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.

From the desk of

L. R. Palant

June 6, 1972

Heinrichs Geoexploration Co.
806 West Grant Road
Tucson, Arizona 85703

ATTENTION: Mr. Walter E. Heinrichs, Jr.
Mr. Chris S. Ludwig

Gentlemen,

This letter will constitute your written authorization to acquire in my name personally (Lyle R. Palant, individually) all rights to prospect, to mine, to lease or any other rights of any nature whatsoever, as such rights are available from Federal or State of Arizona authorities which exist as to availability as at 5:00 P.M. M.S.T. June 6, 1972.

You are so authorized to acquire based upon your representation to me that no conflict of interest exist, direct or indirect, as to the specfic area in which I have personal interest, i.e. T14S, R12E, Pima County Arizona, G.&S.R.&M.. Particular attention is directed towards Section 16 and Section 32 of said township and range, wherein I am personally the owner of the now existing Oil and Gas leasehold interest.

It is agreed that you shall be compensentated financially for obtaining in my name, the above mentioned rights in the above mentioned area as is customary in the

L.R.P.
mkl. cs.l.

normal course of your professional practice.

This instruction is to be considered immediately effective and it is my understanding you will proceed at once to acquire all rights referred to herein.

If the foregoing is in accordance with our understanding, would you be so kind as to execute the orginal of this "Letter-Agreement" and return same to me.

I am yours most respectfully,

Lyle R. Palant

Lyle R. Palant

Acknowledged & Agreed to:

Heinrichs Geoexploration Co.

By: W. E. Heinrichs Jr.

Walter E. Heinrichs, Jr. Pres.

By: Chris S. Ludwig

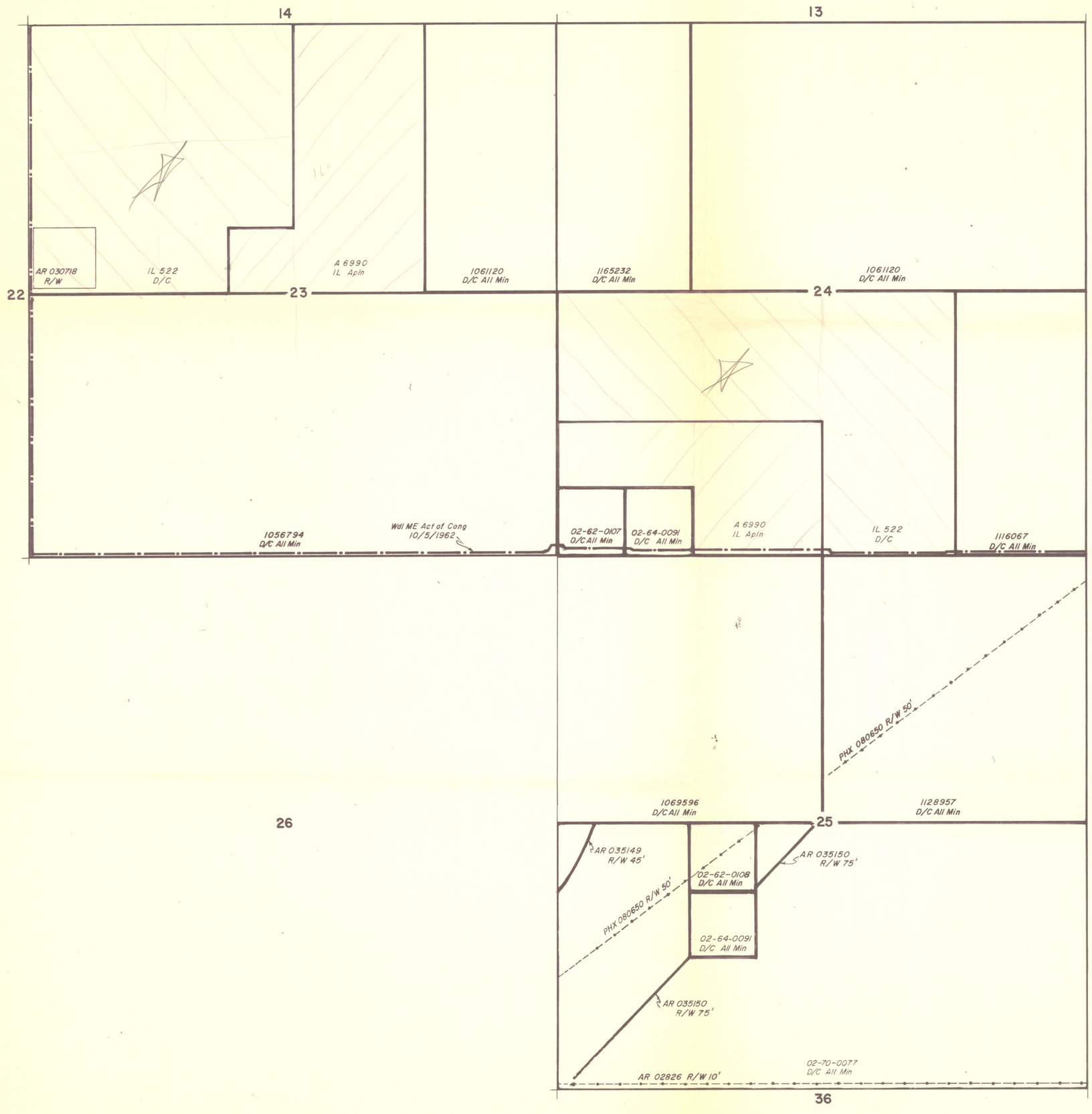
Chris S. Ludwig- Senior Geophysicist

Witness by

J. O. McKibben

Betty J. McKibben

TOWNSHIP 14 SOUTH RANGE 12 EAST OF THE GILA AND SALT RIVER MERIDIAN, ARIZONA



SCALE
5 0 5 10 20
10 chains to the inch

STATUS OF PUBLIC DOMAIN
LAND AND MINERAL TITLES

MTP
SUPP Sec 23,24,25

INDEX TO SEGREGATED TRACTS				
RESURVEY	ORIGINAL SURVEY			
TRACT NO	T	R	SEC	SUBDIVISION

FOR ORDERS EFFECTING DISPOSAL OR USE OF UNIDENTIFIED LANDS WITHDRAWN FOR CLASSIFICATION, MINERALS, WATER AND/OR OTHER PUBLIC PURPOSES, REFER TO INDEX OF MISCELLANEOUS DOCUMENTS.

A 3478 CL MULTIPLE USE

DIST. NO. 2

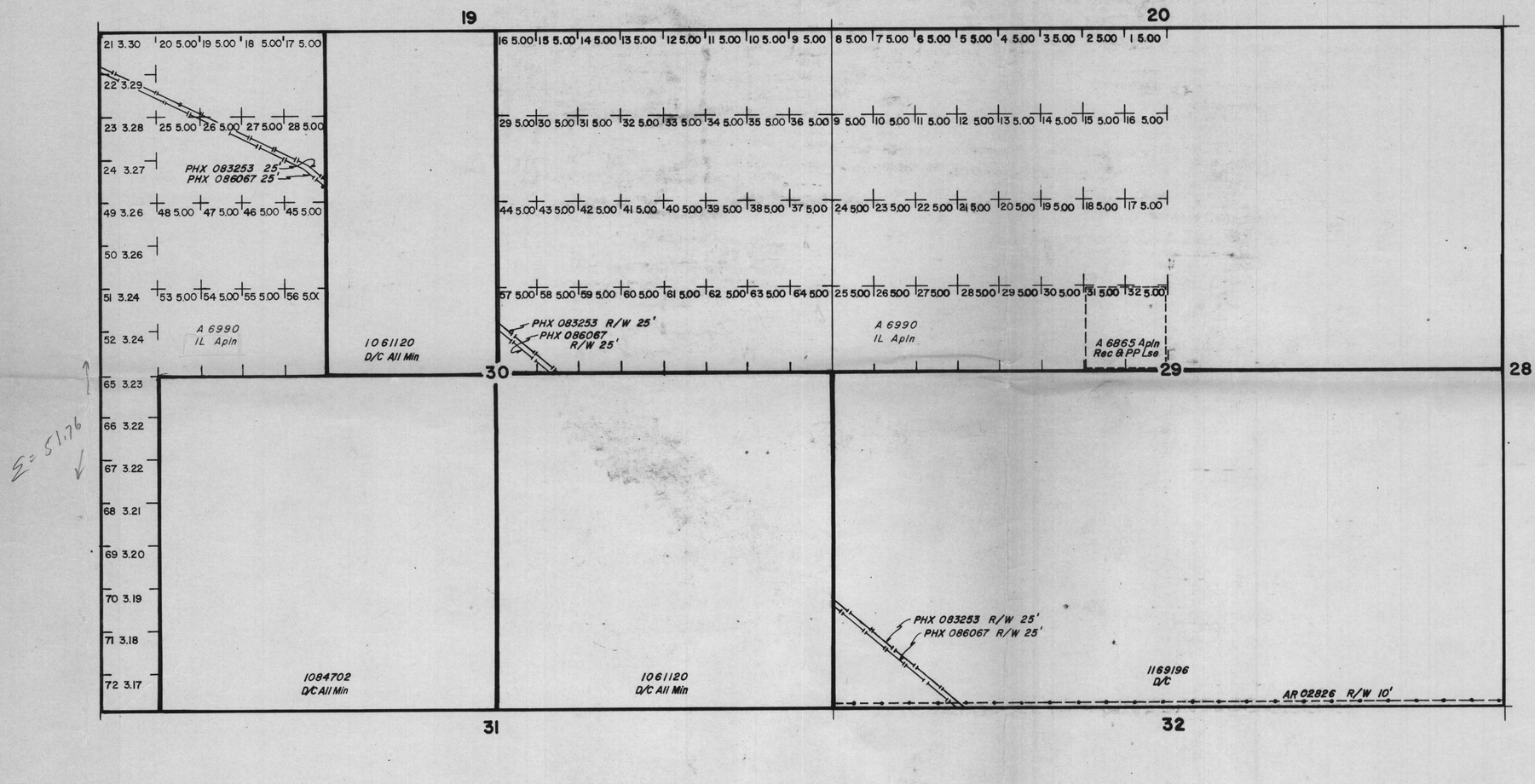
A 4447 CL TRF

BUREAU OF LAND MANAGEMENT
1972 JUN 7 AM 10 45

CURRENT TO	BY

T. 14 S.
R. 12 E.

TOWNSHIP 14 SOUTH RANGE 12 EAST OF THE GILA AND SALT RIVER MERIDIAN, ARIZONA



SCALE

5 0 5 10 20

10 chains to the inch

STATUS OF PUBLIC DOMAIN
LAND AND MINERAL TITLES

MTP
SUPPL Sec 29,30

INDEX TO SEGREGATED TRACTS				
RESURVEY	ORIGINAL SURVEY			
TRACT NO	T	R	SEC	SUBDIVISION

FOR ORDERS EFFECTING DISPOSAL OR USE OF UNIDENTIFIED LANDS WITHDRAWN FOR CLASSIFICATION, MINERALS, WATER AND/OR OTHER PUBLIC PURPOSES, REFER TO INDEX OF MISCELLANEOUS DOCUMENTS.

A 2153 CL MULTIPLE USE

DIST. NO. 2

A 6866 Rec & PP Lse Apln Sec 30

BUREAU OF LAND MANAGEMENT
PHOENIX
RECEIVED
1972 JUN 5 AM 10 44

CURRENT TO	BY

T. 14 S.
R. 12 E.

TOWNSHIP 14 SOUTH RANGE 12 EAST OF THE GILA AND SALT RIVER MERIDIAN, ARIZONA

STATUS OF PUBLIC DOMAIN
LAND AND MINERAL TITLES

MTP
SUPPL Sec 5,34,35

INDEX TO SEGREGATED TRACTS				
RESURVEY	ORIGINAL SURVEY			
TRACT NO.	T	R	SEC	SUBDIVISION

FOR ORDERS EFFECTING DISPOSAL OR USE OF UNIDENTIFIED LANDS WITHDRAWN FOR CLASSIFICATION, MINERALS, WATER AND/OR OTHER PUBLIC PURPOSES, REFER TO INDEX OF MISCELLANEOUS DOCUMENTS.

A 2153 CL MULTIPLE USE

A 3478 CL MULTIPLE USE

DIST. NO. 2

A 4447 CL TRF

4 0.02
3 26.36
48.75
5 36.42
2 43.66
Lot 37 (MS)
9.15
453
ME Pats
6 35.80
7 37.33
6
5
4
02-65-0066
D/C All Min
SO 4/29/1929
Wdl Recreational Area
PHX 084351 101
8
26
27
PHX 080650 50'
AR 034166
R/W
22.6'
1065597
D/C All Min
1069596
D/C All Min
33
34
35
36
SEC: 34
Lot 66 1184829
D/C All Min
68 1196829
D/C All Min
A 6990
IL Apln
AR034166
R/W22.6'
1 41.52
2 41.20
IL 522
D/C
A 6032 R/W 100'
A 6601
PS Apln
1196829
D/C All Min
SEC. 35
Lot 37 1185906
D/C
All Min
38 1194563
D/C
All Min
39 1186281
D/C
All Min
45 1207947
D/C
All Min
46 1208094
D/C
All Min
47 1206478
D/C
All Min
50 1206514
D/C All Min
49 1205476
D/C All Min
48 1205528
D/C All Min

SCALE
5 0 5 10 20
10 chains to the inch

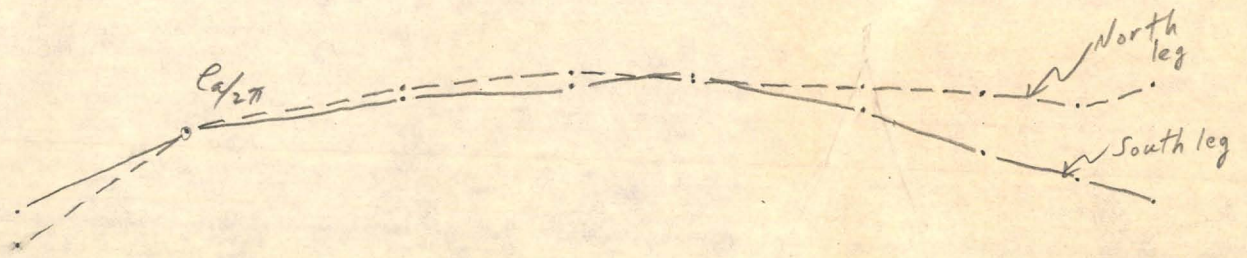
CURRENT TO	BY

T. 14 S
R. 12 E

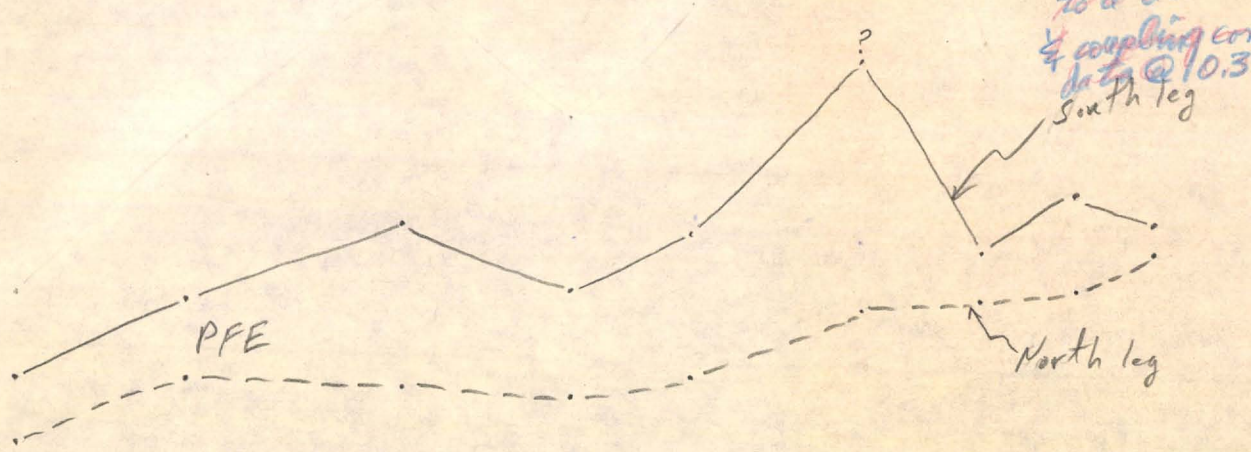
E½ Section 16 – Bankers Bonanza
Job #720 Lyle Palmer
July 1973

Pole-Pole Expander #1

$\rho_a/2\pi$ is @ 0.3 Hz



PFE is normalized to a decade frequency differential & coupling corrected data @ 0.3 & 1.0 Hz



$\rho_a/2\pi$ in ohm-feet

Common Background Range

Percent Frequency Effect (PFE)

a in feet

HEINRICHS GEOEXPLORATION CO.
Box 5964 Tucson, Arizona 85703
Phone: (602) 623-0578
Cable: GEOEX
GEOPHYSICAL ENGINEERS

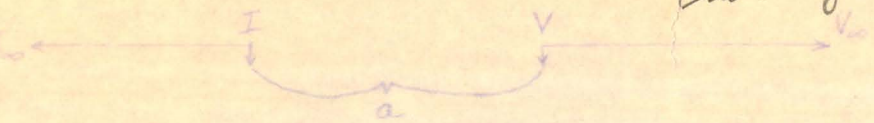
JUL 7 1973

PRELIMINARY

E½ Section 16 - Bankers Bonanza

Job # 720 Lyle Palant

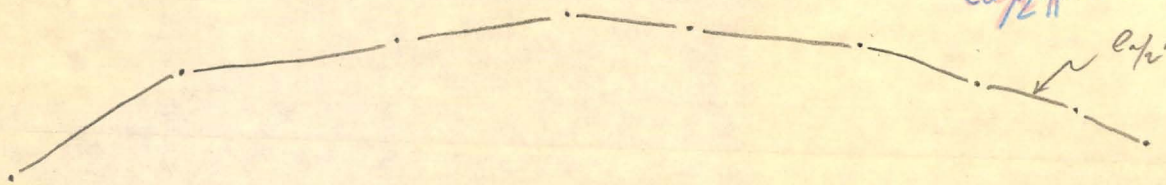
Pole-Pole Expander #2
East leg



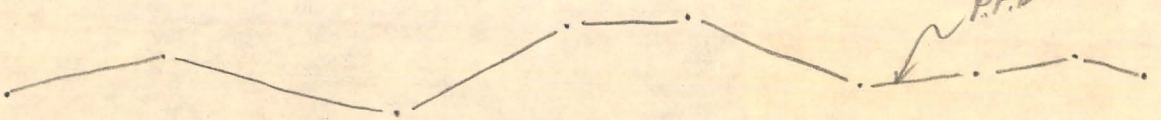
HEINRICHS GEOEXPLORATION CO.
Box 5964 Tucson, Arizona 85703
Phone: (602) 623-0578
Cable: GEOEX

