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

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.

(Roosevelt 1:125000)

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

ARIZONA
INSPIRATION QUADRANGLE
7½-MINUTE SERIES

111°00′ — 57′30″ — 55′ — 280000 FEET — 110°52′30″
33°30′ — 910000 FEET

Scanlon Creek
Barnes Wash
SCANLON TUNNEL (Spring)
Murphy Spr
DeVore Wash
Rockhouse Trough
VABM 4240
GERALD HILLS
RUIN BASIN
Murphy Wash
Hicks Wash
Rip Spring
INDIAN RUINS
Murphy Ranch Mountain
BARNES TUNNEL (Spring)
Well
Dixon Camp
Dixon Spr
Gerald Wash
BM 3539
SILVER BELT SHAFT
Siphon Basin
Pinto Creek
Barnes Spr
Barnes Peak
VABM 5028
GRANITE BASIN
BM 4852
Dago Spr
Giacoma Camp
Sleeping Beauty Spr
Horrel Ranch
2939
Ripper Spring Canyon
Ripper Spr
Walnut Spr
Cottonwood Spr
Gulch
Amateur Spr
FLAT
Cottonwood Canyon
Siphon Canyon
T. 2 N.
T. 1 N.
27′30″
CROOK NATIONAL FOREST
VABM 5776
Webster Mtn
Horse Basin
Grapevine Spr
Sleeping Beauty
VABM 5147
TOP OF THE MOUNTAIN
Eastwater Canyon
Cherry Spr
Skunk Spr
Cherry Canyon
Myberg Basin
MONEY METAL SHAFT
DIAMOND-H AREA
Eastwater Spr
Juniper Flat
Prince Charming Spr
Lost Fly Ranch
BONANZA TUNNEL
Sycamore Spr
Day Peaks
Red Flat
Continental Spr
CONTINENTAL TUNNEL
USMM NO. 3
Jewell Hill
Webster Spring
Potato Patch
Camelback Mtn
Willow Spr
Williams Dairy
TAILINGS POND
Moonshine Hill
VABM 4018
Inspiration
INSPIRATION MAIN SHAFT
LEACHING PLANT
Porphyry Mtn
CASTLE DOME MINE
CASTLE DOME CONCENTRATOR
Bohme Ranch
Vigor of Life Spr
Webster Spr
Bootlegger Spr
Duquesne Spr
Fry Gulch
Reservoir
Tank
Buckhorn Spr
Goose Spr
Pinto Creek
Barney Canyon
Sycamore Spr
Needle Canyon
Grizzly Bear Spr
Miller Spr
BLACK TUNNEL (Spring)
AREA OF DETAIL TRAVERSES
CACTUS AREA
Grizzly Mtn
VABM 4282
Needle Mtn
VABM 5058
See Rec. II Profile
1500 to 1900
Road Junction 1020
End Rec. II
COTTONWOOD TAILINGS POND
HAMILTON SHAFT
PINTO SHAFT
CARLOTA MINE
BLACK BESS SHAFT
YO TAMBIEN TUNNEL (Spring)
Manitou Hill
MIAMI (BM 3438)
BM 3489
BM 3467
Bloody Tanks
BM 3632
Bubbling Well
Tanks
Needle Creek
GILA AND SALT RIVER BASE LINE
GILA PINAL CO. APPROXIMATE BOUNDARY
870000 FEET
T. 1 N.
T. 1 S.
R. 13 E. R. 14 E. R. 14½ E. R. 15 E.
33°22′30″ — 250000 FEET — 57′30″ — 55′ — 110°52′30″
JUNC. U. S. NOS. 60 AND 70 0.8 (Globe 1:62500)
SUPERIOR 18 MI.
(Florence 1:125000)
(Globe)

INDEX OF DIAMOND-H AREA
FOR
MIAMI COPPER CO.
BY
HEINRICHS GEOEXPLORATION CO.
SEPT. 1965 SCALE: 1:24000

INDEX OF CACTUS AREA
FOR
MIAMI COPPER CO.
BY
HEINRICHS GEOEXPLORATION CO.
SEPT. 1965 SCALE: 1:24000

HEINRICHS GEOEX
PHYSICAL ENGINEERS TUCSON, ARIZONA

Start Rec. II
Castle Dome Rd. Junction
1300

Polyconic projection. 1927 North American datum
10000 foot grid based on Arizona (East)
rectangular coordinate system

INSPIRATION, ARIZ.
Edition of 1947

N 3322.5—W 11052.5/7.5

THE TOPOGRAPHIC MAPS OF THE UNITED STATES

The United States Geological Survey is making a series of standard topographic maps to cover the United States. This work has been in progress since 1882, and the published maps cover more than 47 percent of the country, exclusive of outlying possessions.

The maps are published on sheets that measure about 16½ by 20 inches. Under the general plan adopted the country is divided into quadrangles bounded by parallels of latitude and meridians of longitude. These quadrangles are mapped on different scales, the scale selected for each map being that which is best adapted to general use in the development of the country, and consequently, though the standard maps are of nearly uniform size, the areas that they represent are of different sizes. On the lower margin of each map are printed graphic scales showing distances in feet, meters, miles, and kilometers. In addition, the scale of the map is shown by a fraction expressing a fixed ratio between linear measurements on the map and corresponding distances on the ground. For example, the scale $\frac{1}{62,500}$ means that 1 unit on the map (such as 1 inch, 1 foot, or 1 meter) represents 62,500 of the same units on the earth's surface.

Although some areas are surveyed and some maps are compiled and published on special scales for special purposes, the standard topographic surveys and the resulting maps have for many years been of three types, differentiated as follows:

1. Surveys of areas in which there are problems of great public importance—relating, for example, to mineral development, irrigation, or reclamation of swamp areas—are made with sufficient detail to be used in the publication of maps on a scale of $\frac{1}{31,680}$ (1 inch = one-half mile) or $\frac{1}{24,000}$ (1 inch = 2,000 feet), with a contour interval of 1 to 100 feet, according to the relief of the particular area mapped.

2. Surveys of areas in which there are problems of average public importance, such as most of the basin of the Mississippi and its tributaries, are made with sufficient detail to be used in the publication of maps on a scale of $\frac{1}{62,500}$ (1 inch = nearly 1 mile), with a contour interval of 10 to 100 feet.

3. Surveys of areas in which the problems are of minor public importance, such as much of the mountain or desert region of Arizona or New Mexico, and the high mountain area of the northwest, are made with sufficient detail to be used in the publication of maps on a scale of $\frac{1}{125,000}$ (1 inch = nearly 2 miles) or $\frac{1}{250,000}$ (1 inch = nearly 4 miles), with a contour interval of 20 to 250 feet.

The aerial camera is now being used in mapping. From the information recorded on the photographs, planimetric maps, which show only drainage and culture, have been made for some areas in the United States. By the use of stereoscopic plotting apparatus, aerial photographs are utilized also in the making of the regular topographic maps, which show relief as well as drainage and culture.

A topographic survey of Alaska has been in progress since 1898, and nearly 44 percent of its area has now been mapped. About 15 percent of the Territory has been covered by maps on a scale of $\frac{1}{600,000}$ (1 inch = nearly 8 miles). For most of the remainder of the area surveyed the maps published are on a scale of $\frac{1}{250,000}$ (1 inch = nearly 4 miles). For some areas of particular economic importance, covering about 4,300 square miles, the maps published are on a scale of $\frac{1}{62,500}$ (1 inch = nearly 1 mile) or larger. In addition to the area covered by topographic maps, about 11,300 square miles of southeastern Alaska has been covered by planimetric maps on scales of $\frac{1}{125,000}$ and $\frac{1}{250,000}$.

The Hawaiian Islands have been surveyed, and the resulting maps are published on a scale of $\frac{1}{62,500}$.

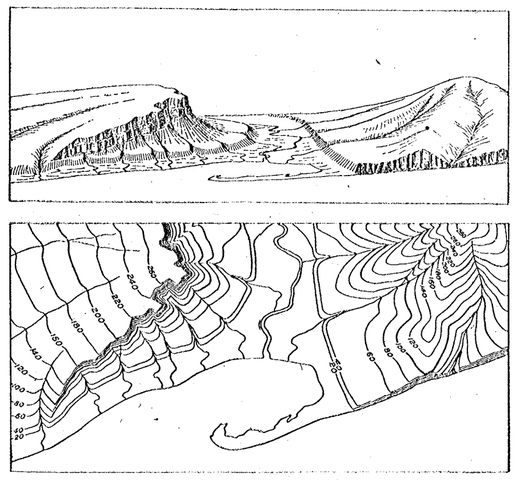
A survey of Puerto Rico is now in progress. The scale of the published maps is $\frac{1}{20,000}$.

The features shown on topographic maps may be arranged in three groups—(1) water, including seas, lakes, rivers, canals, swamps, and other bodies of water; (2) relief, including mountains, hills, valleys, and other features of the land surface; (3) culture (works of man), such as towns, cities, roads, railroads, and boundaries. The symbols used to represent these features are shown and explained below. Variations appear on some earlier maps, and additional features are represented on some special maps.

All the water features are represented in blue, the smaller streams and canals by single blue lines and the larger streams by double lines. The larger streams, lakes, and the sea are accentuated by blue water lining or blue tint. Intermittent streams—those whose beds are dry for a large part of the year—are shown by lines of blue dots and dashes.

Relief is shown by contour lines in brown, which on a few maps are supplemented by shading showing the effect of light thrown from the northwest across the area represented, for the purpose of giving the appearance of relief and thus aiding in the interpretation of the contour lines. A contour line represents an imaginary line on the ground (a contour) every part of which is at the same altitude above sea level. Such a line could be drawn at any altitude, but in practice only the contours at certain regular intervals of altitude are shown. The datum or zero of altitude of the Geological Survey maps is mean sea level. The 20-foot contour would be the shore line if the sea should rise 20 feet above mean sea level. Contour lines show the shape of the hills, mountains, and valleys, as well as their altitude. Successive contour lines that are far apart on the map indicate a gentle slope, lines that are close together indicate a steep slope, and lines that run together indicate a cliff.

The manner in which contour lines express altitude, form, and grade is shown in the figure below.



The sketch represents a river valley that lies between two hills. In the foreground is the sea, with a bay that is partly enclosed by a hooked sand bar. On each side of the valley is a terrace into which small streams have cut narrow gullies. The hill on the right has a rounded summit and gently sloping spurs separated by ravines. The spurs are truncated at their lower ends by a sea cliff. The hill at the left terminates abruptly at the valley in a steep scarp, from which it slopes gradually away and forms an inclined tableland that is traversed by a few shallow gullies. On the map each of these features is represented, directly beneath its position in the sketch, by contour lines.

