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TELEX - 364412 Intr. ID 894

HEINRICHS GEOEXPLORATION COMPANY

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

November 14, 1984

La Paz Mining Inc.
1802 W. Grant Road
Tucson, AZ 85745

Attn: Mr. Dan Lewis
Vice President - Exploration

Re: Gonzales Wash
Placer Project
Preliminary Geophysics
GEOEX #1718

Dear Dan:

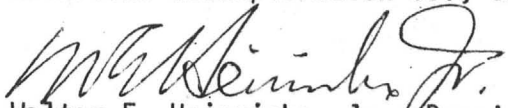
Accompanying this transmittal letter are three copies of our report as captioned above and dated October - November 1984. Our final billing will follow shortly.

You and your associates questions and comments are earnestly solicited and will be welcomed whenever received.

It was a pleasure to work with you on this project and we will look forward to the next opportunity.

Best of luck with the project results as work progresses.

Sincerely,
Heinrichs GEOEXploration Co., Inc. & Assoc.


Walter E. Heinrichs, Jr. President
Geol. Engr.- Geophysicist
P. E. & C. P. G. S.

WEH:jh
Encl: 3

FINAL REPORT

Preliminary Geophysical Survey

GONZALES WASH PLACER PROJECT
La Paz County, Arizona

October - November 1984

for

La Paz Mining Incorporated
1802 West Grant Road
Tucson, Arizona

by

Heinrichs GEOExploration Co., (Inc.) & Associates
P. O. Box 5964
Tucson, Arizona 85703

GEOEX Job #1718



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Geol. Engr.- Geophysicist
P. E. & C. P. G. S.

WEH:jh
Encl: 3

Gonzales Wash Project

October - November 1984

GEOEX Job #1718

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Accompanying Data & Illustrations	
By Line Number	
10 gravity profiles	
10 magnetometer profiles	
15 seismic travel time plots	
Two location plan maps showing lines, stations and drill holes	
at a scale of 1" = 100'.	
East Half	
West half	

Preliminary Geophysics
GONZALES WASH PROJECT

La Paz Mining Inc.
Tucson, Arizona

October - November 1984

GEOEX Job #1718

INTRODUCTION

At the request of Mr. Dan Lewis, Vice President - Exploration of La Paz Mining Inc., Heinrichs GEOEXploration Company Inc., and Associates, conducted a preliminary multiparameter geophysical survey over the so called East Half or Interior Basin portion of the project area and a small part of the West Half or Exterior Basin portion of the project area located immediately northwest of the Gonzales Wash "Gap". See accompanying index map.

Geophysical field work was initiated on 18 October 1984 and essentially completed on 23 October 1984. Personnel in the field were Walter E. Heinrichs, Jr. geological engineer - geophysicist, Mark E. Anders, geophysicist - geologist and Richard R. Leisure, exploration geologist assisted by Dan Lewis, E. Grover Heinrichs and Walter Whitlow of La Paz Mining Inc., of Tucson, Arizona. All personnel were based at the Rodeway Inn, Blythe, California about 12 miles from the project area which is embraced by portions of T. 3 & 4 N., R., 21 W. including a bit of Interstate 10 highway and points north and east of I-10 exit number 5 which provides primary access to the project area from the southwest.

OBJECTIVES

The La Paz mining district is of current and historical interest for both economic placer and lode gold and Gonzales Wash and its upper tributary Ferrar Gulch, have yielded significant placer gold in the past. Purpose of the geophysics was primarily to get bedrock depth and volume information and secondarily to confirm faulting and bedrock rock types, as a preliminary aid to the drilling necessary to evaluate the placer potential of the ground controlled or held by agreement with other owners by La Paz Mining Incorporated.

GENERAL PROCEDURES

Two general bedrock types are identified in the area, a schist-gneiss complex mapped by Eldred Wilson as being of Mesozoic age and a granitic type rock. Overlying these are fluvial sands and gravels with interbedded lenses and layers of caliche and occasional benches of some horizontal strata believed to be recent lake beds or possibly spring water deposits.

Seismic refraction was an obvious first choice method but caliche is often a problem for good seismic results. Therefore, as an alternate choice, gravity was recommended because it can be relatively inexpensive, fast, and is not cumbersome in the field and 7½ minute U.S.G.S quadrangle contouring coverage was available for assumed adequate horizontal and elevation control.

Magnetics was also provided as a matter of general principle. Resistivity was also available but was held in abeyance, to be used only as a last resort if deemed still worthwhile after all else had failed.

Lines were laid out and flagged on compass bearings with hip chain distance control and tied to identified JV & SL claim corners and cultural or recognizable topographic features shown on the U.S.G.S. topographic La Paz Mountain Ariz. - Calif. quadrangle map. See accompanying 1" = 1000' scale index map for line identification, location and orientation.

Stations along the lines were marked in the field with 3" x 5" black magic marker annotated white index cards left on the ground at the stations and held in place by small stones. Usually lines were laid out as the geophysical readings were taken.

Subsequent to 23 October 1984 when Mr. W. E. Heinrichs and Mr. M. Anders returned to Tucson, Mr. Leisure, who stayed on to help with the drill sample collecting and logging, and Grover Heinrichs, ran instrument levels with a transit because the 7½ minute quadrangle contouring was early on, found to be inadequate for satisfactory reduction of the gravity data. Also, Mr. Leisure obtained a little more magnetometer coverage during the interum when initial drilling and sample loading was completed on 4 November 1984 at which time he returned to Tucson.

RESULTS

Seismic

Seismic results are presented as typical travel-time plots on 15 accompanying 8½" x 11" graphical - profile sheets. These are identified by line number, setup number and direction. Seismic coverage was obtained on lines number 1, 2, 3, 7 & 8. Caliche was a problem but good depths were obtained on roughly half of the seismic coverage or more. To expedite data collection in the field, the horizontal and vertical scale of the data plots varies. This was not re-done in the office to match to the gravity and magnetic plots because of the extensive time that this would require. However, each depth point is identified by station number or position on each seismic line plot and the extent of seismic coverage is indicated to scale on the appropriate gravity profile plot.

Equipment used was a Bison model S1575B single channel signal enhancement unit with one geophone and cable and a ten pound sledge hammer energy source. Energy quantity was not found to be a particular problem but, because of the variable bedrock surface slopes and directions and the ever present caliche, each spread or setup needed to be run in both directions. This necessity can be expedited considerably if a second geophone can be employed simultaneously as each setup is run. Attempts in the field to modify the equipment to accomplish this failed because no circuit schematics were available and the extra geophones did not match. If more seismic is done, this deficiency can and should be rectified.

Gravity

One hundred gravimeter observations were made on lines 1 thru 10 on stations which varied from about 40 feet to 200 feet apart on the lines - except for the base readings taken in Blythe. Where ever possible, readings in the field were taken on bedrock at or near both ends of every line. Where ever this could not be done, the results accuracy suffered considerably from lack of bedrock tie references or, effectively prevented any reasonable depth calculations.

The meter used was a La Coste Romberg Model G, serial number 546. An established base station in Blythe at the southwest corner of Lovekin Boulevard and 14th Avenue was occupied at the beginning and end of each field day. Data were reduced to simple Bouguer values by Mark Anders on his Macintosh computer and computer plotted in profile format for each line at a horizontal scale matching the magnetic plots for each line which were also computer profile plotted. Thus the gravity and magnetic profiles from any given line can be used as overlays to each other but cannot be overlayed from one line to another or from the profiles to the plan maps.

Maximum observed gravity gradient was 2.0 milligals per 100 feet between stations 1 and 2 on line 2. Total gravity relief observed on the survey was 4.4 milligals from -41.1 at station 7 line 7 on presumed terrace material, to -45.5 at station 1 line 3 on outcropping bedrock.

Calculated depths are indicated as a small letter d and are plotted in ink on each original gravity profile along with drill holes, drill hole depths and seismic coverage. Terrain corrections of the gravity results were not invoked because of time and expense and doubt as to over all validity and benefit from a cost, yield point of view. Undoubtedly however, such corrections, though very tedious and therefore relatively expensive would improve the quality of the gravity results. See for example line 8 profile across the "Gap" where the greatest terrain effects were encountered.

Magnetics

A Geometrics model G-836 with 10 gamma resolution was used. Absolute total magnetic intensity relief observed on the survey was from a minimum of 49720 gammas at station 4 line 8 to a maximum of 50070 gammas at station 4.75 on line 1. Interestingly these readings were both on outcrop, but the lower reading was next to the cliff on the north side of the Gap.

Magnetic observations totaled 165 (including base readings) on lines 1 thru 10 on stations varying from 25 to 100 feet apart. Diurnal corrections were applied but not quite as rigorously as can be done because the diurnal drift was fairly low.

Magnetic results were about as expected except that the total magnetic relief was smaller than anticipated. No major concentrations of magnetite were identified but station spacing was likely too broad for that kind of definite detection - assuming that such concentrations do in fact exist under the area covered. If additional magnetic coverage is attempted specifically for this purpose a 0.5 or 1.0 gamma instrument is recommended and with a station spacing of probably no more than 10 feet and maybe as little as 5 feet.

CONCLUSIONS AND RECOMMENDATIONS

Over all the seismic results proved most reliable of the three methods applied. This was especially true when the seismic response was definite, straight forward and not mitigated by adverse effects of caliche and wind noise. Sledge hammer energy to and from depths at least to 100 feet below surface, seems reasonably feasible. Attempts to determine maximum practical depths were not made and conceivably depths somewhat greater than 100 feet might be reasonably achieved especially if a heavier sledge hammer was used. This factor may become important if the aeolian (?) sand sections encountered at or near the bottoms of some holes, is to be investigated further and at greater depth. Bi-directional data acquisition from each seismic setup is definitely recommended.

Seismic problems with boulders were nil or very minor. This may be indicative of a lack of very large boulders in the areas covered by seismic.

Gravity results were a little disappointing. This was partly due to the unexpected inadequacy of the 7½ minute quadrangle map. We were unable to pick accurate enough elevations and related horizontal positions solely from the map alone as can often be done with some 7½ minute quadrangle coverage.

With significant exceptions, there seems to be a rather broad correlation between magnetic lows and bedrock lows and the same more or less applies to the gravity data as well except for gravity data tilts due to regional and terrain effects. Conceivably increased magnetic sensitivity and working with the detector on an eight foot tall staff (to reduce near surface magnetic "noise") would benefit the magnetic correlation. Of course, there is no easy or reliable method to calculate absolute depths at this scale from the magnetic data alone.

Bedrock faulting is indicated on lines 1, 2, 7, 8, 9 and 10 and generally correlates fairly well on both magnetics and gravity, except that on line 10 magnetics, there is no definite indication of the locus of faulting. Line 1 magnetics suggests a northerly dip to the faulting at that point. A table of fault indications follows:

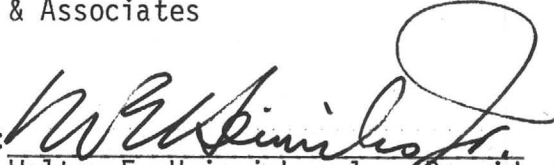
1. Magnetic line 1 sta. 4.25 (325' distance) N. dipping (?)
2. Gravity line 1 near station 4.
3. Gravity line 2 between stations 1 & 2.
4. Magnetic line 2 between stations 1 & 1.4 and 6 & 6.6.
5. Magnetic line 7 between stations 1 & 3.
6. Gravity line 7 between stations 6 & 7 and 1 & 2.
7. Gravity line 8 near station 3.
8. Magnetic line 8 between stations 3 & 4.
9. Gravity line 9 between stations 4 & 5.
10. Magnetic line 9 near station 5.
11. Gravity line 10 near station 10 or between stations 8 to 11.

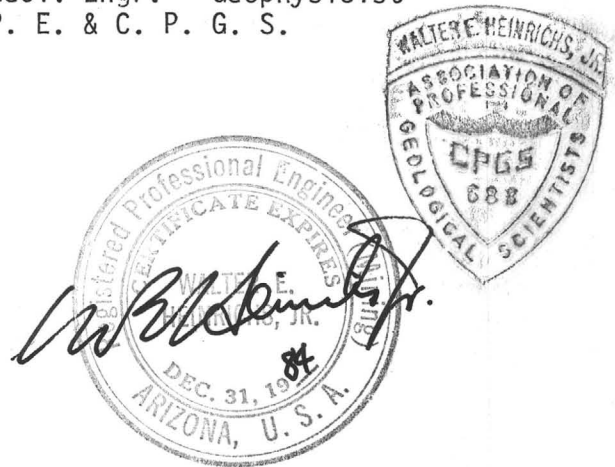
ACKNOWLEDGEMENTS

Assistance of La Paz Mining Incorporated in the form of Dan Lewis and Grover Heinrichs both in the field and in the office and Walter Whitlow in the field is most appreciated.

Respectfully submitted
Heinrichs GEOEXploration Co., Inc.
& Associates

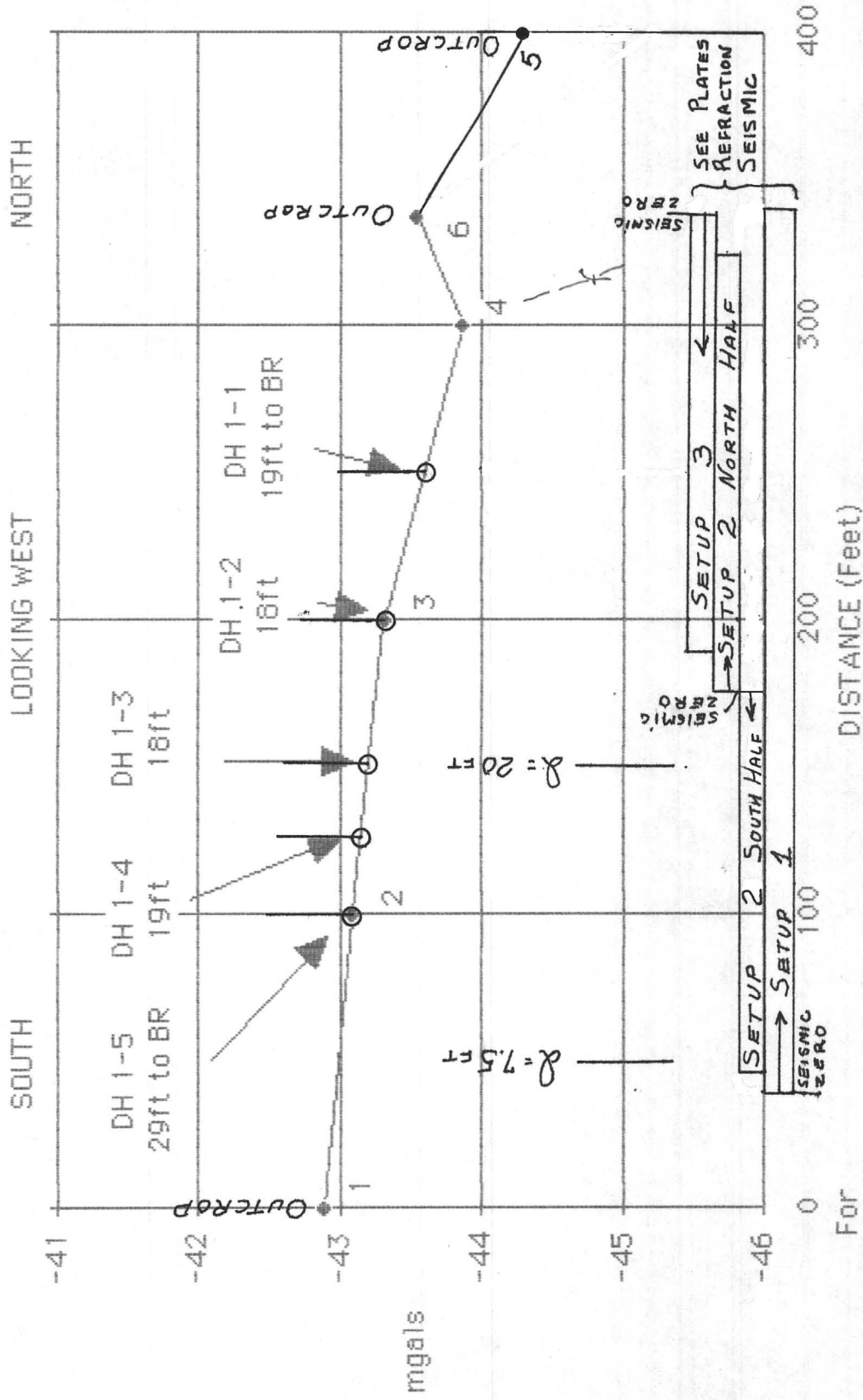
By:


Walter E. Heinrichs, Jr., President
Geol. Engr. - Geophysicist
P. E. & C. P. G. S.



14 November 1984
P. O. Box 5964
Tucson, Arizona 85703
(602) 623-0578
GEOEX Job #1718

LINE 1 GRAVITY (Simple Bouguer Values)



GEOEX Job # 1718
November 9, 1984

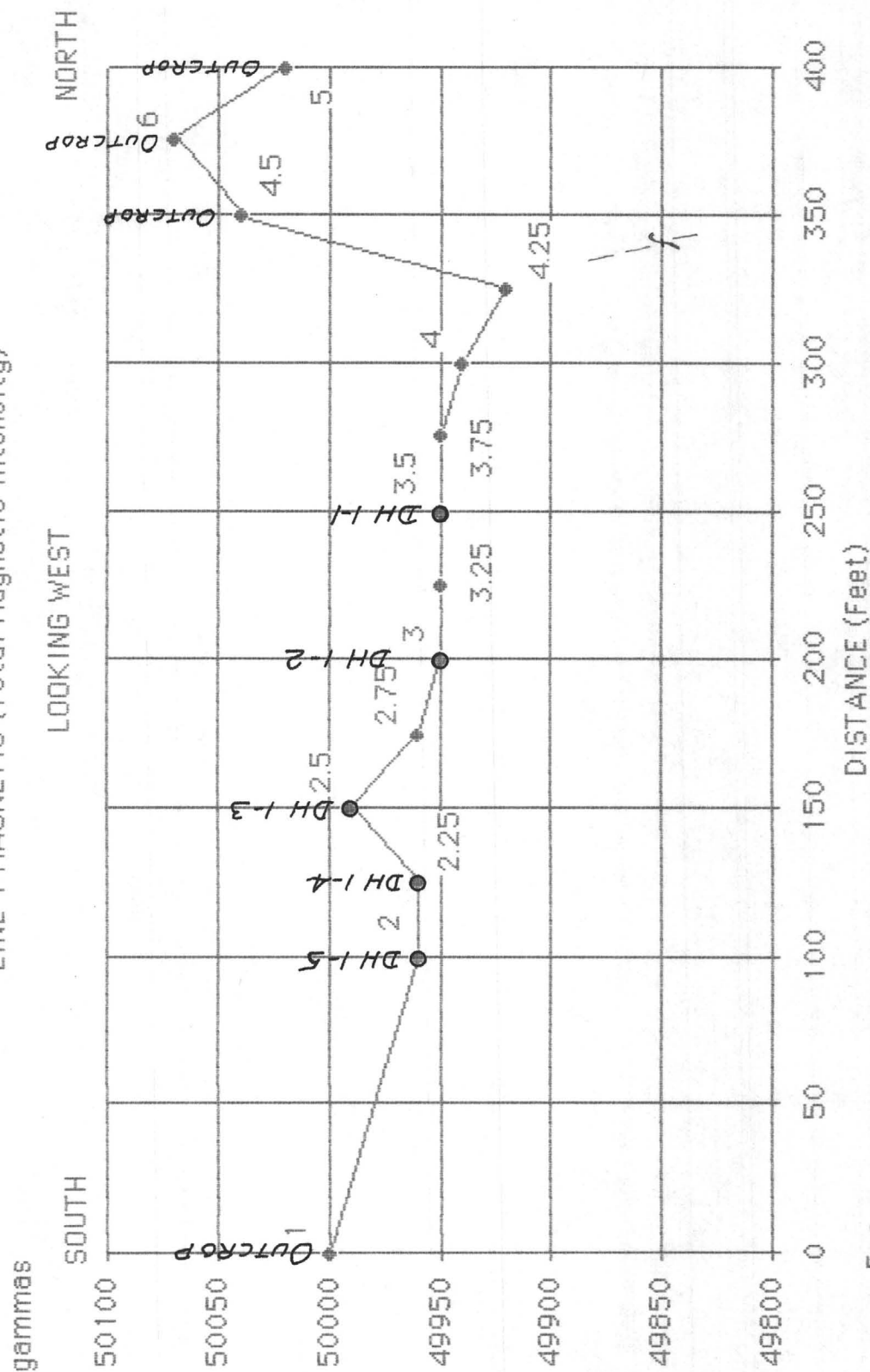


GEODEXPLORATION CO.
P.O. BOX 5964, TUCSON AZ 85703

HEINRICH

For
La Paz Mining Inc.
JV Mining Claims
Gonzales Wash
La Paz County, Arizona

LINE 1 MAGNETIC (Total Magnetic Intensity)



For

La Paz Mining Inc.
JV Mining Claims
Gonzales Wash
La Paz County, Arizona

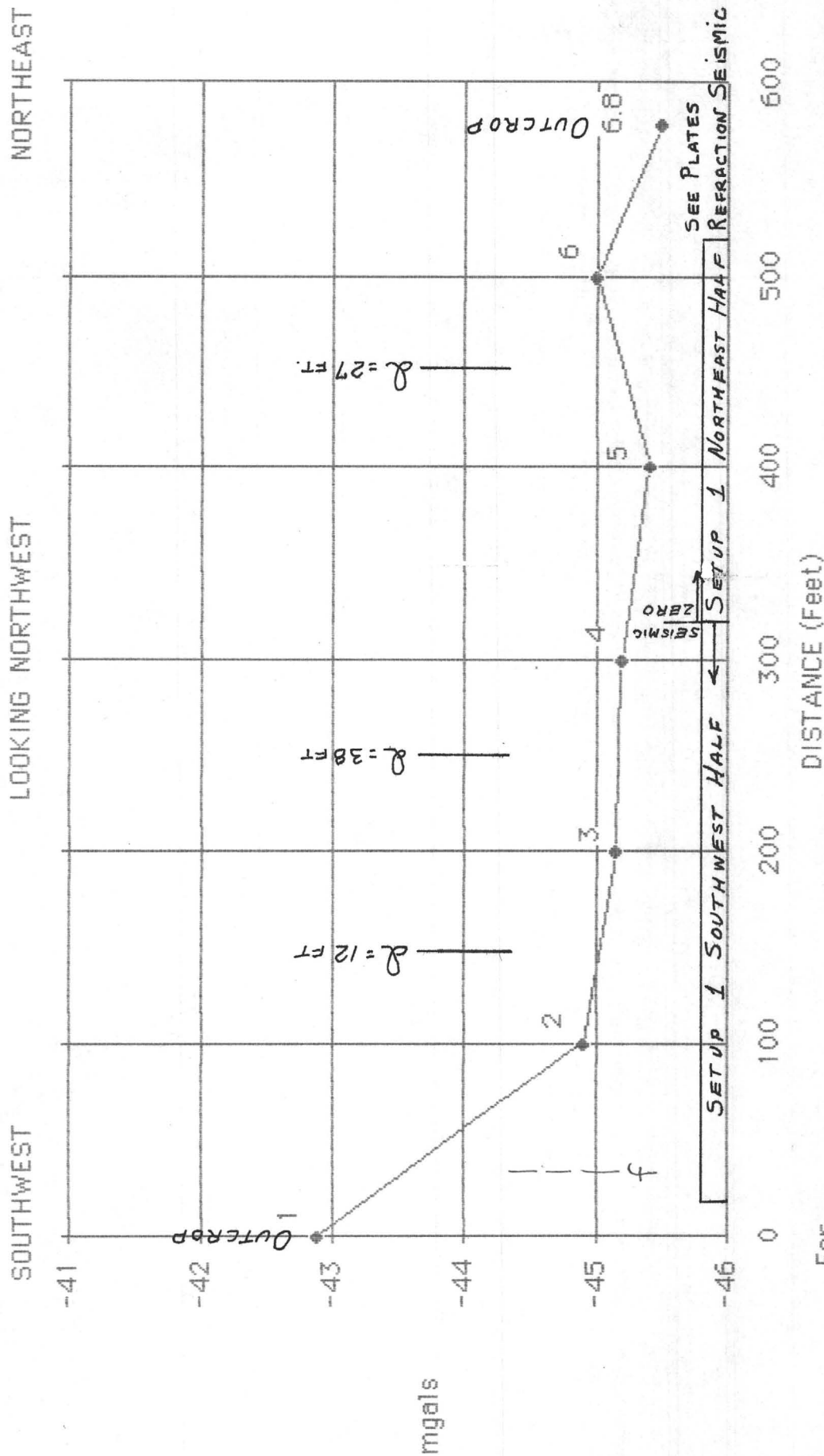
GEOEX Job # 1718
November 9, 1984

HEINRICHS



GEODEXPLORATION Co.
P.O. BOX 5964, TUCSON AZ 85703

LINE 2 GRAVITY (Simple Bouguer Values)



For

La Paz Mining Inc.
JV Mining Claims
Gonzales Wash

La Paz County, Arizona

GEDEX Job # 1718
November 9, 1984

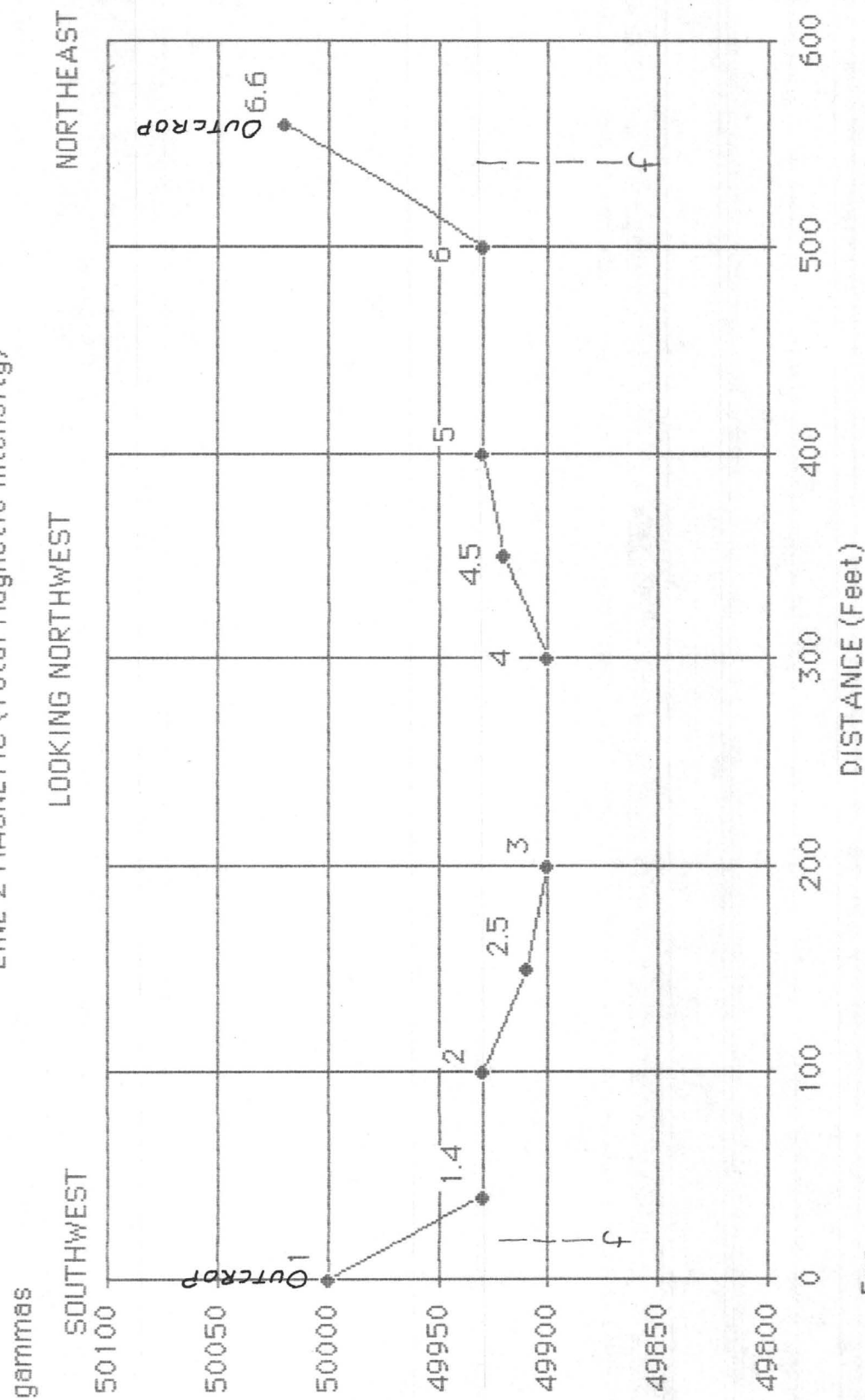
HEINRICHS



GEDEX Exploration Co.

P.O. BOX 5964, TUCSON AZ 85703

LINE 2 MAGNETIC (Total Magnetic Intensity)



For

La Paz Mining Inc.
JV Mining Claims
Gonzales Wash
La Paz County, Arizona

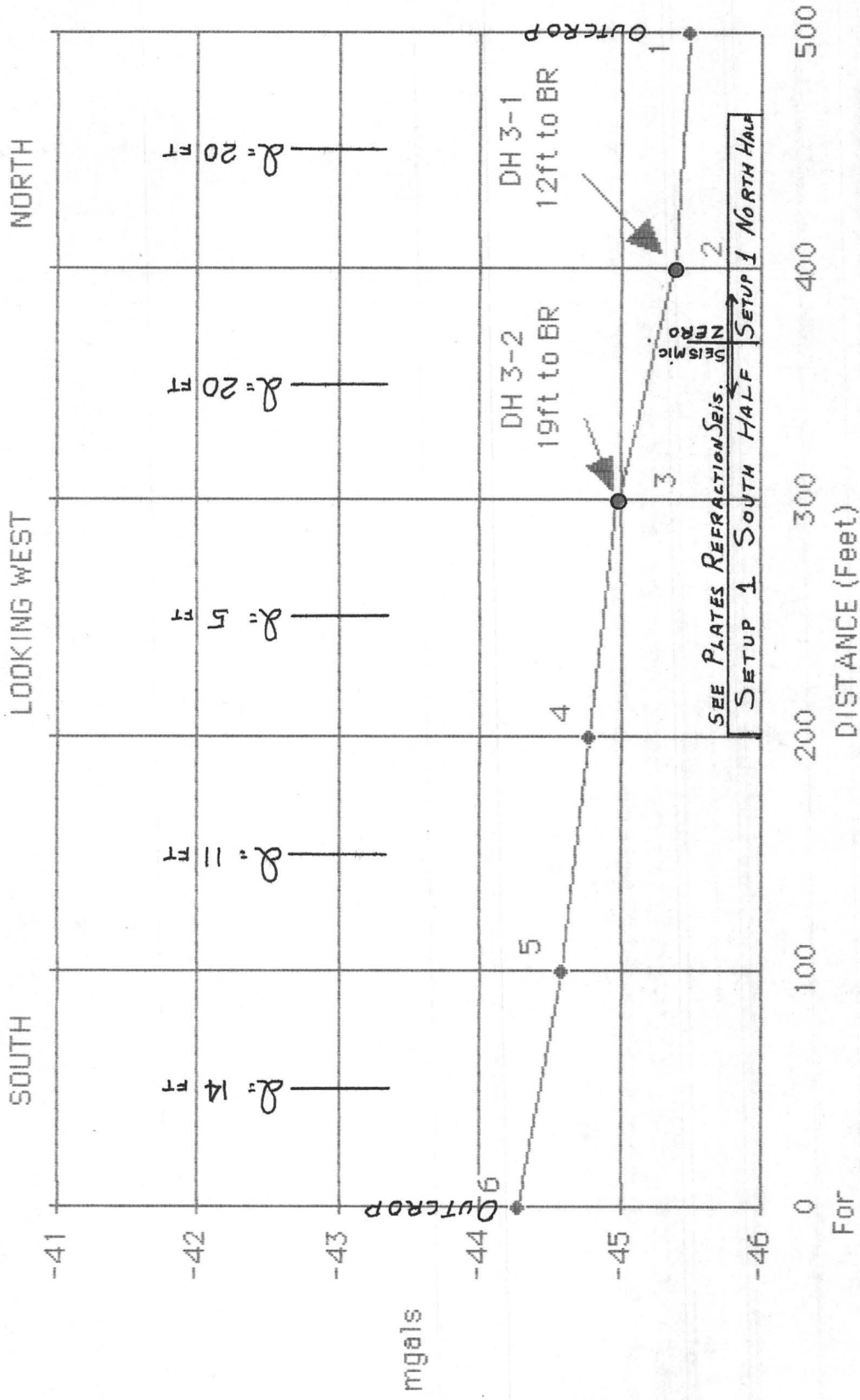
GEOEX Job # 1718
November 9, 1984

HEINRICHS



GEOEX Exploration Co.
P.O. BOX 5964, TUCSON AZ 85703

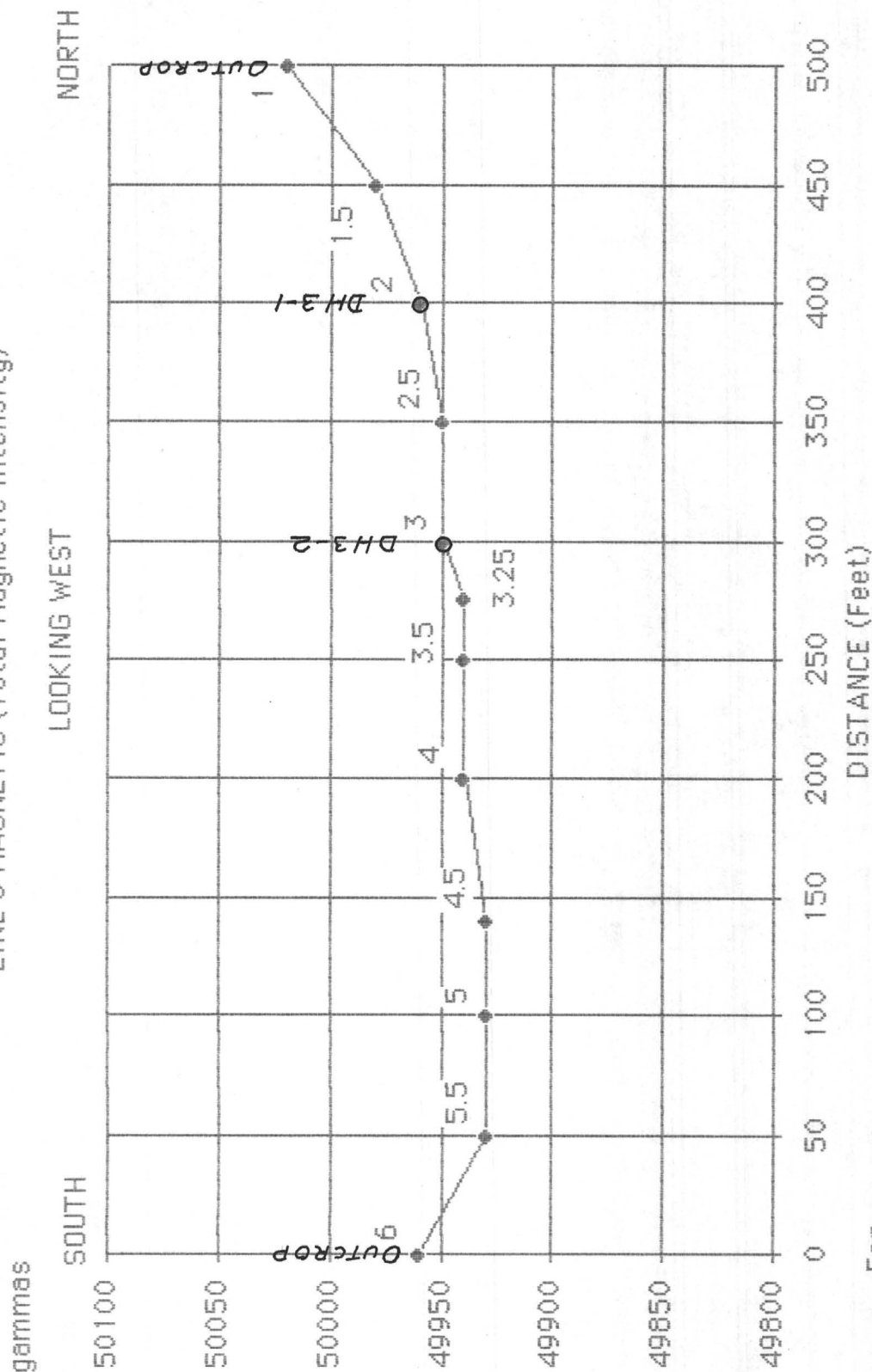
LINE 3 GRAVITY (Simple Bouguer Values)



For
 La Paz Mining Inc.
 JV Mining Claims
 Gonzales Wash
 La Paz County, Arizona

GEDEX Job # 1718
 November 9, 1984

LINE 3 MAGNETIC (Total Magnetic Intensity)



For

La Paz Mining Inc.