JUL 7 1973

$\ell a/2\pi$ is @ 0.3 Hz



PFE is normalized to a decade Hz and coupling corrected - data at 0.3 ± 0.1 Hz



Range of Common Background

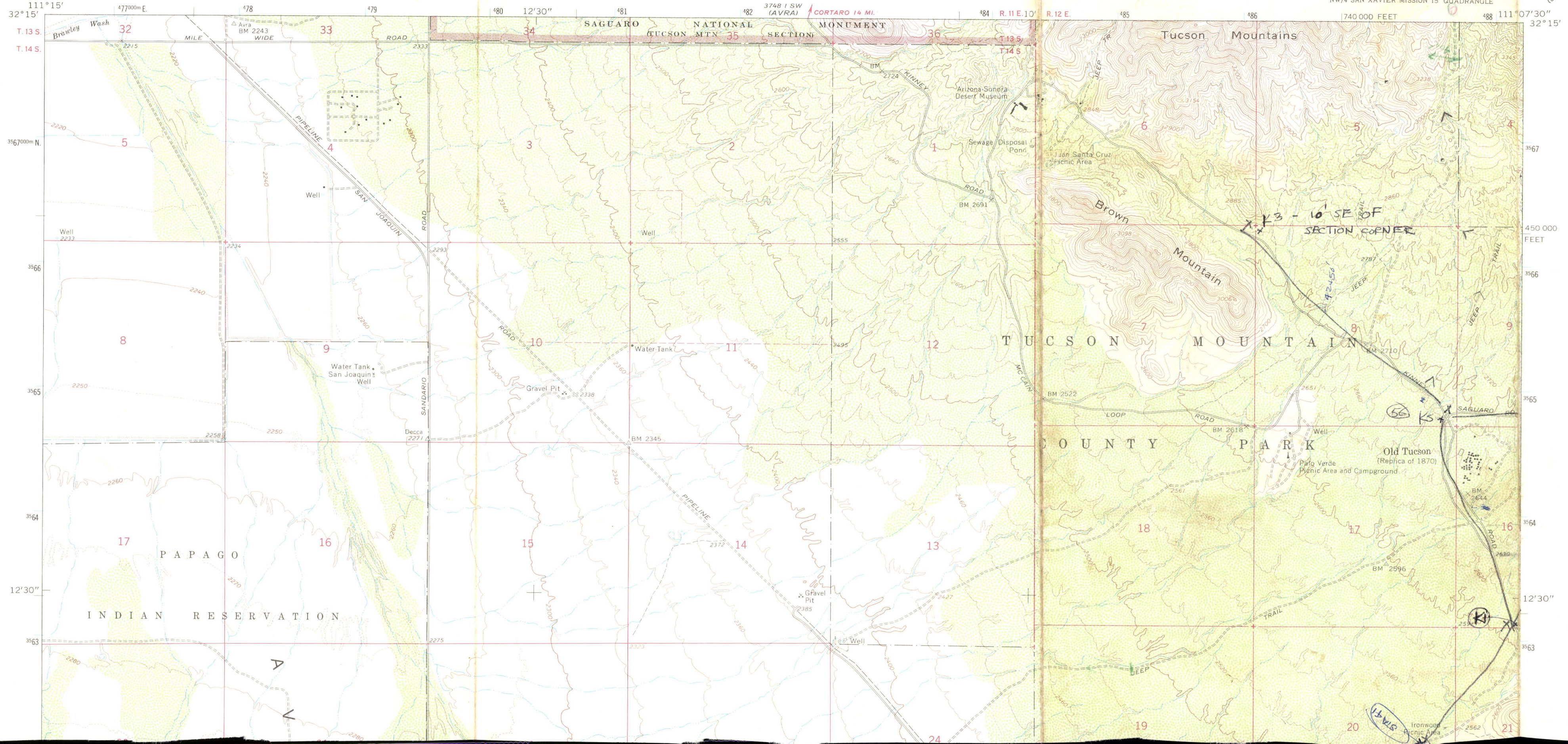
4.0
3.0
2.0
1.0
0.0

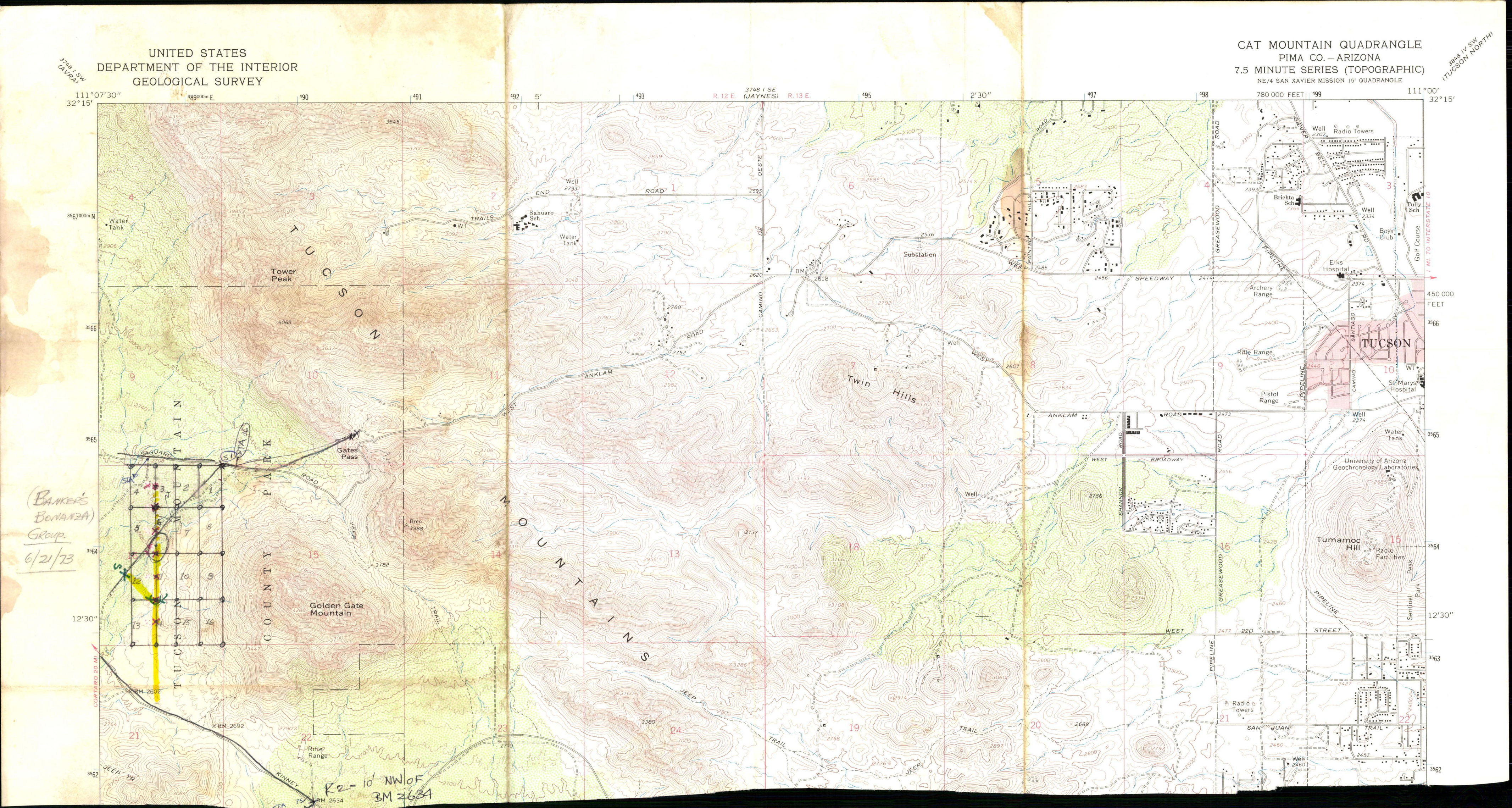
Percent Frequency Effect (P.F.E.)

PRELIMINARY

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

BROWN MOUNTAIN QUADRANGLE
ARIZONA – PIMA CO.
7.5 MINUTE SERIES (TOPOGRAPHIC)
NW/4 SAN XAVIER MISSION 15' QUADRANGLE




UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY
CAT MOUNTAIN QUADRANGLE
PIMA CO. — ARIZONA
7.5 MINUTE SERIES (TOPOGRAPHIC)
NE/4 SAN XAVIER MISSION 15' QUADRANGLE
3748 I SW (AVRA)
3848 IV SW (TUCSON NORTH)
3748 I SE (JAYNES)
111°07'30"
111°00'
32°15'
12'30"
5'
2'30"
R. 12 E.
R. 13 E.
489000m E.
780 000 FEET
450 000 FEET
3567000m N.
3566
3565
3564
3563
3562
TUCSON MOUNTAIN PARK
TUCSON MOUNTAINS
COUNTY PARK
Tower Peak
Golden Gate Mountain
Twin Hills
TUCSON
Gates Pass
Water Tank
Sahuaro Sch
Substation
Well
Radio Towers
Brichta Sch
Tully Sch
Boys Club
Golf Course
Elks Hospital
Archery Range
Rifle Range
Pistol Range
St Marys Hospital
University of Arizona Geochronology Laboratories
Tumamoc Hill
Radio Facilities
Sentinel Peak Park
BM 2602
BM 2692
BM 2634
BM 2618
Rifle Range
Bren
ROAD
TRAIL
JEEP TR
WEST
SPEEDWAY
BROADWAY
STREET
ANKLAM
SAGUARO
CAMINO OESTE
SILVERBELL
GREASEWOOD
PIPELINE
PAINTED HILLS
SANTIAGO
SHANNON
SAN JUAN
1 MI. TO INTERSTATE 10
CORTARO 20 MI.
(BANKER'S BONANZA) GROUP. 6/21/73
K2 - 10' NW of BM 2634

4) PROPERTY BEING SOLD: In Township 14 South, Range 12 East, Pima County, Arizona

SECTION 28:

65 acres-surface only (located in West ½ of Southwest ¼)-
Continental Oil holds mineral claims.

SECTION 29:

320 acres of mineral rights (owned in fee simple)

300 acres of surface ownership

Both mineral interests and surface interests are located in South ½ of Section 29

SECTION 30:

Mineral rights (claims) to the entire section (except Millstone Manor No. 6 subdivision, which contains 160 acres)

80 acres surface ownership-North ½ of Southeast ¼ of Sec. 30.

SECTION 31:

Mineral claims to the entire section

Surface ownership:

150 acres in Southeast ¼ of Section

150 acres (minimum) in North ½ of Section

SECTION 32:

Hydro-Carbon Lease, plus mineral claims to entire Section (except two school site locations of 30 acres, total, situate therein).

Surface-None (owned by State of Arizona)

SECTION 33:

Surface ownership:

120 acres in Northwest ¼

90 acres in South ½ of South ½ of Section

Mineral ownership:

None-Continental Oil claims exist thereon

SECTION 16:

Mineral ownership:

Hydro-Carbon lease and mineral claims on the entire East ½ of said Section.

Surface ownership:

None- (owned by State of Arizona)

PROPERTY BEING SOLD: In Township 14 South, Range 11 East, Pima County, Arizona

SECTION 24:

Mineral ownership:

Claims to the entire section

Surface ownership:

640 acres

TOTAL DEEDED ACRES (MINIMUM) - which includes more than 5.5 miles of major road frontages is 1,595 acres.

TOTAL MINERAL CLAIMS OR OWNERSHIP is 3,300 acres or more.

5) CLOSING DATE: Immediate

6) TITLE INSURANCE: Paid in full by Seller

7) EXISTING DEBT ON PROPERTIES: $4,000,000.00

8) DEBT AT TIME OF CLOSING: None

9) SELLERS:

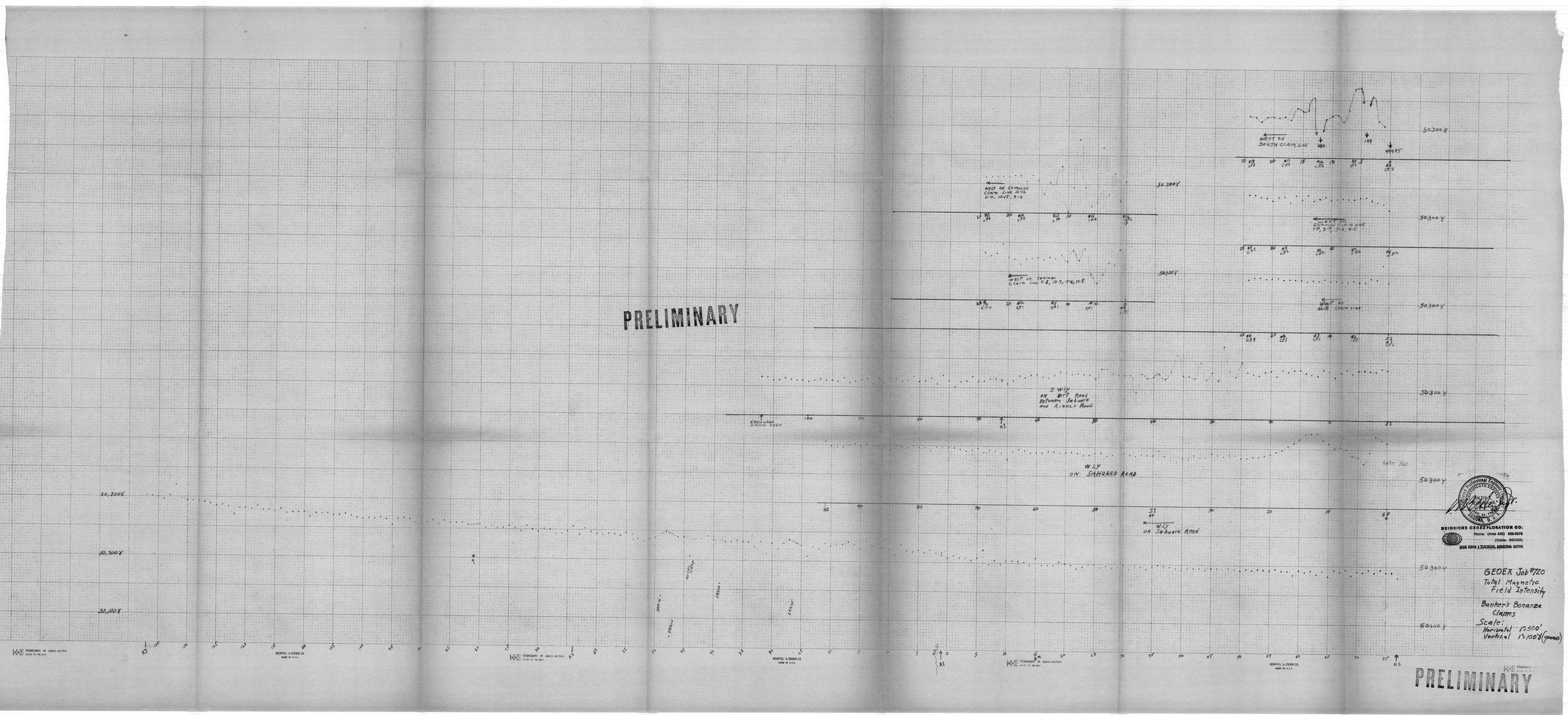
A) Rancho Riata, Inc., an Arizona corporation

B) and Associates

10) REQUIREMENTS FOR EXPLORATION AND DEVELOPMENT OF MINERALIZATION IN SUBJECT AREA: NEGOTIABLE

11) ROYALTY PAYABLE FROM MINERALS EXTRACTED FROM WITHIN THE AREA: NEGOTIABLE

PRELIMINARY



HEINRICHS GEOEXPLORATION CO.
Phone: (Area 602) 623-0575
(Cable: GEOEX)
BOX 5968 • TUCSON, ARIZONA 85703

GEOEX Job #720
Total Magnetic Field Intensity

Bankor's Bonanza Claims

Scale:
Horizontal 1"=500'
Vertical 1"=100γ (gammas)

INDUCED POLARIZATION LOCATION AND
MAGNETIC SURVEY PLAN MAP
of
OLD TUCSON AND VICINITY
PIMA COUNTY, ARIZONA
for
MR. LYLE PALANT
by
HEINRICHS GEOEXPLORATION COMPANY
Job number 720-73 July 1973

T 14 S R 12 E

SCALE: 1" = 500'

ROAD
MAGNETIC TRAVERSE
SECTION CORNER
SECTION NUMBER
BASE STATION & END OF MAGNETIC LINE
I.P. LINE
ELECTRODE
STATION
VERY WEAK
WEAK
} RELATIVE ANOMALY STRENGTH

Registered Professional Engineer
CERTIFICATE EXPIRES
WALTER E. HEINRICHS JR.
DEC. 31, 1973
ARIZONA, U.S.A.

PRELIMINARY

K3
KINNEY ROAD
KS
SAGUARO ROAD
S1
GP
I.P. LINE 1
52.8 N
30E
CENTER EXPANDER NO. 2
BANKER'S BONANZA CLAIM GROUP
CENTER EXPANDER NO. 1 (3,000'N)
(3,000 S)
K1
Sta. 41
KINNEY ROAD
52.8 S
K2

8 9 17 16 15 20 21 22

HEINRICHS GEOEXPLORATION COMPANY

806 WEST GRANT ROAD. TUCSON. ARIZONA 85703. P.O. BOX 5964. PHONE: (602) 623-0578

July 10, 1973

Mr. Lyle Palant
Suite 1421
1501 N. Miracle Mile
Tucson, Arizona 85705

Re: Preliminary Report on
Geophysical Field Investigations
of Bankers Bonanza Claim Group
GEOEX Job #720

Dear Mr. Palant.

The following is a generalized summary of the geophysical field investigations on the Banker's Bonanza Claims, which covers the E 1/2 of Section 16, T14S, R12E, Tucson Mountains, Arizona, as completed July 4, 1973.

The geophysical work done on this project was primarily of reconnaissance type, intended to detect any areas of possible economic mineral interest, in or immediately adjacent to the E 1/2 of Section 16. No such specific area of interest was developed and, in our opinion, any further chance for same is practically nil.

A single seven-electrode sending spread of dipole-dipole induced polarization coverage was completed using a dipole spacing of 660 feet. This work was conducted along the north-south claim line 1980 feet west of the east sideline of Section 16. The results indicate no significant polarization effects originating within the claim group above 1000' deep. The extreme south end of this line did detect the north edge of weak anomalism probably related to the known sulfide mineralization south of Kinney Road. Very weak polarization effects were also noted north of Sahuaro Road. These two anomalous areas are indicated on the enclosed preliminary pseudo-sectional data plot of Line 1 as a solid red arrow and a dashed red arrow respectively.

In addition to the dipole-dipole coverage, three asymetrical pole-pole I.P. depth probes were completed. Two on the south end of the claim group were to test the possibility of the above-mentioned sulphide mineralization extending northward at much greater depth under Section 16. The northern probe was to further test the northern portion of the half section at much greater depth. Results from all three of these deeper probes were negative.

In summary, the induced polarization survey work, together with surface geologic observations and magnetics, indicates little or no probability that any foreseeable mineral deposits exist in the immediate vicinity of the Banker's Bonanza Claims, in the zone down to about 5000 feet deep. Admittedly, tiny highgrade ore deposits could have been missed by such deep-reconnaissance coverage. However, the apparent geologic evidence that some may exist on the claims is considered essentially negative and the overall likelihood for any ore on the claims is therefore believed to be extremely remote.

In addition to the induced polarization coverage, approximately 10.5 miles of magnetic profile were read on stations 100' apart. No magnetic feature of interest which is considered related to potential economic mineralization or I.P. anomalism was detected. The profile westerly from Gates Pass does indicate a structural feature which is probably a fault and/or rock type change located just west of Gates Pass. The erratic magnetic effects noted near the east sideline of Section 16 are interpreted to be simply characteristic of the volcanic rocks appearing at the surface here.

A preliminary 1'=500 feet plan map showing the location of completed field work is enclosed. Our final report will follow within 14 days.

Respectfully submitted,

Heinrichs GEOEXploration Co.

Approved by:

Walter Heinrichs, Jr.
President

Paul A. Head
Senior Geophysicist

PAH:mt

Enclosures:

Preliminary Sectional Data Sheet Line 1
Two Preliminary Depth Probe Plots
Plan Map
Magnetic Profiles

conoco

Minerals Department

Continental Oil Company
1706 West Grant Road
Tucson, Arizona 85705
(602) 623-3627

April 8, 1974

Mr. Walter Heinrich
Heinrich's Geoexploration
Company
Post Office Box 5964
Tucson, Arizona 85703

HEINRICHS GEOEX
Cable: GEOEX
REC'D APR 10 1974 REC'D
BOX 5964 TUCSON, ARIZONA 85703
Phone: (AREA 602) 623-0578

Dear Walt:

Palant Map

Enclosed for your information is subject map of the Palant Claims.

Yours truly,

Wes Pokluda ss
Wes Pokluda
Senior Landman
Tucson District

bw
Enc 1

Ans: 4/11/74 Machine copy:
Dear Wes: Many thanks. This may help.
However, I understand he may control (?)
some deeded surface. Is this correct
and if so which parcel or parcels, or do
you know or able to say?
W.

R.11E.

R.12E.

T.14S.