The contour interval, or the vertical distance in feet between one contour and the next, is stated at the bottom of each map. This interval differs according to the topography of the area mapped: in a flat country it may be as small as 1 foot; in a mountainous region it may be as great as 250 feet. In order that the contours may be read more easily certain contour lines, every fourth or fifth, are made heavier than the others and are accompanied by figures showing altitude. The heights of many points—such as road intersections, summits, surfaces of lakes, and benchmarks—are also given on the map in figures, which show altitudes to the nearest foot only. More precise figures for the altitudes of benchmarks are given in the Geological Survey's bulletins on spirit leveling. The geodetic coordinates of triangulation and transit-traverse stations are also published in bulletins.

Lettering and the works of man are shown in black. Boundaries, such as those of a State, county, city, land grant, township, or reservation, are shown by continuous or broken lines of different kinds and weights. Public roads suitable for motor travel the greater part of the year are shown by solid double lines; poor public roads and private roads by dashed double lines; trails by dashed single lines. Additional public road classification if available is shown by red overprint.

Each quadrangle is designated by the name of a city, town, or prominent natural feature within it, and on the margins of the map are printed the names of adjoining quadrangles of which maps have been published. More than 4,100 quadrangles in the United States have been surveyed, and maps of them similar to the one on the other side of this sheet have been published.

Geologic maps of some of the areas shown on the topographic maps have been published in the form of folios. Each folio includes maps showing the topography, geology, underground structure, and mineral deposits of the area mapped, and several pages of descriptive text. The text explains the maps and describes the topographic and geologic features of the country and its mineral products. Two hundred twenty-five folios have been published.

Index maps of each State and of Alaska and Hawaii showing the areas covered by topographic maps and geologic folios published by the United States Geological Survey may be obtained free. Copies of the standard topographic maps may be obtained for 10 cents each; some special maps are sold at different prices. A discount of 40 percent is allowed on an order amounting to $5 or more at the retail price. The discount is allowed on an order for maps alone, either of one kind or in any assortment, or for maps together with geologic folios. The geologic folios are sold for 25 cents or more each, the price depending on the size of the folio. A circular describing the folios will be sent on request.

Applications for maps or folios should be accompanied by cash, draft, or money order (not postage stamps) and should be addressed to

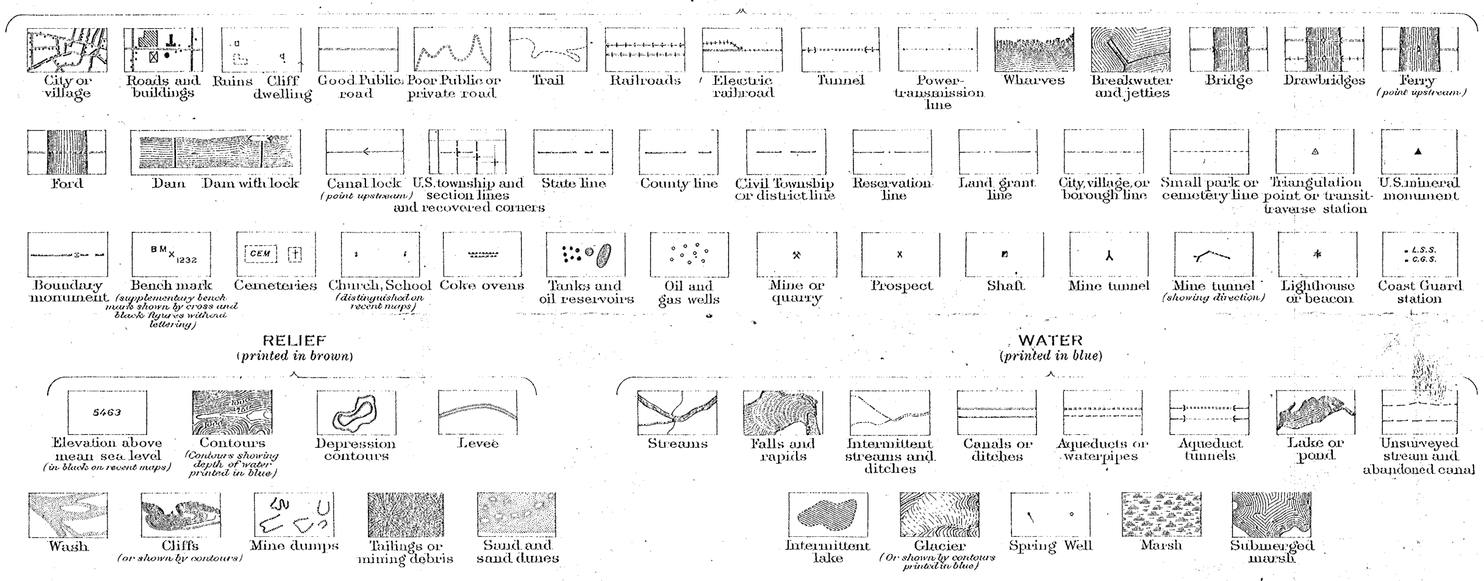
THE DIRECTOR,
United States Geological Survey,
Washington, D. C.

November 1937.

NOTE:—Effective on and after October 1, 1946, the price of standard topographic quadrangle maps will be 20 cents each, with a discount of 20 percent on orders amounting to $10 or more at the retail rate.

STANDARD SYMBOLS

CULTURE
(printed in black)



RELIEF
(printed in brown)

WATER
(printed in blue)

WOODS
(when shown, printed in green)

MOBILE MAGNETOMETER SURVEY

CACTUS AND DIAMOND H RANCH AREAS

GILA COUNTY, ARIZONA

for

MIAMI COPPER COMPANY

September 1965

by

Heinrichs Geoexploration Company
P. O. Box 5671 Tucson, Arizona

TABLE OF CONTENTS

INTRODUCTION

A Mobile Magnetometer survey of a reconnaissance nature was performed in the Cactus and Diamond H areas for Miami Copper Company on September 2, 1965. Exact location of the two areas is shown on the index maps. The survey was performed for the purpose of determining whether the ore bodies underlay high or low magnetic anomalies. Magnetometer operator was Ron Palmer, Keith Henson was Electronic Technician. Records were analyzed and interpreted by Geophysicist, Richard Davis. Copies of records and resultant magnetic contour maps over both areas are included with this report.

CONCLUSIONS AND RECOMMENDATIONS

Magnetometer surveys are definitely good for delineating structure in the Diamond H area. No conclusions can yet be reached by Geoex on the correlation between ore and magnetic anomalies without more geologic data. Before much reliance can be placed on the magnetic contour maps, more coverage would be desirable in some areas.

A magnetic high, noted in the Cactus area, may reflect an ore body, and if little is now known in the zone, it should be checked by drilling.

On the basis of its usefulness in delineating structure alone, ground magnetics would definitely be of considerable value, we feel, in any future exploration in the general area.

PROCEDURES

The instrument used is a Gulf Oil Corp. licensed, flux-gate type, total intensity magnetometer mounted on a Dodge Powerwagon. Variations in the total earth's field are continuously recorded on chart paper in a recorder geared to the vehicle drive. Record is made at whatever speed the vehicle can be driven according to terrain conditions. On this project, most of the existing roads across and around the areas of interest were traversed. A total of about 16.6 miles of record were made.

The instrument was positioned on a sensitivity of 100 gammas per inch, thus giving 500 gammas across the total width of the chart. This type of recorder allows for 10 effective chart widths by letting the trace cross the paper and continue again from the other side as necessary. The charts, as run, read looking lengthwise from the start of the record with higher values to the right. The profile trace is made by a tapper bar that can be actuated by

either the drive of the vehicle or an electronic timing mechanism. In normal usage, the distance function is used, with a section of the trace produced for every five feet of travel. In most of the area, the magnetic gradient change was gradual and a complete readable record was obtained.

The instrument was positioned at the start of the project to record on a horizontal scale of 200 feet per inch. The instrument was kept at this scale throughout the survey.

To avoid confusion, values have been plotted at intervals on the records. An arbitrary level, at the center of the record, was established at the start of the project and assigned a value of 1000 gammas. All values plotted on the records, or contour maps, are relative to this arbitrary level. Basic control for the project was from topo maps and claim maps furnished by the client.

INTERPRETATION

CACTUS AREA

Magnetometer coverage is too sparse for good contouring control. One feature of interest is notable. A north-south trending high near the center of the Cactus Area should be investigated to see whether it might be an ore body indicator. U. S. Geological Survey geologic maps give no hint of structure which might cause such a marked anomaly.

About all that can be said of the rest of the area, without more coverage, is that the Pinal Schist has a much smoother profile than is found over the lava covered terrains to the east and west. This fact seems to enhance the usefulness of magnetics over the schist in this area.

DIAMOND H AREA

Again, magnetometer coverage lacks sufficient detail in most areas. Magnetic values correlate closely with known structure. The Sleeping Beauty Fault, in particular, shows up as a discontinuity between the trends north and south of it.

A magnetic high crosses claims Fly 4 and 5 and does not correlate well with any apparent structure features. This high was crossed at only two points, and so may not be accurately contoured. For instance, we think the Drummond Fault should be reflected in the contours if more data were available.

In this area, magnetics appear to be an excellent structure

mapping tool. Whether or not magnetometer work will delineate ore bodies in this vicinity cannot be determined without more geologic data than is available to us at present. However, after some study, you and your personnel may have an impression of what the magnetics have shown in both areas. We at Geoex would be most happy to review the information at your convenience and learn your ideas on what the magnetics may have contributed to the project.

