



## **CONTACT INFORMATION**

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PRINTED: 09/21/2001

ARIZONA DEPARTMENT OF MINES AND MINERAL RESOURCES AZMILS DATA

PRIMARY NAME: HUMBOLDT TAILINGS

ALTERNATE NAMES:

VAL VERDE MILL TAILINGS

YAVAPAI COUNTY MILS NUMBER: 994A

LOCATION: TOWNSHIP 13 N RANGE 1 E SECTION 23 QUARTER NW

LATITUDE: N 34DEG 29MIN 54SEC LONGITUDE: W 112DEG 13MIN 51SEC

TOPO MAP NAME: MAYER - 7.5 MIN

CURRENT STATUS: PAST PRODUCER

COMMODITY:

COPPER

SILVER

BIBLIOGRAPHY:

USGS MAYERQUAD

ADMMR HUMBOLDT TAILINGS FILE

3 of 3

Visited both Aluminum dross plants at Humboldt. They are operating at capacity.  
FTJ WR 5-19-67

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Active Mine List Oct. 1967 - 4 men

Visited Humboldt dross plants. Royal Aluminum operating as usual. Chem-Metals down  
for the weekend. FTJ WR 11-24-67

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Active Mine List April 1968 - 4 men

Visited Aluminum plants - operating at capacity. FTJ WR 5-24-68

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Active Mine List Oct. 1968 - 4 men

Visited Chem-Metals - operating at capacity. FTJ WR 1-24-69

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Visited Chem-Metals plant - operating about as usual. FTJ WR 3-21-69

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Active Mine List April 1969 - 4 men - H.K. Thomas, Chem-Metals Project

Visited the aluminum plants - operating as usual. FTJ WR 7-18-69

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Visited Chem-Metals plant - production about  $\frac{1}{2}$  capacity. FTJ WR 9-19-69

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Active Mine List Oct. 1969 - 2 men - S.14, 13N, 1E - H. K. Thomas, Chem-Metals

Visited Chem-Metals - down temporarily. FTJ WR 1-23-70

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Chem-Metals - idle. FTJ WR 3-20-70

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Chem-Metal - idle. FTJ WR 5-22-70

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To Aluminum plants - temporarily idle. FTJ WR 5-24-71

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HUMBOLDT MILL

YAVAPAI COUNTRY

Visited Chem-Metal Plant at Humboldt. Jack Thomas the principal and the 2 men crew were away temporarily. The plant which formerly worked on zinc dross from die-casting plants is now working on aluminum scraps, some of which are coming in from a Texas source. The process is still in the research and development phase. TPL WR 3-3-62

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This property active Oct. 1961 - Feb. 1962

Learned that Chem-Metal is continuing its aluminum refining operation at Humboldt with Wayne Alexander in charge. TPL WR 5-26-62

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Active Oct. 1962

Active Oct. 1963

Visited Chem-Metal Plant at Humboldt smelter site. No activity. Later learned from Lane Burton, supt. of Royal Aluminum, that Chem-Metal has been running some of Royal Aluminum dross and is only down temporarily. EGW WR 7-28-64

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Visited Chem-Metals plant. H. K. Thomas and 4 men were running aluminum dross. EGW WR 9-18-64

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Visited Chem-Metal plant at Humboldt smelter site - 2 men working running aluminum dross they are getting from Royal Aluminum Refining Co. EGW WR 1-22-65

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Visited Royal Aluminum Co. dross plant and Chem-Metal zinc dross plant - both at old Humboldt smelter site. Both were in operation. FTJ WR 5-21-65

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Visited Chem-Metal zinc dross plant - also operating. FTJ WR 7-23-65

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Chem-Metal is now called Thomas Enterprises as per Mr. FTJ WR 11-19-65

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Visited Chem-Metals - talked with Mr. Burton of Royal Aluminum who said they are hard pressed to take care of the dross they receive. The men work 10-hour shifts 6 days/week. Excess raw product is handled by H. K. Thomas - Chem-Metals plant nearby. FTJ WR 1-21-66

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Visited Royal Aluminum and Refining Co. and Chem-Metals at Humboldt - working to capacity on aluminum dross. FTJ WR 3-18-66

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Visited Chem-Metals and Royal Aluminum Refining Co. plants. Both are operating at full capacity. FTJ WR 11-18-66

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Active Mine List April 1967 - 5 men -

DEPARTMENT OF MINERAL RESOURCES

STATE OF ARIZONA

FIELD ENGINEERS REPORT

Mine Chem-Metal Plant (Humboldt Mill)  
Chemical Metallurgical Corp.  
3445 N. Valencia Lane, Phoenix  
Date August 28, 1962

District Humboldt, Big Bug - Yavapai County  
Engineer Lewis A. Smith

Subject: Plant visit and interview with H. K. Thomas and T. W. Alexander (plant foreman)

Location: On site of old Humboldt smelter.

Plant Flow Sheet: Aluminum dross, running about 6 percent Al is passed over a magnetic separator to remove iron. It is then jigged to remove copper, then ball-milled, rake classified and passed over a second jig to remove stainless steel which is not magnetic. The concentrate, which runs 65-70 percent Al is then washed and kiln dried. The drier runs at about 350°F. Some aluminum drosses run up to 50 percent Al. The dross is obtained from several California foundaries and the freight to Humboldt is around 38¢ per hundred pounds. Mr. Thomas said that Reynolds Aluminum Company's drosses were too high grade.

It is hoped to later equip the plant with retorts and a melting furnace. The Al concentrate would be melted into ingots and retorted with zinc concentrates to obtain a refined zinc product. However, for the present, it is planned to treat scrap zinc in pots with the Al to get an impure zinc metal for which there is a good market, at secondary zinc plants. The ultimate objective is to treat Iron King or other zinc concentrates.

4 to 5 men are now being employed, under the supervision of T. W. Alexander.

DEPARTMENT OF MINERAL RESOURCES

STATE OF ARIZONA

FIELD ENGINEERS REPORT

Mine Chem-Metal Project (Humboldt Mill) Date Jan. 31, 1961  
District Big Bug District - Yavapai County Engineer Travis P. Lane  
Subject: Visit

Proprietor: H. K. Thomas, 3445 W. Valencia Lane, Phoenix

Supt.: Wayne Alexander

This project is on the site of the old Humboldt smelter - the scene of Archie Poarch's unsuccessful venture of several years ago. At the time of the forced liquidation of that venture Mr. Thomas purchased at auction the smelter site and some buildings, also a small accumulation of ore and other metalliferous material which was to have been treated by the Poarch process. The latter included some 50 tons of zinc dross (flue dust, skimmings, etc.) from various die casting establishments on the west coast.

Mr. Thomas is now engaged in setting up a plant to process zinc dross material into metallic zinc of high purity. To date this work has consisted of enlarging one of the corrugated steel buildings (to about 3500 square ft.) and installing in it a certain amount of equipment, specifically hopper bins, 2 travelling fire brick-lined evaporating vats, 3 pressure digesters, a small drying kiln, etc. with much more to be done to complete the plant. Mr. Thomas was not present to explain the process and the workmen on the job were not conversant with the chemistry, etc. Apparently the process involves hydrochloric acid leaching, with several steps of leaching and evaporating before final precipitation of the metal. It is said that a plentiful supply of zinc dross material is available at plants on the coast.

Two men were employed: Wayne Alexander and Terry Roth. Mr. Thomas visits the job at frequent intervals.

HUMBOLDT MILL

YAVAPAI COUNTY

NOTES from article in Gazette of 7/18/58

New York bars Morris Herman, President of Southwestern Industrial Iron and Chemical Co., Inc., from engaging in the securities business in New York. Herman, of Spring Valley, N.Y., in 1952 proposed extraction of zinc and other minerals from dumps near Prescott and arranged with Archie Poarch to build a mill with \$800,000. raised thru stock sales. A contract was made for Poarch to build the mill with company funds and later sell the mill back to the company for \$6,000,000.(?) The mill never functioned and the corporation went bankrupt.

OTHER NOTES

Ed Lundy, 2114 W. Jefferson in July, 1957 had plans for the Humbolt mill and also for the Burger mill at Aguila if could finance.

The Poarch patents are in the hands of Thermo Metal & Engineering Co., 32 W. Thomas, Phoenix. Poarch was shot by his estranged wife. The Poarch process involved the floating of sulfides, then roasting and residue treatment to recover zinc, gold, silver, iron etc.

FPK

DEPARTMENT OF MINERAL RESOURCES

STATE OF ARIZONA

FIELD ENGINEERS REPORT

Mine Humboldt Mill & Smelter

Date Sept. 9, 1958

District Big Bug, Yavapai Co.

Engineer Travis P. Lane

Subject: Visit to plant

The operating company was the Southwestern Industrial Iron and Chemical Co. This was an A. L. Poarch promotion. The plant was intended to treat mine and mill dump material in the Prescott area, principally the Iron King tailings dump, to recover the metallic values and sulfur and iron by flotation or smelting or a combination of both. A number of patented processes were involved which allegedly would recover valuable ore constituents not otherwise recoverable.

A smelter and fuming plant were constructed and machinery for a small milling plant was delivered to the site, but never installed. The enterprise was shrouded in secrecy and no satisfactory contact could be made with any of the principals during the progress of construction; and after the project ran out of money just before completion of construction, no company officer was accessible. It is known that \$800,000.00 (some say up to \$1,000,000.00) was raised thru stock sales and all presumably spent on the project. The plant never operated, the company was declared bankrupt, and in June 1958 it was announced that a federal investigation was to be made concerning stock dealings, the manner of handling funds, etc.

In June of this year Mr. Ruben Finkelstein who originally sold the land and buildings to the company, bid them in at Sheriff's sale for the approximate amount still due him on the purchase price.

During the period Sept. 6-10 the equipment and facilities (other than buildings) were all sold at public auction by Mannie Feigenbaum of Los Angeles, and on the date of this visit equipment was being loaded and trucked out by several parties.





**RECEIVED**  
OCT 14 1954  
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PHOENIX, ARIZONA

News items

A. L. POARCH 145 So. Pennsylvania Str. Prescott, is constructing a reduction plant to treat existing tailings as well as the daily run from the Iron King Mill. The treatment will be for the recovery of sulphur and iron together with precious metals contained in the tailings. Mr. Poarch states that the present plant is a unit of what will be later enlarged to a capacity of 1000 tons daily. This unit will serve as a pilot or experimental plant to thoroughly develop the process to be used. Present funds are provided by a private syndicate with plans to incorporate later. 15 to 20 men are employed. The location of the plant is on the site of the old Humboldt Smelter.

Mark Gemmill

HUMBOLDT MILL (CHEM-METAL)

YAVAPAI COUNTY

World Mining Nov. 1965 p. 82

E&MJ Vol 167 No. 1 Jan. 1966 p.76

Skillings Mining Review April 23, 1966 p. 16

ABM Bull. 129 p. 59

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SOUTHWESTERN INDUSTRIAL IRON AND CHEMICAL CO. INC.

PHOENIX GAZETTE - Thursday 1-9-58

Funds handling & Ariz. writs of attachment against mining and ore refining plant operation at Humboldt are to be inquired into under ancillary jurisdiction granted in U. S. Dist. Court by Judge Dave W. Ling.

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The Southwestern Industrial Iron and Chemical Co. Inc., now in bankruptcy proceedings, is the firm in the Humboldt holdings. M. Jay Fein, trustee in the federal bankruptcy action in the Southern Dist. of N. Y. asked the court here to take the Ariz. action, and Judge Ling ordered the matter referred to Stanley A. Jerman, referee.

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A. L. POARCH, Owner, 145 So. Penn. St.  
Prescott, Ariz. (10-1954)





