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SJB, ~~TSS~~, ~~BAW~~, JEK

la. 25. 10. 10

J. E. K.

JUN 13 1967

J. H. C.

JUN 9 1967

June 7, 1967

W.E.S.

JUN 12 1967

S. I. B.

JUN 9 1967

Mr. John R. Menke
44 Ogden Road
Scarsdale, New York 10583

United Verde Extension Mine, Jerome, Arizona

Dear Mr. Menke:

I have for acknowledgment your brief note with enclosed copies of some old reports by Mr. Louis E. Reber, Jr., dating back to the 1920's along with copy of Mr. Jim Noble's report of 1948, all on the United Verde property, also copy of Mr. Paul Handverger's memorandum dated April 1967 covering the Cambruzzi crosscut from the Josephine Tunnel, all relating to our recent conversations regarding possible further exploration of the United Verde Extension property by Asarco.

Although the Jerome Camp has intriguing prospective value, I am afraid these speculative possibilities do not justify our attention. Phelps Dodge, Newmont and others with experience in the District and with a much better understanding of possibilities than we have do not appear to have sufficient courage to tackle these expensive programs.

While we do not have sufficient courage at this time to undertake the program you outlined, I do want to thank you for presenting the data for our consideration and I wish you every success in your further endeavors to find another spectacular Jerome ore body.

Very truly yours,

C. P. Pollock

Enc.

CC-CFBarber

Bld.CC-JHCourtright

JHC comments or editing?

J. H. C.

SEP 2 1966

AMERICAN SMELTING AND REFINING COMPANY
Tucson Arizona

September 2, 1966

MR. ~~SVF, JRW, BTD~~

READ AND RETURN

PREPARE ANSWERS ..... HANDLE .....

FILE ..... INITIALS .....

S. V. F

SEP 7 1966

FILE MEMORANDUM

Arizona Mineral Zones
The "Jerome Zone"

J. R. W.

SEP 19 1966

Introduction

The following is a progress report related to porphyry copper geology in Arizona, and more specifically to the subject heading.

Those porphyry copper "mineral zones" which are most obvious strike either NW or NE (recently diagrammed, Memo from J. E. Kinnison to J. H. Courtright, 5/5/66). The northeast zones generally appear to be short and discontinuous, with two exceptions: (1) The Miami - Ray zones (combined) and (2) the Jerome Zone -- which has received only casual comment in the past. The Jerome Zone is an excellent illustration of the continuity which such zones may have. A direct application to prospecting this zone lies in the coincidence of two features. First, the Jerome and the Silver Bell zones cross near Wickenburg where, secondly, there is evidence of a broad and shallow-covered pediment.

Description

Attachment A illustrates the probable extent of the Jerome zone, beginning in the Tranverse ranges in the western desert region of Arizona, and ending 700 miles to the northeast in the Boulder district of Colorado. Attachment B is a generalized sketch of the mineral zones in Arizona.

South of the Colorado Plateau region, the location of the Jerome zone is indicated by the prevailing pre-ore structure of the "schist belt" in the Mountain province of central Arizona. The United Verde at Jerome, and Iron King nearby, are pre-Cambrian deposits. Copper Basin is a typical "Laramide" porphyry copper deposit of sub-marginal size/grade. Other Laramide porphyry copper alteration zones (not shown on attachment A) are known in this general area, but are obviously too small to offer exploration targets. The Jerome zone may tentatively be extended southwest into the Harcuvar-Harquahala mountains of

the desert region, which are frequently termed "transverse ranges" because of their anomolous northeast trend. No ore deposits of consequence are known in these ranges.

The Colorado Plateau has been a stable region since Archean time, and yeilds little evidence of an extension of the Jerome zone. It is worth note, however, that a line extended northeast from Jerome passes first through the Black Mesa basin, then between the gap which separates the Monument uplift in Utah from the Defiance uplift in Arizona, and through the Carrizo Mountains which contain Mesozoic laccoliths.

This rather arbitrary linear feature, which may have influenced those features of the plateau which I summarized in the preceeding paragraph, emerges in Colorado at the southwest end of the "Colorado porphyry belt". This well-known zone of Laramide porphyry intrusives is characterized by many small mines on veins and replacement deposits. Climax and Leadville stand out as the two major deposits.

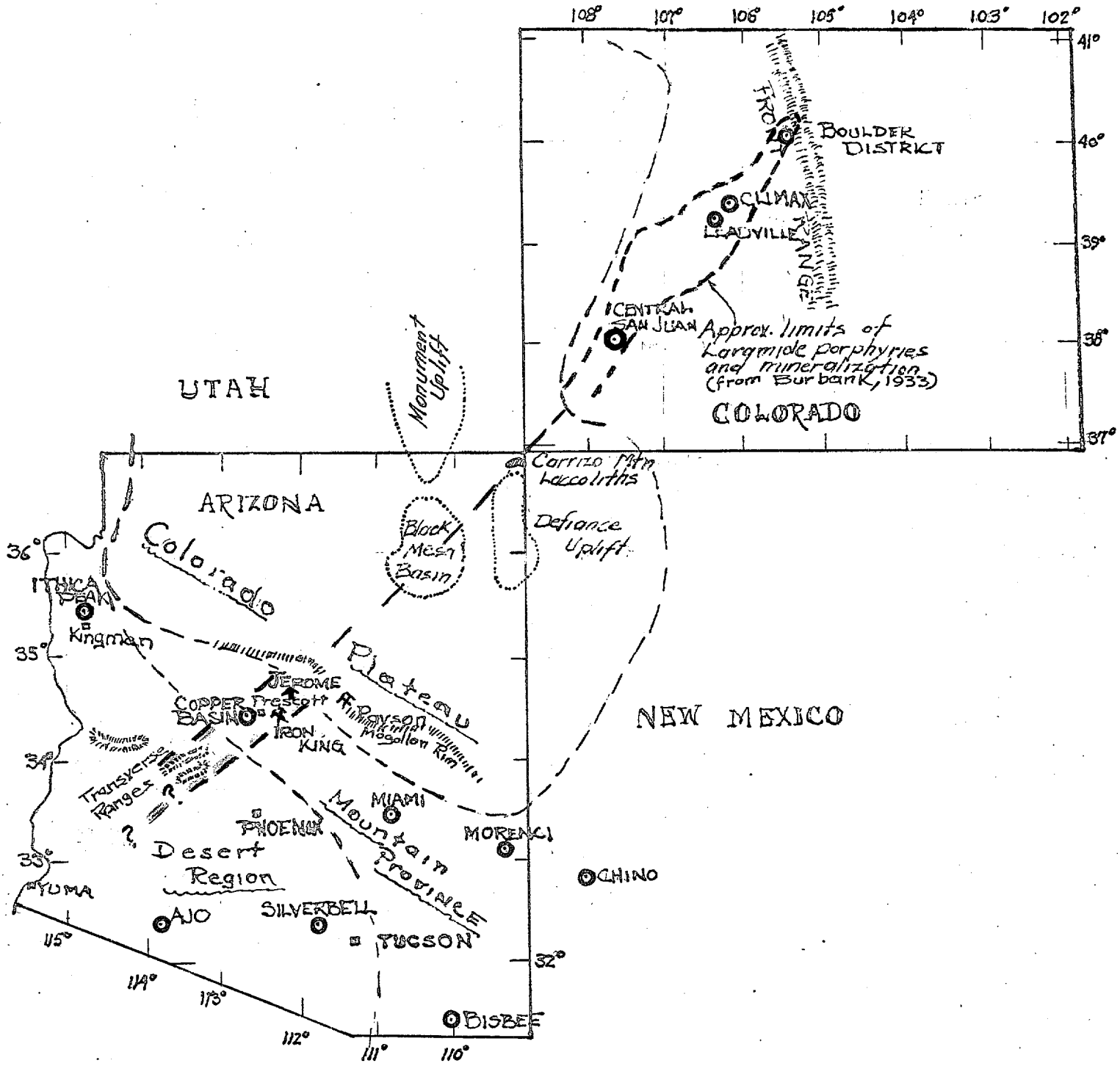
In summary, the Jerome zone contains ore deposits of Archean and also of Laramide age. Its presence as a basement zone beneath the Colorado Plateau may be inferred. It is long, relatively narrow, and must represent a zone of major structural importance. Where is passes through the Arizona "copper belt" the ground must be regarded as favorable for prospecting--especially the pediment region north and west of Wickenburg. The mapping Mr. Watson is now doing there seems to me most appropriate.

John E. Kinnison

JOHN E. KINNISON

JEK/mcg
Attachments
cc: JHCourtright
WESaegart
BNWatson

ATTACHMENT A



100 MILES
1" Approx.

THE JEROME ZONE

And a Probable Correlation Into Colorado Front Range

J.E.K. June 1966

ATTACHMENT B

EXPLANATION

- Gravels
- Volcanics
- } Post Mineral Rocks
- Pre Mineral Rocks

- Productive Porphyry Copper Deposit
- Marginal Deposits (Undeveloped)
- Deposits Currently Under Exploration
- Sub-Marginal Deposits
- Prospects — Untested

CALIFORNIA

SONORA

CHIHUAHUA

CHLORIDE
Mineral Park
KINGMAN
YUMA
Baghdad
PRESCOTT
Iron King
Copper Basin
FLAGSTAFF
JEROME ZONE
United Verde
JEROME
HOLBROOK
Cerrillos
MIAMI ZONE
RAY POSTEN ZONE
PLATEAU BOUNDARY
PHOENIX
Sleeping Beauty
Castle Dome
Miami
Rock House
SUPERIOR
GLOBE
Madera
Christmas
Blackwater
Pioneer
Ray
Kelvin
Chilito
Sacaton
Santa Cruz
Posten Butte
Lost Horse
Reward Mine
Newmont
Lake Shore
Greenback
Ajo
Silver Bell
Copper Creek
San Manuel
SAFFORD
Morenci
San Juan
Lone Star
CLIFTON
MOGOLLON
Steeple Rock
Hiltscher
Santa Rita
Tyrone
ALAMOGORDO
DEMING
Organ Dist
MAGDALENA
TUCSON
Saginaw Hill
Mission-Pima
Twin Buttes
Mc Gee
Esperanza
Helvetia
Johnson Camp
Tombstone
Turquoise
Tyndall
Red Mt
Sunnyside
Four Metals
RUBY
NOGALES
Bisbee
DOUGLAS
Border Pipe
SILVER BELL ZONE
SAN PEDRO ZONE
Cananea
Nacozari

N

After Plate 2, Arizona Bureau of Mines Bulletin No. 145, compiled by J. H. Courtright.

GEOLOGIC MAP of ARIZONA AND NEW MEXICO

Showing Porphyry Copper Deposits

SCALE 1 INCH = 40 MILES

August, 1950

Map No. 924