JV Mining Claims

Gonzales Wash

La Paz County, Arizona

GEOEX Job # 1718

November 9, 1984

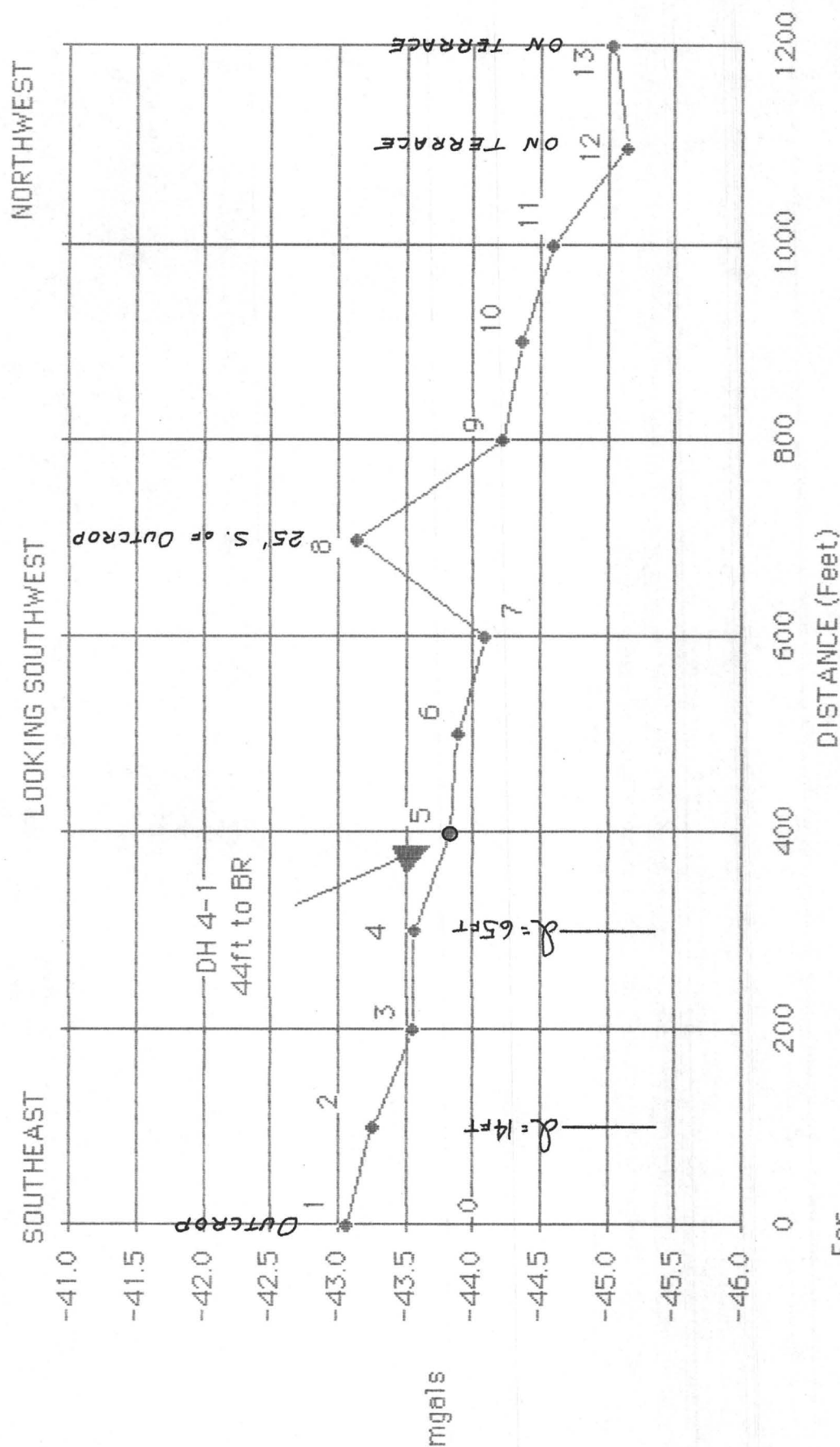
HEINRICHS



GEOEX Exploration Co.

P.O. BOX 5964, TUCSON AZ 85703

LINE 4 GRAVITY (Simple Bouguer Values)



For
 La Paz Mining Inc.
 JV Mining Claims
 Gonzales Wash
 La Paz County, Arizona

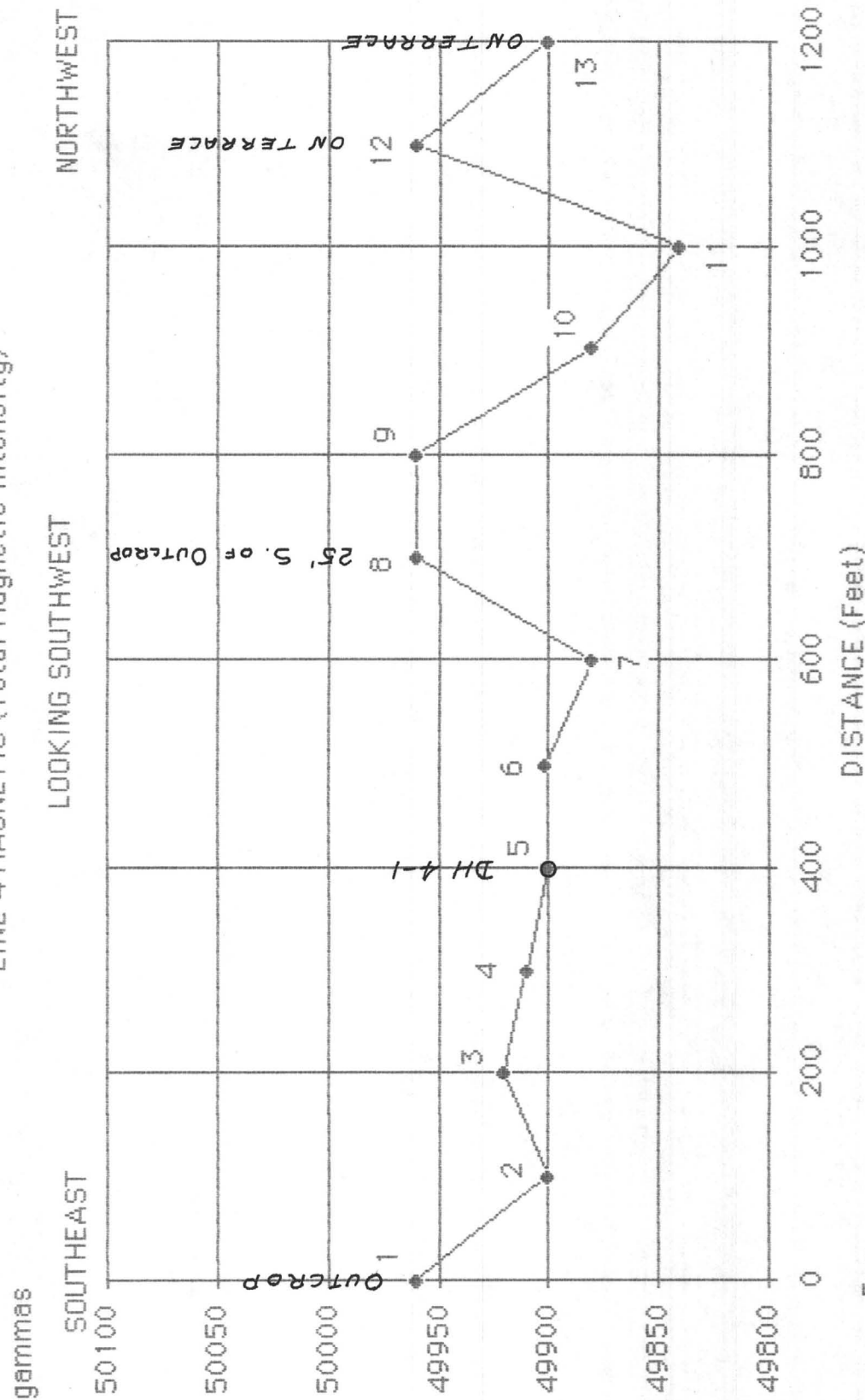
GEDEX Job # 1718
 November 9, 1984



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GEDEX Exploration Co.
 P.O. BOX 5964, TUCSON AZ 85703

LINE 4 MAGNETIC (Total Magnetic Intensity)



For
La Paz Mining Inc.
JV Mining Claims
Gonzales Wash
La Paz County, Arizona

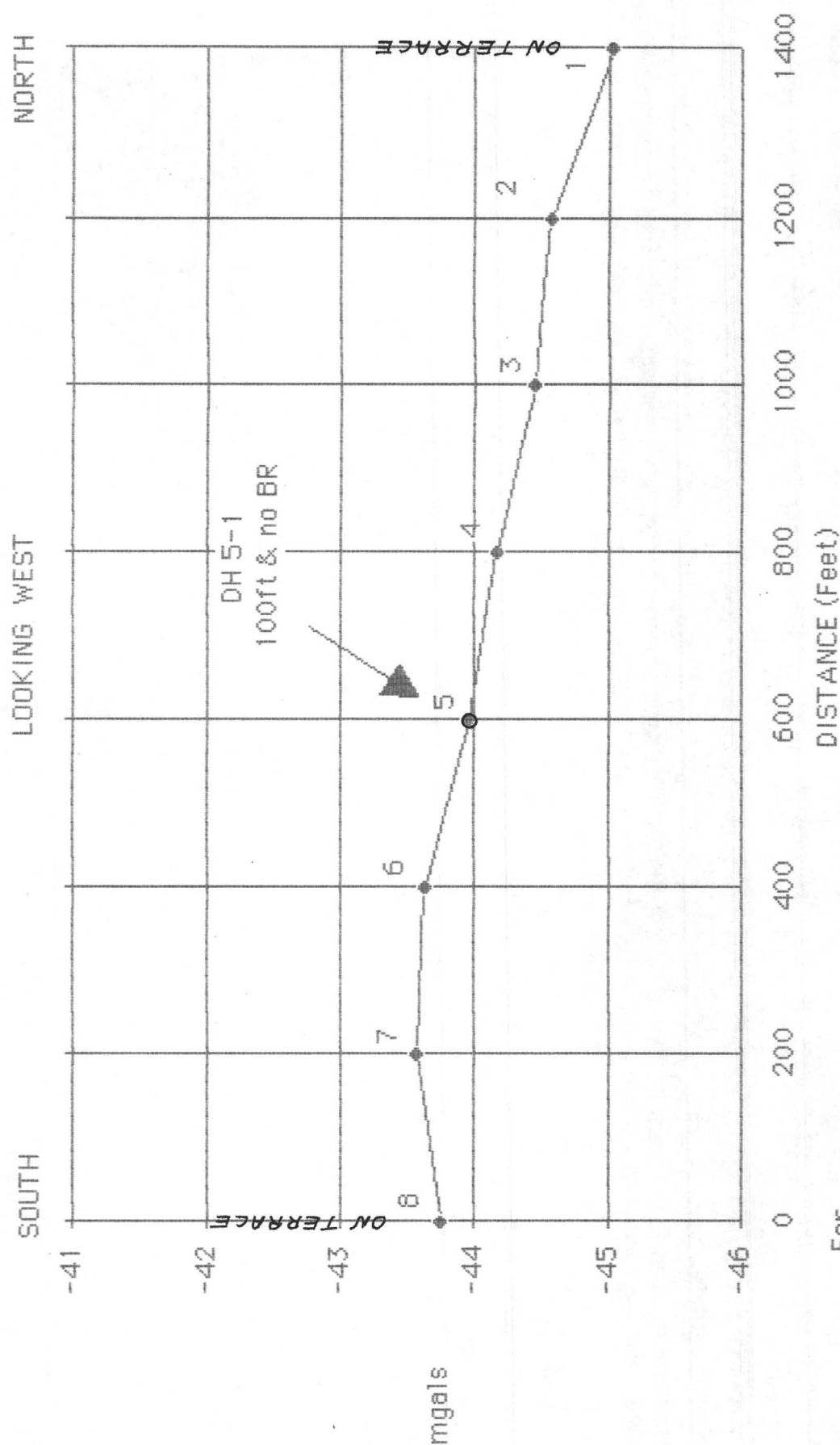
GEDEX Job # 1718
November 9, 1984

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GEDEX Exploration Co.
P.O. BOX 5964, TUCSON AZ 85703

LINE 5 GRAVITY (Simple Bouguer Values)



For
La Paz Mining Inc.
JV Mining Claims
Gonzales Wash
La Paz County, Arizona

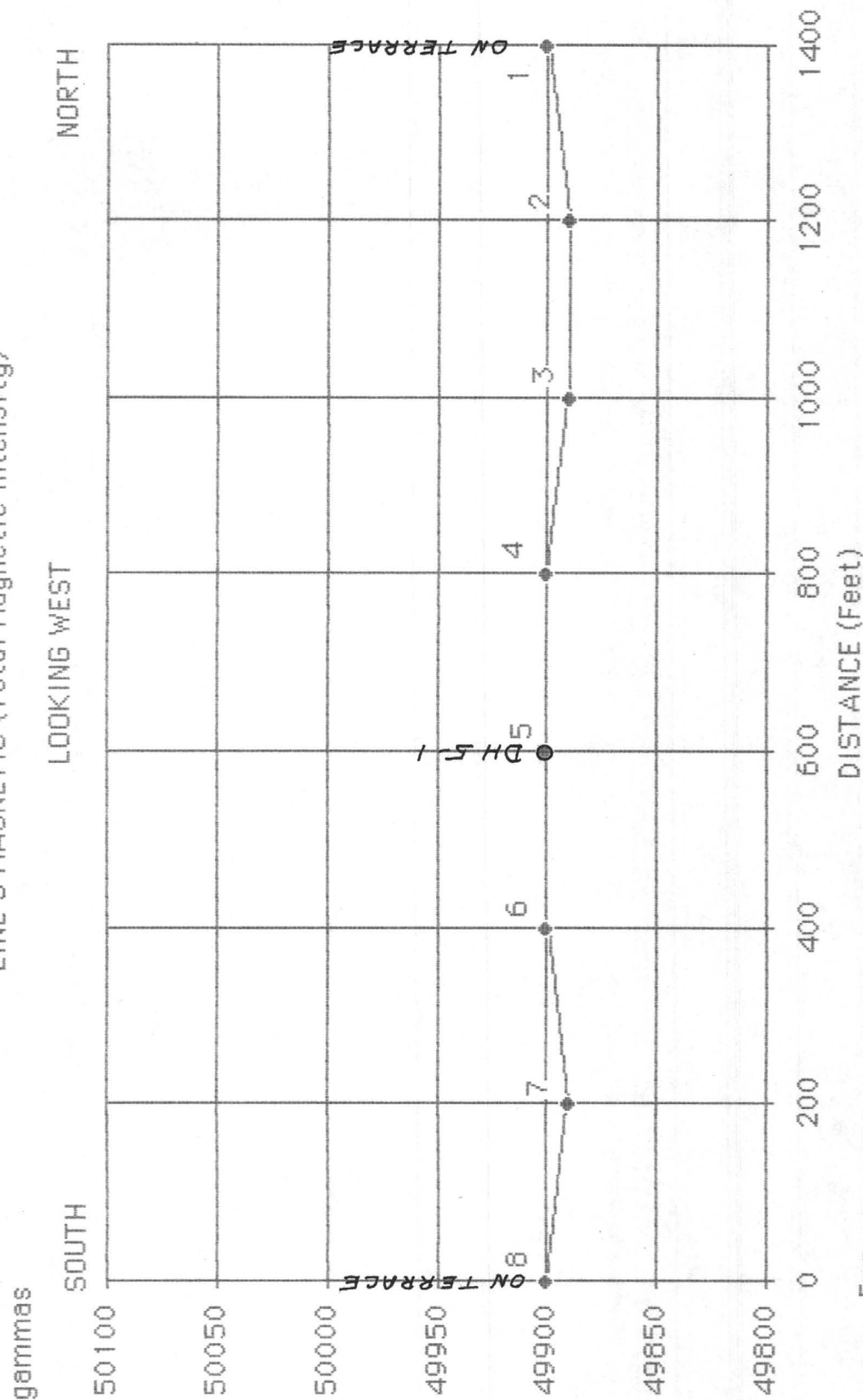
GEOEX Job # 1718
November 9, 1984

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GEOEX Exploration Co.
P.O. BOX 5964, TUCSON AZ 85703

LINE 5 MAGNETIC (Total Magnetic Intensity)



For

La Paz Mining Inc.
JV Mining Claims
Gonzales Wash

La Paz County, Arizona

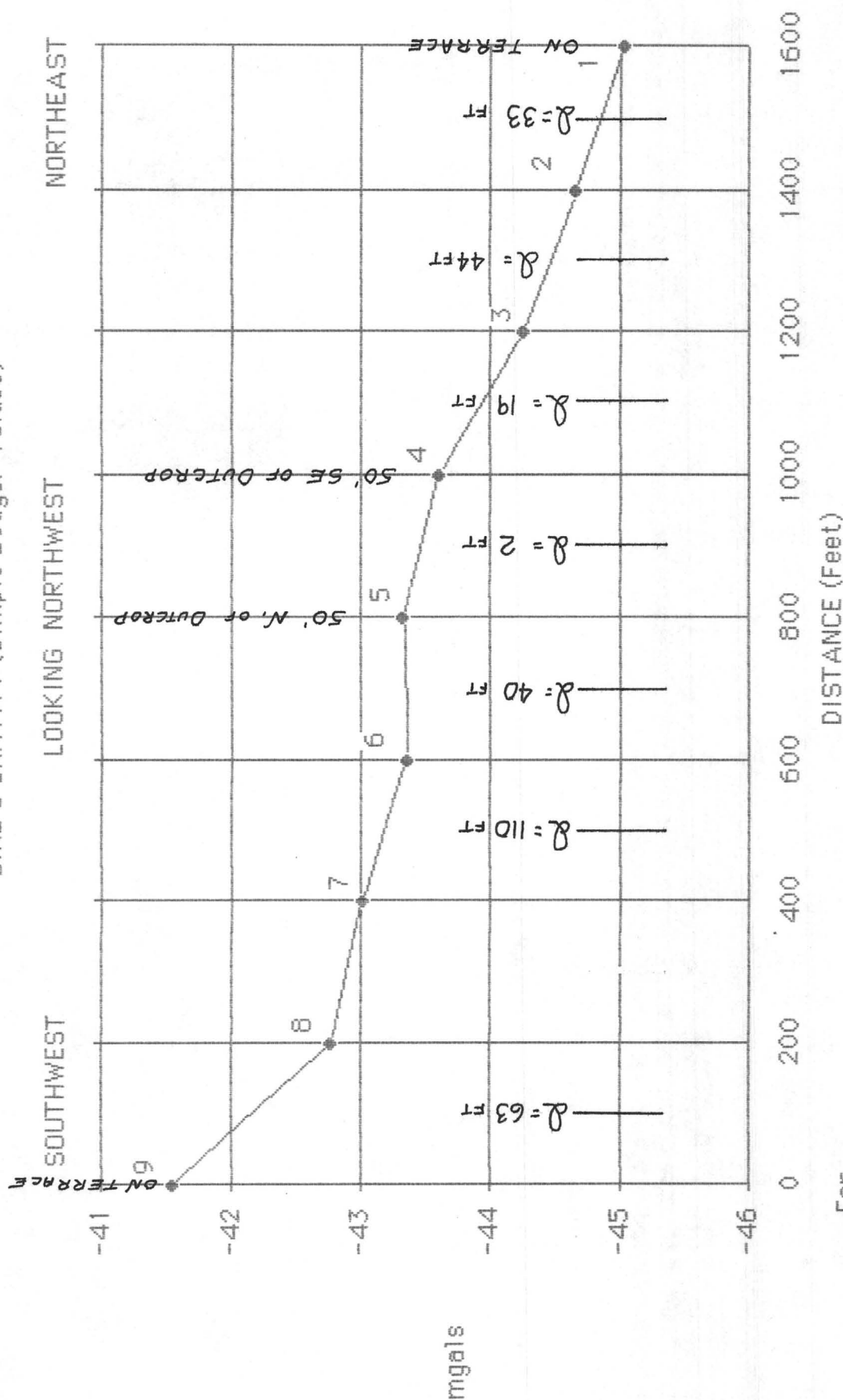
GEOEX Job # 1718
November 9, 1984

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GEOEX Exploration Co.
P.O. BOX 5964, TUCSON AZ 85703

LINE 6 GRAVITY (Simple Bouguer Values)



For
 La Paz Mining Inc.
 JV Mining Claims
 Gonzales Wash
 La Paz County, Arizona

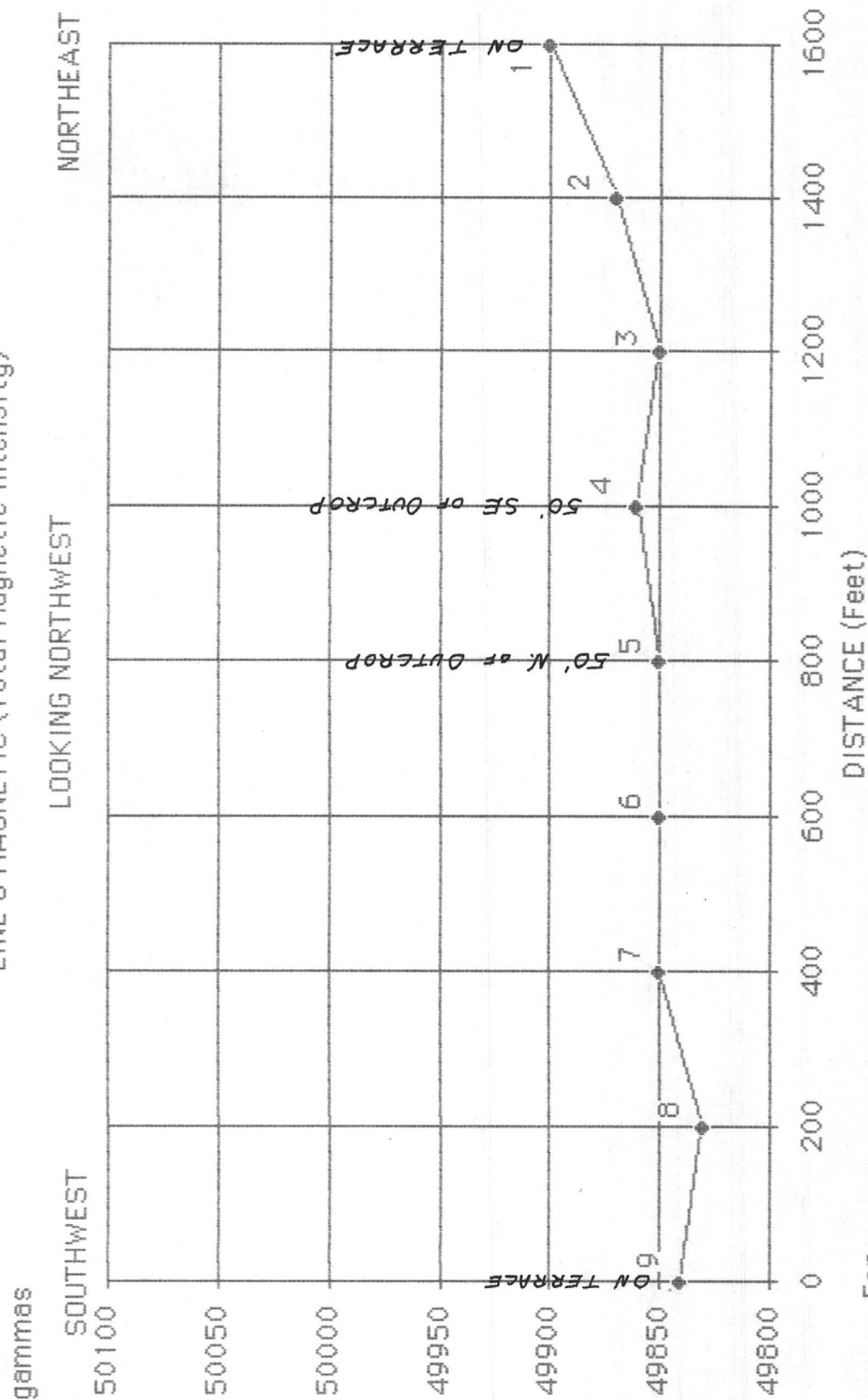
GEOEX Job # 1718
 November 9, 1984



HEINRICHS

GEOEXPLORATION CO.
 P.O. BOX 5964, TUCSON AZ 85703

LINE 6 MAGNETIC (Total Magnetic Intensity)



For

La Paz Mining Inc.
JV Mining Claims
Gonzales Wash
La Paz County, Arizona

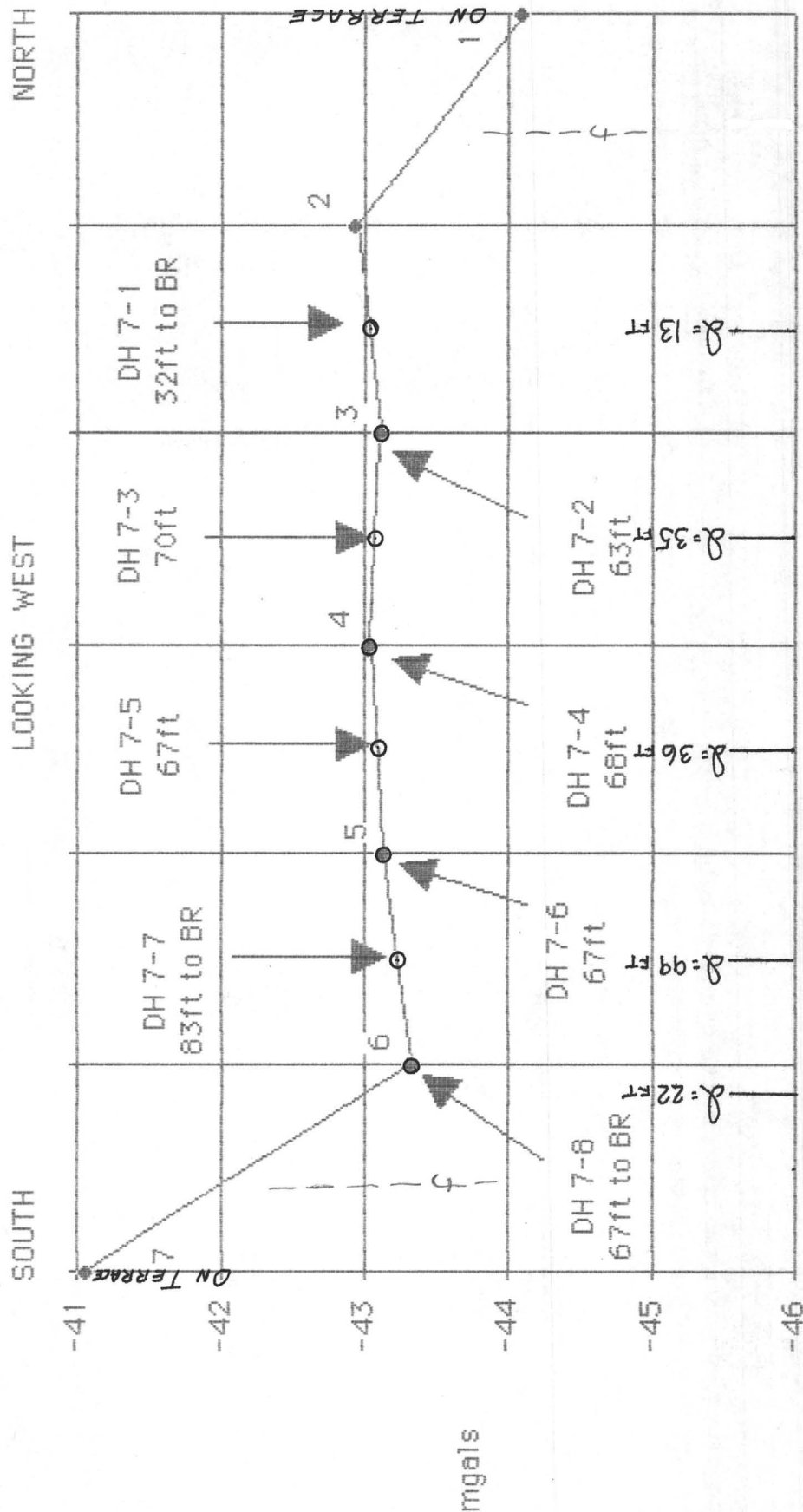
GEDEX Job # 1718
November 9, 1984



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P.O. BOX 5964, TUCSON AZ 85703

LINE 7 GRAVITY (Simple Bouguer Values)