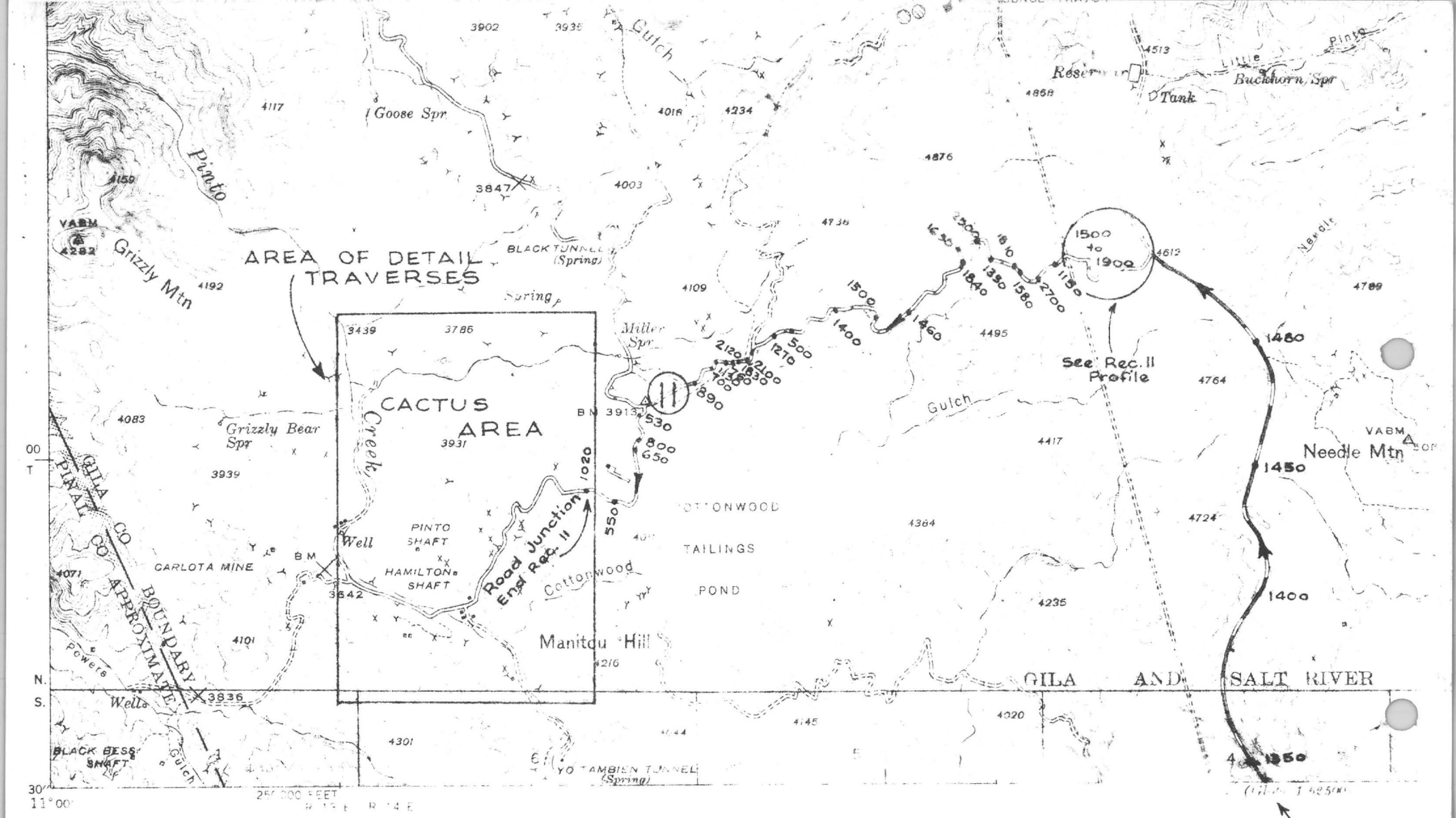
Respectfully submitted,

HEINRICHS GEOEXPLORATION COMPANY

Richard W. Davis, Geophysicist

September 20, 1965

Approved: C. W. Heinrichs Jr.



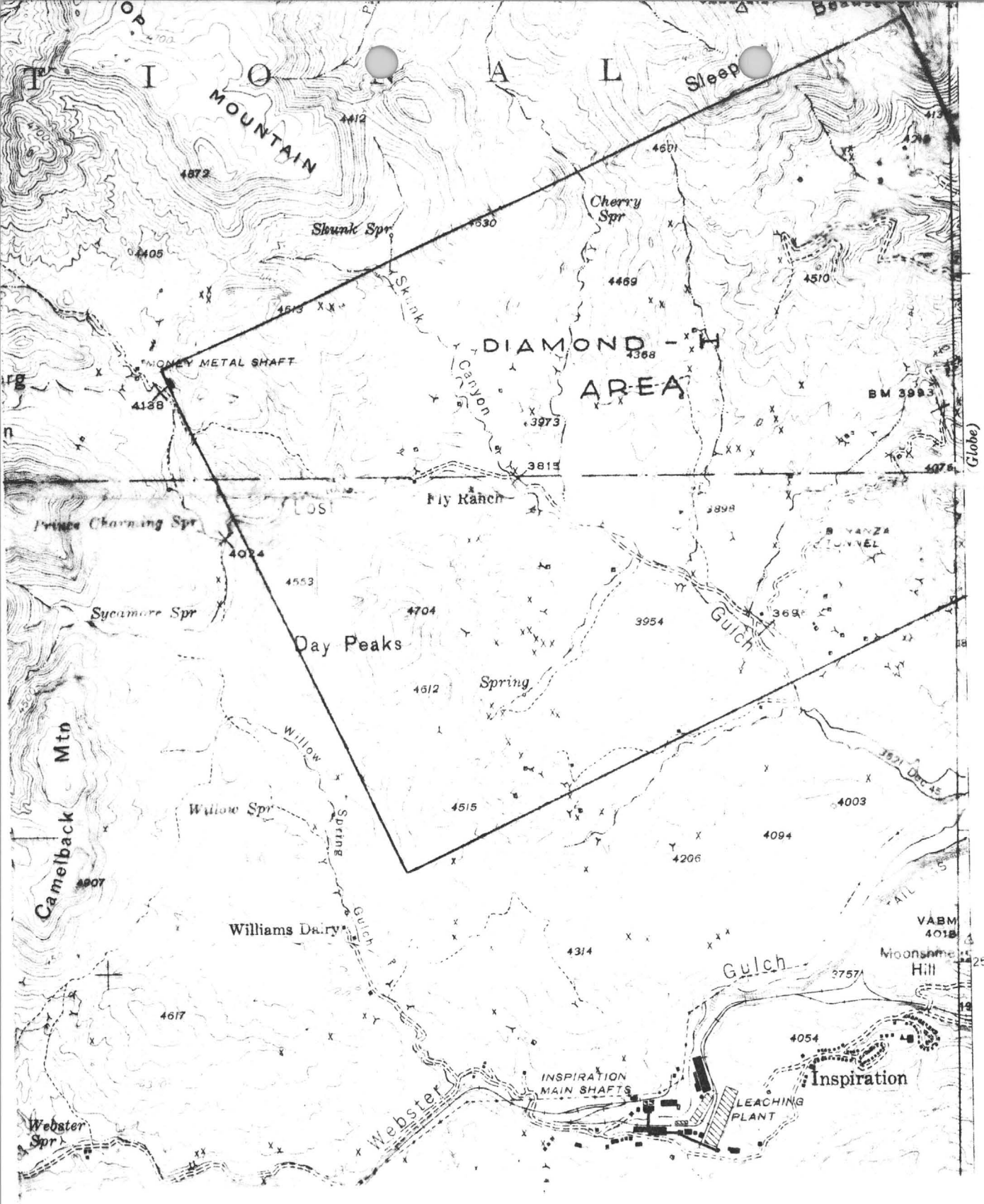
INDEX OF CACTUS AREA
FOR
MIAMI COPPER CO.
BY
HEINRICHS GEOEXPLORATION CO.

SEPT. 1965 SCALE: 1:24000

HEINRICHS GEOEX
GEOPHYSICAL ENGINEERS
TUCSON, ARIZONA

Start Rec. II
Castle Dome
Rd. Junction

1-A



INDEX OF DIAMOND-H AREA

FOR

MIAMI COPPER CO.

BY

HEINRICHS GEOEXPLORATION CO.

SEPT. 1965

SCALE: 1: 24000

HEINRICHS GEOEXPLORATION COMPANY

806 WEST GRANT ROAD, TUCSON, ARIZONA, 85703. P.O. BOX 5671. PHONE: (AREA CODE 602) 623-0578

September 22, 1965

Mr. W. W. Simmons, Chief Geologist
Miami Copper Company
Miami, Arizona 85538

Dear Woody:

Enclosed are the following:
One original report and one copy of the "MOBILE MAGNETIC SURVEY, CACTUS AND DIAMOND H RANCH AREAS, GILA COUNTY, ARIZONA", including index maps, contour maps and magnetic records.

Under separate cover we are sending sepia copies of the contour maps of Diamond H and Cactus Areas.

We trust the results will be helpful.

Grover mentioned your reference to a mag paper by Bob MacDougall of Bear Creek regarding the magnetic expression statistics of certain "porphyry type" ore deposits. For whatever it is worth, you may be interested in our reaction to this paper.

Unfortunately his conclusions require too much broad generalization which like a Mother Hubbard "cover everything but touch nothing". Contrary to some past thinking, current facts bear out that each porphyry type deposit has a somewhat unique mag expression of its own usually not entirely similar to any other and mostly entirely different. This is to be expected if one considers the highly variable character of alteration, mineralization, topography, structure and rock type of most porphyry type deposits, and all of these have an effect, or in fact, are the primary causes of the magnetic picture related to material within 1,000 ft. of the surface. The "highs" vs "lows" bit is way over drawn, especially when there are so very few actual magnetically correlated porphyry deposits. A good example

is Ruth, Nevada, one of MacDougall's statistics classified as a mag high. To date no one, including Kennecott, knows precisely what causes the mag high, therefore how can it be related to the deposit except by geographic coincidence? If it is due to entirely a pre ore feature then it might be totally unrelated to the ore. How about San Manuel, is it a mag high, low, or what have you? To my knowledge, no one knows yet, although by this time it perhaps could be determined. The perfect interpretational last or lattice has yet to come. Meanwhile, the only panacea remotely deserving seems to continue to be throwing everything you have or can get at the time to each prospect individually, with the only categories being waste and ore.

Lets hope yours are all the latter.

Faithfully,

Walter E. Heinrichs, Jr., Geol. Engr.

WEH:jh
cc: Extra Encl.

MOBILE MAGNETOMETER SURVEY

CACTUS AND DIAMOND H RANCH AREAS

GILA COUNTY, ARIZONA

for

MIAMI COPPER COMPANY

September 1965

by

Heinrichs Geoexploration Company
P. O. Box 5671 Tucson, Arizona

TABLE OF CONTENTS

INTRODUCTION

A Mobile Magnetometer survey of a reconnaissance nature was performed in the Cactus and Diamond H areas for Miami Copper Company on September 2, 1965. Exact location of the two areas is shown on the index maps. The survey was performed for the purpose of determining whether the ore bodies underlay high or low magnetic anomalies. Magnetometer operator was Ron Palmer, Keith Henson was Electronic Technician. Records were analyzed and interpreted by Geophysicist, Richard Davis. Copies of records and resultant magnetic contour maps over both areas are included with this report.

CONCLUSIONS AND RECOMMENDATIONS

Magnetometer surveys are definitely good for delineating structure in the Diamond H area. No conclusions can yet be reached by Geoex on the correlation between ore and magnetic anomalies without more geologic data. Before much reliance can be placed on the magnetic contour maps, more coverage would be desirable in some areas.

