope was sealed with a wax seal bearing the letter "N", so I entertain no doubt that she was the writer of the letter.

I read somewhere once, long, long ago that, a lady convinced against her will was of the same opinion still, and believing as I do that Mrs. Nohlachek is mistaken in her idea that the property is of value, I only send you the enclosures in the belief that they would interest you, while in no way changing the condition of the Jubilee Mine.

With kindest thoughts and best wishes, believe me, Sir,

Sincerely yours,

HHSr:MEW



Critic Mine,  
Wenden, Arizona. February 12th,  
1936.

Copy of a letter to:

My dear Mr. Hawley.

I have intended writing you before this, but I have had a great many things on my mind and much to do, so your letter has been neglected.

In regard to the Jubilee property, I certainly have the same opinion of it that I always have had ever since I first located it, and it is a distinct sorrow to me to see it idle due to opinion of engineers who I think, have made a mistake. Mr. Colvocoresses, I understand was on the property less than two hours, Mr. Yost, I think was simply tired and unhappy and being an extremely temperamental man I think advised accordingly. He at least after spending much money and doing a lot of work had succeeded in reaching practically the same level that was reached in the original workings, being only a few feet over the old 1000 foot drift and in which we knew there was only low grade ore, then he was disappointed because he had not gotten high grade ore. Had he followed his vein, in either of the shafts, either shaft could be used as the caved one could have been caught up for many thousands less than 500 feet of cross cutting could be done for, or the Horse Whim Shaft could have been used in which shaft I know from assay Mr. Buchanan took last summer, carries good values. he would not been disappointed.

It is most unfortunate this property should have the experience of many others, simply a victim of ill advice from so called eminent engineers, however like others, it will some day be worked again, possibly by less eminent engineers, and I believe make a mine. This is why mining is so expensive.

I am enclosing with this a list of ore shipped from the Critic during a short period, this was made by Mr. Flagg an engineer who took it from shipping sheets I have. You will see much of this ore was shipped to Mr. Colvocoresses Smelter Humboldt, at the time he was there, so he will have to at least admit that although he considers the Jubilee valueless, that the Critic an adjoining property at least furnished him with a considerable amount of high grade, and in a district where there is one property of this kind, there is a good possibility there will be another if property developed.

Kindly remember me to Mrs. Hawley, and believe me,

Very truly,

*Wm. Humboldt*



# CONSOLIDATED ARIZONA MINES

Phone 570

802 AMERICAN NATIONAL INSURANCE BLDG.  
GALVESTON, TEXAS

## OFFICERS

- BEN SASS**  
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Galveston, Texas.  
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Member Ninth Arizona Legislature.
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Secretary.  
Superintendent of Mine.
- JULES BLOCK,**  
Treasurer.  
Galveston, Texas.  
Exporter of Metals.

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Physical Director.
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**H. W. YOST,**  
Phoenix, Ariz.
- Counsel—  
**JUDGE JOHN NEETHIE,**  
Galveston, Texas.  
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Phoenix, Ariz.
- Depository—  
**W. L. Moody & Co.,**  
Galveston, Texas.  
**Phoenix National Bank,**  
Phoenix, Ariz.



COPY

ORE SHIPMENTS FROM CRITIC MINE,

Shipped to	Dry Tons	Oz. Gold per ton	Total oz Gold	% Copper per ton	Lbs. Copper Total.
Douglas	76.151	0.71	56.34	14.48	22.062
"	527.532	0.57	300.51	8.98	24.811
Humbolt	235.245	1.04	245.55	17.81	84.441
"	10.595	2.20	2.33	9.82	.208
"	762.251	0.78	592.28	13.32	203.03 8
Hayden	73.922	0/67	49.44	11.96	18.884
"	47.765	0.47	22.72	6.30	6.016
"	25.4925	0.31	7.90	9.28	4.731
Wickenburg	13.4	1.90	25.46	13.20	3.538

This ore was shipped by me during 1917-1918, being only the high grade and leaving an equal if not larger amount of low grade ore in the fills in the mine.



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Phoenix National Bank,  
Phoenix, Ariz.





Phone 570

802 AMERICAN NATIONAL INSURANCE BLDG.  
GALVESTON, TEXAS

January 23, 1936.

OFFICERS Copy of a letter to:

BEN SASS  
President.  
Galveston, Texas.  
Ben Blum Co.

T. R. HANCOCK,  
Vice-President.  
Galveston, Texas.  
President Tosco Steamship Lines.

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lature.

W. B. HARRIS,  
Secretary.  
Superintendent of Mine.

JULES BLOCK,  
Treasurer.  
Galveston, Texas.  
Exporter of Metals.

Mrs. Rhoda Hatch Nohlachek,  
Wenden, Arizona.

Dear Mrs. Nohlachek:

Among the papers delivered to the officers of the Corporation, found in the files of the late Mr. Ben Sass following his death, there was a telegram bearing your signature, dated Wickenburg, October 13th, 1934, which reads, as follows:

"ON MY WAY TO PHOENIX STOPPING HERE TO WIRE  
YOU CONGRATULATIONS HAVE JUST SPENT A DAY  
AT THE PROPERTY AND AM DELIGHTED WITH THE  
SHOWING TWENTY FIVE FEET ALL ORE AND STILL  
GOING YOU HAVE CAUSE TO BE HAPPY AS YOU  
NOW HAVE A MINE WITHOUT A DOUBT BEST WISHES"

The present is written because it was believed that you might be disposed at this time to say whether you still entertain the opinion of the Jubilee property expressed in the above telegram:

Mr. Yost returned to the property shortly before the death of Mr. Sass and wrote him that in his opinion it would be better to consider the Jubilee property a disappointment:

Mr. Colvocoresses, a mining engineer resident in Phoenix, Arizona, examined the property some time after the death of Mr. Sass and reported that in his opinion it was without value.

Your own opinion is valued very highly by me and the other Directors of the Company, resident in Galveston, who had the pleasure of meeting you in Arizona, and I therefore, should be very glad to know how you now feel about the property.

With thanks for your kind attention and with great respect, believe me,

Sincerely yours,

HHSr:NEW

(Sgd) HARRY HAWLEY

President.

DIRECTORS

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Galveston, Texas.  
Pres. Peter Gengler Grocery Co.

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Phoenix, Ariz.

Counsel—  
~~JUDGE JOHN NEWMAN,~~  
Galveston, Texas.  
CHAS. B. WARD,  
Phoenix, Ariz.

Depository—  
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Galveston, Texas.

Phoenix National Bank,  
Phoenix, Ariz.



# CONSOLIDATED ARIZONA MINES

Phone 570

A. 7 17  
35

802 AMERICAN NATIONAL INSURANCE BLDG.  
GALVESTON, TEXAS

August 14, 1935.

## OFFICERS

BEN SASS  
President.  
Galveston, Texas.  
Ben Blum Co.

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Superintendent of Mine.

JULES BLOCK,  
Treasurer.  
Galveston, Texas.  
Exporter of Metals.

G. M. Colvocoresses, Esq.,  
Phoenix, Arizona.

Dear Sir:

In the matter of the Jubilee Mine recently examined by you, on the 13th instant there came to me as a stockholder the enclosed printed letter addressed to the stockholders of the Consolidated Arizona Mines dated Wenden, August 10th, 1935, signed W. B. Harris, Secretary and General Manager.

As the Board of Directors was not consulted before the issue of such letter and knew absolutely nothing about it until it was received in Galveston on the 13th instant, I at once telegraphed the Arizona Corporation Commission as follows:

"REFERRING YOUR LETTER TO BLOCK TREASURER AUGUST SEVENTH THAT COMPLAINT FILED AGAINST COMPANY HAVE TODAY RECEIVED PRINTED FORM DATED WENDEN AUGUST TENTH SIGNED HARRIS SECRETARY GENERAL MANAGER ADDRESSED TO STOCKHOLDERS RECOMMENDING PURCHASE FURTHER STOCK AND NOTICE SPECIAL STOCKHOLDERS MEETING FOR AUGUST TWENTY FIFTH WITH PROXY TO HARRIS STOP BOARD DIRECTORS CALLED NO SUCH MEETING AND IT IS WHOLLY UNAUTHORIZED STOP ASK YOU INSTRUCT HARRIS MEETING BE NOT HELD DEMAND RETURN ALL PRINTED NOTICES TO STOCKHOLDERS STOP HAVE SO TELEGRAPHED HARRIS THIS DAY ASK YOU FOR CERTIFIED COPY OF COMPLAINT FILED AGAINST COMPANY"

and telegraphed Harris as follows:

"YOUR LETTER TENTH TO STOCKHOLDERS STOP BOARD LEARNING THEREFROM FIRST TIME SUCH ACTION WHOLLY UNAUTHORIZED STOP WIRED ARIZONA CORPORATION COMMISSION TO SUCH EFFECT"

I also wanted to telegraph the United States District Attorney at Phoenix but was dissuaded by an attorney here who represents two estates, the decedents having invested

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GALVESTON, TEXAS

OFFICERS

G. M. Colvocoresses, Esq., 2

August 14, 1935.

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Phoenix, Ariz.

heavily in the mine, private investments in the property of his own and of his wife, and I took the action I did because I believe that any effort to sell stock in the Corporation, knowing what we do of it from your report, would and ought to expose all concerned in the effort to the rigors of State and Federal penal statutes.

I advise you of the matter because I thought you would find interesting the reference made to the views of the engineer whose name is mentioned in the letter.

This engineer seems to be the same one whose report I recently sent you.

HHSr:MEW

Respectfully,

HARRY HAWLEY

# CONSOLIDATED ARIZONA MINES

WENDEN, ARIZONA

August 10th, 1935.

To the Stockholders of the Consolidated Arizona Mines:

To enable you to know the opinion of an expert as to your property and its development, C. H. Dunning, a registered mining engineer of the State of Arizona, Certificate No. 295, was employed to make a report on the geology and development of the Jubilee Copper-Gold Mine. Although his report analyzes and gives detailed information of your property and fully outlines the development work carried on, and is therefore of interest to every stockholder, it is too lengthy to include in this letter, hence we are merely quoting the conclusion, which is as follows:

"Your property has most excellent geological conditions for the formation of large and profitable orebodies. The development already completed has made an excellent showing and tends to prove the theories which surface conditions indicate.

Further development as outlined is well warranted and advised, and should be carried on step by step, each step serving as a guide for further work.

It is my opinion that further proper development will disclose orebodies of a size and type that will be very profitable."

From the foregoing report we may conclude that the objective for which you have invested your money, i. e., the development of commercial orebodies, may be reached now with a small amount of work. However, it takes money to carry on work in a mine and even if the operations are shut down, expense is incurred to keep the mine unwatered and to prevent deterioration and loss in machinery.

The special meeting of the stockholders is called to consider remedies which if acted on favorably by the stockholders and if the stockholders will co-operate in carrying out the plan proposed, it is believed they will ultimately be rewarded by good returns on their investment. It will be noted that the plans proposed are for the good of all stockholders and not for the personal advantage of any single individual. The following plan is suggested as a remedy for the existing conditions and for your protection:

(1) To consider and act upon the purchase from W. B. Harris of four mining claims known as Centroid No. 18, 19, 20 and 21, for 1,000,000 shares of the capital stock of the corporation. From the said shares, W. B. Harris agrees to offer 200,000 shares to the stockholders of record at  $12\frac{1}{2}$ c per share, the returns from which sale to be handled in the manner following, and to place the remaining 800,000 shares in trust under the control of the following five trustees: W. B. Harris, Wenden, Arizona; Joe Rosenfield, Galveston, Texas; Max Westheimer, Ardmore, Oklahoma; Chas. Niehmeyer, St. Louis, Mo; Dr. Chas. K. Stulik, Chicago, Ill.

The five trustees named above to vote and to disburse the 800,000 shares as they may deem to the best interest of the corporation and if for any reason any of these trustees should fail to serve, the grantor reserves the right to appoint others to serve in their place and stead, and all moneys received from the sale of said shares shall be expended for the use and benefit of the corporation with the approval of the said trustees. Should the present stockholders of the corporation accept the offer of 200,000 shares at  $12\frac{1}{2}$ c a share, the proceeds will be used as follows:

- (1) Payment of indebtedness to laborers and merchants.
- (2) Payment of cost of surveying the Jubilee Mine, making application for and receiving a patent from the United States Government.
- (3) Such development work as is recommended and the cost of applying for a loan from the Government to carry on.

With the payment of the company's present bills for labor and supplies, which amount to approximately \$6,000, and with sufficient additional funds to meet the expense of maintaining the company's camp and preserving its assets, the company's future will be assured. I would estimate that \$15,000 would pay the merchants, laborers, survey of the Jubilee ground, pay for a patent to the property, maintain this camp and hold the assets together for a period of six months, during which time the corporation may either contact the capital necessary to continue from private resources or make application for a loan from the United States Government to properly develop this mine and for a mill to take care of the production.



Recent work shows vein matter widening in the Horse Whim vein and the lower level at about 200 feet is now piled high with ore blasted down in July. Values have run as high as \$21.00 in gold. There is an appreciable amount of copper in the ore.

Follow my advice, provide for the work as recommended by Mr. Dunning and it is my sincere belief that your investment will grow into such proportions and with such startling rapidity as has been the order of all the great mines of the Southwest.

We have now reached the point, according to trustworthy authority, when success may be had with a step or two forward, and if this is done the greatest amount of possible profit will be yours.

The stockholders of this corporation are the real owners and in them now rests the decision as to who will benefit from their investment and their faith.

Plans to sell out, plans to amalgamate, plans of a holding company and any other set-up which involves a loss to you are condemned by the undersigned as being unworthy of consideration.

How many, many times has a rich bonanza been within the grasp of trusting and faithful stockholders, men and women who have invested their money in the hopes of an honest profit, and then lost through carelessness or through ignorance.

DO NOT ALLOW HISTORY TO REPEAT ITSELF IN THIS INSTANCE for it is a fact, according to the opinion of many practical mining men that the Jubilee Copper-Gold Mine has the structure, the geology, the mineral in evidence, the true fissure veins and the fault lines to make a valuable and highly profitable mine.

The Gold values are here and the rich bonanza ore bodies which are predicted as a result of a small amount of work according to the recommendation of Mr. Dunning call for a grim determination by the stockholders to hold to everything and carry on.

I would advise all stockholders to take some of the stock offered at 12½¢ per share, the entire proceeds to be used in paying the obligations for labor and supplies and to make application for patent to the mine, so that in the future your investment will not be jeopardized and the opportunity will be given to the corporation to work on until we enter the orebodies.

All checks, drafts and money orders for subscription to stock should be made payable to W. B. Harris, Trustee. If the total amount received is not sufficient to meet the emergency, all moneys received will be returned to the subscriber.

Very truly yours,

W. B. HARRIS,

*Secretary and General Manager of  
Consolidated Arizona Mines.*

**Hawley & Letzerich**  
CUSTOMS BROKERS, FORWARDERS  
DRAWBACK COLLECTIONS A SPECIALTY

Galveston, June 26, 1934.

PLEASE REFER TO NO.

G. M. Colvocoresses, Esq.,  
Phoenix, Arizona.

Dear Sir:

I am interested as a stockholder in a hole in the ground, which it is represented to me will become a mine, located near Wenden, Arizona and known as the Jubilee Mine.

We have a gentleman supervising the work, who signs his letters as a Registered Mining Engineer, whose name is H. W. Yost and I think the initials stand for Harold Winans:

it is represented to me that Mr. Yost has confidence in the property and I understand has gone so far as to say that he expected to make a reputation, nationwide, through the development of the property.

My own idea has been that, while we have confidence in the judgment of Mr. Yost, two heads are better than one and that, while money is accumulated and sent to Arizona for the development of the property the money is only accumulated with the greatest effort, and while I feel that up to the present time, whatever happens, we have had a run for our money because an earnest effort, I believe, is being made to develop the property, I think that if an error has been made and there really is no hope of making a paying mine, either because there is nothing of value there, or the value is so slight that the property could not be worked with profit, we ought to know that at the earliest possible moment so that the expenditure of further money could cease.

I, therefore, corresponded with the American Institute of Mining and Metallurgical Engineers in order to learn the names of engineers "whose reputation for skill and probity is nationally known", living in the West, whose services we might engage for a survey of the property and a written opinion:

- (1) first, whether the work should be continued;
- (2) second, if it should be continued as it is now being done;
- (3) third, if not in that direction, in what direction;
- (4) fourth, the prospects for developing the property to the point where it could be worked with profit;
- (5) fifth, the probable amount of money necessary to be expended to reach ore of profit;
- (6) sixth, whether, if ore of profit is reached, it would not be wise to



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send such ore to a mill even though the cost of transportation to the mill and the milling of the ore was high in order to raise the money to build a small unit of a mill of our own, then to mill our own ore, thus acquiring money to erect additional units until the mill had reached a capacity warranted by the ore blocked out in the mine.

My object in writing you is to ask you to kindly favor me with an estimate of the cost of such an investigation and report to be made by you as is sketched above with such further additions in the investigation and in the report as your knowledge as a mining engineer would suggest that stockholders in a mine ought to have, and I make this supplement to the enumeration of the information I believe we ought to have because I know nothing about mines and have made my investment as the bulk of the other stockholders, relying upon the opinion of those connected with it before we came in.

If the cost of such an investigation and report could possibly be met I shall use what influence I have to cause the expenditure, but it may very well be that the expense for people situated as we are financially, would be beyond our means, in which event we shall probably have to poke along as best we can relying upon the judgment of Mr. Yost, as well as that of the Superintendent of the Mine, who is heavily interested in the property as a stockholder, whose name is W. B. Harris.

I wrote Mr. Harris on the 21st instant and enclose a copy as it may serve to elaborate the purpose of this letter.

The Institute wrote it was unable to give any information concerning the standing in the profession of Mr. Yost as he ceased to be a member in 1922 and I should like very much to learn something of him since that date.

The Institute favored me with a quantity of names of engineers of the qualifications described above, none of whom are known to me, and I selected your name for a reason that will probably cause you to smile:

my father went to the Naval Academy:

I believe he did not graduate, being obliged to leave before graduation because of financial difficulties in his family:

he is long since dead, but I remember very well his talking to me when I was a child about his days in the Naval Academy, and particularly do I remember the mention of a classmate whose name was Colvocoresses, which in the ribaldry of the youth of that day was alliterated into Christ crawling over the cross trees, and when I saw your name in the list received from the Institute this story came to my mind, and while it may be that the Colvocoresses of the Naval Academy was no connection of yours, the name appealed to me.

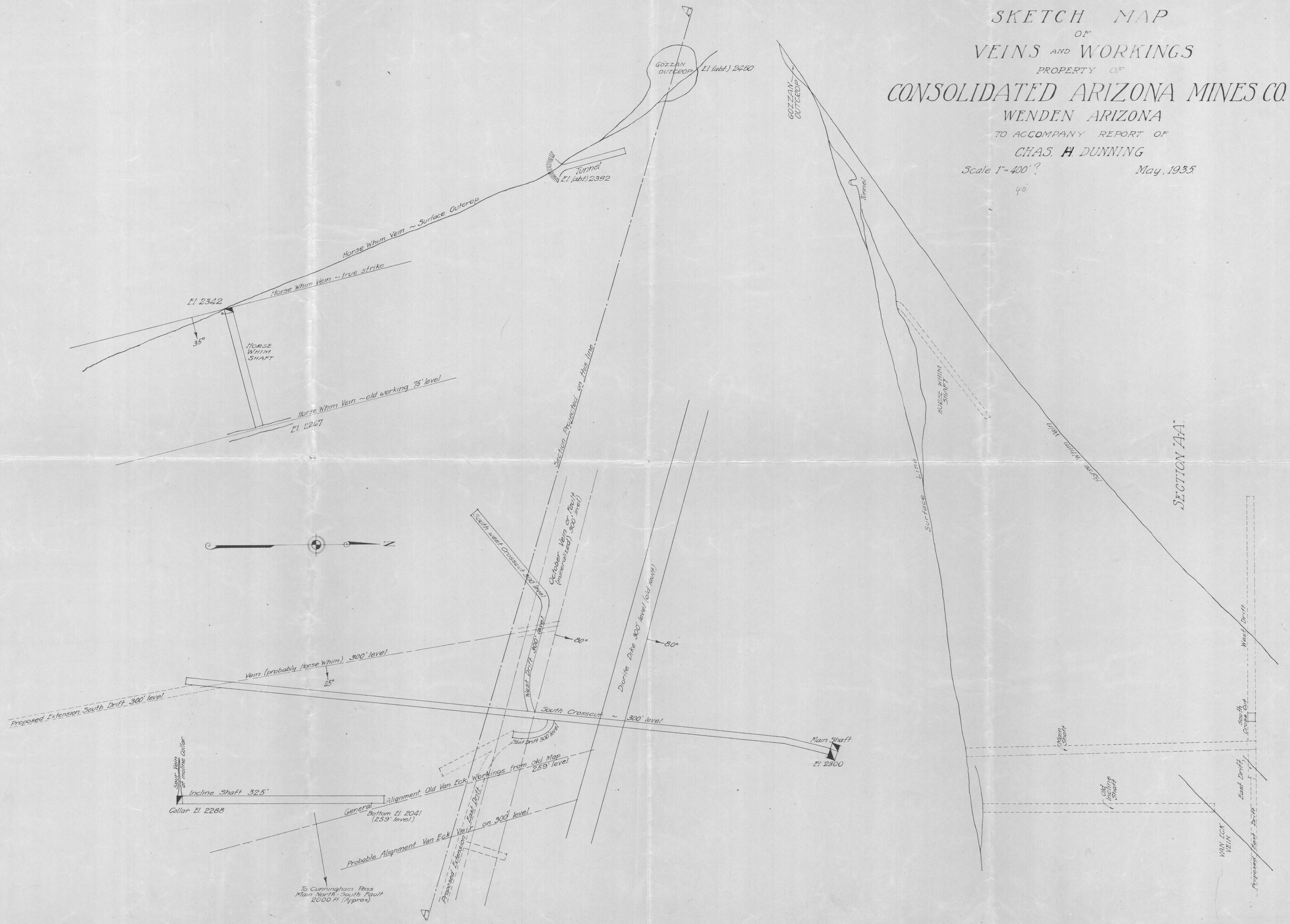
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Yours truly,

  
HARRY HAWLEY



SKETCH MAP  
OF  
VEINS AND WORKINGS  
PROPERTY OF  
**CONSOLIDATED ARIZONA MINES CO.**  
WENDEN ARIZONA  
TO ACCOMPANY REPORT OF  
**CHAS. H. DUNNING**  
Scale 1" = 400' ?  
May, 1935





HARRY HAWLEY  
JUN 10 1985