SEE PLATES
REFRACTION SEISMIC
GEDEX Job # 1718
November 9, 1984

→ SETUP 3 North

SEISMIC ZERO

→ SETUP 1 North
→ SETUP 2 South
→ SETUP 3 South
→ SETUP 2 North

For

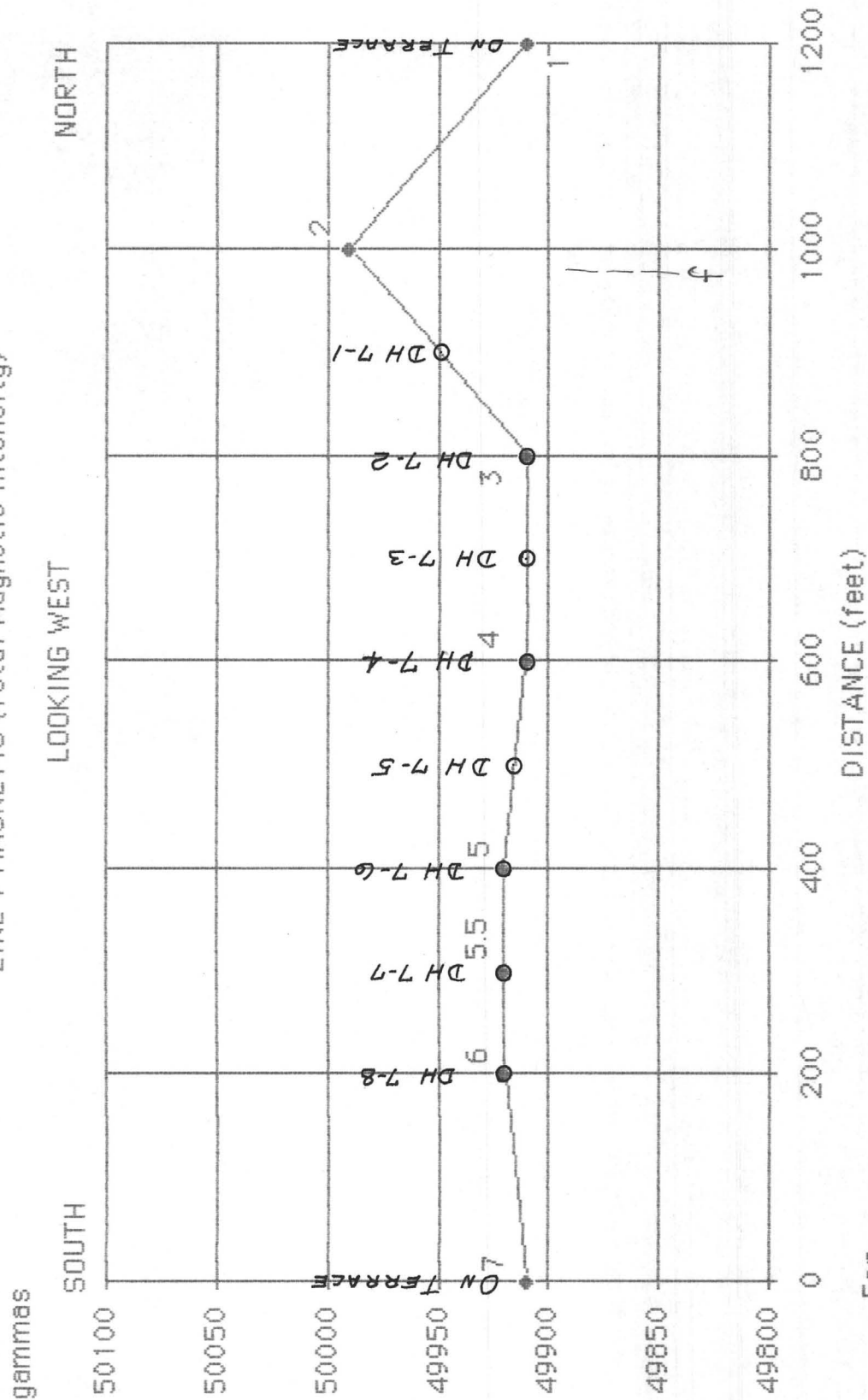
La Paz Mining Inc.
JV Mining Claims
Gonzales Wash
La Paz County, Arizona



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GEDEX Exploration Co.
P.O. BOX 5964, TUCSON AZ 85703

LINE 7 MAGNETIC (Total Magnetic Intensity)



For
 La Paz Mining Inc.
 JV Mining Claims
 Gonzales Wash
 La Paz County, Arizona

GEDEX Job # 1718
 November 9, 1984



HEINRICHS

GEDEXploration Co.
 P.O. BOX 5964, TUCSON AZ 85703

DH 8-1
65ft to BR

OUTCROP

0 1 2 3 4

mgals

SEISMIC ZERO

SETUP 1 SOUTHWEST

SETUP 2 NORTHEAST

SEE PLATES REFRACTION SEISMIC

La Paz Mining Inc.
JV Mining Claims
Gonzales Wash

La Paz County, Arizona

DISTANCE (Feet)

400

OMO

200

GEOEX Job # 1718
November 9, 1984

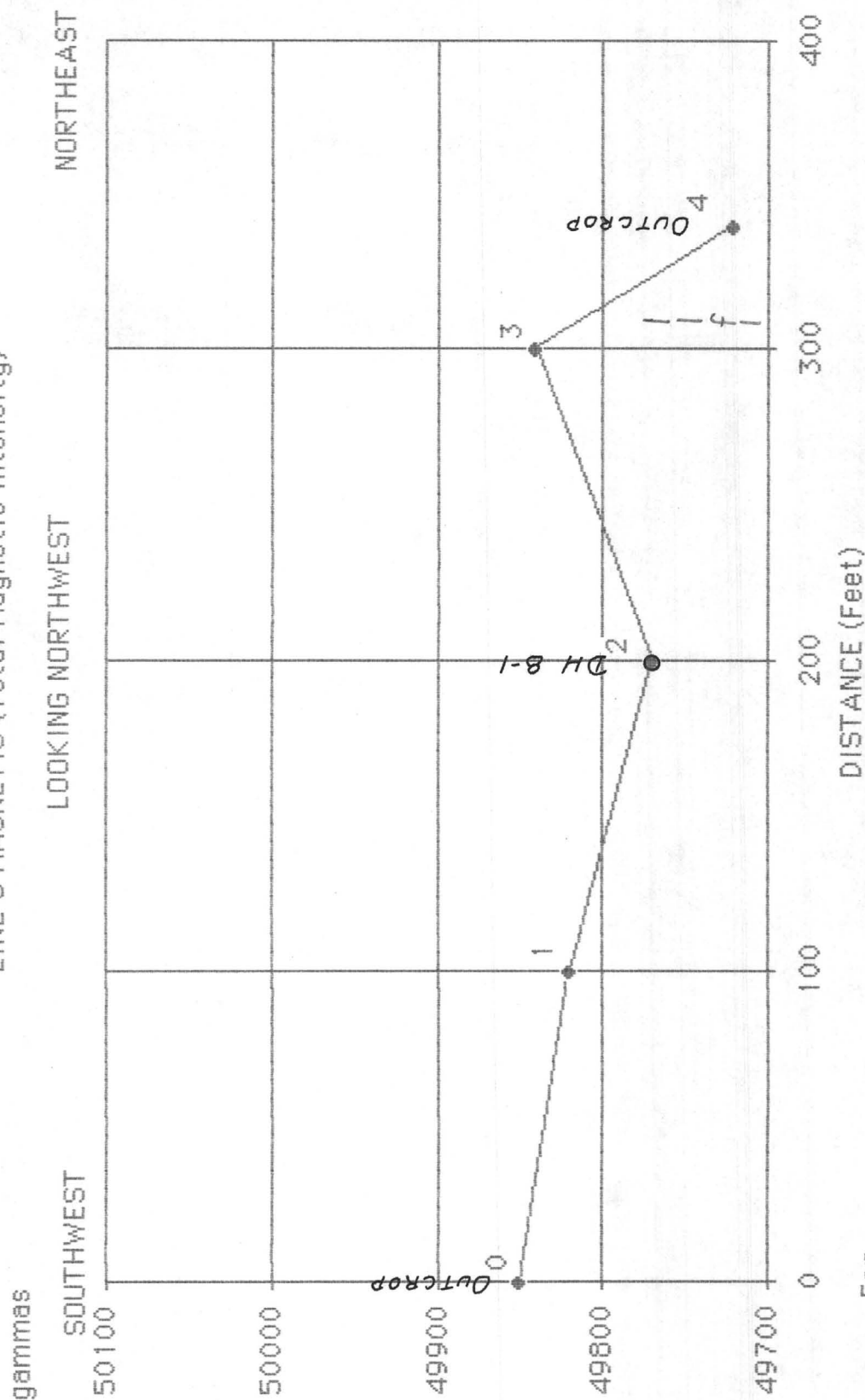


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GEOExploration Co.

P.O. BOX 5964, TUCSON AZ 85703

LINE 8 MAGNETIC (Total Magnetic Intensity)



For
 La Paz Mining Inc.
 JV Mining Claims
 Gonzales Wash
 La Paz County, Arizona

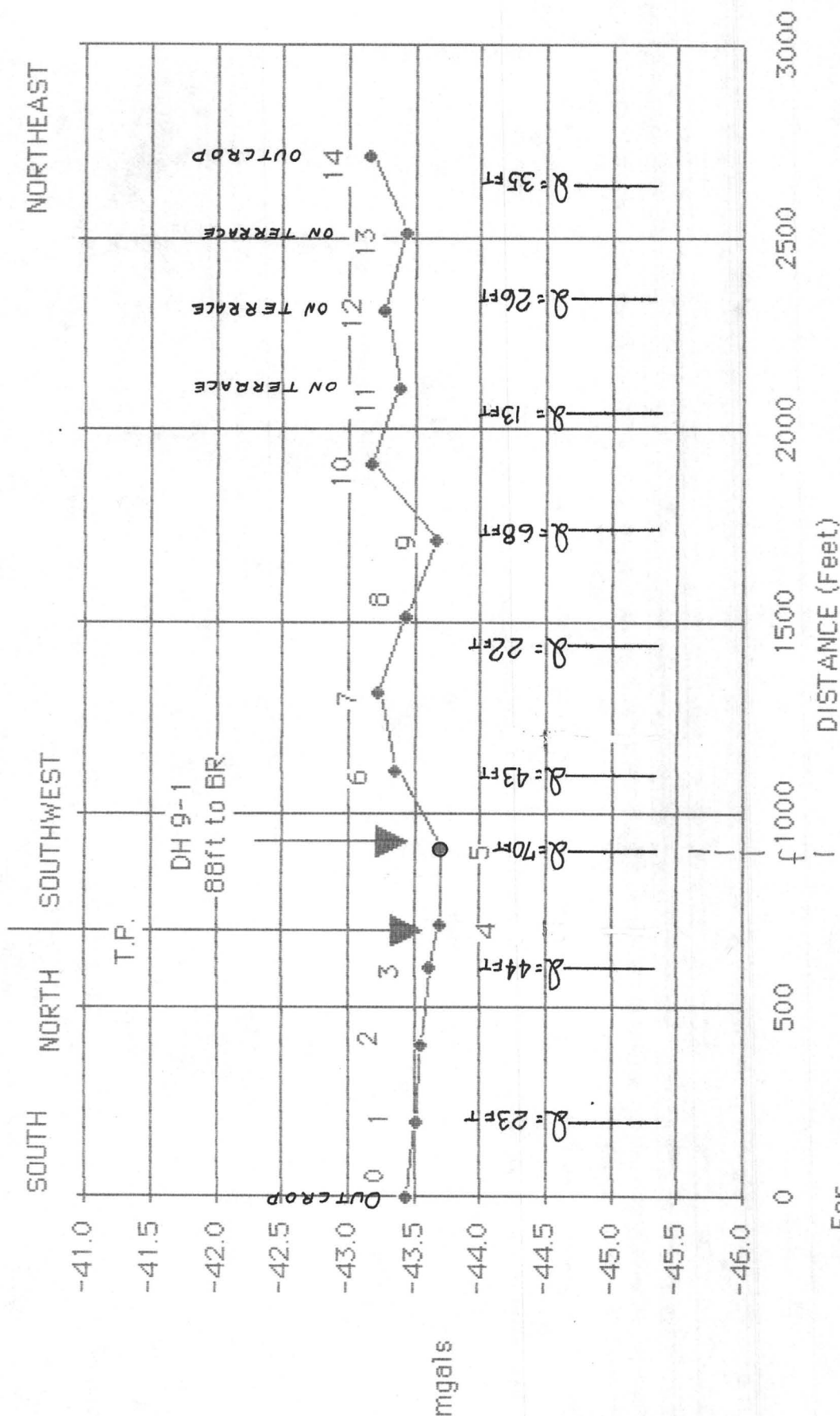
GEDEX Job # 1718
 November 9, 1984



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 P.O. BOX 5964, TUCSON AZ 85703

LINE 9 GRAVITY (Simple Bouguer Values)



For
 La Paz Mining Inc.
 SL Mining Claims
 Gonzales Wash
 La Paz County, Arizona

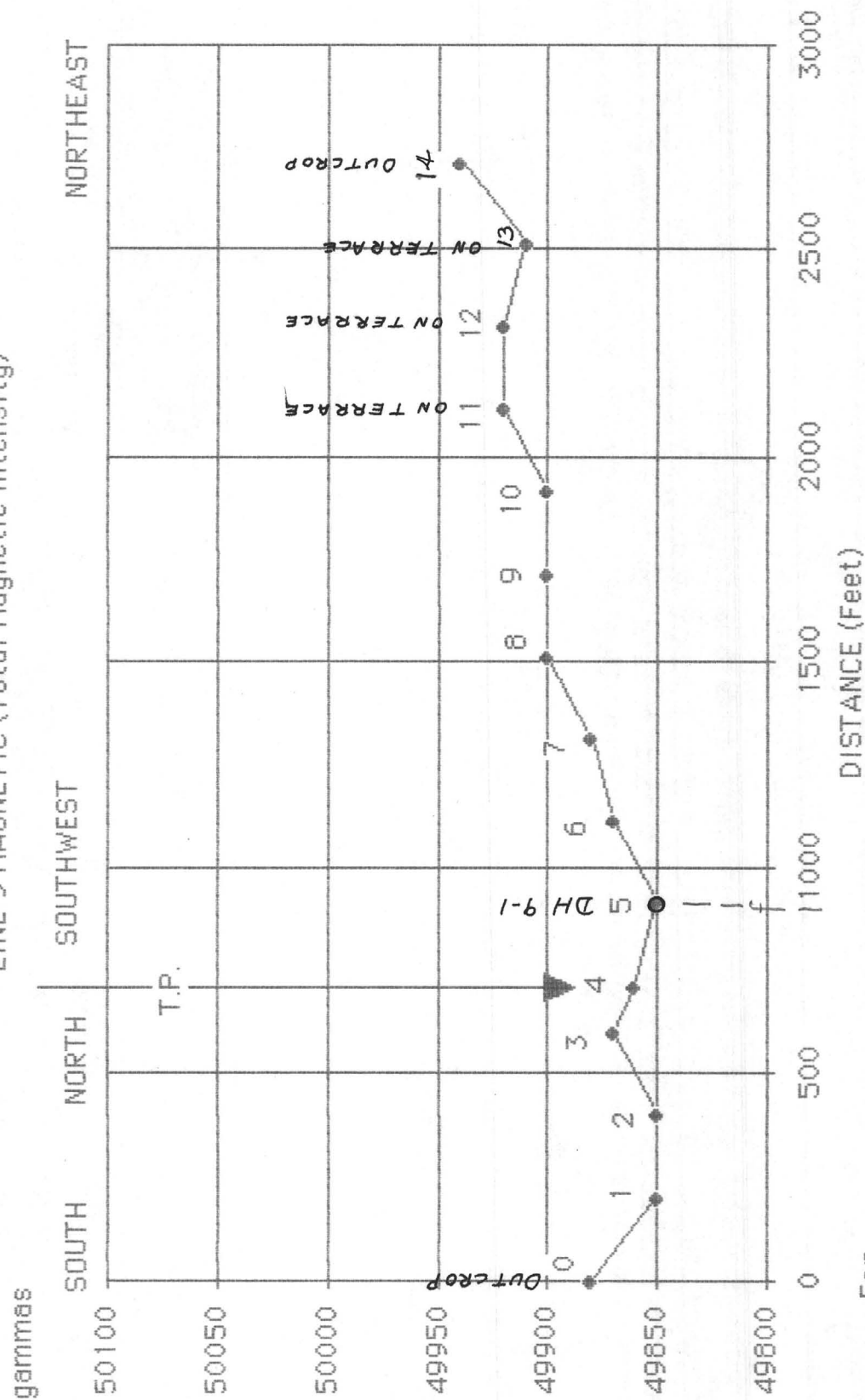
GEOEX Job # 1718
 November 9, 1984



HEINRICHS

GEOEXploration Co.
 P.O. BOX 5964, TUCSON AZ 85703

LINE 9 MAGNETIC (Total Magnetic Intensity)



For

La Paz Mining Inc.
SL Mining Claims
Gonzales Wash
La Paz County, Arizona

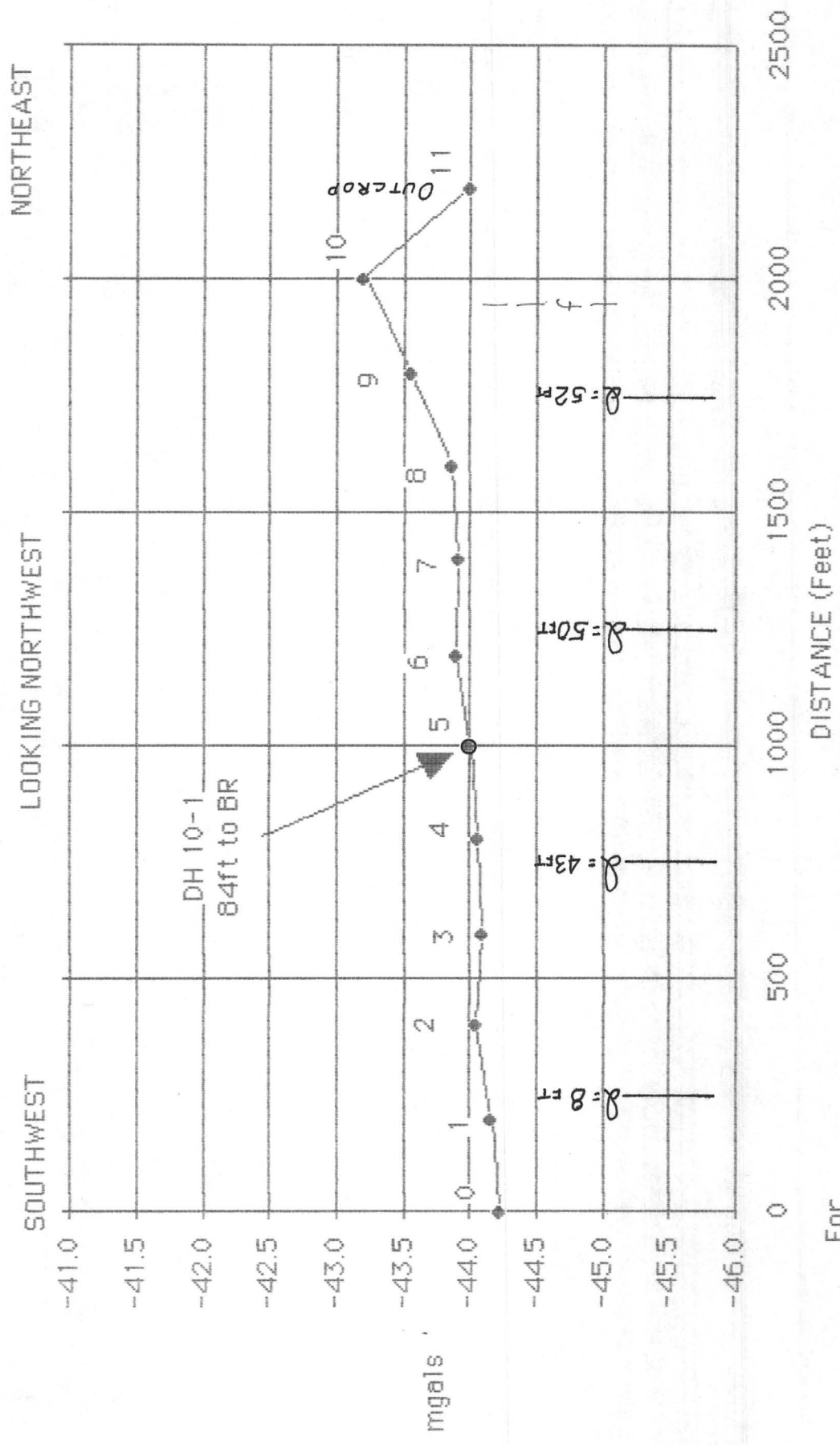
GEOEX Job # 1718
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GEOEX Exploration Co.
P.O. BOX 5964, TUCSON AZ 85703

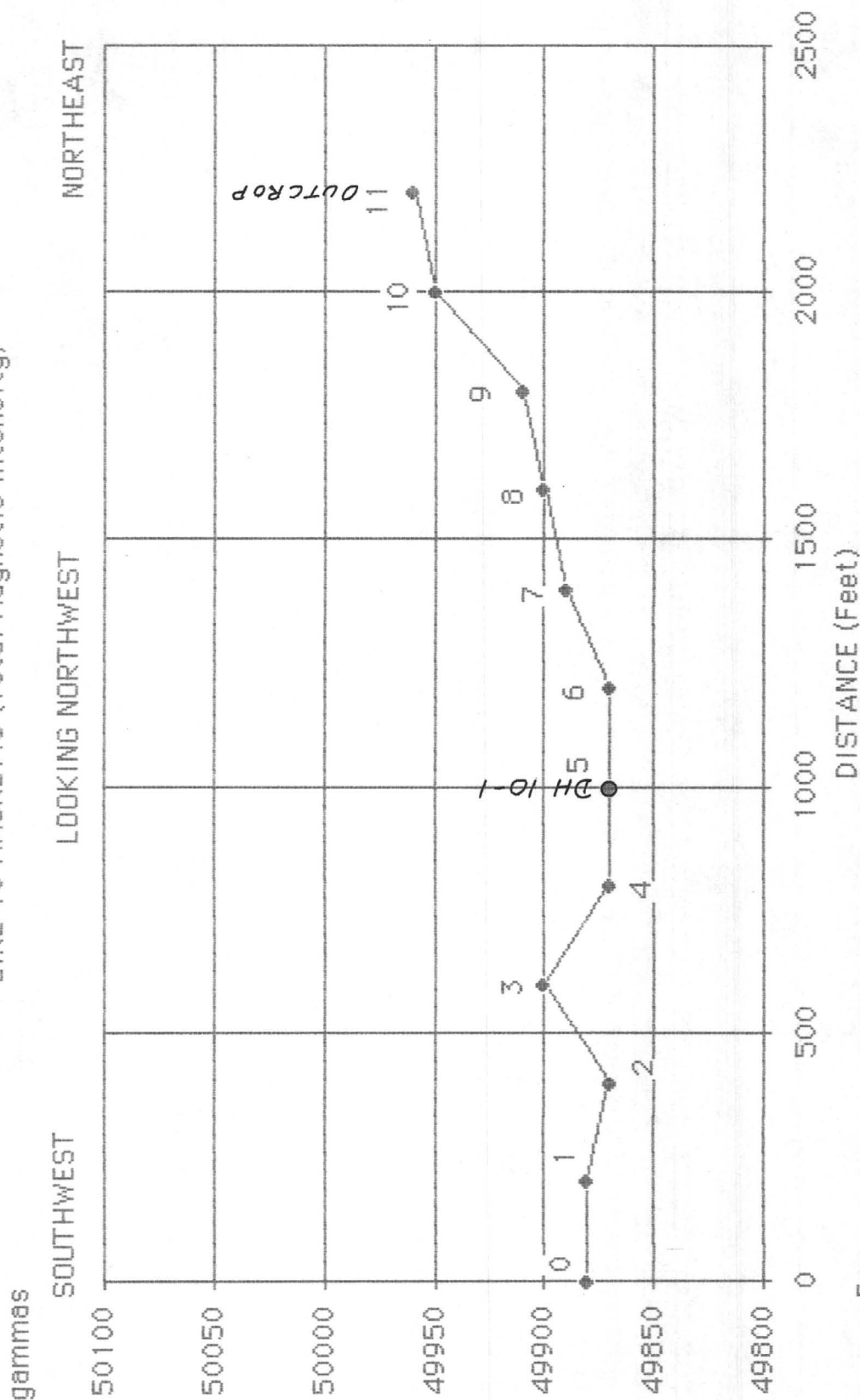
LINE 10 GRAVITY (Simple Bouguer Values)



For
 La Paz Mining Inc.
 SL Mining Claims
 Gonzales Wash
 La Paz County, Arizona

GEDEX Job # 1718
 November 9, 1984

LINE 10 MAGNETIC (Total Magnetic Intensity)



For
 La Paz Mining Inc.
 SL Mining Claims
 Gonzales Wash
 La Paz County, Arizona

GEDEX Job # 1718
 November 9, 1984

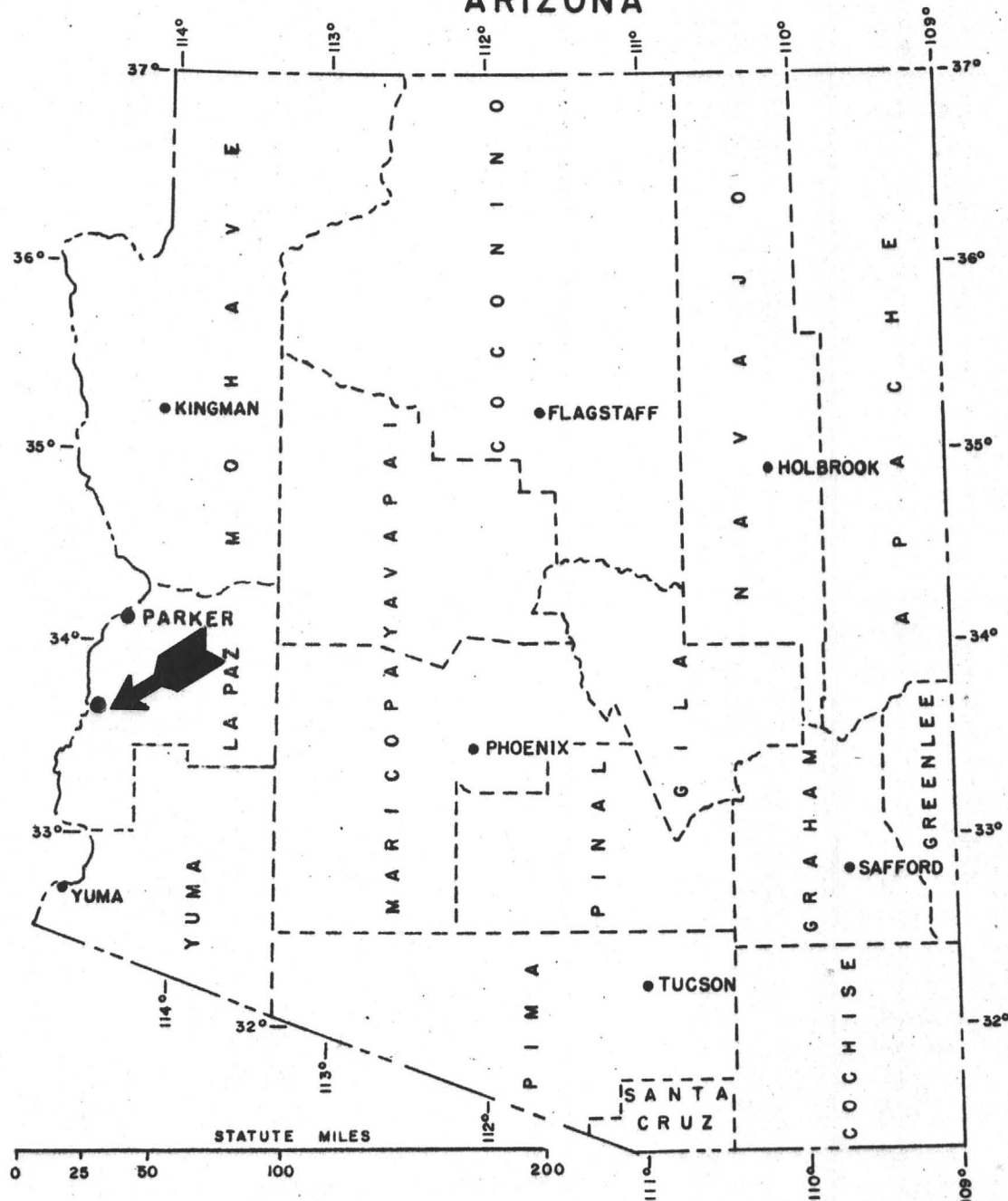


HEINRICHS

GEDEX Exploration Co.
 P.O. BOX 5964, TUCSON AZ 85703

GENERAL LOCATION OF
GONZALES WASH PLACER PROJECT
La Paz County

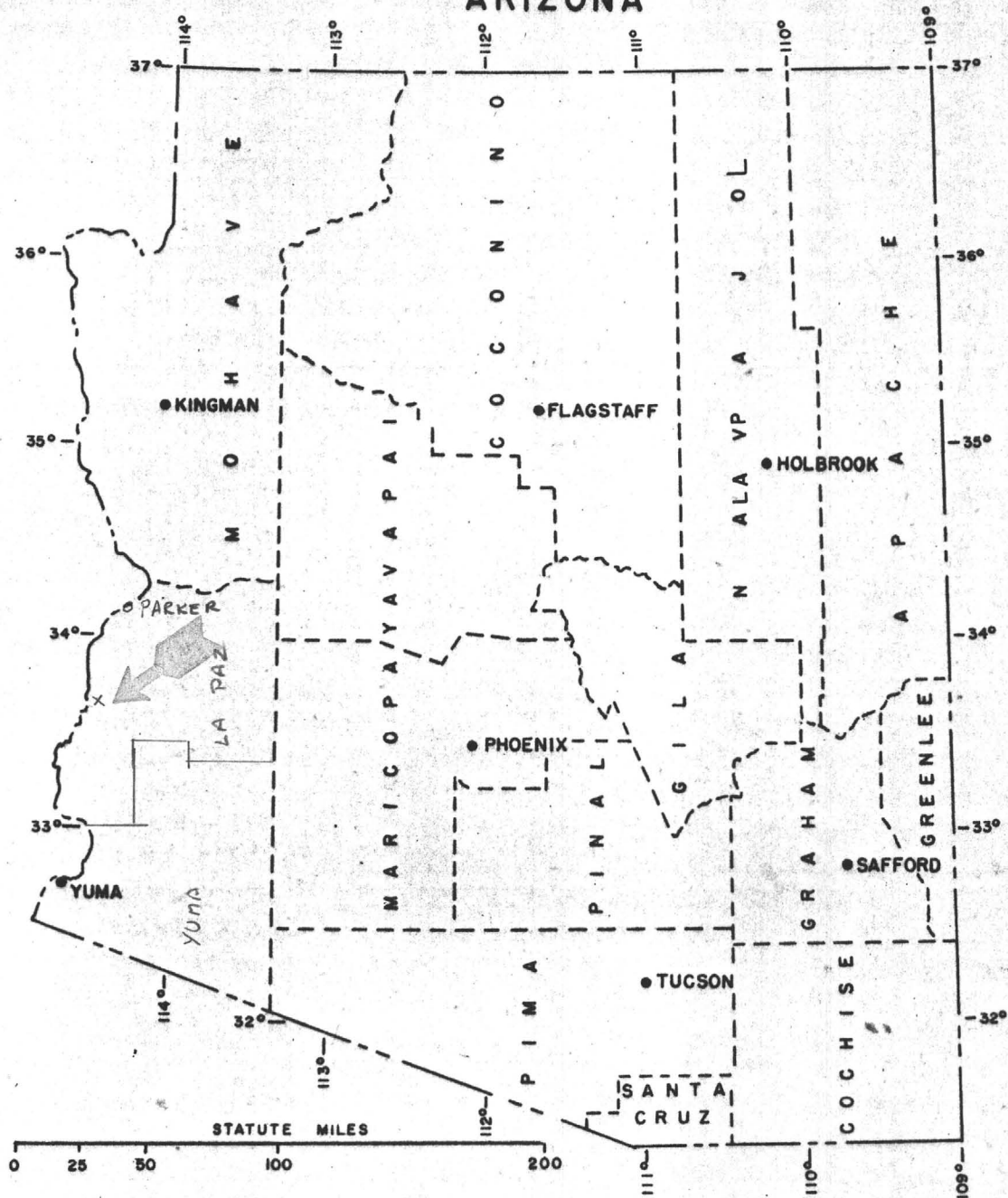
ARIZONA



GENERAL LOCATION OF

Gonzales Wash Pacer Project
LA PAZ County

ARIZONA



55837
55700

La Paz

11-15-84
2

137 copies

Magnetics

A Geometrics model 836 ^{G-} ^{with 10 gamma resolution} was used.

Absolute total magnetic intensity

on the survey

relief observed (was from a minimum of 49720 gammas at station 4 line 8 to a maximum of 50070 gammas at station 4.75 on line 1.)

Interestingly these readings were both on outcrop, but the lower reading was next to the cliff on the north side of the 500.

Magnetics was observed on lines 1 thru 10 on stations varying from 25 to 100 feet apart. Diurnal

corrections were applied but not [rigorously] ^{quite} as can be done because the diurnal drift was fairly low.