16

SIGNO VINCES
BANKERS BONANZA
CLAIMS 1-16
6/13/73 - 7/9/73

15

14

13

18

17

RANCHO RIATA
TRUSTEES
CLAIMS
7/9/73
7/9/73

16

21

22

23

SIGNO VINCES
LUCKOUT
CLAIMS
6/26/73
7/9/73

24

19

20

21

27

26

25

30

29

28

RANCHO RIATA
BANKERS BONANZA
CLAIMS 17-88
6/14/73 - 7/12/73

36

31

SIGNO VINCES
I.N.R.I. CLAIMS
6/9/73 - 7/3/73

32

33

RANCHO RIATA CORD CLAIMS
(No. 1-36) 7/9/73 - 7/9/73, ALSO
COVER SECTION 32

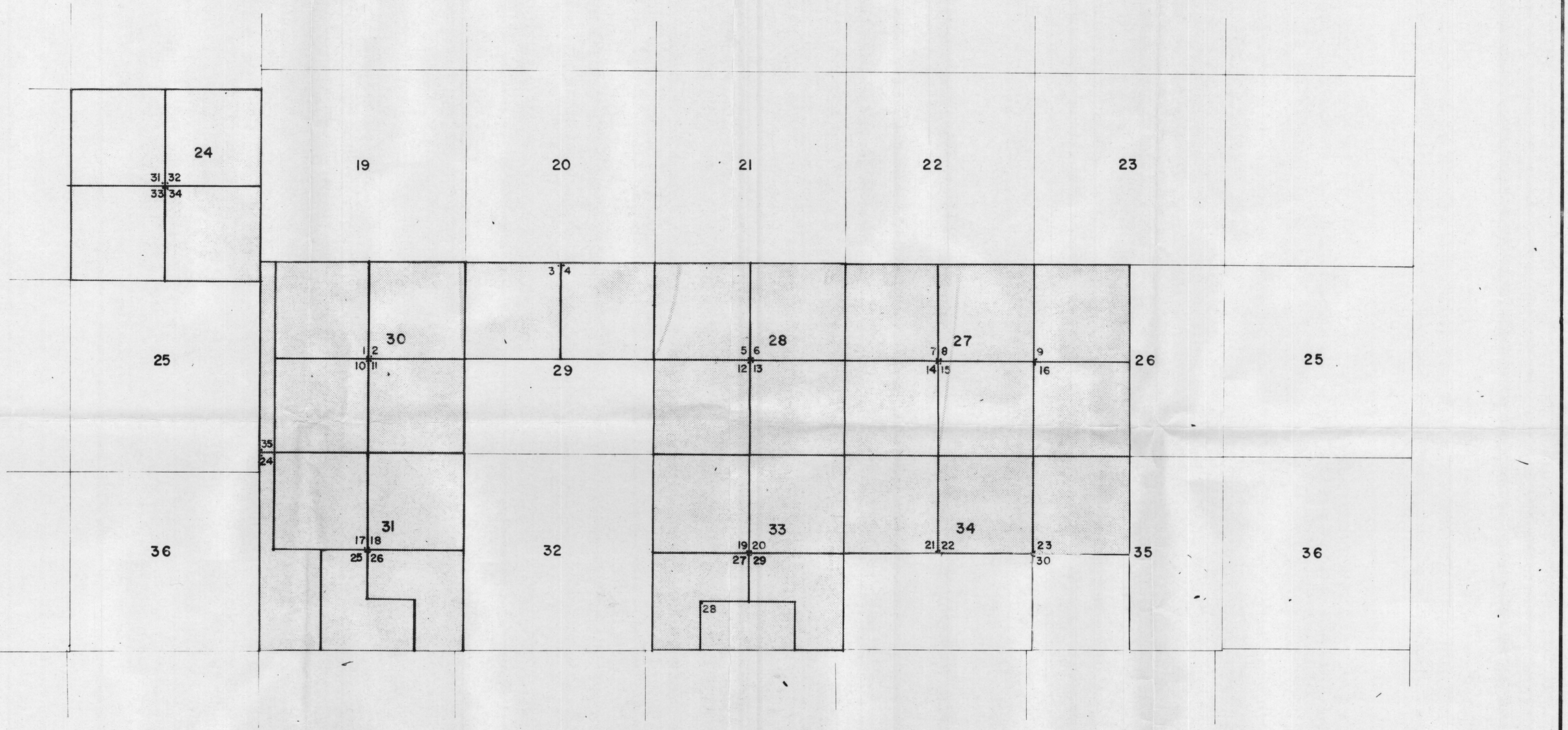
RANCHO RIATA
CORD MINES CLAIMS
7/9/73 - 7/9/73

AREA AND TYPE OF MAP
SEDIMENTARY HILLS AREA
PALANT, RANCHO RIATA CLAIMS

STATE	COUNTY	SCALE	CONTOUR INTERVAL
ARIZONA	PIMA	1"=1000	

CONTINENTAL OIL COMPANY
MINERAL EXPLORATION DEPARTMENT
METALLICS DIVISION
TUCSON, ARIZONA

GEOLOGY BY	DATE	SIZE	FILE NO
		18x24	C-266-25
DRAWN BY TIMOTHY J. ALLEN	DATE 3/4/73	PROJ FILE NO.	

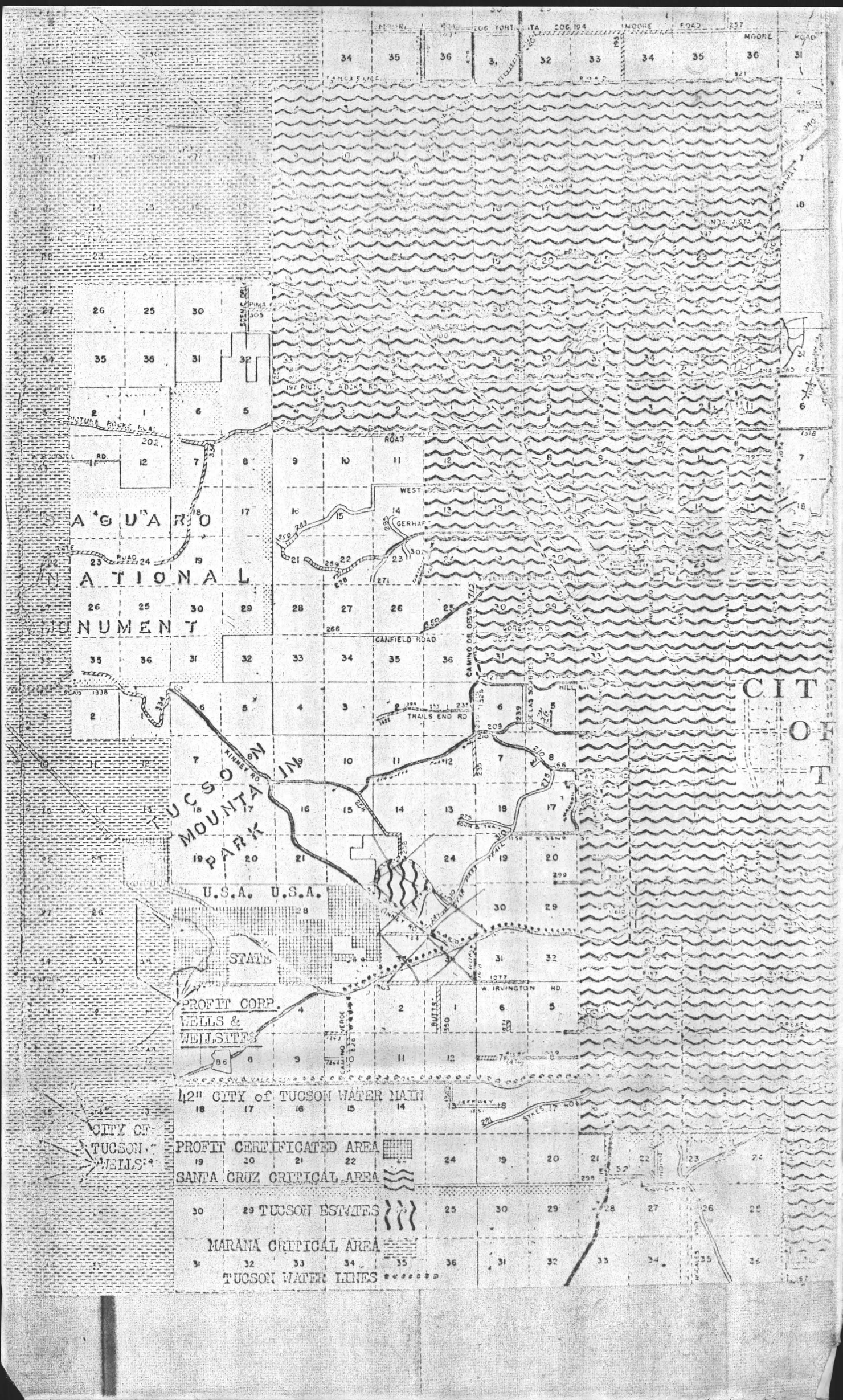


SEDIMENTARY HILLS
SIGNO VINCES PLACER CLAIMS

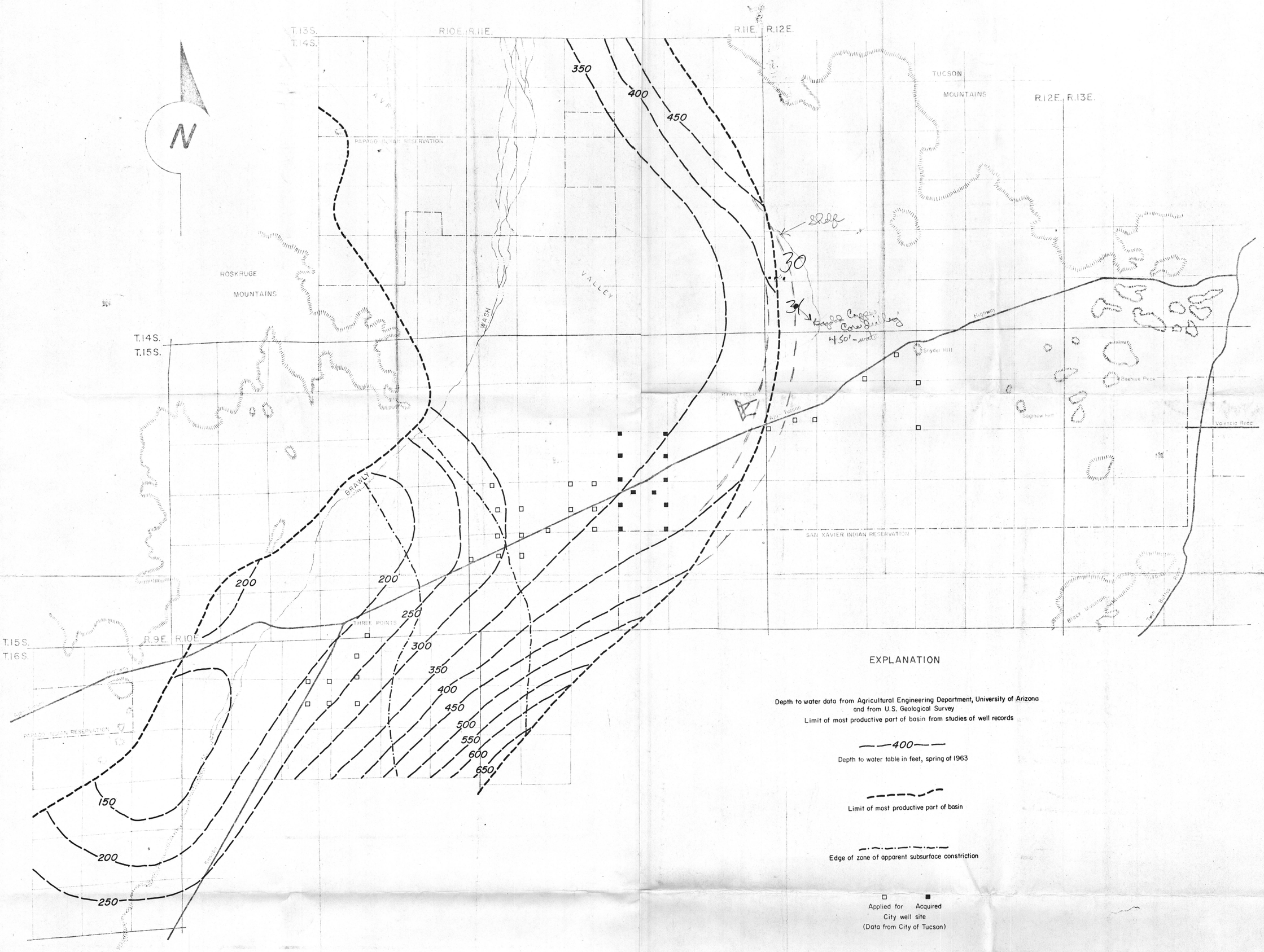
ARIZONA	PIMA	1"=2000

CONTINENTAL OIL COMPANY
MINERAL EXPLORATION DEPARTMENT
METALLICS DIVISION
TUCSON, ARIZONA

DRAWN BY T. J. A	18 X 24	C-266-22B



SAGUARO
NATIONAL
MONUMENT
TUCSON MOUNTAIN PARK
U.S.A. U.S.A.
STATE
PROFIT CORP. WELLS & WELLSITES
42" CITY of TUCSON WATER MAIN
CITY OF TUCSON WELLS
PROFIT CERTIFICATED AREA
SANTA CRUZ CRITICAL AREA
TUCSON ESTATES
MARANA CRITICAL AREA
TUCSON WATER LINES
CITY OF T
PICTURE ROCKS ROAD
CANFIELD ROAD
TRAILS END RD
KINNEY RD.
W. IRVINGTON RD
CAMINO DE OESTE
MOORE ROAD



EXPLANATION

Depth to water data from Agricultural Engineering Department, University of Arizona and from U.S. Geological Survey

Limit of most productive part of basin from studies of well records

—400— Depth to water table in feet, spring of 1963

Limit of most productive part of basin

Edge of zone of apparent subsurface constriction

□ Applied for ■ Acquired
City well site
(Data from City of Tucson)

MAP OF PART OF AVRA VALLEY SHOWING LIMIT OF MOST PRODUCTIVE PART OF BASIN AND DEPTH TO WATER TABLE IN SPRING OF 1963

SCALE 1 1/2 0 1 2 3 4 MILES

Base from U.S. Geological Survey 15' Quadrangles

Water Development Corporation

R9E | R10E | R11E | R12E | R13E | R14E | R15E | R16E | R17E

T11S | T12S | T13S | T14S | T15S | T16S | T17S

PINAL COUNTY LINE

PAPAGO INDIAN RESERVATION

RECREATIONAL AREA

SAN XAVIER INDIAN RESERVATION

CITY OF TUCSON

CORONADO NATIONAL FOREST BOUNDARY

DAVIS-MONTHAN AIRPORT

TUCSON MUNICIPAL AIRPORT

MILITARY RESERVATION

U S A F BOMBING RANGE

SAGUARO NATIONAL MONUMENT

LEGEND

FEDERAL LAND

STATE LAND

LEGAL RIGHTS OF WAY

TUCSON DISTRICT

SCALE ½ INCH = 1 MILE

WALTER A. BURG COUNTY ENGINEER

JANUARY 1933 DRAWN BY R.M.C.

REVISED MAY 1942 BY F.R. COLE

REVISED JANUARY 1959 BY R.F. SUTER

HEINRICHS GEOEXPLORATION COMPANY

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

May 16, 1968

Mr. Richard Waer
2507 Arroyo Chico
Mr. Gilbert Waer
1520 W. Niagara
Tucson, Arizona

Re: Tucson Mountains Project
Pima County, Arizona

Gentlemen:

This letter will serve as a report on the present status of your unpatented mining claims in the Tucson Mountains.

As you know, Mr. Kayser, a Houston, Texas industrialist, has been assigned the exploration option and is currently paying a total sum of $416.67 each month for this option, divided into two equal payments sent each month to each of you.

Because of land ownership complications in one of the major zones of interest, it was decided by Mr. Kayser to approach Anaconda Company who currently hold a state mining lease in the disputed area. It would have been possible to bring suit against Anaconda and the State of Arizona to try and remove them from the land, but this was decided as a poor and a possible lengthy and expensive approach. Therefore, Mr. Kayser has sought to gain Anaconda as a partner and negotiations are currently underway with some encouragement in this direction. I would expect that it may take as long as two or three more months before anything is concluded, and actual exploration operations again get underway.

Very truly yours,

HEINRICHS GEOEXPLORATION COMPANY

E. Grover Heinrichs
Vice President

EGH:jc

HEINRICHS GEOEXPLORATION COMPANY

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

September 7, 1966

SEMIANNUAL REPORT OF WORK ACCOMPLISHED

In accordance with the terms of paragraph VII and VIII of that certain MINERAL LEASE AND OPTION AGREEMENT dated April 8, 1966, by and between GILBERT WAER and GEORGINA F. WAER, husband and wife, of Tucson, Arizona, and RICHARD WAER, SR. and ARMIDA H. WAER, husband and wife, of Tucson, Arizona and HEINRICHS GEOEXPLORATION COMPANY, the following semiannual report of work accomplished on "property" (as defined paragraph II of Agreement) is hereby submitted.

Geology

Twenty-nine days detailed geologic mapping and consultation.

Geophysics

Induced Polarization (dipole-dipole array)
Four lines consisting of 5 spreads giving in excess of 14,000 feet of subsurface coverage on variable dipole spacing.

Magnetics (Vertical intensity hand survey)
Approximately 650 stations gridding an area roughly 12,500' x 6,000'.

The total cost of work done is in excess of five thousand dollars ($5,000.00), and meets the requirements of the Agreement as defined in Article VIII of the above described Agreement.

Very truly yours,
HEINRICHS GEOEXPLORATION COMPANY

E. Grover Heinrichs
Vice President

EGH:jc

March 2, 1967

SEMIANNUAL REPORT OF WORK ACCOMPLISHED

In accordance with the terms of Paragraph VII and VIII of that certain MINERAL LEASE AND OPTION AGREEMENT dated April 8, 1966, by and between GILBERT WAER AND GEORGINA F. WAER, husband and wife, of Tucson, Arizona and RICHARD WAER, SR. AND ARMIDA H. WAER, husband and wife, of Tucson, Arizona and HEINRICHS GEOEXPLORATION COMPANY, the following semiannual report of work accomplished on "property" (as defined in Paragraph II of AGREEMENT) is hereby submitted.

GEOLOGY

Twenty-nine days detailed geologic mapping and consultation.

GEOPHYSICS

Magnetics (Vertical intensity hand survey)

Approximately 650 stations gridding an area roughly 12,500' x 6,000'.

Induced Polarization (dipole-dipole array)

Nine lines consisting of 11 spreads giving in excess of 32,000' of subsurface coverage on a variable dipole spacing. This is an increase of five lines, six spreads, and 18,000' of subsurface coverage since the semiannual report submitted September 7, 1966.

The total cost of work done is in excess of Ten Thousand dollars ($10,000.00) and meets the requirements of the agreement as defined in Article VIII of the above described AGREEMENT.

Magnetics indicated some interesting areas to check with an induced polarization (I.P.) survey. The I.P. was quite negative until recently, and we now have some encouragement.

We are currently trying to interest a third party in the property subject to your approval per the terms of the agreement. We may possibly even get some drilling in 1967 on the property.

We will keep you informed.

Very truly yours,

HEINRICHS GEOEXPLORATION COMPANY

E. Grover Heinrichs
Vice President

EGH:jc
Enclosure: Sketch map of progress
Scale: 1"=500'
cc: Gilbert and Georgina F. Waer
Via certified mail 782802

HEINRICHS GEOEXPLORATION COMPANY

806 WEST GRANT ROAD. TUCSON. ARIZONA 85703. P.O. BOX 5964. PHONE: (602) 623-0578

January 13, 1971

Mr. Paul Kayser
1006 Main St.
Houston, Texas 77002

Re: Letter report on drilling program in Tucson Mtns, Pima County, Arizona
GEOEX Job #186-67 (Kayser-Waer)
D.D.H. # 1

Dear Mr. Kayser:

The drill site was selected to 1: test an induced polarization (I.P.) geophysical anomaly detected by GEOEX on your behalf in 1967 and 2: so as to be positioned within the boundaries of claims under your control.