A magnetic high, noted in the Cactus area, may reflect an ore body, and if little is now known in the zone, it should be checked by drilling.

On the basis of its usefulness in delineating structure alone, ground magnetics would definitely be of considerable value, we feel, in any future exploration in the general area.

PROCEDURES

The instrument used is a Gulf Oil Corp. licensed, flux-gate type, total intensity magnetometer mounted on a Dodge Powerwagon. Variations in the total earth's field are continuously recorded on chart paper in a recorder geared to the vehicle drive. Record is made at whatever speed the vehicle can be driven according to terrain conditions. On this project, most of the existing roads across and around the areas of interest were traversed. A total of about 16.6 miles of record were made.

The instrument was positioned on a sensitivity of 100 gammas per inch, thus giving 500 gammas across the total width of the chart. This type of recorder allows for 10 effective chart widths by letting the trace cross the paper and continue again from the other side as necessary. The charts, as run, read looking lengthwise from the start of the record with higher values to the right. The profile trace is made by a tapper bar that can be actuated by

either the drive of the vehicle or an electronic timing mechanism. In normal usage, the distance function is used, with a section of the trace produced for every five feet of travel. In most of the area, the magnetic gradient change was gradual and a complete readable record was obtained.

The instrument was positioned at the start of the project to record on a horizontal scale of 200 feet per inch. The instrument was kept at this scale throughout the survey.

To avoid confusion, values have been plotted at intervals on the records. An arbitrary level, at the center of the record, was established at the start of the project and assigned a value of 1000 gammas. All values plotted on the records, or contour maps, are relative to this arbitrary level. Basic control for the project was from topo maps and claim maps furnished by the client.

INTERPRETATION

CACTUS AREA

Magnetometer coverage is too sparse for good contouring control. One feature of interest is notable. A north-south trending high near the center of the Cactus Area should be investigated to see whether it might be an ore body indicator. U. S. Geological Survey geologic maps give no hint of structure which might cause such a marked anomaly.

About all that can be said of the rest of the area, without more coverage, is that the Pinal Schist has a much smoother profile than is found over the lava covered terrains to the east and west. This fact seems to enhance the usefulness of magnetics over the schist in this area.

DIAMOND H AREA

Again, magnetometer coverage lacks sufficient detail in most areas. Magnetic values correlate closely with known structure. The Sleeping Beauty Fault, in particular, shows up as a discontinuity between the trends north and south of it.

A magnetic high crosses claims Fly 4 and 5 and does not correlate well with any apparent structure features. This high was crossed at only two points, and so may not be accurately contoured. For instance, we think the Drummond Fault should be reflected in the contours if more data were available.

In this area, magnetics appear to be an excellent structure

mapping tool. Whether or not magnetometer work will delineate ore bodies in this vicinity cannot be determined without more geologic data than is available to us at present. However, after some study, you and your personnel may have an impression of what the magnetics have shown in both areas. We at Geoex would be most happy to review the information at your convenience and learn your ideas on what the magnetics may have contributed to the project.

Respectfully submitted,

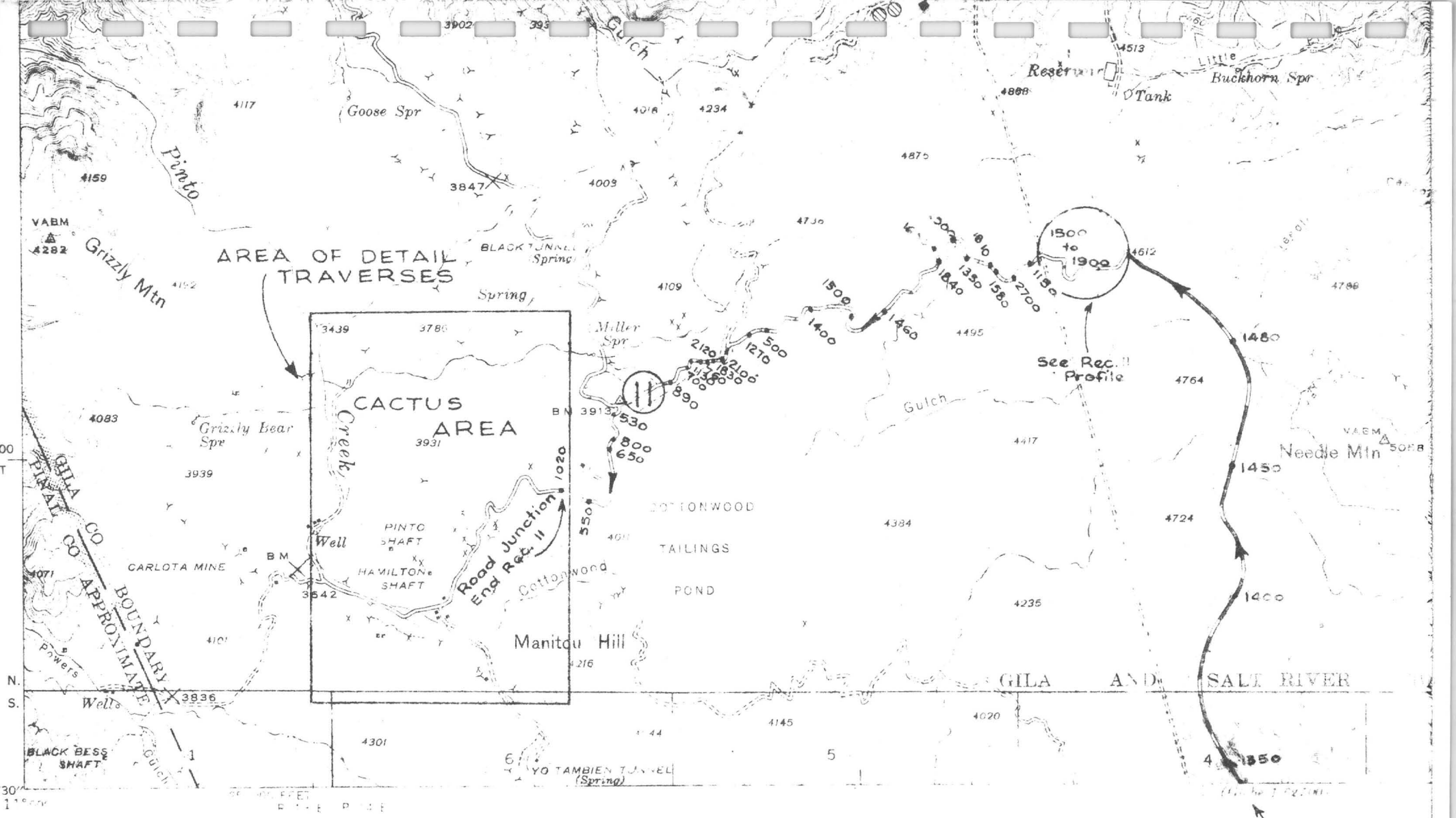
HEINRICHS GEOEXPLORATION COMPANY

Richard W. Davis

Richard W. Davis, Geophysicist

Approved: W. H. Heinrichs Jr.

September 20, 1965

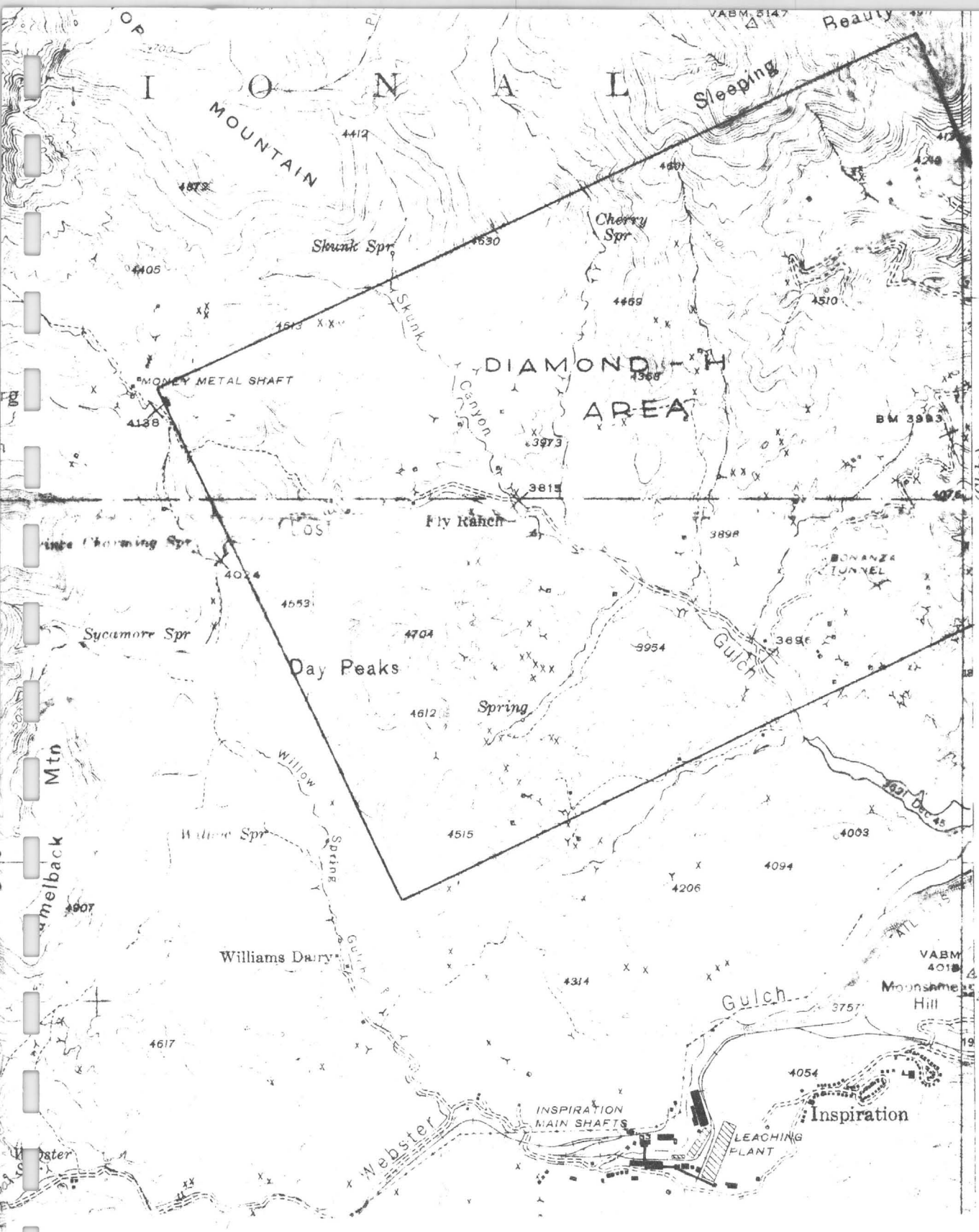


INDEX OF CACTUS AREA FOR MIAMI COPPER CO. BY HEINRICHS GEOEXPLORATION CO.

