



CONTACT INFORMATION  
Mining Records Curator  
Arizona Geological Survey  
3550 N. Central Ave, 2nd floor  
Phoenix, AZ, 85012  
602-771-1601  
<http://www.azgs.az.gov>  
[inquiries@azgs.az.gov](mailto:inquiries@azgs.az.gov)

The following file is part of the Walter E. Heinrichs, Jr. Mining Collection

#### **ACCESS STATEMENT**

These digitized collections are accessible for purposes of education and research. We have indicated what we know about copyright and rights of privacy, publicity, or trademark. Due to the nature of archival collections, we are not always able to identify this information. We are eager to hear from any rights owners, so that we may obtain accurate information. Upon request, we will remove material from public view while we address a rights issue.

#### **CONSTRAINTS STATEMENT**

The Arizona Geological Survey does not claim to control all rights for all materials in its collection. These rights include, but are not limited to: copyright, privacy rights, and cultural protection rights. The User hereby assumes all responsibility for obtaining any rights to use the material in excess of "fair use."

The Survey makes no intellectual property claims to the products created by individual authors in the manuscript collections, except when the author deeded those rights to the Survey or when those authors were employed by the State of Arizona and created intellectual products as a function of their official duties. The Survey does maintain property rights to the physical and digital representations of the works.

#### **QUALITY STATEMENT**

The Arizona Geological Survey is not responsible for the accuracy of the records, information, or opinions that may be contained in the files. The Survey collects, catalogs, and archives data on mineral properties regardless of its views of the veracity or accuracy of those data.

**INDUCED POLARIZATION AND  
RESISTIVITY SURVEY REPORT  
A PORTION OF T21S, R9E, ORO BLANCO  
DISTRICT, PIMA COUNTY, ARIZONA**

**For**

**Humble Oil & Refining Company**

**By**

**Heinrichs Geoexploration Company  
P.O. Box 5671 Tucson, Arizona 85703  
Phone: 623-0578 Area Code: 602**

During the month of July, 1964, Heinrichs Geoexploration Company conducted an induced polarization and resistivity survey over a portion of T21S, R9E near Arivaca, Pima County, Arizona. Two lines were run with a common centerpoint located 2,100 feet east and 400 feet south of the northwest corner of Section 16, R9E, T21S. Line 1 was run approximately north-south, while Line 2 was run east-west (see location map).

The induced polarization was run on 500 foot dipoles using the dual frequency method and employing frequencies of 3.0 and 0.05 cps. The I.P., resistivity, and metallic conduction factor are plotted on sectional data sheets, and the line locations are shown on the magnetic map.

#### Line 1

The resistivity indicates a resistivity change at approximately 1,000 feet south of the centerpoint with higher values to the south and lower values to the north, which may be due to a fault contact between different rock types and/or a greater depth to bedrock to the north. I.P. effects appear to be representative of background and no indication of sulfides was noted to the depth of at least 500 feet.

#### Line 2

Resistivity values are generally higher to the west which is interesting in that one might expect the depth to bedrock to be greater in that direction. There is a resistivity low which is located approximately 2,000 feet east of the centerpoint. The I.P. data shows very weak anomalism at both ends of the line. The feature at the east end correlates with the previously mentioned resistivity low. Each of these features,

may indicate very minor sulfide zones, probably of very limited extent.

While the I.P. data does not appear very encouraging, the area surveyed was very small and abundant copper oxide was noted over several portions of the property. As no I.P. was run over the known mineralized oxide zones, these would make a primary target for additional geophysical work.

Respectfully submitted,  
HEINRICHS GEOEXPLORATION COMPANY

John P. Matthews, Jr.  
Geophysicist

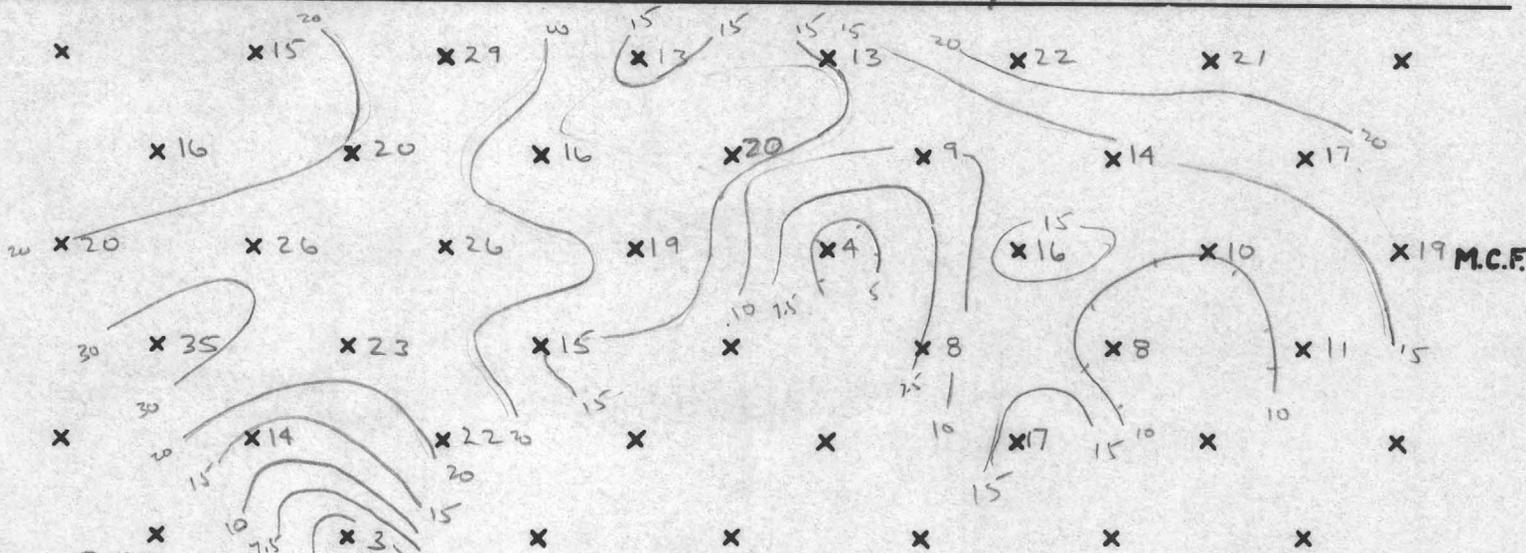