With significant exceptions, the ~~seems to~~ magnetic results were about as expected except that the total magnetic relief was smaller than anticipated. No major concentrations of magnetite were identified but station spacing was likely too broad for that kind of [detection] [definite] - assuming that ~~they~~ do in fact exist under the area covered. ^{Such concentrations}

If additional magnetics ^{coverage} is attempted specifically for this purpose a 0.5 or 1.0 gamma instrument is recommended [with] [and] a station spacing of ~~both~~ 10 feet ^{probably} no more than and maybe as little as 5 feet.

INDEX MAP
Gonzales Wash Project
La Paz Mining Inc.
La Paz County, Arizona
Heinrichs GEOEXploration Co., Inc.
11/14/84 Job #1718

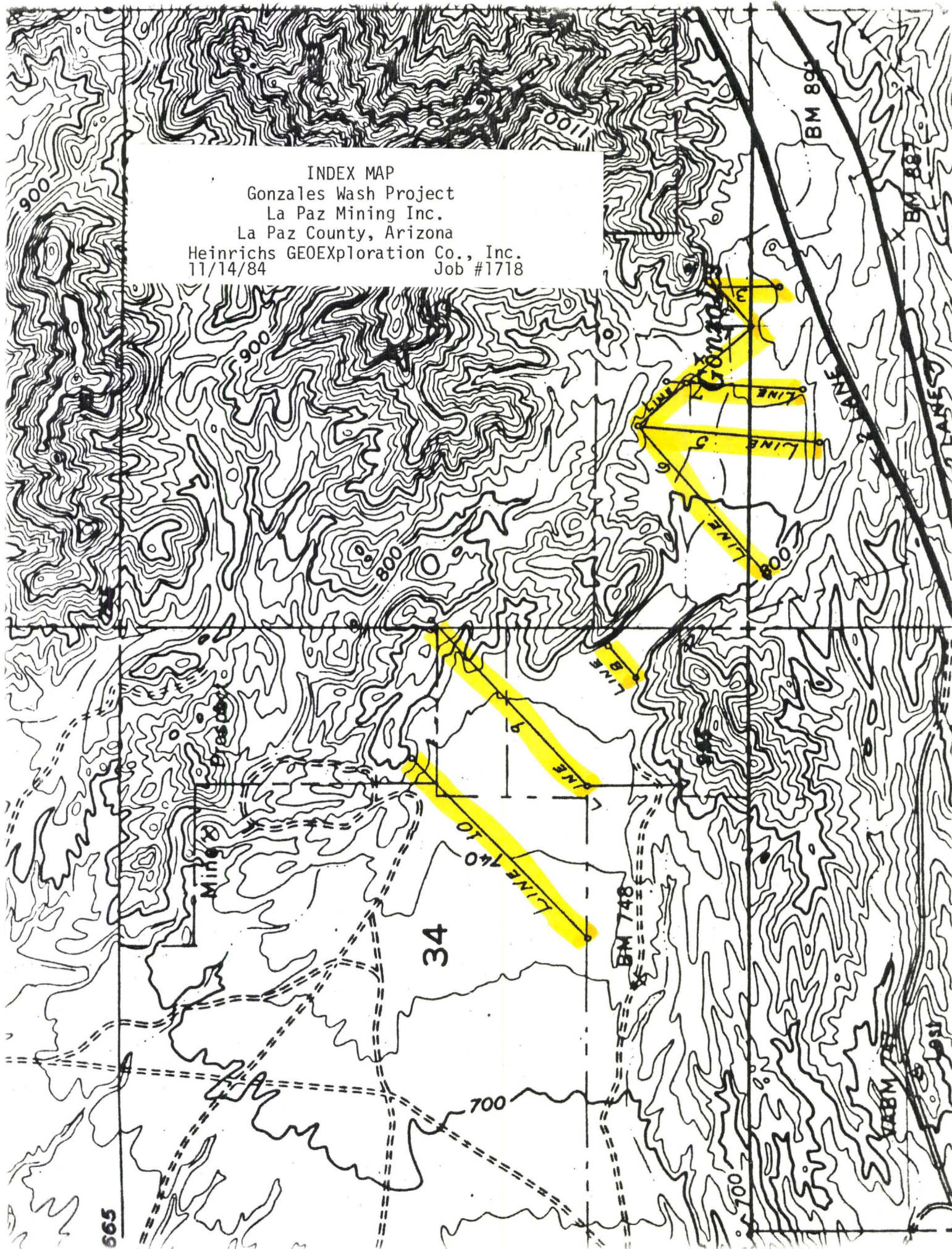
La Paz Mining Inc.

La Paz County, Arizona

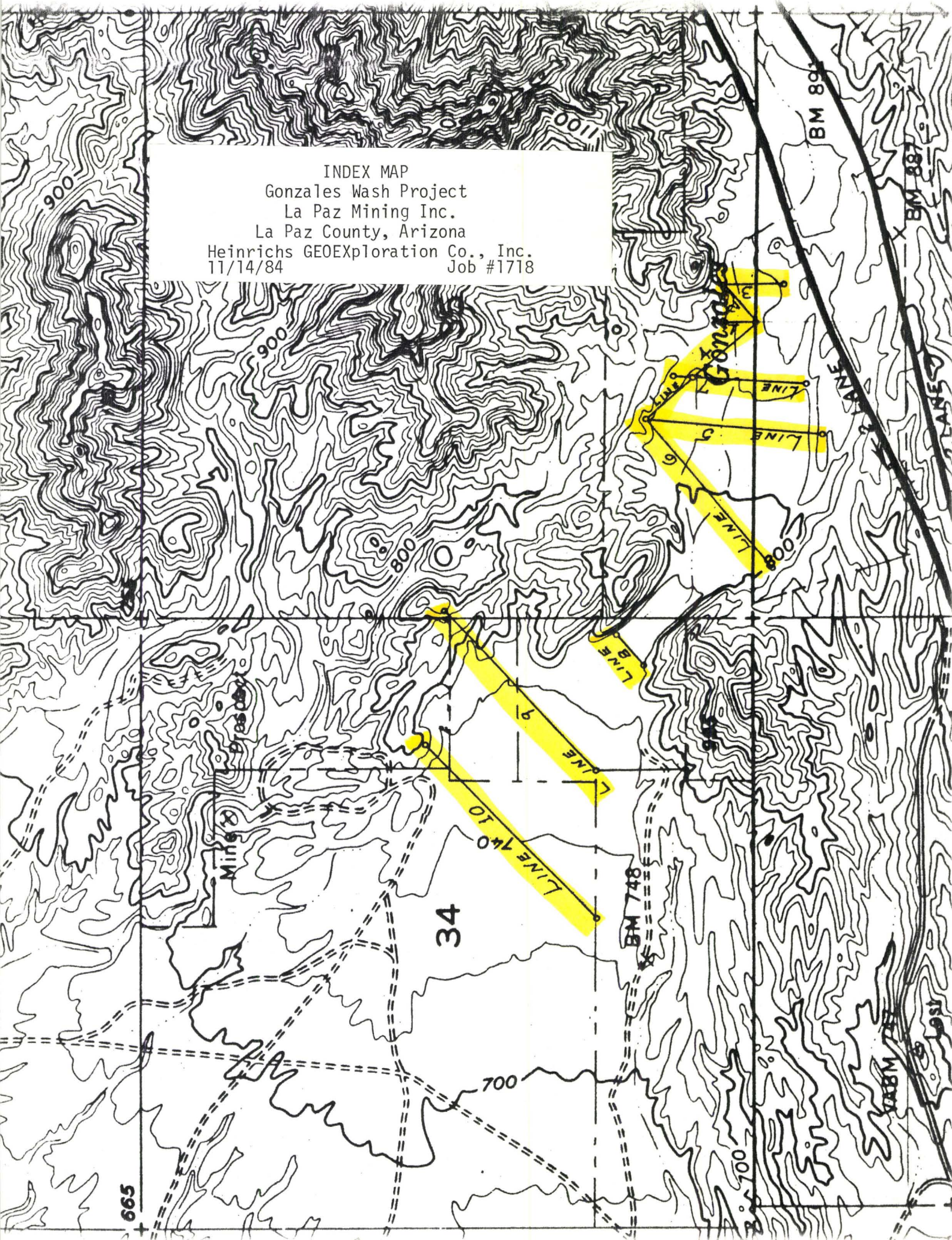
Heinrichs GEOEXploration Co., Inc.

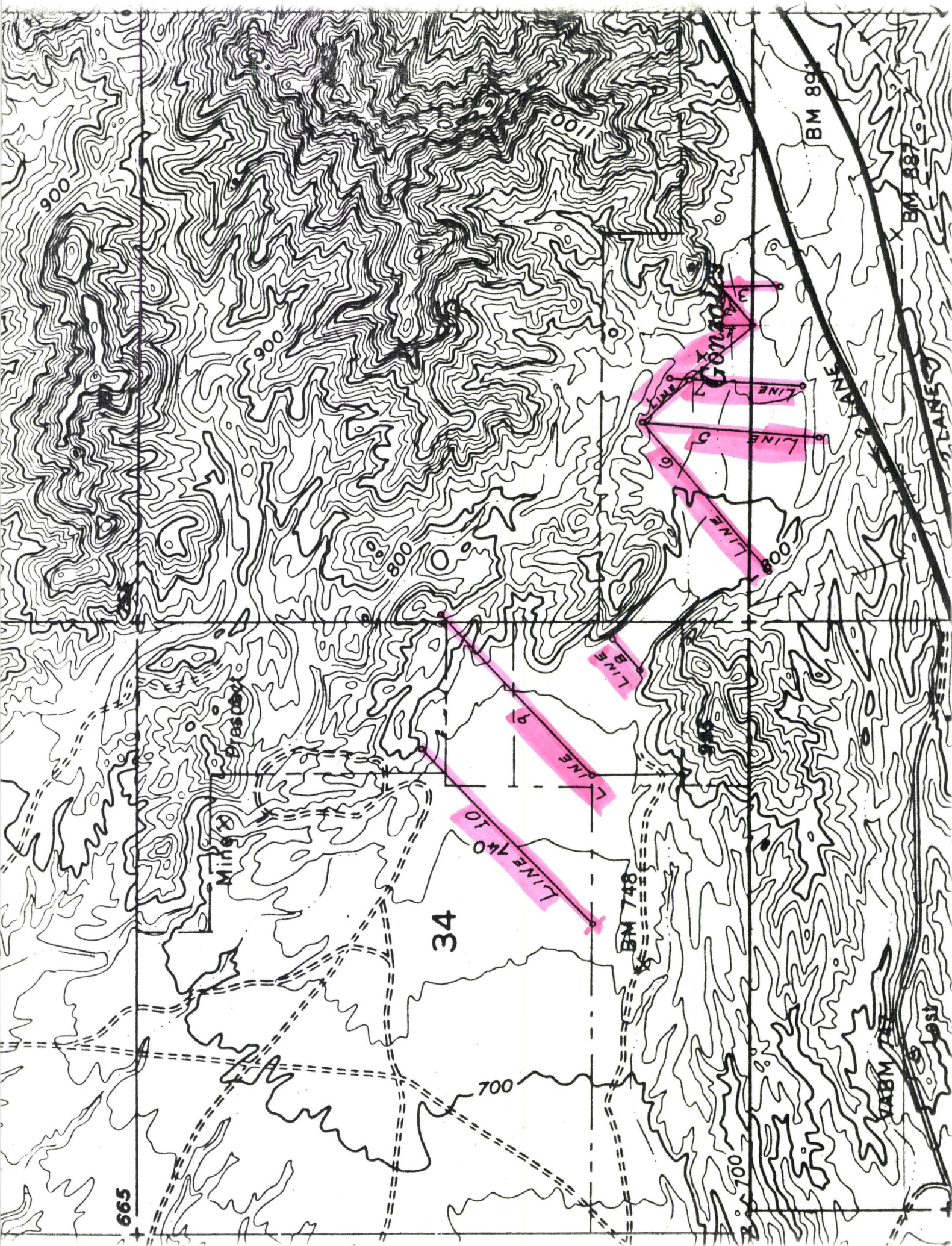
11/14/84

Job #1718



INDEX MAP
Gonzales Wash Project
La Paz Mining Inc.
La Paz County, Arizona
Heinrichs GEOEXploration Co., Inc.
11/14/84 Job #1718





N

For
La Paz Mining Inc.
REFRACTION SEISMIC

Line 1 Setup 1 & Setup 2 South half
Gonzales Wash
10/19/84 Job #1718

by
Heinrichs GEOEXploration Co., Inc.
Box 5964
Tucson, Arizona 85703

LOOKING WEST

20,000' N

10,000' N

(Bedrock)

2222' N = caliche

888' N Sand & gravel

Sta 2.75N
200' N

approx 3' to caliche

50 Bank of wash
100' N

On or near 42.5' bedrock 44m.s.

7000' N = bedrock

?

Down slope or bank

8600' N (Bedrock)

9950' N (on schist outcrop)

1900' N Consolidated Sand & Soil

27.3' to bedrock

20'

19'

to bedrock

5.6' to bedrock

Sta. 1.47
Sta. 1.55

Milli seconds

35

30

25

20

15

10

5

0

S

N

LOOKING WEST

LINE 1
WASH (approx.)
↓
(Sta 215)

For
La Paz Mining Inc.
REFRACTION SEISMIC
Line 1 Setup 2 North Half
Gonzales Wash
10/18/84 Job #1718

by
Heinrichs GEOExploration Co., Inc.
Box 5964
Tucson, Arizona 85703

100-

90

80

70

60

50

40

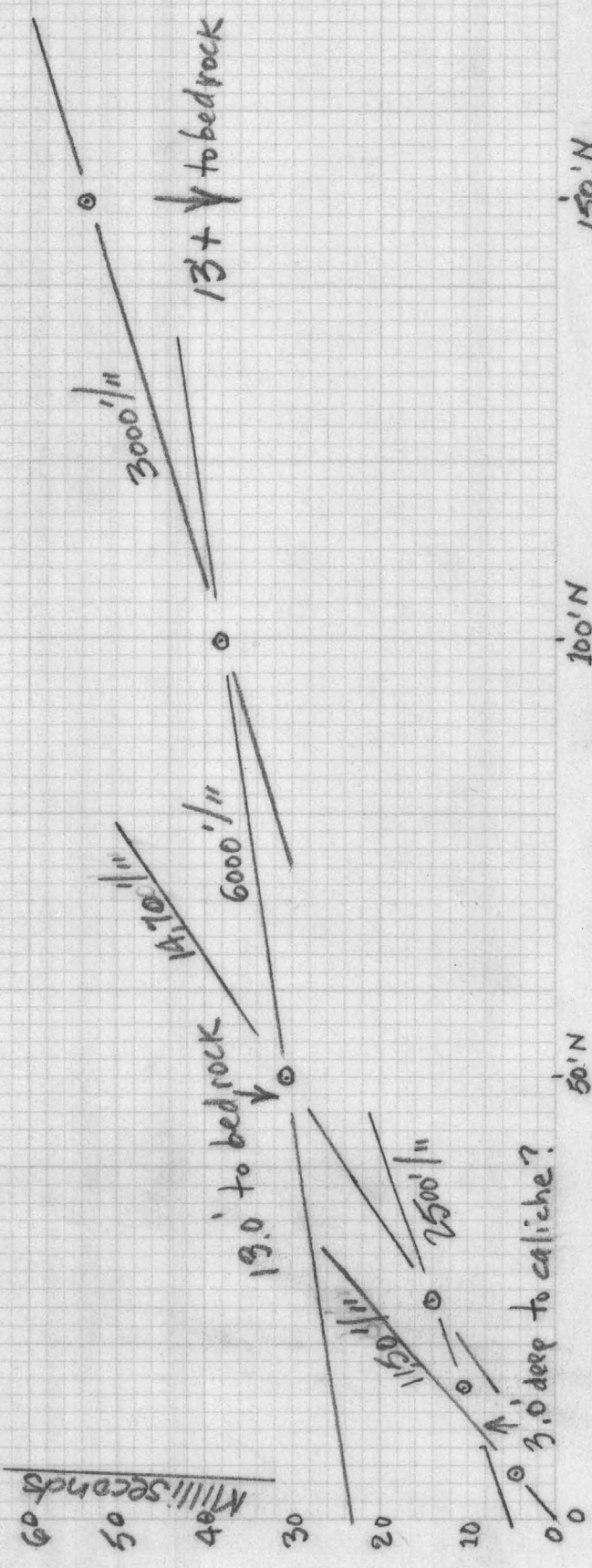
30

20

10

0

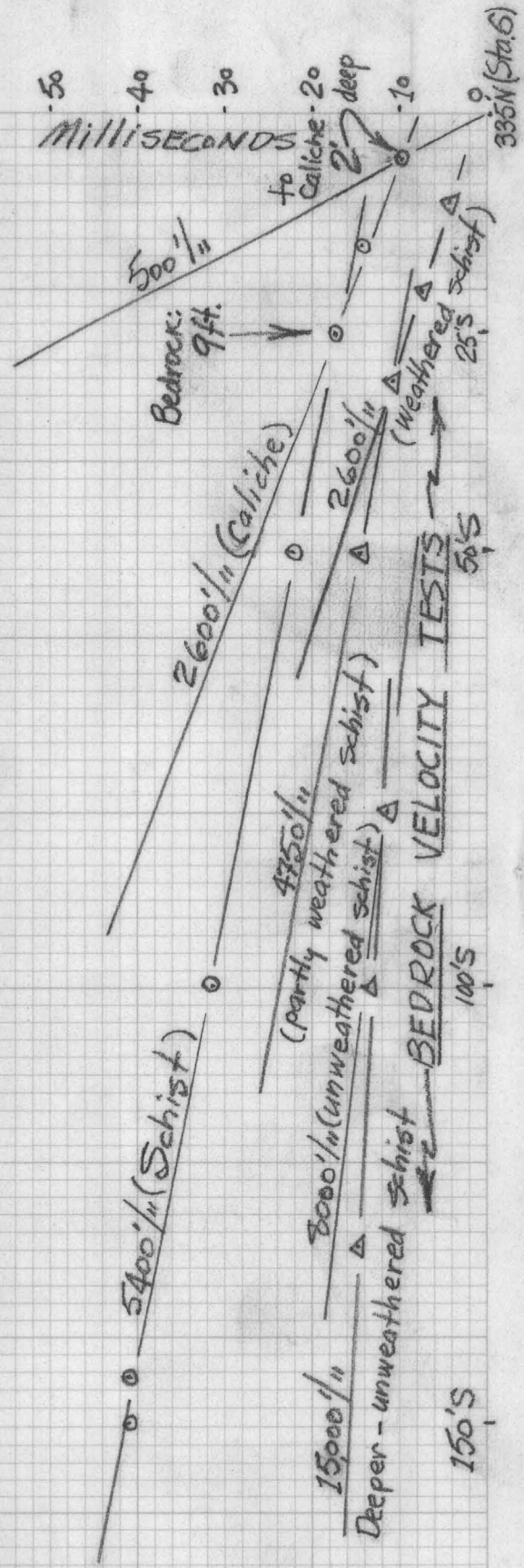
Seconds



Looking West

For
La Paz Mining Inc.
REFRACTION SEISMIC
Line 1 Setup 3
Gonzales Wash
10/18/84 Job #1718

by
Heinrichs GEOEXploration Co., Inc.
Box 5964
Tucson, Arizona 85703



SW

LOOKING NORTHWEST

NE

For
La Paz Mining Inc.
REFRACTON SEISMIC
Line 2 Setup 1 Northeast half
Gonzales Wash
10/19/84 Job #1718
by
Heinrichs GEOEXploration Co., Inc.
Box 5964
Tucson, Arizona 85703

LINe 2
Sta. 4.2



to Bedrock
27.5'



Approx.
2'
to Caliche



1000' $\frac{1}{4}$ " Sand & gravel

2857' $\frac{1}{4}$ " Caliche

7150' $\frac{1}{4}$ " bedrock

MILLISECONDS

-60 -40 -20

300' NE

200' NE

100' NE

ONE

SW

LOOKING NORTHWEST

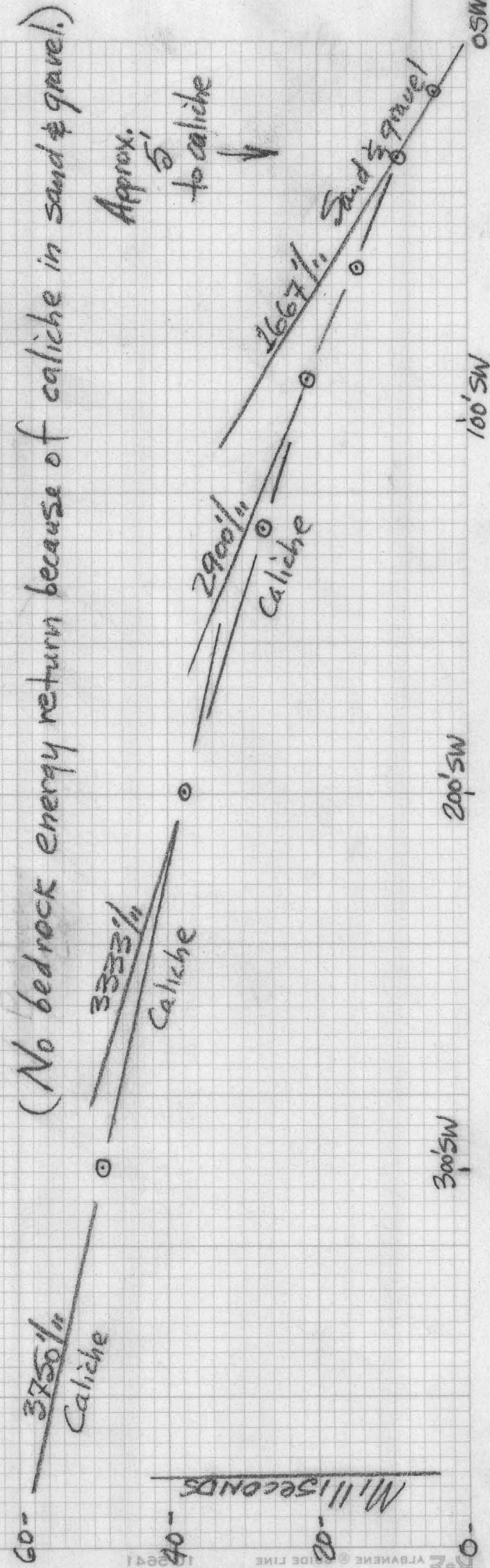
NE

For
La Paz Mining Inc.
REFRACTION SEISMIC

Line 2 Setup 1 Southwest half
Gonzales Wash
10/19/84 Job #1718

by
Heinrichs GEOExploration Co., Inc.
Box 5964
Tucson, Arizona 85703

LINE 2
Sta 4.2



Looking West

N

For
La Paz Mining Inc.
REFRACTION SEISMIC
Line 3 Setup 1 North Half
Gonzales Wash
10/19/84 Job #1718
by
Heinrichs GEOExploration Co., Inc.
Box 5964
Tucson, Arizona 85703

LINE 3
Sta.
2.315

22'
to bedrock

(up dip? bedrock)

34' 10" 1/4

12,500' 1/4

up bluff

bedrock
Step up

39' ?
to bedrock

5700' 1/4 bedrock?

227' N
to outcrop
bedrock
(Sta. 0
LINE 3)

Milliseconds

-60

-40

-20

200' N

150' N

100' N

50' N

30' N

10' N

(231'S)

S

Looking West

N

For
La Paz Mining Inc.
REFRACTION SEISMIC
Line 3 Setup 1 South half.
Gonzales Wash.
10/19/84 Job #1718

by
Heinrichs GEOEXploration Co., Inc.
Box 5964
Tucson, Arizona 85703

LINE 3
Sta. 55
(400'S)
on
bedrock
at R. of W.
fence

Sta.
3.6 S

Sta. 2.9 S

Sta.
2.3 S

bank or
up dip

22'
to bedrock

-20
-40
-60

6780' 1/4

2000' 1/4

160'S

110'S

60'S

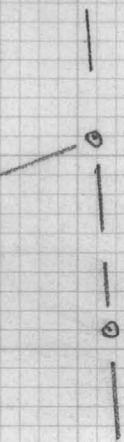
35'S

10'S 0'S

LOOKING WEST

N

Sub-alluvial channel-?



For
La Paz Mining Inc.
REFRACTION SEISMIC
Line 7 Setup 1 South
Gonzales Wash
10/20/84 Job #1718
by
Heinrichs GEOExploration Co., Inc.
Box 5964
Tucson, Arizona 85703

LINE 7
Sta. 555

> 99'?
to bedrock

MilliSeconds

1700'//
Sand & gravel / caliche?

6800'//
Bedrock hi?
or inter-caliche

10.9' to bedrock or caliche?

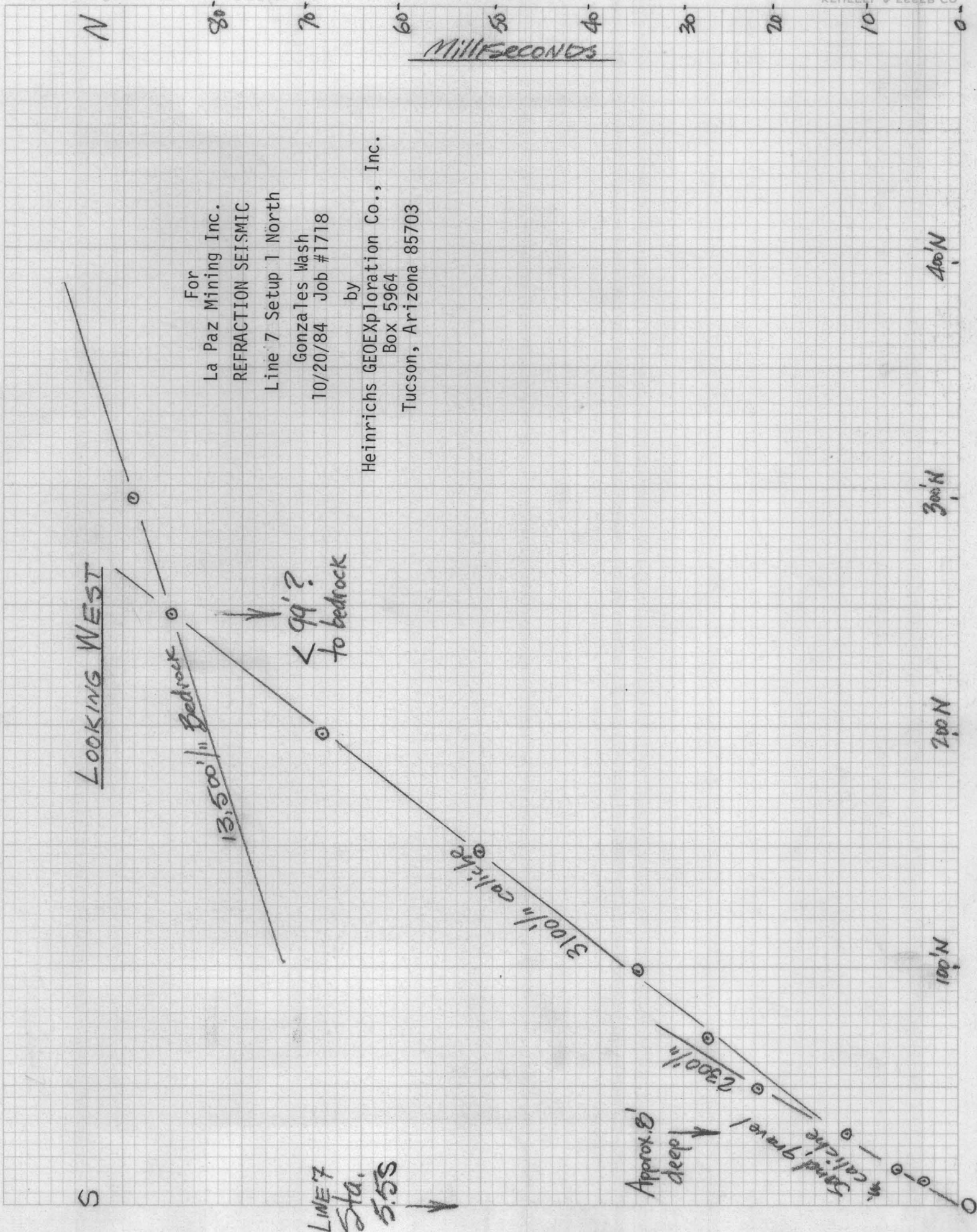
400'S

300'S

200'S

100'S

0'



For
La Paz Mining Inc.
REFRACTION SEISMIC
Line 7 Setup 1 North
Gonzales Wash
10/20/84 Job #1718
by
Heinrichs GEOExploration Co., Inc.
Box 5964
Tucson, Arizona 85703

LOOKING WEST

13,500' Bedrock

99'?
to bedrock

3100' caliche

2300' caliche

Sand/gravel
Approx. 8' deep

LINE 7
Sta. 5.55

100' N
200' N
300' N
400' N

MILLISECONDS

LOOKING WEST

S

LINE 7
Sta.

4

↓ -80

-70

-60

-50

-40

-30

-20

-10

0

24,000' / " bedrock

99' ?
to bedrock

3018' / " caliche

1383' / " sand & gravel

116' approx. to caliche

100' N

200' N

300' N

400' N

For
La Paz Mining Inc.
REFRACTION SEISMIC
Line 7 Setup 2 North
Gonzales Wash
10/20/84 Job #1718
by
Heinrichs GEOExploration Co., Inc.
Box 5964
Tucson, Arizona 85703

N

S

-80

-70

-60

-50

-40

-30

-20

-10

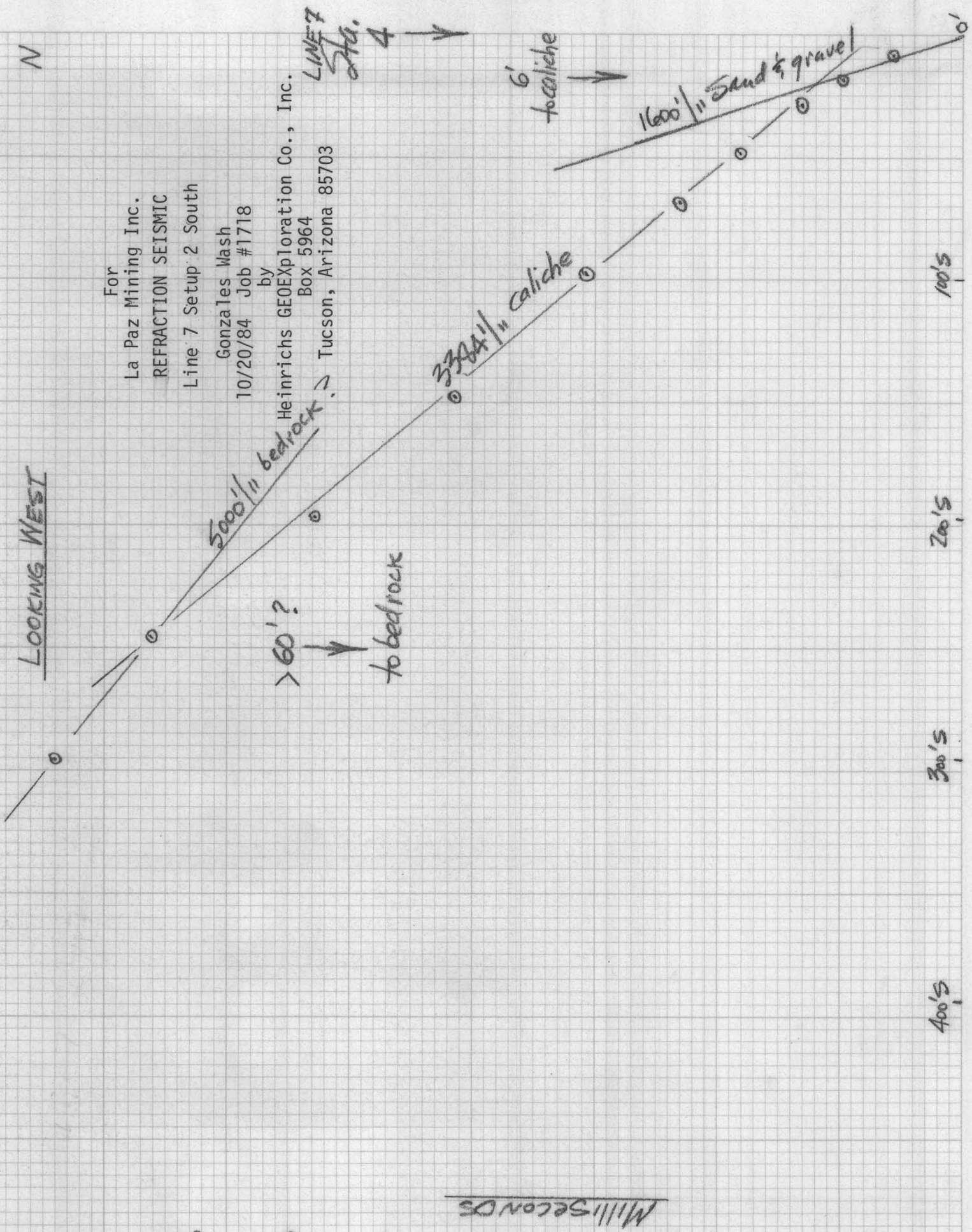
0

MilliSeconds

LOOKING WEST

For
La Paz Mining Inc.
REFRACTION SEISMIC
Line 7 Setup 2 South
Gonzales Wash
10/20/84 Job #1718
by
Heinrichs GEOExploration Co., Inc.
Box 5964
Tucson, Arizona 85703

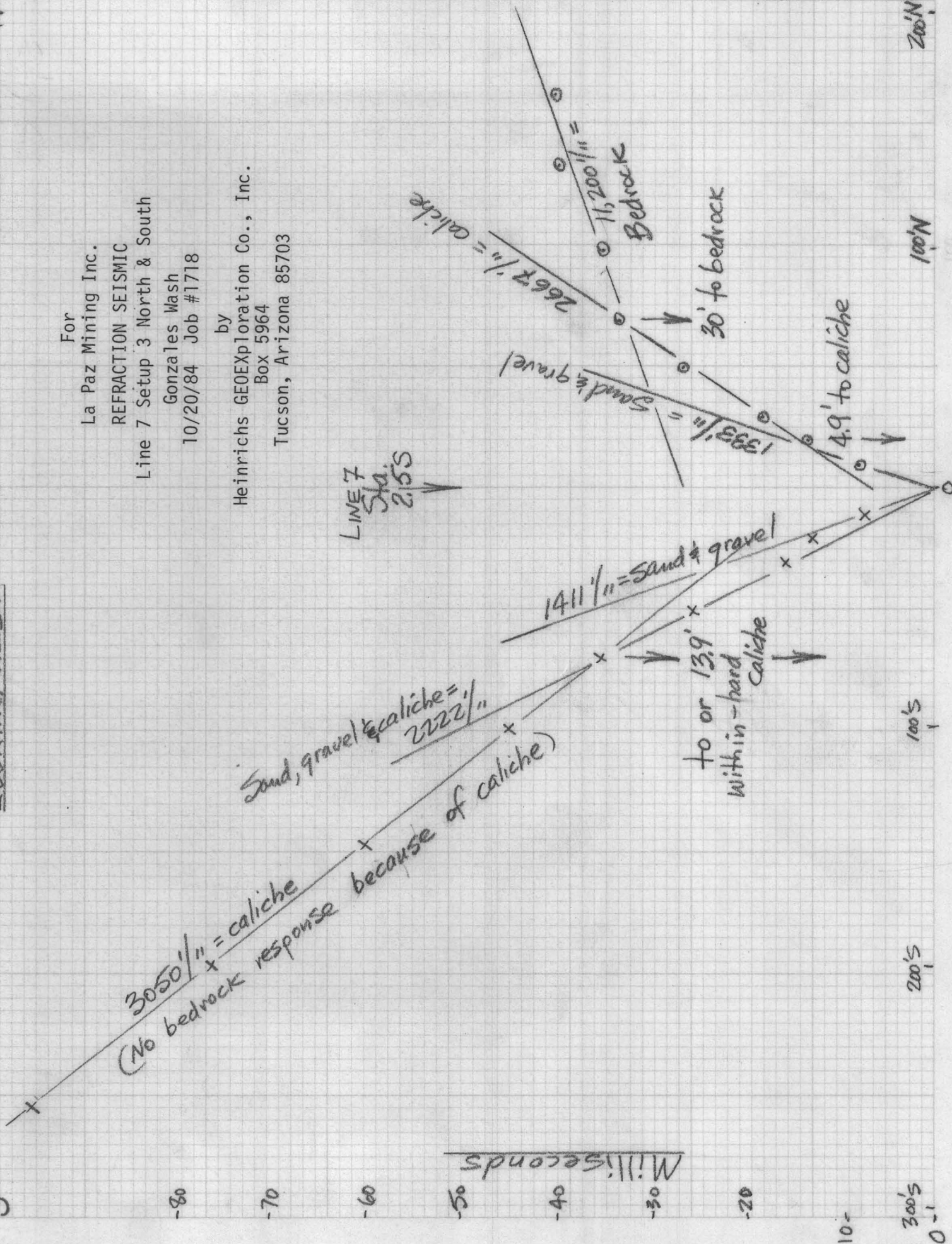
LINE 7
Sta. 4



LOOKING WEST

N

For
La Paz Mining Inc.
REFRACTION SEISMIC
Line 7 Setup 3 North & South
Gonzales Wash
10/20/84 Job #1718
by
Heinrichs GEOEXploration Co., Inc.
Box 5964
Tucson, Arizona 85703



LINE 7
5/10
2.55

LOOKING NORTH WESTERLY

SW

NE

(at SW.
edge of
road)
Sta
0.45 NE

-60

-50

-40

-30

-20

-10

Milliseconds

1500'/"

45'/"

9000'/" = bedrock

55.8'
to bedrock

10,900'/" = bedrock

10.3' deep
to bedrock

Steep bank down
to NE
on bedrock

30'NE

60'NE

90'NE

120'NE

150'NE

180'NE

210'NE

240'NE

270'NE

300'NE

For
La Paz Mining Inc.
REFRACTION SEISMIC

Line 8 Setup 1 Northeast
Gonzales Wash
10/21/84 Job #1718
by

Heinrichs GEOEXPLORATION Co., Inc.
Box 5964
Tucson, Arizona 85703

SW

LOOKING NORTHWESTERLY

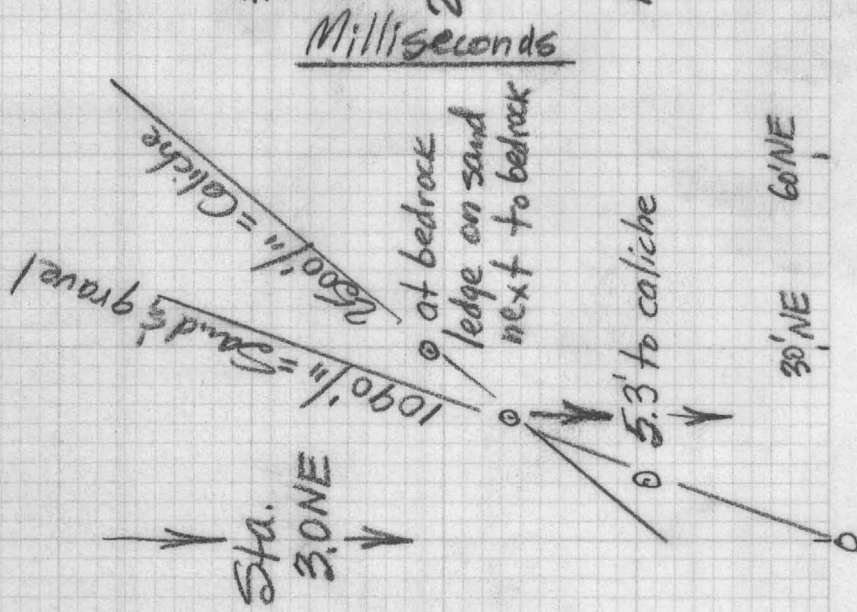
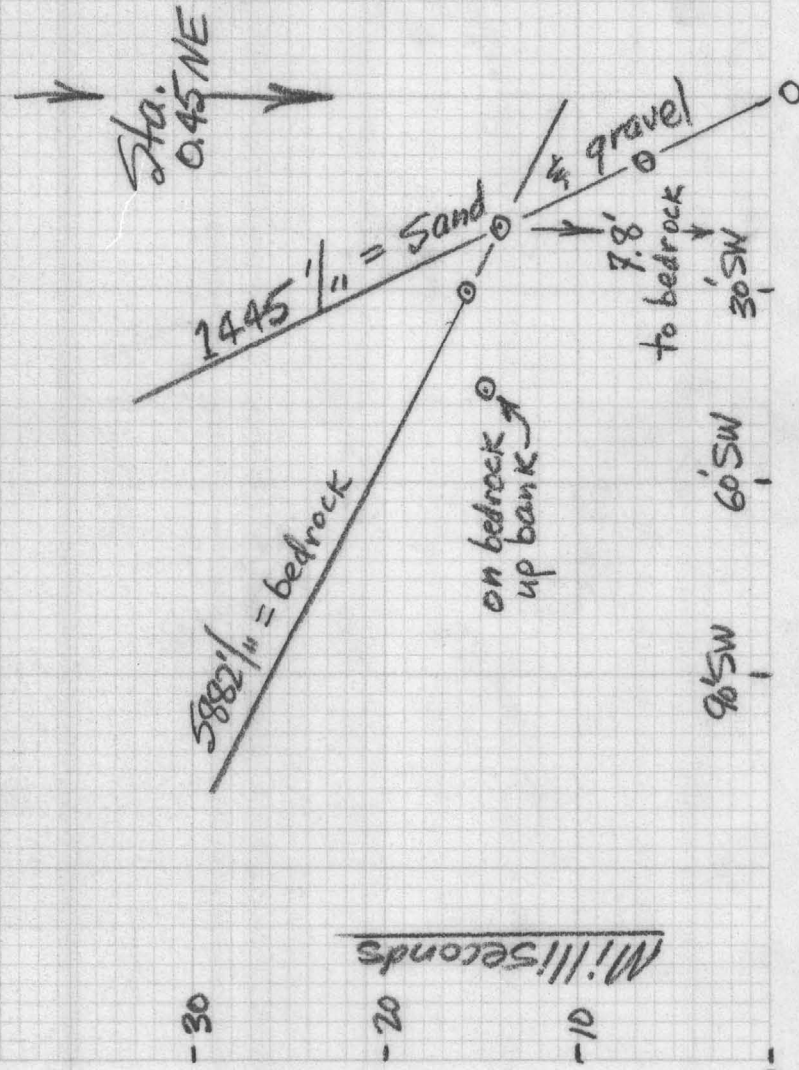
NE

For
La Paz Mining Inc.
REFRACTION SEISMIC
Line 8 Setups 1 & 2
Gonzales Wash
10/21/84 Job 1718
by

Heinrichs GEOExploration Co., Inc.
Box 5964
Tucson, Arizona 85703

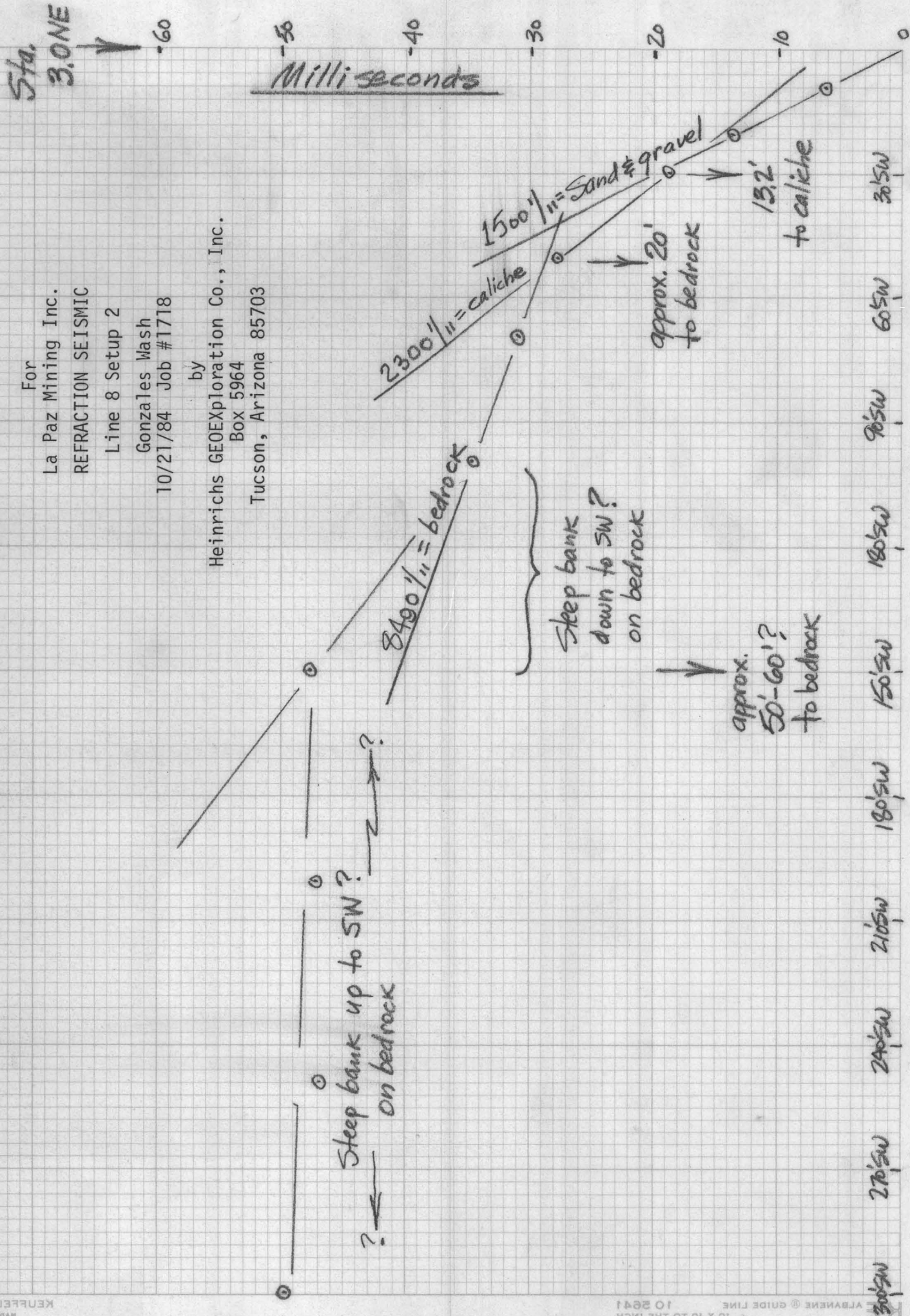
Setup 1 Southwest

Setup 2 Northeast



LOOKING NORTHWESTERLY

For
La Paz Mining Inc.
REFRACTION SEISMIC
Line 8 Setup 2
Gonzales Wash
10/21/84 Job #1718
by
Heinrichs GEOEXploration Co., Inc.
Box 5964
Tucson, Arizona 85703



S

N

LOOKING WEST

LINE 1
WASH (approx.)

↓
(Sta 2.95)

100-

90

80

70

Seconds
60
50
40
30

20

10

0

3.0 deep to caliche?

For
La Paz Mining Inc.

REFRACTION SEISMIC

Line 1 Setup 2 North Half

Gonzales Wash

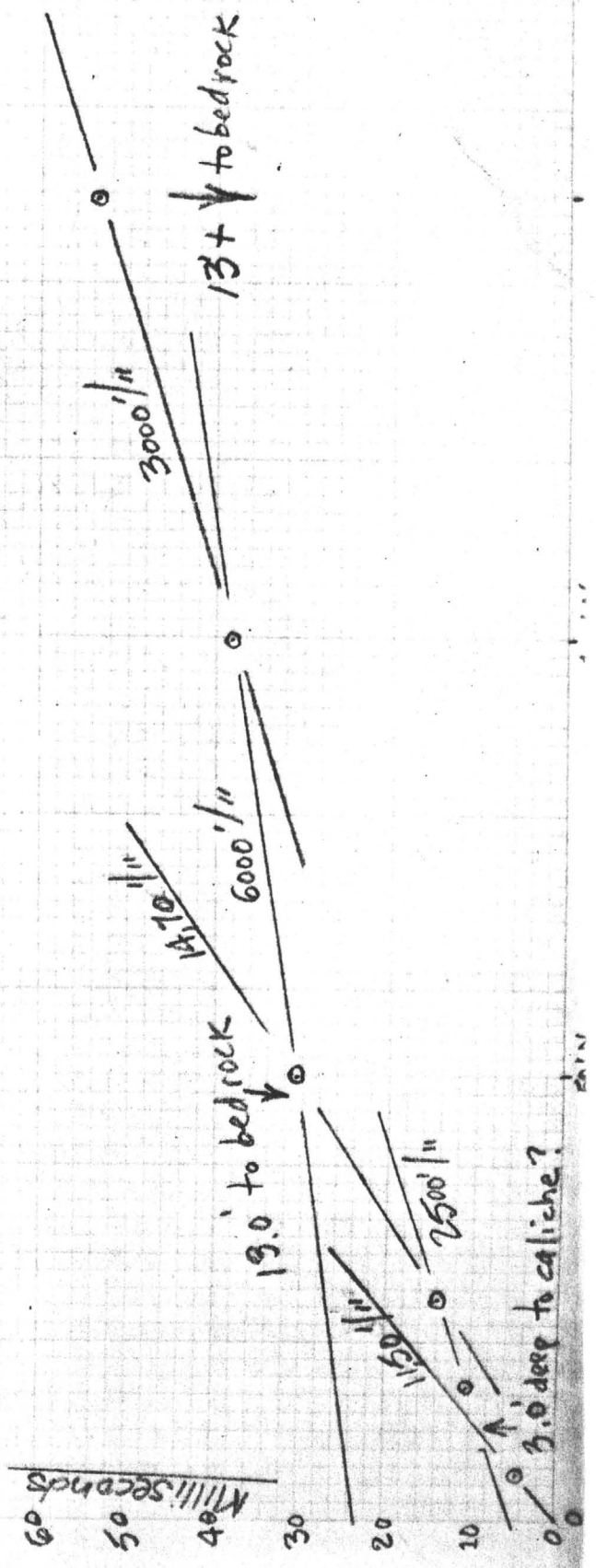
10/18/84 Job #1718

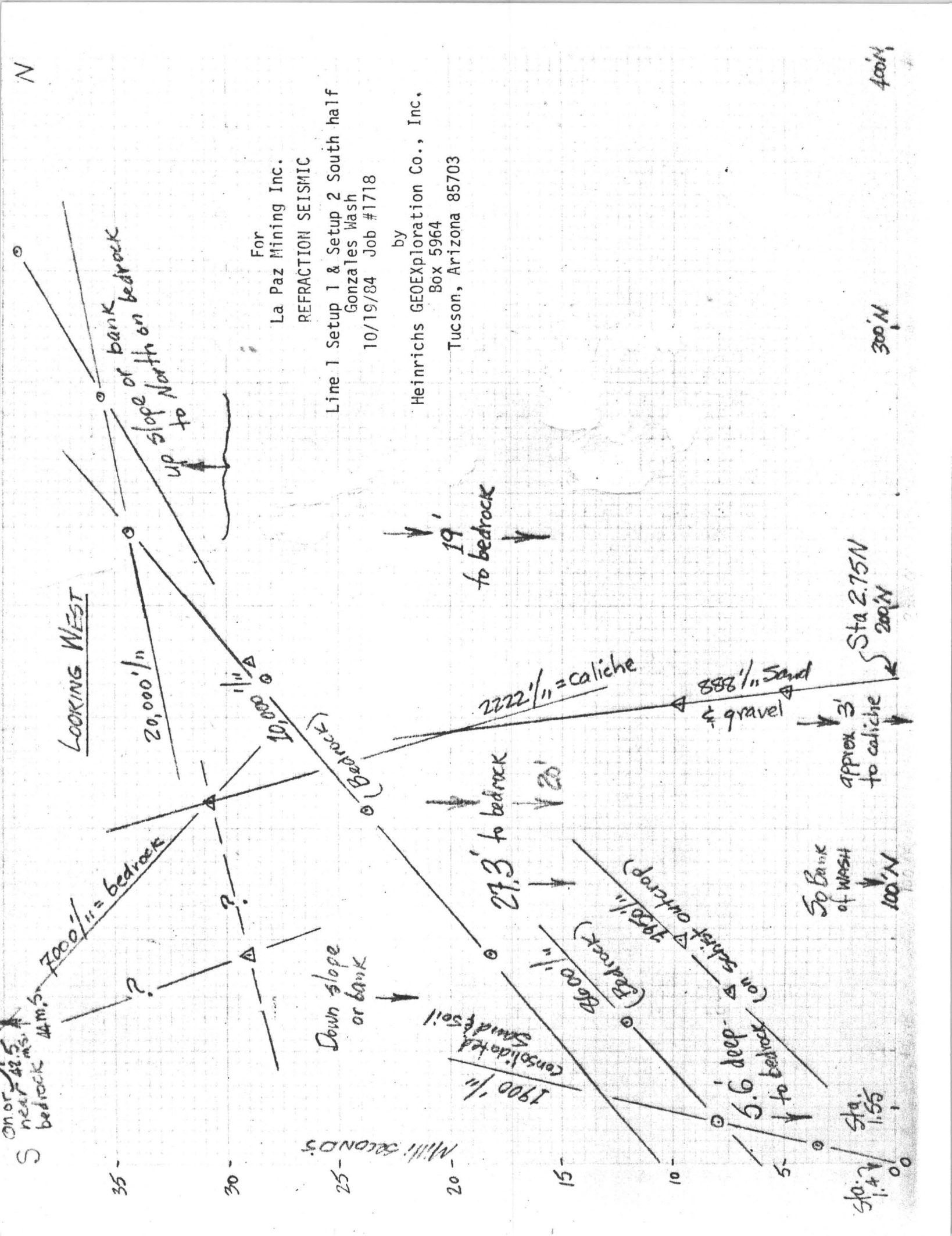
by

Heinrichs GEOEXploration Co., Inc.

Box 5964

Tucson, Arizona 85703





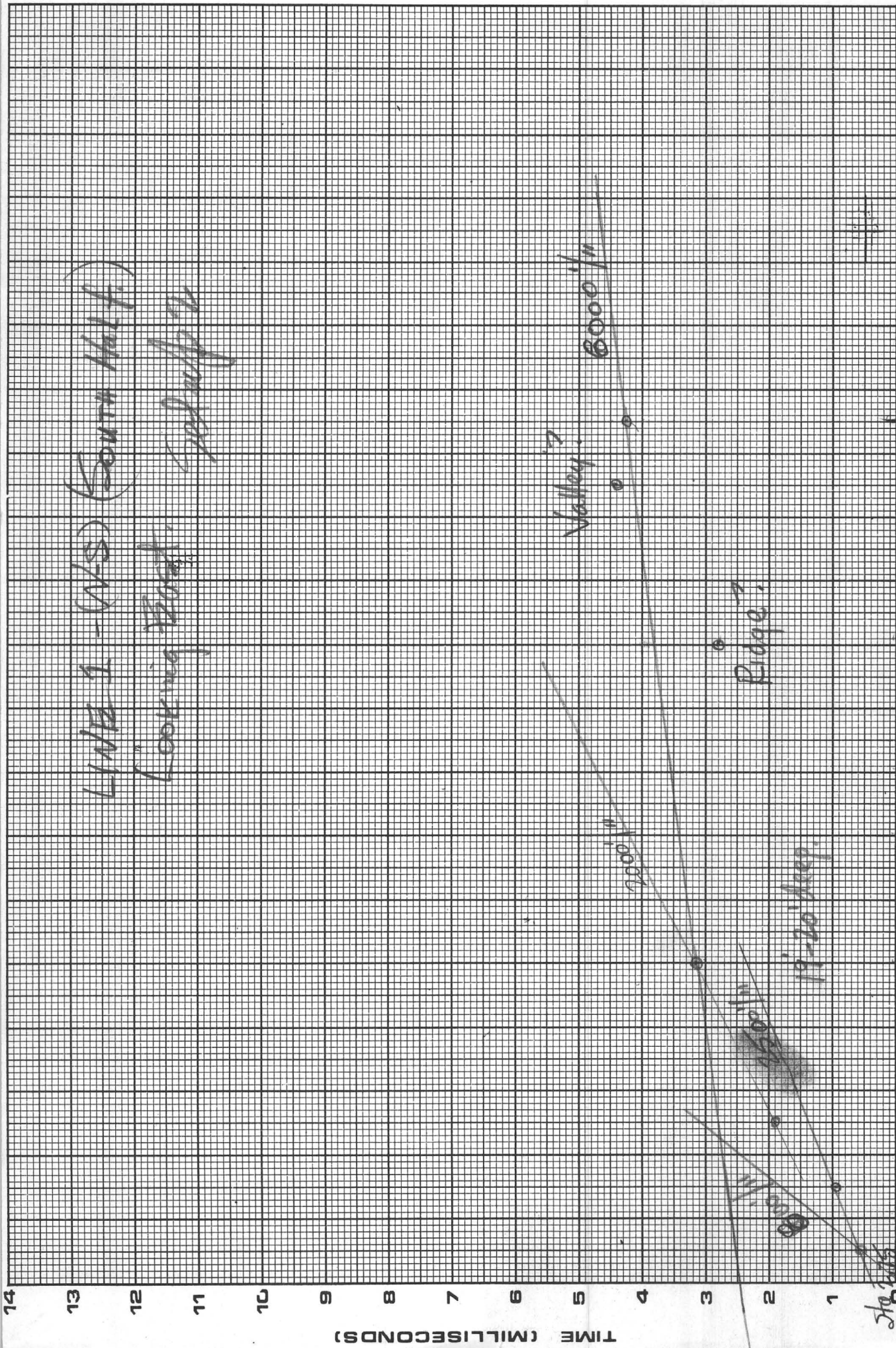
For
La Paz Mining Inc.
REFRACTION SEISMIC

Line 1 Setup 1 & Setup 2 South half
Gonzales Wash
10/19/84 Job #1718

by
Heinrichs GEOExploration Co., Inc.
Box 5964
Tucson, Arizona 85703

1007

by
Heinrichs GEOExploration Co., Inc.
Box 5964
Tucson, Arizona 85703



DATE 10/18 DISTANCE 100'S

JOB 1718 TRAVERSE 1 - page 3

LOCATION/DESCRIPTION Comples Wash

FIELD NOTES _____

OPERATOR Red Rock (by 1/4 Cor & Truck) M.G.H.

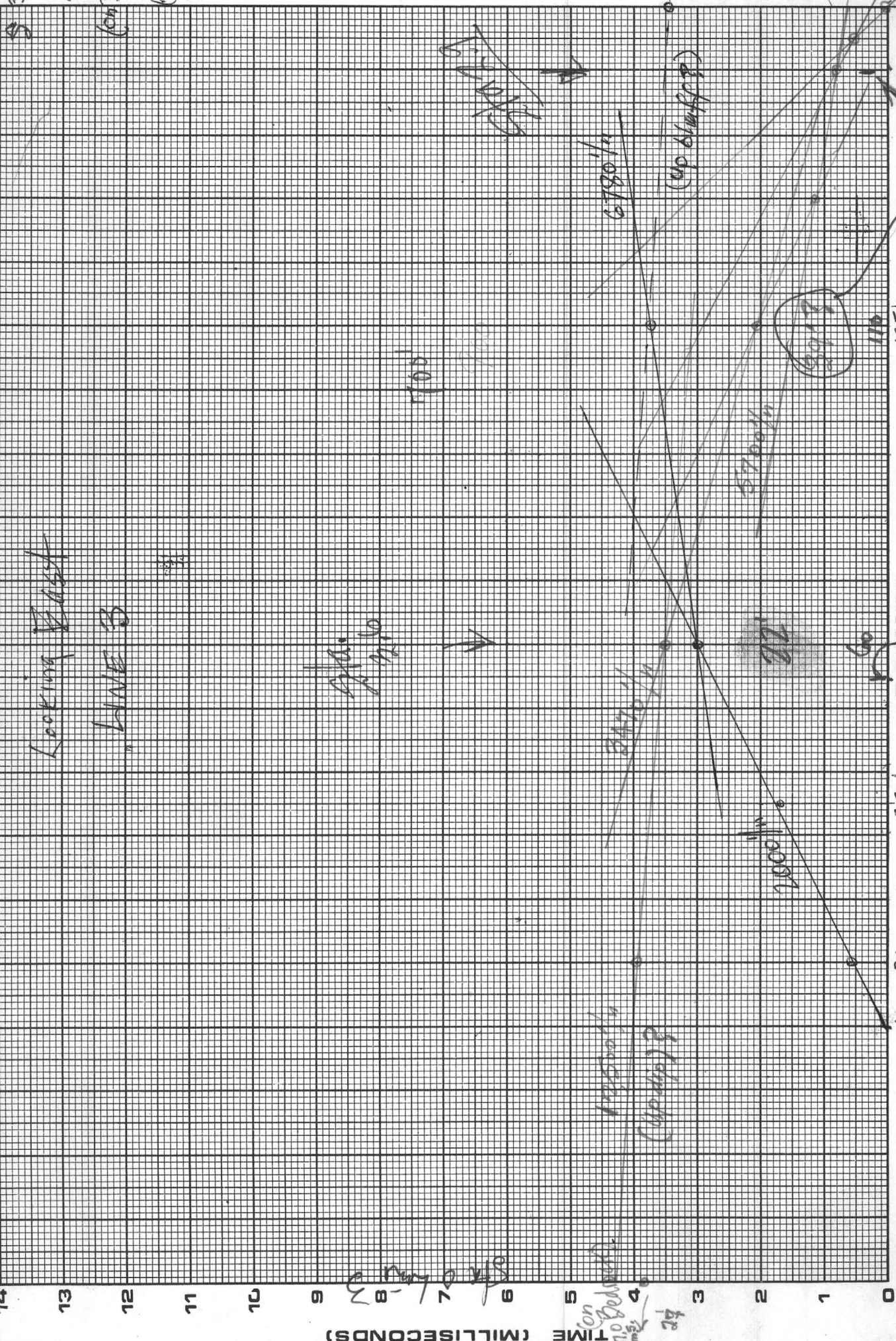
50'S

BISON
INSTRUMENTS
5708 - 36th Street West
St. Louis Park, Minn. 55416
Telephone 612/926-1846

1F-970

200' = 35.5 ms
 (on Bed Rock) (near fence)

Looking East
 LINE 3



DISTANCE

DATE 10/19/84

JOB 1718

OPERATOR

TRAVERSE #3



BISON
 INSTRUMENTS
 5708 - 36th Street West
 St. Louis Park, Minn. 55416
 Telephone 612/926-1846

LOCATION/DESCRIPTION Conspires

FIELD NOTES

Setup 2 - 4448 1 N. Half from 2 (W. 1/4)
 looking West.

? Remains
 in orbit of
 primary

145"

TIME (MILLISECONDS) X 10

4000"

6000"

13.0

1500"

12.4 feet

Wash. (Sta. 2.7)

DISTANCE
 300'

150' N W 3/4 E RBL

OPERATOR

1 - page 2

TRAVERSE

Ganges

LOCATION/DESCRIPTION

FIELD NOTES

BISON

INSTRUMENTS

5708 - 36th Street West

St. Louis Park, Minn. 55416

Telephone 612/926-1846



TIME (MILLISECONDS)

14

13

12

11

10

9

8

7

6

5

4

3

2

1

0

Line 2 - Set up 1
looking Easterly

400' 1/4" (off)

Sta 2.2

SW

NE

7150' 1/4"

caliber 3382' 1/4"

3750' 1/4"

160' 1/4" caliber 2000' 1/4"

" No depth"

1000' 1/4"

2857' 1/4"

4150' 1/4"

0 25' 40' 60' 80' 100' 250' 400'

DATE 10/19/94

DISTANCE 480' 150'

OPERATOR 450'

100' for X marked

TRAVERSE #2

JOB 1716

LOCATION/DESCRIPTION Gopher

FIELD NOTES



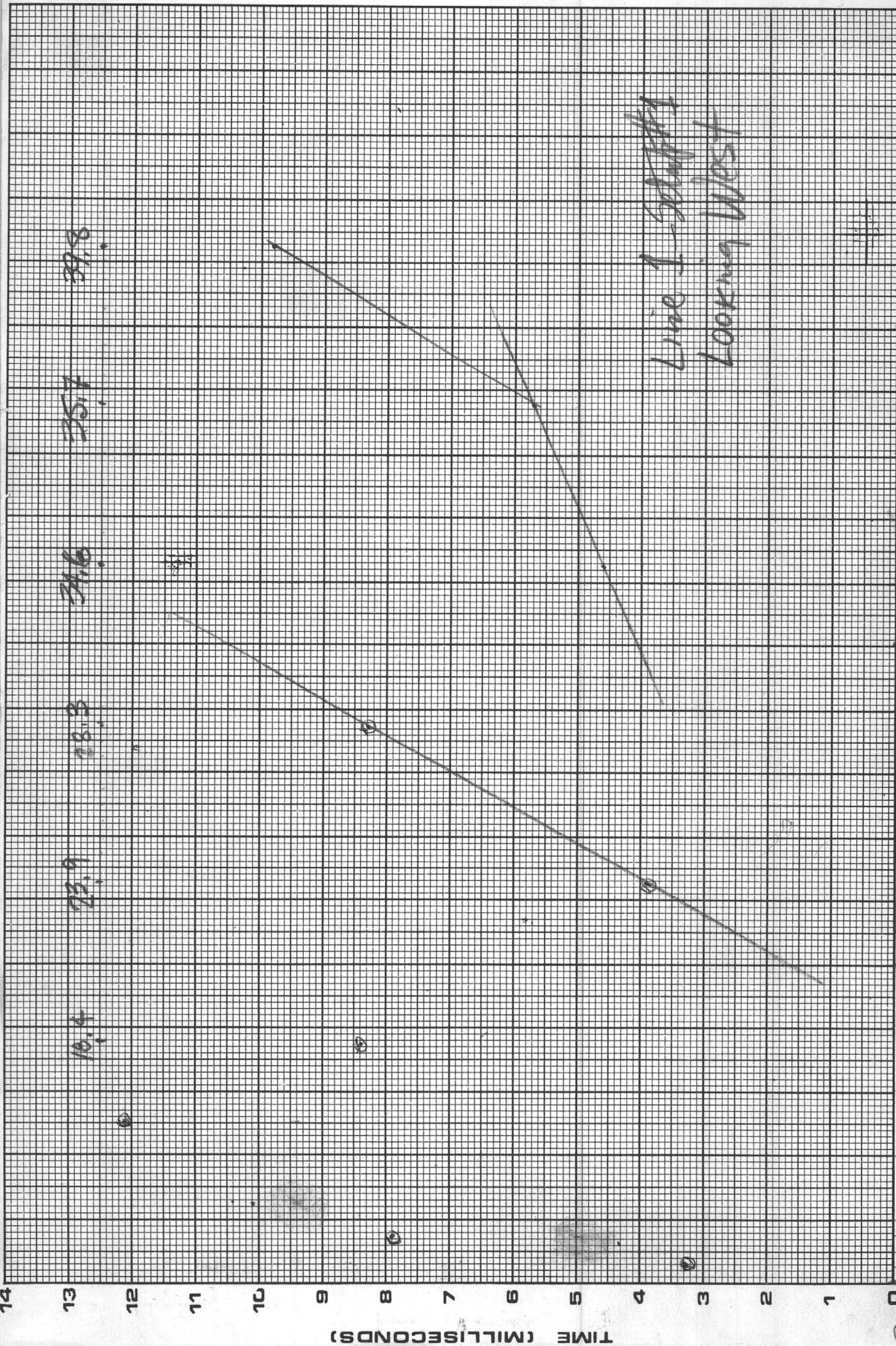
BISON

INSTRUMENTS

5708 - 36th Street West

St. Louis Park, Minn. 55416

Telephone 612/926-1846



DATE 10/18/84 DISTANCE 300 N OPERATOR [Signature]

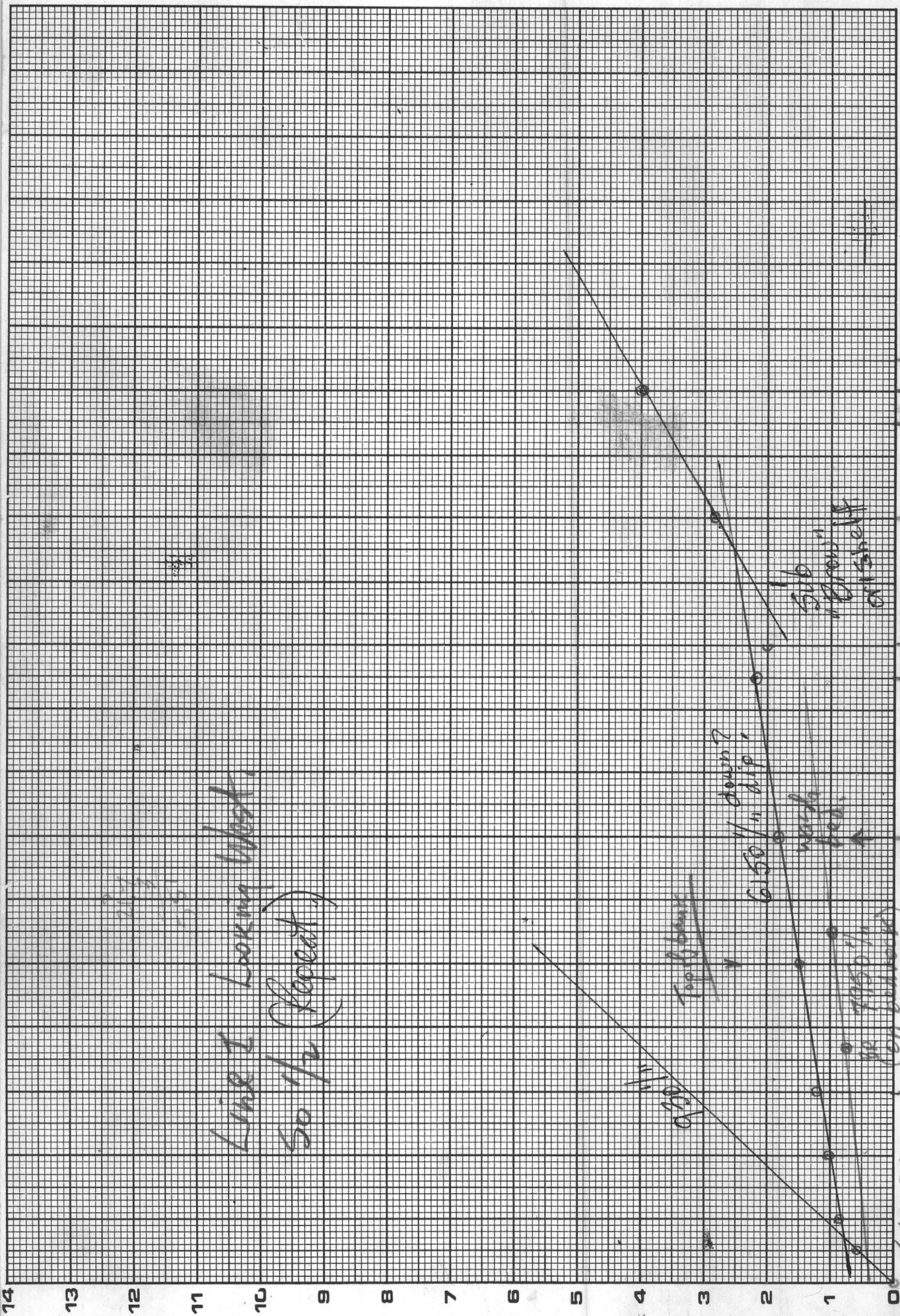
JOB # 718 TRAVERSE # 1 Page 1

LOCATION/DESCRIPTION Gonzales Wash

FIELD NOTES _____



BISON
INSTRUMENTS
5708 - 36th Street West
St. Louis Park, Minn. 55416
Telephone 612/926-1846



DATE 10/19/84 70 95 100 110 120

JOB 1718 OPERATOR NRM & RBZ

TRAVERSE Line 1

LOCATION/DESCRIPTION Gonyales

FIELD NOTES



BISON
INSTRUMENTS
5708 - 36th Street West
St. Louis Park, Minn. 55416
Telephone 612/926-1846

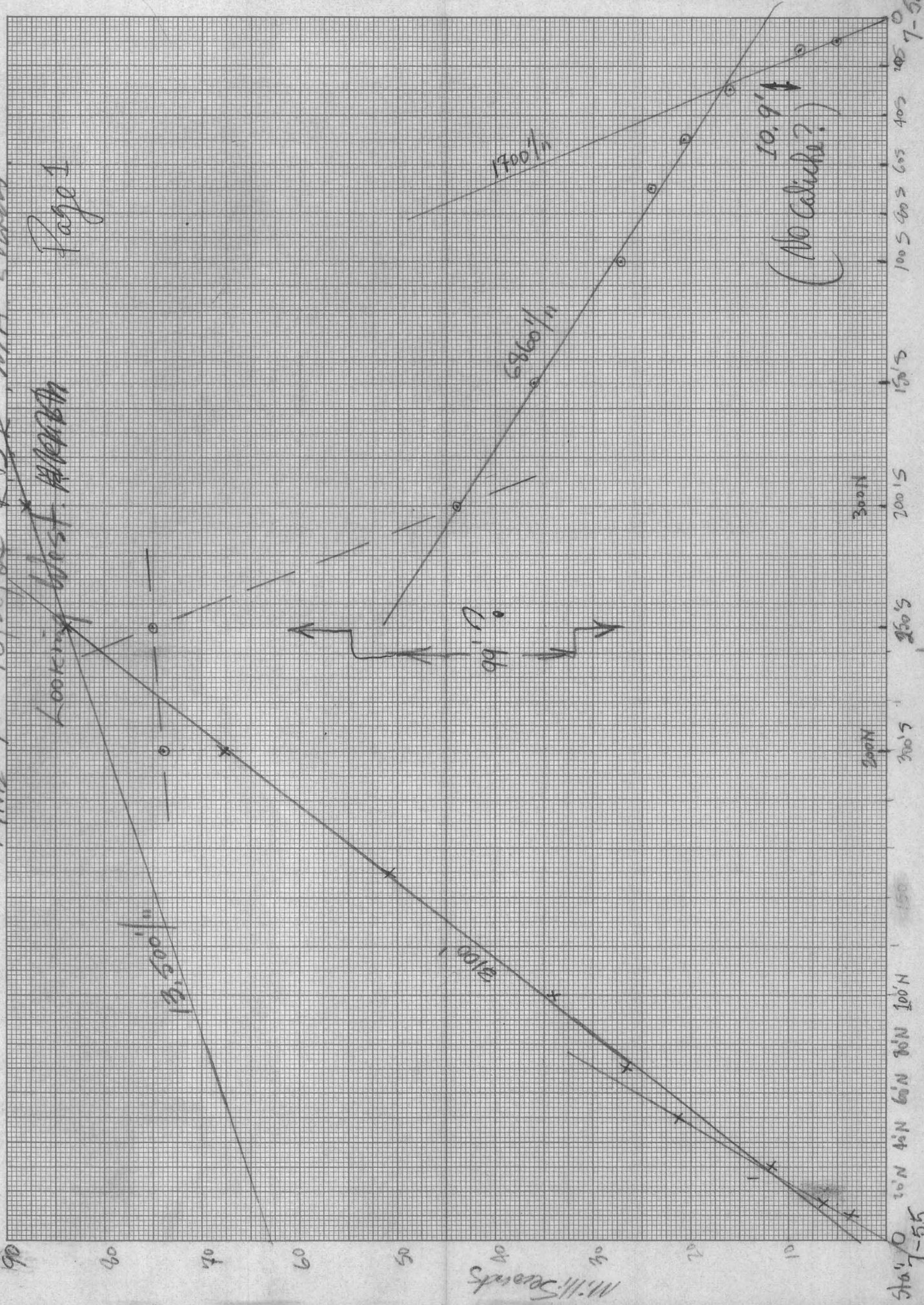
71.4
69.0
7.4

Setup 1

Line 7 - 10/20/84 RBL, MA & WMA

Looking West. ~~WMA~~

Page 1

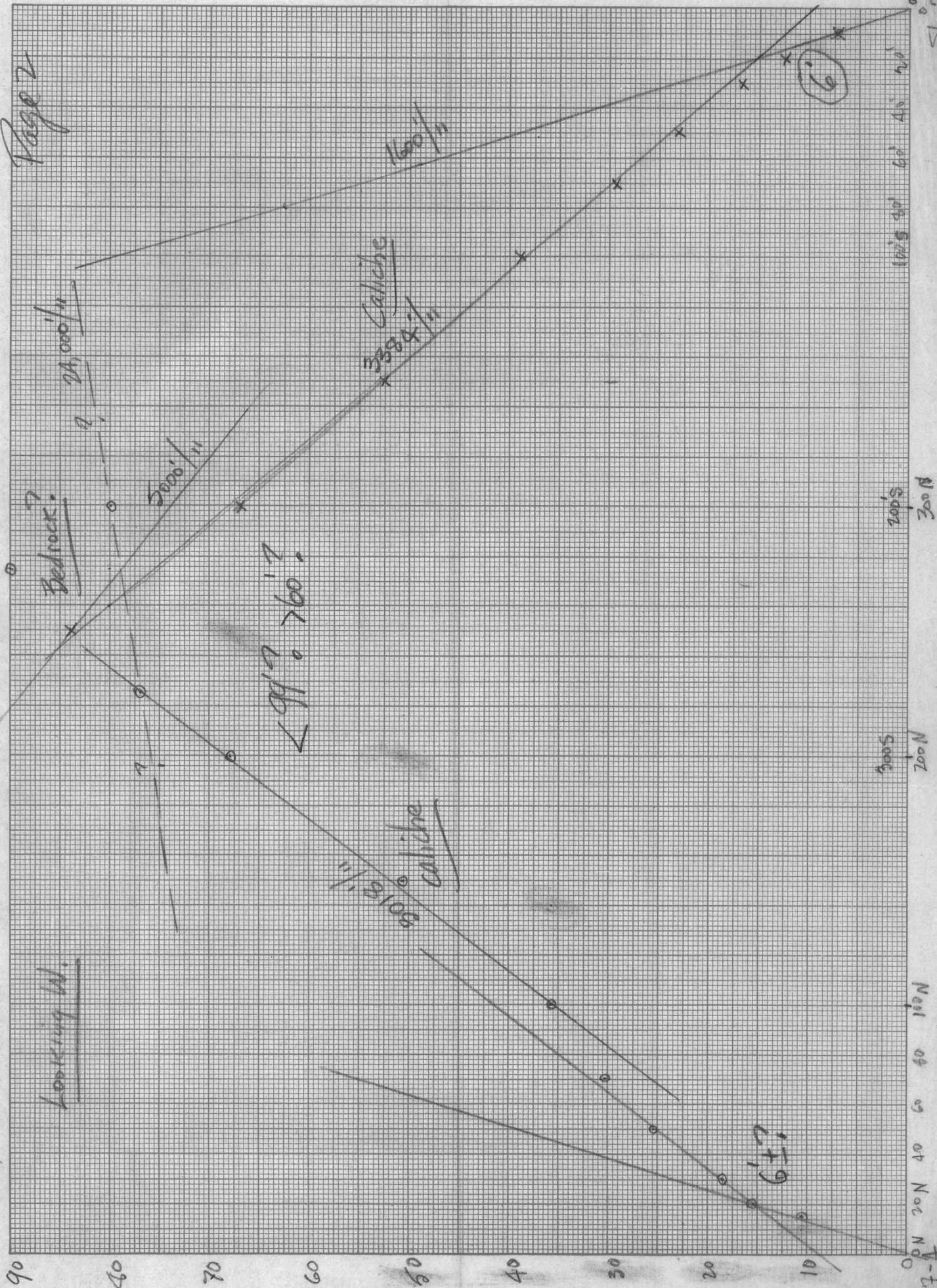


Sta. 7-5.5
100' N
200' N
300' N
400' N
500' N
600' N
700' N
800' N
900' N
1000' N
1100' N
1200' N
1300' N
1400' N
1500' N
1600' N
1700' N
1800' N
1900' N
2000' N
2100' N
2200' N
2300' N
2400' N
2500' N
2600' N
2700' N
2800' N
2900' N
3000' N
3100' N
3200' N
3300' N
3400' N
3500' N
3600' N
3700' N
3800' N
3900' N
4000' N
4100' N
4200' N
4300' N
4400' N
4500' N
4600' N
4700' N
4800' N
4900' N
5000' N
5100' N
5200' N
5300' N
5400' N
5500' N
5600' N
5700' N
5800' N
5900' N
6000' N
6100' N
6200' N
6300' N
6400' N
6500' N
6600' N
6700' N
6800' N
6900' N
7000' N
7100' N
7200' N
7300' N
7400' N
7500' N
7600' N
7700' N
7800' N
7900' N
8000' N
8100' N
8200' N
8300' N
8400' N
8500' N
8600' N
8700' N
8800' N
8900' N
9000' N
9100' N
9200' N
9300' N
9400' N
9500' N
9600' N
9700' N
9800' N
9900' N
10000' N

L12-7-10/20/84

MA, RBL, CRH.

Page 2



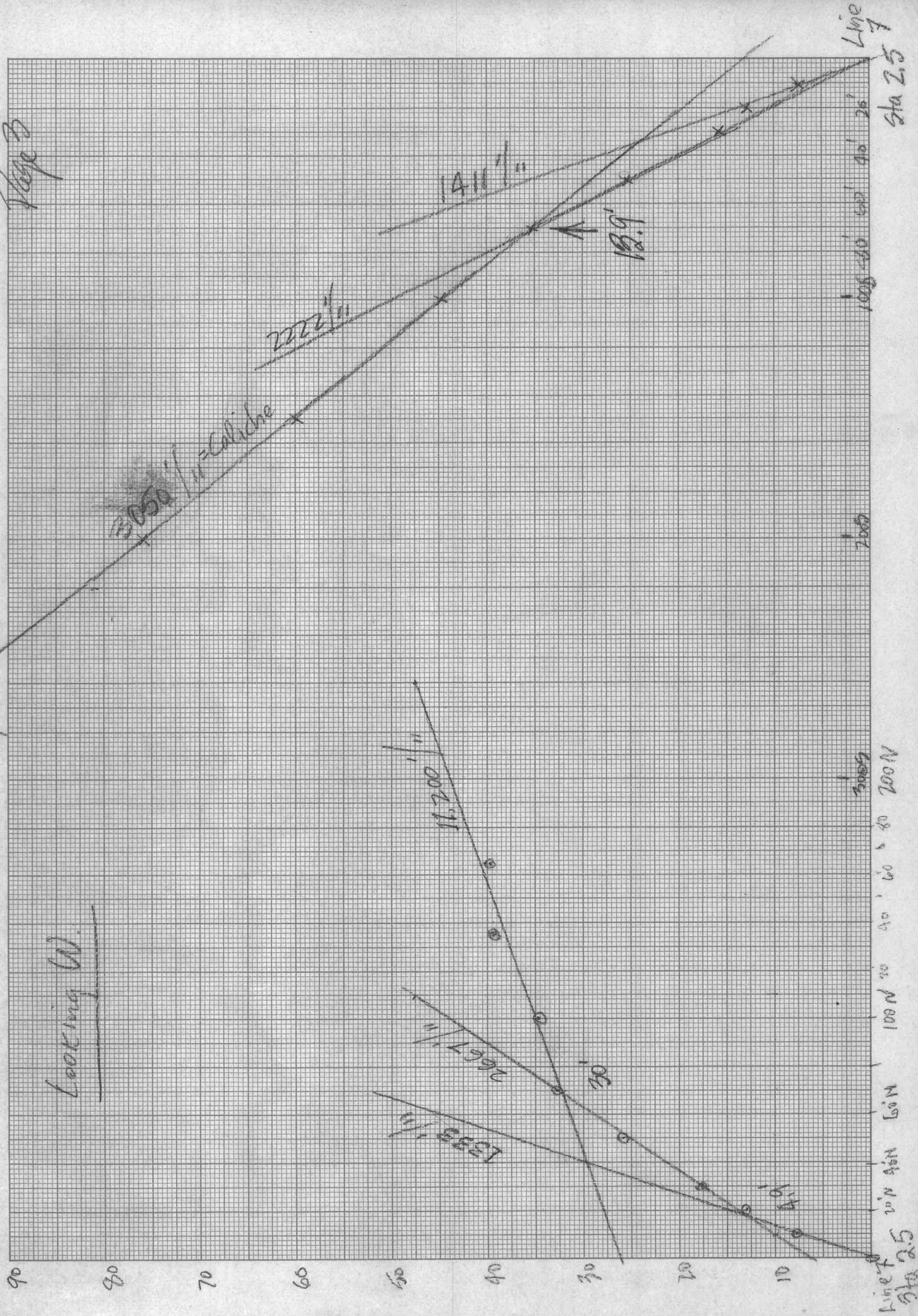
Sta 7-A

Sta 7-A

Line 7 - 10/20/84

Page 3

Looking W.



70

60

40

30

20

10

0

60

50

40

30

20

10

0

LINE 8 - 10/21/84

Looking NW

Page 1

Steeply up(?)

steep up?

13,400'

55.8'

4960'

1500'

13.2'

steep down b.r. & ground water effect.

Step down 2 br. & ground water effect.

Sta. 100' SW
Sta. 200' NE
Big Mesquite tree

0 (Road)
300' SW
Bedrock at Sta. I = 45' SW

30' NE 270' SW
60' NE 240' SW
90' NE 210' SW
120' NE 180' SW
150' NE 150' SW
180' NE 120' SW
190' NE 110' SW
210' NE 90' SW
240' NE 60' SW
270' NE 30' SW
300' NE 0' SW
Bedrock at Sta. 340' NE →

135' NE

20

10.5'

Page 2

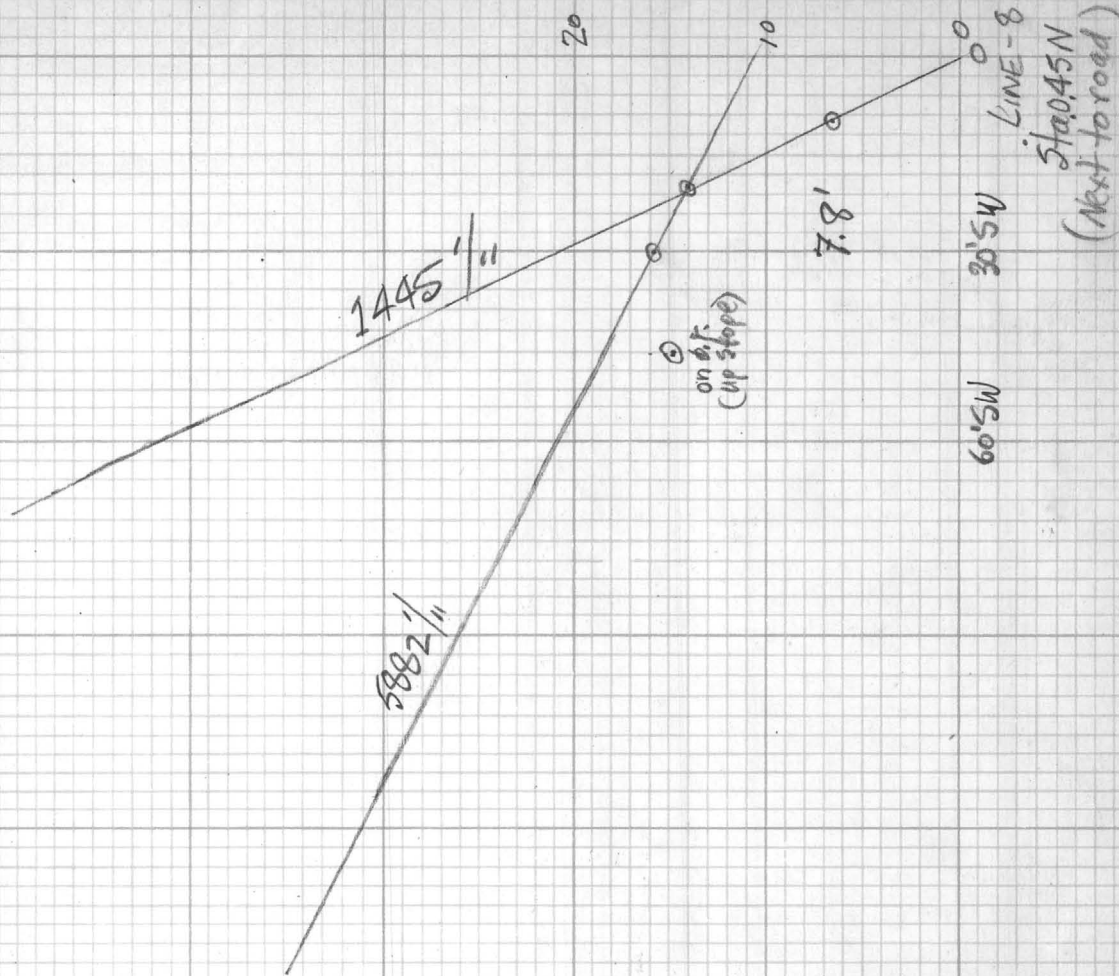
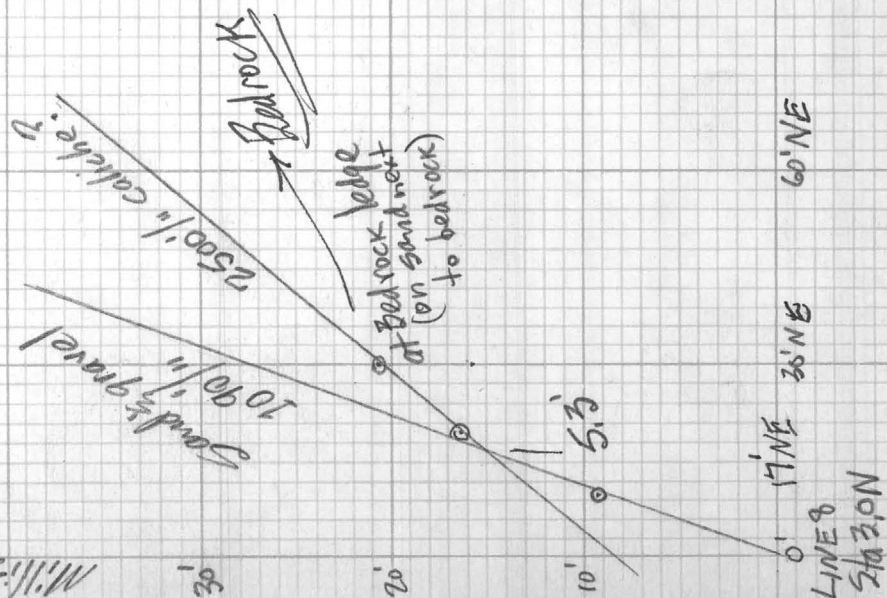
LINE 8 - 10/21/84 N.E. - S.W.

R.B.L. - M.A. & W.E.H.

(Looking Westward)
(N.W.)

16
2.4
4.0
4.0

M.I. 50 cents





AMERICAN INSTITUTE OF PHYSICS

335 EAST 45 STREET, NEW YORK, NEW YORK 10017 • TELEPHONE (212) 661-9404
Telex 960983/AMINSTPHYS-NYK

H. WILLIAM KOCH
Director
RODERICK M. GRANT
Secretary
GERALD F. GILBERT
Treasurer

17 July 1984



Dear Colleague:

AIP is pleased to announce that plans are well underway for its annual Corporate Associates Meeting. This year, McDonnell Douglas Corporation joins us as hosts at the McDonnell Douglas Research Laboratories in St. Louis, Missouri on 23 - 24 October 1984. I invite you to reserve those dates and attend.

The Corporate Associates Advisory Committee, chaired by Edward C. McIrvine of Xerox, has planned an outstanding program. As you can see from the enclosed preliminary program, the theme of the meeting will be "The Physics of High-Performance Materials," and will include talks covering a wide range of interest to physicists and astronomers, as well as a scheduled tour of the McDonnell Douglas Research Laboratories.

On Tuesday evening, after the banquet at the Breckenridge Concourse Hotel, AIP will present the AIP-U.S. Steel Foundation Science-Writing Award. This presentation is to be followed by an invited talk on "The Physics That Every Bacterium Should Know" given by E.M. Purcell of Harvard University.

In September, we will send you the formal meeting program and provide you with further details on registration, hotel accommodations, etc. At that time we will ask, specifically, for your RSVP.

Again, please note the dates and plan to join us.

Sincerely yours,

H. William Koch

H. William Koch

HWK:gs
Enc.

Groves-Sundt

Seismic

2-lines

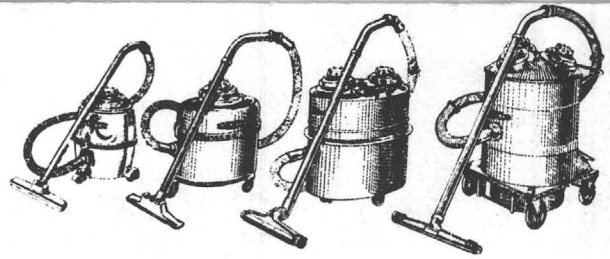
2-3 Miles long

first phase.

7/27/84

NILFISK

OF AMERICA, INC.

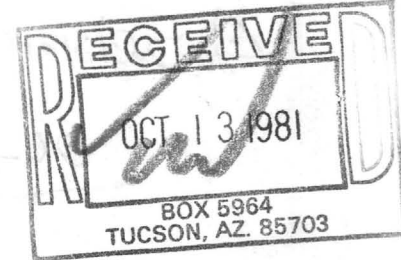


201 KING MANOR DRIVE, KING OF PRUSSIA, PA 19406 (215) 277-3900

October 8, 1981

W. Heinrichs, President
ADIT RESOURCES CORP.
P.O. Box 5964
Tucson, AZ 85703

602/623-0578



Gentlemen,

We have received your inquiry from MINING ENGINEERING and we sincerely appreciate your interest in NILFISK commercial and industrial vacuum systems

Enclosed is descriptive literature explaining the most important features of our equipment, including design, filtration and portability.

If you have a specific dust removal problem, we would be happy to discuss it with you.

Sincerely,

NILFISK OF AMERICA, INC.

Forli-Anders
Sales Services Department

Encl:



Van Lewis Called. Job #1718 9/16/84
Quartzite

Acoustic 15,000 profile feet

50'-60' deep

1-2 Weeks

60 days?
for 15000 feet?

10 deep

20-30/day

Spreads
200-250' long.

10 to 1 day/day

SEG FIELD TRIP ANNOUNCEMENT

GEO THERMAL GEOLOGY OF THE GEYSERS-CLEAR LAKE AREA

March 1-3, 1984

A POST-MEETING FIELD TRIP TO THE GEYSERS-CLEAR LAKE GEOTHERMAL AREA OF NORTHERN CALIFORNIA IS OFFERED FOLLOWING THE 1984 MEETING OF THE SOCIETY OF ECONOMIC GEOLOGISTS IN LOS ANGELES. THE FIELD TRIP WILL LEAVE FROM LOS ANGELES INTERNATIONAL AIRPORT AT 2:00 P.M. ON MARCH 1, 1984. BUSES WILL TRANSPORT PARTICIPANTS FROM THE BONAVENTURE HOTEL TO THE AIRPORT, AND BUSES WILL PICK UP PARTICIPANTS AT SAN FRANCISCO INTERNATIONAL AIRPORT AND TRANSPORT THEM TO KONOCTI HARBOR INN ON CLEAR LAKE. DURING MARCH 2 AND 3 PARTICIPANTS ON THE FIELD EXCURSION WILL BE SHOWN PRESENTLY ACTIVE HYDROTHERMAL SYSTEMS, SULFUR AND MERCURY DEPOSITS, LATE MESOZOIC GEOLOGY OF THE FRANCISCAN COMPLEX AND GREAT VALLEY SEQUENCE, AND LATE PLIOCENE AND PLEISTOCENE VOLCANIC ROCKS OF THE CLEAR LAKE VOLCANIC FIELD.

COST: \$250 Includes bus transport from Bonaventure Hotel to Los Angeles International Airport, one way air fare from Los Angeles to San Francisco, bus transport from airport to field trip area, and return to downtown airlines terminal in San Francisco; also included is shared deluxe motel room with two double beds at Konocti Harbor Inn, all meals except dinner on March 1; field trip guide.

DATE AND TIME: Trip begins at 12:45 p.m. Thursday, March 1, when buses will depart from Bonaventure Hotel to airport and ends about 5:00 p.m. March 3, at downtown airlines terminal in San Francisco. Private vehicles are not permitted on the trip.

LEADERS: Robert J. McLaughlin and Julie Donnelly-Nolan of the USGS.

DEADLINE FOR REGISTRATION: February 1, 1984

LIMIT: 90 participants (To be selected on first come first served basis)

DEADLINE FOR CANCELLATION: February 15.

Cancellation must be in writing and must be received no later than February 15 to be eligible for refund. All refunds will be subject to a \$10 processing fee.

WEATHER AND CLOTHING: Weather in March can vary from sunny and warm to wet and dreary. No hard hats required.

(cut here)

REGISTRATION FORM SEG GEYSERS FIELD TRIP

NAME _____ Dr. Mr. Ms. Mrs.
(last) (first & middle)

ADDRESS _____

CITY	State/Province	Zip

INSTITUTION/EMPLOYER

MAKE CHECK PAYABLE TO: SEG 1984 Winter Field Trips

Mail to: John P. Albers
345 Middlefield Road, Mail Stop 901
Menlo Park, CA 94025

For further information, contact John P. Albers, (415) 323-8111, ext. 4201

Job # 1718

~~\$50~~ \$50⁰⁰/day, gravity + transport.

20-25 stations/day - no level, 20' contours = ±10'

Pre schist & gneiss, alluvium &, Gila Cglorquin?
Volcanics-interbeds at depth unexposed?

20,000' profile \approx 80 stations
250' / sta

$\frac{250 \times 80}{20,000}$

@ 20 " / day = 4 days. grav. & mag.

5 days to workup (minimum)

Seis - est. depths = 60-65' nsl.

10-250 ^{Cross} spreads / day = 2500' per day or 8 days for
10 days to workup? 20,000 feet

Per diem \$50⁰⁰/man/day.

Mileage Tucson - Blythe - $\frac{266}{5} = 5.3 \text{ hrs.} \approx 6 \text{ hrs}$

" Blythe to prospect - 12 mi. travel
(oneway)

4x4 Vehicles $\frac{22 \times 266}{106.40}$ \$50⁰⁰/day + 40¢/mile.

Travel: \$150⁰⁰/vehicle oneway = \$300⁰⁰ R.T.

Travel Time = 12 man hrs. (@ 1/2 base rate)

One way for 2 men

@ 60⁰⁰/hr. $\frac{720}{2} = 360$

R.T. = $360 \times 2 = 720$

\$1020 + \$100⁰⁰ per diem
= \$1120⁰⁰

SEG FIELD TRIP ANNOUNCEMENT

MOJAVE DESERT AND SALTON TROUGH, CALIFORNIA

February 24-26, 1984

A THREE DAY FIELD TRIP TO VISIT MINES, GEOTHERMAL AREAS, AND OTHER POINTS OF GEOLOGIC INTEREST IN SOUTHERN CALIFORNIA IS SCHEDULED TO PRECEDE THE 1984 SEG MEETING IN LOS ANGELES. VISITS WILL BE MADE ON THE FIRST DAY TO THE U.S. BORAX BORATE DEPOSITS AT BORON, AND TO ASARCO'S WATERLOO PROJECT, A DISSEMINATED SILVER DEPOSIT IN THE CALICO MOUNTAINS. ON THE SECOND DAY THE KAISER STEEL EAGLE MOUNTAIN SKARN IRON DEPOSIT AND THE RECENTLY DISCOVERED GOLDFIELDS CONSOLIDATED MESQUITE GOLD DEPOSIT WILL BE SEEN, AS WILL A LONG STRETCH OF THE SAN ANDREAS FAULT ZONE. THE THIRD DAY WILL BE HIGHLIGHTED BY VISITS TO ACTIVE GEOTHERMAL SITES AND TO A GEOTHERMAL POWER PLANT, AS WELL AS TO OTHER AREAS OF GEOLOGIC INTEREST.

COST: \$150 Includes shared motel rooms with two beds in Indio and Brawley; all transport by charter bus; noon box lunches and refreshments; field trip guide.

DATE AND TIME: Trip begins at 8:00 a.m., Friday, February 24, when buses will depart from Bonaventure Hotel in Los Angeles, and ends about 6:00 p.m., Sunday, February 26, at the Bonaventure. Private vehicles are not permitted on the trip.

LEADERS: Wilfred A. Elders, University of California at Riverside, and Paul Morton, Consulting Geologist, Costa Mesa.

DEADLINE FOR REGISTRATION: February 1, 1984

LIMIT: 80 participants (To be selected on first come first served basis)

DEADLINE FOR CANCELLATION: February 15.
Cancellation must be in writing and must be received no later than February 15 to be eligible for refund. All refunds will be subject to a \$10 processing fee.

WEATHER AND CLOTHING: Weather in February is usually sunny and warm but can be windy and cold on the Mojave Desert. Bring hard hats and windbreaker.

REGISTRATION FORM SEG MOJAVE DESERT AND SALTON TROUGH FIELD TRIP (cut here)

NAME _____ Dr. Mr. Ms. Mrs.
(last) (first & middle)

ADDRESS 2222 S. 10th St. Phoenix, Arizona

CITY	State/Province	Zip

INSTITUTION/EMPLOYER

MAKE CHECK PAYABLE TO: SEG 1984 Winter Field Trips

Mail to: John P. Albers
345 Middlefield Road, Mail Stop 901
Menlo Park, CA 94025

For further information, contact John P. Albers, (415) 323-8111, ext. 4201

<u>Field</u>	<u>40 hr/wk</u>	<u>O.T.</u>
One man pro, or sup. -	\$32.50	\$39.50
Two men , one pro, & helper -	45.00	59.00
Two men , both pros -	60.00	74.25
Three men , (one pro, ^{or} one tech & one or two helpers)	60.00	74.25
Four men , (two pros & 2 helpers, or one pro, two techs 1 helper, or one pro two techs & 2 helpers.)	75.00	98.50

Office:
\$ 27.50 / pro man hour + expenses

~~Direct~~ ~~related~~
expenses @ 115% of our invoiced cost
including eqpt. rental, extra labor, insurance,
expensable supplies, reproductions and
communications.

Positioning ~~costs~~ ^{travel time charges} at
1/2 base rates. Travel from ^{time} ~~to~~ ^{to} ~~site~~
Job site to domicile at regular rates.
Average field work day 10 hours
" field work week 60 hours.

SEG FIELD TRIP ANNOUNCEMENT
MOTHER LODE GOLD BELT
March 1-5, 1984



A 4 1/2 DAY FIELD TRIP THROUGH CALIFORNIA'S HISTORIC MOTHER LODE GOLD BELT IS SCHEDULED TO FOLLOW THE 1984 MEETING OF THE SEG IN LOS ANGELES. VISITS WILL BE MADE TO A NUMBER OF MOTHER LODE GOLD MINES AND POINTS OF GEOLOGIC INTEREST. THE ADJACENT EAST AND WEST GOLD BELTS WILL ALSO BE VISITED. HIGHLIGHTS OF THE TRIP INCLUDE VISITS TO PROPOSED OPEN PIT GOLD MINING OPERATIONS IN THE JAMESTOWN DISTRICT, HODSON DISTRICT, AND SAN JUAN RIDGE. PARTICIPANTS WILL ALSO TOUR YUBA GOLD DREDGE NO. 21, WHICH IS NOW IN OPERATION AT HAMMONTON.

COST: \$275 Includes shared motel rooms with two beds in Merced, Sonora, Jackson, and Nevada City; all transport by charter bus; all morning and noon meals and one banquet dinner; field trip guide.

DATE AND TIME: Trip begins at 1:00 p.m., Thursday, March 1, when buses will depart from the Bonaventure Hotel in Los Angeles and ends about 5:00 p.m., Monday, March 5, at the downtown airlines terminal in San Francisco. Private vehicles are not permitted on the trip.

LEADERS: Frank C. W. Dodge of USGS and Ralph Loyd of the California Division of Mines and Geology

DEADLINE FOR REGISTRATION: February 1, 1984

LIMIT: 80 participants (To be selected on first come first served basis.)

DEADLINE FOR CANCELLATION: February 15
Cancellation must be in writing and must be received no later than February 15 to be eligible for refund. All refunds will be subject to a \$10 processing fee.

WEATHER AND CLOTHING: Weather in March can vary from sunny and warm to wet and snowy. Bring hard hats!

----- (cut here) -----
REGISTRATION FORM SEG MOTHER LODE GOLD BELT FIELD TRIP
NAME _____ Dr. Mr. Ms. Mrs.
(last) (first & middle)
ADDRESS _____
CITY _____ State/Province _____ Zip _____
INSTITUTION/EMPLOYER _____

MAKE CHECKS PAYABLE TO: SEG 1984 Winter Field Trips

Mail to: John P. Albers
345 Middlefield Road, Mail Stop 901
Menlo Park, CA 94025

For further information, contact John P. Albers (415) 323-8111, ext. 4201

8.12.84
96
Shirley

450
9/5/84

2 men - 10 ^{field} work days. Seis & mag?

Mag &
Gravity field
4 work days

Seis = 6 days = 60 hrs. per diem = 600⁰⁰

$\frac{1}{2}$ mag? 40 x 60 = 2400 $\frac{3}{2400^{00}}$

$\frac{2400}{20 \times 74.25} = 1485$ $\frac{2400}{148.5} = 1485^{00}$

4 \$day @ 60 hrs. $\frac{2400^{00}}$

4 day per diem $\frac{400^{00}}$

Positioning: $\frac{1120^{00}}$

Vehicle on job (less positioning)

10 days @ 50⁰⁰/day $\frac{500^{00}}$

25 miles/day = 250 miles @ 0.40 \$/mile $\frac{100^{00}}$

410 days $\frac{164000}{100000}$

Seis eq pt rental

$\frac{9005.00}{900.00} = 9905.00$

Interpretation & report - 2 men 10 days

= 20 man days $\frac{1}{2}$ 8 \$/day = 160 hrs

@ 27.50/hr =

use 100 hrs
12 man days x 8 = 96 hrs
@ 27.50

$\frac{4400^{00}}$

$\frac{14305.00}{14505.00}$

Expenses -

@ 1-2% $\frac{134}{268}$
402

$\frac{200.00}{14505.00}$

$\frac{14505.00}{14505.00}$

$\frac{40.00}{7500.00}$

$\frac{7500.00}{7500.00}$

Seis Eq pt rental \$900⁰⁰
Gravity " " - 450⁰⁰

~~14,505.00~~

14,505.00

Gravity & magnetic

ES-125 @ \$75/day (used) x 10 = 750 \$150 shipping &/or contingency = 900⁰⁰

also: EG & G @ \$500 + shipping for 2 weeks (if available) = 600⁰⁰



P.O. BOX 32574 • TUCSON, ARIZONA 85751-2574 • (602) 298-9404

September 27, 1984

DOWNTOWN
600 N. Stone
Tucson, AZ 85705
884-7758

Heinrichs Geoexploration Co.
810 W. Grant Rd.
Tucson, Az. 85705

EASTSIDE
6911 E. Broadway
Tucson, AZ 85710
298-9404

Gentlemen:

NORTHSIDE
3660 N. Oracle
Tucson, AZ 85705
888-1650

Are your company cars and trucks out of service when you need them most? Milex 5 Star Fleet Service has a maintenance plan for you, whether you have a couple of vehicles...a couple of dozen...or more.

We offer several fleet service plans and three convenient locations. Our services include:

PRIORITY SERVICE...ideal for those requiring an absolute minimum of down-time. Your vehicle will be in and out in less than two hours for most services. (Saturday service is also available.)

ECONOMY SERVICE...perfect for those whose down-time is less critical. Vehicles are always out in 24 hours and often the same day. On this plan, you can save with our quantity discounts.

POSITIVE PREVENTIVE MAINTENANCE...we custom design a service package to suit your needs. A schedule is used to perform routine services and inspect each vehicle for safety and reliability. Maintenance logs are maintained on each vehicle and mileage service reminders affixed.

There's much more to Milex Fleet Service...because we believe your company deserves a plan tailored to your needs, you get what you need, when you need it.

If you'll call me at 884-7758, I will be happy to discuss your fleet requirements.

Cordially,

Alan L. McGee
President & General Manager

World's Leading Auto Tune-Up Specialists

for four field days

est. 7 days elapsed for

Gov. rental $7 \times \frac{\$50}{\text{day}} = 350$

$\$300^{\infty}$

350

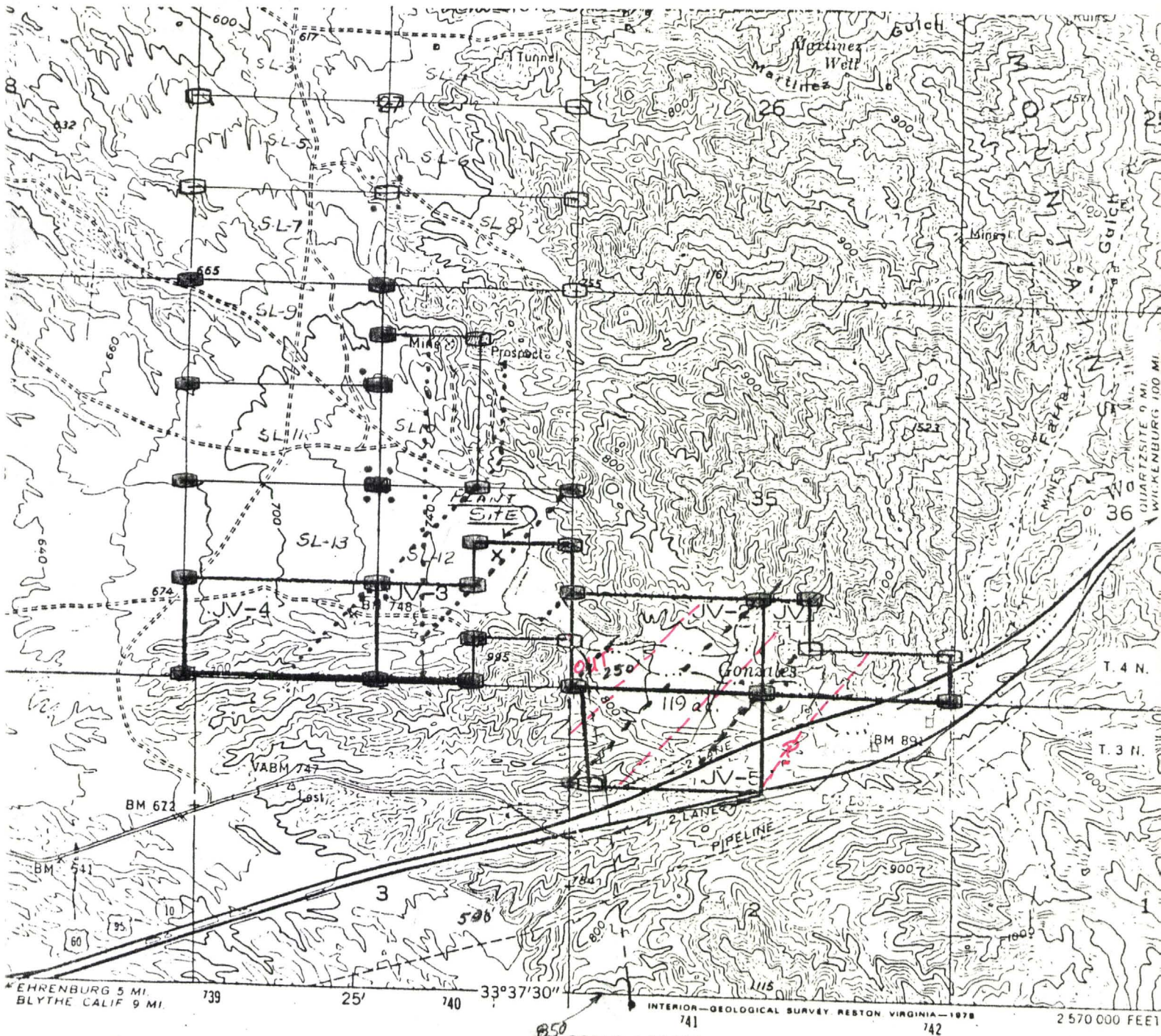
650

100

750

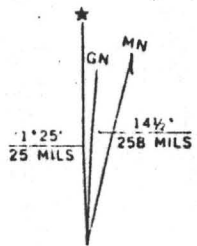
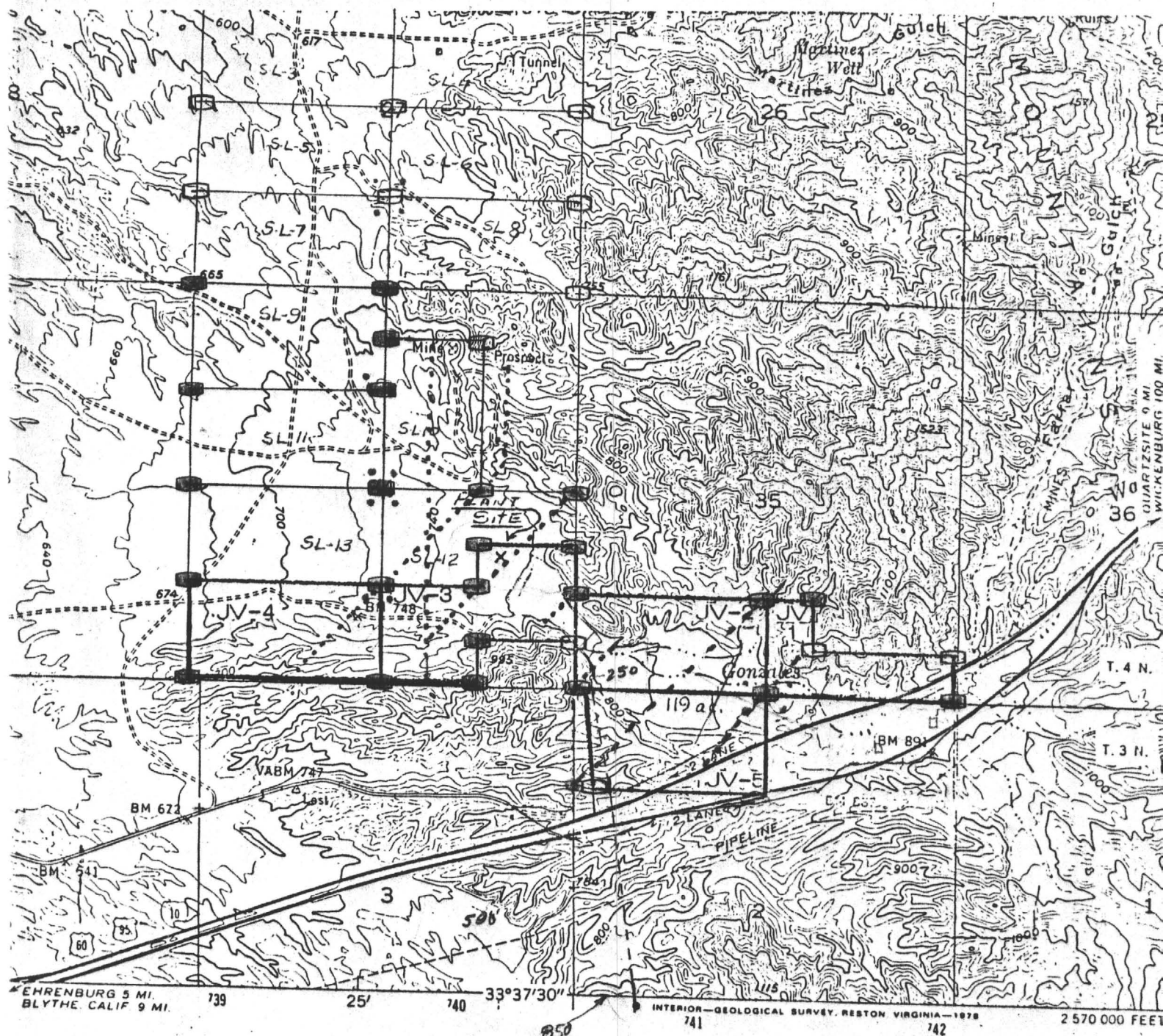
+ freight 50^{∞} of w $\approx 100^{\infty}$ RV.

INDEX MAP
LA PAZ MINING INC.
JV CLAIM GROUP
LA PAZ COUNTY, ARIZONA

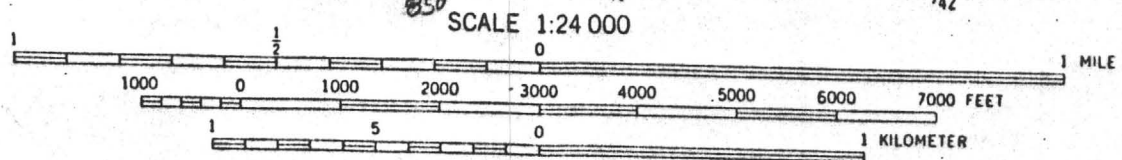


UTM GRID AND 1970 MAGNETIC NORTH
DECLINATION AT CENTER OF SHEET

INDEX MAP
LA PAZ MINING INC.
JV CLAIM GROUP
LA PAZ COUNTY, ARIZONA



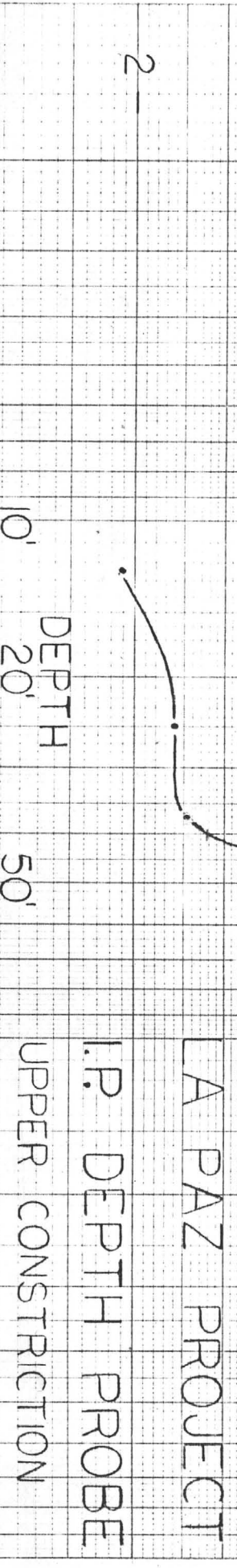
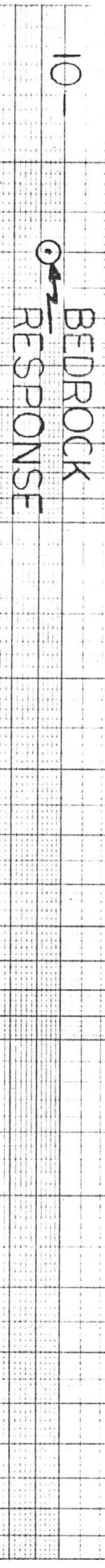
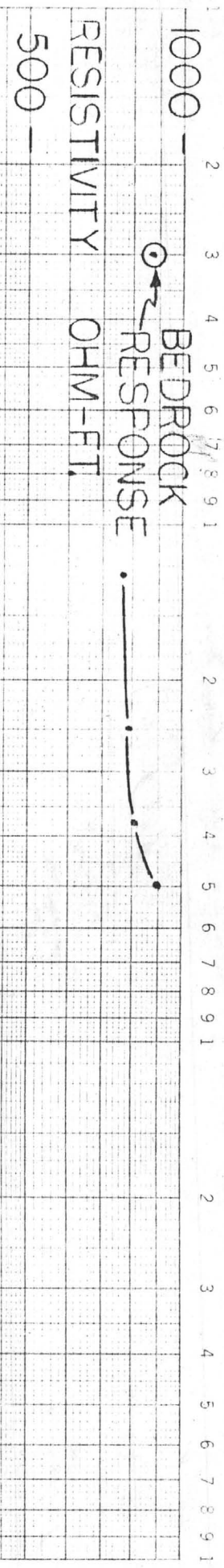
ITM GRID AND 1970 MAGNETIC NORTH
DECLINATION AT CENTER OF SHEET



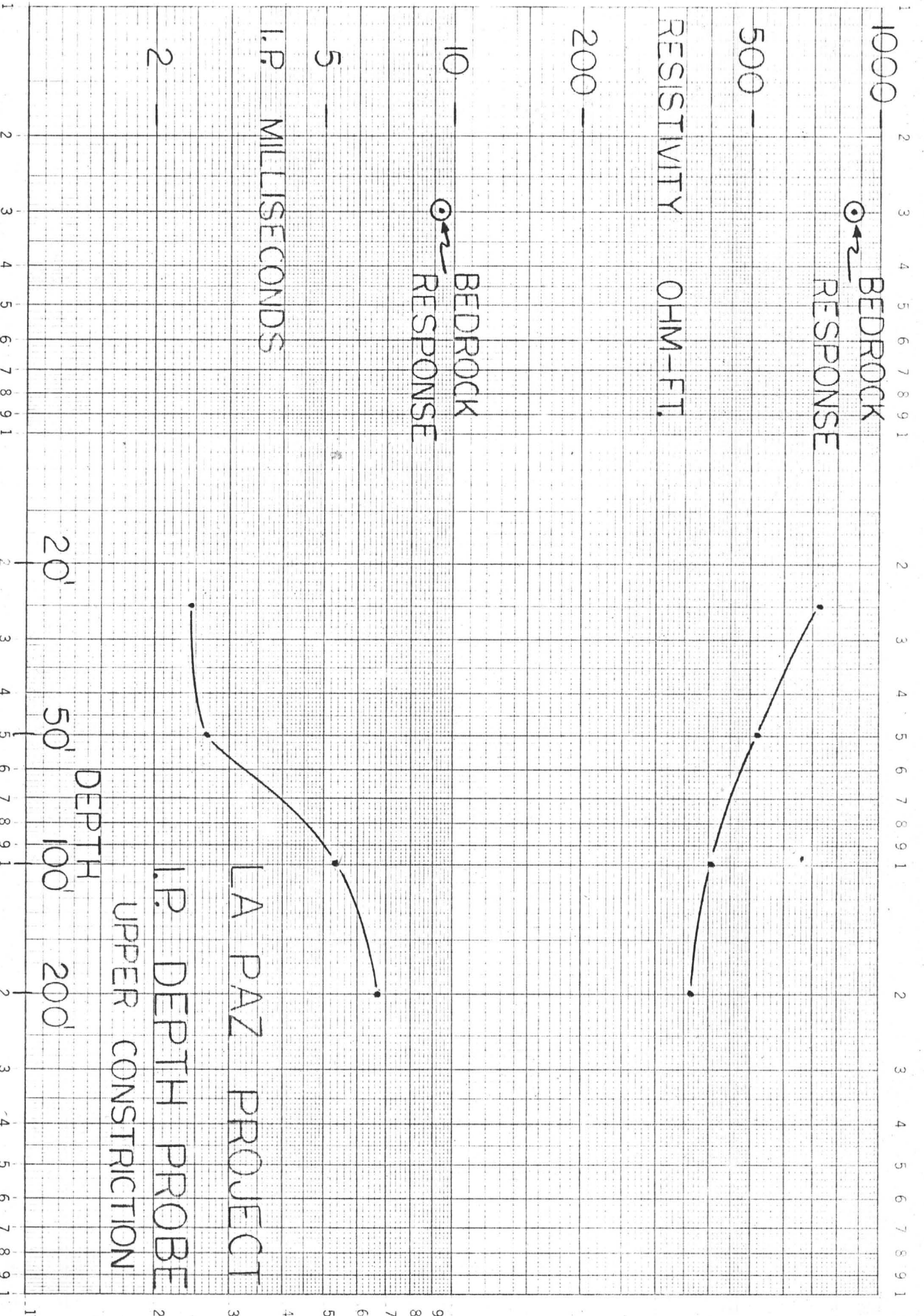
SCALE 1:24 000
CONTOUR INTERVAL 20 FEET
DOTTED LINES REPRESENT 10-FOOT CONTOURS
NATIONAL GEODETIC VERTICAL DATUM OF 1929



of 2 construction



LA PAZ PROJECT



GEOEX

10/4/84

La Paz Mining Inc.

1802 West Grant Road
Tucson, AZ 85745

Re: La Paz District Placer
T. 34N., R. 21W La Paz County AZ
GEOEX #1718 Proposal

Attn: Mr. Dan Lewis

Dear Dan:

This will confirm and attempt to summarize our
various discussions ~~and~~ ^{and conclusions regarding} subject property.

The area is outlined on a 1"=1000' scale blow up of the
USGS quadrangle with 20 foot contour interval. Ultimate
Objective is gold placer, presumably concentrated at or very near
bedrock in vicinity of alluvial out wash fans and/or basins and
such zones protected from erosion by faulting or capture flooding.
Immediate objective is to determine bedrock depths and ^{potential} ~~or~~ auriferous
alluvial gravel thicknesses in at least three subsections of
primary interest. Depending on results, ^{preliminary} initial ^{envisioned} coverage may
approach or exceed 20,000 profile feet.

EXPORT

MANUFACTURERS

P. O. BOX 770

Oil Field

SUPPLY CO. (INTL) INC

GARDEN CITY, NEW YORK 11530-0770

TELEX NO. 14-4626

CABLE "EXOILSUP"

(212) 846-5300

C84-82627

SPECIFICATION SHEET

ITEM	QUANTITY	UNIT	DESCRIPTION, SPECIFICATIONS, CATALOG NO.
28	1	Set	TRIAXIAL CELL for confining pressures upto 70 MPa and for NX size rock specimens, complete with deformation jacket, electrical feed through connectors for strain gauges and pore water provisions.
29	1	Set	CONSTANT HYDRAULIC PRESSURE PUMP for generation of pressures upto 70 MPa and for use with triaxial cells of item no. 25 and 26; operating voltage 220 V AC, 50 Hz.
30	1	Set	COMPRESSION TEST APPARATUS of 50 kN capacity for unconfined and triaxial testing of soil specimens, complete with triaxial cell of 100 mm diameter, stepless variable motor drive, oil and water constant pressure unit for upto 1700 kPa , and accessories; operating voltage 220 V AC, 50 Hz.

Maximum bedrock depths are estimated at 60 to 65 feet in areas near ^{to} or surrounded by bedrock. However, some ^{greater depths} ~~have also been reported but not confirmed.~~

Bedrock is exposed in several places next to the sub-areas of interest. ~~Bedrock~~ ^{reported by} consists of granite ^{on} the north west part of the property and schist on the southeasterly portion.

Various geophysical methods have been used with varying success in this kind of application but, generally, even under the worst conditions, there is ^{at least some} synergistic advantage in the use of multiple methods. Based on this experience we propose to first try a combination of magnetics and gravity. If initial results are favorable, we estimate that approximately 20,000 profile feet of data can be acquired, compiled, interpreted and presented for about \$7500. If initial results are too marginal, we ~~could~~ ^{then} recommend switching to a combination of seismic ^{refraction} and magnetics and/or resistivity and magnetics. 20,000 feet of seis and magnetics are estimated at about \$14,505 and resistivity and magnetics ~~about \$12,500.~~ ^{that amount to about \$12,500.}

The best ^{depth to bedrock} accuracy possible is $\pm 15\%$ of the ^{Total} estimated ^{present} ~~depth~~ ^{depth} if there are no mitigating factors. However, certain mitigating factors are ~~definitely anticipated~~ expected. Boulders and

EXPORT

MANUFACTURERS

P. O. BOX 770

Oil Field

SUPPLY CO. (INTL.) INC.

AND SUPPLIERS OF OIL FIELD AND WATER WELL EQUIPMENT

GARDEN CITY, NEW YORK 11530-0770

CABLE "EXOILSUP"

(212) 846-5500

TELEX NO. 14-4626

C84-82627

SPECIFICATION SHEET

ITEM	QUANTITY	UNIT	DESCRIPTION, SPECIFICATIONS, CATALOG NO.
24	1	Set	SLAKE DURABILITY TEST APPARATUS comprising 220 V AC motor drive, brass test drums and plastic water troughs.
25	1	Set	VIBRATORY LAPPING MACHINE for polishing rock specimens with removable lap pan of at least 50 cm diameter, diamond impregnated plate in and core holder for 4 specimens; operating voltage 220 V AC, 50
26	1	Set	STIFF COMPRESSION TESTING MACHINE of electro-hydraulic servo control type of 200 tonne capacity, complete with X-Y plotter, oscilloscope and circumferential extensometer for determination of lateral expansion of rock specimens; capable of static and pulse loads with square and haversine wave forms; operating voltage 220/440 V AC,
27	1	Set	HOEK TRIAXIAL CELL for confining pressures upto 70 MPa and for various size rock specimens, complete with platens and membrane jackets.

and thick bed-rock weathering will be ^{significantly} adverse as caliche ~~will be~~ ~~adverse to~~ ~~bedrock weathering and~~ will clay layers in resistivity work. Magnetics done ^{together} may ~~also~~ give little depth or thickness information directly but, with ^{information} gravity, it stands a reasonable chance to ^{provide} ^{depth and thickness} ~~data~~ ^{plus, maybe also} differentiating the bedrock character, ^{ie granite vs schist} and ^{bedrock versus} ~~bedrock~~ delineating some faulting as well. Hopefully, the gravel-caliche-lake bed sections that possibly will be encountered will in any case ~~provide~~ ^{provide} enough density contrast to give good gravity profiles ^{which are reasonably} ^{true} correlatable to the ^{true} bedrock surface.

~~These~~ ^{the} ~~shapes~~ ^{work} ~~for the~~ ^{are} as follows

Depending on work load, prior commitments, personnel, and equipment availability, field work can ^{almost} ^{always} start ^{be} within two or three ^{notice} weeks ~~and~~ and often within a few days. Rental costs and availability of seismic and gravity equipment can sometimes ^{become} ^a ^{controlling} factor.

Base charge ^{rates} for field work ~~are~~ ^{as follows} (plus expenses) are as follows:

EXPORT *Oil Field* SUPPLY CO. (INTL.) INC.

MANUFACTURERS

AND SUPPLIERS OF OIL FIELD AND WATER WELL EQUIPMENT

P. O. BOX 770

GARDEN CITY, NEW YORK 11530-0770

CABLE "EXOILSUP"

(212) 846-5500

TELEX NO. 14-4626

C84-82627

SPECIFICATION SHEET

ITEM	QUANTITY	UNIT	DESCRIPTION, SPECIFICATIONS, CATALOG NO.
20	4	Sets	HYDRAULIC SUPPORT PRESSURE RECORDER with clock-work drive of 1 revolution per day, preferably 3 recording pens for simultaneous recording of pressure in 3 hydraulic lines, pressure range upto 690 bars (10 000 psi)
21	2	Sets	SCHMIDT REBOUND HAMMER for rock strength estimation (type L of Proceq SA, Switzerland)
22	1	Set	POINT LOAD TESTER for rock strength estimation, of manual field-use type with dial calibration in SI units.
23	1	Set	POINT LOAD TESTER for rock strength estimation, of hydraulic laboratory type with two dial gauges calibrated in SI units for soft and hard rocks.

Call 5/8/84
3:05 Ranchers
3:03 Jolt #165, Montana
Monte (505) 344-3542
Left Word. 5th Federal
Weather OK
Bill Naumann will meet Sw.
Chick will follow.
contact in mail
May 1981
Monday
mos
Thom

25
Monday

ON COMPANY
 PHONE: (502) 623-0576
 84
 Geophysics
 R. 15 W.
 rty, Montana
 GEOEX #1695

Dear Dave:

This will confirm the gist of our telephone conversation last Friday regarding your proposed geophysical survey in Granite County, Montana. Your related maps and rock samples arrived last week and have been incorporated into our planning.

On or about 15 May 1984, GEOEX agrees to supply personnel, standard equipment and vehicle for the purpose of conducting a geophysical survey on behalf of Ranchers as outlined more or less on attached map. We understand that the exploration target sought is hidden mantle type massive sulfide lenses perhaps as big as 400' x 1000' or larger, at depth within the exposed Precambrian Wallace formation.

Field crew rate charges including geophysical and nominal surveying equipment are as follows (plus expenses):

	40 hrs. per week (regular time) Per Hour	Over 40 hrs. week (over time) Per Hour
One man (professional or supervisor)	\$32.50	\$39.50
Two men (one pro. <i>helper</i>)	45.00	59.00
Three men, (one pro. <i>one tech. & two helpers</i>)	60.00	74.25
Four men (two pros. <i>two helpers</i>)	60.00	74.25
<i>or one pro, two techs & one helper or one pro, two techs. and two helpers</i>	75.00	98.50

(job positioning)
 Mobilization and demobilization, travel, standby and weathered out work days not made up are charged at one half the above rates up to a maximum of 10 hours per day. Travel time from crew domicile to job site and return is considered part of the normal crew work day.

Per diem is \$40.00 per man day or our cost which ever is greater.
 Vehicles are \$40.00 per day plus \$0.40 per mile or our invoiced cost plus 15%. Data compilation in field or office, report and office supervision

Two men, both pros.

27.50

are charged ~~\$25.00~~ per professional man hour plus expenses. Work days usually average about 10 hours and work weeks about 60 hours from Sunday through Saturday. Expendable supplies, outside equipment or labor, sub-contracting, communications, reproductions, transportation, etc., directly incidental to the job, are charged at 115% of our invoiced payroll costs and, except for transportation, ~~not commonly~~ will amount to about ~~10%~~ 10 percent of total job charges.

All property permits and trespass liability and ~~matters and~~ related costs are to be for the account of La Paz Mining Incorporated.

A base line may be set up along the apparent fault ~~line~~ which ~~tends~~ through "the gap" and lines run perpendicular to this base line at least in part. Some claim control has ~~been~~ ^{already} established and is ~~considered~~ hoped it will be adequate for ~~all~~ initial requirements.

~~Accordingly,~~ Assuming the crew domiciles in Philipsburg, we estimate a turn key cost of about \$9,000.00 including final report. ~~The amount of \$3750.00 is~~ ^{advance} ~~herein~~ ^{is} ~~enclosed~~ ^{herewith}.

For our mutual convenience, if this letter constitutes a satisfactory mutual understanding then such may be indicated by executing as provided below on the enclosed extra copy of this letter and returning same to us together with your advance on account of \$3,750.00.



9/20/84

69 922-

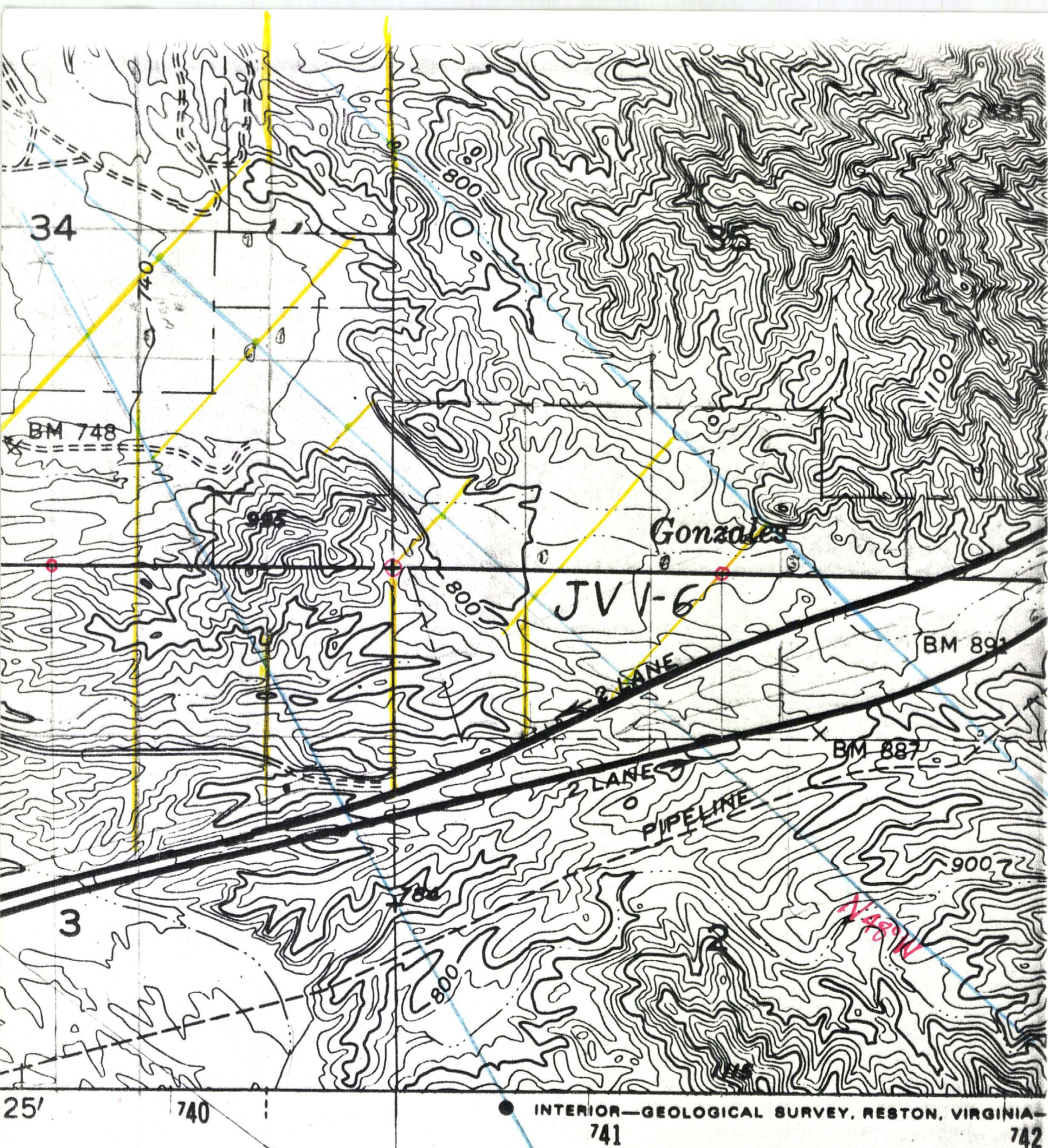
2184

~~Bkt~~ 39

Roadway Lm.
Blythe.

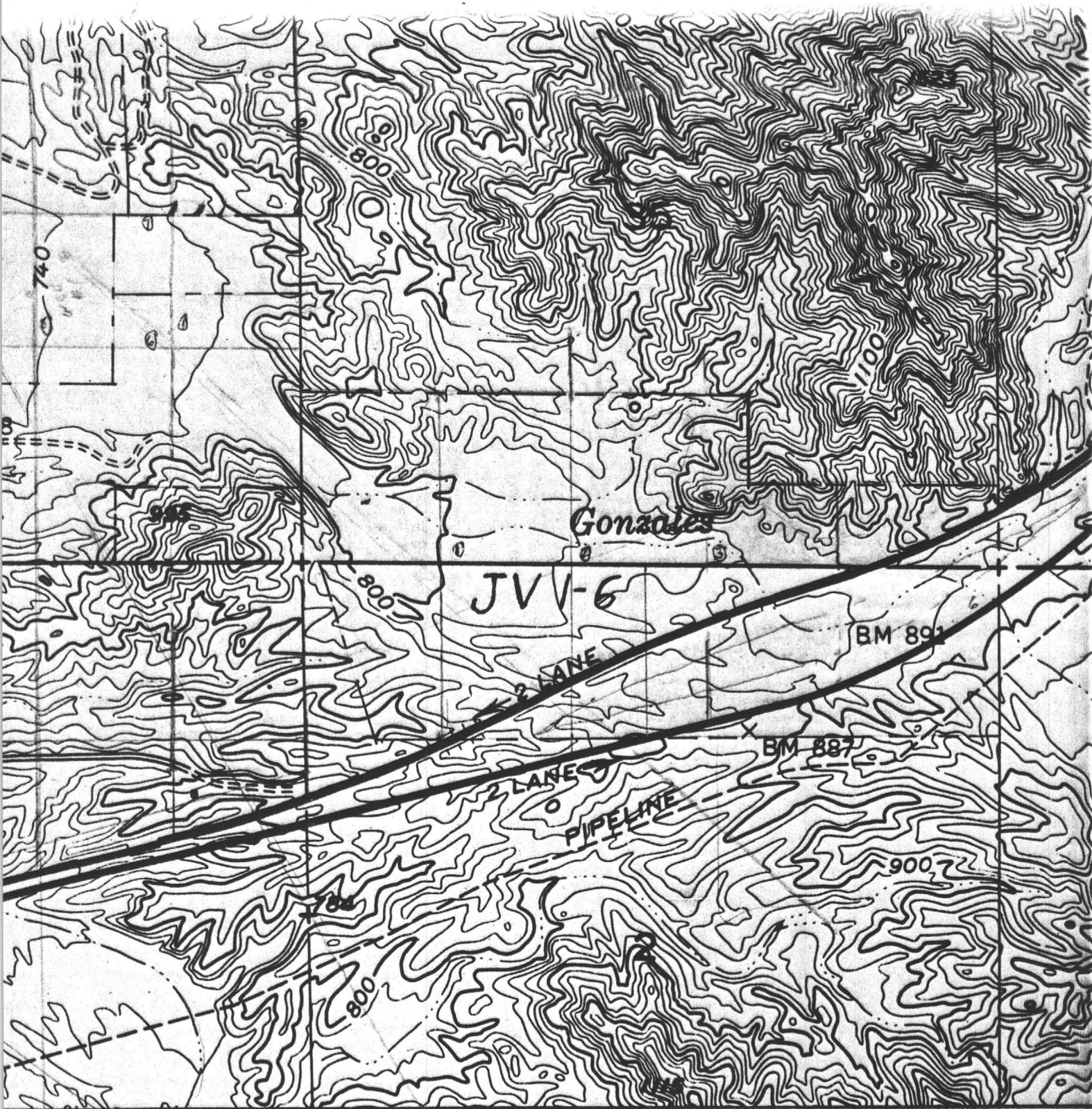
Connie

J



$\approx 20,000'$ profile

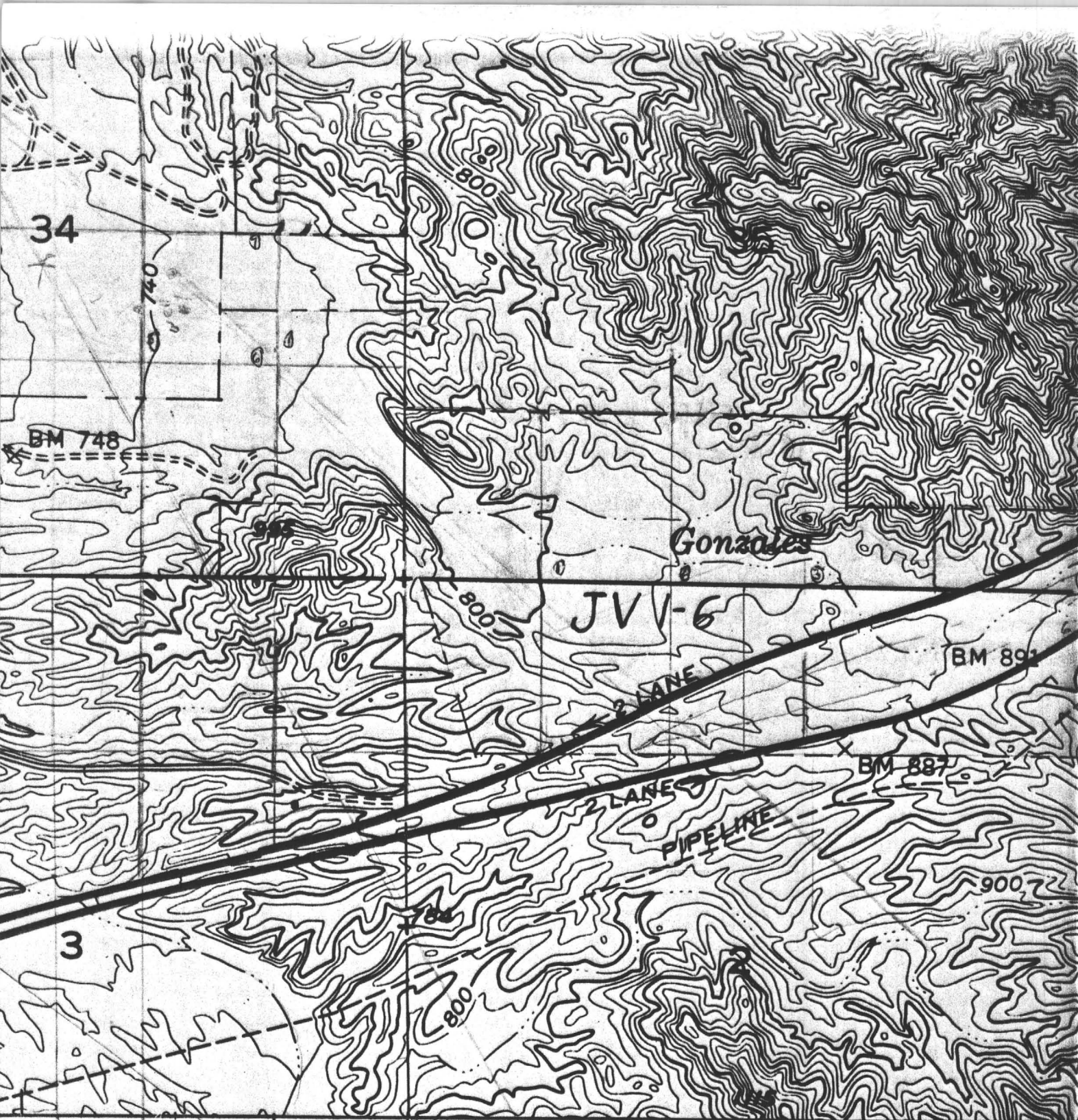
100% Major Frontal
 Alluvium? Fault? - other faults in blue minor displacement?
 Yellow lines = N 48° E "base line" fault, N 48° W.



● INTERIOR—GEOLOGICAL SURVEY, RESTON, VIRGINIA—1978

741

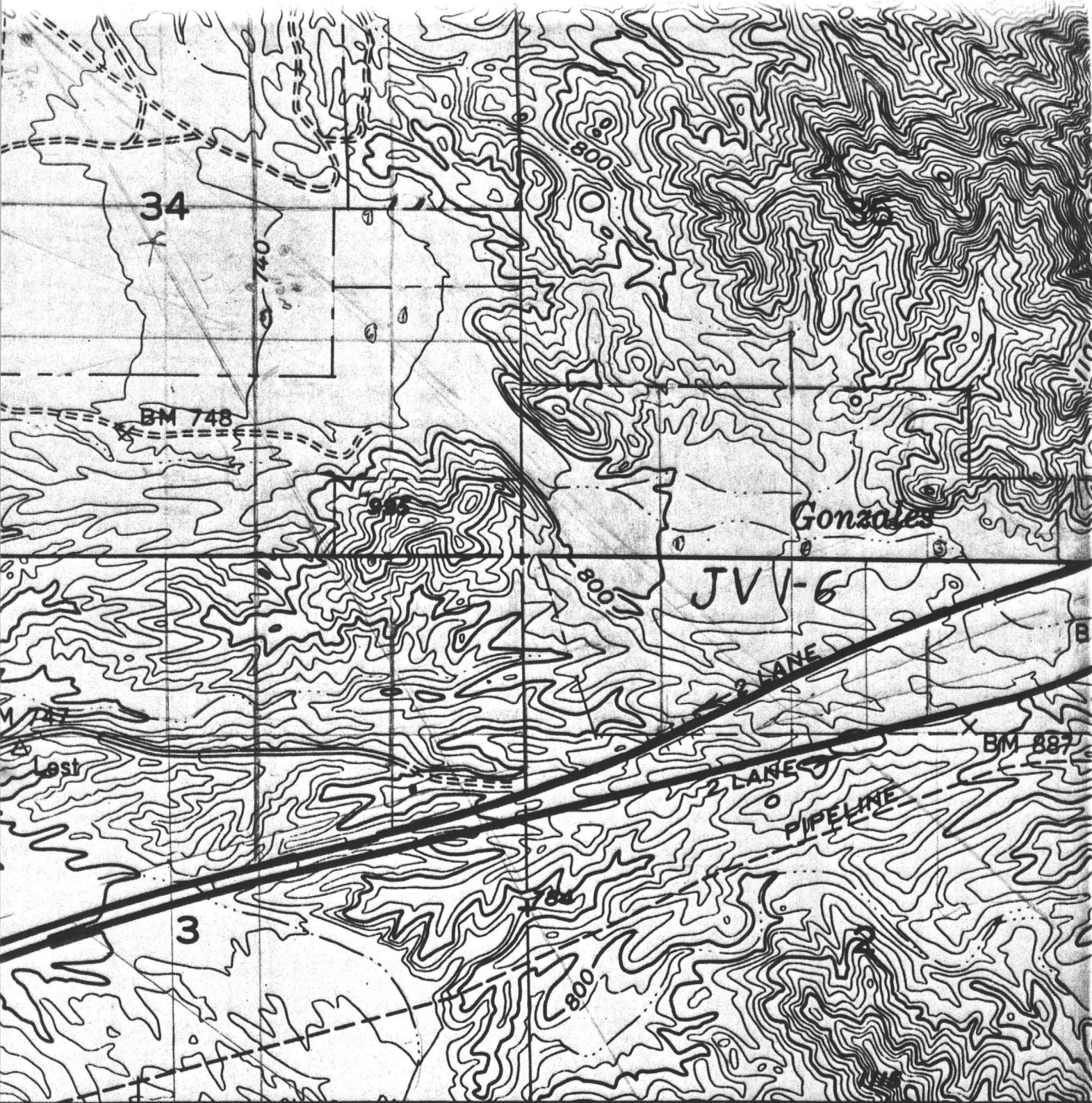
742



25' 740

● INTERIOR—GEOLOGICAL SURVEY, RESTON, VIRGINIA—

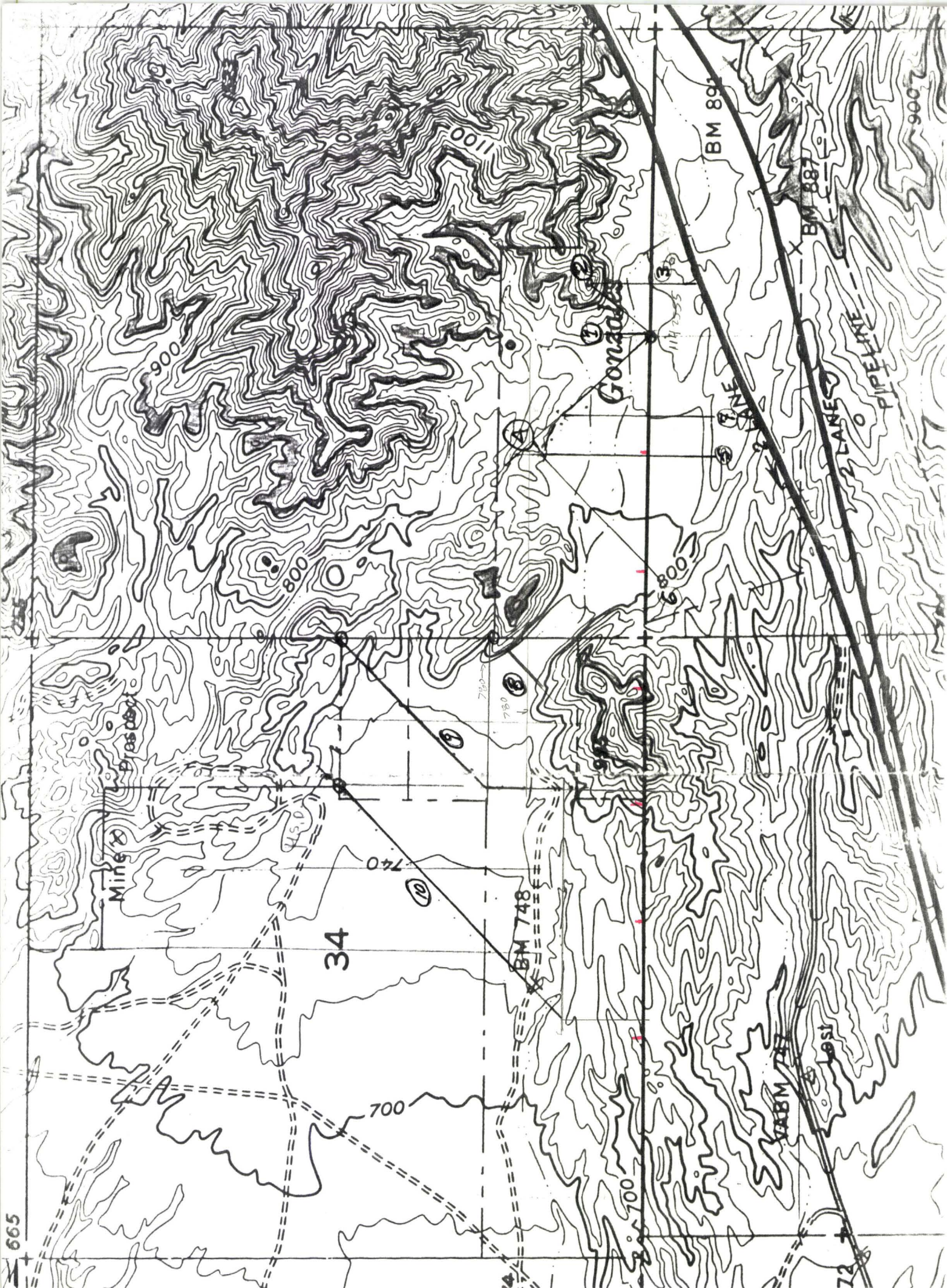
741 742



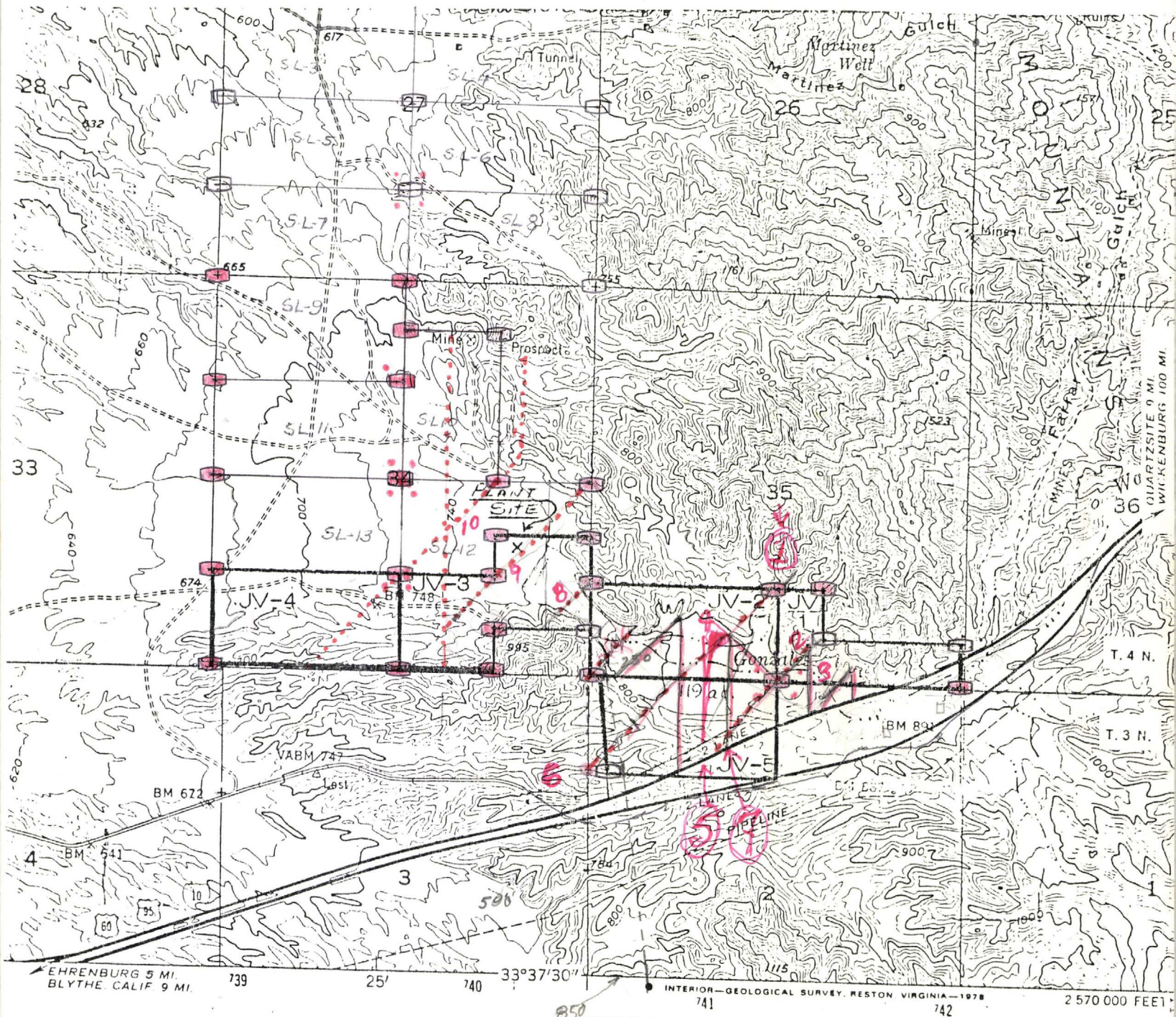
● INTERIOR—GEOLOGICAL SURVEY, RESTON
741

Lewis et al

#1718



INDEX MAP
LA PAZ MINING INC.
JV CLAIM GROUP
LA PAZ COUNTY, ARIZONA



$4-8 = 7-2$

CONTOUR INTERVAL 20 FEET
DOTTED LINES REPRESENT 10-FOOT CONTOURS
NATIONAL GEODETIC VERTICAL DATUM OF 1929

UTM GRID AND 1970 MAGNETIC NORTH
DECLINATION AT CENTER OF SHEET



of #2 construction



HEINRICHS GEOEXPLORATION COMPANY

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

October 4, 1984

La Paz Mining Inc.
1802 West Grant Road
Tucson, AZ 85745

Re: La Paz District Placer
T., 3 & 4 N., R., 21 W.
La Paz County, AZ.
GEOEX Proposal #1718

Attn: Mr. Dan Lewis

Dear Dan:

This will confirm and attempt to summarize our various discussions and conclusions regarding subject property.

The area is outlined on a 1" = 1000' scale blow up of the U.S.G.S. La Paz Mtn. Ariz. - Calif. quadrangle with 20 ft. contour interval. Ultimate objective is gold placer, presumably concentrated at or very near bedrock in vicinity of alluvial out wash fans and/or basins and such zones protected from erosion by faulting or capture flooding. Immediate objective is to determine bedrock depths and/or potential auriferous alluvial gravel thickness in at least three sub areas of primary interest. Depending on results, initial preliminary coverage envisioned may approach or exceed 20,000 profile feet.

Minimum bedrock depths are estimated at 60 to 65 feet in areas near to or surrounded by bedrock. However, some depths greater than this have also been reported but are not confirmed.

Bedrock is exposed in several places next to the sub-areas of interest. Bedrock reportedly consists of granite on the northwest part of the property and schist on the southeasterly portion.

Various geophysical methods have been used with varying success in this kind of application but, generally, even under the worst of conditions, there is at least some synergistic advantage in the use of multiple methods. Based on this experience we propose to first try a combination of magnetics and gravity. If initial results are favorable, we estimate that approximately 20,000 profile feet of data can be acquired, compiled, interpreted and presented for about \$7,500.00. If initial results are too marginal, we then recommend switching to a combination of seismic refraction and magnetics and/or resistivity and magnetics. 20,000 feet of seismic and magnetics are estimated at about \$14,505.00 and resistivity and magnetics about \$12,500.00.

The best depth to bedrock accuracy possible is +/- 15% of the total estimated or interpreted seismic refraction depth, if there are no mitigating

factors present. However certain mitigating factors are expected. Boulders and caliche and thick bedrock weathering will be seismically adverse as will bedrock weathering and clay layers in resistivity work. Magnetics alone may give little depth or thickness information directly but, together with gravity, it stands a reasonable chance to provide some depth and thickness information plus, maybe also differentiating the bedrock character i.e. granite vs. schist and delineating some faulting as well. Hopefully, the bedrock versus gravel-caliche-lakebed sections that possibly will be encountered will in any case provide enough density contrast to give good gravity profiles which are reasonably correlatable to the true bedrock surface.

Depending on work load, prior commitments, personnel and equipment availability, field work can almost always be started within two or three weeks notice and often within a few days notice. Rental costs and availability of seismic and gravity equipment can sometimes become a controlling factor.

Base charge rates for field work (plus expenses) are as follows:

Field	40 hr./wk.	Overtime
1 man pro. or supervisor	\$32.50/hr	\$39.50/hr.
2 men, one pro. & helper	45.00/hr	59.00/hr
2 men, both professionals	60.00/hr	74.25/hr
3 men (one pro. &/or one tech. and one or two helpers)	60.00/hr	74.25/hr (74.00/hr.)
4 men (2 pros. & 2 helpers or 1 pro. 2 techs. & 1 helper or 1 pro, 2 techs. & 2 helpers)	75.00/hr	98.50/hr

Office: \$27.50 per professional man hour plus expenses.

Direct job related expenses: 115% of our invoiced cost including equipment rental, extra labor, insurance, expendable supplies, reproductions and communications. On initial job phase, these are estimated at about 10% or \$750.00.

Mobilization and demobilization (job positioning) travel, standby and weathered out work days not made up are charged at one half the above rates up to a maximum of 10 hours per day. Travel time from crew domicile to job site and return is considered part of the normal crew work day.

Average field work day is ten hours. Average field work week is sixty hours.

Per diem is \$50.00 per man day or our cost which ever is greater. Vehicles are \$40.00 per day plus \$0.40 per mile or our invoiced cost plus 15%. Data compilation in field or office, report and office supervision are charged \$27.50 per professional man hour plus expenses. Report supplies and expenses are estimated at about 1 - 2% of total job charges.

All property permits and trespass liability and related matters and costs are to be for the account of La Paz Mining Incorporated.

A base line may be set up along the apparent fault line which trends through "the gap" and lines run perpendicular to this base line - at least in part. Some claim control has already been established and is hoped it will be adequate for all initial requirements.

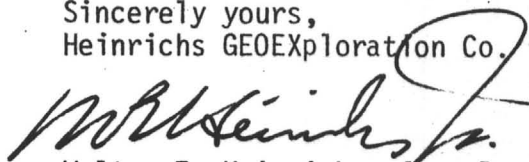
La Paz Mining Inc.
October 4, 1984
Page 3

Preliminary field plots and interpretation are available often within two or three days following acquisition. Final report will take about ten days after completion of all field work depending on complexity of data and degree of drafting, etc. required or desired. Compilation and report costs are estimated at about 37% of the initial job phase - assuming that full coverage is obtained.

A customary advance on short jobs of half the estimated total initial job will serve as our notice from you to proceed. This amount is ordinarily allocated against subsequent periodic detailed billings with a final statement accompanying the final report. Accordingly an advance billing in the amount of \$3750.00 is herewith enclosed.

For our mutual convenience, if this letter constitutes a satisfactory mutual understanding then such may be indicated by executing as provided below on the enclosed extra copy of this letter and returning same to us together with your advance on account of \$3,750.00.

Sincerely yours,
Heinrichs GEOEXploration Co.



Walter E. Heinrichs, Jr., President

WEH:jh

Accepted: Date: 10/9/84
La Paz Mining Inc.

By: Dan E Lewis

Title: Vice President Exploration



HEINRICHS GEOEXPLORATION COMPANY

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

October 4, 1984

La Paz Mining Inc.
1802 West Grant Road
Tucson, AZ 85745

Re: La Paz District Placer
T., 3 & 4 N., R., 21 W.
La Paz County, AZ.
GEOEX Proposal #1718

Attn: Mr. Dan Lewis

Dear Dan:

This will confirm and attempt to summarize our various discussions and conclusions regarding subject property.

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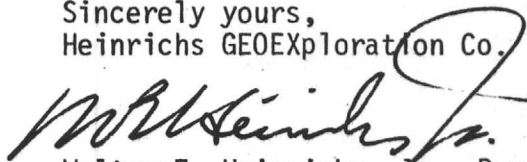
La Paz Mining Inc.
October 4, 1984
Page 3

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Heinrichs GEOEXploration Co.



Walter E. Heinrichs, Jr., President

WEH:jh

Accepted: Date: _____
La Paz Mining Inc.

By: _____

Title: _____



HEINRICHS GEOEXPLORATION COMPANY

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

October 4, 1984

STATEMENT

La Paz Mining Inc.
1802 West Grant Road
Tucson, AZ 85745

Re: GEOEX Proposal #1718

Advance on account. Reference proposal letter dated October 4, 1984
Geophysical survey, La Paz District Placer, T., 3 & 4 N., R., 21 W
La Paz County, Arizona.

Detailed accounting of sum advanced will be provided in
future billings.

Advance: \$3,750.00