SEPT. 1965 SCALE: 1:24000

HEINRICHS GEOEX
CONSULTING ENGINEERS
TUCSON, ARIZONA

1-A



INDEX OF DIAMOND-H AREA

FOR

MIAMI COPPER CO.

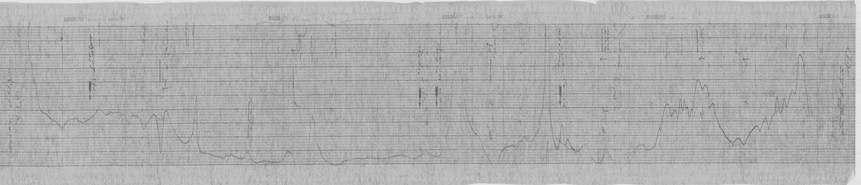
BY

HEINRICHS GEOEXPLORATION CO.

SEPT. 1965

SCALE: 1: 24000

1-B

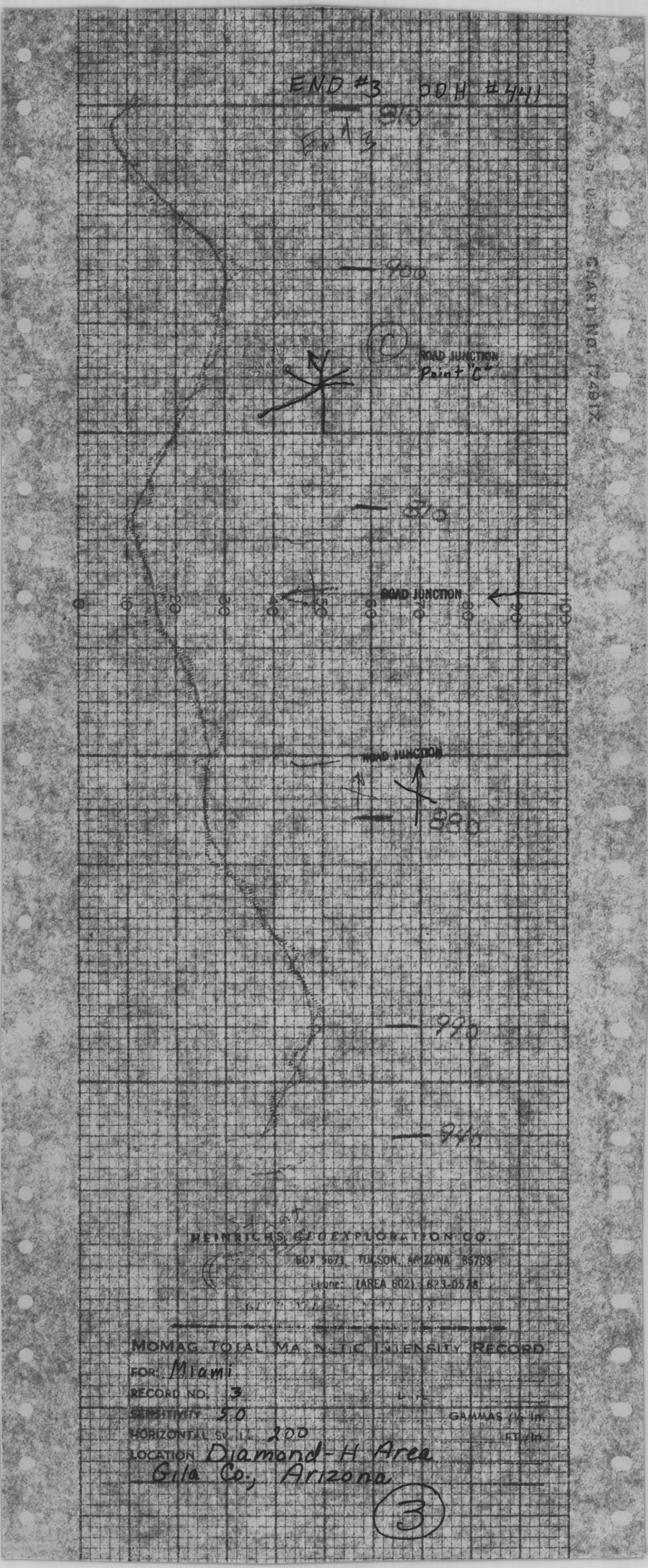


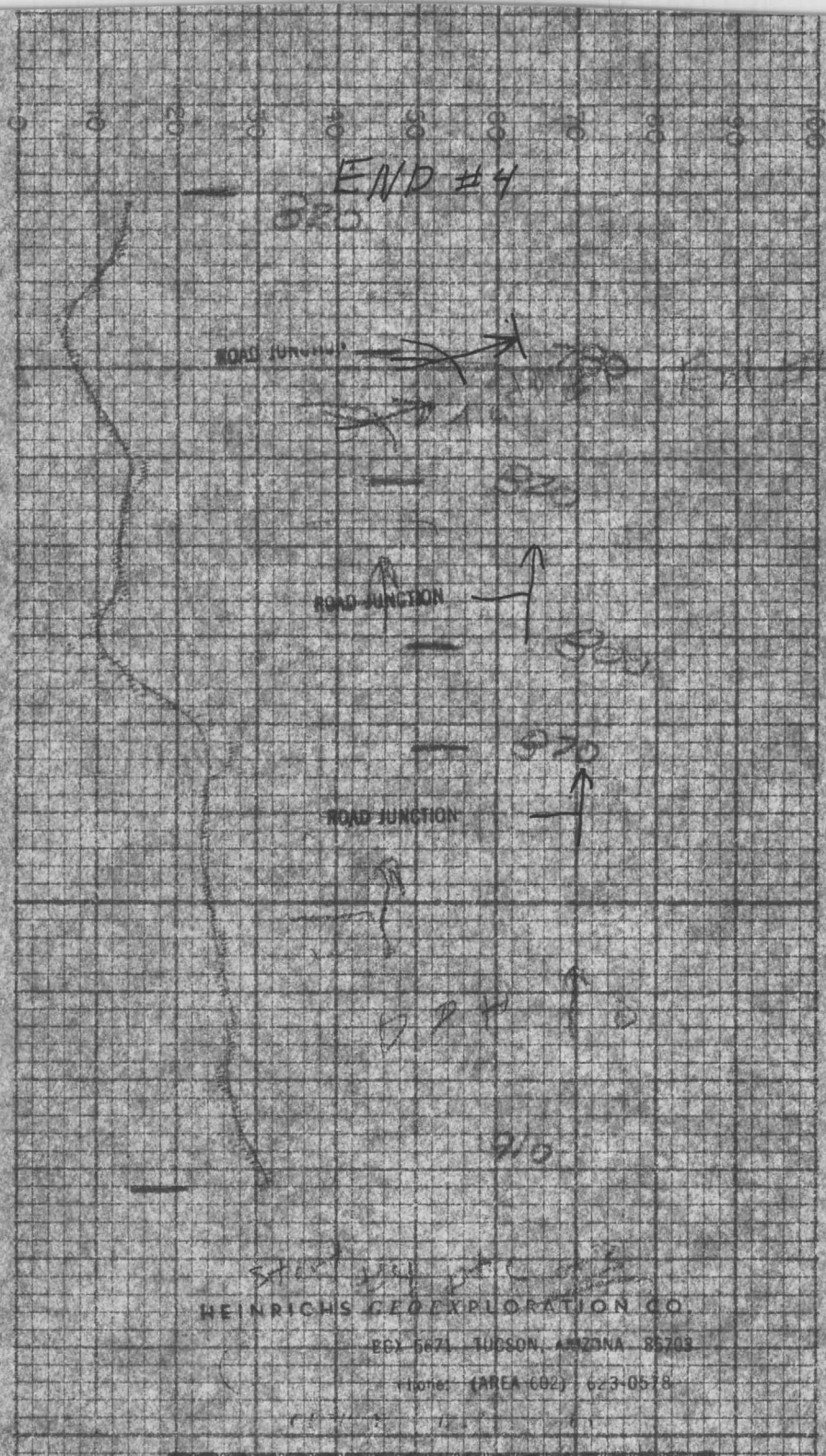
HEINRICHS GEOEXPLORATION CO.
BOX 5671, TUCSON, ARIZONA 85703
Phone: (AREA 602) 623-0578

MOMAG TOTAL MAGNETIC INTENSITY RECORD

FOR: Miami
DATE: Sept 2
RECORD NO. 2
SENSITIVITY 50 GAMMAS/in.
HORIZONTAL SCALE 200 FT/in.
LOCATION Diamond-H Area
Gila Co., Arizona

(2)


END #3 DDH #441
910
915
900
ROAD JUNCTION
Point "C"
890
ROAD JUNCTION
ROAD JUNCTION
880
920
940
HEINRICHS GEOEXPLORATION CO.
BOX 5671 TUCSON, ARIZONA 85703
Phone: (AREA 602) 623-0578
MOMAG TOTAL MAGNETIC INTENSITY RECORD
FOR: Miami
RECORD NO. 3
SENSITIVITY 5.0
GAMMAS /½ in.
HORIZONTAL SCALE 200
FT./in.
LOCATION Diamond-H Area
Gila Co., Arizona
3



HEINRICHS GEOEXPLORATION CO.

P.O. BOX 5671 TUCSON, ARIZONA 85703

Phone: (AREA 602) 623-0518

MOMAG TOTAL MAGNETIC INTENSITY RECORD

FOR Miami

RECORD NO. 4 DATE

SENSITIVITY 50 GAMMAS/½ in.

HORIZONTAL SCALE 200 Ft./in.