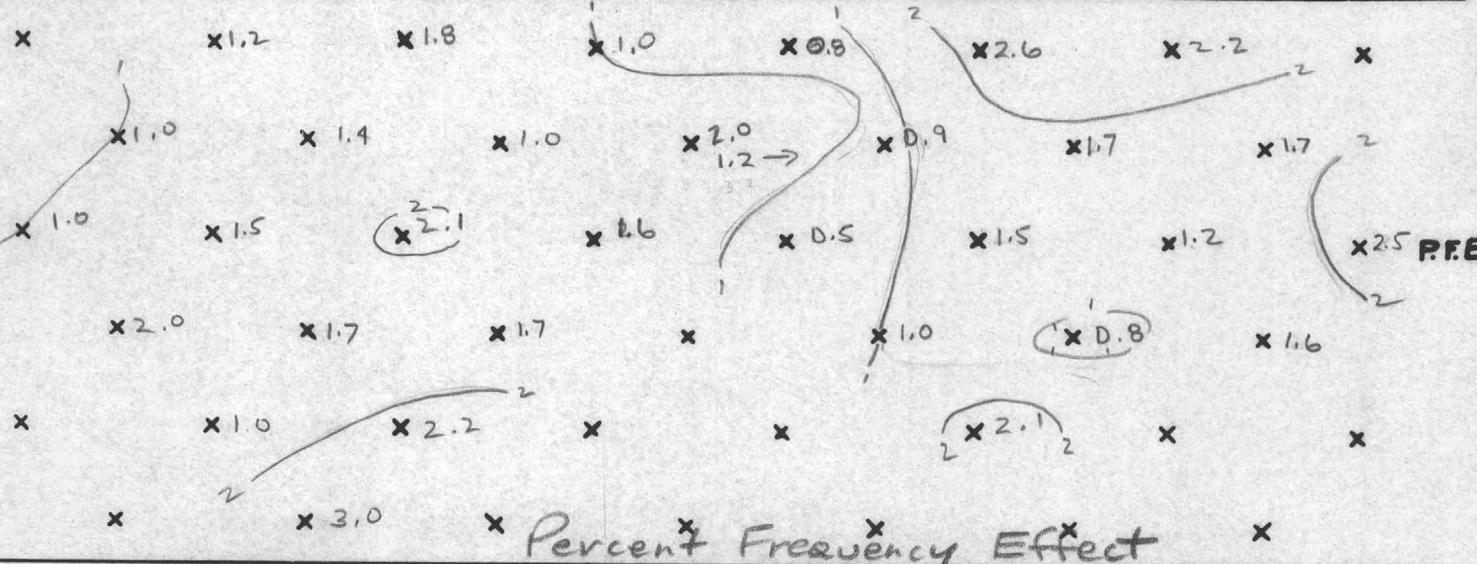
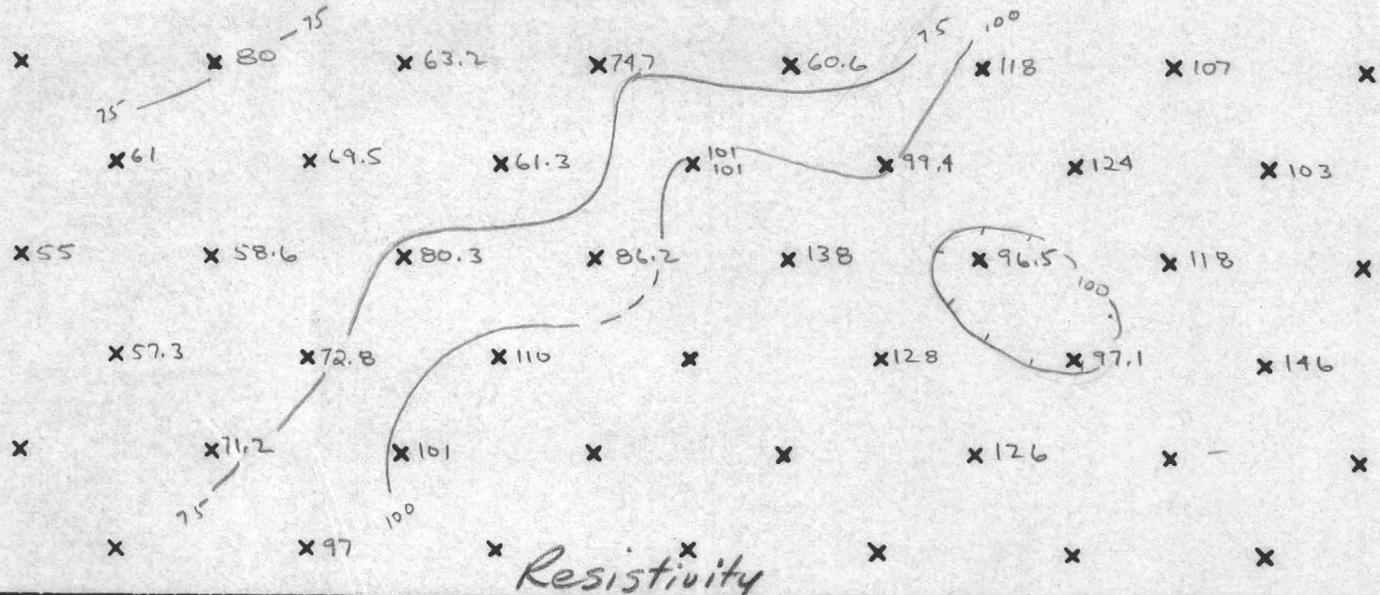
APPROVED Chris S. Ludwig  
Chris S. Ludwig  
Sr. Geophysicist

April 26, 1967  
Tucson, Arizona

HEINRICHS GEOEX. INDUCED POLARIZATION SECTIONAL DATA PLOT, LOOKING EAST

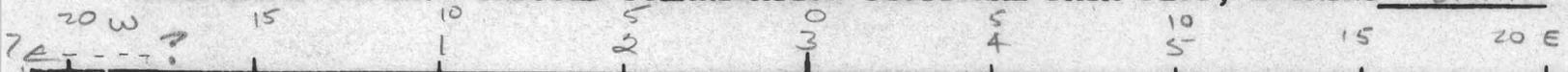
20N 15 10 5 0 5 10 15 S20

Preliminary

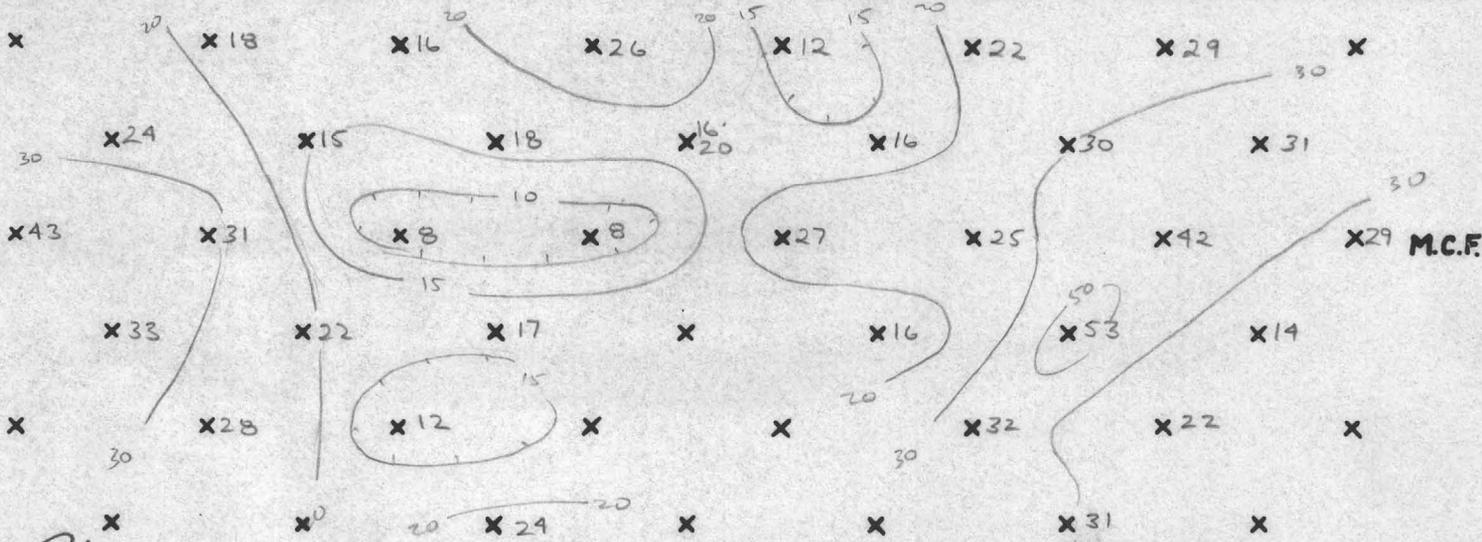
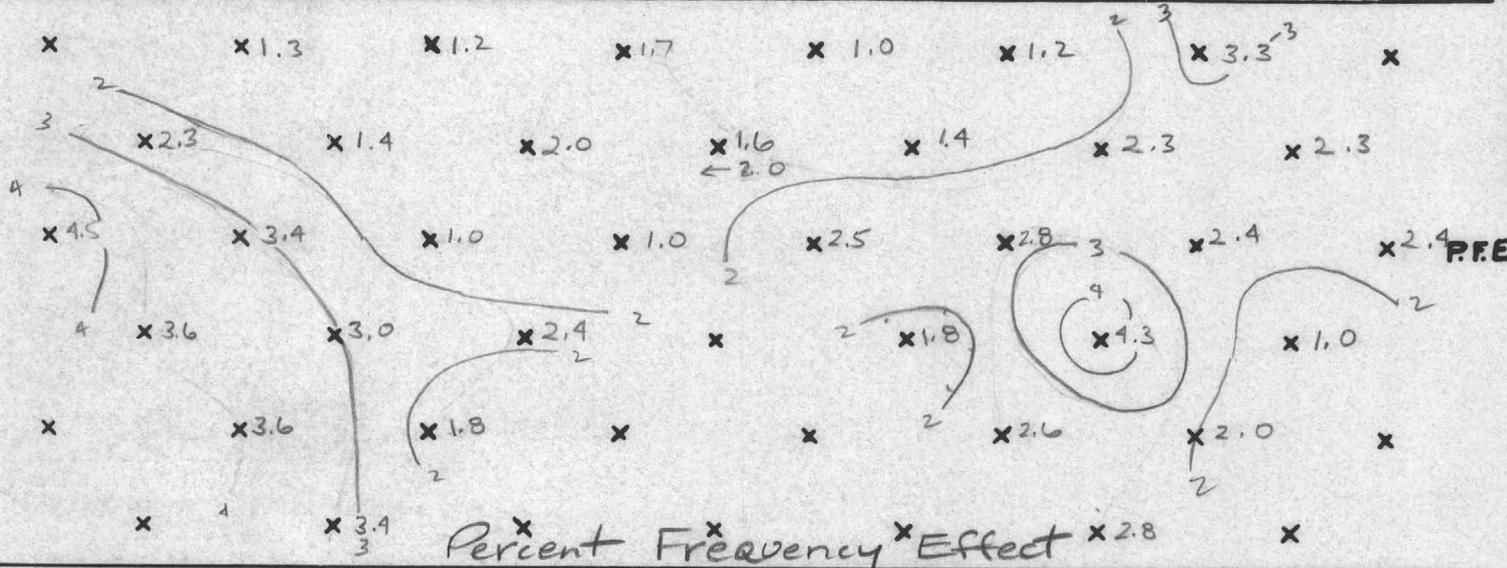
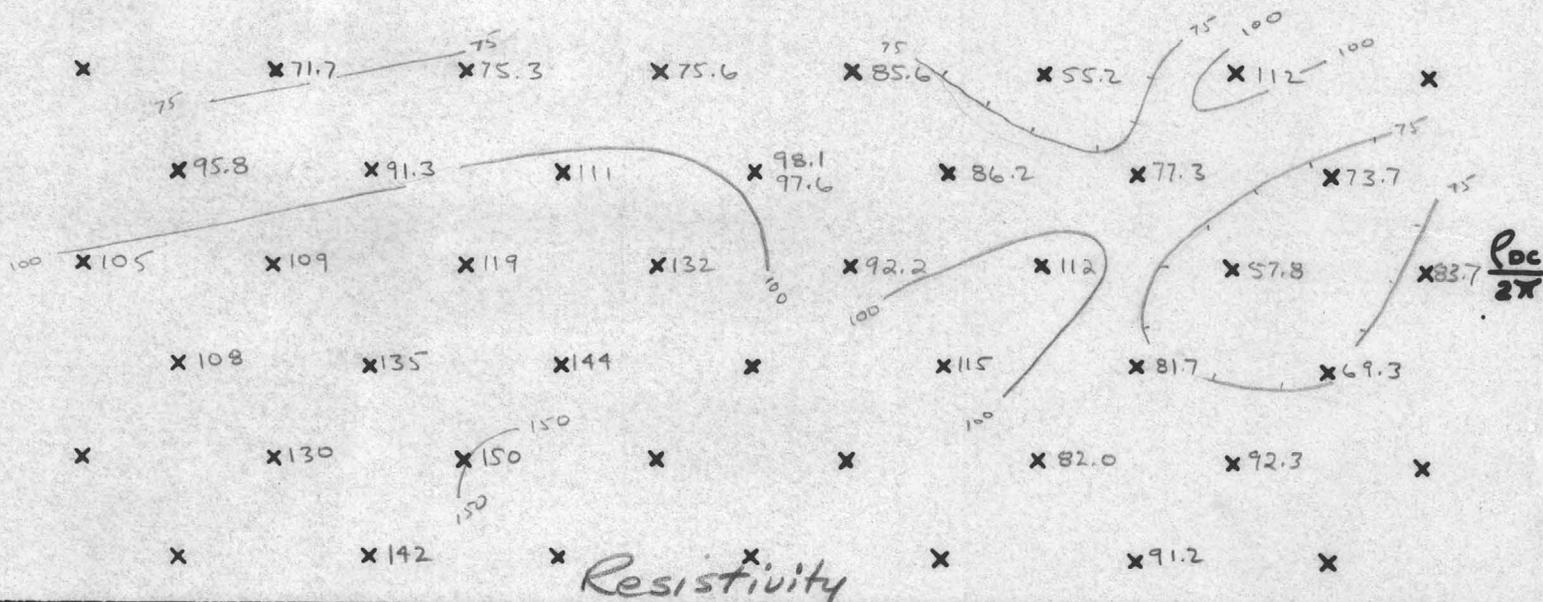


Pima Co. ARIZ. Metal Conduction Factor

HEINRICHS GEOEX. INDUCED POLARIZATION SECTIONAL DATA PLOT, LOOKING NORTH



Preliminary



Pima Co., Ariz  
 Portions of AREA T.21 S., R.9 E. LINE 2 a = 500' SCALE: 1" = 500' DATE: 4/26/67

5

R 9 E

4

3

8

9

10

T  
21  
S

T  
21  
S

17

16

R 9 E

PRELIMINARY

HEINRICHS GEOEXPLORATION COMPANY P.O. Box 5671 Tucson, Arizona		
VERTICAL MAGNETIC INTENSITY & INDUCED POLARIZATION LOCATION PLAN PORTIONS T21S, R9E PIMA CO. ARIZONA FOR Humble Oil Co.		
SCALE: 1" = 400'	CONTOUR INTERVAL: 50 Y	REVISIONS
DATE: APRIL 26, 1967	SHEET OF	
DRAWN BY: J.P.M.	DRAWING NO.:	FILE:

