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ARIZONA GOLD AND COPPER COMPANY

OR

CASH MINE

Yavapai County, Arizona.

INCORPORATION:

Incorporated under the Laws of the State of Delaware;
\$500,000. Preferred Shares 7% Cumulative \$1,000,000. Common Shares.
Capital Stock ----- \$1,500,000.

SITUATION:

Located in Yavapai County, State of Arizona, about 12 miles south of Prescott. An excellent State automobile road from Prescott direct to the mines, rising gradually from an elevation above sea level of 5300 feet to an elevation of 7300 feet at the mines, passing through a mountainous and well timbered country and crossing the well known Hassayampa River about one mile before reaching the mines.

PROPERTY:

There are seven Lode Mining Claims in the Maine Group #1, all patented. The main hoisting works, shaft-house, etc. are located on the "Cash" and "H. J. Glenn" Claims, and the mill and boarding house located on the "Yavapai Claim".

There are five lode mining claims in Group #2, all patented, well mineralized and timbered. These claims have some development work done on them but have not been worked to any extent up to the present. They lie about one mile south of Group #1 and the State Road passes through them. Ore of the value of \$40.00 per ton has been taken from these claims.

There are two lode mining claims in Group #3, showing good mineral values and well timbered. A small amount of development work has been done. These lie about a half mile south of Group #2.

GEOLOGY:

The ore occurs in well defined fissure veins, bearing

gold, silver, copper, lead and zinc, with a matrix of quartz. The formation is a "Metomorphosed Granite", "Schist", "Quartzite", "Diorite", and "Porphyry".

VEINS:

There are twelve (12) veins within the claims of Group #1, with strong outcrops traceable for from 3500 to 4500 feet along the surface. They are well mineralized with these ores and metals chiefly in the form of sulphide mingled with quartz which is the chief vein stone. A cross-cut on the 400 foot level will develop all these 12 veins and open a large quantity of ore, as only four of the veins have been developed by the present workings.

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The major development work has been done within the confines of the "Cash", "H. J. Glen" and "Yavapai" Claims, and consists of over 8600 lineal feet of shafts, drifts, cross-cuts, and winzes, irrespective of stopes, which have already produced over \$450,000 worth of ore, as shown by mill lines and smelter returns. The mine at present at its greatest depth is 725 feet vertical, at which level it is drained by a connection with the Senator Adit, which at all times drains the mine dry and does away with the expense of pumping the 20,000 gallons of water per day which seeps into the workings. The development by levels on the veins is approximately as follows:

Level No. 1	-	483	Feet of Drifts on the vein.
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ORE:

The ore occurs in the veins in the form of Sulphides of copper, lead, zinc carrying gold and silver, with an approximate

value (based on 20,000 tons milled) of \$22.58 per ton. The ore-shoots are in many places 50 to 300 feet long, all good milling ore, easily mined. A summary of the ore blocked in the mine, as per the report of Leonard D. Sivyer, E. M., is on file at this office, as follows:

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These values are based on the market for these metals under normal conditions, but under present market value they have nearly doubled - the demand for copper, lead, zinc and silver is very strong and gold is standard at \$20.67 per oz.

MINING:

The cost of mining is approximately \$4.00 to \$4.50 per ton.

TIMBER:

There is an abundance of timber for mining use on the property at a low cost for cutting and hauling - the value of the timber on the property has been estimated at \$30,000. The ground stands firmly and requires very little timbering.

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The mine water can be pumped to the surface for use of hoist plant or mill when necessary during dry season but a pumping plant has been installed from the mill, which supplied all water necessary at all times of the year. This plant cost approximately \$5,000.00

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Steam is used at present but it is intended to change to Electric power, as a high tension electric line passes within a mile of the plant, at an approximate cost of \$5,000.00; this will reduce the cost of power about one-third.

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The mill, with a capacity of approximately 60 tons in 24 hours is located on the Yavapai Claim, and is a patented mill site. It is about 300 feet from the main hoisting plant, ore being dumped directly from the mine cars into the ore bins, thence through crushers to 10-1000 lbs. stamp-mill; thence to two Huntington mills, thence to 5 Wilfley and 3 Monell concentrating tables, slimers, etc. It has 140 horse power and is equipped for the entire process of turning out economically a good marketable concentrate. The cost of this mill was approximately \$50,000.00.

BUILDING:

There are 2 hoist houses, mill house, both large, well built and roomy. Blacksmith shop, assay office and Laboratory, also mine office, superintendent's house, and miners' boarding house - all thoroughly equipped.

(Signed) Leonard D. Sevyer, M.E.

ORE DEPOSITS OF THE JEROME AND BRADSHAW
MOUNTAINS QUADRANGLES, ARIZONA
by--Waldemar Lindgren--

CASH MINE
(HASSAYAMPA DISTRICT)
Page 121

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Amphibolite schist crops out on the road between the Senator veins and the "Cash". The shaft dump shows Yavapai schist injected with diorite. Dikes of normal rhyolite porphyry about 10' wide crop out along the road to the mine. The vein strikes N. 40° E. and Dips 60° S.E.

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Although the underground workings could not be visited, it seems clear that there are here two different kinds of veins, one of which contains magnetite, specularite, and adularia, in addition to pyrite, chalcopryrite, spalerite, and galine, the place of the iron oxides in the succession being between pyrite and chalcopryrite. Figure 7 shows in twice the natural scale the relation between the ore minerals. (See Drawing). It appears that the deposition began with magnetite, quartz and calcite, after which pyrite with quartz and calcite was deposited in small crystals and crystal aggregates. Then followed specularite in long laths in quartz; parts of the laths and masses of specularite consist of magnetite, suggesting that all of the specularite had passed thru early magnetite stage. Chalcopryrite is distinctly the last mineral (See Pl. 14A) Note: Plate 14 is a photograph enlarged 110 diameters of ore from "Cash" mine ore of second type carries apparently only chalcopryrite, galena, and sphalerite.

Figure 7--Section of ore from "Cash" mine. A, Altered schist; B, Magnetite with quartz and calcite; C, Quartz beinlet; D, Pyrite crystals disseminated with quartz and calcite; E, Massive pyrite; F. Quartz with plates of specularite and some magnetite; G, Chalcopryrite,--Enlarged two diameters.

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Another group of mines, some of which have had a large production, center about the northern slopes of Mount Tritle and Mount Union. They are on gold-silver veins that are closely connected with the rhyolite porphyry dikes, and the Senator is the best known among them.

GEOLOGIC ATLAS OF UNITED STATES

(HASSAYAMPA CREEK DISTRICT)

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MINERS HANDBOOK -- 1922 -- Y. P. Mining Co.
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Dividends paid are said to amount to \$15,000.

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Development has continued for several years and is now at 750' level. The 60 ton mill and concentrating plant has five

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Development to depth of 750'. One estimate gives "A reasonable \$734,000 worth of ore in sight with silver at \$.60".

MINERS HANDBOOK -- 1931

Y. P. Mining Co.
Address, %Betty O'Neil Mines
68 Devonshire Street
Boston, Massachusetts

EQUIPMENT: Equipment includes steam power compressor, 1200' tram and 30 ton stamp mill. Total production to date about \$500,000. Idle since 1917 and was reopened in 1928 and sampled. The new management reported values to be satisfactory and construction of a selective flotation plant to recover all of the metallic values was proposed. Plant power is also to be changed from steam to electricity. Management promises more on **this property** for 1930, Probably on the completion of the merger of the Betty O'Neil into the Gold Circle Consolidated Mining Company.

BETTY O'NEAL MINES
GENERAL BALANCE SHEET - July 31, 1929
(Passed by Public Utilities Comm. of Mass.)

ASSETS

Cash - Battle Mountain State Bank (See note below)		\$98,428.76
Notes Receivable-Account of Stock Sold		9,097.75
Sundry Accounts Receivable		1,832.07
Inventory-supplies-Mine and Mill		8,213.62
Investment-Stock		250.00
Loans Receivable Gold Circle Mines		59,389.40
Prepaid Inc. Fire and Industrial		1,830.87
Betty O'Neal Property	\$1,067,299.43	
Y. P. Property	591,339.07	
Mine Buildings	44,211.19	
Mill & Mine Equipment	221,547.99	
General Equipment	77,661.24	
Office Equipment Mine & Boston	2,736.38	
Auto and Truck Equipment	4,871.80	
General Development, B. O'Neal	327,986.32	
General Development Y. P.	20,828.31	
Chiara Ranch	10,234.54	\$2,368,716.27
<hr/>		
Less Reserves		
Depreciation Buildings	9,655.95	
" Autos & Trucks	4,552.04	
" Office Fixtures	1,410.22	
Depletion Ore Reserves	471,648.65	487,266.86
		<u>\$1,881,449.41</u>
Deficit		<u>257,548.15</u>
	Total	<u>\$2,318,040.03</u>

LIABILITIES

Accounts Payable (Dividends)		9,641.10
Royalty Payable		3,135.93
Commissions Payable		563.00
Capital Stock Authorized	\$2,500,000	
Less in Treasury	<u>195,300</u>	Outstanding <u>\$2,304,700.00</u>
	Total	<u>\$2,318,040.03</u>

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Development to depth of 750'. One estimate gives "A reasonable \$734,000 worth of ore in sight with silver at \$.60".

MINERS HANDBOOK -- 1931

Y. P. Mining Co.
Address, Betty O'Neil Mines
68 Devonshire Street
Boston, Massachusetts

EQUIPMENT: Equipment includes steam power compressor, 1200' tram and 30 ton stamp mill. Total production to date about \$500,000. Idle since 1917 and was reopened in 1928 and sampled. The new management reported values to be satisfactory and construction of a selective flotation plant to recover all of the metallic values was proposed. Plant power is also to be changed from steam to electricity. Management promises more on this property for 1930, Probably on the completion of the merger of the Betty O'Neil into the Gold Circle Consolidated Mining Company.

BETTY O'NEAL MINES
GENERAL BALANCE SHEET - July 31, 1929
(Passed by Public Utilities Comm. of Mass.)

ASSETS

Cash - Battle Mountain State Bank	(See note below)	\$98,428.76
Notes Receivable-Account of Stock Sold		9,097.75
Sundry Accounts Receivable		1,832.07
Inventory-supplies-Mine and Mill		8,213.62
Investment-Stock		250.00
Loans Receivable Gold Circle Mines		59,389.40
Prepaid Inc. Fire and Industrial		1,830.87
Betty O'Neal Property	\$1,067,299.43	
Y. P. Property	591,339.07	
Mine Buildings	44,211.19	
Mill & Mine Equipment	221,547.99	
General Equipment	77,661.24	
Office Equipment Mine & Boston	2,736.38	
Auto and Truck Equipment	4,871.80	
General Development, B. O'Neal	327,986.32	
General Development Y. P.	20,628.31	
Chiara Ranch	10,234.54	\$2,368,716.27
<hr/>		
Less Reserves		
Depreciation Buildings	9,655.95	
" Autos & Trucks	4,552.04	
" Office Fixtures	1,410.22	
Depletion Ore Reserves	471,648.65	487,266.86
		\$1,881,449.41
Deficit		<u>257,548.15</u>
	Total	\$2,318,040.03

LIABILITIES

Accounts Payable (Dividends)		9,641.10
Royalty Payable		3,135.93
Commissions Payable		563.00
Capital Stock Authorized	\$2,500,000	
Less in Treasury	<u>195,300</u>	
	Outstanding	<u>\$2,304,700.00</u>
	Total	\$2,318,040.03

ARIZONA GOLD AND COPPER COMPANY

OR

CASH MINE

Yavapai County, Arizona.

File

INCORPORATION:

Incorporated under the Laws of the State of Delaware;
\$500,000. Preferred Shares 7% Cumulative \$1,000,000. Common Shares.
Capital Stock ----- \$1,500,000.

SITUATION:

Located in Yavapai County, State of Arizona, about 12 miles south of Prescott. An excellent State automobile road from Prescott direct to the mines, rising gradually from an elevation above sea level of 5300 feet to an elevation of 7300 feet at the mines, passing through a mountainous and well timbered country and crossing the well known Hassayampa River about one mile before reaching the mines.

PROPERTY:

There are seven Lode Mining Claims in the Maine Group #1, all patented. The main hoisting works, shaft-house, etc. are located on the "Cash" and "H. J. Glenn" Claims, and the mill and boarding house located on the "Yavapai Claim".

There are five lode mining claims in Group #2, all patented, well mineralized and timbered. These claims have some development work done on them but have not been worked to any extent up to the present. They lie about one mile south of Group #1 and the State Road passes through them. Ore of the value of \$40.00 per ton has been taken from these claims.

There are two lode mining claims in Group #3, showing good mineral values and well timbered. A small amount of development work has been done. These lie about a half mile south of Group #2.

GEOLOGY:

The ore occurs in well defined fissure veins, bearing

gold, silver, copper, lead and zinc, with a matrix of quartz. The formation is a "Metomorphosed Granite", "Schist", "Quartzite", "Diorite", and "Porphyry".

VEINS:

There are twelve (12) veins within the claims of Group #1, with strong outcrops traceable for from 3500 to 4500 feet along the surface. They are well mineralized with these ores and metals chiefly in the form of sulphide mingled with quartz which is the chief vein stone. A cross-cut on the 400 foot level will develop all these 12 veins and open a large quantity of ore, as only four of the veins have been developed by the present workings.

DEVELOPMENT:

The major development work has been done within the confines of the "Cash", "H. J. Glen" and "Yavapai" Claims, and consists of over 8600 lineal feet of shafts, drifts, cross-cuts, and winzes, irrespective of stopes, which have already produced over \$450,000 worth of ore, as shown by mill lines and smelter returns. The mine at present at its greatest depth is 725 feet vertical, at which level it is drained by a connection with the Senator Adit, which at all times drains the mine dry and does away with the expense of pumping the 20,000 gallons of water per day which seeps into the workings. The development by levels on the veins is approximately as follows:

Level No. 1	-	483	Feet of Drifts on the vein.
" "	2	- 1110	" "
" "	3	- 1506	" "
" "	4	- 1360	" "
" "	6	- 400	" "

ORE:

The ore occurs in the veins in the form of Sulphides of copper, lead, zinc carrying gold and silver, with an approximate

value (based on 20,000 tons milled) of \$22.58 per ton. The ore-shoots are in many places 50 to 300 feet long, all good milling ore, easily mined. A summary of the ore blocked in the mine, as per the report of Leonard D. Sivyer, E. M., is on file at this office, as follows:

Block No. 1 Vein	\$118,000
" "A" Level No. 4	10,500
" "B" " "	18,000
" "C" "	14,000
" "D" 1-2	11,500
" "L" Level No. 3	15,000
" "E" " No. 3	5,115
" "G" " " 3	18,000
" "F" " " 3	10,000
" "I" " " 2	13,000
" "M" " " 2	25,000
" "K" " " 1	15,000
" "N" " " 1	25,000
" "R" " P.S. Adit	17,000
Copper vein	250,000
South shaft dump 18,000 tons	
@ \$4.50	81,000
Mill dump 5,443 @ 14.00	76,209
Miscellaneous dumps	1,000
	<u>\$723,322.</u>

These values are based on the market for these metals under normal conditions, but under present market value they have nearly doubled - the demand for copper, lead, zinc and silver is very strong and gold is standard at \$20.67 per oz.

MINING:

The cost of mining is approximately \$4.00 to \$4.50 per ton.

TIMBER:

There is an abundance of timber for mining use on the property at a low cost for cutting and hauling - the value of the timber on the property has been estimated at \$30,000. The ground stands firmly and requires very little timbering.

WATER:

The mine water can be pumped to the surface for use of hoist plant or mill when necessary during dry season but a pumping plant has been installed from the mill, which supplied all water necessary at all times of the year. This plant cost approximately \$5,000.00

POWER:

Steam is used at present but it is intended to change to Electric power, as a high tension electric line passes within a mile of the plant, at an approximate cost of \$5,000.00; this will reduce the cost of power about one-third.

HOISTING PLANT:

This is equipped with a hoist for developing the mine to 1200 feet vertical depth. Ten drill Imperial type air compressor pumps, tanks, etc., and 80 horse power boiler. All in good working order. This plant cost approximately \$25,000.00.

MILL:

The mill, with a capacity of approximately 60 tons in 24 hours is located on the Yavapai Claim, and is a patented mill site. It is about 300 feet from the main hoisting plant, ore being dumped directly from the mine cars into the ore bins, thence through crushers to 10-1000 lbs. stamp-mill; thence to two Huntington mills, thence to 5 Wilfley and 3 Monell concentrating tables, slimers, etc. It has 140 horse power and is equipped for the entire process of turning out economically a good marketable concentrate. The cost of this mill was approximately \$50,000.00.

BUILDING:

There are 2 hoist houses, mill house, both large, well built and roomy. Blacksmith shop, assay office and Laboratory, also mine office, superintendent's house, and miners' boarding house - all thoroughly equipped.

(Signed) Leonard D. Sevyer, M.E.

ORE DEPOSITS OF THE JEROME AND BRADSHAW
MOUNTAINS QUADRANGLES, ARIZONA
by--Waldemar Lindgren--

CASH MINE
(HASSAYAMPA DISTRICT)
Page 121

"About a quarter of a mile to the east of the wagon road on the north side of the Mount Union pass is the Cash vein. It lies about 1,000 feet east of the outcrops of the Senator group and is probably the extension of one of the Senator veins. In the Mint report for 1883 it is mentioned as being developed by three shallow shafts and having a 9' vein with low grade ore. Since that time it has been extensively developed, particularly from 1900 to 1902 but was idle from 1912 to 1922, when it was again opened. It is reported to be the property of the Betty O'Neil Mining Company of Nevada. The mine is developed by a shaft 400 feet deep and has a 10 stamp mill with plates and concentration. The value of the total production could not be ascertained.

Amphibolite schist crops out on the road between the Senator veins and the "Cash". The shaft dump shows Yavapai schist injected with diorite. Dikes of normal rhyolite porphyry about 10' wide crop out along the road to the mine. The vein strikes N. 40° E. and Dips 60° S.E.

Jagger and Palache (U. S. Geol. Survey, Geol. Atlas, Bradshaw Mountains folio (No. 126), 1905) describe the vein, which was being worked in 1900, as follows:

"The ore body in this mine is in the form of a series of well-defined lenses that have a maximum thickness of $2\frac{1}{2}$ ft. and occur in sericite schist which is in places black and graphitic. The ore is rich in sulphides, chiefly galena, sphalerite, pyrite, and chalcopryite, contains some tetrahedite in quartz, and is characterized by comb and banded structure, the center of the vein being generally open and lined with beautiful crystals of all the

vein minerals. A rich body of free gold ore was found in this mine at a depth of 200 ft. from the surface.

The ore seen on the dumps in 1922 contains predominating quartz with some calcite and more or less pyrite, sphalerite and chalcopryrite. Some of the sphalerite is coated with covellite. On the main ore dump was noted banded ore of magnitite and pyrite like that in parts of the "Senator" mine.

Although the underground workings could not be visited, it seems clear that there are here two different kinds of veins, one of which contains magnetite, specularite, and adularia, in addition to pyrite, chalcopryrite, spalerite, and galine, the place of the iron oxides in the succession being between pyrite and chalcopryrite. Figure 7 shows in twice the natural scale the relation between the ore minerals. (See Drawing). It appears that the deposition began with magnitite, quartz and calcite, after which pyrite with quartz and calcite was deposited in small crystals and crystal aggregates. Then followed specularite in long laths in quartz; parts of the laths and masses of specularite consist of magnetite, suggesting that all of the specularite had passed thru early magnetite stage. Chalcopryrite is distimtly the last mineral (See Pl. 14A) Note: Plate 14 is a photograph enlarged 110 diameters of ore from "Cash" mine ore of second type carries apparently only chalcopryrite, galena, and sphalerite.

Figure 7--Section of ore from "Cash" mine. A, Altered schist; B, Magnetite with quartz and calcite; C, Quartz beinlet; D, Pyrite crystals disseminated with quartz and calcite; E, Massive pyrite; F. Quartz with plates of specularite and some magnetite; G, Chalcopryrite,--Enlarged two diameters.

Page 46 DISTRIBUTION:

"These veins are continued farther southwest by the "Senator, Cash Storm Cloud" vein system, in the upper Hassayampa, which is remarkable for carrying magnetite and specularite which is also rich in gold."

Page 48 UNUSUAL TYPES:

"Among the unusual types of vein formation the Senator, Cash, Storm Cloud veins stand out. Although otherwise conforming to the type here discussed they contain magnetite, in large part altered to specularite, the plates of which project through the other sulphides. The succession seems to be pyrite (oldest) magnetite, specularite, chalcopyrite, sphalerite, and galena. The specularite is shown in Plate 14A (See also fig. 7). It is said that in the Senator mine ore of this type contains much free gold.... The succession of minerals is well shown in specimens from the Cash mine. The country rock next to the ore, probably a schist, has here been altered to quartz and alularia, the latter in short prismatic crystals. The altered rock also contains calcite, ankerite, chlorite, pyrite, magnetite, and apatite in confused textures. There is some residuary albite and probably also some secondary albite.

Page 114-115 HASSAYAMPA DISTRICT

".... The area includes many mines of considerable production, mostly in gold and silver"

Another group of mines, some of which have had a large production, center about the northern slopes of Mount Tritle and Mount Union. They are on gold-silver veins that are closely connected with the rhyolite porphyry dikes, and the Senator is the best known among them.

GEOLOGIC ATLAS OF UNITED STATES

(HASSAYAMPA CREEK DISTRICT)

Page 10.

"The southern part of the same stock of quartz-diorite is drained by Hassayampa Creek. It is bordered to the south and east by the amphibolites and basid diorite of Mount Tritel Range, and here are found several important gold mines of which the Senator and Cash are the best developed. These mines are all on veins trending northeast to southwest and their chief value is in gold. In the Senator a fairly continuous vein of banded quartz, 3 to 6' wide, occurs parallel to and near the contact of hard, black banded amphibolite and metamorphic conglomerate, some distance from the edge of the quartz diorite stock. The ore is chiefly pyrite, galena, and sphalerite in coarse, white, banded quartz. A large body of free gold with pyrite was opened on the 500' level next to the conglomerate wall rock.....The Cash mine is somewhat farther from the quartz-diorite.

Page 5: BASIC DIKES:

....."Dikes of diorite and diorite-porphry were noted at the Cash Mine.

MINERS HANDBOOK -- 1922 -- Y. P. Mining Co.
VOL. XIV 1918 - 1919

Y. P. Mining Co.
Address, N. H. Getchell, Mgr.
Prescott, Arizona

Operating Cash property 14 miles south of Prescott in the Senator district, Yavapai County.

Dividends paid are said to amount to \$15,000.

DEVELOPMENT:

Development has continued for several years and is now at 750' level. The 60 ton mill and concentrating plant has five

Wilfley tables and a Monell sliver and at last account was producing \$8,000 gold bullion per month.

MINERS HANDBOOK -- 1922

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