LOCATION Diamond-H Area
Gila Co., Arizona

4

END #5 at pt "C"

Joins #3

WASH

ROAD JUNCTION

ROAD JUNCTION

ROAD JUNCTION

DDH 458

Start #5 at point "C"

HEINRICHS GEOEXPLORATION CO.
BOX 5671 TUCSON, ARIZONA 85703
Phone: (AREA 602) 623-0578

MOMAG TOTAL MAGNETIC INTENSITY RECORD

FOR: Miami

RECORD NO. 5 DATE Sept 2 1968

SENSITIVITY 50 GAMMAS PER INCH

HORIZONTAL SCALE 200 FEET PER INCH

LOCATION Diamond-H Area
Gila Co., Arizona

(5)

END 6

DDH 470 End

DDH #

ROAD JUNCTION

DDH #466

DDH #472

Switch Back

ROAD JUNCTION

ROAD JUNCTION

Switch to Start 6

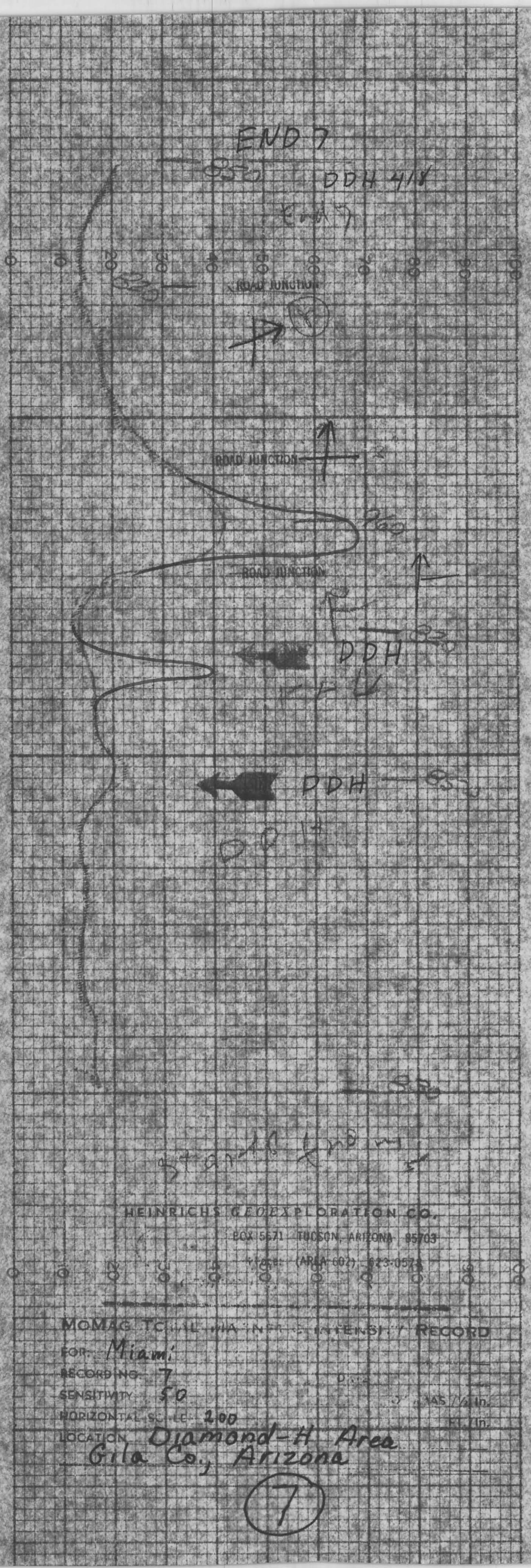
HEINRICHS GEOEXPLORATION CO.
BOX 5671 TUCSON, ARIZONA 85703
Phone: (AREA 602) 623-0678
GEOPHYSICIST

MoMAG TOTAL MAGNETIC INTENSITY RECORD

FOR: Miami
RECORD NO. 6
SENSITIVITY 50
HORIZONTAL SCALE 200
LOCATION Diamond-H Area
Gila Co., Arizona

6

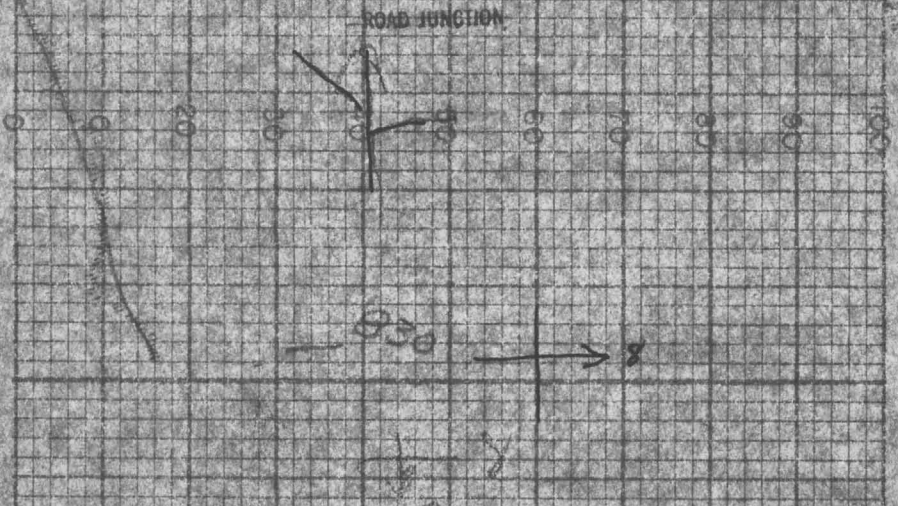
STARTING END


END 7
DDH 4/8
ROAD JUNCTION
ROAD JUNCTION
ROAD JUNCTION
DDH
DDH
HEINRICHS GEOEXPLORATION CO.
P.O. BOX 5671 TUCSON, ARIZONA 85703
PHONE: (AREA 602) 623-0571
MOMAG TOTAL MAGNETIC INTENSITY RECORD
FOR: Miami
RECORD NO. 7
SENSITIVITY 50
HORIZONTAL SCALE 200
LOCATION Diamond-H Area
Gila Co., Arizona
7
MADE IN U.S.A.

End Record 8

340

670 — DDH



HEINRICHS GEOEXPLORATION CO.
BOX 5621 TUCSON, ARIZONA 85703
Phone: (AREA 602) 623-0578

GEOPHYSICAL ENGINEERS

MOMAG TOTAL MAGNETIC INTENSITY RECORD

FOR: Miami

RECORD NO. 8

SENSITIVITY 50 GAMMAS /½ in.

HORIZONTAL SCALE 200 FT./in.

LOCATION Diamond-H Area
Gila Co., Arizona

8

HEINRICHS GEOEXPLORATION CO.
BOX 5671 TUCSON, ARIZONA 85703
Phone: (AREA 602) 623-0578
GEOPHYSICAL ENGINEERS

MOMAG TOTAL MAGNETIC INTENSITY RECORD

FOR: Miami Copper Co.
RECORD NO. 9
SENSITIVITY 50 GAMMAS / 1/4 In.
HORIZONTAL SCALE 200 FT./In.
LOCATION Diamond-H, Gila Co, Arizona

(9)

GEOMAG TOTAL MAGNETIC INTENSITY RECORD

FOR: Miami Copper Co.

RECORD NO. 10 DATE 9-23-63

SENSITIVITY 50 GAMMAS /½ IN.

HORIZONTAL SCALE 200 FT./IN.

LOCATION Diamond H Gila Co., Arizona

10

GEOPHYSICISTS EXPLORATION CO.
BOX 3021 TUCSON, ARIZONA 85703
PHONE: AREA 602, 623-0578

End Record 10

End Record 12

1000

1100

1200

1300

1400

1500

1600

1700

1800

1900

2000

2100

2200

2300

2400

2500

2600

2700

2800

2900

3000

0 10 20 30 40 50 60 70 80 90 100

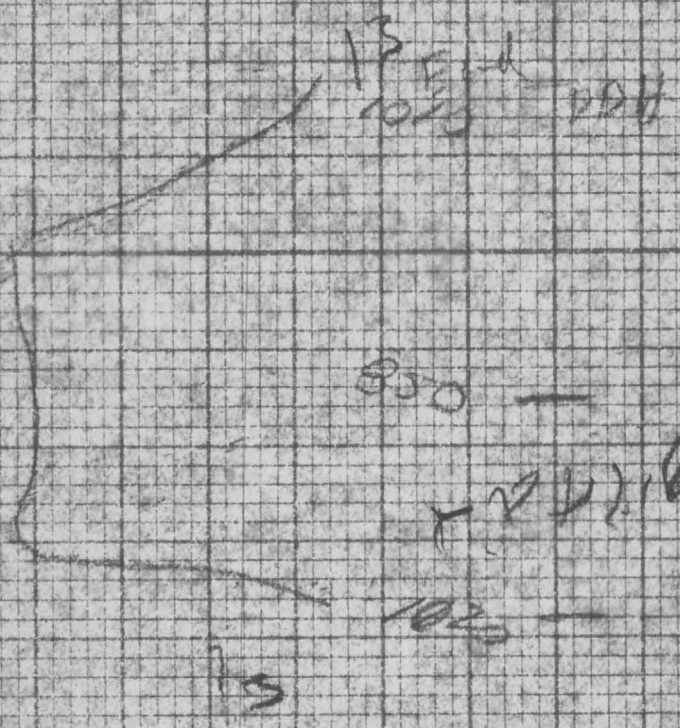
HEINRICHS GEOEXPLORATION CO.
BOX 5671 TUCSON, ARIZONA 85703
Phone: (AREA 602) 623-0979
GEOPHYSICAL ENGINEERS

MOMAG TOTAL MAGNETIC INTENSITY RECORD

FOR: Miami Copper Co.
RECORD NO. 12 DATE 9-2-65
SENSITIVITY 50 GAMMAS 1/4 in.
HORIZONTAL SCALE 200 FT./in.
LOCATION Cactus Area
Gila Co., Arizona

12

End Record 13



HEINRICHS GEOEXPLORATION CO.

BOX 5671 TUCSON, ARIZONA 85703

Phone: (AREA 602) 623-0578

GEOPHYSICAL FEATURES

MAG TOTAL MAGNETIC INTENSITY RECORD

FOR: Miami Copper Co.

RECORD NO: 13 DATE 9-2-65

SENSITIVITY 50 GAMMAS /½ in.