The drill hole was placed on I.P. line #7 @ 500 N on the Buena Vista claim approximately 110 feet west of the east end center. The split core remaining half not used for assaying is at present stored at GEOEX.

The drill hole collared in a highly silicified and metamorphosed rock that was originally probably a freshwater muddy limestone (or limey mudstone) and is now a hornfels. Approximately 1500 feet north of this hole the monzonite intrusion outcrops and forms Wasson Peak. The I.P. anomaly is in juxtaposition to the intrusive and the known sulfide mineralization in the immediate area makes the site selection a good one.

Drill core logs prepared by us, together with the assays of the split half of the core handled by us and your Mr. Bob Franks that have been given to us, are included with this letter. The core is mostly siliceous limestones or hornfels with occasional thin stringers of igneous rocks and some garnet. The chemical reactions have altered the igneous rock such that much of it is more basic than the parent monzonite intrusive. In

Cont'd....

much of the rock garnet has been developed and the garnet content and frequency is apparently increasing with depth. Throughout the entire depth of the hole pyrite is in excess of the quantity to sufficiently account for the I.P. anomaly. Some chalcopyrite is present throughout the length of the core. This correlates with the low grade copper seen in the assay values.

The amount of pyrite present is indicative of strong mineralization and in this geologic environment the possibility of an economic concentration is quite good. The Mile Wide and Gould Mines are indicative of greater copper concentrations in this immediate area than that seen in the present drill hole but, to date, not enough work has been done to explain or understand a possible cause for the local concentration. The I.P. has defined some areas of anomalism that, in the light of the present drill hole information, will assuredly be mineralized, but it could take 10 or 15 more drill holes and maybe even deepening the existing hole, just to test this anomalism. Before any additional drilling is done, some more field geology and a geochemical sampling program is recommended first. The next drill hole should be placed in the best copper geochemical anomaly. This approach is much less expensive than random drilling and would help to make the best decision as to further drilling, and possible economic discovery.

Sincerely yours,

HEINRICHS GEOEXPLORATION COMPANY

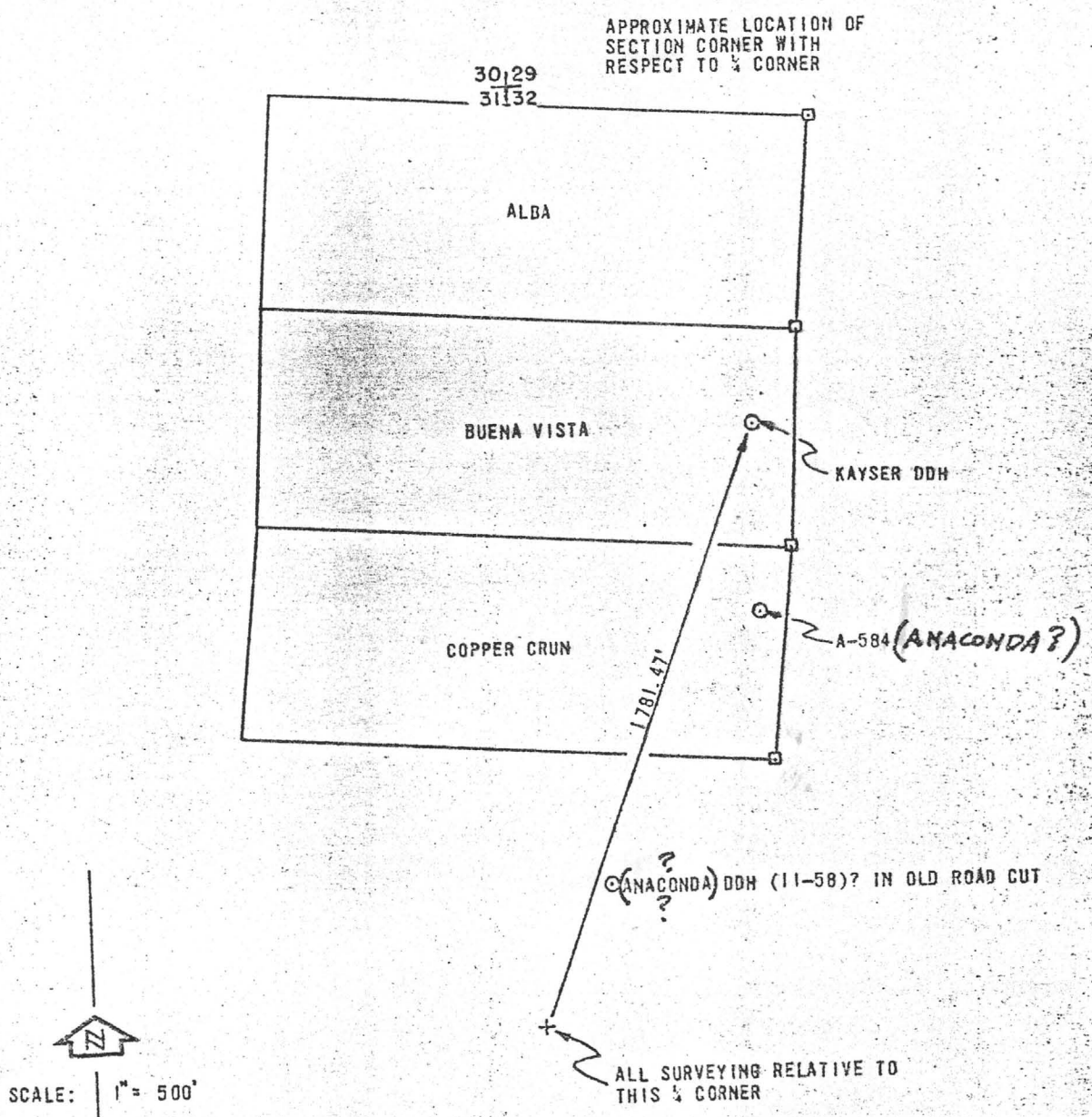
Donald B Cooley

Donald B. Cooley
Senior Geologist

Encl: Survey Plan Kayser Prop. & D.H. 25 Nov. 1970 - 1"=500'.
D.H. #1 - Log - 5 pages.
Ownership Status map 1"=1000'
I.P., Mag location & Interp. 1"=500'

DBC/re:

SURVEY PLAN OF KAYSER TUCSON MOUNTAIN PROPERTY
NOVEMBER 25, 1970



HEINRICHS
GEOEXPLORATION COMPANY
GEOPHYSICAL ENGINEERS

AUSTRALIA
(SYDNEY)
39 Hume Street
Crows Nest, NSW
Phone: 439-1793

U.S.A.
Post Office Box 5964
Tucson, Arizona 85703
Phone: (602) 623-0578
Cable: GEOEX, Tucson

HEINRICHS GEOEX
GEOPHYSICAL ENGINEERS

HEINRICHS GEOEXPLORATION COMPANY

POST OFFICE BOX 5964 TUCSON, ARIZONA 85703
PHONE [redacted]02/623-0578 CABLE: GEOEX, TUCSON

DIRECTION
INCLINATION Vertical (2° SW @ Bottom)
STARTED
COMPLETED 9 January 1971
DEPTH 0-225'
NOTES BY S.G.C.

HOLE NO. Tucson Mountains #1
PROPERTY K - W
LOCATION
COLLAR COORD: N E
COLLAR ELEVATION

SCALE: 1" = 25'
DATE 12/8/70

SHEET 1 OF 5

LITHOLOGY	MINERAL	ROCK TYPE - GEOLOGY	SURV.	% CORE RECV'D	CORE ASSAYS SECT.	Au	Ag	Cu	Mo
		0							
		First core (16')		0		0.005	0.10	0.03	
		17' to 52' Monzonite - Quartz Monzonite.							
		Moderate - intense limonite on fracture		85			0.10	0.02	
		25 surfaces; colors brown, dark brown, dark		90		0.005	0.10	0.06	
		reddish brown. Moderate-strong kaolinization. Slight amount disseminated pyrite.		40		0.005	0.10	0.07	
		50		75			0.05	0.05	
		Hornfelsic rock. Dense slightly calcareous Light gray - light gray - Dark gray. Intermittent moderate silicification. Calcareous fracture filling.		95		0.005	0.15	0.03	
		57' - 74' Pyrite platy on cleavage surfaces and in veinlets 1/8" thick. 20% pyrite in 2' zone.		98		0.005	0.20	0.25	
		75		98			0.10	0.09	
		86' Pyrite in massive verticle veinlets & Platy along cleavage surfaces.		100			0.10	0.11	
		90' moderate silicification							
		94' Trace chalcopyrite		100			0.05	0.05	
		100							
		102' moderate silicification		100		0.005	0.10	0.13	
		115' Pyrite becoming more disseminated		95			0.10	0.11	
		125		98		0.005	0.15	0.17	
		135' Platy and disseminated pyrite slight silicification		100		0.005	0.05	0.08	
		150		100		0.005	0.15	0.21	
		151' to 170' - Intense fracture filling		100			0.05	0.11	
				100			0.05	0.01	
		175		90			0.10	0.05	
				95		0.005	0.10	0.06	
				98			0.05	0.04	
		200. 200' to 205' intense pyrite dissemination. 5' zone. Some marbleization?		100			0.10	0.05	
		209' Intense fracture filling; marbleization		100			0.10	0.03	
		220' Platy and Veinlet Pyrite.		100		0.005	0.15	0.04	

HEINRICHS GEOEXPLORATION COMPANY
POST[illegible]FICE BOX 5964 TUCSON, ARIZONA 85[illegible]
PHON[illegible]02/623-0578 CABLE: GEOEX, TUC[illegible]

HEINRICHS GEOEX GEOPHYSICAL ENGINEERS

DIRECTION _____ HOLE NO. Tucson Mountains #1
INCLINATION Vertical PROPERTY K - W
STARTED _____ LOCATION Tucson Mountains
COMPLETED _____ COLLAR COORD: N _____ E _____
SCALE: 1" = 25' DEPTH 225' - 450' COLLAR ELEVATION _____
DATE 12/8/70 NOTES BY S.G.C. SHEET 2 OF 5

LITH-OLOGY	MIN-ERAL	ROCK TYPE - GEOLOGY	SURV.	% CORE RECV'D	CORE ASSAYS SECT.	Au	Ag	Cu	Mo
		225 Lightgray Hornfels light green gray to Dark gray. Intermittent calcareous fracture filling		95%					
		233' Zone(1')of massive platy pyrite. Trace chalcopyrite·240'-245' intense fracture filling.		98%					
		250 250' to 265' Massive platy & disseminated pyrite. Epidote. Some fracture filling (calcareous) and silicification.							
		275 281' Moderate fracture filling. Platy pyrite. some veinlets pyrite. Epidote.		100%					
		300							
		325 330' -2' zone strong silicification		95%					
				100%					
		350 353' - 260' Vuggy calcite & intense calcareous fracture filling. Slight silicification. 265' slight garnet (brown)		94%					
		375 386' Pink feldspar		100%					
		400 412' to 420' strong fracture filling							
		425 435' slight silicification. Moderate fracture filling							

HEINRICHS GEOEX
GEOPHYSICAL ENGINEERS

HEINRICHS GEOEXPLORATION COMPANY

POST OFFICE BOX 5964 TUCSON, ARIZONA 85703
PHONE: 602/623-0578 CABLE: GEOEX, TUCSON

DIRECTION _____ HOLE NO. Tucson Mountains #1
INCLINATION Vertical PROPERTY K-W
STARTED _____ LOCATION Tucson Mountains
COMPLETED _____ COLLAR COORD: N _____ E _____
SCALE: 1" = 25' DEPTH 450' - 675' COLLAR ELEVATION _____
DATE 12/10/70 NOTES BY S.G.C. SHEET 3 OF 5

LITHOLOGY	MINERAL	ROCK TYPE - GEOLOGY	SURV.	% CORE RECV'D	CORE ASSAYS SECT.	Au	Ag	Cu	Mo
		450 Hornfels-light gray -light greenish gray. Intermittent silicification. Calcareous & other. Fracture filling. Epidote & pyrite common. & associated, 455'-465' Strong calcite fracture filling. Manganese filling?(457')Pyrite platy inveinlets.(458'-460' highly fractured)		100 %		0.005	0.15	0.11	
						"	0.15	0.11	
						0.005	0.05	0.04	
		475 480'-490' Pyrite platy & strongly associated. Calcite veinlets & fracture filling. Platy pyrite becoming associated with black platy manganese?mineral.				"	0.10	0.03	
						"	0.10	0.05	
		500 3' siliceous zone				"	0.05	0.03	"
						"	0.05	0.03	0.003
		525				0.003	0.15	0.05	
						0.005	0.20	0.07	
				98 %		"	0.10	0.04	
		550 Rock type change. Hornfels intermittent with igneous rock. Diorite to porphyritic diorite. Dark gray - dark brownish gray. Plagioclase phenocrysts quartz <10%. Ferromag matrix, pyrite occurring in				"	0.10	0.03	
						"	0.15	0.02	
		575 veinlets, disseminated and platy. Epidote and black manganese?Mineral associated with pyrite. Trace chalcopyrite(550'- 575')				0.005	0.20	0.06	
						"	0.20	0.06	
						"	0.10	0.05	
		600 Pyrite content 20%				"	0.05	0.06	
						"	0.10	0.06	
		619' 4' siliceous zone.				0.005	0.10	0.07	
		625 Rock type mainly hornfels with intermittent siliceous and granitic zone 629' slight garnet							
								0.07	0.005
				100 %				0.07	"
		650						0.05	0.002
								0.03	0.002
		675 Rubio						0.03	"

HEINRICHS GEOEX
GEOPHYSICAL ENGINEERS

HEINRICHS GEOEXPLORATION COMPANY

POST OFFICE BOX 5964 TUCSON, ARIZONA 85703
PHON[redacted]02/623-0578 CABLE: GEOEX, TUC[redacted]

DIRECTION _____ HOLE NO. Tucson Mountains #1
INCLINATION Vertical PROPERTY K - W
STARTED _____ LOCATION Tucson Mountains
COMPLETED _____ COLLAR COORD: N _____ E _____
SCALE: 1" = 25' DEPTH 675' - 900' COLLAR ELEVATION _____
DATE 12/28/70 NOTES BY S.G.C. SHEET 4 OF 5

LITHOLOGY	MINERAL	ROCK TYPE - GEOLOGY	SURV.	% CORE RECV'D	CORE ASSAYS SECT.
		675' Hornfels with intermittent silicification. Dark greenish gray to greenish black. Epidote and pyrite common. Ta chalcopyrite 680'-682' - silicified light colored.			
		700 Intermittent granitic-like rock. Epidote, pyrite & chalcopyrite in varying amounts.			
		725 Alteration and fracture filling present. Rock type seems to be mixture of limey and intrusive factions. 737' Strong monzonite.			
		750 753' moderate chlorite 765' - 787' Rock predominantly granitic-			
		775 787' lime rock. Resemblance great to hornfelsic rock encountered near top of hole. Essentially devoid of mineralization with exception of some granitic intru-		100%	
		800 sions, which are usually mineralized (pyrite, chalcopyrite, epidote) 823' - 827' strong epidote			
		825			
		847' - 851' Dark green heavily garnet- ized zone. Strong pyrite, moderate chal- copyrite and epidote.			
		850 Limey hornfels - 1-2% pyrite -thin seams minor dissemination			
		875 875' to 880'-increase in garnet -small nodules 884' - 887.5' -Zeolite minerals on fracture faces 888' to 899'-increase in garnet to 30%			

HEINRICHS GEOEX
GEOPHYSICAL ENGINEERS

HEINRICHS GEOEXPLORATION COMPANY

POST OFFICE BOX 5964 TUCSON, ARIZONA 85[illegible]
PHONE 602/623-0578 CABLE: GEOEX, TUC[illegible]

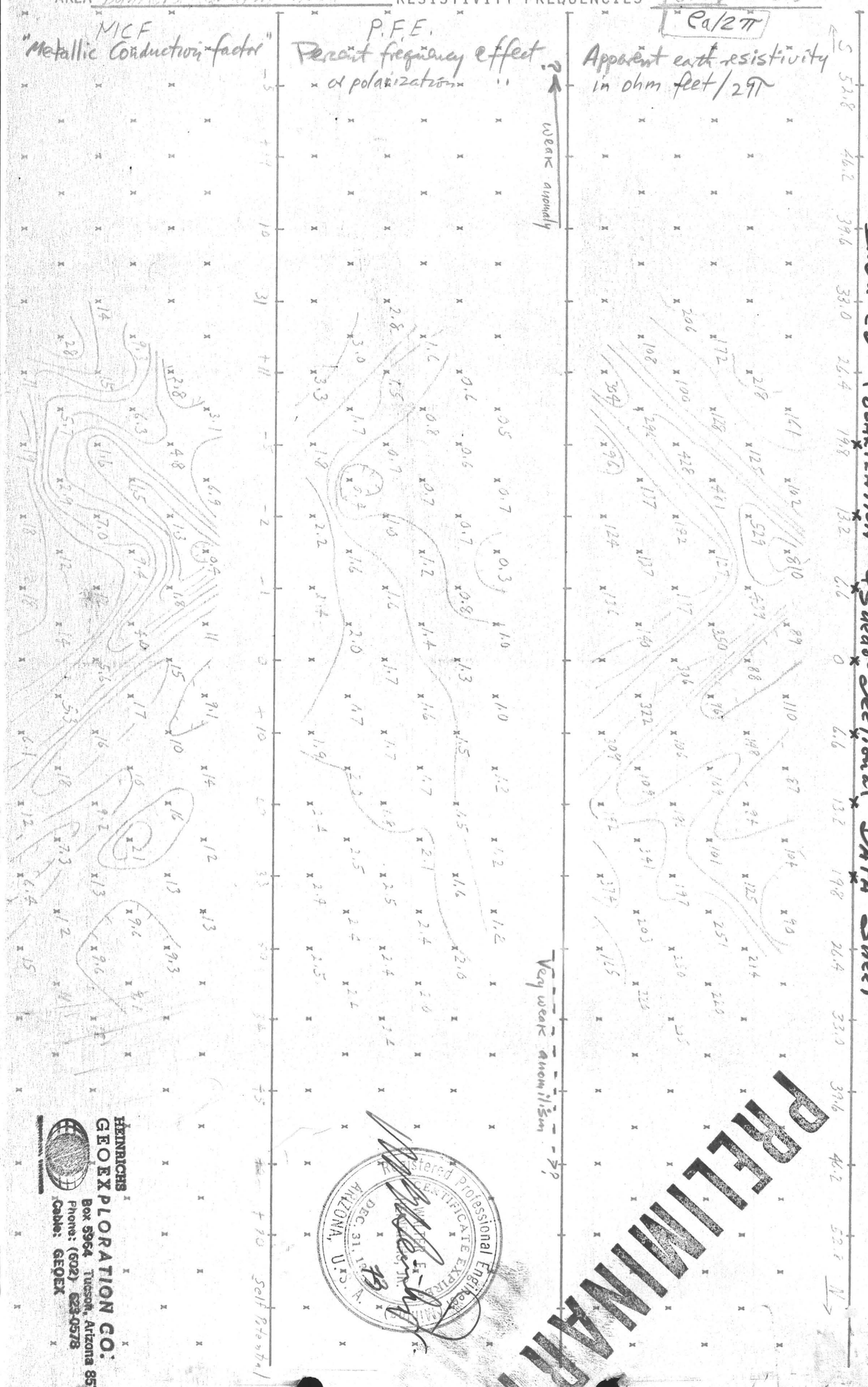
DIRECTION _____ HOLE NO. Tucson Mountains #1
INCLINATION Vertical PROPERTY K - W
STARTED _____ LOCATION Tucson Mountains
COMPLETED _____ COLLAR COORD: N _____ E _____
SCALE: 1" = 25' DEPTH 675' - 900' COLLAR ELEVATION _____
DATE 12/28/70 NOTES BY S.G.C. SHEET 5 OF 5

LITHOLOGY	MINERAL	ROCK TYPE - GEOLOGY	SURV.	% CORE RECV'D	CORE ASSAYS SECT.	Cu	Mo	Au	Ag
		900 899' to 913.5 - very dense siliceous hornfels - minor garnet with pyrite in-seams. 913.5 to 914 - calcite cemented breccia, rock broken with gouge to 925'.				0.02	T		
		925' No obvious mineralization. - 925' rock hard siliceous hornfels minor pyrite and garnet. 937' to 939' 50% garnet 941' to 941' rock very broken 947' contact basic igneous rock				0.02	T		
		950 increase in pyrite.				0.04	T		
						0.03	T		
						0.04	T		
						0.03	0.002		
				100%		0.04	0.002		
						0.03	0.006		
		975 973.5' rock very broken 985' - contacts igneous rock and hornfels - black very dense - contact not obvious 996.5' to bottom - diorite to quartz diorite contact 3% disseminate pyrite - minor chalcopyrite				0.04	T		
						0.03	0.003		
		1000 1001' bottom of hole.				0.04	0.002		

JOB# 720 LINE# 1 SP 1 a = 660 BEARING N-S

CLIENT Lyle Palant DATE June 1973 FREQUENCIES & Hz

AREA Bankers Claim Area RESISTIVITY FREQUENCIES 3.0 0.3



PRELIMINARY

HEINRICHS
GEOEXPLORATION CO.
Box 5964 Tucson, Arizona 85703
Phone: (602) 623-0578
Cable: GEOEX

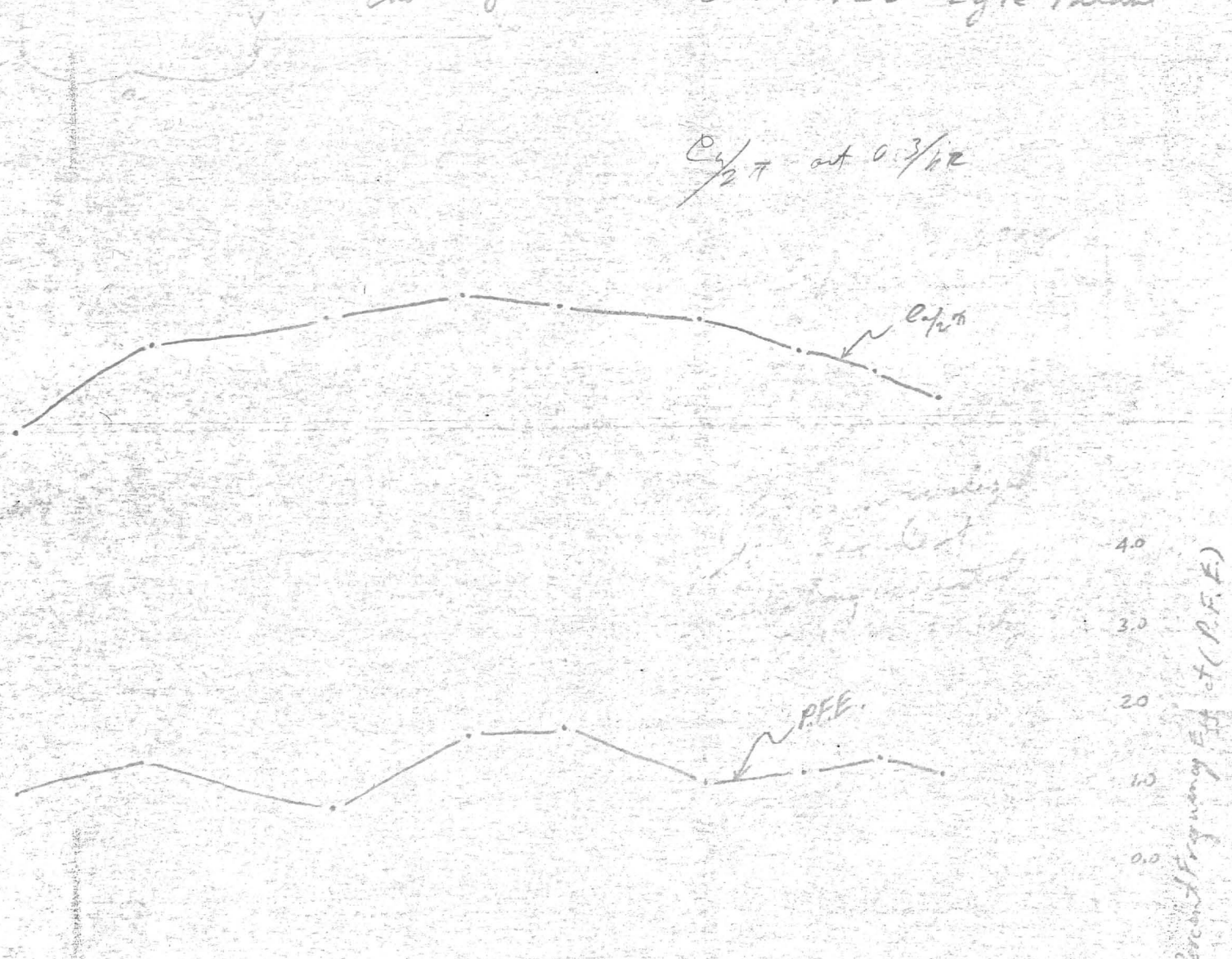
Registered Professional Engineer
CERTIFICATE EXPIRES
DEC. 31, 19
ARIZONA, U.S.A.

E½ Section 16 - Bankers Bonanza

Job #720 Lyle Palant

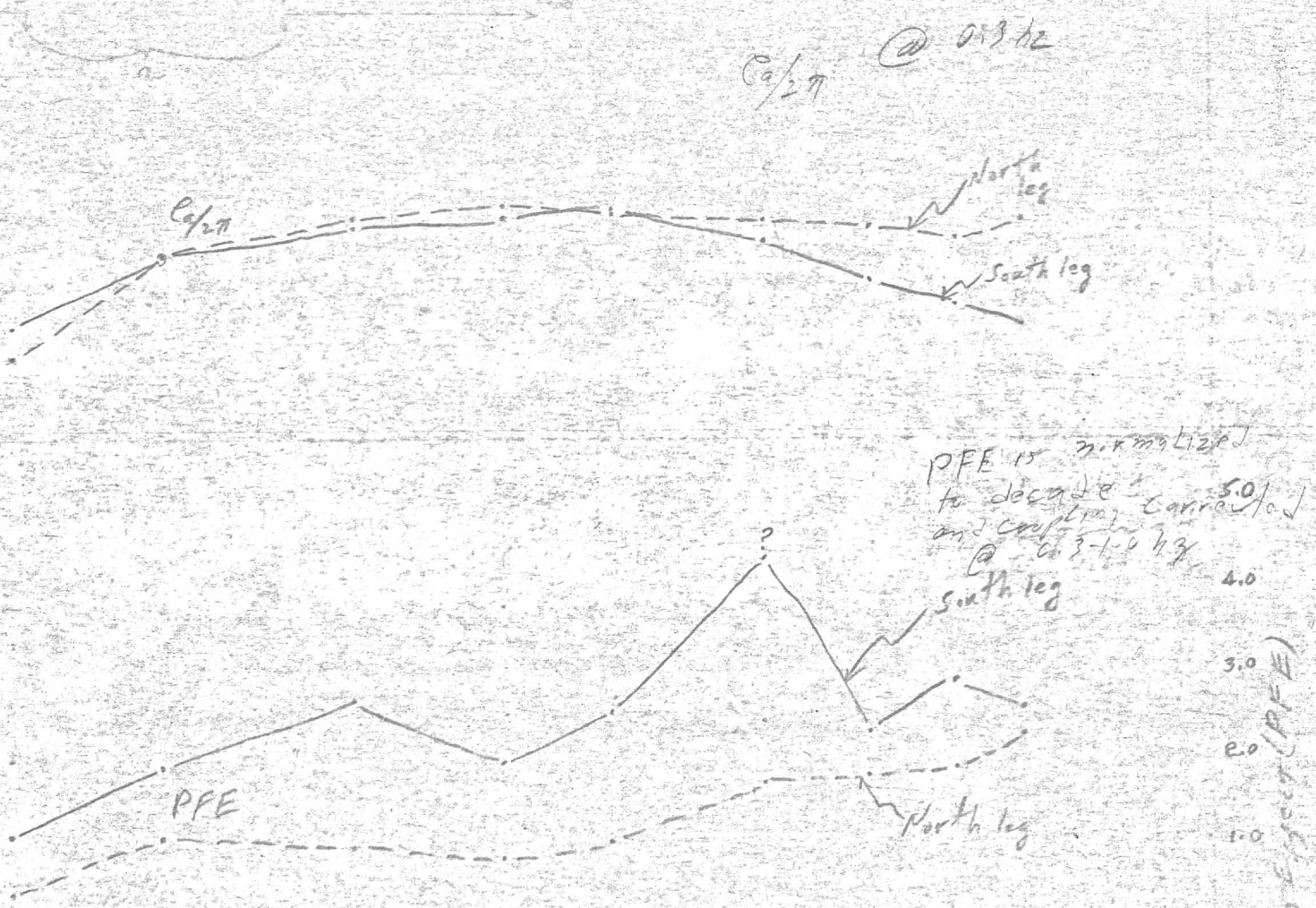
Pole - Pole Expansion #2

East leg



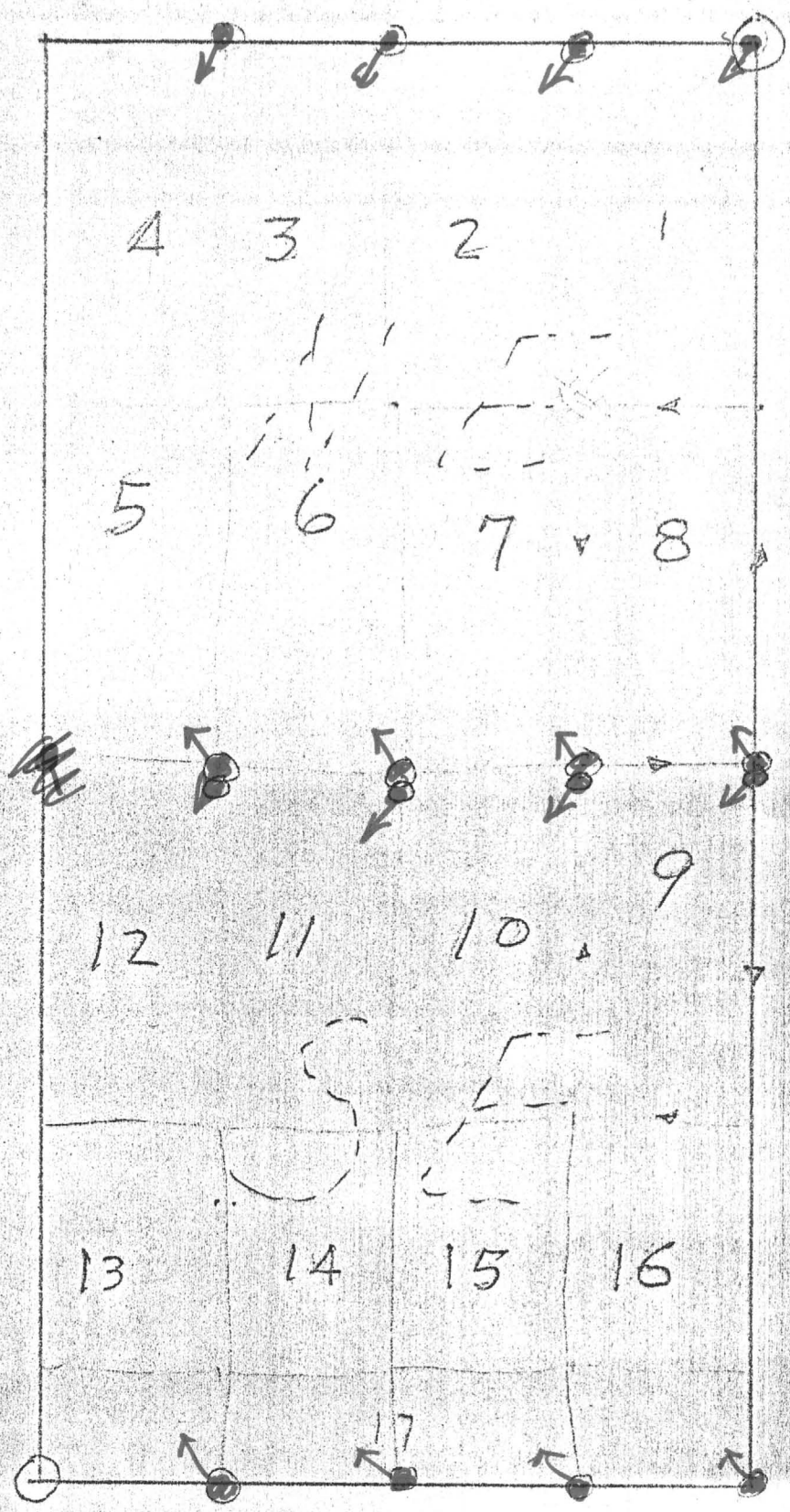
E½ Section 16 – Bankers Bonanza
Job #720 Lyle Pelant
July 1973

Pole-Pole Expan. #1



SEC. 16, T. 14 S. R. 12 E.

~~I.N.T.~~ BANKERS BONANZA

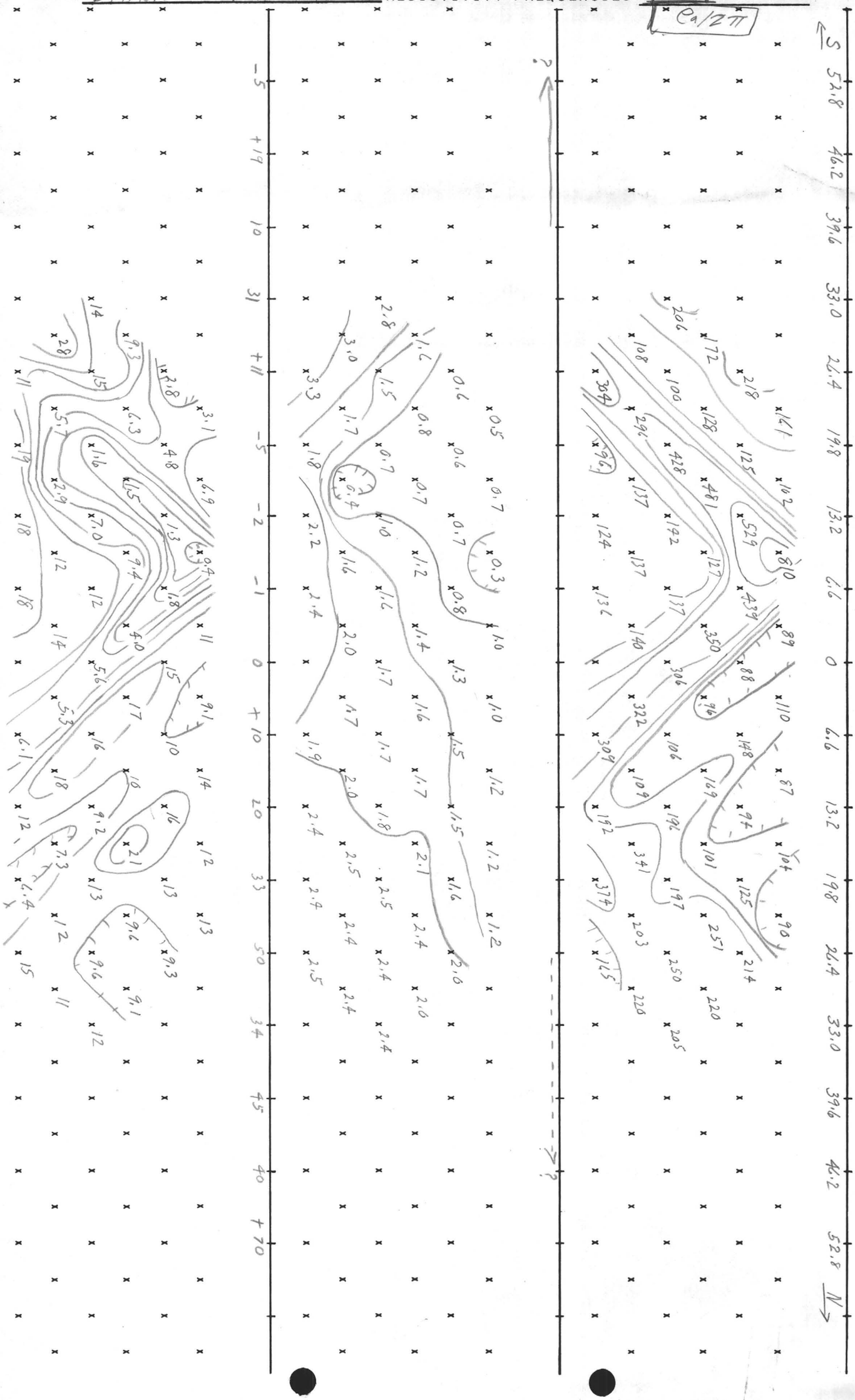


1320

JOB# 720 LINE# 1 SP 1 a = 660 BEARING N-S

CLIENT Lyle Palant DATE June 1973 FREQUENCIES 3.0 & 0.3 Hz

AREA Bankers Claim Area RESISTIVITY FREQUENCIES 3.0 ~~0.3~~ ρa/2π



I. P. RECEIVER NOTES, JOB No. 720, AREA Rankers

LINE Exp-1, HALF S, SR. _____, a = _____, BEARING N-S

SENDER STA. Center = ELECTRODE No. #2, DATE 6/29/73

PAGE 1

HEINRICHS GEOEX

SEND											CAL
RECEIVE	200 S	300 S	500 S	750 S	1000 S	1500 S	2000	2500	3000		Center
MULTIPLIER	10	10	10	10	10	10	1.0	1.0	1.0		
PFE	C										
CUR. (AMPS)	2.0	2.0		2.	2.	2.	1.5	1.5	1.5		
POINT NO.											
SEP. (n)			718	469	321	248	152	82.5	57.8	45.5	
H. F. MV 0.3	88 x 5.										
DRIFT	+0.2		0	+0.2	0.0	? Left out	+0.4	-0.2	0.0	-0.2	
1.0 PFE K_n/1000	-0.7		-0.2	0.6	-1.0	-1.2	-1.5	-2.4	-3.4	-4.4	
0.3 PFE P_{CAL}											
0.1 PFE PFE_C	+0.6		+0.8	1.3	0.9	1.2	2.4	0.0 → 3.6	2.2 → 4.8	-2.0 7.5	9.5
3.0 MV $P/2\pi$											
DRIFT MCF											
S. P.	-41.	+7.	-50.8	-51.8	-41	-90	-56	-28	-30		100 MV
NOISE											
POT RES.	3800	5000	1300	1900	1800	1200	1100	900	2500		
CULT & CMTS						120 SEC Damp	120 SEC damp	120	120		

I. P. RECEIVER NOTES, JOB NO. 720, AREA [redacted]

LINE EX 1, HALF S, SP. _____, a = _____, BEARING N-S

SENDER STA. _____ = ELECTRODE NO. _____, DATE July 2

PAGE 2

HEINRICHS GEOEX

SEND										
RECEIVE	3000 S	3000 S	2500 S	2000 S						
MULTIPLIER	1.0	1.0	1.0	10						
PFE										
CUR. (AMPS)	3.0	2.5	2.5	2.5						
POINT NO.										
SEP. (n)										
H. F. MV 0.3	91.7	76.7	96.8	128.0						
DRIFT		-0.2	+0.1	0.0						
1.0 PFE $K_n/1000$		-4.2	-3.4	-2.5						
0.3 PFE ρ_{CAL}		-4.3	-3.6	-2.7						
0.1 PFE PFE_c	1.8	1.6	1.8	1.3						
3.0 MV $\rho/2\pi$										
DRIFT MCF										
S. P.		-36	-38	+66.1						
NOISE		NA	NA	NA						
POT RES.	1500	1500	2100							
CULT & CMTS		SOLID	SOLID	SOLID						

I.P. RECEIVER NOTES, JOB No. 720, AREA Parkers Claims

LINE Exc 1, HALF N, SR. _____, a = _____, BEARING _____

SENDER STA. _____ = ELECTRODE No. _____, DATE _____

SEND										CAL
RECEIVE	3000 N	2500	2000	1500	1000S	750	500	300	200	Center
MULTIPLIER	1.0	10.0	10.0	10.0	10.0	10.0	10.0	100	100.6	
PFE										
CUR. (AMPS)	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	
POINT NO.										
SEP. (n)										
H. F. MV0.3	101.8	116.0	148	201	307	417	597.5	898	1020.	99.8
DRIFT	0.0	0.0	+0.2	0.0	0.0	-0.1	+0.1	0.0		0.0
1.0 PFE K_n/1000	-2.4	-2.2	-1.7	-1.4	-1.3	-1.1	-0.9	-0.7		+0.2
0.3 PFE P_{CAL}	-2.6	-2.4	-2.0	-1.6	-1.5	-1.3	-1.1	-0.9		
0.1 PFE PFE_C	1.3	1.1	1.1	0.9	0.6	0.5	0.5	0.5	0.2	0.0
3.0 MV $P/2\pi$										
DRIFT MCF										
S. P.	+56	-58	-74.	-45	-30	-22	-21	-71		
NOISE										
POT RES.	5800	800	500	700	800	1000	2000	12000	1100	
CULT & CMTS									??	

I.P. RECEIVER NOTES, JOB NO. 720, AREA Bakken

LINE Exp 2, HALF E, SR. _____, a = _____, BEARING _____

SENDER STA. 3285N of #1 Center ELECTRODE NO. _____, DATE July 3

PAGE 1

HEINRICHS GEOEX

SEND										
RECEIVE	3000 E	2500	2000	1500	1000	750	500	300	200	CAL
MULTIPLIER	1.0	1.0	1.0	1.0	10.0	10.0	10.0	10.0	10.0	
PFE										
CUR. (AMPS)	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.0
POINT NO.										
SEP. (n)										
H. F. MV 0.3	35.75	46.95	61.9	90.6	143.	195.5	275.	422.5	492.	100.0
DRIFT	-0.2	0.0	-0.1	0.0	+0.2	+0.1	0.0	0.0	0.0	0.0
I.0 PFE K_n/1000	-2.6 -2.7	-2.2 -2.4	-2.0 -2.2	-1.5 -1.7	-1.1 -1.4	-0.8 -1.0	-1.1 -1.3	-0.8 -1.0	-0.7 -0.9	+0.2
0.3 PFE P_{CAL}	1.000									
0.1 PFE PFE_C	0.8 0.9	0.9	0.8	0.7	1.0 0.9	0.8	0.5	0.7	0.5	0.0
3.0 MV $P/2\pi$	72	78	83	91	95	98	92	85	66	
DRIFT MCF										
S. P.	-58.3	-70.8	-60.1	-76.2	-72.3	-72.3	-76.1	-85.7	-63.3	
NOISE										
POT RES.	4500	7300	11000	8000	6500	40,000	4500	65,000	25,000	
CULT & CMTS										

Job 720 Pole-Pole Calculations

$PFE_a = \left[PFE_c - \frac{PFE_{.3\Omega} - PFE_c}{5}\right] 2.096$

7/3/73

$\Omega/2\pi = a\frac{V}{I}\,Cal$

Expander #1

South Leg Cal factor = 1.002

a	V	I	$\Omega/2\pi$	$PFE_c \times 2.096$	PFE_a	PFE_c
200	885	2	89	1.0	0.9	0.5
300	718	2	108	1.7	1.7	0.8
500	469	2	117	2.5	2.5	1.2
750	321	2	121	1.9	1.8	0.9
1000	248	2	124	2.5	2.4	1.2
1500	152	2	114	4.2?	4.2?	2.0 ✓
2000	82.5	1.5	110	4.0?	—	1.9?
2500	57.8	1.5	97	7.3?	—	3.5?
3000	45.5	1.5	91	5.9?	—	2.8?
2000	128	2.5	103	2.7	2.2	1.3
2500	96.8	2.5	97	3.6	2.8	1.7
3000	76.7	2.5	92	3.6	2.5	1.7

	North Leg		$\Omega/2\pi$	$PFE_c \times 2.096$	PFE_a	PFE_c
200	1020	2.5	82	0.4	0.2	0.2
300	898		108	1.0	0.9	0.5
500	597.5		120	1.0	0.8	0.5
750	417		125	1.0	0.7	0.5
1000	307		123	1.3	0.9	0.6
1500	201		121	1.9	1.6	0.9
2000	148		119	2.1	1.7	1.0
2500	116		116	2.3	1.8	1.1
3000	101.8		122	2.7	2.2	1.3

↑ an adjustment has been made here for coupling

over

I. P. RECEIVER NOTES, JOB NO. 72, AREA OLd Tucson

LINE 1, HALF N, SR. 1, a = 660, BEARING N-S

SENDER STA. 0 = ELECTRODE NO. 4, DATE 6/21/73 6/22

PAGE 1

HEINRICHS GEOEX

SEND		2-3	1-2	3-4	2-3	1-2	4-5	3-4	2-3	1-2	5-6
RECEIVE		0-6.6N	—	6.6 →	13.2	[illegible]	13.2-19.8				19.8 →
MULTIPLIER		1.0	10.0	10.0	1.0	1.0	1.0	1.0	0.1	1.0	1.0
PFE		0.6	0.4	0.6	0.9	1.0	1.0	1.3	1.4	1.5	1.0
CUR. (AMPS)		2	2	2	2	2	2	2	2	2	2
POINT NO.											
SEP. (n)											
H. F. MV		85.7	10x6.0	10x6.	21.3	33.8	88.6	37.5	9.76	15.5	105.1
DRIFT		0.0	0	0	0	0	0	0	0	0	0
1.0 PFE	K_n/1000	1.98	7.92	1.98	7.92	19.8	1.98	7.92	19.8	39.6	1.98
0.3 PFE	P_{CAL}	1.0	0.8	1.0	1.3	1.4	1.2	1.5	1.6	1.7	1.2
0.1 PFE	PFE_c										
3.0 MV	$P/2\pi$	89	439	110	88	350	87	148	96	306	109
DRIFT	MCF	11	1.8	9.1	15	4.0	14	10	17	5.6	12
S. P.		+10.1		+9.6			+12.5				+17.2
NOISE											
POT RES.		1500		2000			4800				2400
CULT & CMTS											

I. P. RECEIVER NOTES, JOB NO. 720, AREA OLJ Tucson

LINE 1, HALF N, SP. 1, a = 660, BEARING

SENDER STA. _____ = ELECTRODE NO. _____, DATE 6/22/73

PAGE 2

HEINRICHS GEOEX

SEND		4-5	3-4	2-3	1-2	6-7	5-6	4-5	3-4	2-3	1-2
RECEIVE		—	26.4	—	—	26.4	→	33.0			
MULTIPLIER		1.0	1.0	0.1	.01	1.0	1.0	1.0	0.1	0.1	0.1
PFE		1.3	1.5	1.5	1.5	1.0	1.4	1.9	1.6	1.8	1.7
CUR. (AMPS)		2	2	2	2	1.0	2	2	2	2	2
POINT NO.											
SEP. (n)											
H. F. MV		23.9	17.1	5.36	9.33	45.2	31.8	10.2	9.95	3.15	5.6
DRIFT		0	0	0	0	0	0	0	0	0	0
1.0 PFE	$K_n/1000$	7.92	19.8	39.6	69.3	1.98	7.92	19.8	39.6	69.3	110.9
0.3 PFE	ρ_{CAL}	1.5	1.7	1.7	1.7	1.2	1.6	2.1	1.8	2.0	1.9
0.1 PFE	PFE_c										
3.0 MV	$\rho/2\pi$	94	169	106	322	90	125	101	196	109	309
DRIFT	MCF	16	10	16	5.3	13	13	21	9.2	18	6.1
S. P.			1			-15.4					
NOISE											
POT RES.		LS and	SS	near 19.8		3000	LS +	SS →			
CULT & CMTS		O.C.									

I. P. RECEIVER NOTES, JOB NO. 720, AREA Old Tucson

LINE 1, HALF 5, SP. 1, a = 660, BEARING N-S

SENDER STA. _____ = ELECTRODE NO. _____, DATE 6/22/

HEINRICHS GEOEX

SEND	6-7	5-6	4-5	3-4	2-3	6-7	5-6	4-5	3-4	
RECEIVE	33.0 →	396				39.6 →		46.2		
MULTIPLIER	1.0	1.0	1.0	1.0	0.1	1.0	1.0	0.1	0.1	
PFE	1.8	2.2	2.3	2.2	2.2	1.8	2.2	2.2	2.2	
CUR. (AMPS)	1	2	2	2	2	1	2	2	2	
POINT NO.										
SEP. (n)										
H. F. MV	27.1	25.5	10.0	9.90	3.47	11.2	12.7	5.90	6.78	
DRIFT	0	0	0	-0.1	0	0	-0.1	0	0	
1.0 PFE K_n/1000	7.92	19.8	39.6	69.3	110.9	19.8	39.6	69.3	110.9	
0.3 PFE P_{CAL}	2.0	2.4	2.5	2.5	2.4	2.0	2.4	2.4	2.4	
0.1 PFE PFE_C										
3.0 MV $P/2\pi$	214	251	197	341	192	220	250	203	374	
DRIFT MCF	9.3	9.6	13	7.3	12	9.1	9.6	12	6.4	
S. P.	+10.8					~~+1.6~~	-5.2			
NOISE										
POT RES.	5400						3000			
CULT & CMTS		25	OC	14 wash						

I. P. RECEIVER NOTES, JOB NO. 720, AREA OLD Tucson

LINE 1, HALF N, SR. 1, α = _____, BEARING _____

SENDER STA. 0.0 = ELECTRODE NO. 4, DATE 6/22

HEINRICHS GEOEX

									6/22	6/21
SEND	8-7	5-6	4-5						6-7	C9L
RECEIVE	~~46.2~~	~~52.8~~							C9L	4-5
MULTIPLIER	0.1	0.1	0.1						1.0	10
PFE	2.3	2.2	2.3						-0.2	-0.4
CUR. (AMPS)	1	2	2						1	2.0
POINT NO.										
SEP. (n)										
H. F. MV	520	6.37	3.00						100.4	191
DRIFT	+0.2	-0.1	0						0	0.0
1.0 PFE K_n/1000	39.6	69.3	1.1	110.9						
0.3 PFE P_{CAL}	2.4	2.4	2.3	2.5						
0.1 PFE PFE_C			3.3							
3.0 MV $P/2\pi$	205	220	3.00	165						
DRIFT MCF	12	11	-0.1	15						
S. P.	~~+40.1~~	30.2								
NOISE										
POT RES.										
CULT & CMTS		1800								

I. P. RECEIVER NOTES, JOB NO. 720, AREA OLD TUCSON

LINE 1, HALF S, SR. 1, a = 660, BEARING N-S

SENDER STA. _____ = ELECTRODE NO. _____, DATE 6/21

HEINRICHS GEOEX

SEND	1-2	X	X	2-3	3-4	4-5	5-6	6-7		CAL
RECEIVE	0-6.6S	6.6-13.2	13.2-19.8	19.8 →	26.	4				3.4
MULTIPLIER	100			1.0	10.	1.0	0.1	0.1		
PFE	0.1			0.5	0.5	1.0	1.4	1.8		
CUR. (AMPS)	2			2	2	2	2	1		
POINT NO.										
SEP. (n)										
H. F. MV	821			103.2	134.	12.9	69.5	20.2		
DRIFT	0			0	0	0	0	0		
1.0 PFE K_n/1000	1.98			1.98	7.97	19.8	39.6	69.3		
0.3 PFE P_{CAL}	0.3			0.7	0.7	1.2	1.6	2.0		
0.1 PFE PFE_C										
3.0 MV $P/2\pi$	810			102	529	127	137	140		
DRIFT MCF	0.4			≅ 6.9	1.3	9.4	12	19		
S. P.	-1.0	-1.1	-3.0	+16.4						
NOISE										
POT RES.	2500			1800						
CULT & CMTS	1									

I. P. RECEIVER NOTES, JOB NO. 720, AREA Old Tucson

LINE 1, HALF S, SP. 1, a = _____, BEARING _____

SENDER STA. _____ = ELECTRODE NO. _____, DATE 6/22

PAGE 6

HEINRICHS GEOEX

SEND	1-2	2-3	3-4	4-5	5-6	6-7	1-2	2-3	3-4	4-5
RECEIVE	26.4	33.0					33.0	→	39.6	
MULTIPLIER	10.	1.0	1.0	0.1	0.1	0.1	1.0	1.0	1.0	0.1
PFE	0.3	0.4	0.5	0.8	1.4	2.2	0.4	0.6	0.5	0.2
CUR. (AMPS)	2	2	2	2	1	1	2	2	2	2
POINT NO.										
SEP. (n)										
H. F. MV	164	31.7	48.8	7.18	1.99	123	55.5	13.0	21.7	3.96
DRIFT	0	0	0	+0.1	0	0	0	+0.1	0	0
1.0 PFE K_n/1000	1.98	7.92	19.8	39.6	69.3	110.9	7.92	19.8	39.6	69.3
0.3 PFE P_{CAL}	0.5	0.6	0.7	1.0	1.6	2.4	0.6	0.8	0.7	0.4
0.1 PFE PFE_C										
3.0 MV $P/2\pi$	161	125	481	142	137	136	218	128	428	137
DRIFT MCF	3.1	4.8	1.5	7.0	12	18	2.8	6.3	1.6	2.9
S. P.	+20.3	~~-21.0~~					-21.3			
NOISE										
POT RES.	7500	~~2200~~					2200			
CULT & CMTS										

I. P. RECEIVER NOTES, JOB NO. 720, AREA OLD Tucson

LINE 1, HALF S, SR. 1, a = 660, BEARING N-S

SENDER STA. _____ = ELECTRODE NO. _____, DATE 6/22/73

HEINRICHS GEOEX

SEND		5-6	1-2	2-3	3-4	4-5	1-2	2-3	3-4		
RECEIVE			39.6	→	46.2		46.2	→	52.8		
MULTIPLIER		0.1	1.0	0.1	0.1	0.1	0.1	0.1	0.1		
PFE		2.2	1.7	1.3	1.5	1.4	2.6	2.8	3.1		
CUR. (AMPS)		1	2	2	2	2	2	2	2		
POINT NO.											
SEP. (n)											
H. F. MV		1.12	17.4	50.5	8.58	1.73	16.46	3.12	5.52		
DRIFT		+0.4	0	-0.1	0	-0.4	0	-0.1	-0.2		
1.0 PFE	K_n/1000	110.9	19.8	39.6	69.3	110.9	39.6	69.3	1.4	110.9	
0.3 PFE	PCAL	2.2	1.6	1.5	1.7	1.8	2.8	3.0	3.1	3.3	
0.1 PFE	PFE_c								4.7		
3.0 MV	P/2π	124	172	100	296	96	206	108	3.1	304	
DRIFT	MCF	18	9.3	15	5.7	19	14	28	-0.2	11	
S. P.			+9.4				-23.8				
NOISE											
POT RES.			8000				4800				
CULT & CMTS											

I. P. SENDER NOTES

JOB No. 720 AREA OLD Tucson

LINE 1, HALF N, SP. 1, DATE 6/21/73

HEINRICHS GEOEX

SEND	2-3	1-2	3-4	2-3	1-2	4-5	3-4	2-3	1-2	5-6
RECEIVE	0-	6.6N	6.6	→	13.2	13.2	→	19.8		19.8
RANGE										
VOLTAGE	215	218	150	115	220	235	155	115	225	305
CURRENT	2	2	2	2	2	2	2	2	2	2
SEND	4-5	3-4	2-3	1-2	4-7	5-6	4-5	3-4	2-3	1-2
RECEIVE	→	26.4			26.4	→	33.0			
RANGE										
VOLTAGE	235	155	115	225	190	310	235	155	115	225
CURRENT	2	2	2	2	1	2	2	2	2	2

FREQUENCIES 3. 0.3

SENDER No.

OPERATOR

RECEIVER No.

OPERATOR

COMMENTS:

I. P. SENDER NOTES

JOB No. 720 AREA OLd Tucson

LINE 1, HALF IV, SP. 1, DATE 6/21/73

HEINRICHS GEOEX

SEND	7-6	5-6-	4-5	3-4	2-3	7-6	6-5	5-4	4-3	
RECEIVE	39.0	→	39.6			39.6	→	46.2		
RANGE										
VOLTAGE	190	305	235	255	115	190	305	235	160	
CURRENT	1	2	2	2	2	1	2	2	2	
SEND	7-6	6-5	4-5						cal	cal
RECEIVE									67	4-5
RANGE										
VOLTAGE	190	305	235						195	220
CURRENT	1	2	2						1	2.0

FREQUENCIES 3 - 0.3

SENDER No.

OPERATOR

RECEIVER No.

OPERATOR

COMMENTS:

I. P. SENDER NOTES

JOB No. 720 AREA OLD Texas

LINE 1, HALF 5, SP. 1, DATE 6/22/73

PAGE 3

HEINRICHS GEOEX

SEND	1-2	2-3	3-4	4-5	5-6	6-7	1-2	2-3	3-4	CAL
RECEIVE	0-6.6	19.8	→	26.4			26.4	→ 33.0		3-4
RANGE										
VOLTAGE	225	115	150	225	300	190	220	112	150	
CURRENT	2	2	2	2	2	1	2	2	2	2.
SEND	4-5	5-6	6-7	1-2	2-3	3-4	4-5	5-6	1-2	2-3
RECEIVE				33.0	→	3	9.6	39.6	-46.	2
RANGE										
VOLTAGE	225	140	185	220	112	150	225	142	220	112
CURRENT	2	1	1	2	2	2	2	1	2	2

FREQUENCIES 3.0 0.3

SENDER No.

OPERATOR

RECEIVER No.

OPERATOR

COMMENTS:

I. P. SENDER NOTES

JOB No. 720 AREA Old Tucson

LINE 1, HALF 5, SP. 1, DATE 6/22/73

HEINRICHS GEOEX

SEND 3-4	4-5	1-2	2-3	3-4							
RECEIVE		46.2 →		52.8							
RANGE											
VOLTAGE 150	220	220	112	150							
CURRENT 2	2	2	2	2							
SEND											
RECEIVE											
RANGE											
VOLTAGE											
CURRENT											

FREQUENCIES 3.0 6.3

SENDER No.

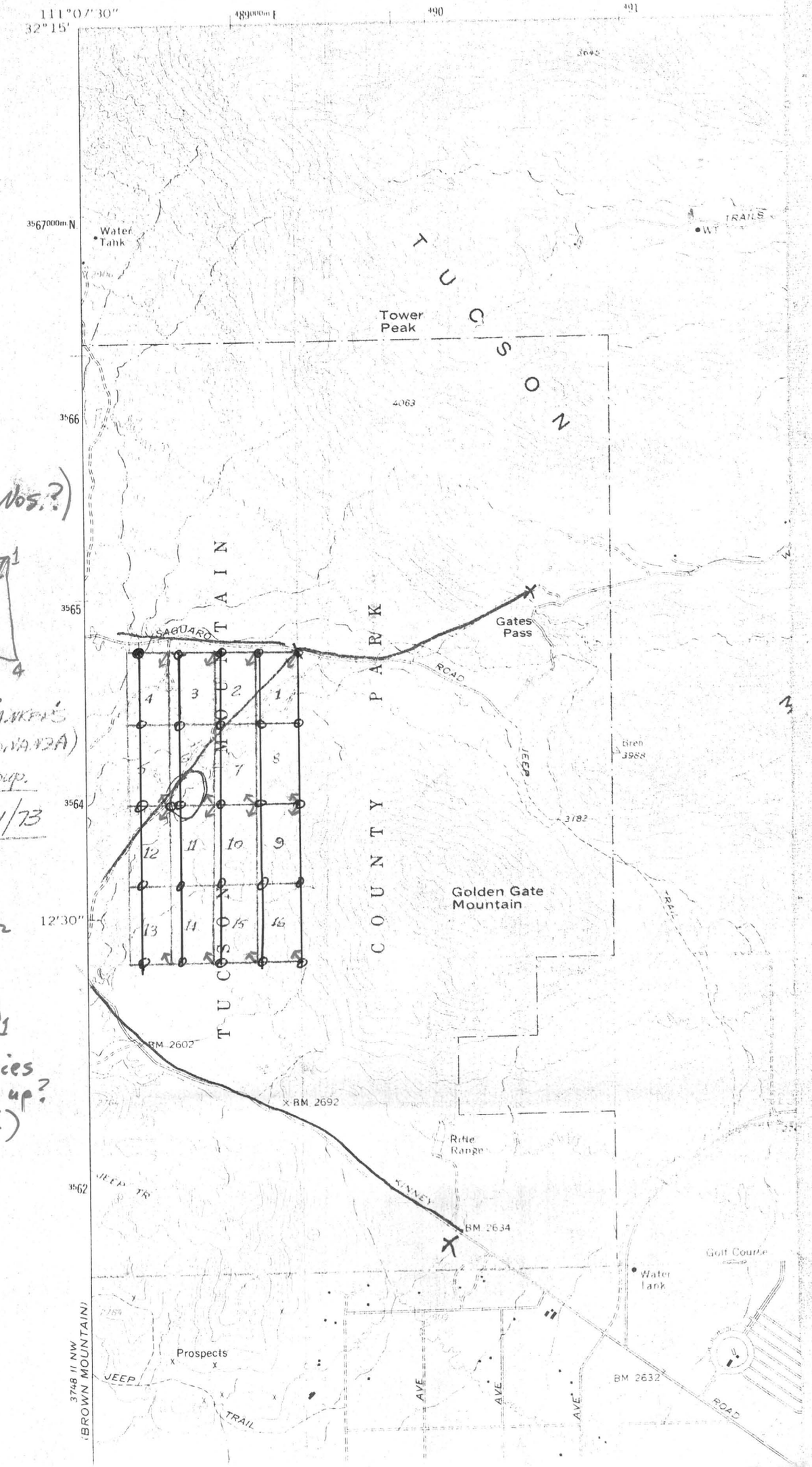
OPERATOR

RECEIVER No.

OPERATOR

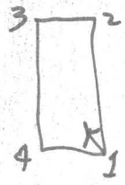
COMMENTS:

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY



(= Cor. Nos.?)

(Banker's Bonanza) Group.
6/21/73



(as notices written up? Webb.)

JOB NO. 720 LINE NO. _____ PAGE 4

AREA _____ DATE 6-26-73

INSTRUMENT _____

	STA.	TIME	READING	BASE CORR.	Δt	DRIFT CORR.	VALUE
1							
2							
3	ALL		READING		TAKEN		
4							
5	10'		EAST OF		SECTION		
6							
7	CORNER.						
8							
9							
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							
21							
22							
23							
24							
25							
26							
27							
28							
29							
30							

HEINRICHS GEOEXPLORATION COMPANY

51 = #1 CORP 1

51 = #1 CORNER POST 1

6 - #2 CP 1

~~14 BIKE TRAIL~~

~~17 LASH~~

12 - #3 CP 1

18 ± #4 CP 1

24 - #4 CP 4

JOB No. 720 LINE No. _____ PAGE 1

AREA _____ DATE 6-28-73

INSTRUMENT S.N. 446 (MAG)

	STA.	TIME	READING	BASE CORR.	Δt	DRIFT CORR.	VALUE
1							
2	S1	GOING WEST TO					
3				+3			
4	S1	14:43	370	373	0	0	373
5	1		428	431			431
6	2		378	381			381
7	3		383	386			386
8	4		369	372			372
9	5		370	373			373
10	6		376	379			379
11	7		370	373			373
12	8		372	375			375
13	9		374	377			377
14	10	:48	374	377	5	0	377
15	11		380	383			383
16	12		374	377			377
17	13		376	379			379
18	14		373	376			376
19	15		376	379			379
20	16		378	381			381
21	17	:53	378	381	10	0	381
22	18		377	380			380
23	19		382	385			385
24	20		380	383			383
25	21		50 379	382		0	382
26	22		384	387		-1	386
27	23		383	386			385
28	24	14:57	376	50 379	14	-1	378
29							
30							

HEINRICHS GEOEXPLORATION COMPANY

24 - #5 C.P. 3

18 - #5 CP 2

12 - #6 CP 2

6 - #7 CP 2

0 = #8 C.P 2

JOB No. 720 LINE No. PAGE 2
AREA DATE 6-26-73
INSTRUMENT MAG S.N 946 (MAG)

	STA.	TIME	READING	BASE CORR.	Δt	DRIFT CORR.	VALUE
1		GOING		EAST			
2				+3			
3 (#5 CPS)	24	15:07	369	372	24	-2	370
4	23		369	372			370
5	22		361	364			362
6	21		360	363			361
7	20		349	352			350
8	19		362	365			363
9	-18		362	365			363
10	17		343	346			344
11	16	:12	368	371	29	-2	369
12	15		354	357			355
13	14		369	372			370
14	13		350	353			351
15	12		358	361			359
16	11		363	366			364
17	10		354	357			355
18	9		358	361			359
19	8		359	362			360
20	7		357	360			358
21	6	17	356	359	34	-2	357
22	5		364	367			365
23	4		363	366			364
24	3		355	358			356
25	2		347	350			348
26	1		340	343			341
27	0	15:22	320	323	39		321
28	51	15:27	372	375	44	-2	50373
29							
30							

HEINRICHS GEOEXPLORATION COMPANY

24 - #12 CP 4

18 - #12 CP 1

12 - #11 CP 1

6 - #10 - CP 1

6 - 9 CP 1

JOB No. 720 LINE No. PAGE 3
AREA DATE 6-26-73
INSTRUMENT S-N 446 (MAG)

	STA.	TIME	READING	BASE CORR.	Δt	DRIFT CORR.	VALUE
1		GOIN	G EAST				
2							
3	25 cps	15:58 50	364				
4	24	16:07	365				
5	23		352				
6	22		348				
7	21		349				
8	20		347				
9	19		360				
10	18		342				
11	17	:12	337				
12	16		342				
13	15		358				
14	14		333				
15	13		344				
16	12		354				
17	11		368				
18	10		364				
19	9		317				
20	8	:17	314				
21	7		371				
22	6		327				
23	5		451				
24	4		261				
25	3	:24	237				
26	2		287				
27	1		270				
28	0	16:30 50	307				
29							
30							

REDONE

HEINRICHS GEOEXPLORATION COMPANY

1 - #3 C.P. 2

2 - #12 KP 4

3 - #5 C P. 3

Job No. 720 Line No. _____ Page 4
Area _____ Date 6-26-73
Instrument SN 496

	STA.	TIME	READING	BASE CORR.	Δt	DRIFT CORR.	VALUE
1							
2	1	17:30	344				
3	2	17:40	368				
4	3	17:48	335				
5							
6							
7							
8							
9							
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							
21							
22							
23							
24							
25							
26							
27							
28							
29							
30							

RE DONE

HEINRICHS GEOEXPLORATION COMPANY

24 #13 cp 3

18 #13 - c.p 2

12 #14 c.p 2

6 - #15 cp 2

0 - #16 - c.p 2

JOB No. 720 LINE No. PAGE 5
AREA DATE 6-27-23
INSTRUMENT MAG (SN. 496)

	STA.	TIME	READING	BASE CORR.	Δt	DRIFT CORR.	VALUE
1				-3			
2	GOING EAST						
3	#5 CP3	13:58	50373	370	0	0 50	370
4	#12 CP4	14:05	371	368	7		368
5	24	14:10	344	341	12		341
6	(#13 CP3) 23		341	338			338
7	22		324	321			321
8	21		341	338			338
9	20		340	337			337
10	19		338	335			335
11	18	:15	343	340	17	0	340
12	17		333	330			330
13	16		373	370			370
14	15		364	361			361
15	14		369	366			366
16	13		410	407			407
17	-12	:20	193	190	22	0	190
18	11		337	334			334
19	10		349	346			346
20	9		351	348			348
21	8		327	324			324
22	7		369	366			366
23	-6	25	442	439	29	0	439
24	5		448	445			445
25	4		202	199			199
26	3		414	411			411
27	2		331	328			328
28	1		50314	50311			50311
29	(#16 CP2)	14:31	49988	49985	33	0	49985
30							

HEINRICHS GEOEXPLORATION COMPANY

0 - #9 c.p 4

6 - #10 c.p 1

12 - #11 c.p 1

18 - #12 c.p 1

24 - #12 c.p 4

JOB No. 720 LINE No. PAGE 6
AREA DATE 6-27-73
INSTRUMENT MAG (S.N. 946

	STA.	TIME	READING	BASE CORR.	Δt	DRIFT CORR.	VALUE
1				-3			
2		(GO) N	G	WEST			
3	(#9, CP1) 0	14:48	50 210	50 207	50	-1	50 206
4	1		380	377			377
5	2		327	324			324
6	3		335	332			332
7	4		294	291			291
8	5		265	262			261
9	6	:53	298	295	55		294
10	7		384	381			380
11	8		343	340			339
12	9		378	375			374
13	10		337	334			333
14	11		363	360			359
15	12	:58	347	344	60		343
16	13		353	350			349
17	14		345	342			341
18	15		353	350			349
19	16		349	346			345
20	17		347	344			343
21	18	15:02	330	327	64		326
22	19		346	343			342
23	20		352	349			348
24	21		398	395			394
25	22		365	362			361
26	23		357	354			353
27	24	15:05	369	366	67		365
28	#5 →	15:10	50 374	50 371	72	-1	50 370
29	CP3						
30							

24 – #13 C.P 4

18 – #14 C.P 4

12 – #15 – C.P. 4

6 – #16 – C.P. 4

0 – #16 C.P 1

JOB No. 720 LINE No. PAGE 7
AREA DATE 6-27-71
INSTRUMENT HAG (S-N. 44C

	STA.	TIME	READING	BASE CORR.	Δt	DRIFT CORR.	VALUE
1				+3			
2		GOING		EAST			
3	#13, CP3	15:56	338	50341	0	50	341
4	(#13, CP4) 24	16:04	321	324	9	-1	323
5	23		323	326			325
6	22		324	327			326
7	21		324	327			326
8	20		323	326			325
9	19		327	330			329
10	18		327	330			329
11	17		307	310		-2	308
12	16		329	332			330
13	15	:09	311	314	14	-2	312
14	14		265	268			266
15	13		305	308			306
16	12		300	303			301
17	11		361	364			362
18	10		199	202			200
19	9		288	291			289
20	8		454	457			455
21	7	:14	288	291	19	-2	289
22	6		223	226			224
23	5		239	242		-3	239
24	4		427	430			427
25	3		267	270			267
26	2		339	342			339
27	1		244	247			244
28	(#16, CP1) 0	16:21	313	316	26	-3	313
29				50-			
30							

HEINRICHS GEOEXPLORATION COMPANY

#13 c-P 3

B.M - (2602)

JOB No. #20 LINE No. _____ PAGE 8

AREA _____ DATE 6-27-73

INSTRUMENT MAC. (S.N-446)

	STA.	TIME	READING	BASE CORR.	Δt	DRIFT CORR.	VALUE
1				+3			
2	(2602)						
3	BM*	16:36	321 (30.)	50324	41	-5	319
4	#13, CP3	16:46	~~344~~	50347	51	-6	341
5							
6							
7							
8							
9							
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							
21							
22							
23							
24							
25							
26							
27							
28							
29							
30							

JOB NO. _____ LINE NO. _____ PAGE _____
AREA _____ DATE _____
INSTRUMENT _____

	STA.	TIME	READING	BASE CORR.	Δt	DRIFT CORR.	VALUE
1							
2							
3							
4							
5							
6							
7			JOB #1				
8							
9							
10							
11							
12			MILAGE				
13							
14			010				
15							
16							
17							
18							
19							
20							
21							
22							
23							
24							
25							
26							
27							
28							
29							
30							

JOB NO. 720 LINE NO. _____ PAGE _____
AREA _____ DATE _____
INSTRUMENT _____

	STA.	TIME	READING	BASE CORR.	Δt	DRIFT CORR.	VALUE
1							
2							
3		CODE					
4							
5	S1 - SAGUARO RD						
6	KS - SAGUARO - KINNEY RD						
7							
8	K1 - KINNEY RD						
9							
10							
11	ALL READINGS ARE						
12							
13		50,000					
14							
15							
16							
17							
18							
19							
20							
21							
22							
23							
24							
25							
26							
27							
28							
29							
30							

HEINRICHS GEOEXPLORATION COMPANY

S1 ~ 10' EAST OF SECTION CORNER

JOB No. 720 LINE No. _____ PAGE 1
AREA _____ DATE 6-21-73
INSTRUMENT S.N. 446

	STA.	TIME	READING	BASE CORR.	Δt	DRIFT CORR.	VALUE
1							
2	S1 → GATES PASS →					S1	
3							
4	S1	14:23	50373	373	0	0	373
5	G.P	14:28	50424		5	-1	423
6	1		433				432
7	2		447				446
8	3		391				390
9	4		353				352
10	5		376			-2	374
11	6		381				379
12	7	14:33	403		10	-2	401
13	8		409				407
14	9		407				405
15	10		423				421
16	11		433				431
17	12		457				455
18	13		455			-3	452
19	14	:37	454		14	-3	451
20	15		437				434
21	16		424				421
22	17		413				410
23	18		400				397
24	19		392				389
25	20		385				382
26	21		379				376
27	22		376				373
28	23	14:42	377		19	-4	373
29							
30							

HEINRICHS
GEOEXPLORATION COMPANY

36. ROAD

JOB No. 720 LINE No. _____ PAGE 2

AREA _____ DATE 6-21-93

INSTRUMENT S.N.

	STA.	TIME	READING	BASE CORR.	Δt	DRIFT CORR.	VALUE
1							
2							
3	-24	14:42	371		19	-4	367
4	25		371				367
5	26		381				377
6	27		381				377
7	28		377				373
8	-29		380				376
9	30		388				384
10	31		371				367
11	32	:47	373		24	-4	369
12	33		381			-4	377
13	-34		370			-5	365
14	35		372				367
15	36		357				352
16	37		374				369
17	38		377				372
18	-39		395				390
19	▷40	14:52	378		29	-5	373
20	BS1		50-				
21							
22							
23							
24							
25							
26							
27							
28							
29							
30							

JOB NO. 720 LINE NO. _____ PAGE 3
AREA _____ DATE 6-21-73
INSTRUMENT S.N.

	STA.	TIME	READING	BASE CORR.	Δt	DRIFT CORR.	VALUE
1	S1	TO	K1	TO S1			
2	~~S1 — IRONWOOD PICNIC AREA~~						
3				-11			
4							
5	S1	15:12	503 84	373	0	0	373
6	1		389	378			378
7	2		380	369			369
8	3		381	370			370
9	4		382	371			371
10	5		381	370			370
11	6		372	361			361
12	7		384	373			373
13	8		375	364			364
14	9	:17	360	349	5	0	349
15	10		378	367			367
16	11		384	373			373
17	12		363	352			352
18	13		367	356			356
19	14		372	361			361
20	15		382	371			371
21	16		382	371			371
22	17	22	376	365	10		365
23	18		381	370			370
24	19		359	348		0	348
25	20		380	369		-1	368
26	21		376	365			364
27	22		363	352			351
28	23		367	356			355
29	24	15:27	374	363	15		362
30							

JOB NO. 720 LINE NO. _____ PAGE 4
AREA _____ DATE 6-21-73
INSTRUMENT S.N.

	STA.	TIME	READING	BASE CORR.	Δt	DRIFT CORR.	VALUE
1							
2				-11			
3	25	15:27	410	399	15	-1	398
4	26		357	346			345
5	27		377	366			365
6	28		462	451			450
7	29		345	334			333
8	30		372	361			360
9	31	32	348	337	20	-1	336
10	32		405	394			393
11	33		352	341			340
12	34		360	349			348
13	35		361	350			349
14	36		431	420			419
15	37		373	362			361
16	38		349	338			337
17	39	37	367	356	25	-1	355
18	40		355	344			343
19	41		351	340			339
20	42		367	356			355
21	43		301	290			289
22	44		361	350		-2	348
23	45		362	351			349
24	46		363	352			350
25	47		367	356			354
26	48	42	382	371	30		369
27	49		383	372			370
28	50	15:43	348	337	31		335
29							
30							

Job No. 720 Line No. Page 5
Area Date 6-21-73
Instrument S.N. 496

	STA.	TIME	READING	BASE CORR.	Δt	DRIFT CORR.	VALUE
1							
2			.	-11		-	
3	51	15:43	361	350	31	-2	348
4	52		361	350			348
5	53		364	353			351
6	54		362	351			349
7	55		369	358			356
8	56		369	358			356
9	57		359	348			346
10	58		350	339			337
11	59		352	341			339
12	60		361	350			348
13	61	48	359	348	36		346
14	62		350	339			337
15	63		355	344			342
16	64		339	328			326
17	65		329	318			316
18	K1	15:52	338	327	40		325
19	S1	15:58	50386	375	46	-2	373
20							
21							
22							
23							
24							
25							
26							
27							
28							
29							
30							

JOB No. 720 LINE No. _____ PAGE 6
AREA _____ DATE _____
INSTRUMENT S.N.

	STA.	TIME	READING	BASE CORR.	Δt	DRIFT CORR.	VALUE
1				-15			
2	K1 TO		←	TO IRON WOOD			
3	K1	16:30	340	325	0	0	325
4	1		347	332		-0	332
5	2		346	331			331
6	3		338	323			323
7	4		337	322		-1	321
8	5		354	339			338
9	6		328	313			312
10	7		337	322			321
11	8	:35	320	305	5		304
12	9		338	323		-1	322
13	10		358	343			342
14	11		329	314			313
15	12		347	332			331
16	13		339	324		-2	324
17	14		337	322			320
18	15		354	339			337
19	16		340	325			323
20	17	40	337	322	10	-2	320
21	18		347	332			330
22	19		347	332			330
23	20		331	316			314
24	21		347	332			330
25	22		328	313		-3	310
26	23		345	330			327
27	24		344	329			326
28	25		337	322			319
29	26	16:45	332	317	15	-3	314
30							

JOB No. 720 LINE No. _____ PAGE 7
AREA _____ DATE 6-21-73
INSTRUMENT S.N.

	STA.	TIME	READING	BASE CORR.	Δt	DRIFT CORR.	VALUE
1							
2				-15			
3	27	16:45	348	333	15	-3	330
4	~~28~~		336	321			318
5	29		339	324		-3	321
6	-30		340	325		-4	321
7	31		344	329			325
8	32		339	324			320
9	33		336	321			317
10	34		340	325			321
11	-35	:50	340	325	20	-4	321
12	~~36~~		342	327		-4	323
13	~~37~~		347	332		-5	327
14	~~38~~		341	326			321
15	~~39~~		340	325			320
16	40		350	335			330
17	41	:55	350 ~~358~~	335	25	-5	330
18							
19	K1	17:00	346	331	30	-6	325
20			50				
21							
22							
23							
24							
25							
26							
27							
28							
29							
30							

HEINRICHS GEOEXPLORATION COMPANY

15- IRON WOOD TURNOFF

16- B.M.

JOB No. 720 LINE No. — PAGE 8
AREA DATE 6-21-73
INSTRUMENT S:N

	STA.	TIME	READING	BASE CORR.	Δt	DRIFT CORR.	VALUE
1	K1	TO	K-2	TO	K1		
2				-15			
3	K1	17:18	340	325	0	0	325
4	1		332	317			317
5	2		339	324			324
6	3		331	316			316
7	4		328	313			313
8	5		324	309			309
9	6		333	318			318
10	7	:23	360	345	5		345
11	8		311	296			296
12	9		325	310			310
13	10		311	296			296
14	11		323	308			308
15	12		323	309			308
16	13		322	307			307
17	14		319	304		0	304
18	15	:28	307	292	10	+1	293
19	15 16		332	317			318
20	17		309	294			295
21	18		309	294			295
22	19		309	294			295
23	20		321	306			307
24	21		314	299			300
25	22		310	295			296
26	23	:33	298	283	15		284
27	24		303	288			289
28	24-25	11:34	312	297	16	+1	298
29							
30							

JOB NO. 720 LINE NO. PAGE 9
AREA DATE 6-21-73
INSTRUMENT S-N

	STA.	TIME	READING	BASE CORR.	Δt	DRIFT CORR.	VALUE
1							
2				-15			
3	25 ~~26~~	17:34	311	296	16	+1	297
4	27		303	288			289
5	28		309	294			295
6	29		301	286			287
7	30		304	289			290
8	31		311	296			297
9	32		299	284			285
10	33		310	295			296
11	34	:39	305	290	21		291
12	35		298	283			284
13	36		307	292			293
14	37		311	296		+2	298
15	38		308	293			295
16	39		304	289			291
17	39 40		301	286			288
18	40 41		296	281			283
19	41 42		301	286			288
20	42 43		300	285			287
21	43 44	:44	300	285	26	+2	287
22	44 45		296	281			283
23	45 46		300	285			287
24	46 47		301	286			288
25	47 48		299	284			286
26	48 49		302	287			289
27	49 50		299	284			286
28	50 51		295	280			282
29	51	17:48	302	287	30	+2	287
30							

HEINRICHS GEOEXPLORATION COMPANY

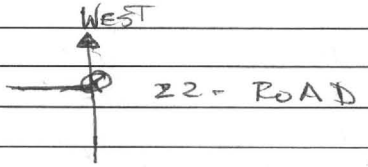
75- RIFLE RANGE ~~TRAVERSE~~ TURN OFF

K2 - 10' FROM BM.

JOB No. 720 LINE No. PAGE 10
AREA DATE 6-21-73
INSTRUMENT S.N.

	STA.	TIME	READING	BASE CORR.	Δt	DRIFT CORR.	VALUE
1				-15			
2							
3	52	17:48	297	282	30	+2	284
4	53		301	286		+2	288
5	54		298	283		+3	286
6	55		297	282			285
7	56		301	286			289
8	57		294	279			282
9	58		294	279			282
10	59		290	275			278
11	60		297	282			285
12	61		291	276			279
13	62	:53	295	280	35	+3	283
14	63		284	269			272
15	64		294	279			282
16	65		277	262			265
17	66		297	282			285
18	67		292	277			280
19	68		299	284			287
20	69	:58	281	266	40	+3	269
21	70		294	279			282
22	71		291	276			279
23	72		300	285			288
24	73		290	275			278
25	74		296	281			284
26	75	18:02	290	275	45	+4	279
27	76		291	276			280
28	K2	18:03	272	257	46		261
29	K1	18:13	336	321	56	+4	325
30							

HEINRICHS GEOEXPLORATION COMPANY

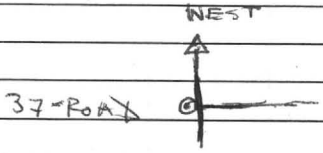


JOB No. 720 LINE No. PAGE 11
AREA DATE 6-21-73
INSTRUMENT S.N 496

	STA.	TIME	READING	BASE CORR.	Δt	DRIFT CORR.	VALUE
1	S1	-TO	KS1	TO	S1		
2				-4			
3	S1	18:37	377	373	0		373
4	1		378	374			374
5	2		382	378			378
6	3		375	371			371
7	4		378	374			374
8	-5		384	380			380
9	6	:42	372	368	5		368
10	7		377	373			373
11	8		374	370			370
12	9		387	383			383
13	-10		384	380			380
14	11		376	372			372
15	12		375	371			371
16	13		382	378			378
17	14		386	382			382
18	- 15		384	380			380
19	16	:47	383	379	10		379
20	17		388	384			384
21	18		388	384		0	384
22	19		382	378		+1	379
23	20		382	378			379
24	21		381	377			378
25	22		389	385			386
26	23		392	388			389
27	24		385	381			382
28	25	18:52	257	353	15		354
29							
30							

HEINRICHS GEOEXPLORATION COMPANY

27 WASA



JOB No. 720 LINE No. _____ PAGE 12

AREA _____ DATE 6-21-73

INSTRUMENT S.N

	STA.	TIME	READING	BASE CORR.	Δt	DRIFT CORR.	VALUE
1				-4			
2	26	18:52	381	377	15	+1	378
3	27		385	381			382
4	28		389	385			386
5	29		382	378			379
6	30		394	390			391
7	31		389	385			386
8	32	:57	386	382	20		383
9	33		389	385			386
10	34		396	392			393
11	35		396	392			393
12	36		397	393			394
13	37		397	393			394
14	38		385	381			382
15	39		395	391			392
16	40		396	392			393
17	41	19:02	401	397	25	+2	399
18	42		395	391			393
19	43		397	393			395
20	44		400	396			398
21	45		387	383			385
22	46		400	396			398
23	47		399	395			397
24	48		397	393			395
25	49	:07	403	399	30		401
26	50		400	396			398
27	51		406	402			404
28	52		401	397			399
29	53	19:08	396	392	31		394
30							

JOB No. 720 LINE No. _____ PAGE 13
AREA _____ DATE 6-21-73
INSTRUMENT S.N

	STA.	TIME	READING	BASE CORR.	Δt	DRIFT CORR.	VALUE
1							
2							
3	54	19:09	393	389	32	+2	391
4	55		400	396			398
5	KS	19:11	414	416	34		412
6							
7	51	19:16	375	371	39	+2	373
8			50				
9							
10	51 → KS → 1						
11	ALL STATION ON						
12	SOUTH SIDE OF ROAD						
13							
14							
15							
16							
17							
18							
19							
20							
21							
22							
23							
24							
25							
26							
27							
28							
29							
30							

JOB NO. 720 LINE NO. PAGE 14
AREA DATE
INSTRUMENT S.N. 496 CALC.

	STA.	TIME	READING	BASE CORR.	Δt	DRIFT CORR.	VALUE
1				412			
2	KS TO		K 3 TO		KS		
3							
4	KS (4)	14:03 50	400	412	0	0	412
5	1.5 :1		385	397			
6	2		382	394			
7	3		381	393			
8	4		388	400			
9	5		391	403			
10	70 6		382	394			
11	7		388	400			
12	8		400	412			
13	9	:08	383	395	5		
14	10		393	405			
15	11		400	412			
16	12		393	405			
17	13		393	405			
18	14		400	412			
19	15		393	405			
20	80 16	:13	403	415	10		
21	17		294	306			
22	18		403	415			
23	19		409	421			
24	20		408	420			
25	21		408	420			
26	22		415	427			
27	23		405	417			
28	24	14:18	416	428	15	0	
29							
30							

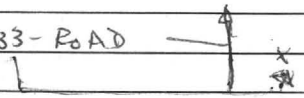
HEINRICHS GEOEXPLORATION COMPANY

27 ROAD

28 + ~ 50' E = BM.

31 - ROADSIDE

33 - ROAD



33 - 200' EAST OF KENNY

42+50 - TRAIL

JOB NO. 720 LINE NO. _____ PAGE 15
AREA _____ DATE 6-22-73
INSTRUMENT S.N. 446

	STA.	TIME	READING	BASE CORR.	Δt	DRIFT CORR.	VALUE
1				+12			
2	25	14:19	411	423	16	-1	422
3	90 26		414	426			425
4	27		409	421			420
5	28		420	432			431
6	29		425	437			436
7	30		421	433			432
8	31		401	413			412
9	32		419	431			430
10	33	24	426	438	21	-1	437
11	34		422	434			433
12	35		423	435			434
13	100 36		421	433			432
14	37		425	437			436
15	38	32	430	442	29	-1	441
16	39	8	437	449			448
17	40		433	445			444
18	41		432	444			443
19	42		437	449			448
20	43	37	438	450	34	-2	448
21	44		439	451			449
22	45		428	440			438
23	110 46		443	455			453
24	47		442	454			452
25	48		441	453			451
26	49		439	451			449
27	50	42	454	466	39		464
28	51	14:43	445	457	40	-2	455
29							
30							

HEINRICHS GEOEXPLORATION COMPANY

55- ROADSIDE

56 WASH

59- TRAIL

69- TRAIL

JOB NO. 720 LINE NO. PAGE 16
AREA DATE 6-22-73
INSTRUMENT S.N. 446

	STA.	TIME	READING	BASE CORR.	Δt	DRIFT CORR.	VALUE
1				+12			
2	52	14:43	449	461	40	-2	459
3	53		449	461			459
4	54		462	474			472
5	55		451	463			461
6	120 56		456	468			466
7	57		455	467			465
8	58		432	444			442
9	59		459	471			469
10	60		467	478			476
11	61		463	475			473
12	62	:48	469	481	45	-2	479
13	63		472	484			482
14	64		476	488			486
15	65		478	490			488
16	11' 66		478	490			488
17	67		484	496	5		494
18	68	:53	531	543	50	-2	541
19	69		494	506			504
20	70		484	496			494
21	71		490	502			500
22	72		492	504			502
23	K373	14:55	493	505	52		503
24	74						
25	KS	15:00	402	414	57	-2	412
26			50				
27							
28							
29							
30							

HEINRICHS GEOEXPLORATION COMPANY

10~ DRAIN PIPE

15~ DRAIN

17 - DRAIN

20 METAL

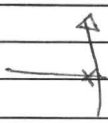
25 DRAIN PIPE

JOB NO. 720 LINE NO. _____ PAGE 17
AREA _____ DATE 6-22-73
INSTRUMENT S N ~~591~~ 946

	STA.	TIME	READING	BASE CORR.	Δt	DRIFT CORR.	VALUE
1				+5			
2	KS	-0	K1	to	KS		
3	KS4	15:32 50	407	412	0	0	412
4	1		378	383			383
5	2		401	406			406
6	3		389	394			394
7	60 4		381	386			386
8	5		380	385		0	385
9	6		384	389		-1	388
10	7		383	388			387
11	8	:37	378	383	5	-1	382
12	9		387	392			391
13	10		284	389			388
14	11		368	373			372
15	12		362	367			366
16	13		367	372			371
17	50 14		374	379			378
18	15		173	178			177
19	16		393	398			397
20	17	42	034	50 039	10	-1	038
21	18		374	379			378
22	19		373	378			377
23	20		311	316			315
24	21		367	372			371
25	22		371	376		-2	374
26	23		380	385			383
27 40	24		366	371			369
28	25		250	255			253
29	26	15:47	361	366	15	-2	364
30							

HEINRICHS GEOEXPLORATION COMPANY

30 ROAD



37 DRAIN

JOB NO. 720 LINE NO. PAGE 18
AREA DATE 6-22-73
INSTRUMENT S.N. 446

	STA.	TIME	READING	BASE CORR.	Δt	DRIFT CORR.	VALUE
1				+5			
2	27	15:47	363	368	15	-2	366
3	28		366	371			369
4	29		363	368			366
5	30		345	350			348
6	31		363	368			366
7	32		322	327			325
8	30 33		359	364			362
9	34		337	342			340
10	35	:52	357	362	20	-2	360
11	36		370	375		-	373
12	37		165	170		-3	167
13	38		352	357			354
14	39		314	319			316
15	40		346	351			348
16	41		339	344			341
17	42		359	364			361
18	20 43		352	357			354
19	44		355	360			357
20	45	:57	356	361	25	-3	358
21	46		365	370			367
22	47		356	361			358
23	48		343	348			345
24	49		368	373			370
25	50		351	356			353
26	51		360	365		-3	362
27	52		345	350		-4	346
28	53	16:01	343	348	29	-4	344
29							
30							

JOB No. 720 LINE No. PAGE 19
AREA DATE 6-22-73
INSTRUMENT SN 5446 HAG

	STA.	TIME	READING	BASE CORR.	Δt	DRIFT CORR.	VALUE
1				+5			
2	9 54	16:01	323	328	29	-4	324
3	8 55		359	364			360
4	7 56		337	342			338
5	6 57		335	340			336
6	5 58		339	344			340
7	4 59		333	338			334
8	3 60		341	346			342
9	2 61		330	335			331
10	DK1	16:06	50 333	338	34	-4	334
11	KS	16:09	411	416	37	-4	411
12							
13							
14							
15							
16							
17							
18							
19							
20							
21							
22							
23							
24							
25							
26							
27							
28							
29							
30							

Rec'd: 6/19/73

HEINRICHS GEOEXPLORATION COMPANY

806 WEST GRANT ROAD. TUCSON, ARIZONA 85703. P.O. BOX 5964. PHONE: (602) 623-0578

June 19, 1973

Signo Vinces, Inc.
Suite 1421
1501 N. Miracle Mile
Tucson, Arizona 85705

Attention: Mr. Lyle R. Palant

Re: Proposed Economic Geologic Claim Staking Consulting and Geophysical Contracting Service in T14S R12E, Pima County, Arizona, and Vicinity - GEOEX Job #720

Dear Sir:

Per our recent discussions and your request, this letter proposal is submitted for your approval as the basis of our understanding to conduct work on your behalf as follows:

Magnetic and induced polarization surveys and interpretations at depth according to customary good technical and economic practice in the industry over the E 1/2 of Sec. 16, and adjacent public roads, check on status of claims on this property and provide confidential advice. You are aware that we may perform similar contract geophysical services on adjacent properties on behalf of Conoco, which work if undertaken would be confidential to Conoco.

Our basic charge is $175.00 for a 2 man mag crew and $250.00 for a 3 man I.P. crew per eight hour work day, based on 5 work days per week including all usual equipment, plus expenses which include $15.00 per day per vehicle plus $0.15 per mile per vehicle for a probable maximum of two vehicles at any one time. Other job incidental expenses are billed at 115% of our invoice cost. Overtime, if requested by you, will be charged at $37.50 per hour for the three man crew, plus expenses and standby time at $15.63 per hour plus expenses.

Compilation, computation and drafting of data will be charged at $10.00 per hour. Consulting, supervision, interpretation and reporting will be $18.75 per hour.

Commonly $500.00 per profile mile will cover average I.P. work alone. In this case, with added magnetics and other work, we estimate about $2,000.00 per half section more or less, depending on degree of cultural interference problems and character of results obtained.

Extra helpers may be used at $50.00 per man work day base rate, with overtime at $9.40 per hour, and plus expenses. Usually this does not materially affect overall project costs, but does save time and is invoked at client's request, if available, or by us, if deemed in client's best interest.

GEOEX will save the client harmless from all Workmen's Compensation liability, public liability and property damage liability incurred by GEOEX employees.

All property permits, and trespass liability and related costs which are incurred on behalf of the client will be chargeable to the client at GEOEX cost plus 15%.

Billings will be submitted weekly and payments are due on presentation. Final payment is due on presentation of final report.

Crew availability is within 48 hours, but could change by next week. Preliminary report and interpretation of results will be submitted in written form not later than four days following completion of field work, and a final report two weeks later.

No oral or written disclosures of information obtained will be given to any person or entity without your express written consent.

Your approval of this letter contract may be indicated by executing as provided below on the accompanying copy and returning same to us, together with an advance on account in the amount of $1500.00 as your firm indication of our notice to proceed on your behalf to undertake this work.

Sincerely,

Heinrichs GEOEXploration Co.

cc: Extra enclosed

Walter E. Heinrichs, Jr.
President

Accepted by: Signo Vinces, Inc.

Person: Lyle R. Palant

Title: President

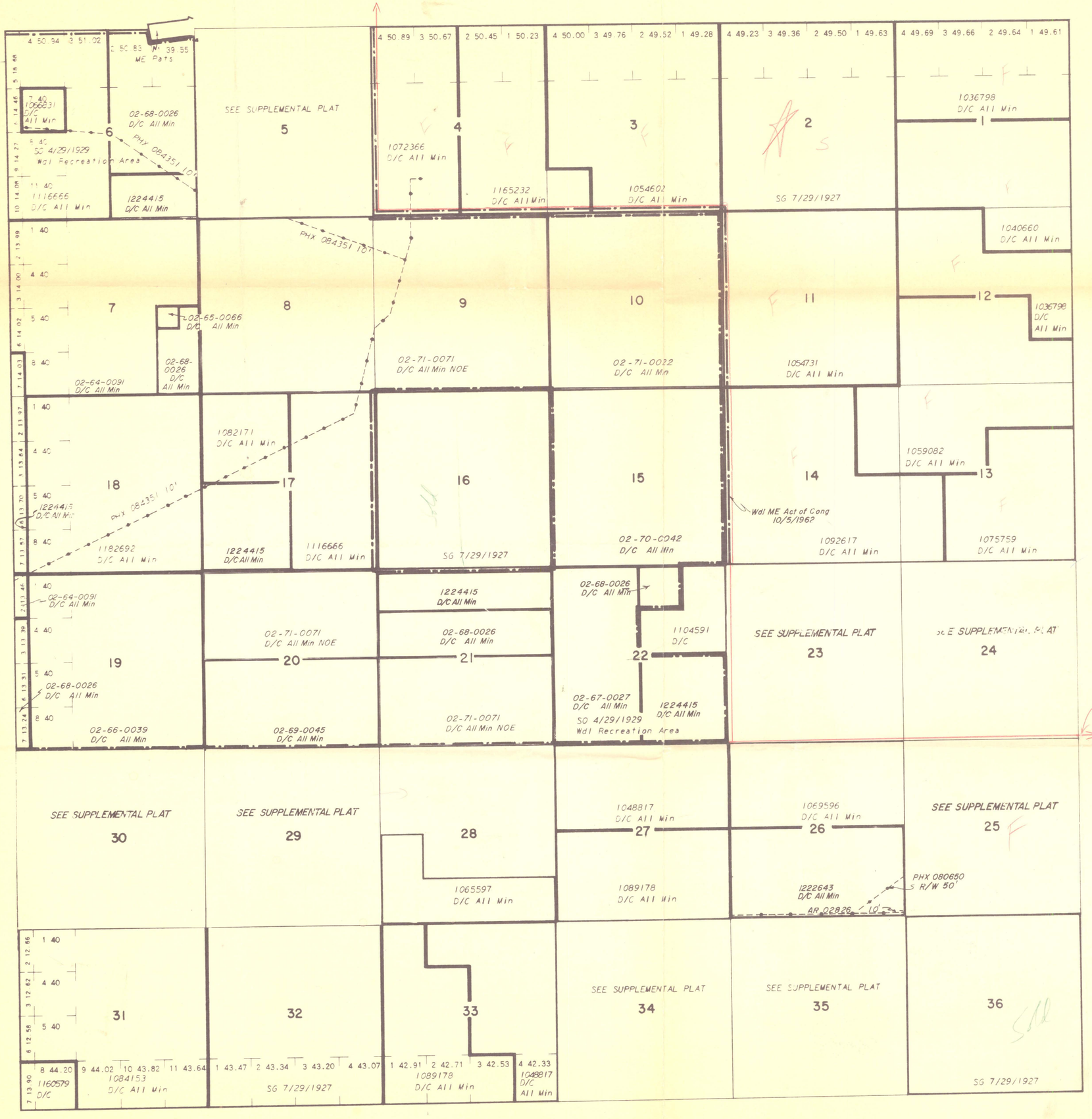
Date: June 19, 1973

GEOEX Job #720

TOWNSHIP 14 SOUTH RANGE 12 EAST OF THE GILA AND SALT RIVER MERIDIAN, ARIZONA

STATUS OF PUBLIC DOMAIN
LAND AND MINERAL TITLES

PIMA COUNTY



Federal Lands - Mineral Entry Withdr PL 87-747 Oct. 5, 1962

Lat. 32°09'44" N
Long. 111°03'51" W

SCALE
10 5 0 10 20 30 60
30 chains to the inch

INDEX TO SEGREGATED TRACTS				
RESURVEY	ORIGINAL SURVEY			
TRACT NO	T	R	SEC	SUBDIVISION

FOR ORDERS EFFECTING DISPOSAL OR USE OF UNIDENTIFIED LANDS WITHDRAWN FOR CLASSIFICATION, MINERALS, WATER AND/OR OTHER PUBLIC PURPOSES, REFER TO INDEX OF MISCELLANEOUS DOCUMENTS.

A 2153 CL MULTIPLE USE

DIST. NO. 2

REINRICHS GEOEX
REC'D JUN 7 1972
BOX 5964 TUCSON, ARIZONA 85703
Phone: (AREA 602) 623-0578

CURRENT TO	BY

T. 14 S.
R. 12 E.