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PRELIMINARY REPORT ON
HILLSIDE MINE
YAVAPAI COUNTY, ARIZONA.

INTRODUCTION

At the request of Mr. G. C. Taylor of the Valley National Bank of Phoenix, Arizona, a preliminary examination of the Hillside Mine was made January 6 and 7, 1937. This examination was made to determine whether or not a complete examination of the property should be made to serve as a basis for consideration of a loan of \$75,000 to Hillside Mines, Inc. by the Valley Bank. For the purposes of the preliminary examination statements made by the owners were accepted as reliable. The short time spent on the property was not sufficient to permit checking of assay information or other operating data. All accounting information is kept at the Prescott office of Hillside Mines, Inc., and was not available at the mine. The information set forth in this preliminary report must be considered as subject to revision in any complete report made upon the property.

LOCATION, PHYSICAL FEATURES, OWNERSHIP, PRESENT OPERATION

The Hillside Mine is located in the canyon of Boulder Creek, Eureka Mining District, Yavapai County, Arizona, in sections 16 and 21, R 9 W, T 15 N, and is about 35 miles by graded dirt road from Hillside station

on the Ash Fork-Phoenix branch of the Santa Fe Railroad. The topography of the region near the mine is rugged and there is no timber in the district. Water for use in the mill is obtained from the mine which is making about 100 gallons per minute on the newly opened 7th level. Water for domestic use is obtained from springs.

All supplies are trucked from Hillside.

Electric power is generated at the mine with a six cylinder 450 H.P. Fairbanks-Morse diesel engine connected to a 440 volt General Electric generator. Truck transportation between Hillside and the mine is at times interrupted for short periods during the summer months by torrential rains and by occasional snows in the winter months. Concentrates are hauled from the mine to Hillside at a cost of \$2.50 per ton.

The property consists of six patented and ten unpatented claims and was purchased for \$150,000 by Hillside Mines, Inc. under a bond and lease on which payments are reported to have been completed in November 1936. The stock is reported to be held by Mr. H. L. Williams, President and General Manager, of Prescott, Arizona, Mr. J. W. Walton of St. Davids, Pennsylvania, and Mr. M. R. Smith of Kansas City, Missouri.

The present operation at the property employs 107 men and from 135 to 150 tons per day are produced. The mine and mill are operated seven days per week on a three shift basis with approximately 25 men underground

on each shift. Miners receive \$4.00 and muckers \$3.50. Labor conditions appear to be good and no labor difficulties have been encountered since the operation was started in 1934.

HISTORY AND PRODUCTION

Arizona Bureau of Mines Bulletin 137 states that the Hillside deposit was located by John Lawler in 1887, and intermittent operations by Lawler, leasers and others continued on the 4th tunnel level and above until the death of Lawler in 1917. Thereafter the property was inactive until 1934 when Mr. H. L. Williams obtained a bond and lease from the Lawler estate. To 1934 the property is credited with a production of \$296,500, produced from 13,094 tons of ore and concentrates. Operations since 1934 are stated by the present operators to have produced a gross value of \$1,040,000 from approximately 120,000 tons of ore mined and milled. The values were 64% in gold, 35% in silver and 1.0% in copper; since August 1936 a small payment has been made for the lead contained in the concentrates.

EQUIPMENT

Hillside Mines, Inc. has installed on the property the equipment necessary to mine and mill 150 tons of ore per day. Considerable road building has been

necessary and portable compressors, a tractor and other road building machinery have been purchased. A diesel power plant was installed in 1935, and camp and mine buildings have been built. A list of the principal items of equipment is attached to this report.

The forced sale value of this equipment cannot be accurately estimated without an accurate knowledge of the state of the market for such materials at the time of the sale. It is probable that the surface and underground equipment at the Hillside Mine would bring not less than \$40,000 at a forced sale in a normal market. This sum would be roughly divided as follows: Power plant \$18,000; mill \$10,000, and mine and surface equipment \$12,000.

GEOLOGY

The Hillside vein is a narrow, stringery, persistent vein in gray mica schist which has been developed underground for about 2500 feet on strike, and at the main shaft to a depth of 400 feet. The vein has a strike of N 15° E and a dip of 70° W. Mineralization near the surface is composed of iron stained quartz, iron oxides, and lead carbonate with erratic high grade gold and silver values. Below the 4th level the mineralization is quartz, pyrite, sphalerite, galena, little chalcopyrite and possibly some arsenopyrite, with gold and silver values. The mineralization is discontinuous on strike and dip, and in the

upper levels the vein width varies from a few inches to 1.5 feet with an average of slightly more than 1.0 feet. Below the 4th level the vein averages about 1.5 feet in width, and locally reaches a width of three feet of quartz and sulphide mineralization.

On the 7th level the 200 feet of drifting done to date has exposed a width of 2.0 to 2.5 feet of quartz and sulphides which scattered samples taken by the mine foreman indicate will average better than \$12.00 per ton in gold and silver at present United States prices as compared with the mill heads during the last six months of 1936 of approximately \$10.20 in gold and silver, or an assay value of 0.20 oz. gold and 4.7 oz. silver per ton.

Thin clay gouges parallel the mineralization and where the quartz sulphide mineralization has pinched out the vein structure is represented by clay gouges, crushed altered schist and narrow seams of gray quartz. There are large granite intrusives in the schist near the mine, and on the 6th and 7th levels there is a coarse granite dike about 30 feet in the foot wall of the vein which has a dip parallel to the vein. All development on the vein has been through schist wall rocks and there is no clue as to the possible behavior of the vein should the structure pass into another rock type with depth.

MINING AND MILLING

Early operations at the Hillside Mine were carried on through tunnels. The lowest of these is known as the 4th level and was driven at an elevation just above the bed of Boulder Creek. This 4th level is 100 feet below the main shaft collar, and the 5th, 6th and 7th levels have been driven at 100 foot intervals below the 4th level. Approximately 1850 feet of drifting on the vein has been done on the 5th level, 1200 feet on the 6th level, and 200 feet on the 7th level.

The present operation is through a vertical, two and a half compartment shaft which is 400 feet in depth. The shaft collar is on the vein outcrop, and the shaft bottoms about 80' in the footwall of the vein. Only one compartment is used for ore hoisting; the other full compartment is used for shaft sinking and hoisting through this compartment is done by a small auxiliary electric hoist operated from the surface.

Cut and fill stopes are used to extract the ore. The stoping width is made to conform to the vein width as nearly as possible, but it is necessary to break from 2.0 to 2.5 feet where the actual vein width is 1.5 feet. Some sorting is done in the stopes but from observation underground it is likely that the mill feed represents a stoped width of from 2.0 feet to 2.5 feet. Fill for the stopes is obtained by blasting into the wall rock; the soft fractured nature of the schist makes it necessary

to keep the stopes filled within a few feet of the back. Stulls are used where necessary in heavy ground.

Development headings have not been driven rapidly enough to keep the ore blocked out in advance of mining, and in many cases stoping operations are started before raises have been driven between levels. Irregular sampling is done by the mine foreman in stopes and development faces, but no records of accurate locations for these samples are kept.

The mill is a flotation plant in which a bulk sulphide flotation product is made. The present concentration ratio is between 5 and 6 to 1, and a 95% recovery of the gold-silver content of the ore is made. Concentrates are sacked and shipped by truck to Hillside and thence by rail to the A. S. & R. smelter at El Paso, Texas. Moisture content of sacked concentrates is 8 to 9%. Grinding is to 50% through 48 mesh. A tabulation of mill records for 1936 taken from assay and tonnage reports at the mine is attached to this report.

SMELTING

From the beginning of the current operation until August 1936, concentrates were shipped to the Magma Smelter at Superior, Arizona. Since that time concentrates have been shipped to the A. S. & R. Co. smelter at El Paso, Texas. The contract with the El Paso smelter

provides for shipment of a maximum of 1000 tons per month; additional tonnage, under the contract, may be refused by the smelter. The contract is dated July 9, 1936, and expires July 9, 1938, but may be cancelled by either party sixty days after written notice is given that the contract is to be terminated. An advance payment of \$2000.00, approximately 70% of the value of an average car, is made by the smelter on each car of concentrates as soon as loaded and billed at Hillside station. A typical smelter liquidation sheet, dated December 29, 1936, shows the following smelter charges and payments: Smelter charge including freight Hillside to El Paso, \$6.06; no penalties; pay for 100% of gold content at \$32.818 per ounce; pay for 95% of the silver content at \$0.77 per ounce; pay for lead, deduct 6.5 units and pay for 50% of the remainder at \$0.03 under market. The analysis of this shipment showed the following: Moisture 8.8%, Insoluble 9.6%, Silica 8.2%, Iron 29.1%, Lime 0.2%, Alumina 1.3%, Sulphur 36.1%, Arsenic 4.37%, Antimony 0.40%, Zinc 6.6%, Lead 9.9%, Copper 0.6%, Silver 34.35 ozs. per ton, Gold 1.235 ozs. per ton.

Freight on the above concentrates from Hillside station to El Paso is reported at the mine to be \$5.75 per ton. Therefore the total smelter and freight charge of \$6.06 per ton appears very favorable to the mine. However, the deductions made in the payment for the lead content appear to penalize the mine and so minimize the advantage of the low smelter rate.

POSSIBLE ORE RESERVES

The short time spent at the mine did not permit checking of sample information, and the following possible ore reserves are based upon statements by the operators and must therefore be accepted only as an estimate made from data which may or may not be substantiated by independent investigation.

As shown upon the mine map and long section, there is sufficient unstoped ground below the 4th level developed by drifts on the 5th, 6th and 7th levels to make possible a developed reserve of 28,000 tons of sulphide ore of approximately the same grade as the ore milled during the last six months of 1936, or \$10.20 in gold and silver. Above the 4th level approximately 11,000 tons of mixed oxide and sulphide may be found in small blocks left in the old stoping operations, and above the south end of the 3rd level.

Future ore possibilities may be roughly estimated in a narrow stringery vein of this type by projecting known ore developed by stopes or drifts to a depth of 100 feet below such ore exposures. There may exist therefore, above the 7th level and below the 3rd level, some 36,000 tons of future ore. Below the present 7th level drift a block containing 5,500 tons of future ore may be present above the elevation of the projected new 8th level. Future development of this ore would necessitate sinking the shaft from the 7th to the 8th level.

Development on the 5th level has exposed a length along the vein of 1700 feet which has been or may be stopped; the 6th level development has exposed an ore length of 1150 feet with about 400 feet of vein below the 5th level drifts unexplored. If it is assumed from the 5th and 6th level development that the 7th level drift will develop ore over a length of 1600 feet, approximately 35,000 tons of ore could be developed between the 6th and 7th levels. A continuance of such an ore shoot with depth assuming a width of 2.5 feet and a length of 1600 feet would develop about 325 tons per foot of depth.

COSTS AND CURRENT POSITION OF COMPANY

The audit of the company's books for the year 1936 has not yet been completed by Barrow, Wade, Guthrie and Company, accountants and auditors of Los Angeles, California. No statement of the current position of the company was available at the mine. All costs data and accounts are kept at the office of the Hillside Company in Prescott, Arizona.

Mr. Williams, mine manager, stated that the operating cost for the past few months was about \$6.30 per ton. An informal statement by the Hillside Company to the Valley Bank showed a profit of \$250,000 during the period from June 1934 to December 31, 1936, from the extraction of 120,000 tons of ore; this would indicate a profit of slightly more than \$2.00 per ton.

CONCLUSION

Operation of the Hillside mine by the present management for the past two and one-half years has shown a considerable profit. Development of the vein on the 5th and 6th levels indicates a narrow ore width to extend for a length of some 1600 feet. Statements and maps made by the operators indicate that there may be unstopped some 28,000 tons of sulphide ore between the 7th and 4th levels and 11,000 tons of mixed sulphide and oxide ore. Additional development work on the 7th level and below may appreciably increase the developed ore tonnage. Equipment on the property should have a value of not less than \$40,000 at forced sale. No information about the current financial position of the company or about operating costs was available at the mine, and can best be obtained after the completion of the report by Barrow, Wade, Guthrie and Co.

If the report of the audit shows a favorable financial position in the view of the Valley Bank, and operating costs roughly check the statements of the mine manager, a complete examination of the property is recommended to determine present and possible future ore reserves, and the value of the equipment at forced sale. The report of such an examination would serve as a basis for consideration of a loan of \$75,000 to the Hillside Mines, Inc. by the Valley National Bank.

Respectfully submitted,

RBM/G

EQUIPMENT

Double drum electric hoist Wellman Mach. Co. good for 700 feet of depth.

Small axillary electric hoist used in shaft sinking.

Cameron sinking pump and two small centrifugal pumps underground.

Assay Office with equipment for making gold and silver assays.

Caterpillar 60 tractor.

Road building machinery, scrapers, etc.

Chicago Pneumatic portable compressor.

Sullivan portable compressor.

Sullivan compressor 300 cu. ft.

Ingersoll Rand jack bit sharpener.

Lathe.

450 HP Fairbanks Morse diesel engine connected to General Electric 440 volt generator, new in 1935.

75 HP Fairbanks Morse diesel, old.

Jaw crusher, Fine ore feeder, Marcy ball mill, Dorr classifier, 12 Denver sub-A flotation cells small drum type filter, thickener, small Dorr classifier, pumps, and motors for driving all mill equipment, mill building.

Miscellaneous underground equipment: cars, rails, pipe, machines, etc.

Warehouse and other mine and camp buildings.

HILLSIDE MINE 1936 MILL RECORD

Period 1936	Ave. Tons per Day	HEADS ASSAY			TAILS ASSAY			CONCEN. ASSAY			CONCTS.		RECOVERY %
		Oz. Au.	Oz. Ag.	Value \$	Oz. Au	Oz. Ag.	Value \$	Oz. Au	Oz. Ag.	Value \$	Ratio to 1	Tons Day	
Jan.	135	.181	6.1	10.88	.0031	0.41	0.403	1.44	47.2	82.00	8.1	17.0	96.7
Feb.	140	.177	4.8	9.35	.0057	0.53	0.580	1.58	43.9	84.25	9.3	15.0	94.5
Mar.	151	.185	4.4	9.37	.0043	0.37	0.41	1.56	37.5	78.70	8.6	17.6	96.2
Apr.	150	.154	3.96	7.96	.0083	0.71	.80	1.93	41.5	93.70	12.7	11.8	90.9
May	135	.168	4.02	8.47	.0033	0.31	.39	2.01	41.4	96.64	11.6	11.6	96.1
June	144.4	.166	3.64	8.12	.0063	0.23	.38	1.22	25.38	58.95	7.4	19.6	95.5
July	133.6	.229	4.54	10.86	.0087	0.29	.50	1.245	22.10	57.06	5.5	24.5	96.6
Aug.	152.7	.225	4.68	10.82	.0079	0.25	.45	1.347	24.9	62.46	5.9	25.7	97.0
Setp.	153	.221	5.12	11.03	.0060	0.21	.35	1.292	26.9	62.10	5.7	26.6	97.5
Oct.	140	.196	4.73	9.89	.0061	0.16	.35	1.351	29.2	65.71	6.8	20.5	97.0
Nov.	130	.165	4.25	8.54	.0050	0.16	.29	1.285	30.1	64.17	7.7	16.9	97.0
Dec.	133	.204	4.81	10.22	.0043	0.19	.33	1.191	27.4	59.18	5.9	22.4	97.3

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Hillside Mines, Inc. has installed on the property the equipment necessary to mine and mill 150 tons of ore per day. Considerable road building has been

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GEOLOGY

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Thin clay gouges parallel the mineralization and where the quartz sulphide mineralization has pinched out the vein structure is represented by clay gouges, crushed altered schist and narrow seams of gray quartz. There are large granite intrusives in the schist near the mine, and on the 6th and 7th levels there is a coarse granite dike about 30 feet in the foot wall of the vein which has a dip parallel to the vein. All development on the vein has been through schist wall rocks and there is no clue as to the possible behavior of the vein should the structure pass into another rock type with depth.

MINING AND MILLING

Early operations at the Hillside Mine were carried on through tunnels. The lowest of these is known as the 4th level and was driven at an elevation just above the bed of Boulder Creek. This 4th level is 100 feet below the main shaft collar, and the 5th, 6th and 7th levels have been driven at 100 foot intervals below the 4th level. Approximately 1850 feet of drifting on the vein has been done on the 5th level, 1200 feet on the 6th level, and 200 feet on the 7th level.

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Freight on the above concentrates from Hillside station to El Paso is reported at the mine to be \$5.75 per ton. Therefore the total smelter and freight charge of \$6.06 per ton appears very favorable to the mine. However, the deductions made in the payment for the lead content appear to penalize the mine and so minimize the advantage of the low smelter rate.

POSSIBLE ORE RESERVES

The short time spent at the mine did not permit checking of sample information, and the following possible ore reserves are based upon statements by the operators and must therefore be accepted only as an estimate made from data which may or may not be substantiated by independent investigation.

As shown upon the mine map and long section, there is sufficient unstopped ground below the 4th level developed by drifts on the 5th, 6th and 7th levels to make possible a developed reserve of 28,000 tons of sulphide ore of approximately the same grade as the ore milled during the last six months of 1938, or \$10.20 in gold and silver. Above the 4th level approximately 11,000 tons of mixed oxide and sulphide may be found in small blocks left in the old stoping operations, and above the south end of the 3rd level.

Future ore possibilities may be roughly estimated in a narrow stringery vein of this type by projecting known ore developed by stopes or drifts to a depth of 100 feet below such ore exposures. There may exist therefore, above the 7th level and below the 3rd level, some 36,000 tons of future ore. Below the present 7th level drift a block containing 5,500 tons of future ore may be present above the elevation of the projected new 8th level. Future development of this ore would necessitate sinking the shaft from the 7th to the 8th level.

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COSTS AND CURRENT POSITION OF COMPANY

The audit of the company's books for the year 1936 has not yet been completed by Barrow, Wade, Guthrie and Company, accountants and auditors of Los Angeles, California. No statement of the current position of the company was available at the mine. All costs data and accounts are kept at the office of the Hillside Company in Prescott, Arizona.

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CONCLUSION

Operation of the Hillside mine by the present management for the past two and one-half years has shown a considerable profit. Development of the vein on the 5th and 6th levels indicates a narrow ore width to extend for a length of some 1600 feet. Statements and maps made by the operators indicate that there may be unstopped some 28,000 tons of sulphide ore between the 7th and 4th levels and 11,000 tons of mixed sulphide and oxide ore. Additional development work on the 7th level and below may appreciably increase the developed ore tonnage. Equipment on the property should have a value of not less than \$40,000 at forced sale. No information about the current financial position of the company or about operating costs was available at the mine, and can best be obtained after the completion of the report by Barrow, Wade, Guthrie and Co.

If the report of the audit shows a favorable financial position in the view of the Valley Bank, and operating costs roughly check the statements of the mine manager, a complete examination of the property is recommended to determine present and possible future ore reserves, and the value of the equipment at forced sale. The report of such an examination would serve as a basis for consideration of a loan of \$75,000 to the Hillside Mines, Inc. by the Valley National Bank.

Respectfully submitted,

RBM/G

EQUIPMENT

Double drum electric hoist Wellman Mach. Co. good for 700 feet of depth.

Small axillary electric hoist used in shaft sinking.

Cameron sinking pump and two small centrifugal pumps underground.

Assay Office with equipment for making gold and silver assays.

Caterpillar 60 tractor.

Road building machinery, scrapers, etc.

Chicago Pneumatic portable compressor.

Sullivan portable compressor.

Sullivan compressor 300 cu. ft.

Ingersoll Rand jack bit sharpener.

Lathe.

450 HP Fairbanks Morse diesel engine connected to General Electric 440 volt generator, new in 1935.

75 HP Fairbanks Morse diesel, old.

Jaw crusher, Fine ore feeder, Marcy ball mill, Dorr classifier, 12 Denver sub-A flotation cells small drum type filter, thickener, small Dorr classifier, pumps, and motors for driving all mill equipment, mill building.

Miscellaneous underground equipment: cars, rails, pipe, machines, etc.

Warehouse and other mine and camp buildings.

HILLSIDE MINE 1936 MILL RECORD

Period 1936	Ave. Tons per Day	HEADS ASSAY			TAILS ASSAY			CONCEN. ASSAY			CONCTS.		RECOVERY %
		Oz. Au.	Oz. Ag.	Value \$	Oz. Au.	Oz. Ag.	Value \$	Oz. Au.	Oz. Ag.	Value \$	Ratio to 1	Tons Day	
Jan.	135	.181	6.1	10.88	.0031	0.41	0.403	1.44	47.2	82.00	8.1	17.0	96.7
Feb.	140	.177	4.8	9.35	.0057	0.53	0.580	1.58	43.9	84.25	9.3	15.0	94.5
Mar.	151	.185	4.4	9.37	.0043	0.37	0.41	1.56	37.5	78.70	8.6	17.6	96.2
Apr.	150	.154	3.96	7.96	.0083	0.71	.80	1.93	41.5	93.70	12.7	11.8	90.9
May	135	.168	4.02	8.47	.0033	0.31	.39	2.01	41.4	96.64	11.6	11.6	96.1
June	144.4	.166	3.64	8.12	.0063	0.23	.38	1.22	25.38	58.95	7.4	19.6	95.5
July	133.6	.229	4.54	10.86	.0087	0.29	.50	1.245	22.10	57.06	5.5	24.5	96.6
Aug.	152.7	.225	4.68	10.82	.0079	0.25	.45	1.347	24.9	62.46	5.9	25.7	97.0
Setp.	153	.221	5.12	11.03	.0060	0.21	.35	1.292	26.9	62.10	5.7	26.6	97.5
Oct.	140	.196	4.73	9.89	.0061	0.16	.35	1.351	29.2	65.71	6.8	20.5	97.0
Nov.	130	.165	4.25	8.54	.0050	0.16	.29	1.285	30.1	64.17	7.7	16.9	97.0
Dec.	133	.204	4.81	10.22	.0043	0.19	.33	1.191	27.4	59.18	5.9	22.4	97.3

P. O. Box 327
Grants, New Mexico
March 28, 1951

Mr. W. J. Wilcox
Anaconda Copper Mining Company
P. O. Box 1961
Butte, Montana

Dear Mr. Wilcox:

The following is a summary of expenses and distribution of time for January, 1951

Meals - - - - -	\$ 25.25
Telephone - - - - -	4.95
Hotels- - - - -	7.15
Passport pictures, etc. - - - - -	5.15
Passport fee- - - - -	10.00
Transportation, gasoline, oil and repairs (speedometer, gas tank)-	92.49
Supplies- - - - -	4.20
Total	\$149.19

Expenses and distribution of time are allocated to various accounts as follows:

<u>Name of Property and Location</u>	<u>Days</u>	<u>Expense</u>
Indiana Mine, Pima County, Arizona-----	3	\$ 7.70
Ben Hur Group, Graham County, Arizona---	5	37.20
Bush Mine, Graham County, Arizona-----	1	5.70
Nickol Prospect, Graham County, Arizona-	2	9.90
Idaho Mine, Santa Cruz County, Arizona--	6	19.79
Padres Group, Pima County, Arizona-----	1	-
Coronation Mines, Yuma County, Arizona--	4	-
Grants, McKinley County, New Mexico-----	8	52.00
General Exploration-----	1	16.90
Total	31	\$149.19

Yours Very truly,


Arthur W. Ruff

cc: Alex M. McDonald

Please deposit the sum of \$149.19 in Southern Arizona Bank and Trust Company, Campbell Street Branch, Tucson, Arizona, to the credit of Arthur W. Ruff to maintain account at \$250.00.

Mul.

January 1, 1951
2825 E. 22nd. St.
Tucson, Arizona

Mr. R. B. Mulchay
Cananea Consolidated Copper Company
Cananea, Mexico.

Dear Mr. Mulchay:

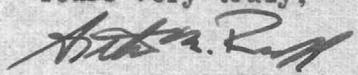
Following is the distribution of my expenses for the month of December, 1950:

Hotel	\$ 20.97
Food	37.35
Carbide	7.65
Passport	1.00
Gasoline (transportation)	67.84
Brakes, oil, and grease	10.94
Maps	1.50
Paper	1.15

Total expenses for the month of Dec. \$148.40

Credit to account on December 1	\$ 33.28
Money advanced during December	160.00
Total credit for the month of Dec.	<u>\$193.28</u>
Total expenses for the month of Dec.	148.40
Money returned to Mr. Mulchay	<u>\$ 44.88</u>

Yours very truly,



Arthur W. Ruff

2623 E. Bend. Street
Tucson, Arizona
February 24, 1951

Mr. W. J. Wilcox
Anaconda Copper Mining Company
P.O. Box 1981
Butte, Montana

Dear Mr. Wilcox:

The following is a summary of expenses and distribution of time for February, 1951:

Meals	\$ 125.16
Hotel	126.26
Transportation, gasoline, oil, and repairs	73.61
Telephone	4.77
Stamps	2.00
Supplies	<u>5.65</u>
Total	\$ 357.77

Expenses and distribution of time are allocated to the following account:

<u>Name of Property and Location</u>	<u>Days</u>	<u>Expense</u>
Colorado Plateau Investigation, Valencia and Mc Kinley County, Grants, New Mexico	28	\$ 357.77

Yours very truly,


Arthur W. Ruff

cc-Alex M. McDonald

Approved - - - - -

Please deposit the sum of \$357.77 in Southern Arizona Bank and Trust Company, Cambell Street Branch, Tucson, Arizona, to the credit of Arthur W. Ruff to maintain account at \$250.00.

Campbell