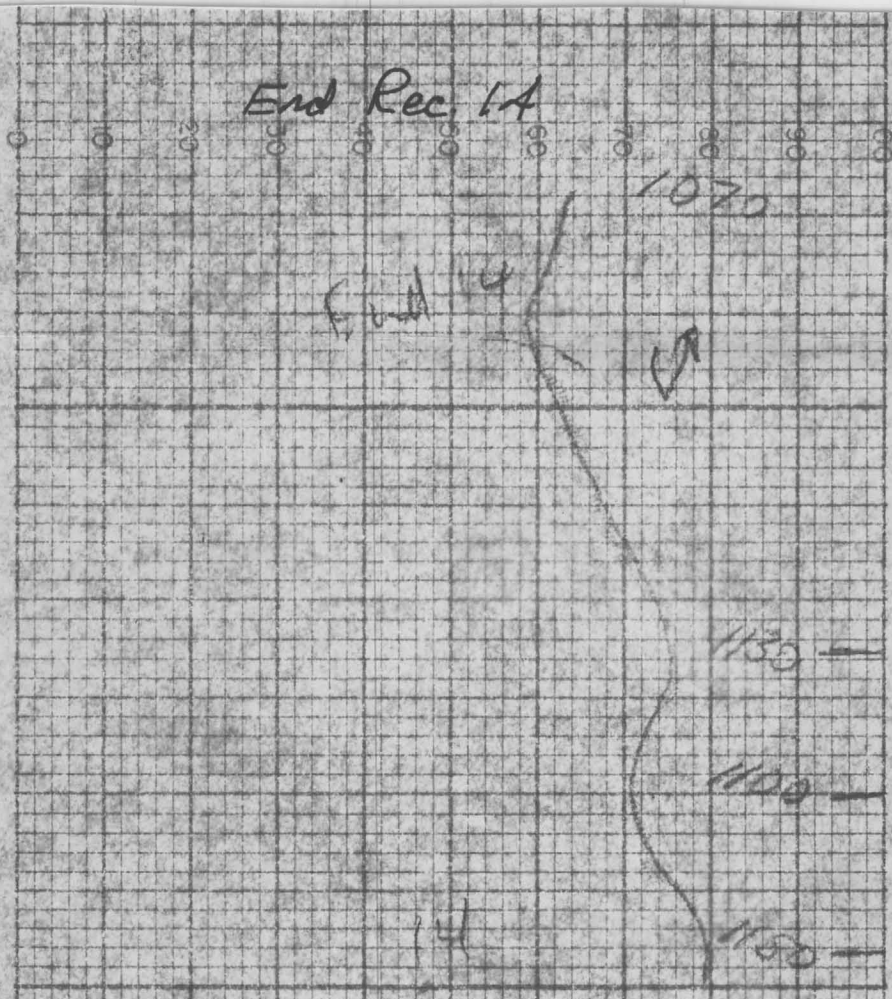
HORIZONTAL SCALE 200 Ft./in.

LOCATION Cactus Area

Gila Co., Arizona

13

End Rec. 14



HEINRICH GEOEXPLORATION CO.

BOX 5671 TUCSON, ARIZONA 85703

Phone: (AREA 602) 623-0578

GEOPHYSICAL ENGINEERS

MOMAG TOTAL MAGNETIC INTENSITY RECORD

FOR: Miami Copper Co.

RECORD NO. 14 DATE 9-2-65

SENSITIVITY 50 GAMMAS / ½ in.

HORIZONTAL SCALE 200 FT. / in.

LOCATION Cactus Area
Gila Co., Arizona

14

MADE IN U.S.A. ESTERLINE ANGUS INDIANAPOLIS, IND., U.S.A. E.S.

MOMAG TOTAL MAGNETIC INTENSITY RECORD

FOR: Miami Copper Co. DATE 9-2-65

RECORD NO. 13 SENSITIVITY 50 GAMMAS / ½ IN.

HORIZONTAL SCALE 200 FT./IN.

LOCATION Cactus Area Globe Co., Arizona

G1

HEINRICHS GEOEXPLORATION CO.
BOX 5671 · TUCSON, ARIZONA 85703
PHONE: (AREA 602) 623-1078
GEOPHYSICAL ENGINEERS

ESTERLINE-ANGUS INDIANAPOLIS, IND., U.S.A. CHART NO. 17491X

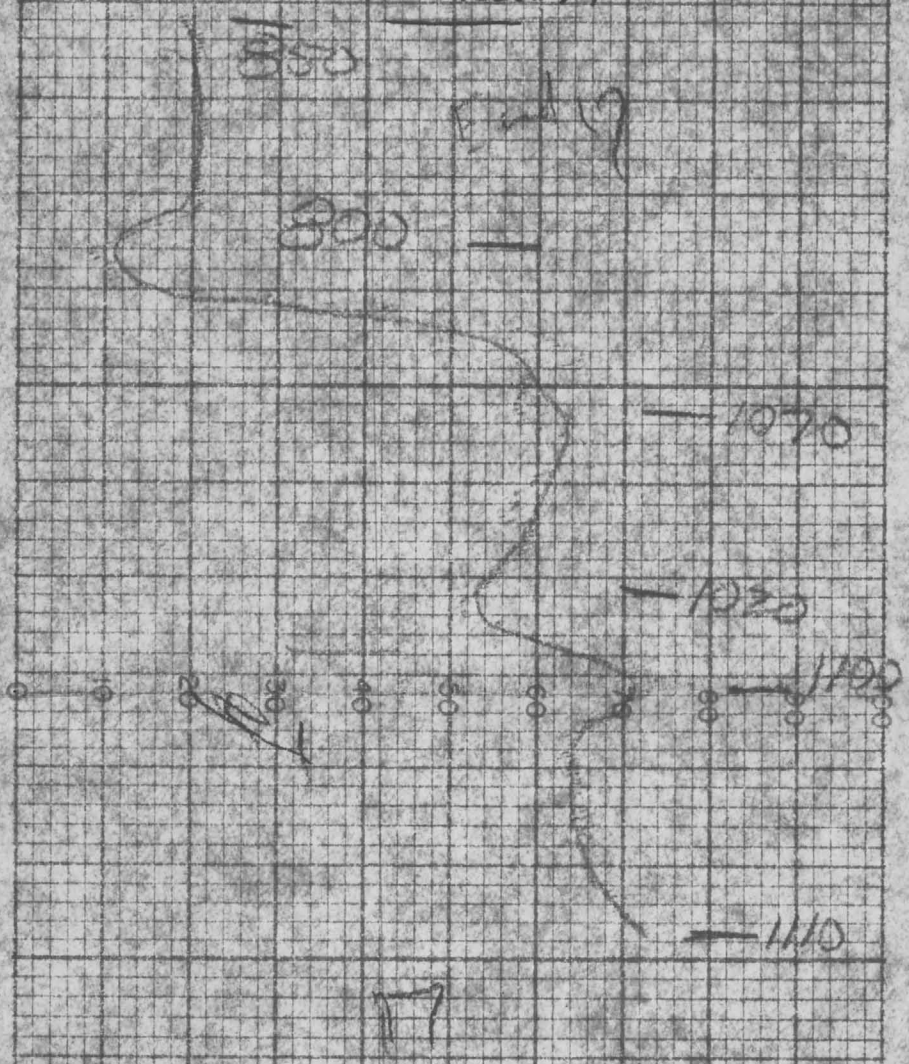
End Rec. 13

HEINRICHS GEOEXPLORATION CO.
BOX 5671 TUCSON, ARIZONA 85703
Phone: (AREA 602) 623-0578
GEOPHYSICAL ENGINEERS

MoMag Total Magnetic Intensity Record

FOR: Miami Copper Co
RECORD NO. 16 DATE 9-2-65
SENSITIVITY 50 GAMMAS /½ In.
HORIZONTAL SCALE 200 FT./In.
LOCATION Cactus Area
Gila Co., Ariz.

End Rec. 17



HEINRICHS GEOEXPLORATION CO.
BOX 5671 TUCSON, ARIZONA 85703
Phones (AREA 602) 628-0578
GEOPHYSICAL ENGINEERS

MoMAG TOTAL MAGNETIC INTENSITY RECORD

FOR: Miami Copper Co.

RECORD NO. 17 DATE 9-2-65

SENSITIVITY 50 GAMMAS / ½ in.

HORIZONTAL SCALE 200 ft. / in.

LOCATION Cactus Area
Gila Co., Arizona

17

CHART NO. 17491X

End Rec. 18

1000

1020

1050

1100

0 10 20 30 40 50 60 70 80 90 100

HEINRICHS GEOEXPLORATION CO.
P.O. BOX 5671, TUCSON, ARIZONA 85703
Phone: (AREA 602) 623-0578
GEOPHYSICAL ENGINEERS

MoMag TOTAL MAGNETIC INTENSITY RECORD

FOR: Miami Copper Co.

RECORD NO. 18 DATE 9-2-65

SENSITIVITY 50 GAMMAS / ½ In.

HORIZONTAL SCALE 200 FT./In.

LOCATION Cactus Area
Gila Co., Arizona

18

End Rec. 19

Rec 19

1150

600

750

1050

0 10 20 30 40 50 60 70 80 90 100

1180

0 10 20 30 40 50 60 70 80 90 100

STERLING ANGUS INDIANAPOLIS, IND., U.S.A. CHART NO. 17491X

HEINRICHS GEOEXPLORATION CO.
BOX 5671 TUCSON, ARIZONA 85703
Phone: (AREA 602) 623-0378
GEOPHYSICAL EXPLORATION

MoMAG TOTAL MAGNETIC INTENSITY RECORD

FOR: Miami Copper Co.

RECORD NO. 19 DATE 9-2-65

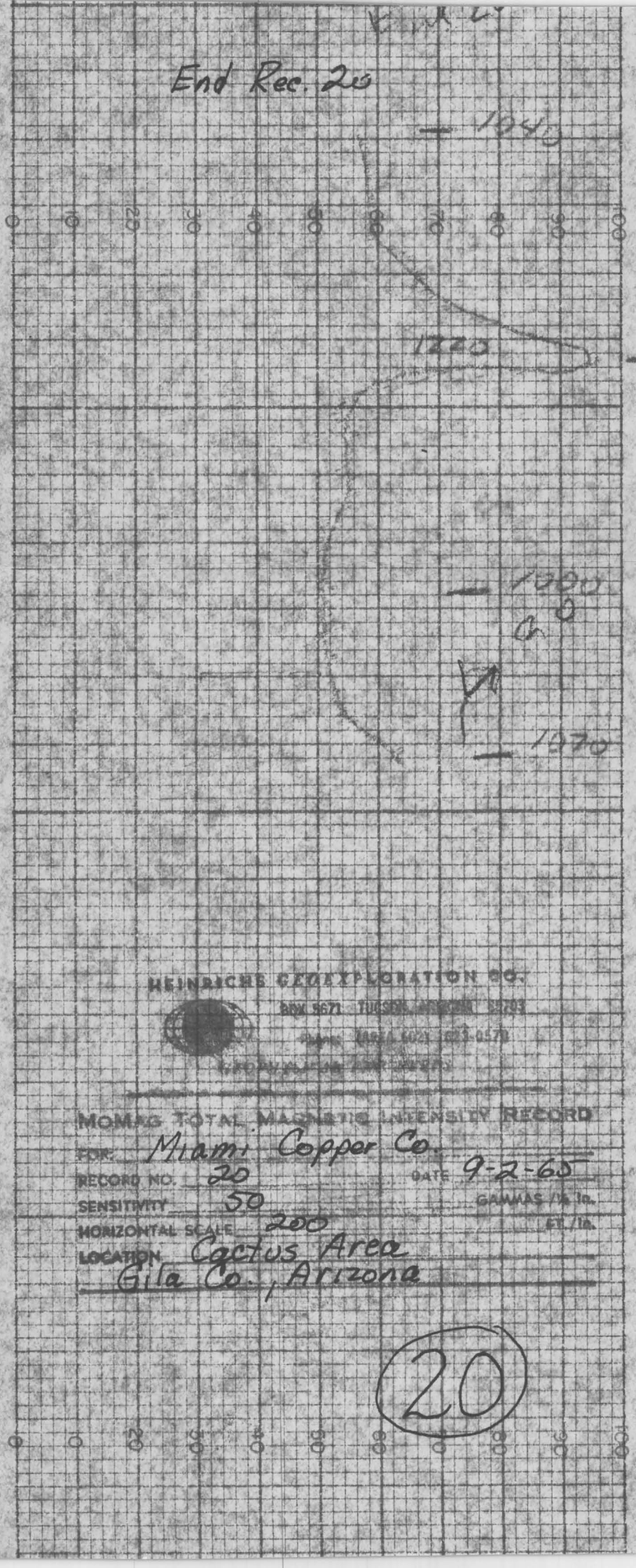
SENSITIVITY 50 GAMMAS / ¼ IN.

HORIZONTAL SCALE 200 FT./IN.

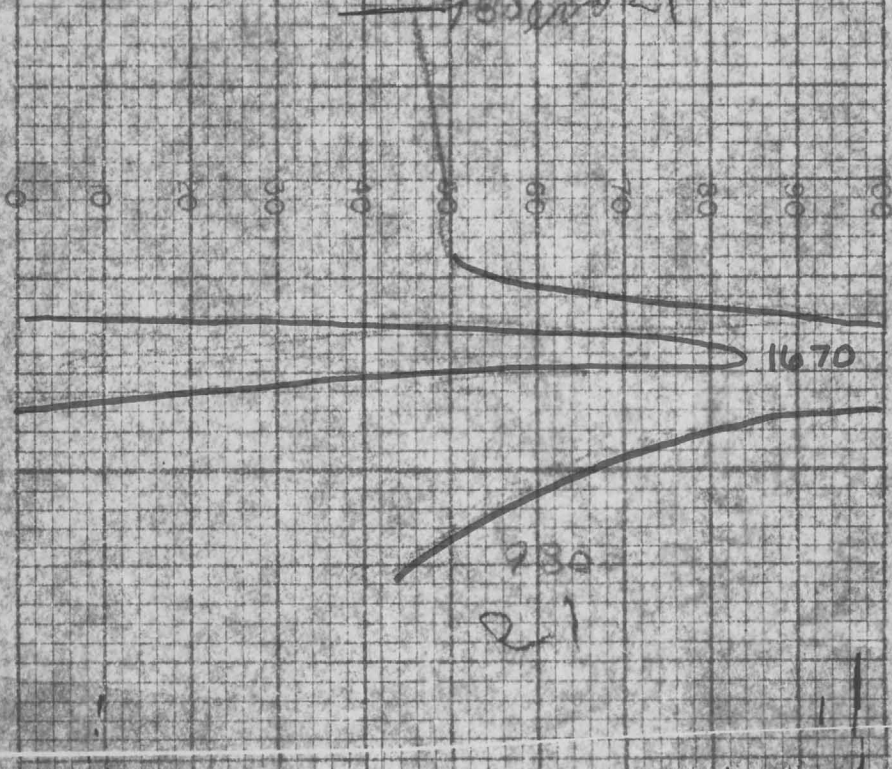
LOCATION Cactus Area
Gila Co., Arizona

19

MADE IN U.S.A. STERLING ANGUS


End Rec. 20
1045
1220
1000
1070
HEINRICHS GEOEXPLORATION CO.
MOMAG TOTAL MAGNETIC INTENSITY RECORD
FOR: Miami Copper Co.
RECORD NO. 20
DATE 9-2-65
SENSITIVITY 50
GAMMAS / in.
HORIZONTAL SCALE 200
FT. / in.
LOCATION Cactus Area
Gila Co., Arizona
20

End Rec 21



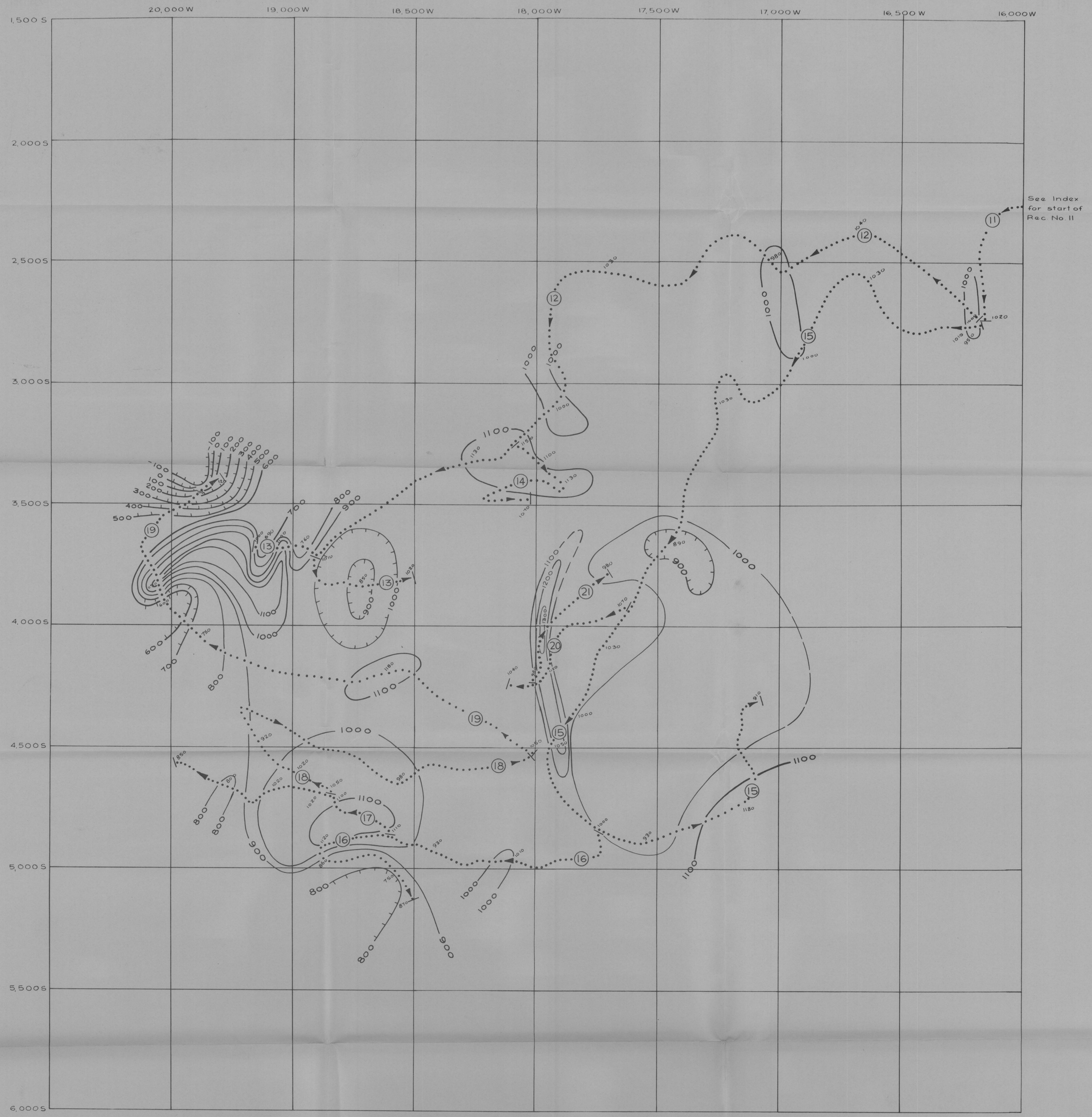
[redacted] GEOPHYSICAL EXPLORATION CO.
[redacted] BOX 5021 TUCSON, ARIZONA 85703
[redacted] Phone: AREA (602) 623-0575
GEOPHYSICAL ENGINEERS

MOMAG TOTAL MAGNETIC INTENSITY RECORD

FOR Miami Copper Co.
RECORD NO. 21
SENSITIVITY 50
DATE 9-2-65
HORIZONTAL SCALE 200
LOCATION Cactus Area
Gila Co, Arizona

20

MADE IN U.S.A. ESTERLINE ANGUS INDIANAPOLIS, IND., U.S.A.



MOMAG TRAVERSE
REC. No. & DIRECTION

HEINRICHS GEOEX
GEOPHYSICAL ENGINEERS
TUCSON, ARIZONA

HEINRICHS GEOEXPLORATION COMPANY
P.O. Box 5671 Tucson, Arizona

MOBILE MAGNETOMETER SURVEY TOTAL INTENSITY

FOR MIAMI COPPER COMPANY

CACTUS AREA
GILA COUNTY, ARIZONA

SCALE: 1" = 200'	CONTOUR INTERVAL:	REVISIONS
	DATA BY: R E P	
DATE: SEPT 1965	SHEET OF	
DRAWN BY:	DRAWING NO.:	FILE:

N 17,000

E 9,000

E 8,500

E 8,000

E 7,500

N 16,000

N 15,000

N 14,000

N 13,000

E 5,000

E 6,000

E 7,000

E 8,000

E 8,500

E 9,000

E 10,000

E 11,000

E 12,000

MANGANESE

LIMESTONE NO. 4

LIMESTONE NO. 5

RITA NO. 2

SYCAMORE

RITA NO. 4

RITA NO. 6

RITA NO. 3

SLEEPING BEAUTY FAULT

D.H. NO. 7

D.H. NO. 4

D.H. NO. 5

D.H. NO. 2

COPPER WEDGE

D.H. NO. 8

D.H. NO. 9

D.H. NO. 3

YELLOW DIAMOND

ALPHA

FLY NO. 14

D.H. NO. 1

BIG BOY

FLY NO. 1

FLY NO. 2

FLY NO. 3

FLY NO. 4

FLY NO. 5

FLY NO. 6

FLY NO. 7

FLY NO. 8

FLY NO. 13

FLY NO. 12

FLY NO. 11

FLY NO. 9

FLY NO. 10

④ MOMAG TRAVERSE
REC. No & DIRECTION

HEINRICHS GEOEXPLORATION COMPANY
P.O. Box 5671 Tucson, Arizona

MOBILE MAGNETOMETER SURVEY TOTAL INTENSITY

FOR

MIAMI COPPER COMPANY

DIAMOND - H AREA

SCALE: 1" = 200'	CONTOUR INTERVAL: 100 ϒ	REVISIONS
	DATA BY: R E P	
DATE: SEPT 1965	SHEET OF	
DRAWN BY:	DRAWING NO.:	FILE: