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

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FEB 1962
GEØEX

Tucson, Arizona
January 31, 1962

Mr. John W. Marlatt
% Heinrichs Geoexploration Co.
808 West Grant Road
Tucson, Arizona

Re: Pat Hills, Cochise Co., Arizona

Dear Bill,

This letter will briefly summarize my impressions of the geologic picture in the Pat Hills area, gained on the one day visit last Saturday, January 27, 1961. This brief summary will, I hope, give you some idea of how I would answer some of the questions you raised and will outline my impression of the merits of the area as to economic-geologic potential.

Rocks in the area are all of crystalline character and consist of a sequence of volcanic rocks ranging from andesite to rhyolite and intrusive rocks of two general types - latite and latite porphyry and a fine-grained phaneritic rock best termed syenite although locally it may grade to monzonite. The most widespread rock is an andesite whose physical properties may vary from one place to another. It is my impression that this variation in physical character is due to varying conditions of cooling and differentiation near the surface and therefore such abrupt changes would suggest a near-by source.

Distribution of the rocks suggests a sequence that is not entirely clear but might be as follows: flows of andesite were the first and dominant rock units emplaced. These flows were apparently accompanied and/or postdated by occasional ash eruptions or by extrusion of rhyolite. Postdating the flows was intrusion of a group of rocks, dominantly latite and quartz latite and some rhyolite, that formed dikes and sills. In the absence of any visual proof, the nature of the syenitic plugs at the west end of the area has to be a matter of speculation. It is possible that these plugs do intrude the volcanic sequence. In view of the fact that there appears to be a close relationship between the feldspar composition of the syenites and the latites there exists the possibility that a genetic relationship may exist. Therefore, I suggest the possibility that the plugs might represent the erosional remnants of volcanic necks, and indicate the original volcanic source. Present eastward dips of andesites on the east side of the area are not incompatible with such a suggestion but it requires structural quiesence after the vulcanism. In view of the morphology of the area, rounded hills and considerable erosion, the vulcanism is probably pre-Quaternary. It would be difficult to prove, on any basis other than tentative lithologic comparison, that the volcanics are of Cretaceous age although there is no evidence to the contrary.

There is little visible structure in the area other than gentle regional dips. There has no doubt been breaking of some nature as some faults can be seen in discovery cuts and pits. However, the faulting of andesite against andesite does not juxtapose rocks of different character and thus there is no surficial evidence of breaking. There is no evidence of any faulting of recent age. The general east-west trend of the rhyolite dikes at the east-central end of the area suggests some breaking of this nature. Perhaps a very close study of air photos would reveal additional breaks. The breccia plugs and ring dike are important non-linear structures that appear to reflect the probability of a near-by source of the volcanics.

Mineralization and alteration are somewhat restricted. In the area of the breccia bodies, the most strongly mineralized part of the area, there is abundant evidence of pyrite but only scantevidence of copper. There is some suggestion from the gossan, by no means clear cut, that some copper was present with the breccia. However, the high amount of pyrite tends to obliterate any evidence of copper that might have otherwise been present. If any primary copper sulfides were present, I suspect that the pyrite to copper sulfide ratio was in excess of 10:1 There are a few secondary oxidized copper shows but no picture was obtained of their distribution.

It is interesting to note that the pyrite which occurs in the latite is of "segregation" aspect, that is, it occurs as an integral part of the rock rather than as veins or fracture filling. If the pyrite found in the breccia is presumed to be of the same age and genetic origin as that in the latite, the indication is that the latitic stage of differentiation was the one giving rise to sulphide development. Further, it indicates that the latite postdates or is contemporaneous with the development of the breccia zones.

Alteration, other than epidote that may be surficial in large part, was not immediately apparent. There is some argillization of the andesite but this could be a feature of weathering as well as a result of hydrothermal processes. There is abundant jarosite present in the latite where pyrite was present and weathered out. Most of the "limonite" appears to be goethite and is residual. Again, there is no direct evidence of the presence of copper.

The potential of the area is difficult to determine. About the only interesting aspect is the presence of the breccia zones or plugs. I have a " feeling" and it is only that, that there is not too much of a chance for any major discovery. In the event there is time or funds to continue exploration, however, there are a few "long shot" possibilities that could be considered.

First, further exploration of the zones of breccia could be undertaken. I am not certain of the depths of detectivity of your instrumentation but a near surface zone of enrichment would be a possible target. In addition, I would also consider the possibility of mineralization of the pre-volcanic surface. It might be shallow or it might be quite deep. Mineralization contemporaneous with the latite and quartz-latite is a fact and the possibility of contact mineralization at depth could be investigated. The absence of any positive indication of copper is a detracting factor. There are, of course, the areas of oxidation where copper is present as malachite and possibly chrysocolla. However, one would be hard put to find volcanic rocks in southern Arizona where such shows did not exist. Therefore, I do not believe that the presence of this copper should be evaluated strictly by itself.

A second factor that could be considered in further exploratory work concerns itself with the nature of the syenitic plugs to the west. The nature of these plugs should be considered and effort spent to find any evidence at the surface that would indicate their relationship to surrounding rocks. In the event it can be shown that they are intrusive into the sequence, I would suggest some geophysics to the west to determine whether or not they may have mineralized any rocks below the cover. Again, the probability of deep development of mineralization.

Further geologic work should be concerned with detailing mineralization and trying to determine if any zonal picture can be established. Geochemistry might be of some help. In addition, a critical picture, as I see it now is the nature of the plugs to the west. Geologic work should be undertaken to

try to come up with some idea of the nature of these igneous rocks. Such work would give a basis for evaluating the possibility of further work to the west.

I trust these ideas will be of help to you, Bill. I hope that I have covered the points you believe to be important, and that you can make something out of them. As I told you, there is too much in the area for it to be considered a complete washout yet there is too little for it to be considered as anything much more than a speculative possibility.

It was a pleasure to go into the field with you - thanks much for the day. Best regards to all at Heinrichs Geoex.

Sincerely

Spencer R. Titley

Pat Hill, F
OLD Dick F

CYPRUS MINES CORPORATION
523 WEST SIXTH STREET
LOS ANGELES 14, CALIFORNIA
TELEPHONE MADISON 6-3231

January 5, 1962

Mr. Walter E. Heinrichs, Jr.
Heinrichs Geoexploration Co.
806 West Grant Road
Tucson, Arizona

Dear Walt:

In connection with the preliminary appraisal which you are making of the applicability of geophysical methods in the Old Dick area, we are sending you herewith a report made in 1953 by Dr. G. Potapenko of Cal Tech on some magnetometer reconnaissance work done at that time, together with an excerpt from a report by myself which is self-explanatory. In general, we felt that the results were inconclusive.

- - - - - - - - - - - - - - - -

Also enclosed is a photogeologic map of the Pat Hills area made by D. H. Elliott, together with some explanatory notes.

We trust that this map may be of some assistance to you in the current survey.

Please return Dr. Potapenko's report when you have finished with it.

Best regards,

Ken

K. K. Welker

KKW:g
enclosures

VOUCHER NO.

DATE	DESCRIPTION	ACCOUNT NO.	GROSS AMOUNT	DISCOUNT	OTHER DEDUCTIONS	NET AMOUNT
	Advance on Pat Hill Area EOP Geophysical Work					$1,000.00

JAN 1962
GEOEX

PLEASE DETACH BEFORE DEPOSITING CHECK

CYPRUS MINES CORPORATION
523 W. SIXTH STREET
LOS ANGELES 14, CALIF.

THIS CHECK IS TENDERED IN FULL PAYMENT OF INVOICES LISTED ABOVE

CMC FORM NO. 2

CYPRUS MINES CORPORATION
523 WEST SIXTH STREET
LOS ANGELES 14, CALIFORNIA
TELEPHONE MADISON 6-3231

January 2, 1962

Mr. Walter E. Heinrichs, Jr.
Heinrichs Geoexploration Company
P.O. Box 5671
Tucson, Arizona

Pat Hills Area Exploration Project

Dear Walt:

This will confirm our phone conversation today wherein I authorized you to proceed with the Pat Hills area magnetic and geological work as recommended to us in your letter of May 5 to Ken Welker. You are to proceed under Item 3 which has an estimated cost of $2250, with a top limit of $4000. However, you are to advise us as the work progresses so that we will be fully aware of any overrun above the $2250 estimate before it is incurred.

While doing this work, we would like to have you consider the appropriateness of some additional geophysical work. We have assumed that your magnetic work will outline the three anomalies that are reported to have been found by others and that we would not want to abandon the project without putting at least one drill hole in each of the anomalies, so that other geophysical work hardly appeared justified. But, now that we have successfully crossed the ownership barrier and are able to proceed with field work, we wonder if we are being hasty in assuming that we should commence drilling without other work. Therefore, we would like to have you consider the question of additional geophysical work, so that you can make a recommendation to us.

We have advised the owners of the property that you will be starting your field work in the next few days and have assured them that your activities will not involve permanent damage to fences and other ranch facilities.

Very truly yours,

Bill

W. J. Rundle

WJR:w
encl. (Check # 12362, $1,000.00)

CYPRUS MINES CORPORATION
523 WEST SIXTH STREET
LOS ANGELES 14, CALIFORNIA
TELEPHONE MADISON 6-3231

December 21, 1961

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

Re: Pat Hills Exploration

Dear Walt:

The State has advised Martin Gentry in Bisbee, as attorney for the owners, that amended patents for the fee land in our Pat Hills project will be issued by the end of this month. The amended patents will convey mineral as well as surface rights and when issued will permit us to proceed with our program.

There has been so much delay in getting this project off the ground that I am reluctant to tell you to get set because a further delay may develop. However, I did feel that you would like to know that we do hope to get a green light within a few days.

Very truly yours,

Bill

W. J. Rundle

WJR:w
cc-V.H. Verity

Many thanks for your letter of 21 December 1961.

Dear Bill: understand the situation. We appreciate very much your keeping us informed and up to date so to speak. We will look forward to your further word as developments proceed.

V.T.V.

5622 E. SILVER STREET PHONE AX 6-0351

D. H. ELLIOTT
PHOTOGEOLOGIST
TUCSON, ARIZONA

December, 1961

Photogeologic Notes on the
PAT HILLS AREA,
Cochise County, Arizona

INTRODUCTION. Airphotos having a scale of approximately 1:35,000 flown in 1946 for the U.S.G.S. were used for this project. The prints were borrowed from the U.S.G.S. at the University of Arizona. The Dos Cabezas topographic sheet is the basis for the accurate land grid. One day was spent in the field checking structure and lithology.

GEOLOGY. The Pat Hills is mainly a series of volcanic flows -- mostly intermediate to rhyolitic in character. A partly metamorphosed arkose or sandstone was found in two separate places. In each case, only a small bed possibly several meters thick at most was seen.

In several places, the contact between the basic and acidic flows was delineated clearly on the photos by a sharp change in color, but was much more obscure on the ground. The contact between the Quaternary outwash and alluvium, and the volcanics has been mapped.

The photos show that in several areas, the rocks weather to an unusual jagged expression. This was checked on the ground, but no apparent lithologic difference was seen.

The only set of dikes mapped were of normal acidic type.

In two places, oxidation or pyrites (or possible hydrothermal alteration) was seen. The typical red and ochre colored rocks were mapped in Section 28 along the mapped dike, and the other in the SW part of Section 35 at the contact which trends N80°W. No other mineralization was seen.

D. H. Elliott
December, 1961

D. H. Elliott

VICTOR H. VERITY
ATTORNEY AT LAW
2207 EAST WAVERLY STREET
TUCSON, ARIZONA
EAST 5-9448

GEOEX AUG 1961

August 7, 1961

Mr. W. J. Rundle
Cyprus Mines Corporation
523 West Sixth St.
Los Angeles 14, California

Dear Bill: Re: Shasta Group

I enclose the original Quitclaim Deed of the Shasta group of claims consisting of Nos. 1-5 both inclusive from John W. Marlatt to Cyprus Mines Corporation. This deed was executed July 17 and recorded July 24, 1961 in the Cochise County Recorder's office in Docket 280, page 329.

Very truly yours,

Victor H. Verity

Enclosure

cc-Heinrichs Geoexploration Company

COPY

Pat Hill file
Cyprus

VICTOR H. VERITY
ATTORNEY AT LAW
2207 EAST WAVERLY STREET
TUCSON, ARIZONA
EAST 5-9448

JUL 1961
CLEAR

July 13, 1961

Mr. E. Grover Heinrichs
Vice President
Heinrichs Geoexploration Company
P. O. Box 5671
Tucson, Arizona

Dear Grover:

I acknowledge receipt of your letter of July 10 and the recorded copies of the location notices for the Shasta 1-5, inclusive, lode mining claims located in Sec. 34, Township 16 South, Range 27 East. With this recording data available I have prepared a new quitclaim deed from John W. Marlatt to Cyprus Mines Corporation and enclose the original and one copy. Will you please have John sign the original of the deed and acknowledge his signature before a notary public and return the deed to me. The copy is for your file.

Very truly yours,

Victor H. Verity

Encls.

cc-Mr. W. J. Rundle

VICTOR H. VERITY
ATTORNEY AT LAW
2207 EAST WAVERLY STREET
TUCSON, ARIZONA
EAst 5-9448

June 3, 1961

RECEIVED JUN 5 1961

Mr. W. J. Rundle
Cyprus Mines Corporation
523 West Sixth Street
Los Angeles 14, California

Dear Bill: Re: PAT HILLS AREA

Going one step further in regard to the point brought out in Walt Heinrichs' letter to you of May 31, the County Recorder's office at Bisbee may be closed on Saturday, August 19, or at least in the afternoon, and therefore the recording of the location notices should be made not later than Friday, August 18.

As Walt pointed out, the last day to complete location work is August 20 but since that is a Sunday, it would be better to figure on the 19th at the very latest for completion of the discovery shaft and erection of end line monuments.

Very truly yours,

Victor H. Verity

cc-W.E.H., Jr.

COPY

CYPRUS MINES CORPORATION
523 WEST SIXTH STREET
LOS ANGELES 14, CALIFORNIA
TELEPHONE MADISON 6-3231

May 29, 1961

RECEIVED MAY 31 1961

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

Re: Pat Hills Area Claims

Dear Walt:

Enclosed is our check for $167.07 per your invoice of May 23 covering the staking of claims in Section 34, T 16 S, R 27 E, Cochise County.

Since the proposed exploration project has been delayed pending clarification of mineral rights on part of the area, we do not want to file the notices or do the additional work at this time. We will keep the matter under advisement and make a decision before the expiration of 90 days (August 22, 1961).

We appreciate your doing this work for us.

Very truly yours,

W. J. Rundle

WJR:g
enclosure

cc - V. H. Verity

CYPRUS MINES CORPORATION
523 WEST SIXTH STREET
LOS ANGELES 14, CALIFORNIA
TELEPHONE MADISON 6-3231

May 2, 1961

RECEIVED MAY 5 1961

Heinrichs Geoexploration Company
808 West Grant Road
P.O. Box 5671
Tucson, Arizona

Attention: W. E. Heinrichs, Jr.

Gentlemen:

Enclosed please find a map showing the group of sections in the Pat Hill areas which we wish to have covered by a magnetometric survey as per our discussion of last Thursday, April 27th, and phone conversation of this A.M.

An option agreement is now being negotiated with the owners. We would like to be ready to start the geophysical survey as soon as possible after the agreement is finalized.

At your convenience, we will appreciate receiving your proposal with cost estimate.

As per our phone conversation please include in the estimate a rough geological reconnaissance to the amount of not more than three days field work.

Very truly yours,

CYPRUS MINES CORPORATION
per

K. K. Welker

K. K. Welker
Chief Geologist

KKW:w
Encl.

R.27E.

GILA & SALT RIVER MERIDIAN

PATENTED GROUND - SHOWING OWNERSHIP

STATE SURFACE OR GRAZING RIGHTS, MINERAL PROSPECTING PERMITS

STATE MINING CLAIMS

INDICATED MAGNETIC ANOMALIES = - - - -

CYPRUS MINES CORP.

LOS ANGELES

PAT HILLS AREA
COCHISE COUNTY, ARIZONA
PROPERTY OWNERSHIP

DATE : 5-1-61
SCALE : 1 1/2" = 1 MILE
DRAWN BY

DRAWING No. LD-27
FILE:

Pat Hill file

QUITCLAIM DEED

For one dollar ($1.00), receipt of which is hereby acknowledged, and other valuable considerations, I hereby quitclaim to CYPRUS MINES CORPORATION, a New York corporation authorized to do business in the State of Arizona, and to its successors and assigns forever, all my right, title, and interest in the following-described lode mining claims situated in Section 34, Township 16 South, Range 27 East, G&SRM, Cochise County, Arizona, the location notices of which are of record in the office of the Recorder of Cochise County, Arizona, as follows:

Name of Claim	Book	Page
Shasta 1	279	165
Shasta 2	279	166
Shasta 3	279	167
Shasta 4	279	168
Shasta 5	279	169

TO HAVE AND TO HOLD the same together with all the appurtenances thereunto belonging, to the grantee and its successors and assigns forever.

Dated July 17, 1961.

John W. Marlatt
John W. Marlatt

STATE OF ARIZONA)
) ss.
COUNTY OF PIMA)

On this the 17 day of July 1961, before me, the undersigned notary public, personally appeared JOHN W. MARLATT, known to me to be the person whose name is subscribed to the within instrument and acknowledged that he executed the same for the purposes therein contained.

In witness whereof I hereunto set my hand and official seal.

Notary Public

My commission expires:

My Commission Expires Dec. 29, 1963

July 17, 1961

Mr. Victor H. Verity
2207 E. Waverly St.
Tucson, Arizona

Re: Cyprus Mines, Pat Hills Shasta
Claim Group. Johnson Camp Project

Dear Vic:

Enclosed is a machine copy of a letter from me to Mr. Louis Molina with a note at the bottom of the page by Mr. Molina stating that the N.E. corner of the Afterthought (amended) has been set.

Also enclosed is the original quit claim deed from John W. Marlatt to Cyprus Mines Corp signed and notarized as per your request. We have retained for our file, one copy of the quit claim deed.

Very truly yours,

E. Grover Heinrichs

EGH:jh
Enclosures

July 10, 1961

F

Mr. Victor H. Verity
2207 East Waverly Street
Tucson, Arizona

F

Re: Cyprus Mines Corp., Pat Hills Project
Cochise County, Arizona

Dear Vic:

Enclosed are the recorded copies of the Shasta 1 through 5 inclusive. As you may notice the recorder goofed by putting Heinrichs Geoex's name in the top right hand corner and this is why the notices were mailed back to us instead of directly to you as requested.

We have retained a conformed copy of the recorded notices for our files and are also sending a conformed set to Mr. Rundle with a copy of this letter. Also, Walt informe me that you now have the original as well as a copy of the Quit Claim Deed assigning the Shasta Group from Marlatt to Cyprus Mines Corp and that you will tend to having it recorded when, as and if requested by Cyprus. I have added the recorded claim notices' Docket and Page numbers to our copy of the deed.

Very truly yours,

HEINRICHS GEOEXPLORATION CO.

E. Grover Heinrichs
Vice President

EGH:jh
cc: W. J. Rundle
w/ 5 claim notices.

July 10, 1961

STATEMENT

To: Cyprus Mines Corporation
523 West 6th Street
Los Angeles 14, California

Attn: Mr. W. J. Rundle

Re: Pat Hills Project, Cochise County, Arizona

Recording fee, Shasta Claim Group----------$5.00
July 3, 1961

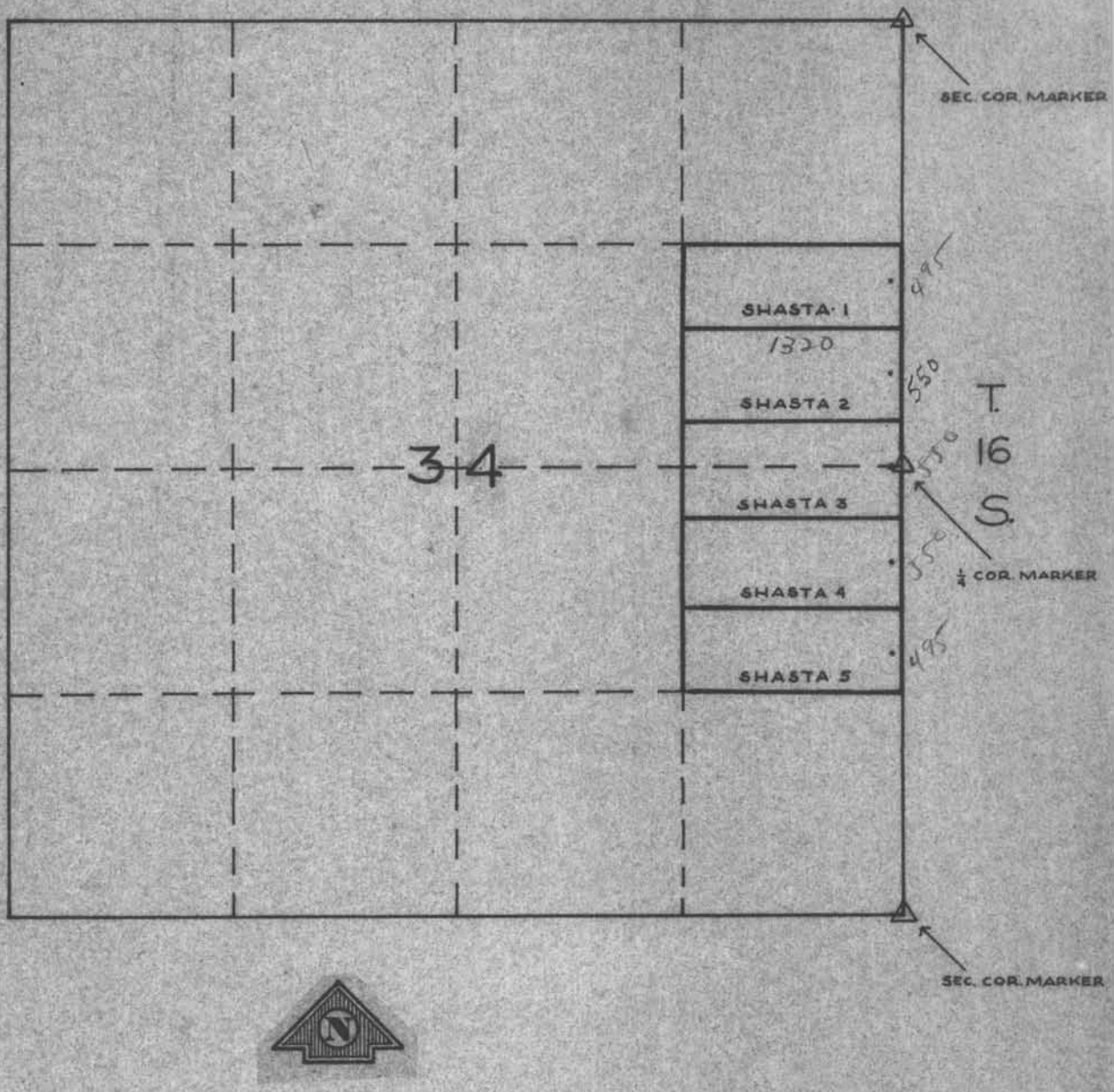
Total: $5.00

DAILY ACCOUNT RECORD

Project *Pat Hills* Area *Cochise County Ariz.* Client *Cyprus Mines Corp*

Date *July 10, 1961*

DATE	Crew No	Crew Hours	Type Survey	Profile Miles/Ft	Car No	Car Miles	Car Chg. Day	Car Chg. Mile	Fee Charge	Communic. Charges	Misc. Expenses	Item Explan.	TOTALS
1961													
July 3									*Recording Fee*		*5.00*		*5.00*
									Total				*5.00*
TOTALS													



SCALE: 1" - 1000'

• LOCATION POST.

NO CORNER OR END POSTS PUT IN.

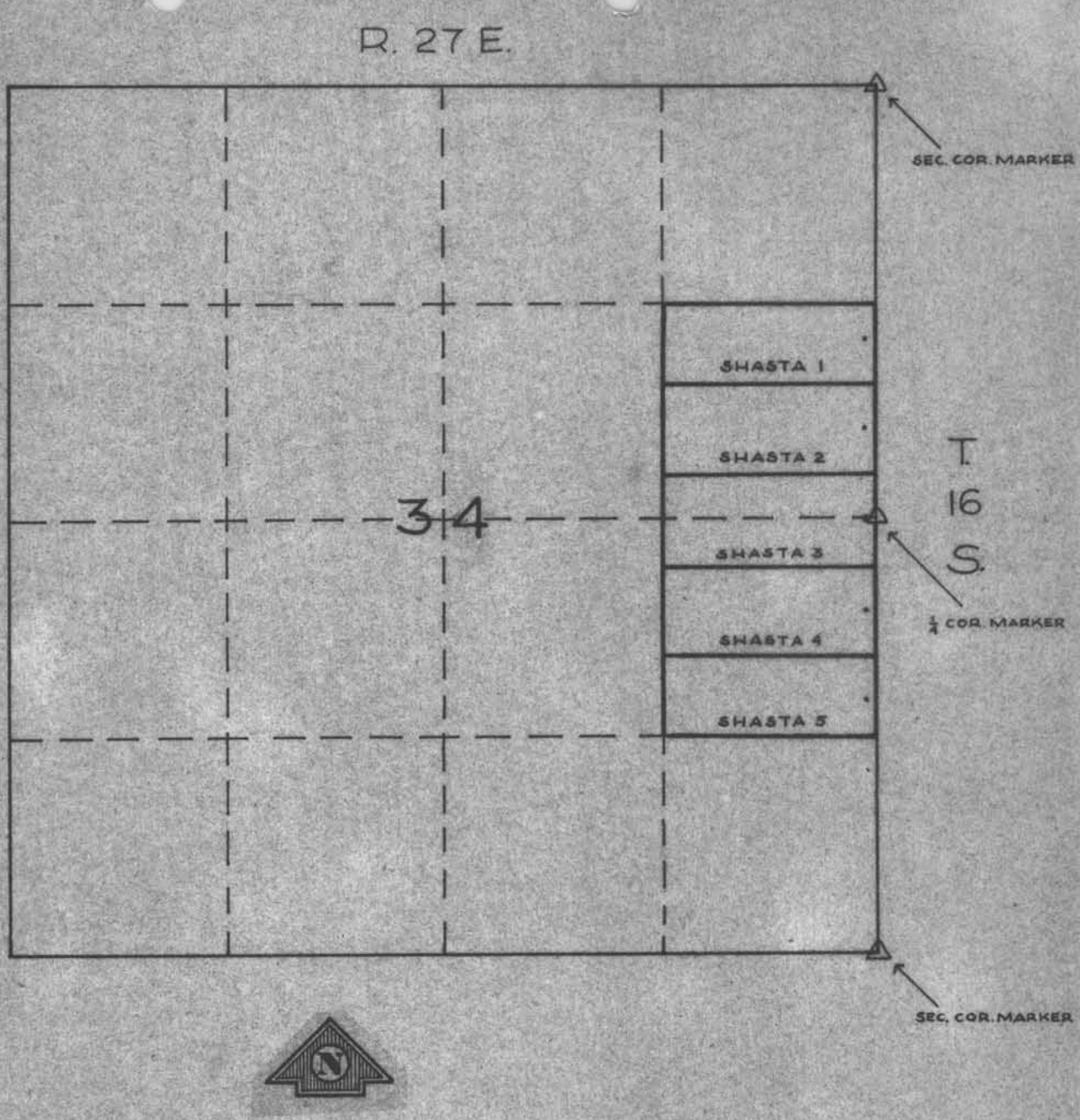
SURVEYED BY TRANSIT-STADIA.

SHASTA CLAIM GROUP

COCHISE COUNTY, ARIZONA

MAY 22, 1961

HEINRICHS GEOEXPLORATION CO.
P. O. BOX 5671 TUCSON, ARIZONA



SCALE: 1"-1000'

• LOCATION POST.

NO CORNER OR END POSTS PUT IN.

SURVEYED BY TRANSIT-STADIA.

SHASTA CLAIM GROUP

COCHISE COUNTY, ARIZONA

MAY 22, 1961

HEINRICHS GEOEXPLORATION CO.
P. O. BOX 5671 TUCSON, ARIZONA

May 23, 1961

Mr. William Rundle
Cyprus Mines Corporation
523 West 6th Street
Los Angeles 14, California

Re: Pat Hills Area

Dear Bill:

Enclosed herewith are three copies of a map showing the locations of the lode mining claims Shasta 1, 2, 3, 4, & 5. These were located on May 22, 1961 in Section 34, T16S, R27E, Cochise County, Arizona in my name. A copy of the location notices and of a deed quitclaiming the claims from me to Cyprus Mines Corporation are also enclosed. The originals of each one are being held in our office pending your instructions as to whether to record them, forward them to you or to Victor Verity, or whatever. Mr. Verity is also receiving a copy of everything for his files.

I went first to Mr. Jim Hudson's ranch and then to the area with him. He mentioned, in incidental conversation that Phelps Dodge personnel in Douglas were informed as to developments in the Pat Hills land negotiations.

Our statement is enclosed.

Sincerely yours,

HEINRICHS GEOEXPLORATION CO.

J. W. Marlatt, Geologist

JWM:jh
Enclosures: 10
cc: V. H. Verity w/o statement

HEINRICHS GEOEXPLORATION COMPANY
MINERAL ENGINEERING CONSULTANTS AND CONTRACTORS
GEOPHYSICAL, GEOLOGICAL AND ECONOMIC APPRAISALS
TUCSON, ARIZONA

WALTER E. HEINRICHS, JR.
E. GROVER HEINRICHS

PHONE: MAIN 2-4202
806-808 WEST GRANT ROAD
MAIL: P. O. BOX 5671

May 23, 1961

Mr. William Rundle
Cyprus Mines Corporation
523 West 6th Street
Los Angeles 14, California

Re: Pat Hills Area

Dear Bill:

Enclosed herewith are three copies of a map showing the locations of the lode mining claims Shasta 1, 2, 3, 4, & 5. These were located on May 22, 1961 in Section 34, T16S, R27E, Cochise County, Arizona in my name. A copy of the location notices and of a deed quitclaiming the claims from me to Cyprus Mines Corporation are also enclosed. The originals of each one are being held in our office pending your instructions as to whether to record them, forward them to you or to Victor Verity, or whatever. Mr. Verity is also receiving a copy of everything for his files.

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Our statement is enclosed.

Sincerely yours,

HEINRICHS GEOEXPLORATION CO.

John W. Marlatt

J. W. Marlatt, Geologist

JWM:jh
Enclosures: 10
cc: V. H. Verity w/o statement

STATE OF ARIZONA,
County of ..... } ss.

I, ..., County Recorder in and for the County and State aforesaid, do hereby certify that the within instrument was filed for record at.....o'clock.....M., on this.....day of....., 19....., and duly recorded in Book No.....of..... Records of..... County, Arizona, at pages.....

WITNESS my hand and official seal the day and year first above written.

.....
County Recorder.

No.....

Quit-Claim Deed

Short Form

FROM .....

TO .....

.....

Dated ....., 19....

Filed and Recorded at Request of .....

....., A. D. 19....

at .....M.,

Book.....

Pages.....

County Recorder.

By.....Deputy Recorder.

My commission expires..... Notary Public.

In witness whereof I hereunto set my hand and official seal.

executed the same for the purposes therein contained.

person..... whose name..... subscribed to the within instrument and acknowledged that.....

....., known to me (or satisfactorily proven) to be the

.....

.....

On this the.....day of....., 19....., before me,

....., the undersigned Notary Public, personally appeared

County of ..... } ss.

STATE OF ARIZONA

My commission expires..... Notary Public.

My Commission Expires Dec. 29, 1959

In witness whereof I hereunto set my hand and official seal.

executed the same for the purposes therein contained.

person..... whose name..... subscribed to the within instrument and acknowledged that.....

....., known to me (or satisfactorily proven) to be the

.....

.....

On this the.....day of....., 19....., before me,

....., the undersigned Notary Public, personally appeared

County of ..... } ss.

STATE OF ARIZONA

Quit-Claim Deed

THIS INDENTURE, Made the 22nd day of May, 19 61,
between John W. Marlatt, a citizen of the United States of America

Grantor and Cyprus Mines Corporation, A New York corporation authorized to do business in the State of Arizona

Grantee,

WITNESSETH: That the said grantor, for and in consideration of the sum of ONE DOLLARS
to him in hand paid by the said grantee, the receipt whereof is hereby confessed and acknowledged, has, released and quit-claimed, and by these presents does release and quit-claim unto the said grantee, and to its successors heirs and assigns forever, all the right, title, interest, claim and demand which the said grantor has; in and to the following described property situated in the County of Cochise, and State of Arizona, to-wit:

Those certain unpatented lode mining claims known as
Shasta 1, Shasta 2, Shasta 3, Shasta 4 and Shasta 5
Located in Section 34, T16S, R27E, Cochise County, Arizona

Claim Name		Loc.	Rec.	Docket	Pg.
Shasta	1	3/22/61	7/5/61	279	165
Shasta	2	"	"	279	166
Shasta	3	"	"	279	167
Shasta	4	"	"	279	168
Shasta	5	"	"	279	169

TO HAVE AND TO HOLD the same together with all the appurtenances thereunto belonging, to the grantee its successors heirs and assigns forever.

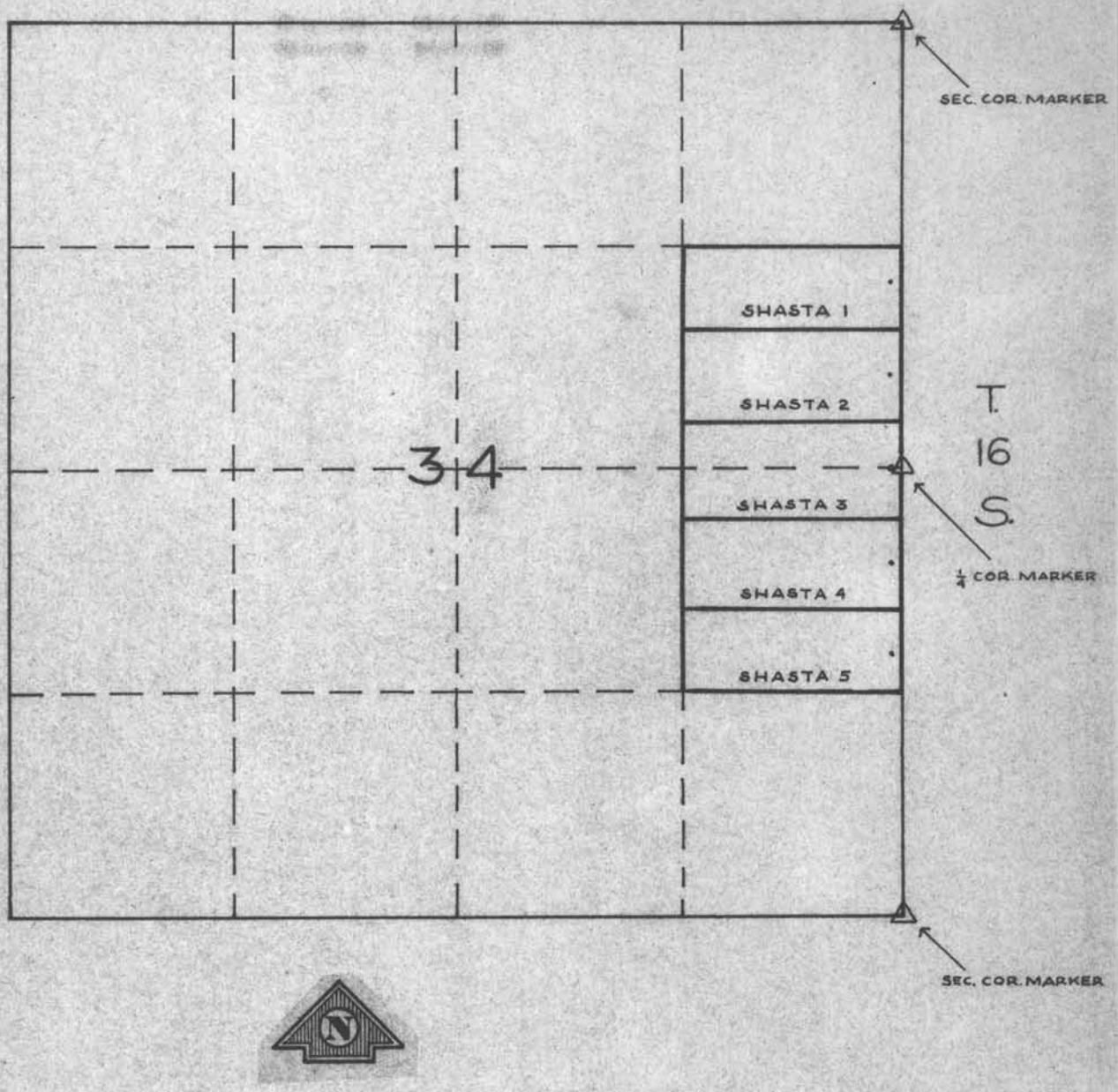
IN WITNESS WHEREOF, the said grantor has hereunto set his hand the day and year first above written.

John W. Marlatt

John W. Marlatt

Form No. 35—Quit-Claim Deed—Short Form— HOWARD & STOFFT

R. 27 E.



SCALE: 1" - 1000'

• LOCATION POST.

NO CORNER OR END POSTS PUT IN.

SURVEYED BY TRANSIT-STADIA.

SHASTA CLAIM GROUP

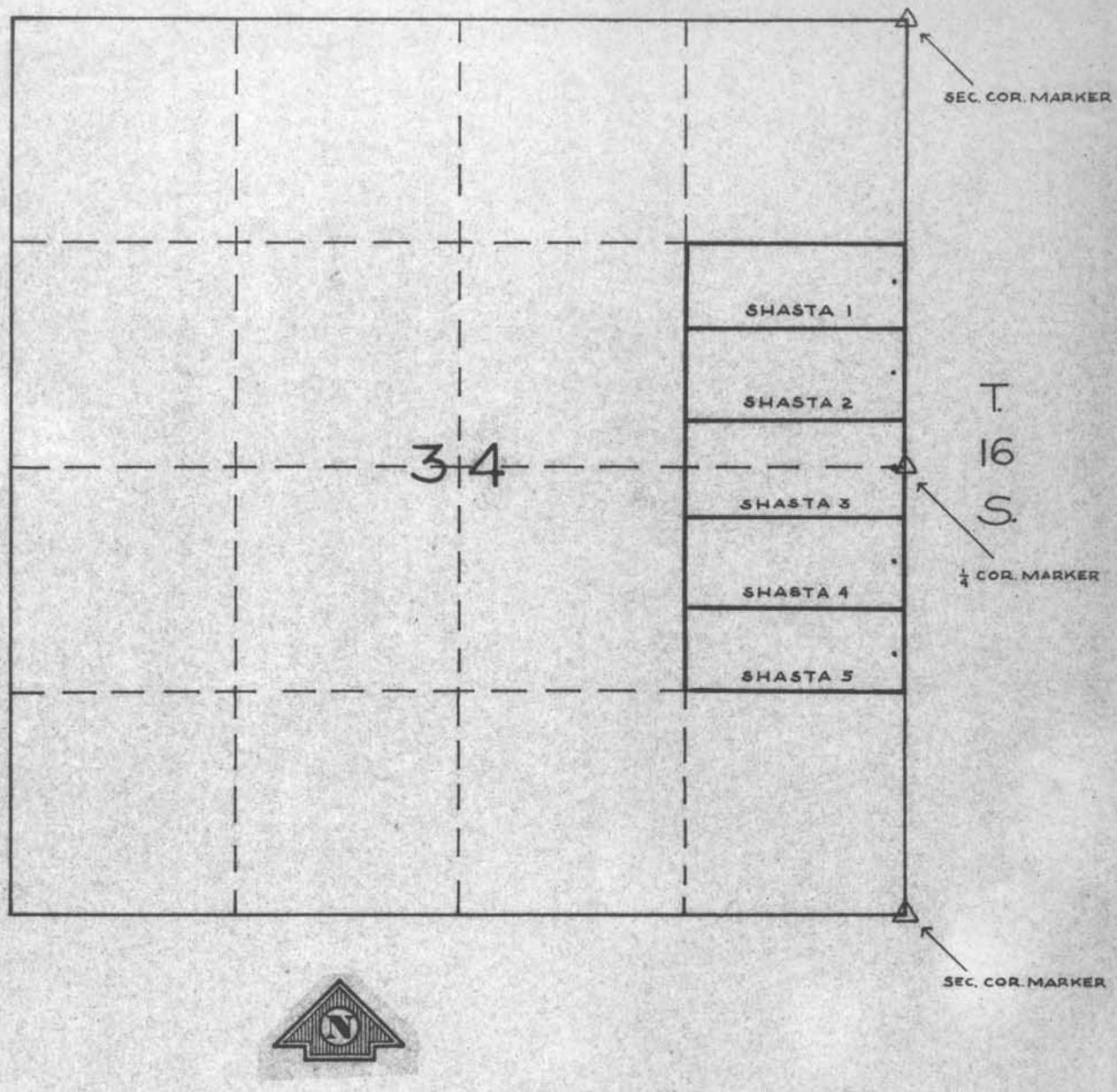
COCHISE COUNTY, ARIZONA

MAY 22, 1961

HEINRICHS GEOEXPLORATION CO.

P. O. BOX 5671 TUCSON, ARIZONA

R. 27 E.



SCALE: 1" - 1000'

• LOCATION POST.

NO CORNER OR END POSTS PUT IN.

SURVEYED BY TRANSIT-STADIA.

SHASTA CLAIM GROUP

COCHISE COUNTY, ARIZONA

MAY 22, 1961

HEINRICHS GEOEXPLORATION CO.
P. O. BOX 5671 . TUCSON, ARIZONA

STATE OF ARIZONA
COUNTY OF COCHISE } ss
Witness my hand and Official Seal
F. W. NEWBURY, County Recorder
F. W. Newbury Deputy

Recorded	Photostat-Composed	Blotted

I hereby certify that the within instrument was filed and recorded at request of Heinrichs Geoexploration Co. Box 5671, Tucson, Arizona

For $ 1.00 pd

I. R. S.

Total $

Date JUL 5 1961 - 8.00 AM

Docket 279 Page 165 No. 10744

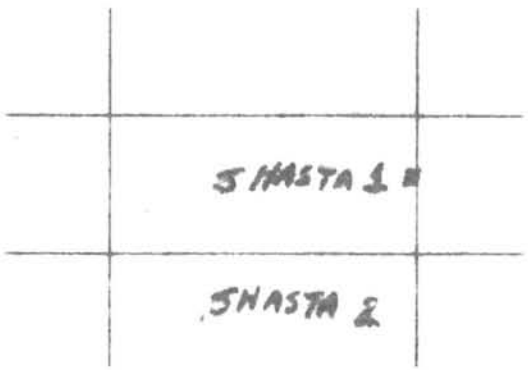
Notice of Location
(LODE)

NOTICE IS HEREBY GIVEN that the SHASTA 1 lode mining claim was located by JOHN W. MARLATT on MAY 22, 1961. This claim is 1,500 feet in length along the vein or deposit of mineral-bearing rock in place and 300 feet in width on each side of the middle of said vein or deposit at which this notice is posted. The general course of this claim is EAST-WEST and is situated in the PAT Hills Mining District, COCHISE County, Arizona. This claim runs from the location monument or stake on which the notice is posted 75 feet in a EASTERLY direction to the EAST center end monument or stake and 1425 feet in a WESTERLY direction from the location monument or stake to the WEST center end monument or stake, and is also marked by two corner monuments or stakes at each end of the claim, one on each side of and 300 feet from the center end monuments or stakes, making the claim in the form of a parallelogram.

LOCATED IN SEC. 34 T16S R27E

SHASTA 1

SHASTA 2



John W. Marlatt
Box 5671, Tucson, Arizona
Locator

John F. King
witness

Write on the above lines the locality of the claim with reference to some natural object or permanent monument whereby the claim can be identified. Give the section, township and range if known and, if possible, the direction and distance from the nearest public survey marker. It is advisable to make a sketch in the space above, showing the adjoining and overlapping claims. If this is an amendment of a location notice, give the name and book and page of recording of the claim being amended.

STATE OF ARIZONA
COUNTY OF COCHISE } ss
Witness my hand and Official Seal
E. W. NEWBURY, County Recorder
E. W. Newbury Deputy

Indexed	Photostat-Compared	Blotted

I hereby certify that the within instrument was filed and recorded at request of
Heinrichs Geoexploration Co
Box 5671, Tucson, Arizona

Fee $ 1.00 ph
I. R. S.
Total $
Docket 279

Date JUL 5 1961 - 8.00 AM
Page 166 No. 10745

Notice of Location
(LODE)

NOTICE IS HEREBY GIVEN that the SHASTA 2 lode mining claim was located by JOHN W. MARLATT on MAY 22, 1961. This claim is 1,500 feet in length along the vein or deposit of mineral-bearing rock in place and 300 feet in width on each side of the middle of said vein or deposit at which this notice is posted. The general course of this claim is EAST-WEST and is situated in the PAT HILLS Mining District, COCHISE County, Arizona. This claim runs from the location monument or stake on which the notice is posted 75 feet in a EASTERLY direction to the EAST center end monument or stake and 1425 feet in a WESTERLY direction from the location monument or stake to the WEST center end monument or stake, and is also marked by two corner monuments or stakes at each end of the claim, one on each side of and 300 feet from the center end monuments or stakes, making the claim in the form of a parallelogram.

LOCATED IN SEC. 34 T16S R27E

SHASTA 1	
SHASTA 2	
SHASTA 3	

John W. Marlatt
Box 5671 Tucson, Ariz.
Locator
John F. King
Witness

Write on the above lines the locality of the claim with reference to some natural object or permanent monument whereby the claim can be identified. Give the section, township and range if known and, if possible, the direction and distance from the nearest public survey marker. It is advisable to make a sketch in the space above, showing the adjoining and overlapping claims. If this is an amendment of a location notice, give the name and book and page of recording of the claim being amended.

STATE OF ARIZONA
COUNTY OF COCHISE } ss

Witness my hand and Official Seal
P. W. [illegible], County Recorder
By [illegible] Deputy

I hereby certify that the within instrument was filed and recorded at request of
Heinrichs Geo. Co.
Box 5671, Tucson, Arizona

Fee $ 1.00 pd
I. R. S.
Total $
Date JUL 5 1961 - 8.00 AM
Docket 279 Page 167 No. 10746

Notice of Location
(LODE)

NOTICE IS HEREBY GIVEN that the SHASTA 3 lode mining claim was located by JOHN W. MARLATT on MAY 23, 1961. This claim is 1,500 feet in length along the vein or deposit of mineral-bearing rock in place and 300 feet in width on each side of the middle of said vein or deposit at which this notice is posted. The general course of this claim is EAST-WEST and is situated in the PAT HILLS Mining District, COCHISE County, Arizona. This claim runs from the location monument or stake on which the notice is posted 75 feet in a EASTERLY direction to the EAST center end monument or stake and 1425 feet in a WESTERLY direction from the location monument or stake to the WEST center end monument or stake, and is also marked by two corner monuments or stakes at each end of the claim, one on each side of and 300 feet from the center end monuments or stakes, making the claim in the form of a parallelogram.

LOCATED IN SEC. 34 T16S R27E

	SHASTA 2
	SHASTA 3 •
	SHASTA 4

John W. Marlatt
Box 5671 Tucson Ariz
Locator

John F. King
witness

Write on the above lines the locality of the claim with reference to some natural object or permanent monument whereby the claim can be identified. Give the section, township and range if known and, if possible, the direction and distance from the nearest public survey marker. It is advisable to make a sketch in the space above, showing the adjoining and overlapping claims. If this is an amendment of a location notice, give the name and book and page of recording of the claim being amended.

168

STATE OF ARIZONA
COUNTY OF COCHISE } ss
Witness my hand and Official Seal
R. W. NEWBURY, County Recorder
[signature] Deputy

Indexed	Photostat Compared	Blotted

I hereby certify that the within instrument was filed and recorded at request

Fee $ 1.00 pd

Heinrichs Geoexploration Co.
Box 5671, Tucson, Arizona

I. R. S.

Total $

Date JUL 5 1961 - 8:00 AM

Docket 279 Page 168 No. 10747

Notice of Location
(LODE)

NOTICE IS HEREBY GIVEN that the SHASTA 4 lode mining claim was located by JOHN W. MARLATT on MAY 22, 1961. This claim is 1,500 feet in length along the vein or deposit of mineral-bearing rock in place and 300 feet in width on each side of the middle of said vein or deposit at which this notice is posted. The general course of this claim is EAST-WEST and is situated in the PAT HILLS Mining District, COCHISE County, Arizona. This claim runs from the location monument or stake on which the notice is posted 75 feet in a EASTERLY direction to the EAST center end monument or stake and 1425 feet in a WESTERLY direction from the location monument or stake to the WEST center end monument or stake, and is also marked by two corner monuments or stakes at each end of the claim, one on each side of and 300 feet from the center end monuments or stakes, making the claim in the form of a parallelogram.

LOCATED IN SEC. 34 T16S R27E

SHASTA 3	
SHASTA 4	
SHASTA 5	

John W. Marlatt
Box 5671 Tucson, Ariz.
Locator

John F. King
witness

Write on the above lines the locality of the claim with reference to some natural object or permanent monument whereby the claim can be identified. Give the section, township and range if known and, if possible, the direction and distance from the nearest public survey marker. It is advisable to make a sketch in the space above, showing the adjoining and overlapping claims. If this is an amendment of a location notice, give the name and book and page of recording of the claim being amended.

STATE OF ARIZONA
COUNTY OF COCHISE
Witness my hand and Official Seal
[illegible] NEWBURY, County Recorder
[illegible] Deputy

I hereby certify that the within instrument was duly recorded at request of
Heinrich Geoexploration Co.
Box 5671, Tucson, Arizona

Fee $ 1.00 pd
I. R. S.
Total $
Date JUL 5 1961 - 8:00 AM
Docket 279 Page 169 No. 10745

Indexed | Photostat-Compared | Blotted

Notice of Location
(LODE)

NOTICE IS HEREBY GIVEN that the SHASTA 5 lode mining claim was located by JOHN W. MARLATT on MAY 22, 1961. This claim is 1,500 feet in length along the vein or deposit of mineral-bearing rock in place and 300 feet in width on each side of the middle of said vein or deposit at which this notice is posted. The general course of this claim is EAST-WEST and is situated in the PAT HILLS Mining District, COCHISE County, Arizona. This claim runs from the location monument or stake on which the notice is posted 75 feet in a EASTERLY direction to the EAST center end monument or stake and 1425 feet in a WESTERLY direction from the location monument or stake to the WEST center end monument or stake, and is also marked by two corner monuments or stakes at each end of the claim, one on each side of and 300 feet from the center end monuments or stakes, making the claim in the form of a parallelogram.

LOCATED IN SEC. 34 T16S R27E

SHASTA 4

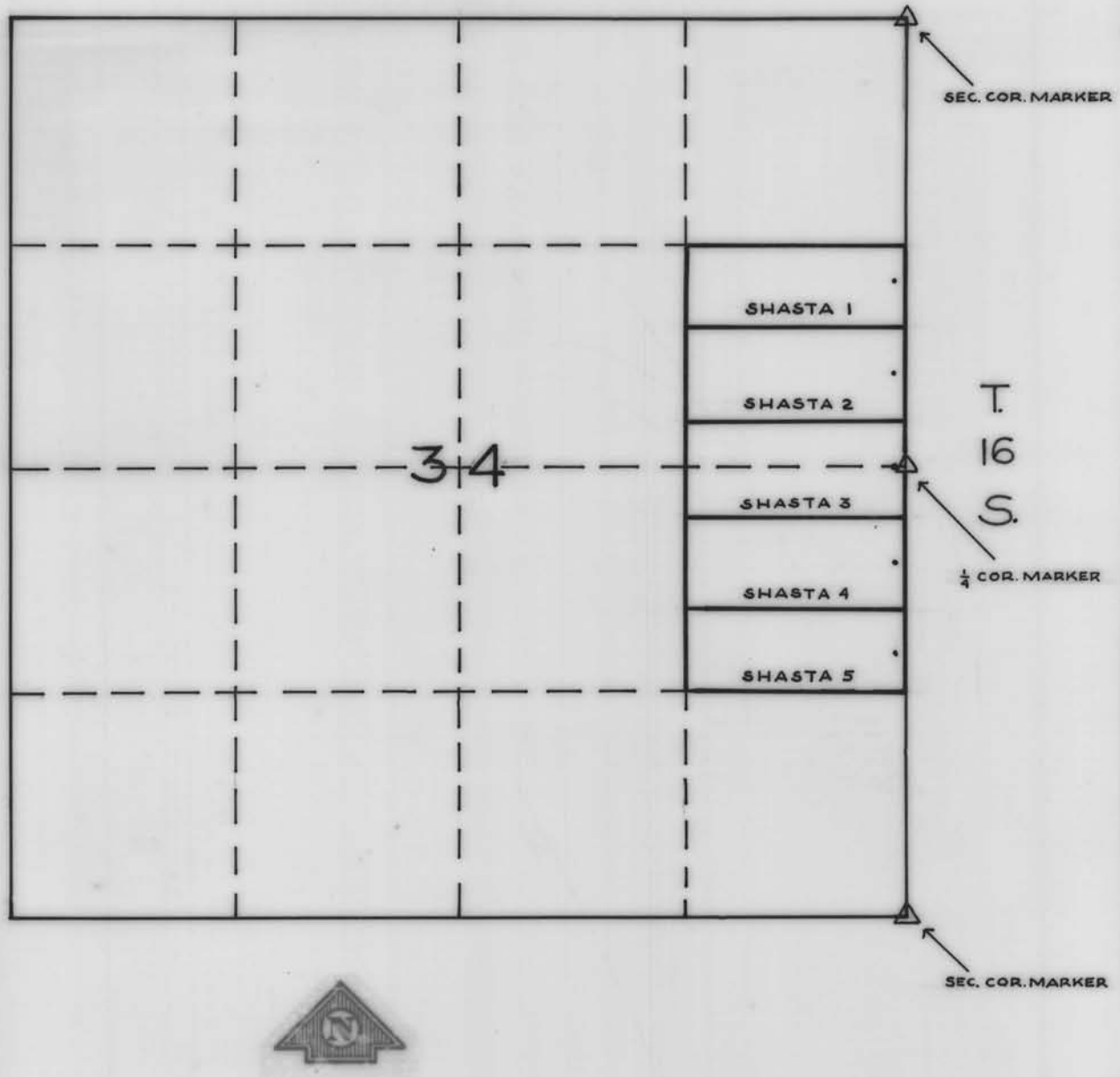
SHASTA 5

John W. Marlatt
Box 5671 Tucson, Ariz.
Locator

John T. King
Witness

Write on the above lines the locality of the claim with reference to some natural object or permanent monument whereby the claim can be identified. Give the section, township and range if known and, if possible, the direction and distance from the nearest public survey marker. It is advisable to make a sketch in the space above, showing the adjoining and overlapping claims. If this is an amendment of a location notice, give the name and book and page of recording of the claim being amended.

R. 27 E.



SCALE: 1"-1000'

• LOCATION POST.

NO CORNER OR END POSTS PUT IN.

SURVEYED BY TRANSIT-STADIA.

SHASTA CLAIM GROUP

COCHISE COUNTY, ARIZONA

MAY 22, 1961

HEINRICHS GEOEXPLORATION CO.
P. O. BOX 5671 TUCSON, ARIZONA

5/19/61

Ken Welker called —:
Cyprus Mines Corp

Geology & Mo May in part concurrent - but also in part - separated, but consecutive.
6 days Mo May = at least 6 days report compilation etc. In other words about 2 weeks from start to finish - (but could be 3 weeks.)

Geol - 350.00
6 days May - 1400.00
$1750.00

Will start claim survey Monday May 22.

W.

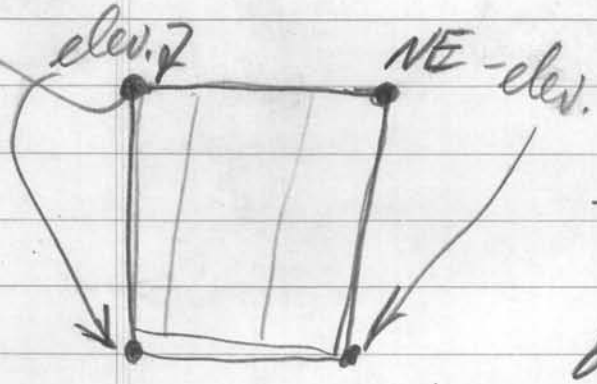
5/18/61

Bill Rundle -:

2 - 40 acre tracts open ground?
Sec 34 - T16S R27E
NE of SE
SE of NE

125.00
36.00
161.00 $150.00 - $175.00

Air way beacon.
Peak 1320 x 1320

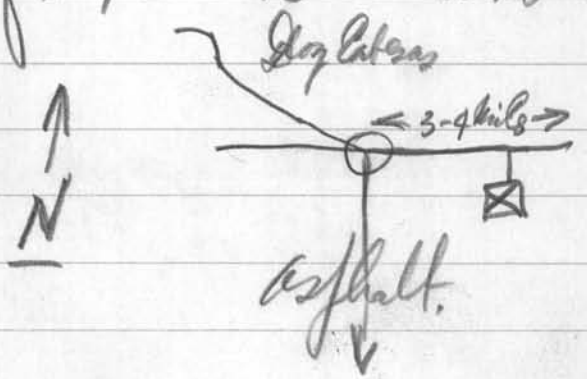


Martin Gentry.

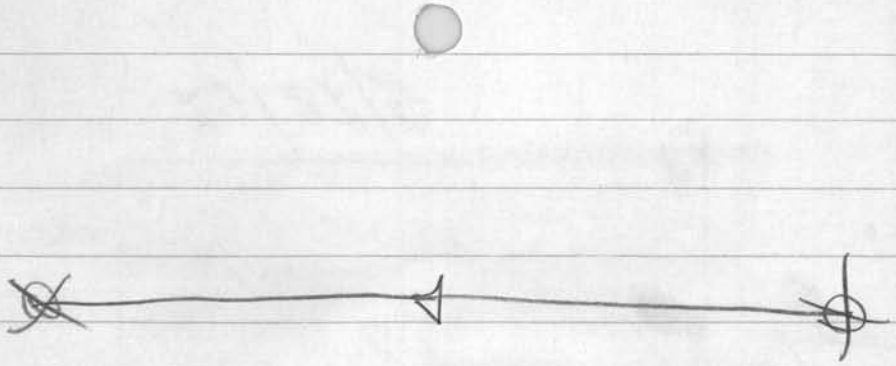
— Billy Riggs at Oak Ranch
Knows area.
on road to Waderland of Rocks

Definitely - Notify - Jim Hudson - lives on highway
white - sign

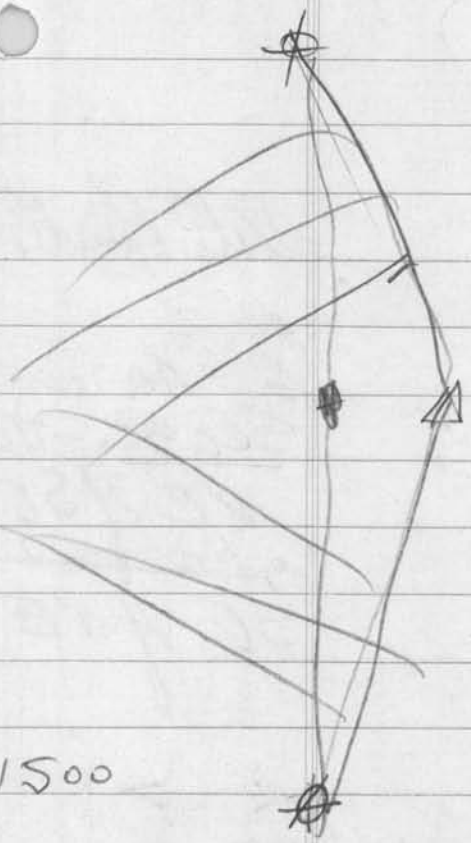
By end of next week on leases etc.



gravel then
paved on east
side
so of highway
going east.



600
36
564

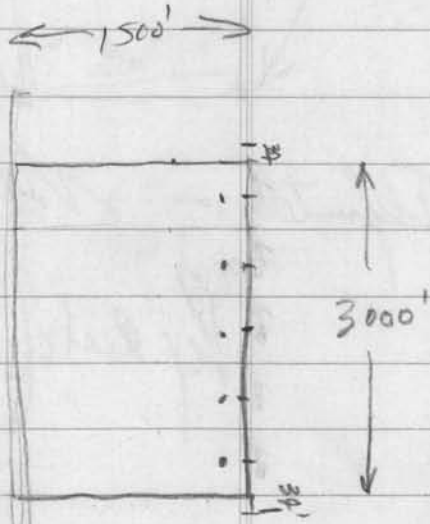


550' X 1500

600
528
72
60

36
2 | 72
6
12

528
5 | 2640
25
14
10
40



5 x 600 = 3000
2640
360

2640

2640

May 5, 1961

Cyprus Mines Corporation
523 West Sixth Street
Los Angeles 14, California

Attn: Mr. K. K. Welker, Chief Geologist

Gentlemen:

Re: Mobile Magnetic Survey and geological Reconnaissance, Pat Hills Area, Cochise County, Arizona, Your letter of May 2, 1961 and attached map.

An approach to investigation of said area may be made in either of two ways.

1. Rapid reconnaissance driving roads and trails in the vicinity, and some specific, oriented lines in Sections 33, 34, 3 and 10 to locate and investigate known anomalies.
2. Cover the 15 sections by more or less equal spaced, oriented lines giving a general picture of the whole area.

Estimated costs for each of the above:

1. Two operating days @ $280.00/day
   (This includes a map and basic interpretation) $560.00
   Travel to and from the area and
   men's living expenses---------- 140.00
   $700.00

2. Six operating days @ $280.00/day
   (This includes map and detailed
   interpretation)----------$1680.00
   Travel to and from area and
   men's living expenses--------- 220.00
   $1900.00

Although we feel that in six days a fairly comprehensive survey can be made, the possibility always exists that important anomalism may be located that would suggest more detailed

close spacing, or areas of rougher terrain, where the mobile magnetometer cannot be driven, might indicate that fill-in hand magnetometer work is desirable. Additional work of this type that you might want, could vary in time from an extra day to several days and is difficult to estimate until the situation arises.

Unit charges for all work are as follows:

Field operating day for mobile magnetometer, including followup office computations, map, compilation and report is--------$280.00 per day

Mobilization, demobilization, travel to and from area, etc. variable depending on location. In this case, $100.00.

Crews living expenses while out of town----at cost.

Communications, map reproductions, etc. at cost.

Geologic mapping, $100.00/day plus vehicle expenses of $10.00/day and $0.10/mile.

We would undertake to prepare a geologic map of the area for $350.00 which would include the field work, vehicle and drafting of finished map.

Our estimate for the magnetic work and geologic mapping is that it can be done for about $2250.00. To allow for unknown detail that might be required as the work progresses, we propose a figure of not-to-exceed $4,000.00 for a complete job.

Standby time for extensive periods (when equipment is ready, but because of client factors, not operating) at client's expense--------$100.00/day. Usually avoided by mutual convenience and rarely enforced. Breakdown time and non-operating time, no fee charges to client or is made up at no added charge.

The unit cost for mobile magnetometer surveys includes all equipment, gas, oil, materials and supplies normally necessary for such a survey. Any special equipment or supplies, not usually included in a mobile magnetic survey and at client's request

will be at client's expense (such as a bulldozer, etc.)

Our approach is to try to obtain minimum even coverage by profile lines evenly spaced, usually (in this part of the country) on east-west lines but on more rugged terrain following the topographic pattern of ridges and washes.

Base map and survey control will be from topographic maps of the area, and aerial photos, if they can be procured prior to the start of the project. Brunton and pace would be used for geologic mapping.

Our current availability is about May 15th, subject to any firm commitments that might be made prior to your definite acceptance of this proposal.

A remittance of $500.00 in advance would be appreciated. Statements are submitted semi-monthly or after satisfactory completion of the job and presentation of our report.

If you have any further questions please let us know. Your acceptance of this proposal may be indicated by designating which item or items below are preferred and by executing the blanks as provided below and returning a copy to us.

Item #1---Two days of reconnaissance Magnetics---$700.00

Item #2---Six days regional magnetics--------$1680.00

Item #3---Six days regional magnetics, a geological map detail fill-in magnetics as required approximately $2250.00 but not to exceed $4,000.00

Very truly yours,

HEINRICHS GEOEXPLORATION CO.

Walter E. Heinrichs

Accepted & Approved:
Items #_____

Date:_____

by:_____
Cyprus Mines Corporation

WEH:jh
Extra CC Enclosed

F

5/2/61

Cyprus

Ken Welker + Geology.

10 days ± sending letter today

W.

March 29, 1962

Mr. K. K. Welker
Cyprus Mines Corporation
523 West Sixth Street
Los Angeles 14, California

Dear Mr. Welker:

In response to personal inquiry to me by Mr. Leonard Ettinger about using our base maps of the Pat Hills area, Walt called you on 27 March 1962 and received an affirmative response. Although Mr. Ettinger has not yet been in, I looked through our Cyprus-Pat Hills file and find that the master negative and positive of the topographic enlargement had inadvertently not been sent to you, which is probably why he had approached me, you not having it available.

Under separate cover these are being forwarded to you immediately. They constitute a considerable portion of the item "Maps, reproductions----etc." for which Cyprus was billed on Feb. 7, 1962 and which has been paid. We retain a sepia from which blue line copies can be made by anyone locally, at your authorization.

The MoMag records were kept in our file in anticipation of the probability that some discussions would arise between Cyprus and Geoex personnel about the magnetic results. As this has not materialized, would you like the records sent to you now?

Very truly yours,

HEINRICHS GEOEXPLORATION CO.

J. W. Marlatt
Geologist

JWM:jh

3/27/62

Student at U. of A. for

Cyprus —— LEnord ETTINGER

Probably better get quads we need locally & pass charges on to clients as might not get them soon enough from Denver. — ok. but not done yet M.

→ OK. Sam Welber Nothing else new or pending. W.

February 7, 1962

Mr. W. J. Rundle
Cyprus Mines Corporation
523 West Sixth Street
Los Angeles 14, California

Dear Bill,

Enclosed are two copies of the report of our magnetic and geologic work at Pat Hills, Cochise County, Arizona.

We have retained the MoMag records in our Cyprus file as from past experience we find this best for everyone.

Sent separately are reproducible sepias of the maps, in a roll tube.

Our billing is enclosed. The minimum estimate was exceeded mostly due to adverse weather factors. Occasionally we must charge standby for weather lost time, but overlooked mentioning this previously. Therefore, we halved the excess expenses involved and trust you will find this fair.

After reviewing the report, if you have questions we will be happy to answer them. There may be some feeling we were too detailed, but this being our first experience with you, we wished to be completely thorough and comprehensive.

Sincerely,

Walt.

Walter E. Heinrichs, Jr.

WEH:jh

Enclosures

February 7, 1962

Mr. W. J. Rundle
Cyprus Mines Corporation
523 West Sixth Street
Los Angeles 14, California

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Sincerely,

Walter E. Heinrichs, Jr.

WEH:jh

Enclosures

February 7, 1962

S T A T E M E N T

To: Cyprus Mines Corporation
523 West Sixth Street
Los Angeles 14, California

Attn: Mr. W. J. Rundle

Re: Geologic & Magnetic Reconnaissance, Pat Hills, Cochise County, Arizona January - February 1962

Services:	Field Geology	
1/6/62 - 1/7/62	J.W.M. & C.S.L.	
	2 days @ $100.00/day	$200.00
	Vehicle expenses	57.00
	Living expenses	20.27
1/27/62	J.W.M. & S.R.T. 1 day	100.00
	1 vehicle day	47.60
	Mobile Magnetometer Mobilization	100.00
1/15-16-17/62	J.W.M. & E.G.H. 2 days @ $280/day	560.00
	Living expenses	56.57
1/21-22/62	J.W.M. & E.G.H. 2 days	560.00
	Living expenses	34.14
1/29-30-31/62	J.W.M. & E.G.H. 2 days	560.00
	Living expenses	38.72
Office - computations, plotting data, reports etc. 12 staff days		N. C.
Maps, reproductions, blueprints, communications, etc.		75.25
Supplemental vehicle expenses & excess travel time between Tucson & Pat Hills due to weather delays - $379.80	Split 50/50 with Cyprus	189.90
		$2599.45
	Advance received 1/6/62	1000.00
	Balance due to date:	$1599.45

Rec. No	Anomalism of interest
1	Sudden rise in level just east of 22/23 27/26
	Sharp anomaly in sec. 4
2	Low south of old mine in sec. 10
3	Sharp low just west of a road fork
4	Nothing
5	"
6	Sharp high in sec. 4
7	Fast climb in level at start of record
8	Broad low sec. 9
9	Nothing
10	Sharp rise in level near hill w/ pros. pits Sec. 33
11	Anomaly just east of breccia pipe
12	nothing
13	"
14	"
15	Broad low in sec. 11
16	" " " " "
17	Nothing
18	Broad low sec. 10
19	Quite variable
20	" " - low at east side of hill Sec. 2
21	Low in sec. 4
22	Low at 9/3 9/10 & high at 1/4 4/3
23	high at 1/4 4/3 Low in center sec. 4
24	" in sec. 4
25	Nothing
26	weird low, sec. 3 . otherwise quite variable
27	Variable
28	"
29	"
30	"
31	Nothing
32	Variable - fault? break east of prospect pits.
33	" - high from 29/28 32/33 to 28 33

Rec. No	Anomalism of interest
34	Nothing
35	Small high sec. 9
36	" " "
37	" " "
38	Sharp " "
39	Variable & weird low sor of mine, sec. 10
40	Slightly variable
41	" "
42	Anomaly - high on west side of hill Sec. 34
43	" " " " " " " "
	Also quite variable & fault? break about 32/33
44	High in sec. 29
45	Two highs - Sec. 33
46	Nothing
47	"
48	"
49	"
50	"
51	"
52	Extremely erratic
53	" "

To WALT

Date 2/2/62 Time

WHILE YOU WERE OUT

M Rundle

of

Phone MADISON 63231

TELEPHONED		PLEASE CALL	
CALLED TO SEE YOU		WILL CALL AGAIN	
WANTS TO SEE YOU		URGENT	

Message

Op. 771

NEXT 30 min.

Operator

Efficiency Line No. 2725

LONG DISTANCE PHONE CALL REPORT

Request of Mr. W

Date 2/7/62

Number Called MAdison 6-3231
Exchange Number

Time Requested _____ A.M. P.M.

Individual Bill Rundle.

KIND OF SERVICE DESIRED

☐ Station to Station ☒ Person to Person

Firm Cyprus.

Time Called 9:35 A.M. P.M.

Street Address

Time Connected 10:15 A.M. P.M.

City Los Angeles. State Cal

Time Off 10:28 A.M. P.M.

Remarks: Re: Billing etc.

Minutes Elapsed Time 13

split diffon wx excess etc

ok. Will review & decide

what to do after etc.

4.80
47
5.17

5.17
52
26
5.95

CHARGES: $ 5.95

Phone Company Verification of Charge Given by

Switchboard Operator's Notations

☒ **Company Business**
☐ **Personal Call**

Charge to Cyprus Pat Hills A/C No.

Signed [illegible]
Switchboard Operator

The **UTILITY** Line Form 39A

Pat Hills 2/2/62

Bill Rwandle.

Cyprus Mining Co.

3 main areas of interest (2 for I.P. to be recommended)

Marginal or weak Cu.

Stronger Pyrite evidence

May alone not outstanding anomalous.

" with geol some indicated possibilities

I.P. - 4 - 4500' lines (500'"A") at $1000-1500 ea

3 drill holes regardless of I.P. -

I.P. to show where rather than whether.

Report next week.

Walt
W.V.M
R.G.H.

January 19, 1962

Mr. W. J. Rundle
Cyprus Mines Corp
523 West Sixth Street
Los Angeles 14, California

Re: Pat Hills

Dear Bill:

Just a note to advise you that the magnetic work and geological reconnaissance is underway at Pat Hills but is proceeding slowly due to inclement weather and subsequent muddy conditions. There has been zero temperatures, snow, hail, rain and fog. Very unusual for this part of Arizona. We completed two days of Momag before further rain made the ground so muddy we hesitated to continue due to damage to the range land. In the interest of good relations with the ranchers we returned to Tucson to work on the data obtained so far but expect to return to the area this coming week.

At this time I will only say that we are finding considerable magnetic anomalism, and will withhold any interpretation remarks until completion of the work.

Very truly yours,

J. W. Marlatt
Geologist

JWM:jh

Rundle called today - told him we hoped to have his report 1st week in Feb. Sounded a little anxious to know what we are finding. Walker talked to Walt about trip next week to Old Dick.

January 19, 1962

Mr. W. J. Rundle
Cyprus Mines Corp
523 West Sixth Street
Los Angeles 14, California

Re: Pat Hills

Dear Bill:

Just a note to advise you that the magnetic work and geological reconnaissance is underway at Pat Hills but is proceeding slowly due to inclement weather and subsequent muddy conditions. There has been zero temperatures, snow, hail, rain and fog. Very unusual for this part of Arizona. We completed two days of Momag before further rain made the ground so muddy we hesitated to continue due to damage to the range land. In the interest of good relations with the ranchers we returned to Tucson to work on the data obtained so far but expect to return to the area this coming week.

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Very truly yours,

J. W. Marlatt
Geologist

JWM:jh

1/10/62

Vic Verity called

re: Cyprus

Pat Hills - 16th & 17th.

Hill Top
Pat Hills
Bisbee
Fairbank-Charleston
Hereford, Camp.

January 9, 1962

F Pat Hills.
Cyprus F.

Mr. D. H. Elliot, Photogeologist
2927 Almeda Plaza
Houston Texas

Dear Doug:

Nice to hear from you and have your present address on file. I hope you are finding opportunities for your line of work greater there than you did ~~in Tucson~~.

The reason for writing just now--we tried to get the photos covering the Pat Hills area and find they are still checked out in your name. If you have them we'd appreciate it if you would forward them to us, then when we are through with them we will return them to the University for you.

Wishing you a ~~prosperous~~ 1962.

Sincerely,

HEINRICHS GEOEXPLORATION CO.

Walter E. Heinrichs, Jr.
President & General Manager

WEH:jh

January 9, 1962

1-9-62

Thoughts to date on PAT HILLS PROJECT

1. Norm Eastmoore and Al Clark did not see much of, nor the better parts of the area.

2. It is a bare possibility though a very long shot.

3. Geology is both simple and complex.

4. Doug Elliott map does not help much.

5. We need some information about the old working in Sec. 10.

6. Cu shows only in Sec. 10 & 33 though there are also old pits in Sections 29 & 34.

7. We havent yet seen quite all the area.

8. There is a possibility that the areas furnished us by Cyprus as being magnetic anomalies were not originally so marked for that purpose as they all overlay the past workings.

9. Spot readings with the A.E.M. show variance of over 1,000 gammas.

10. There are many areas of alteration.

11. The most likely target areas as seen by surface recon are the "breccia pipes" in the southeast part of Sec. 28 and the old mine on a fault in Sec. 10. Some preferential feeling (intuition?) for the former.

12. The fault in Section 10 is the only definite one of any size noted but strong suggestions for others.

13. Areas of breccia pipes and west from them have psuedo morphs of large x-tals - some pyritohedrons? - lying in ground in profusion. Probably an excellent clue if their occurence can be completely understood.

14. Small granite areas to west may not be as young as country-geology shows.

15. Generally speaking the rocks are extrusive or near surface intrusive and gradational from andesite to latite, rhyolite and granite. A few small spots of possible quartzite or arkose seen. No sedimentary section, or shist, or metamorphics, or monzonite or basalt flows, or diorite dikes, or dia base, etc.

16. No marked structural breaks though topo and other features indicate some probable structural changes.

17. Very strong circular patterns from small areas inches across of circular fracturing, to ring-dike like intrusions to regional circular features. Photos show possible caldera feature.

18. Fairly consistent general north dip apparently related to flow banding and joint fracturing.

19. Rhyolite dikes are roughly east west and vertical.

20. Fault mineralization in Section 10 is N30E and dips 72° East.

21. There are many trail roads and the MoMag can get up on some of the hills. Away from hills is excellent MoMag country.

22. Recon MoMag as planned will be good. As of now there is doubt if results of above will justify detail magnetics as anomalism will surely be found from andesite and no magnetite association with copper shows has yet been found. Fairly strong (500γ) magnetic variation on breccia pipe.

23. Some other type geophysics will probably be recommended for at least two limited areas. However these two areas will need drill holes regardless. I.P.

24. A vague impression that some of the latite? was a cap and the rhyolite was in vertical dikes.

25. Alteration more pronounced on the acidic rocks. They also show some former pyritization?

26. The arcuate patterns and north dips may be important clues to mineralization buried outside the immediate hills.

27. We need the original photos from which our copies were made, but even more important we should recommend Cyprus have a few hundred dollars worth of low level photography done at once.

27, The breccia pipe areas are an intersection of strong N30W and N60E topo breaks, alteration, some epidotization and mineralization.

29. The mine in Sec. 10 is at extreme south endof outcrop. This is the best copper show and may indicate the best potential for an economic ore body is out under the alluvium.

ORIGINAL MOMAG RECORDS

for

CYPRUS MINES CORP.

PAT HILLS PROJECT

COCHISE COUNTY, ARIZONA

RECORDS 1 thru 53 inclusive

January, 1962

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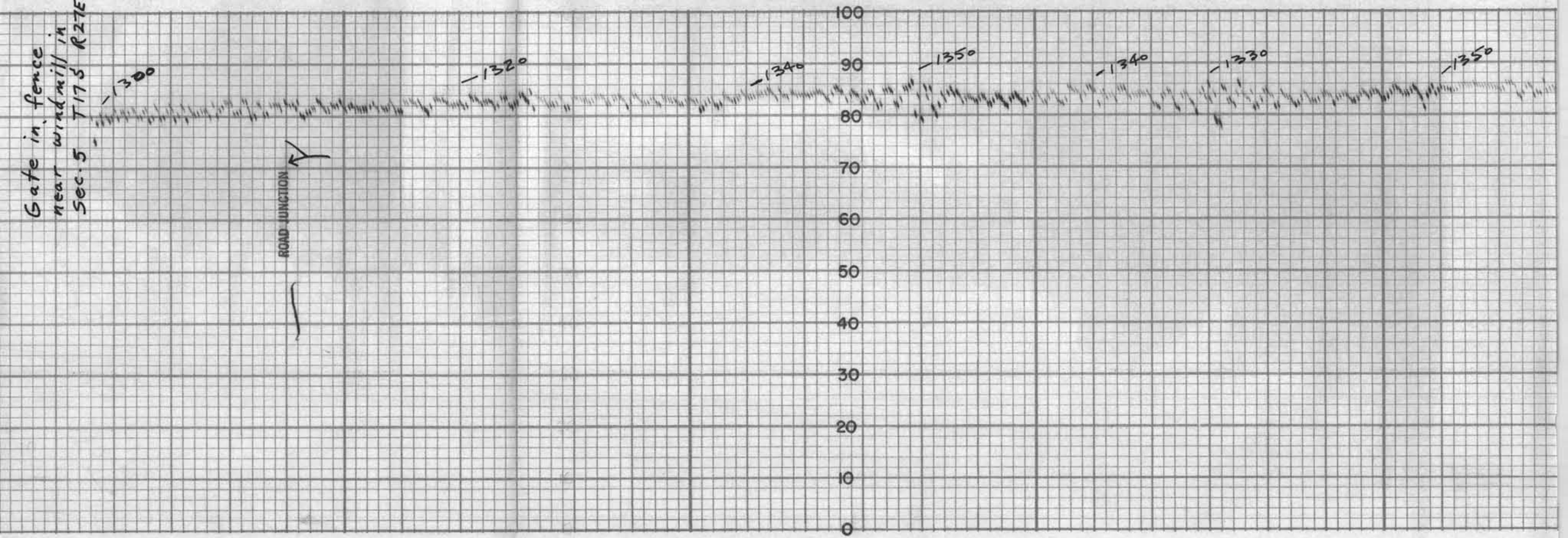

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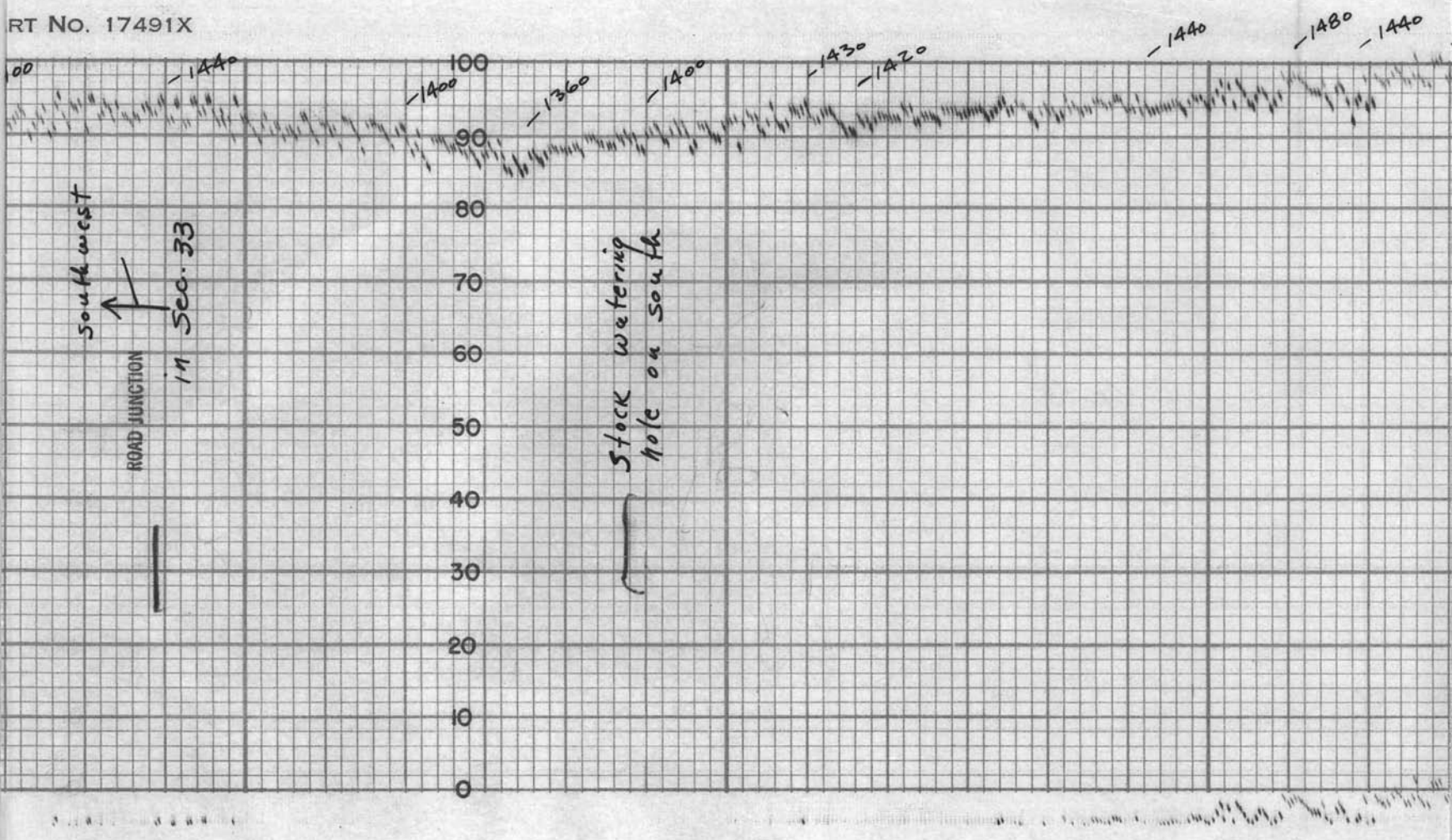
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hole on south

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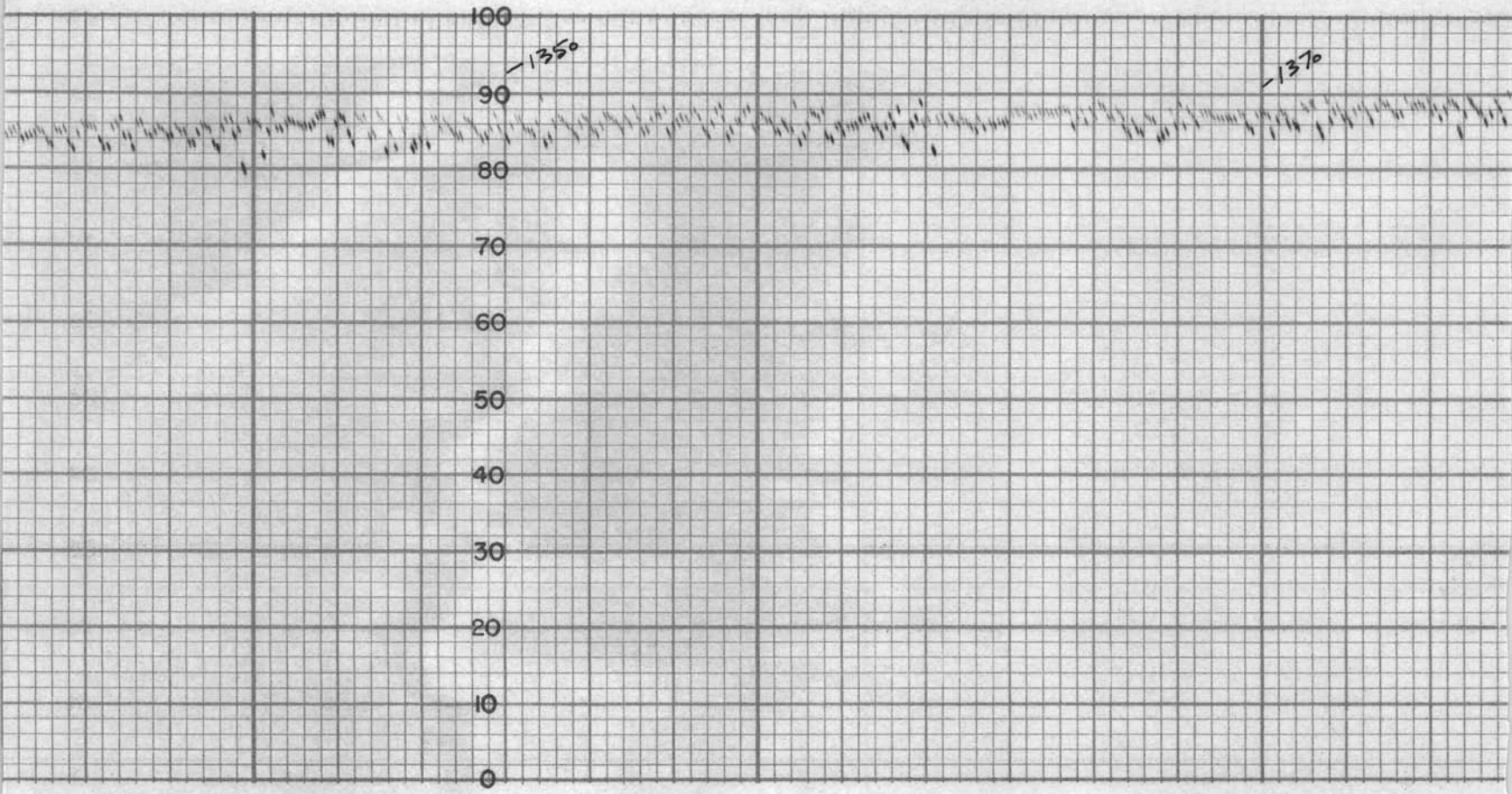

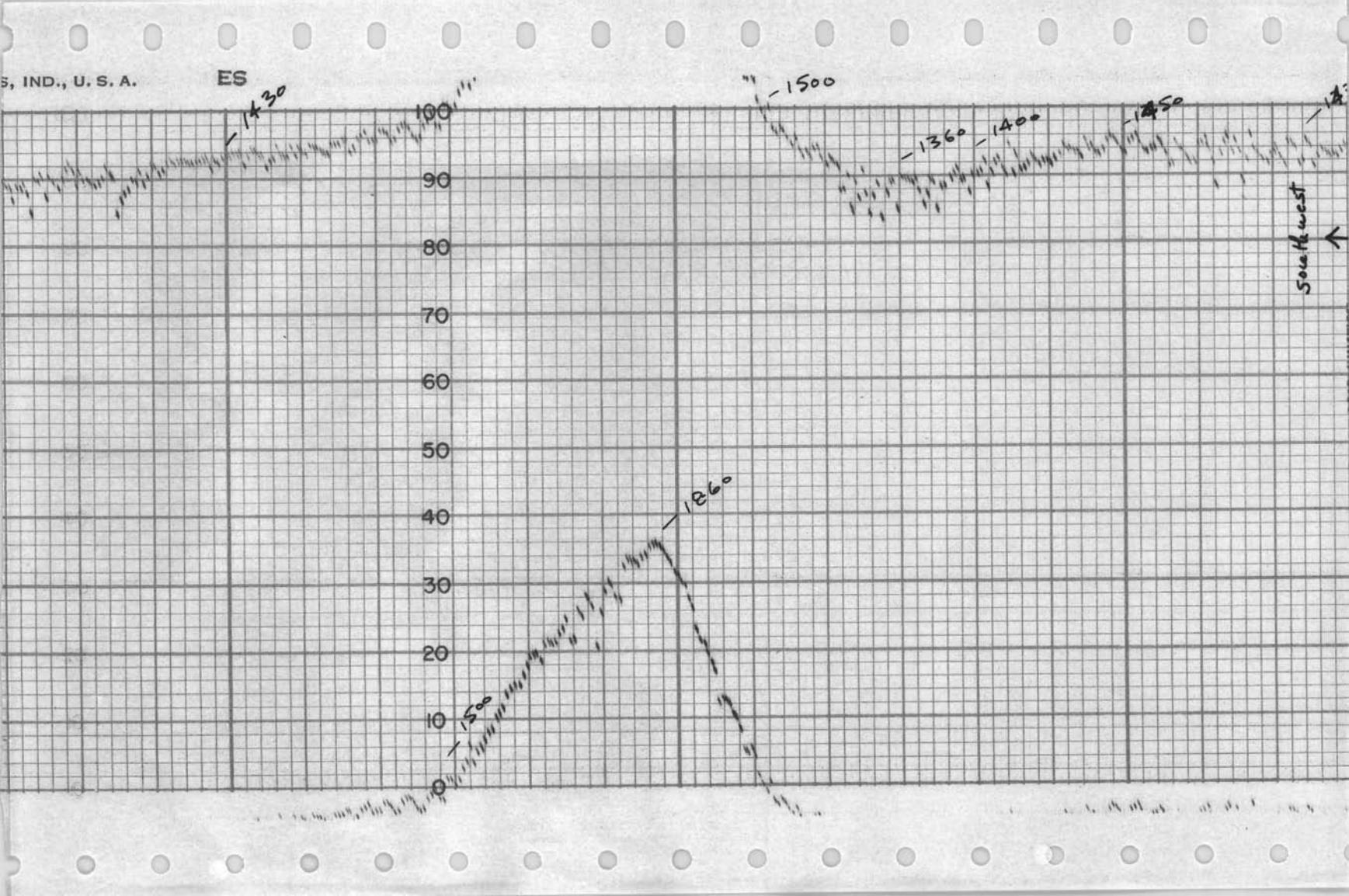
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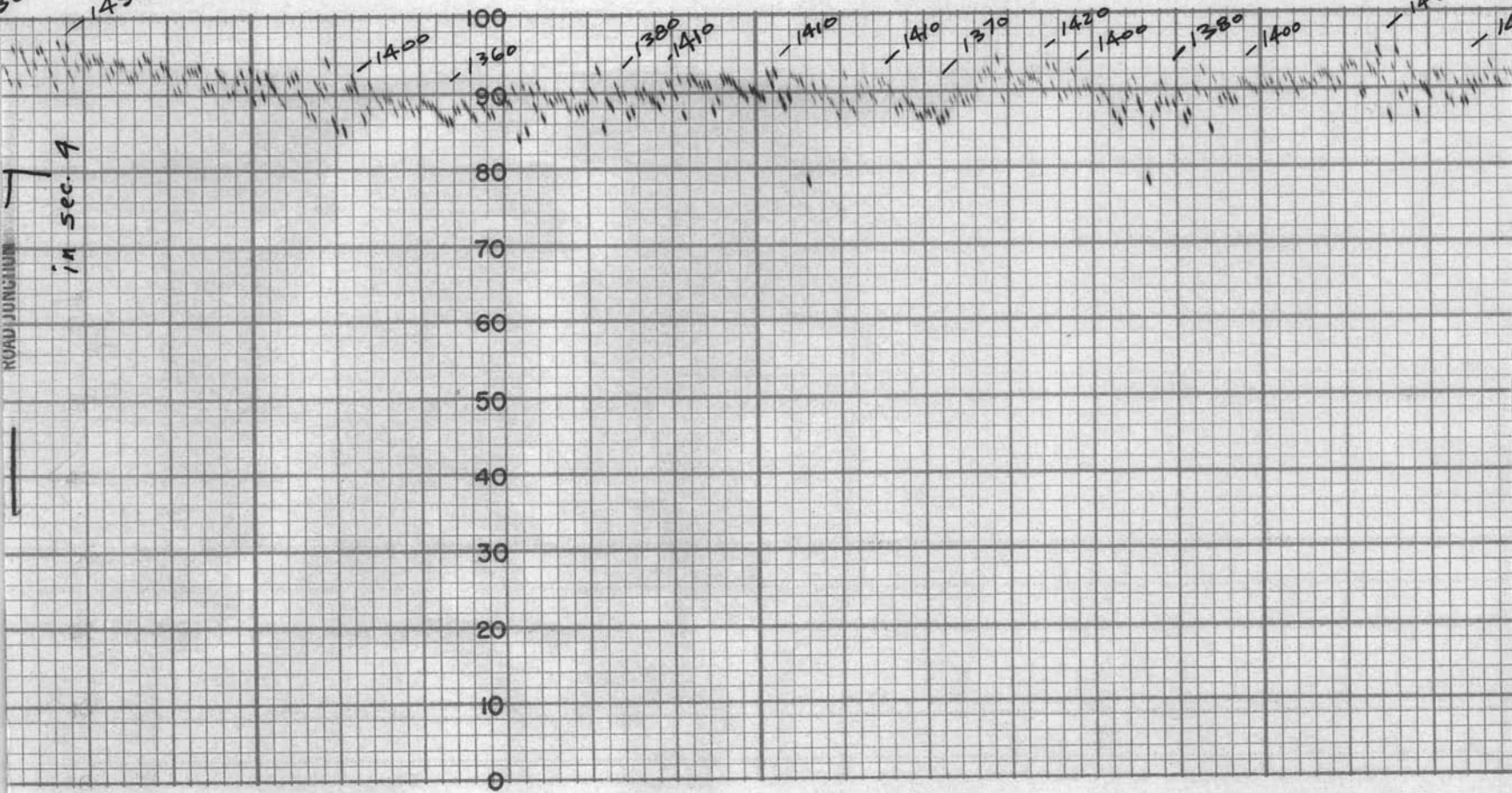

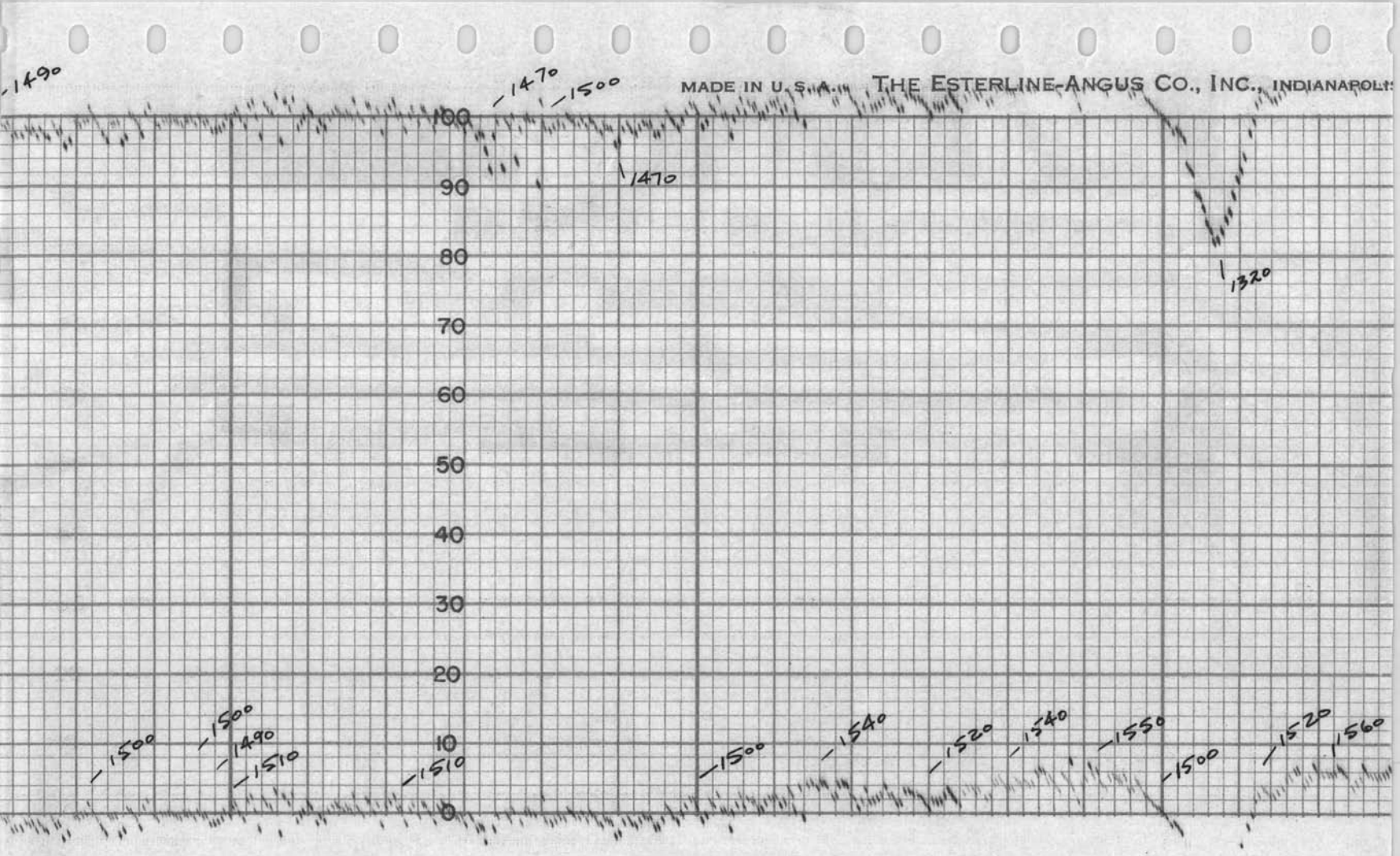
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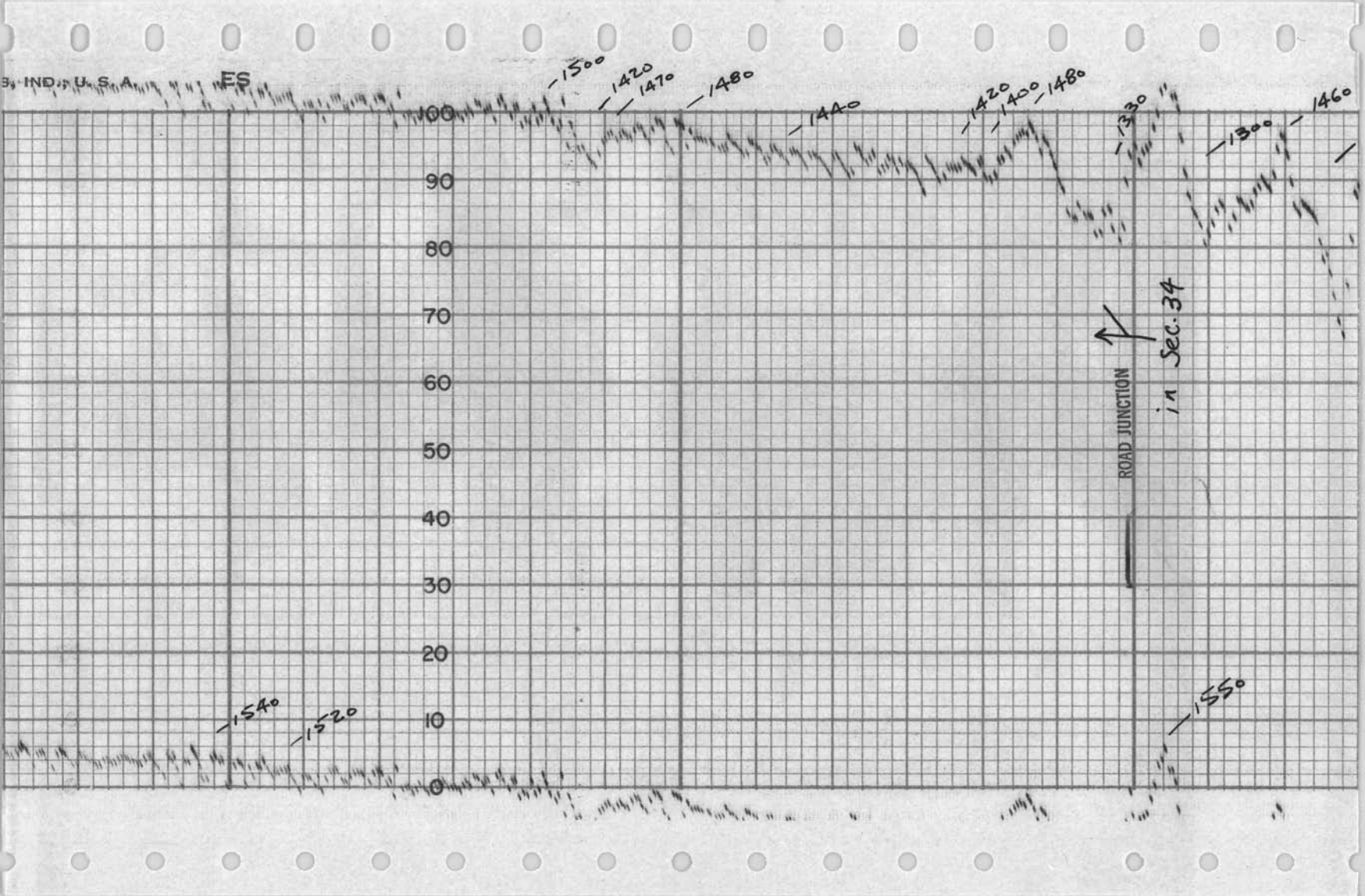
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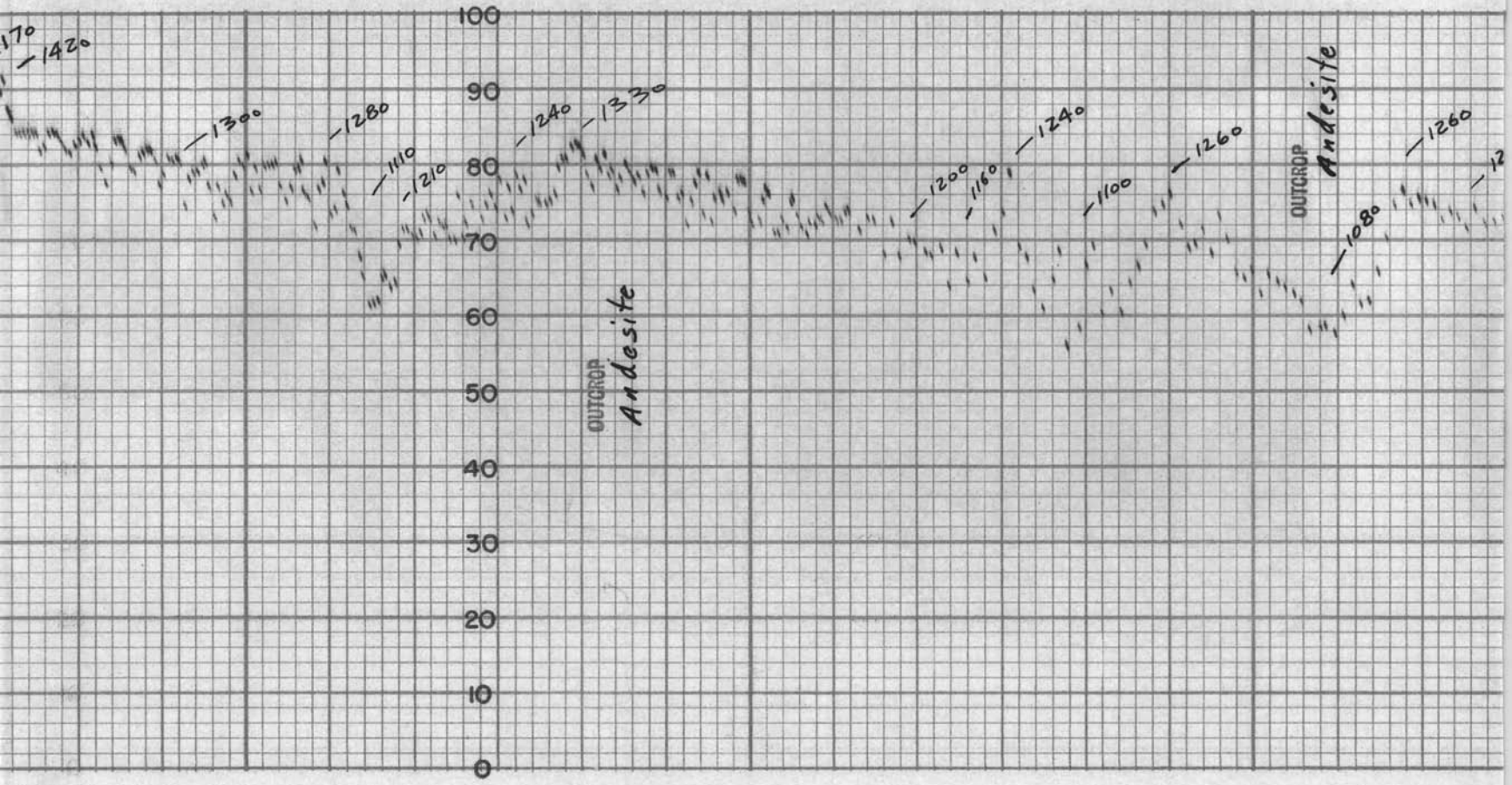
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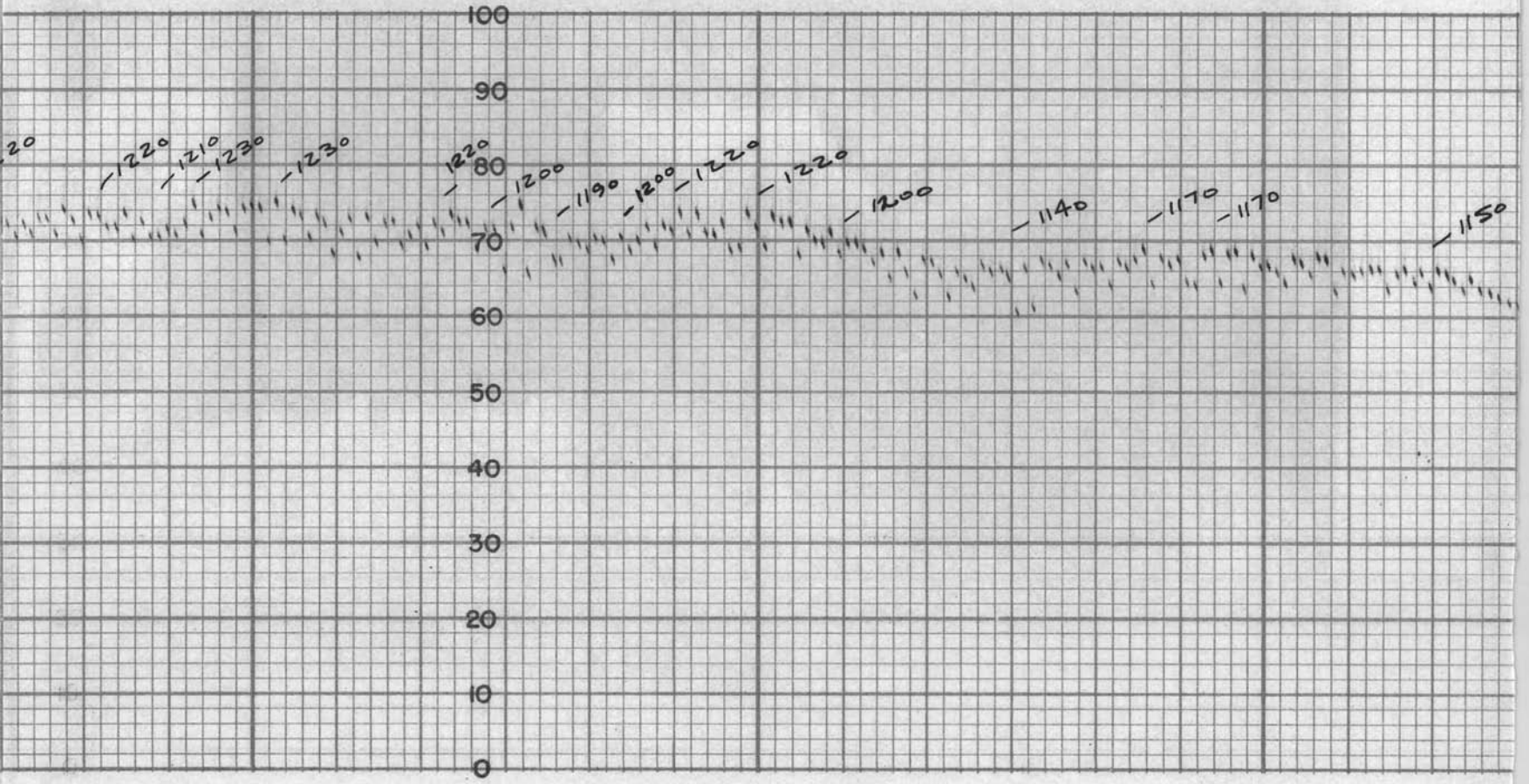
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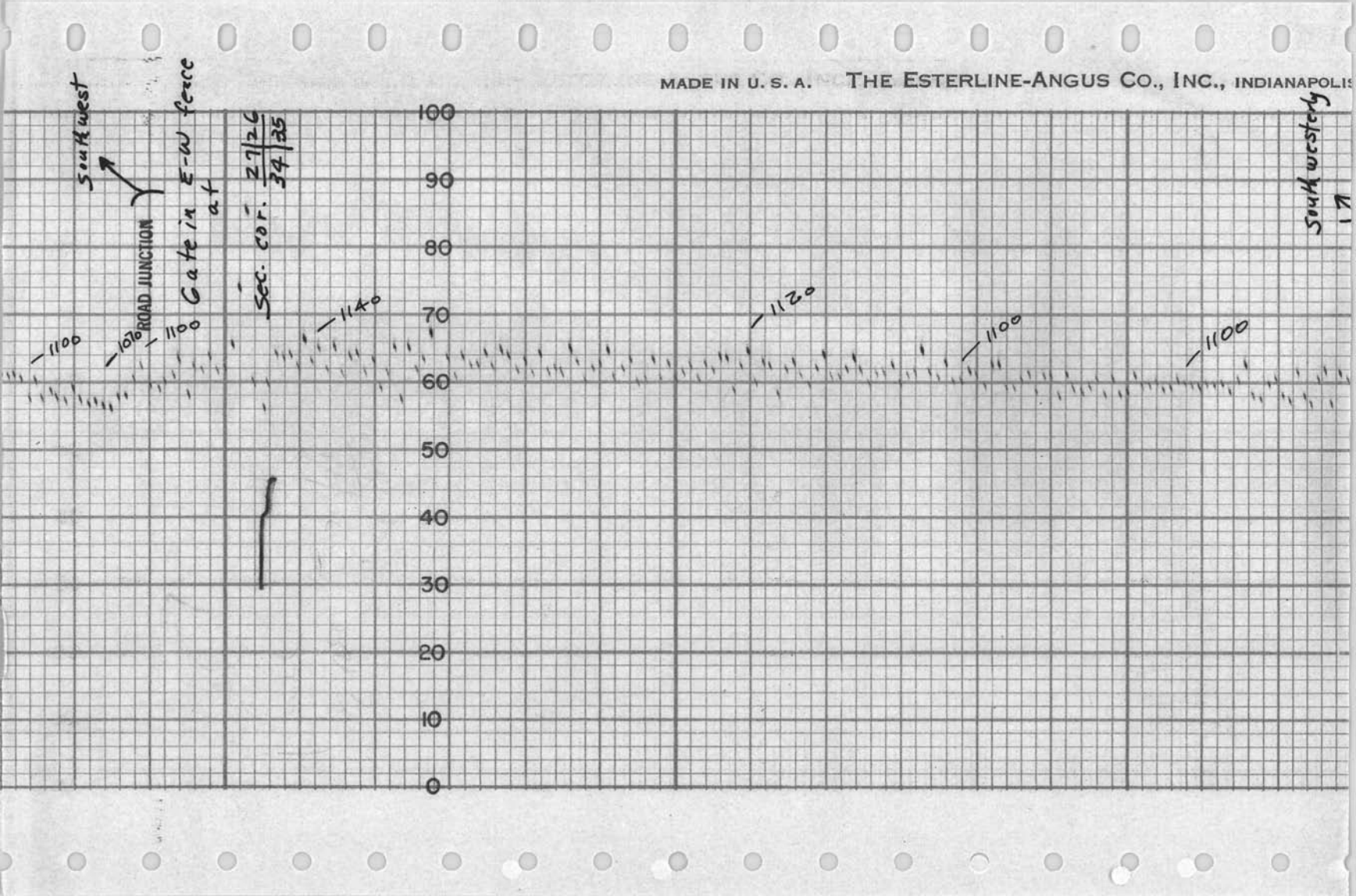

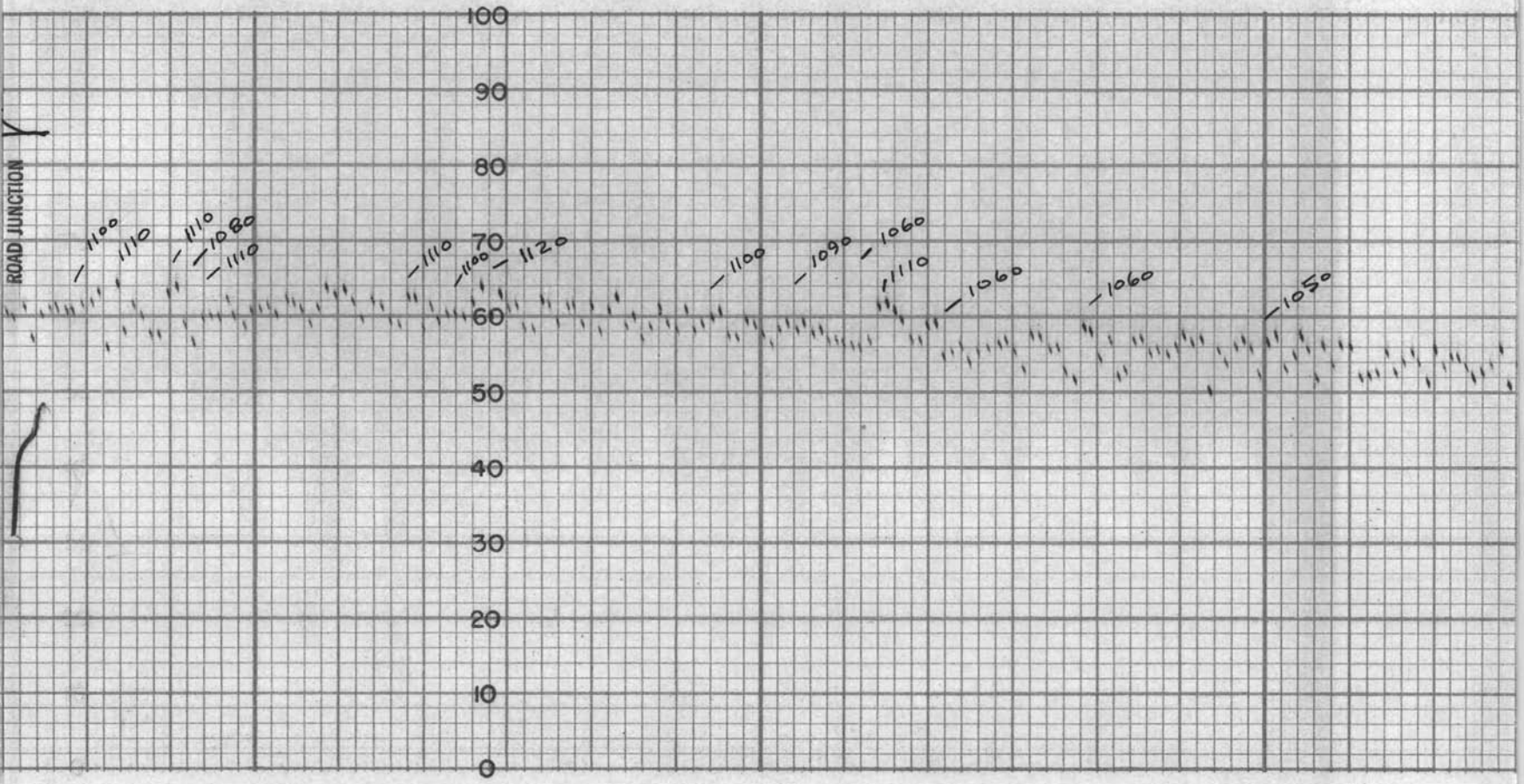
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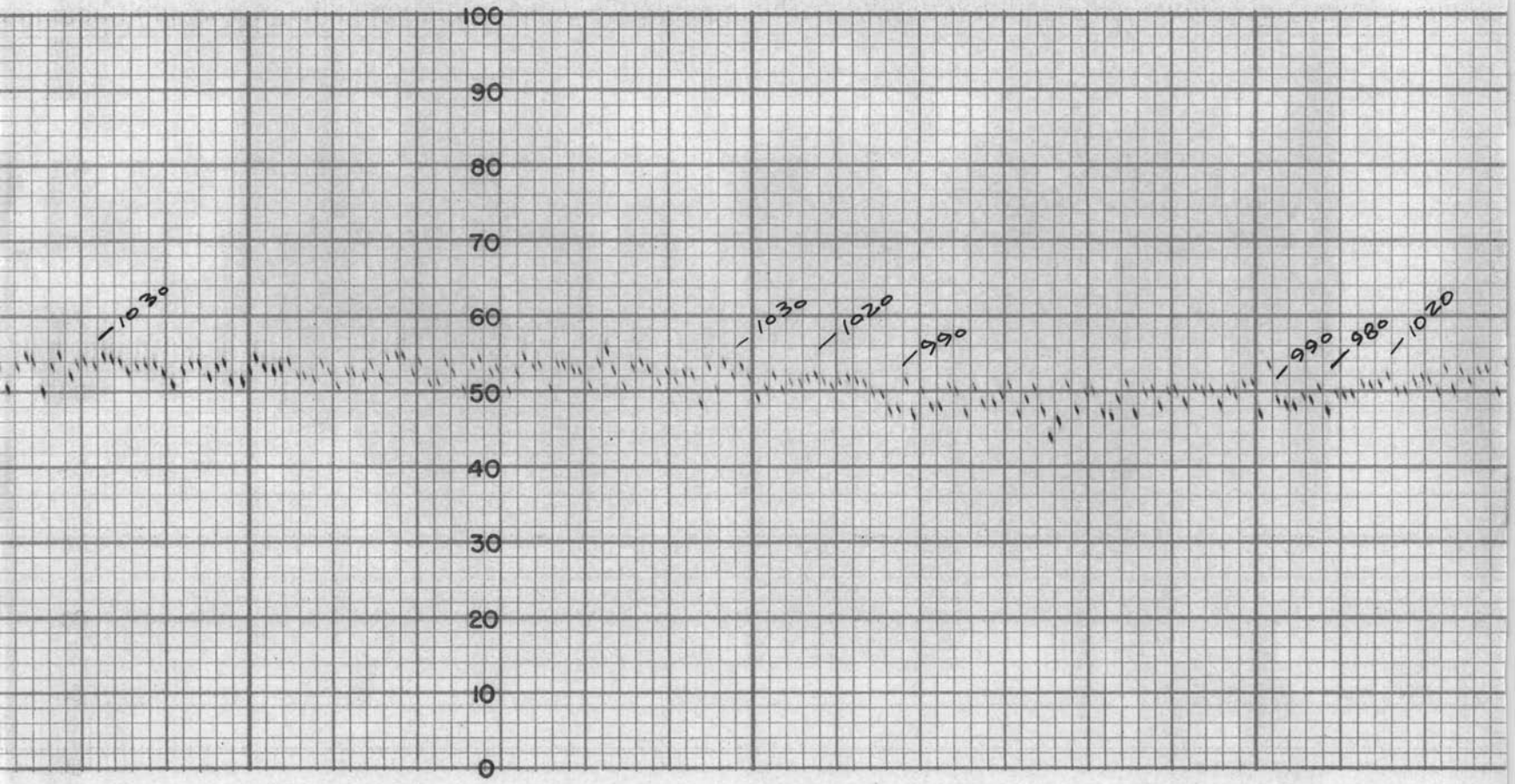
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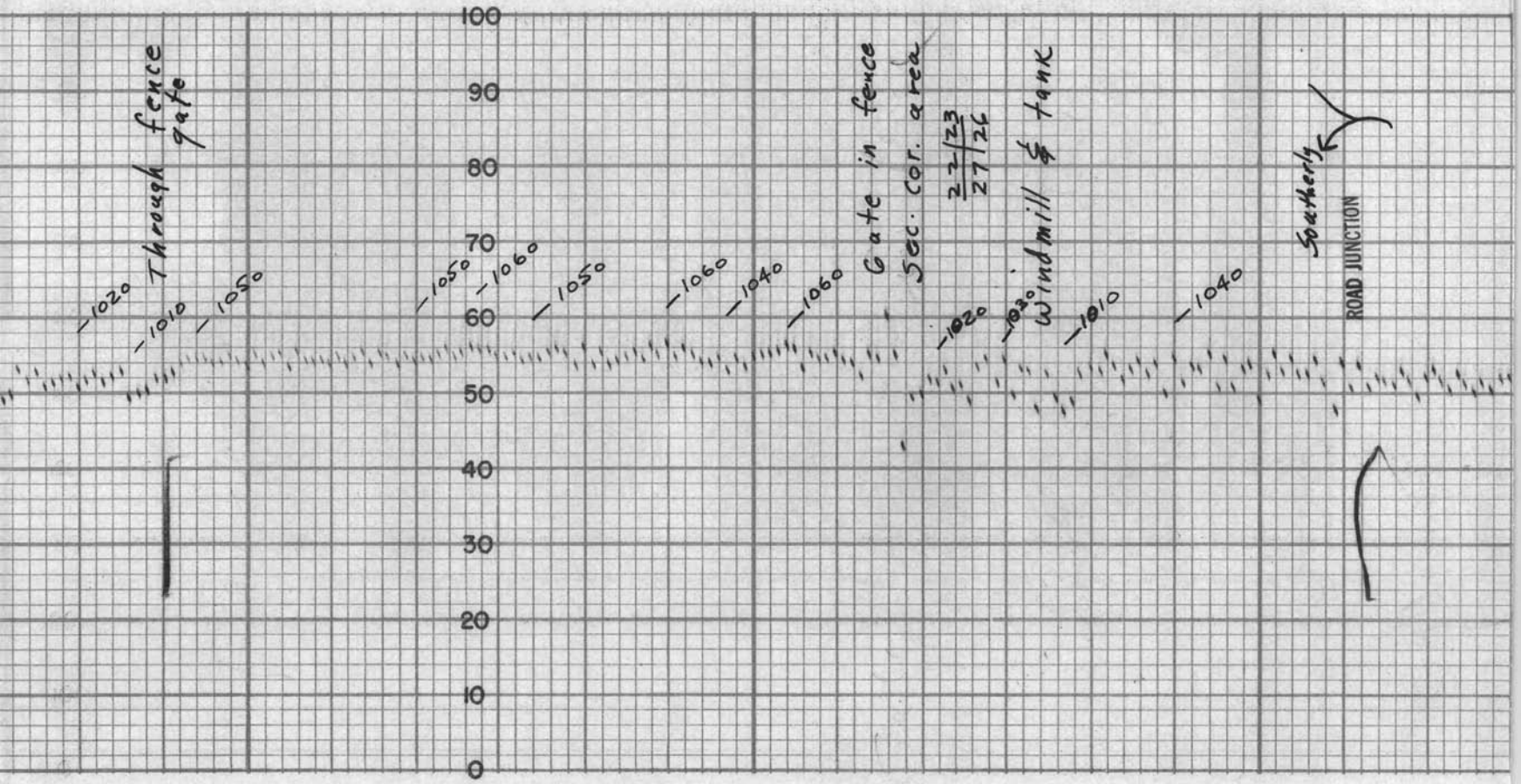
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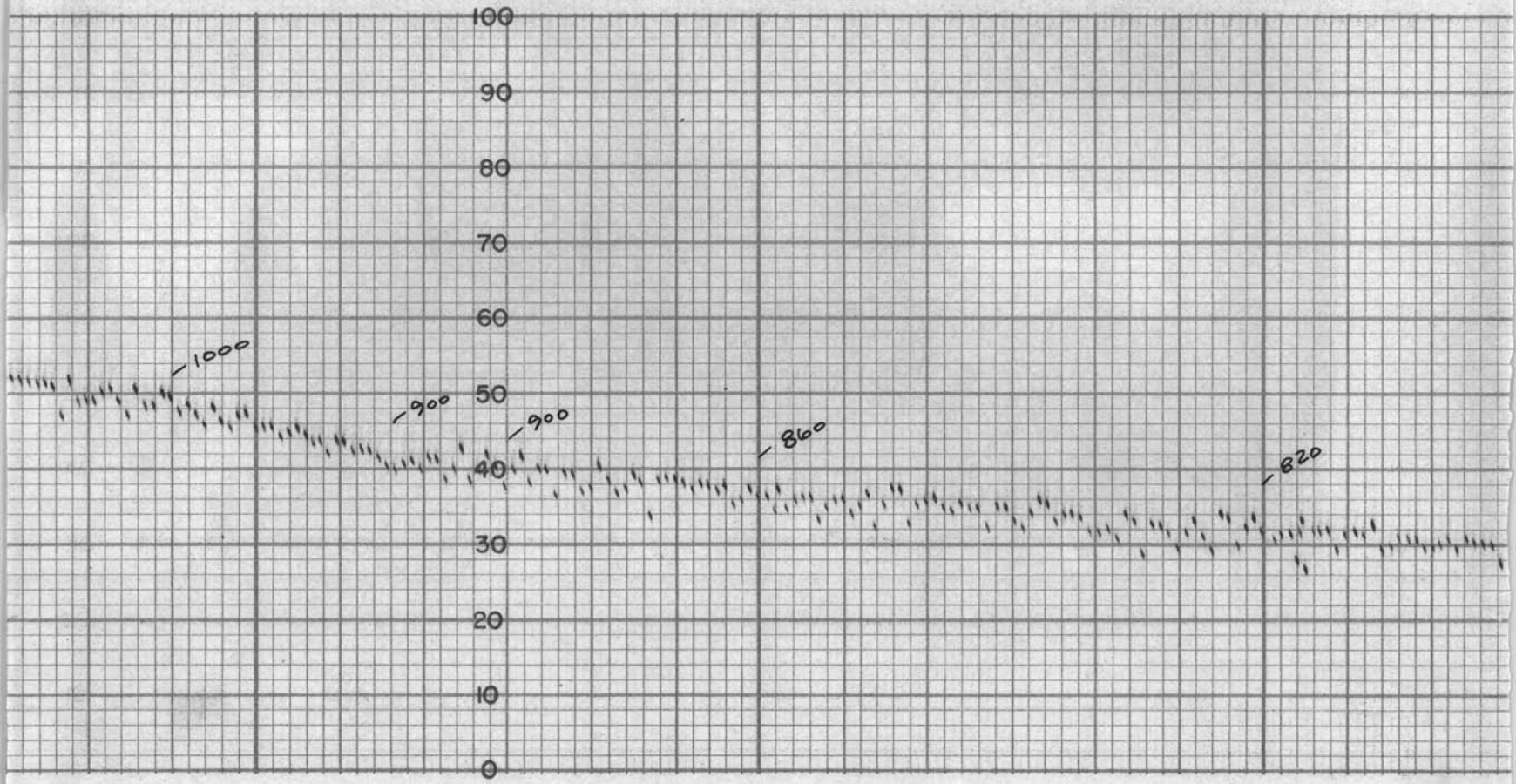

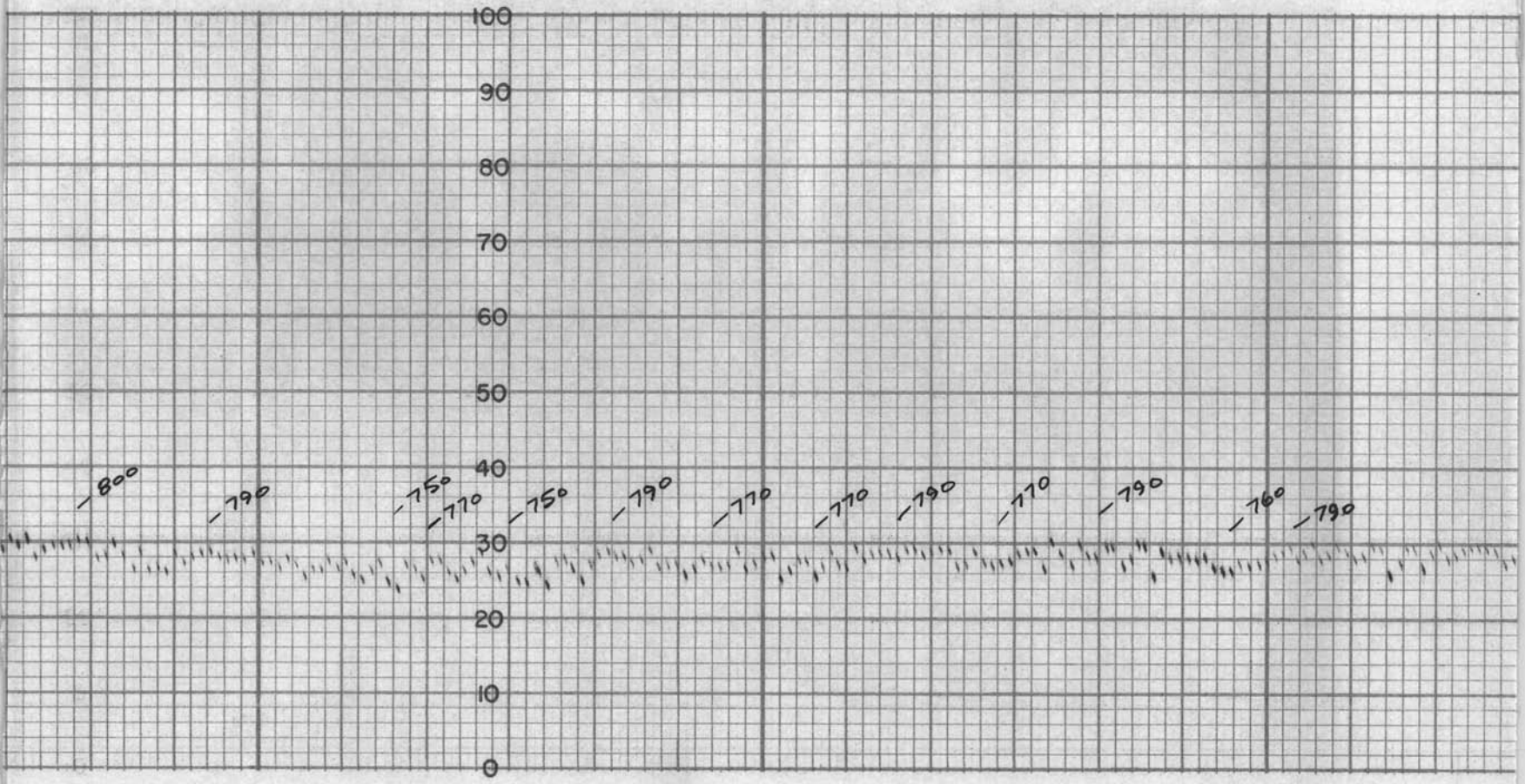
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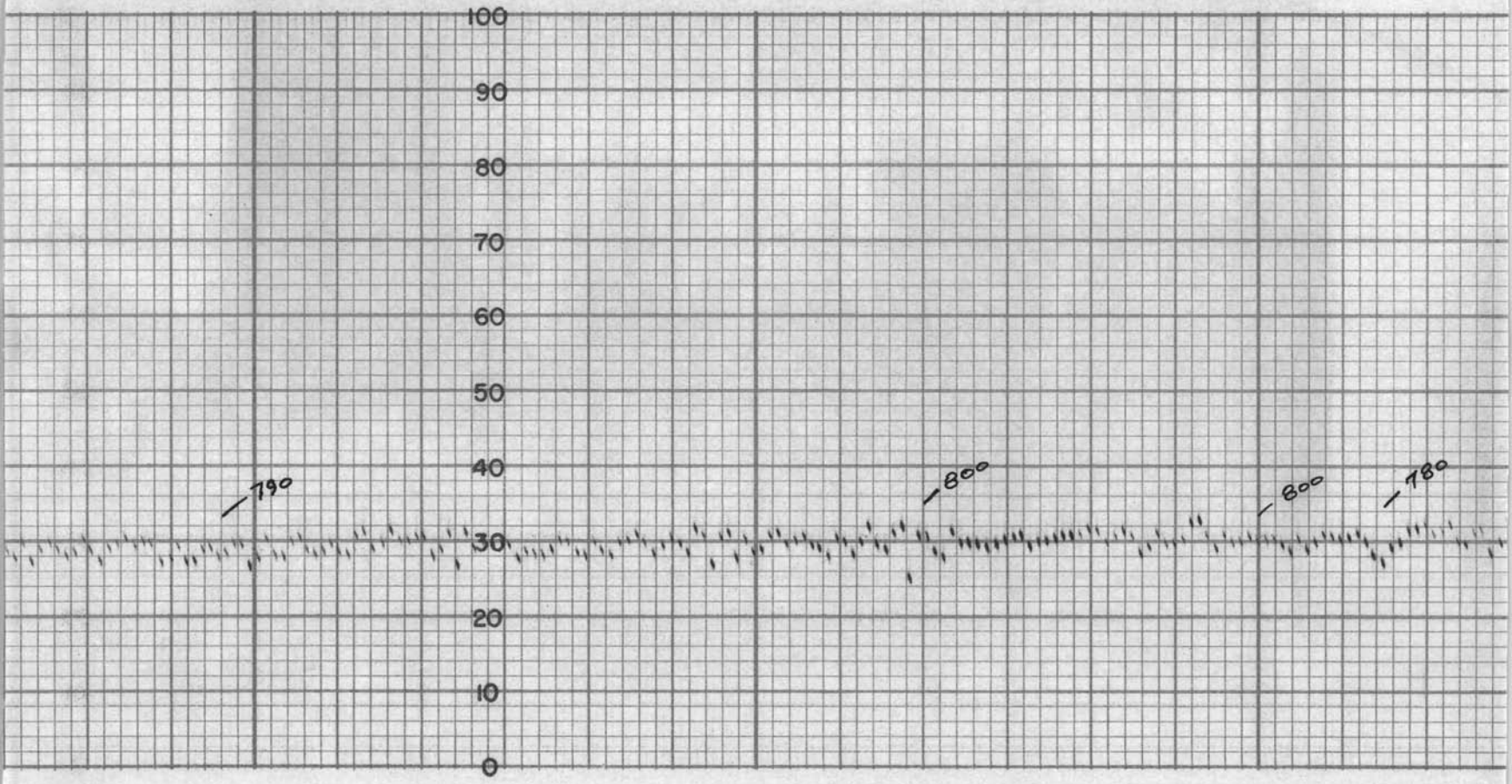
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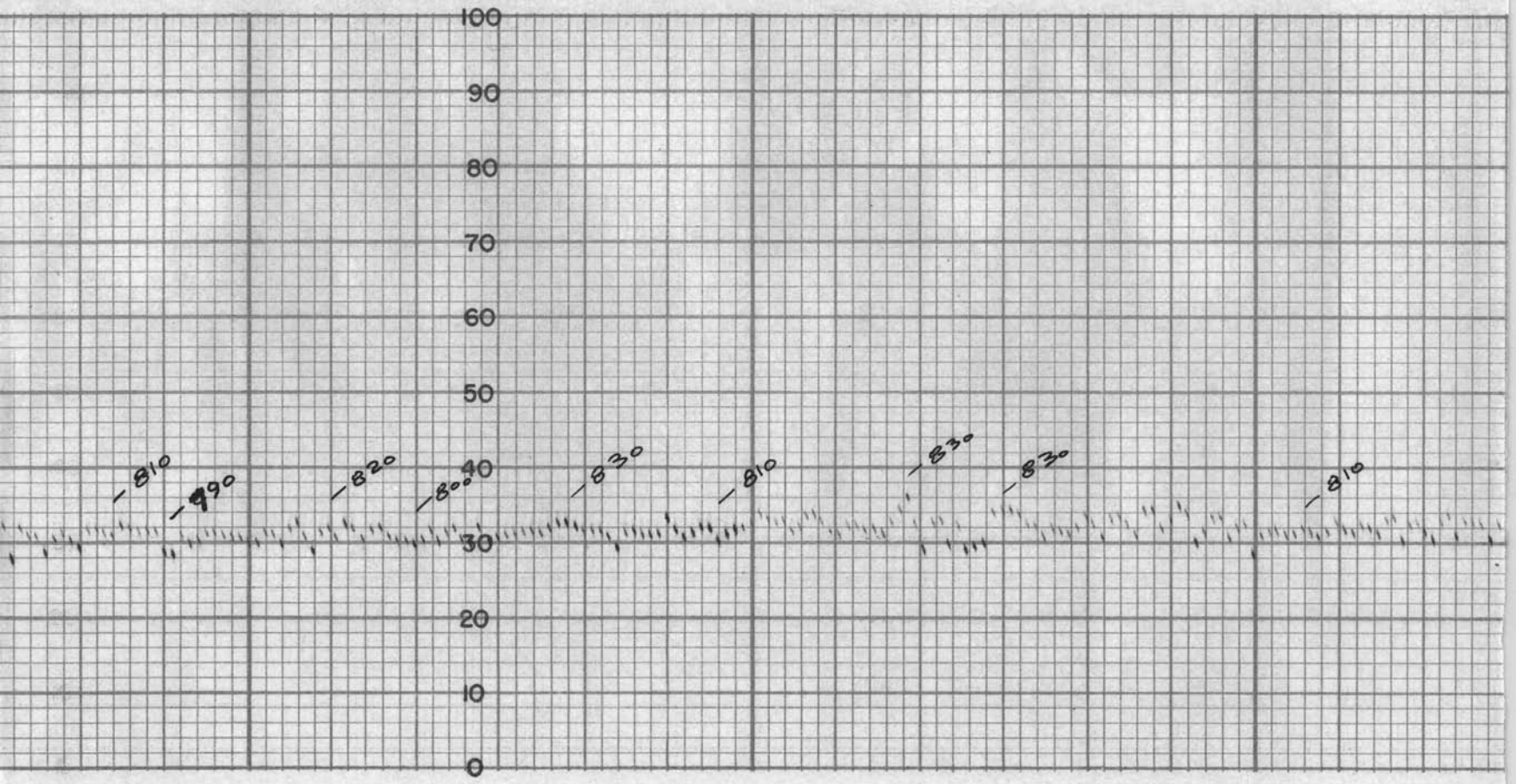

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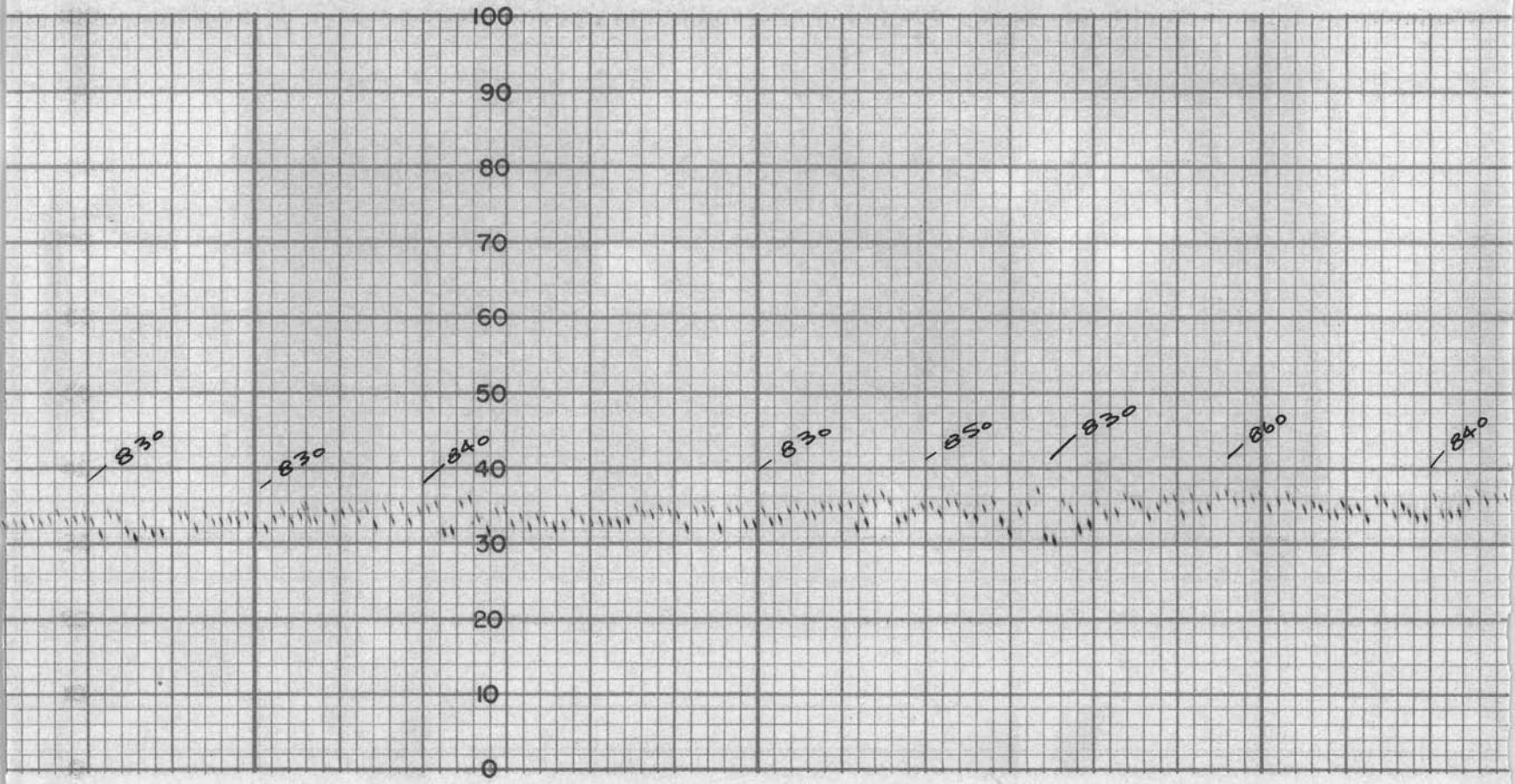

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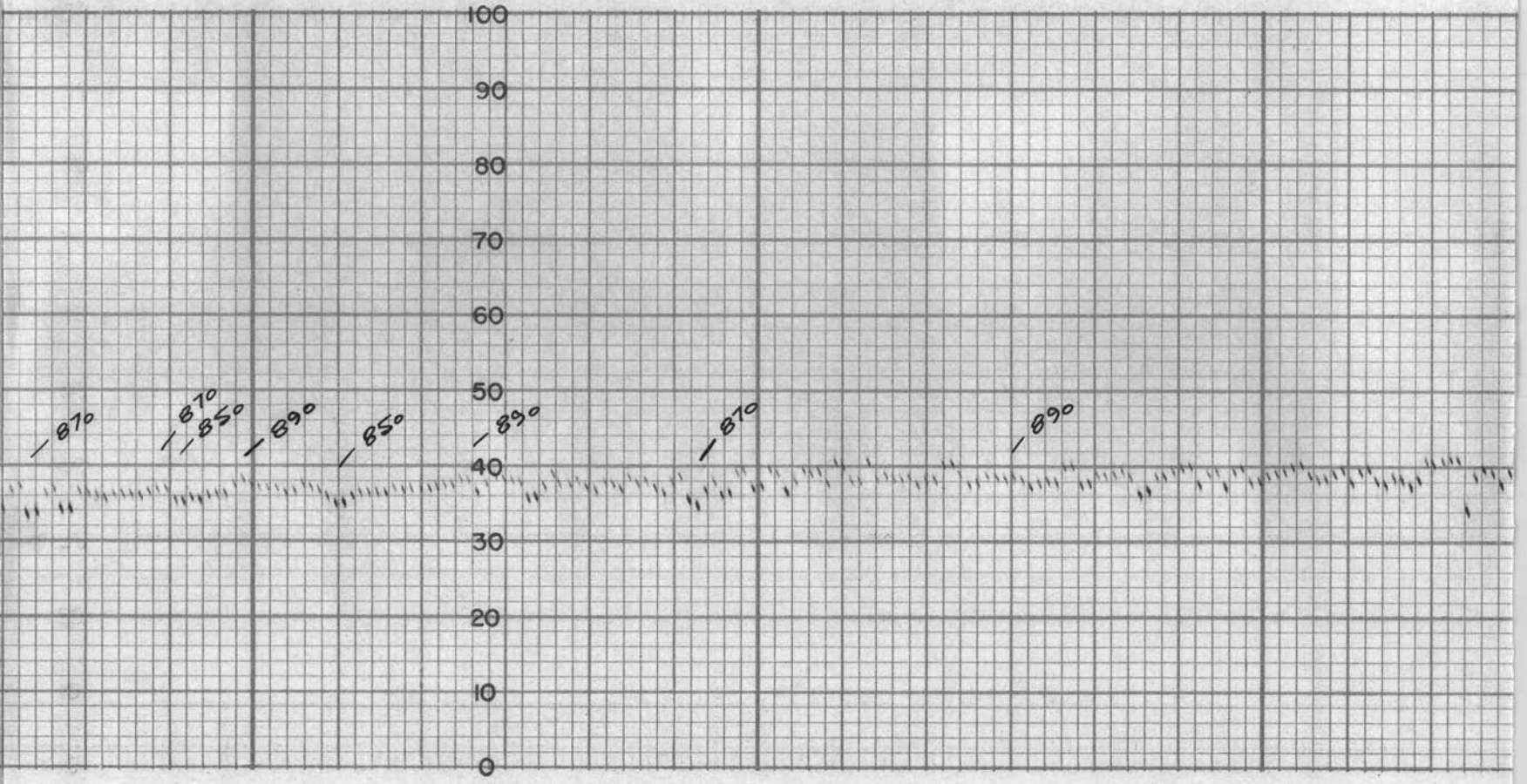

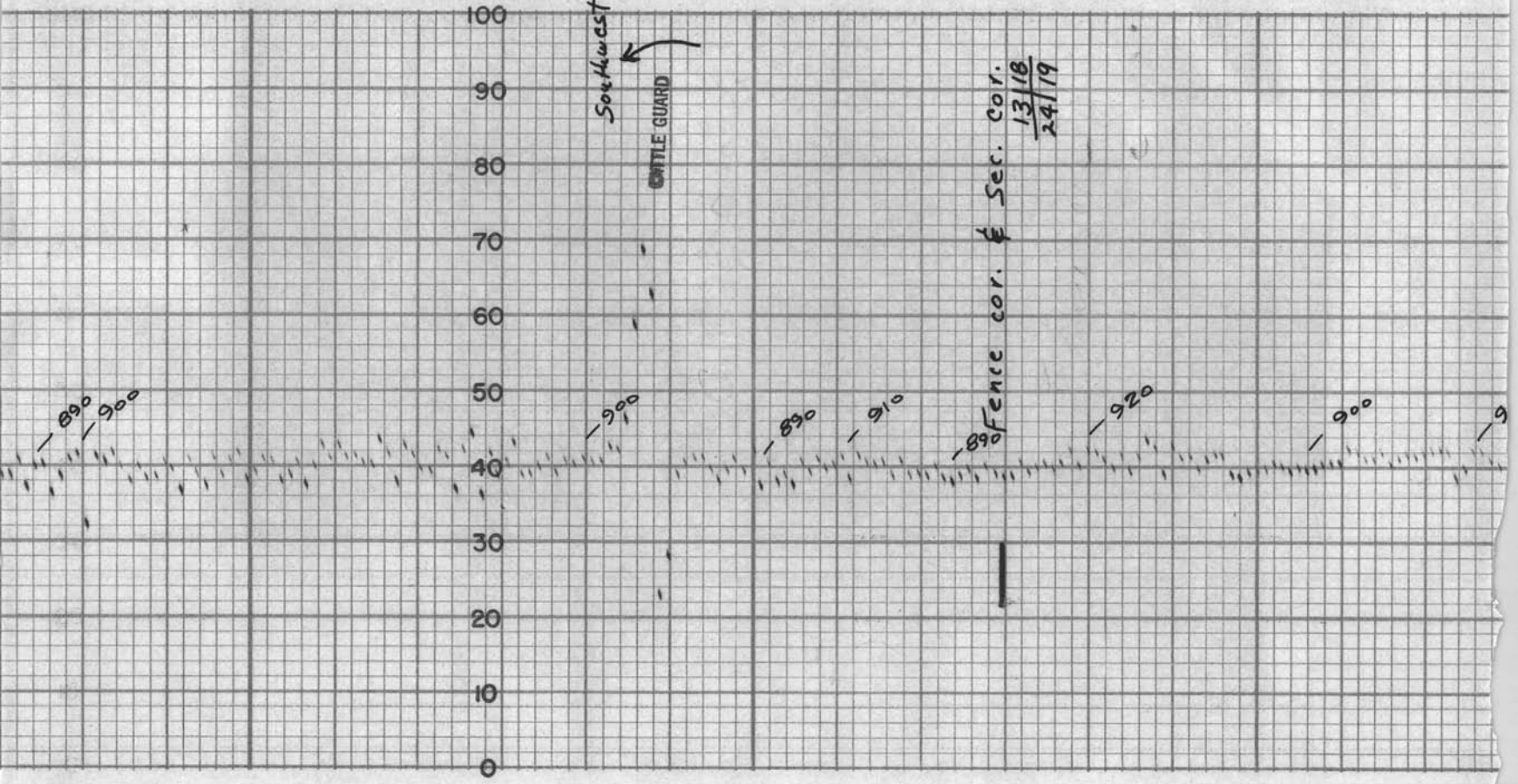
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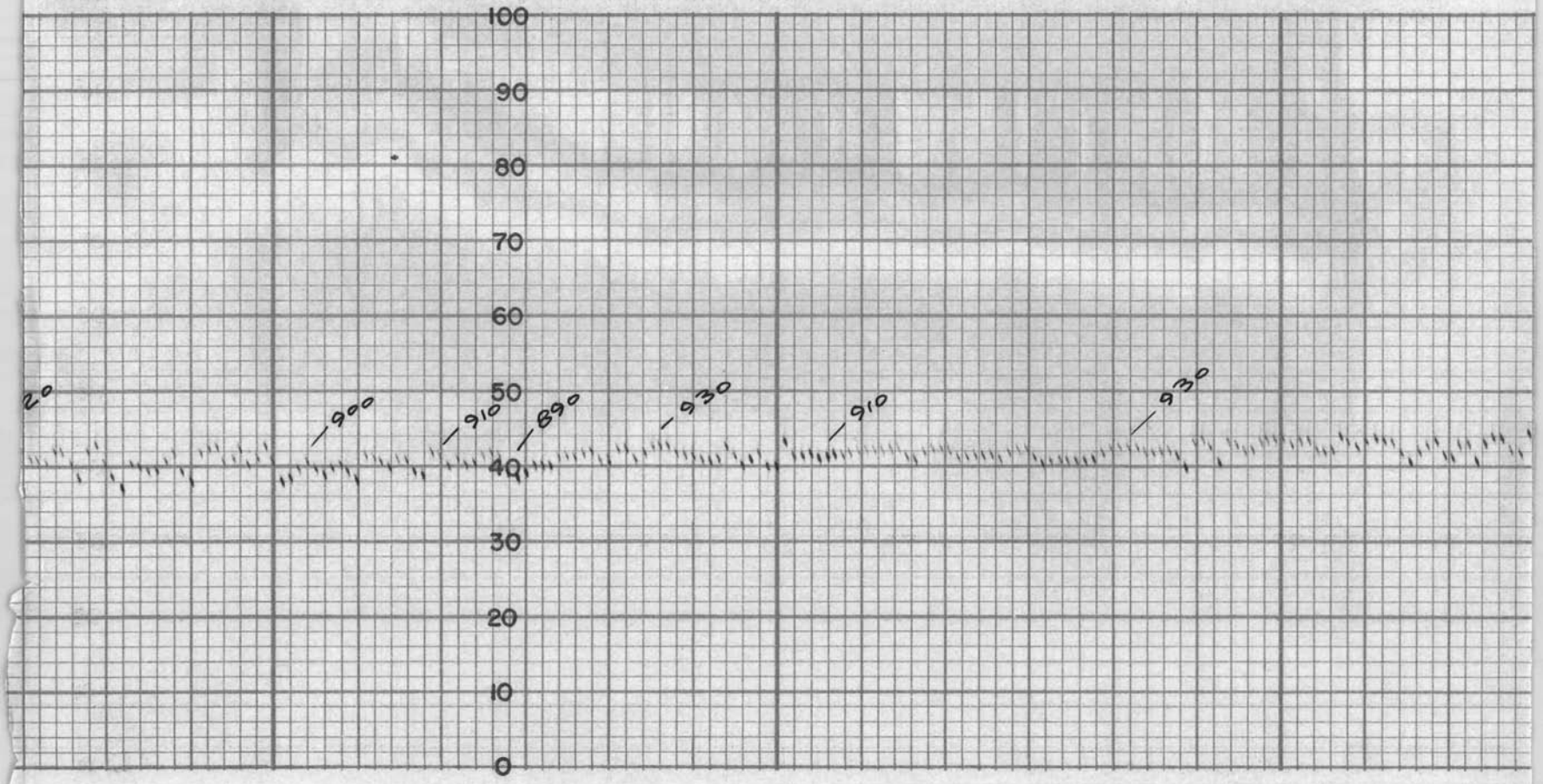

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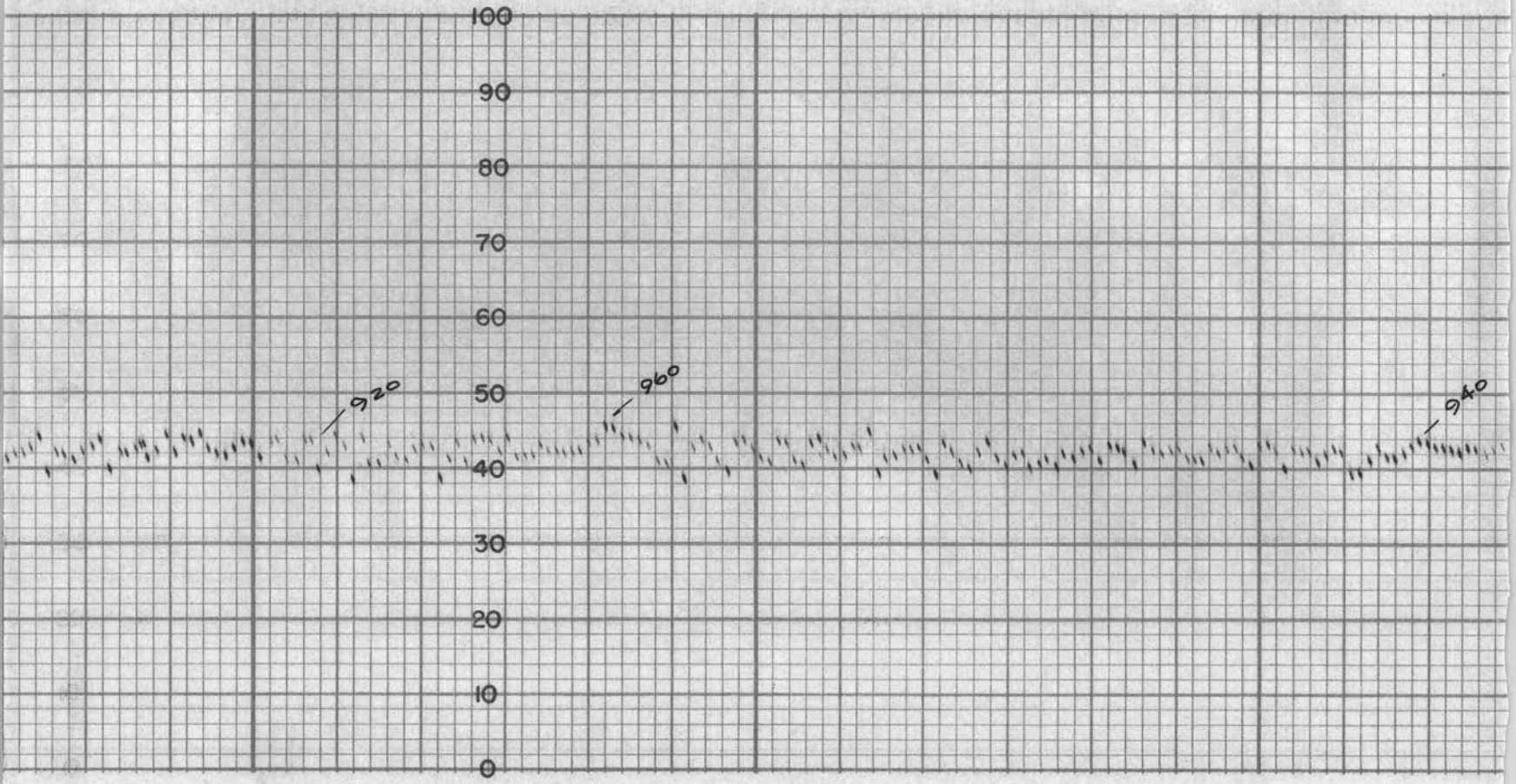

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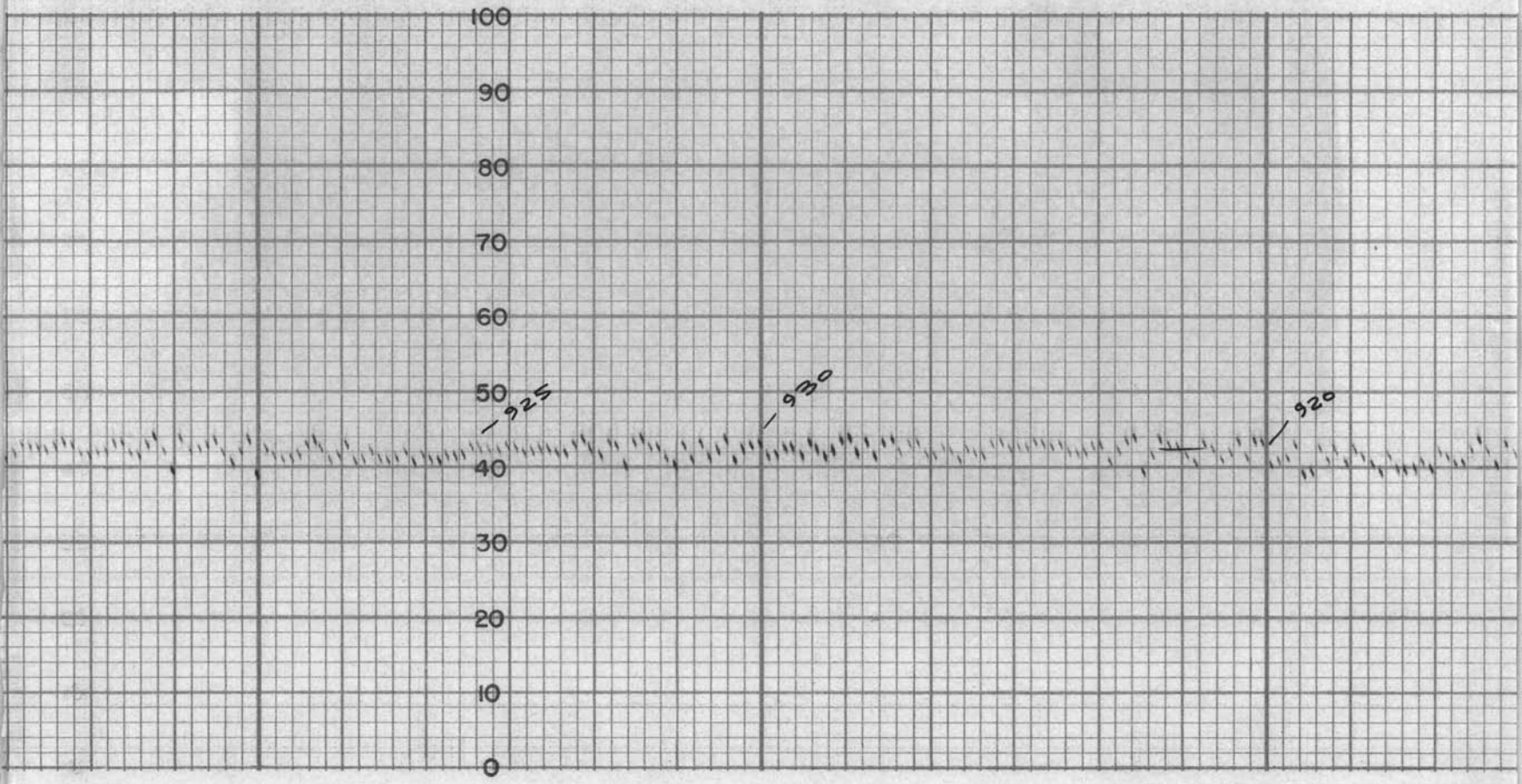

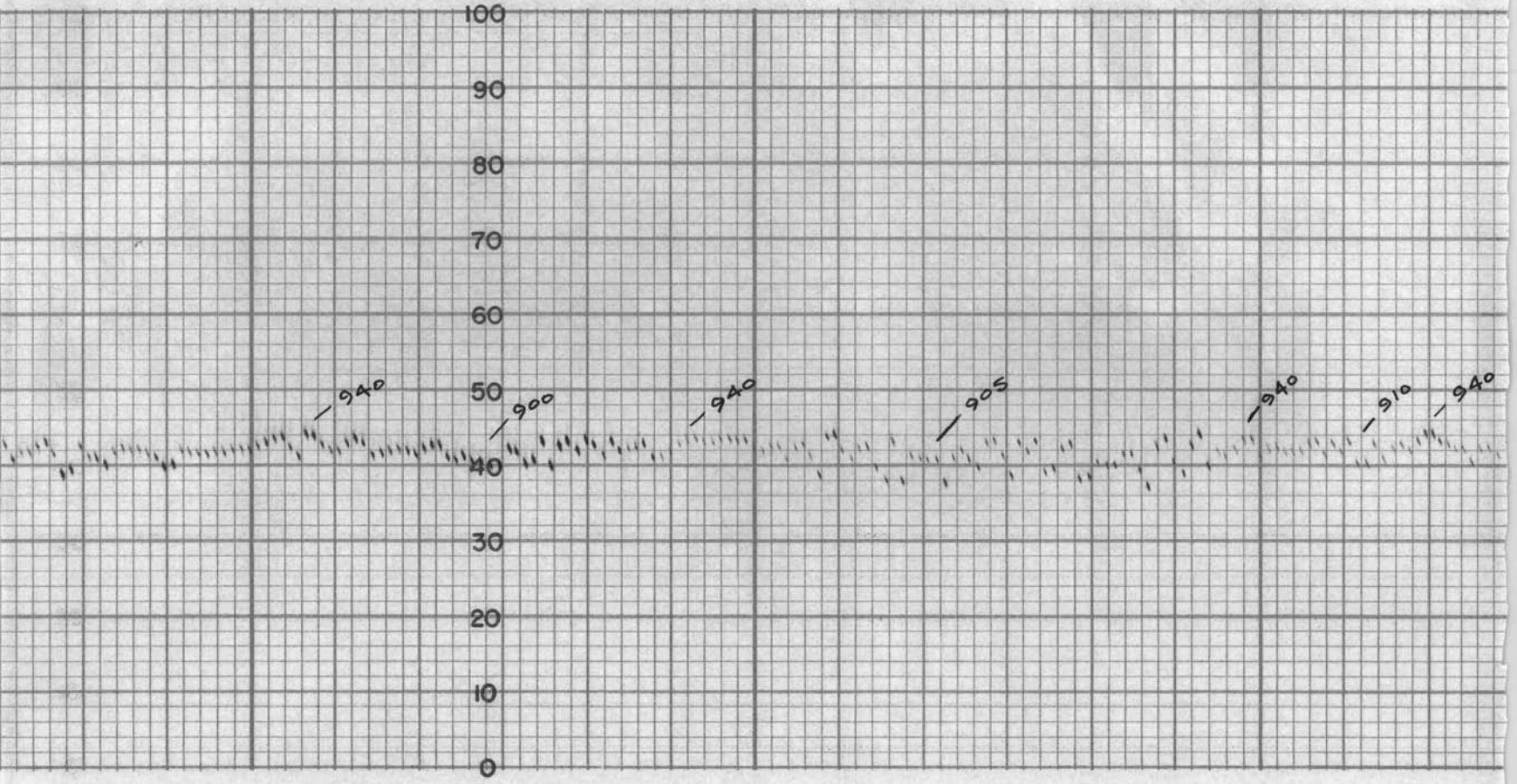
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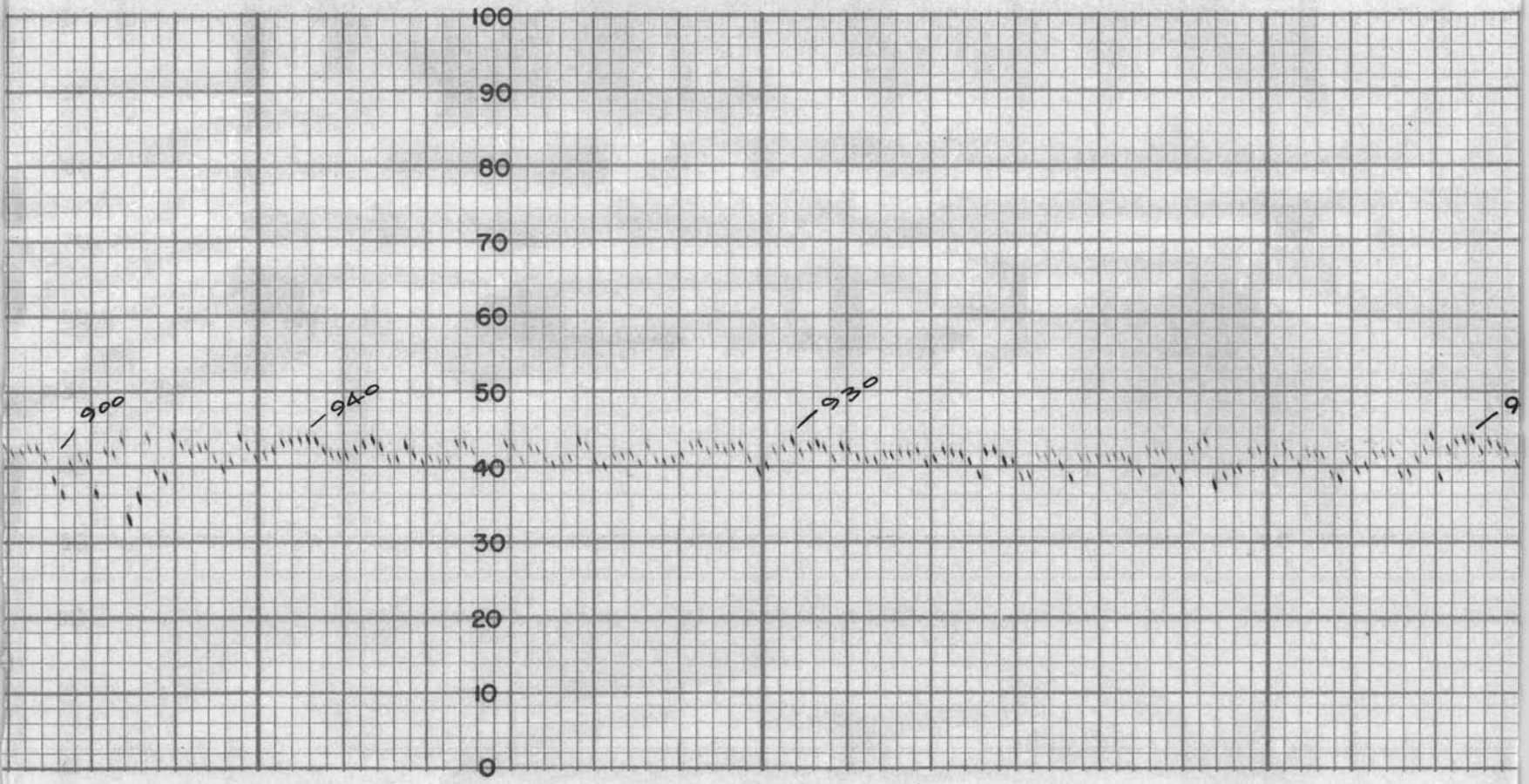
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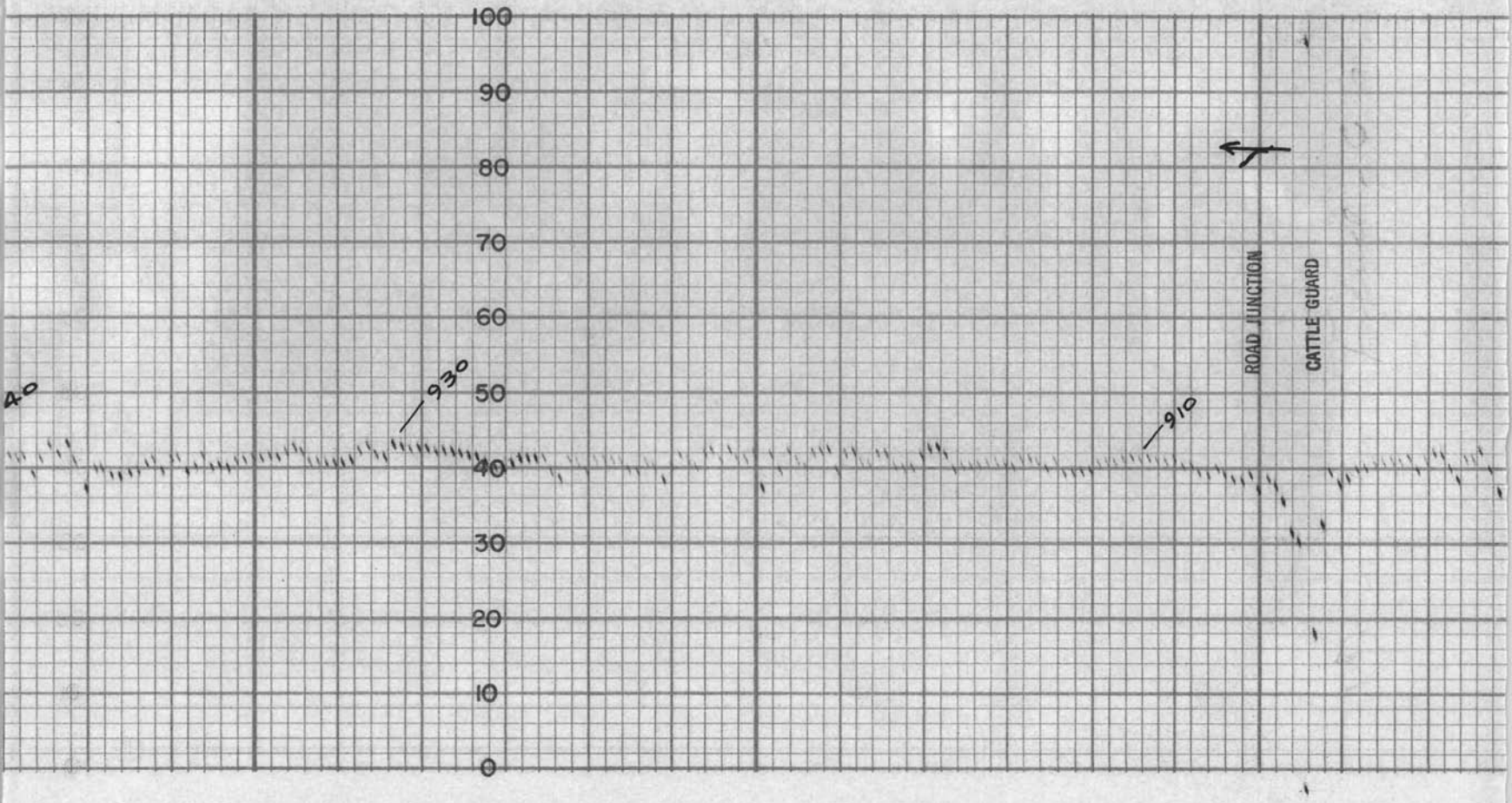

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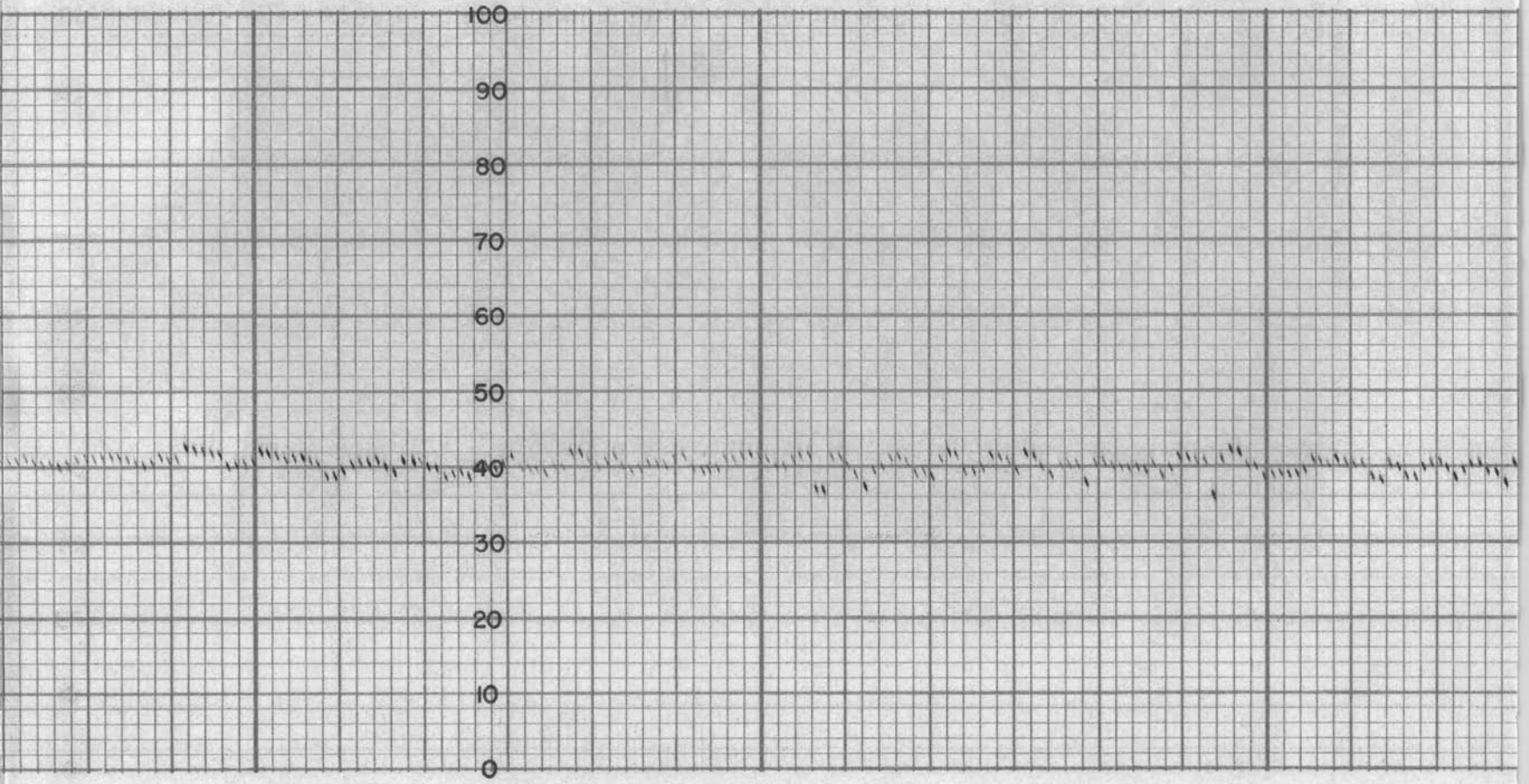

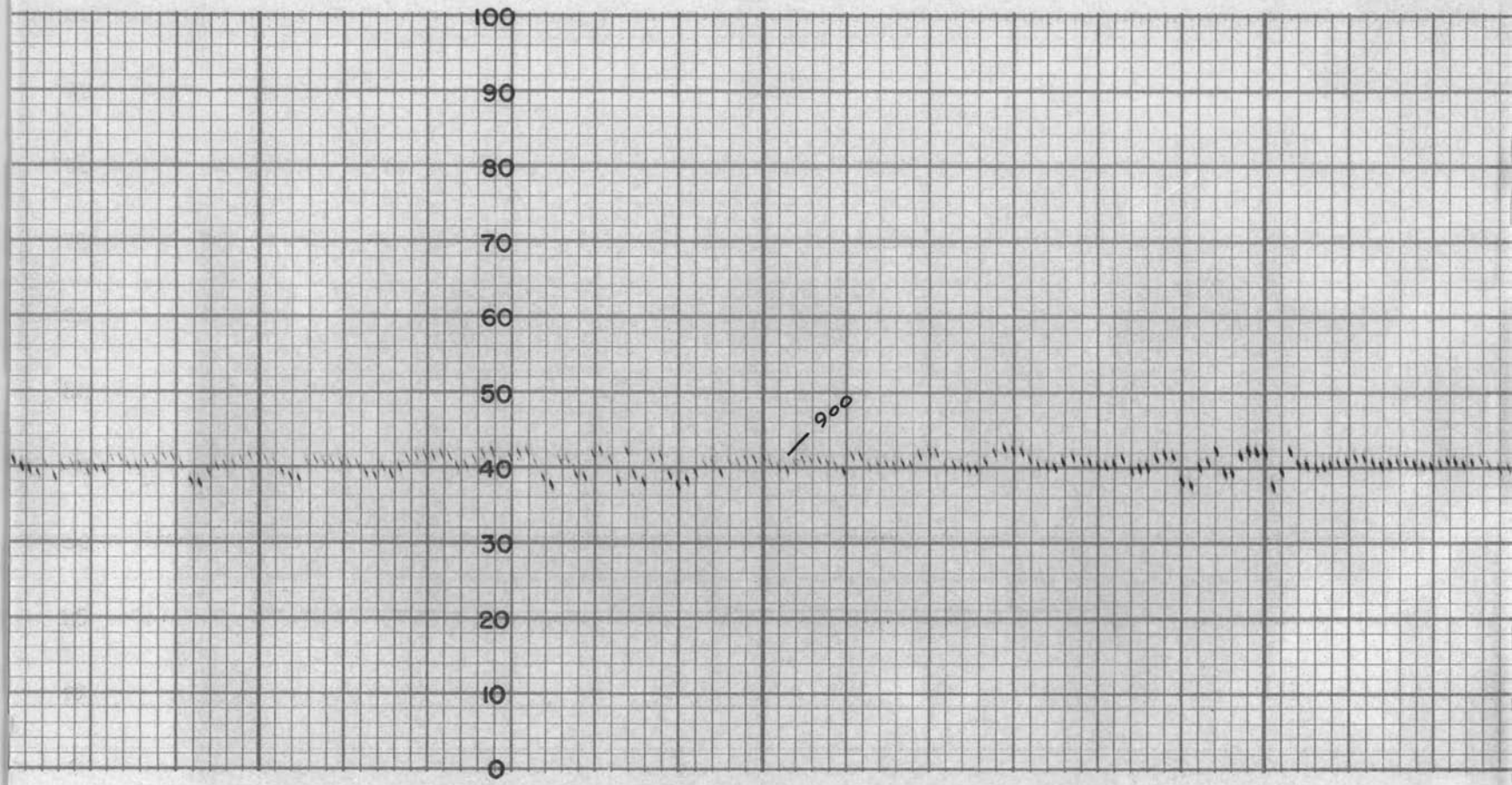
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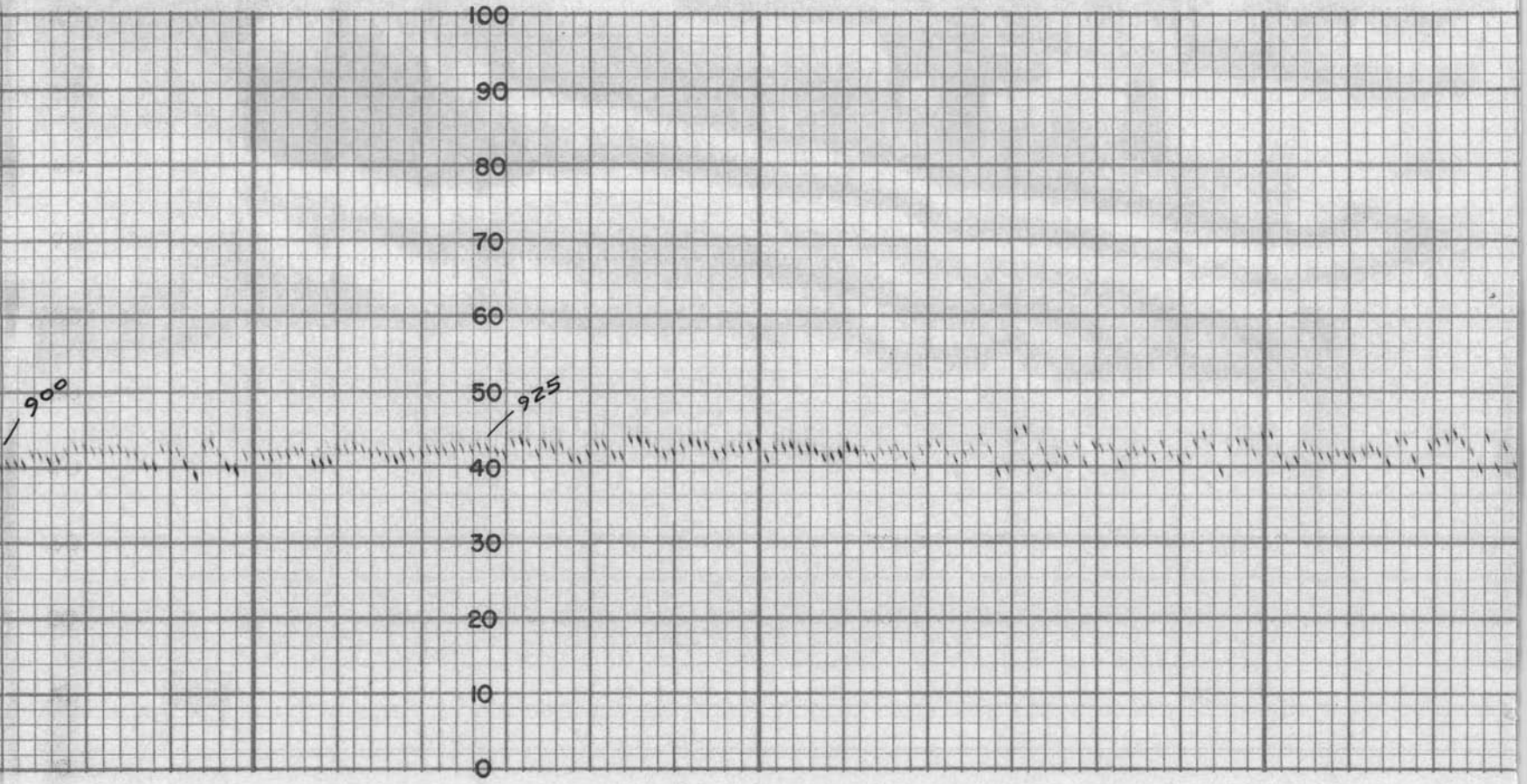

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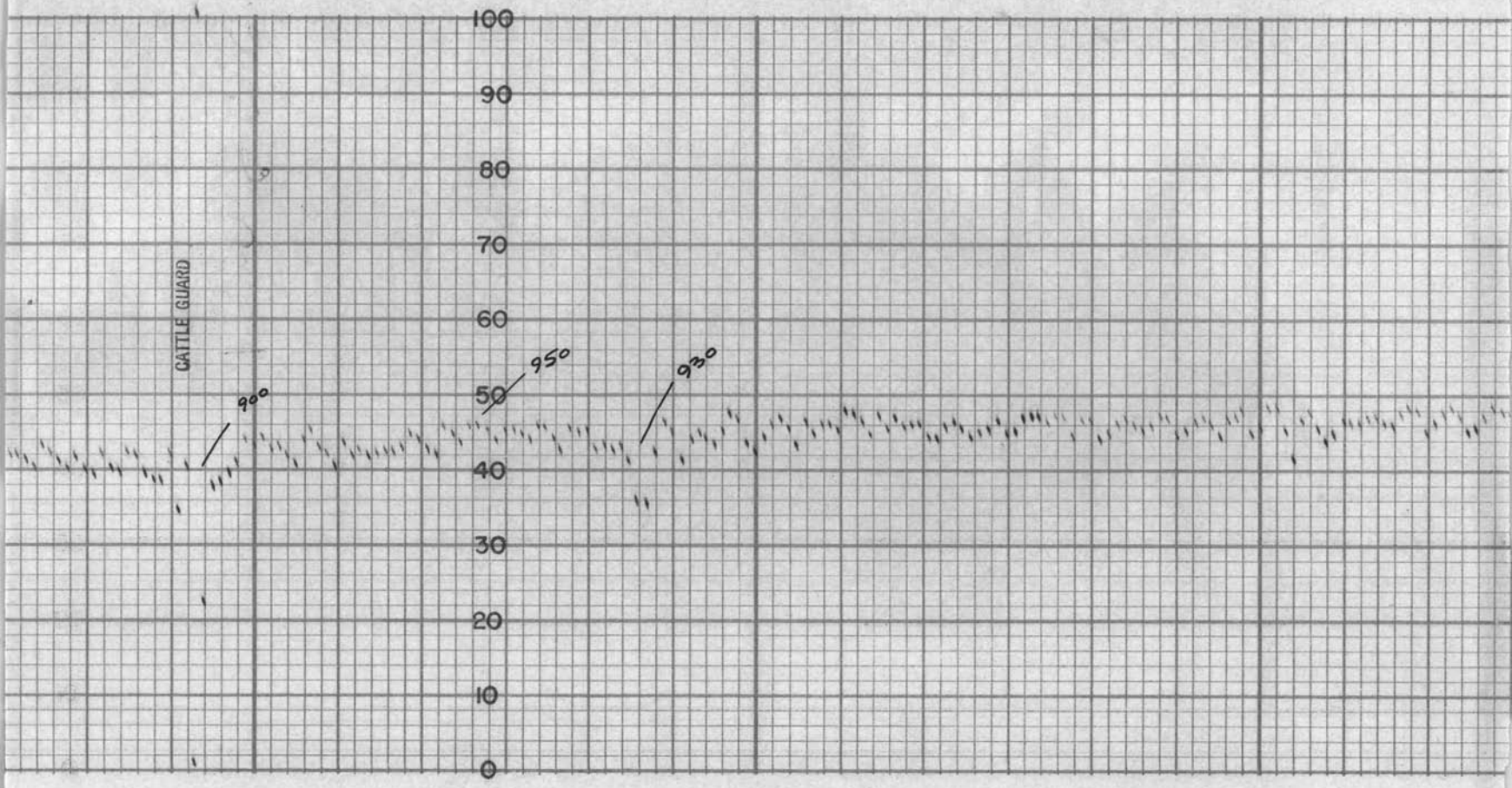
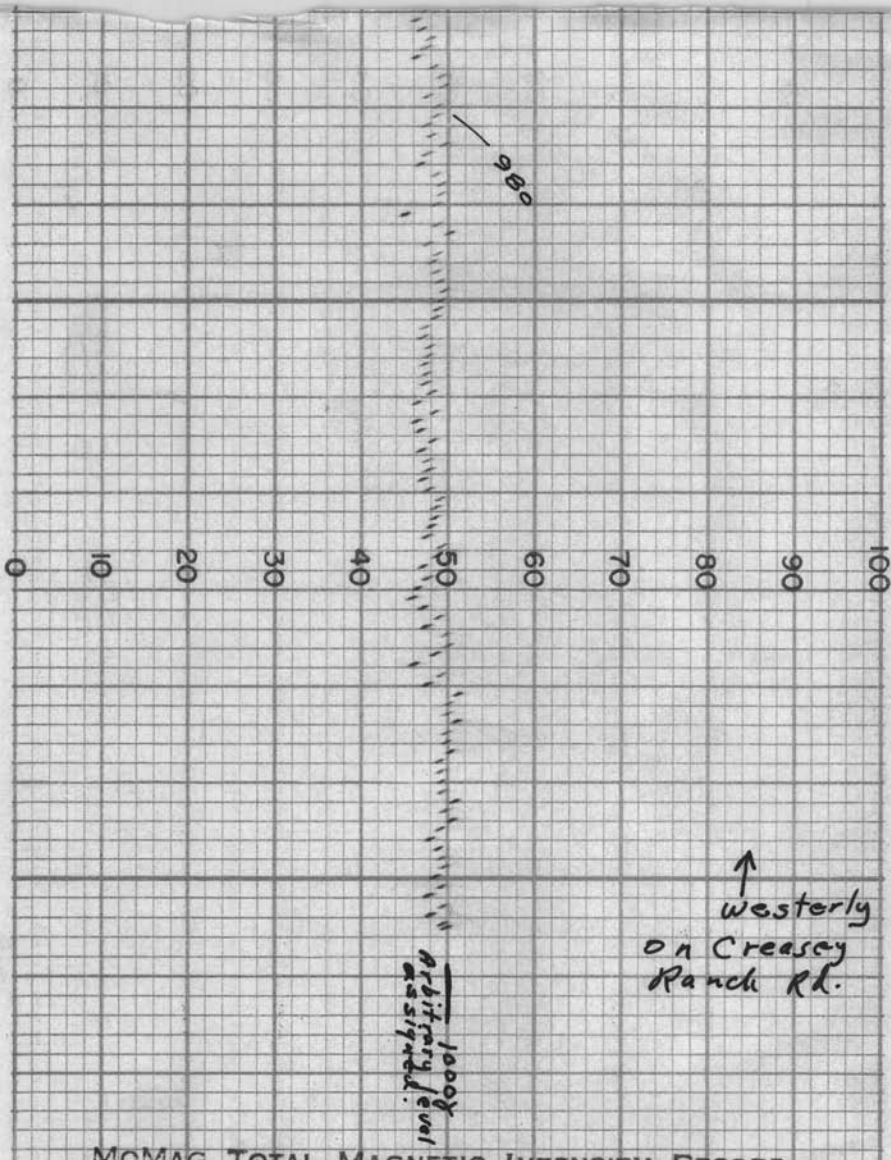




McMAG TOTAL MAGNETIC INTENSITY RECORD

FOR: CYPRUS MINES CORP.

RECORD NO. 1 DATE 1-15-62

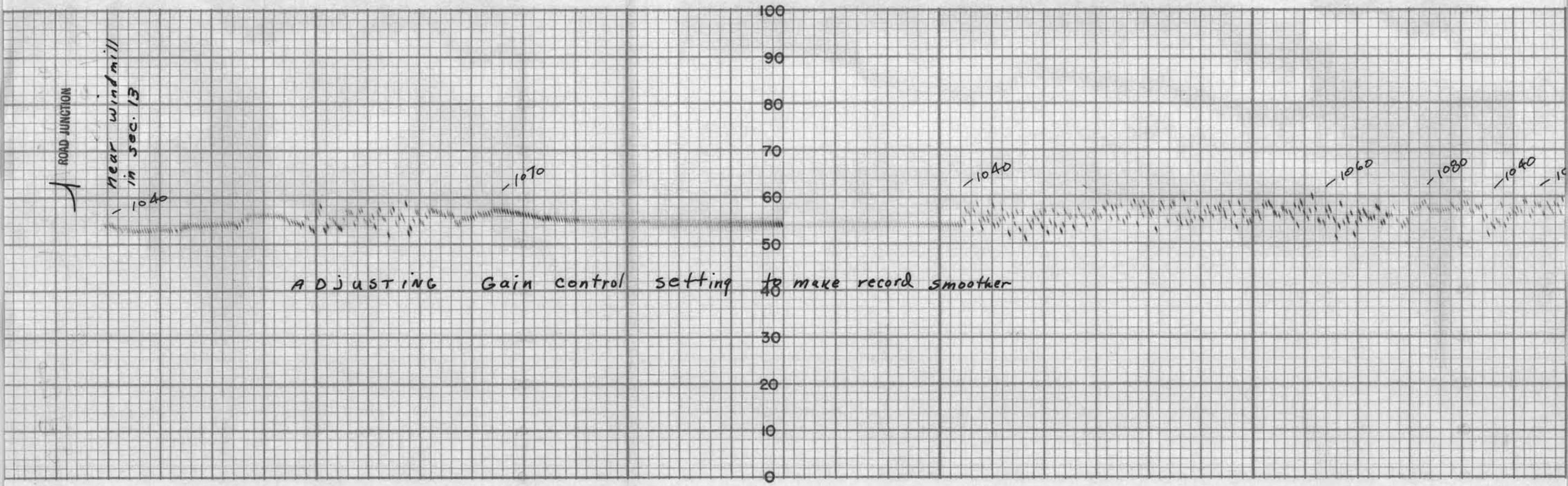
SENSITIVITY 100 (→ ± ←) GAMMAS / ½ In S.D.

HORIZONTAL SCALE 200 FT./In. = ± ↑

LOCATION PAT HILLS, COCHISE CO., ARIZ.

Starts at Entrance to Creasey Ranch Road from Wonderland of Rocks Road in Sec. 15 T16S R28E and goes westerly through PAT HILLS to the windmill in Sec. 5, T17S, R27E.

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



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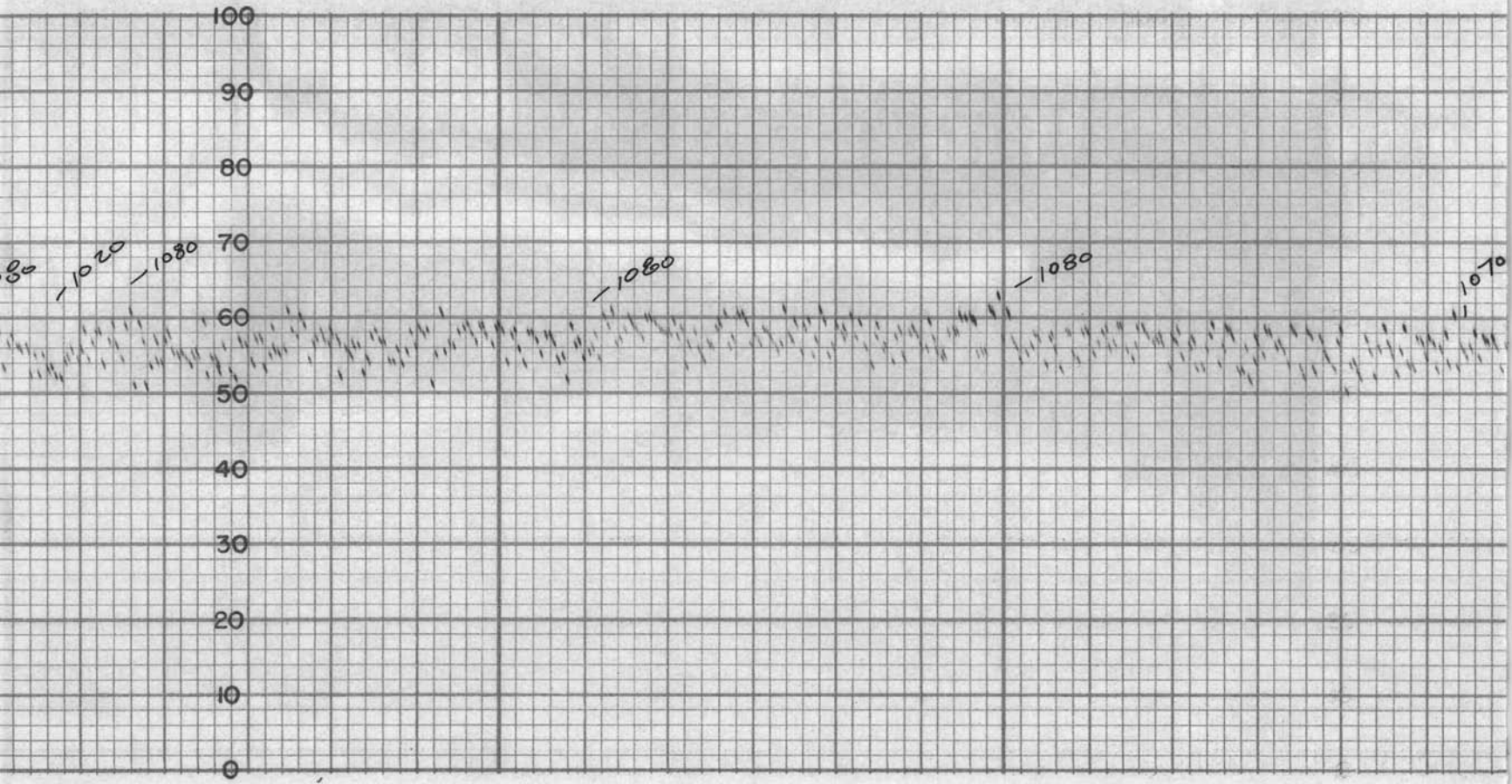

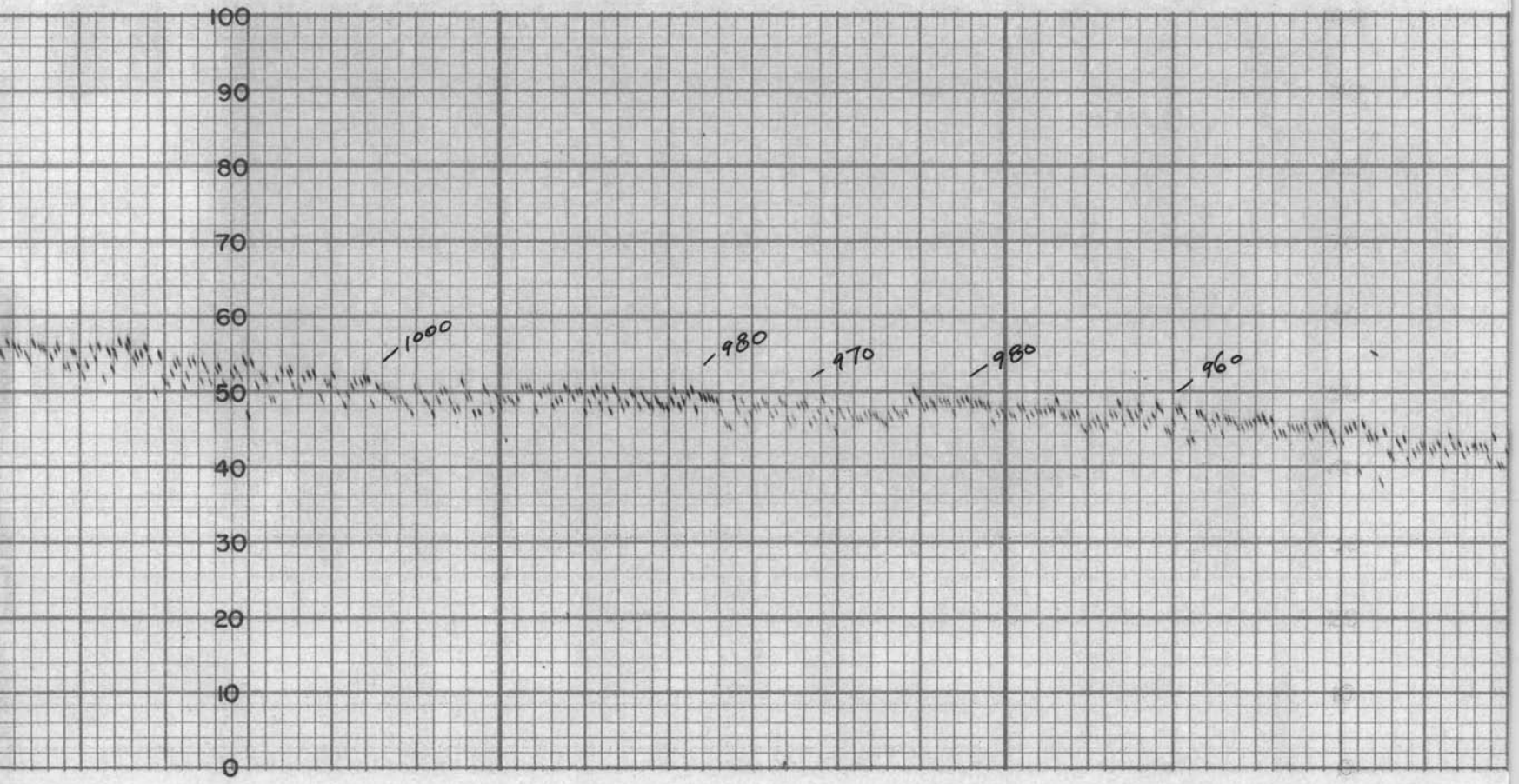
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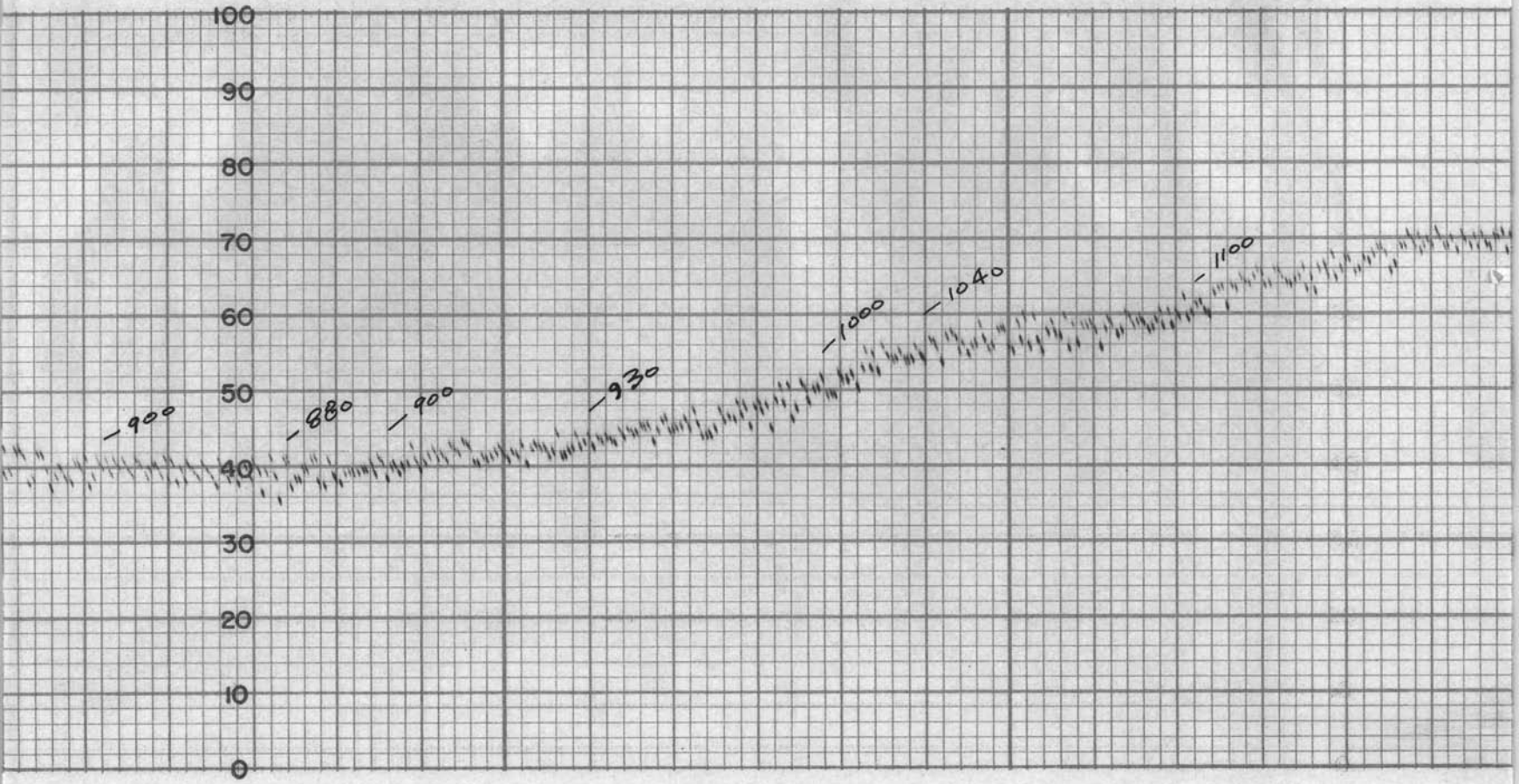
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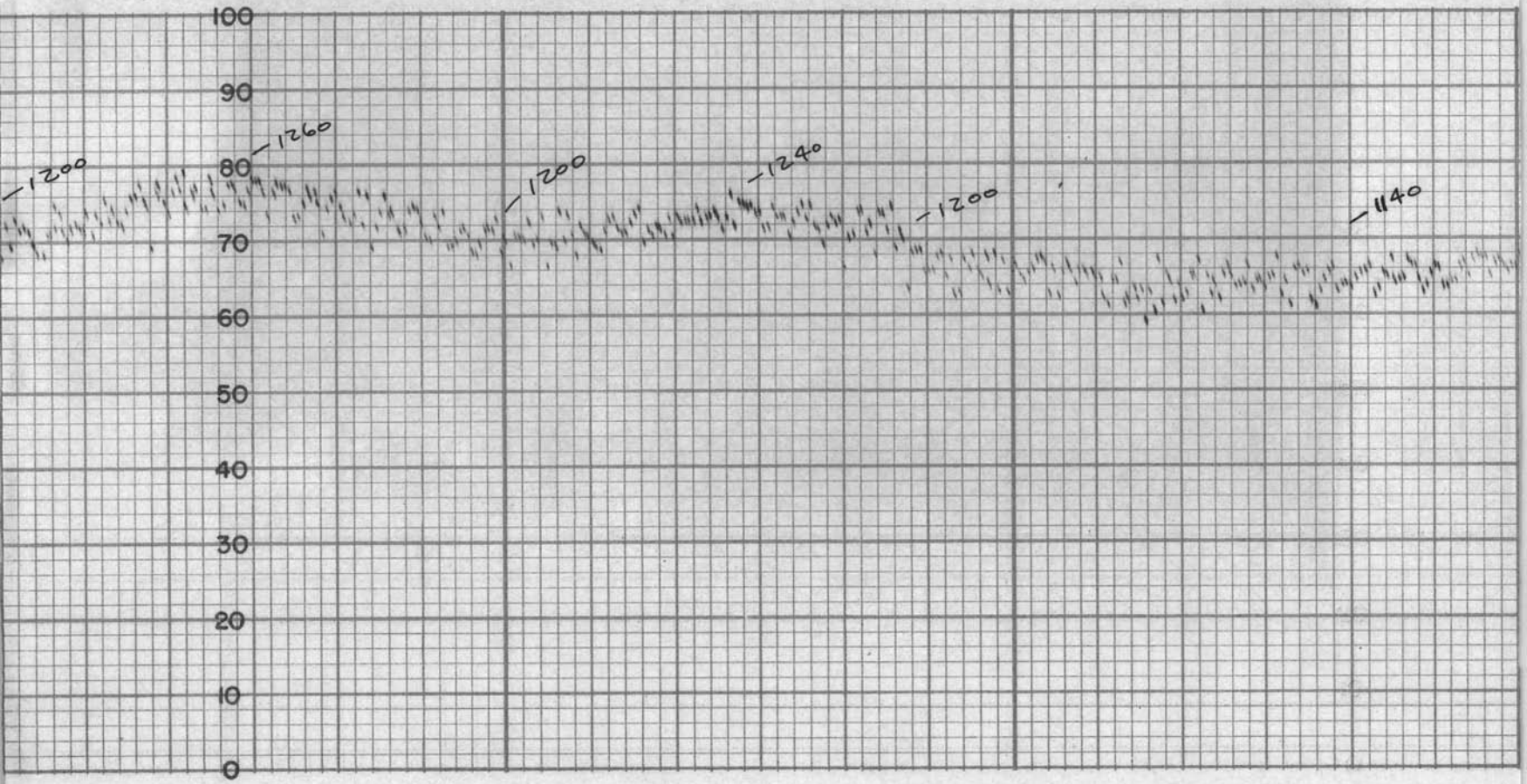
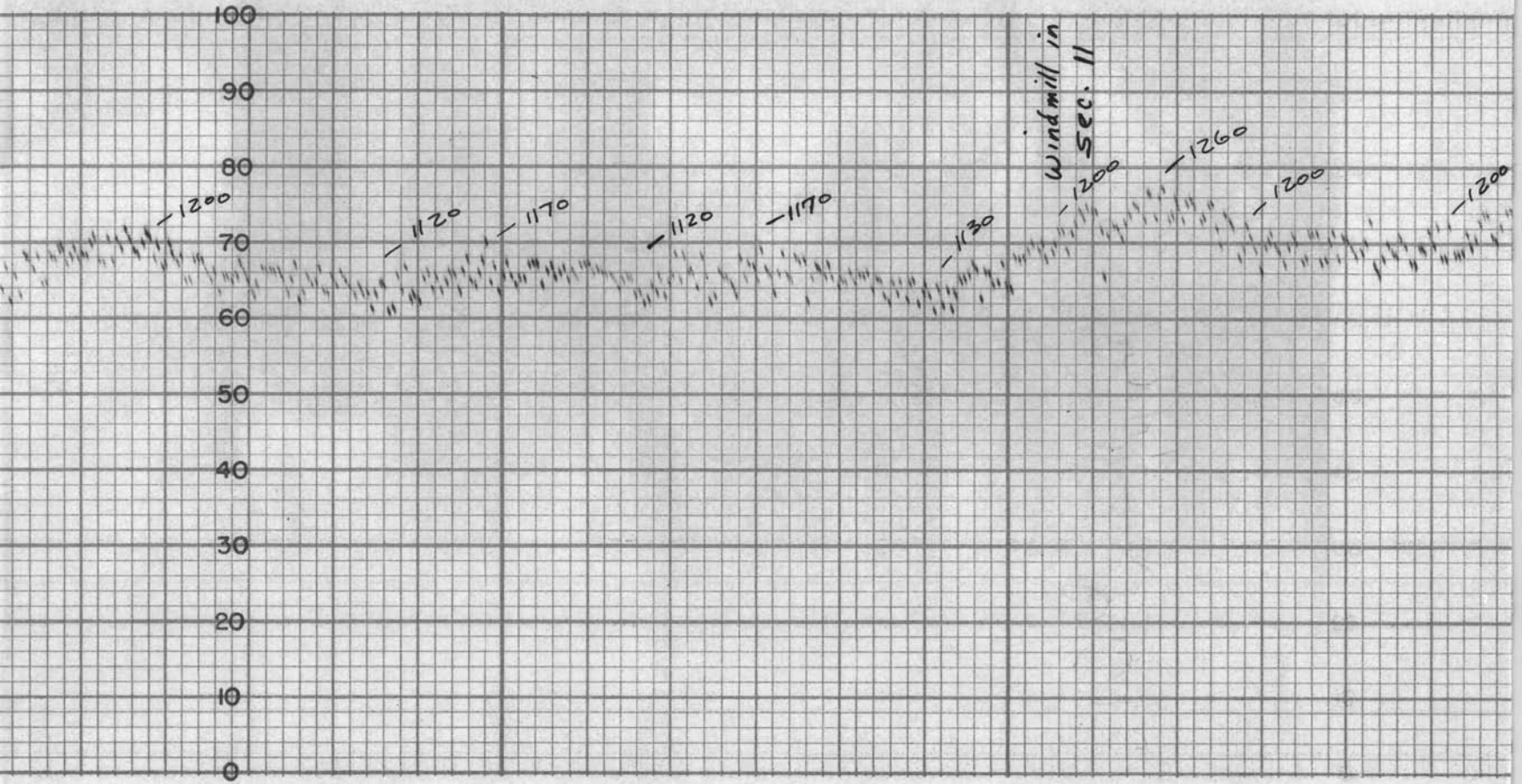
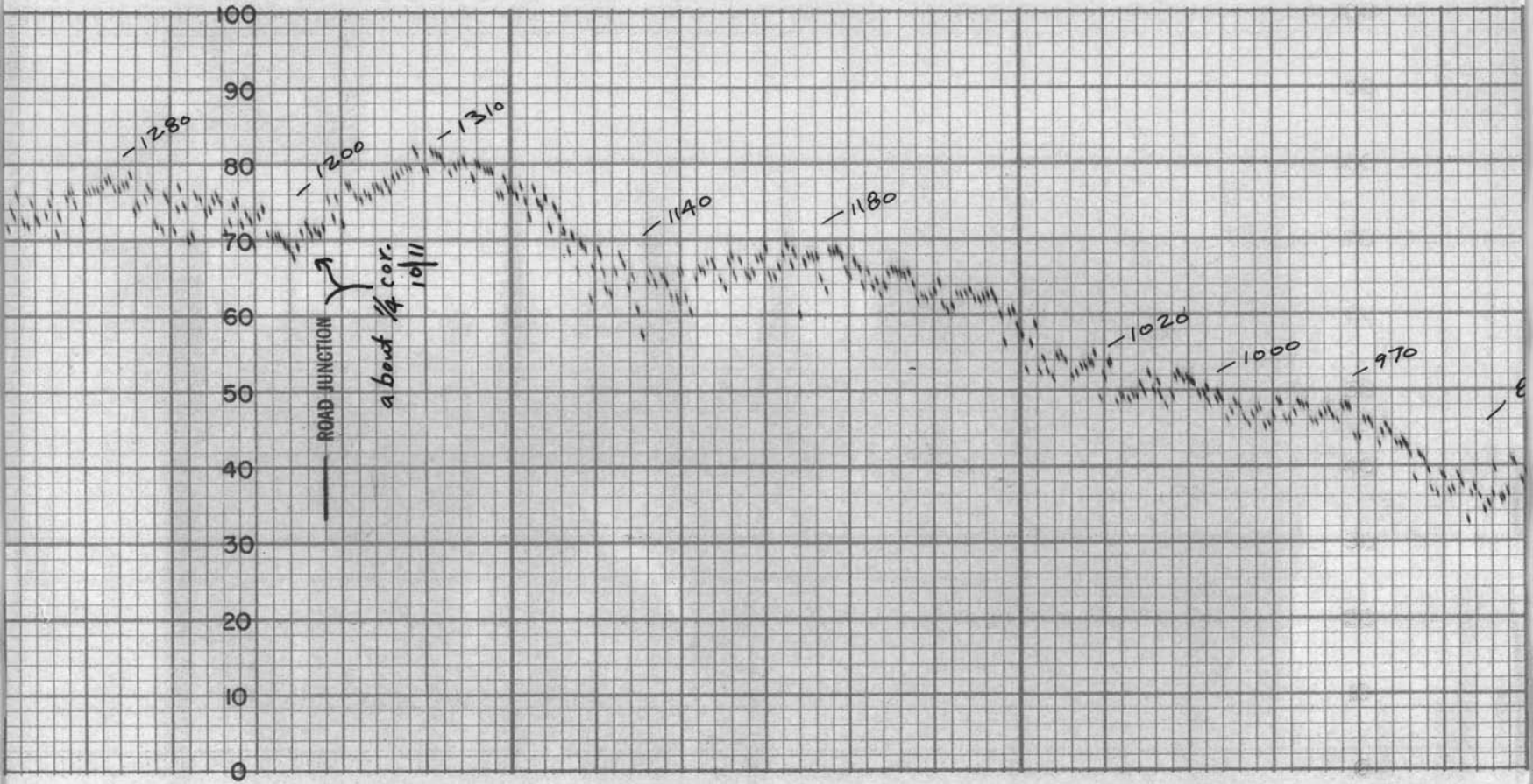
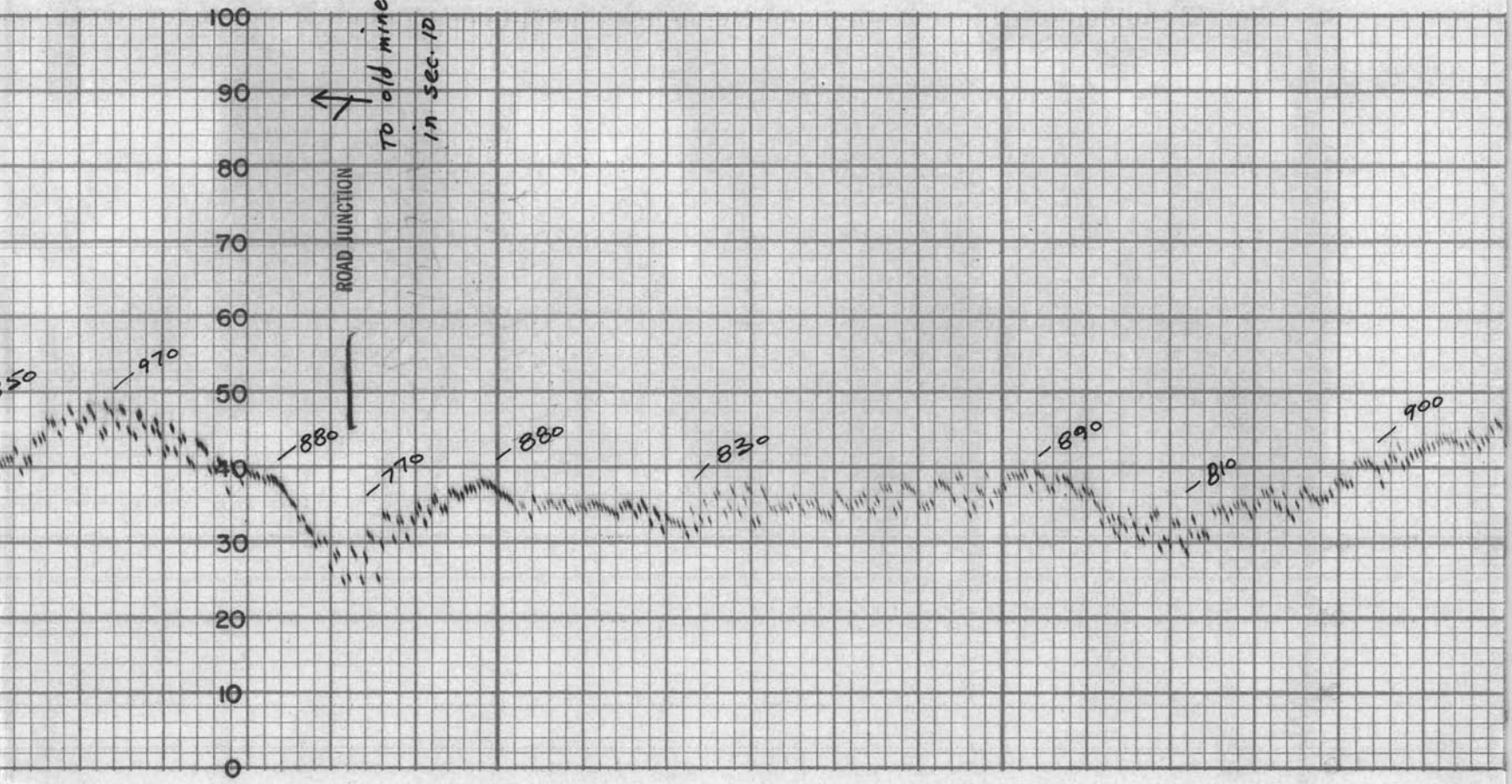
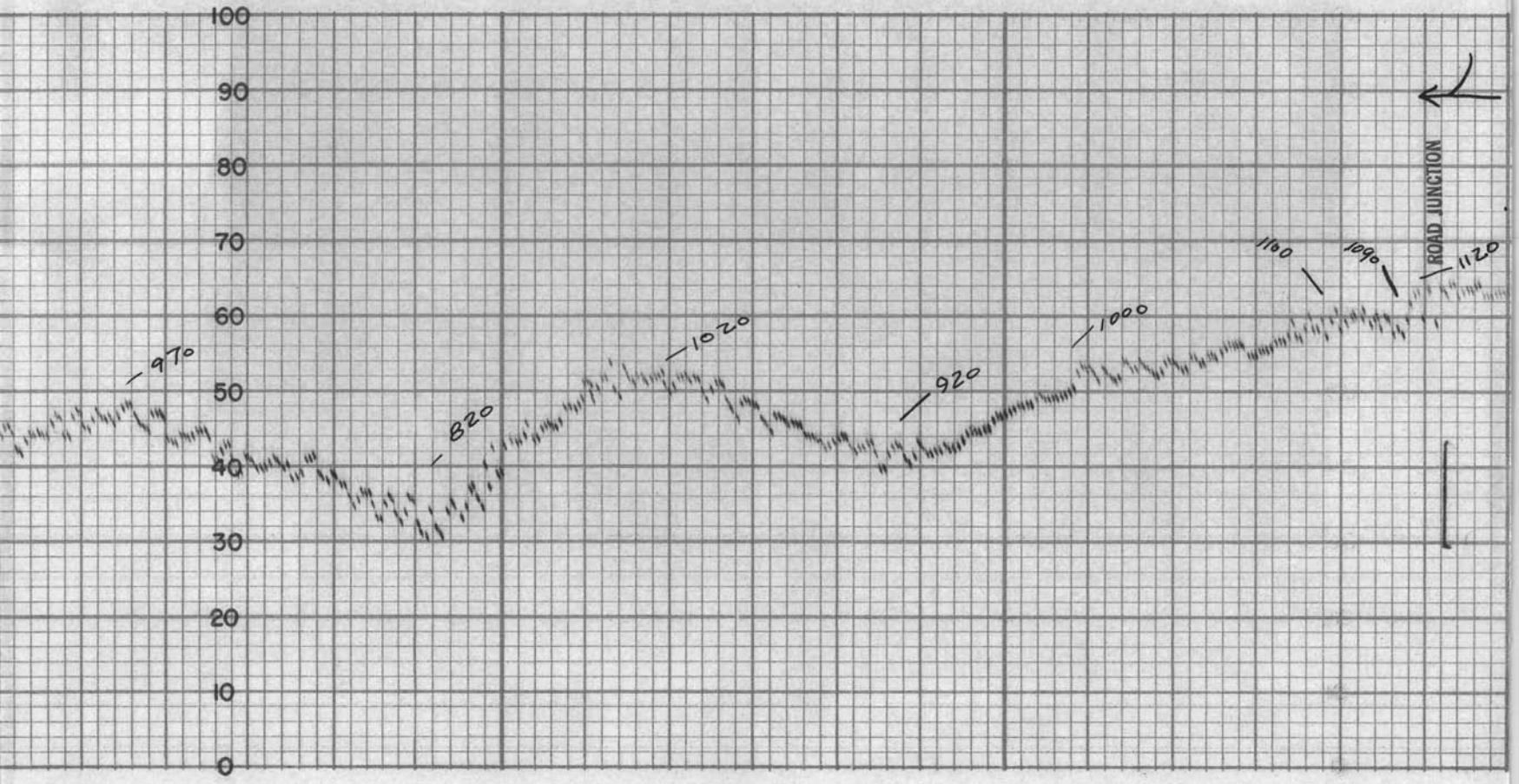

100
90
80
70
60
50
40
30
20
10
0
1200
1260
1200
1240
1200
1140

MADE IN U. S. A. THE ESTERLINE-ANGUS CO., INC., INDIANAPOLIS, IND., U. S. A.

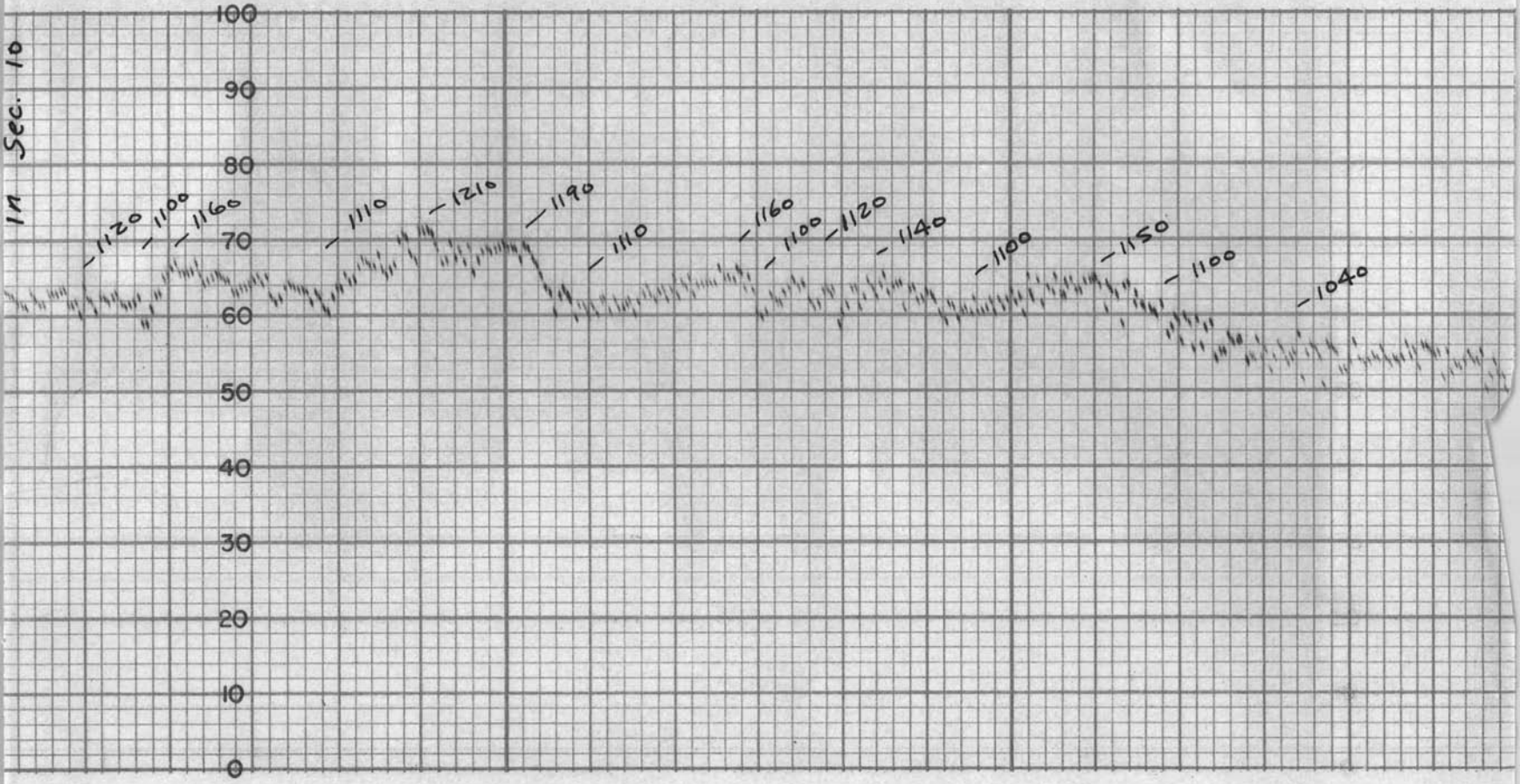


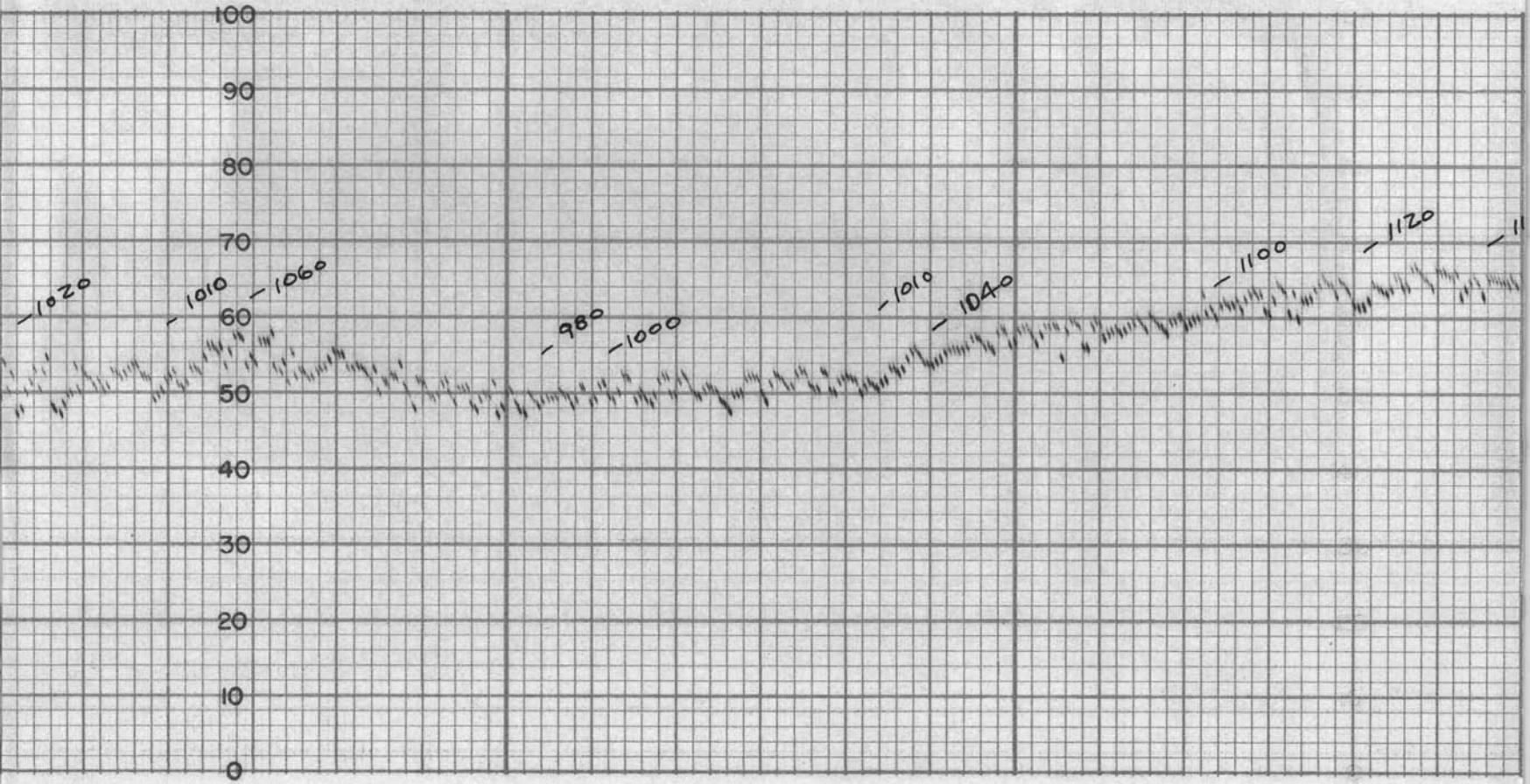

100
90
80
70
60
50
40
30
20
10
0
1280
1200
1310
1140
1180
1020
1000
970
ROAD JUNCTION
about ¼ cor.
10/11

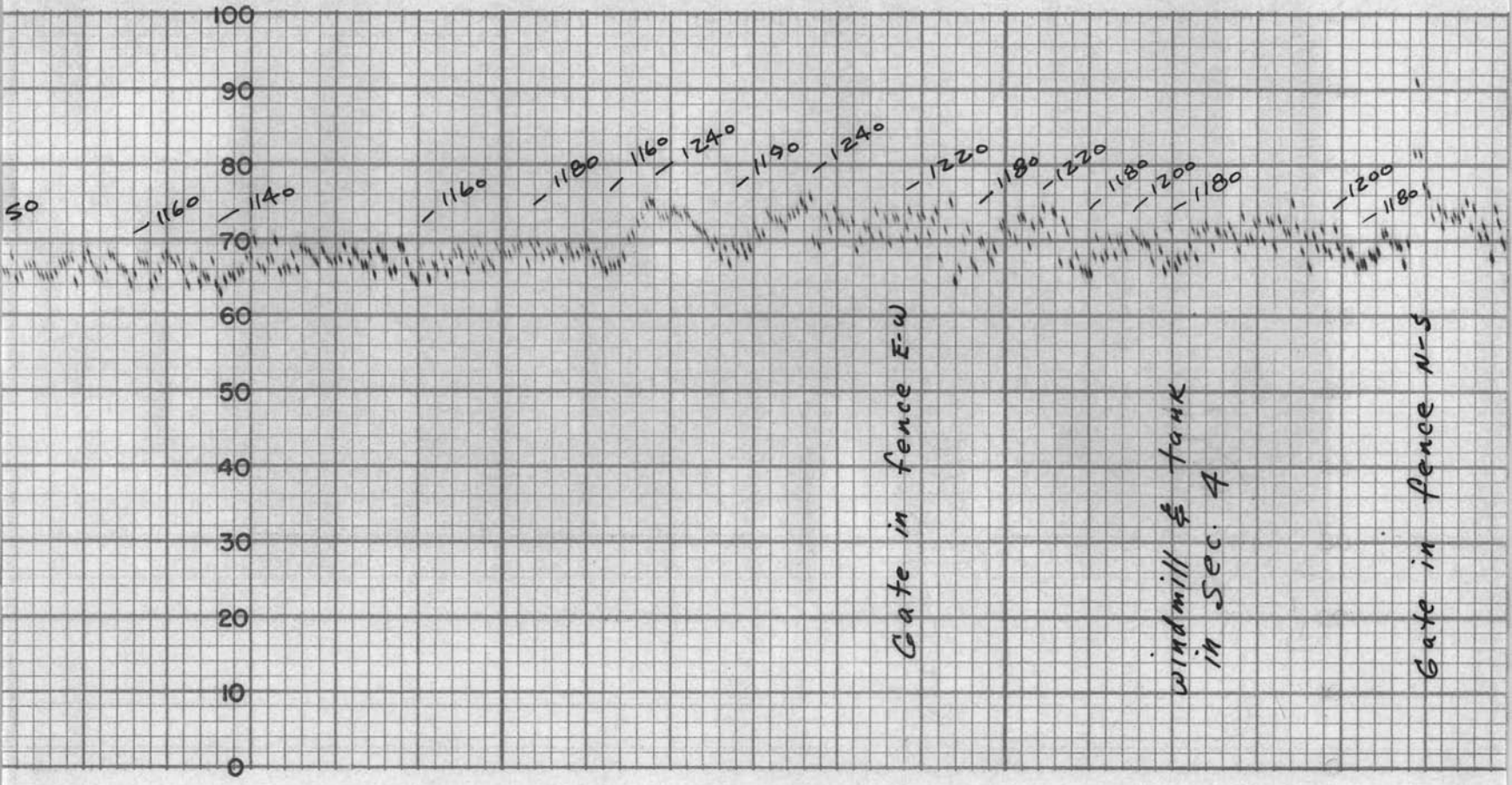

100
90
80
70
60
50
40
30
20
10
0
ROAD JUNCTION
To old mine
in sec. 10
970
880
770
880
830
890
810
900

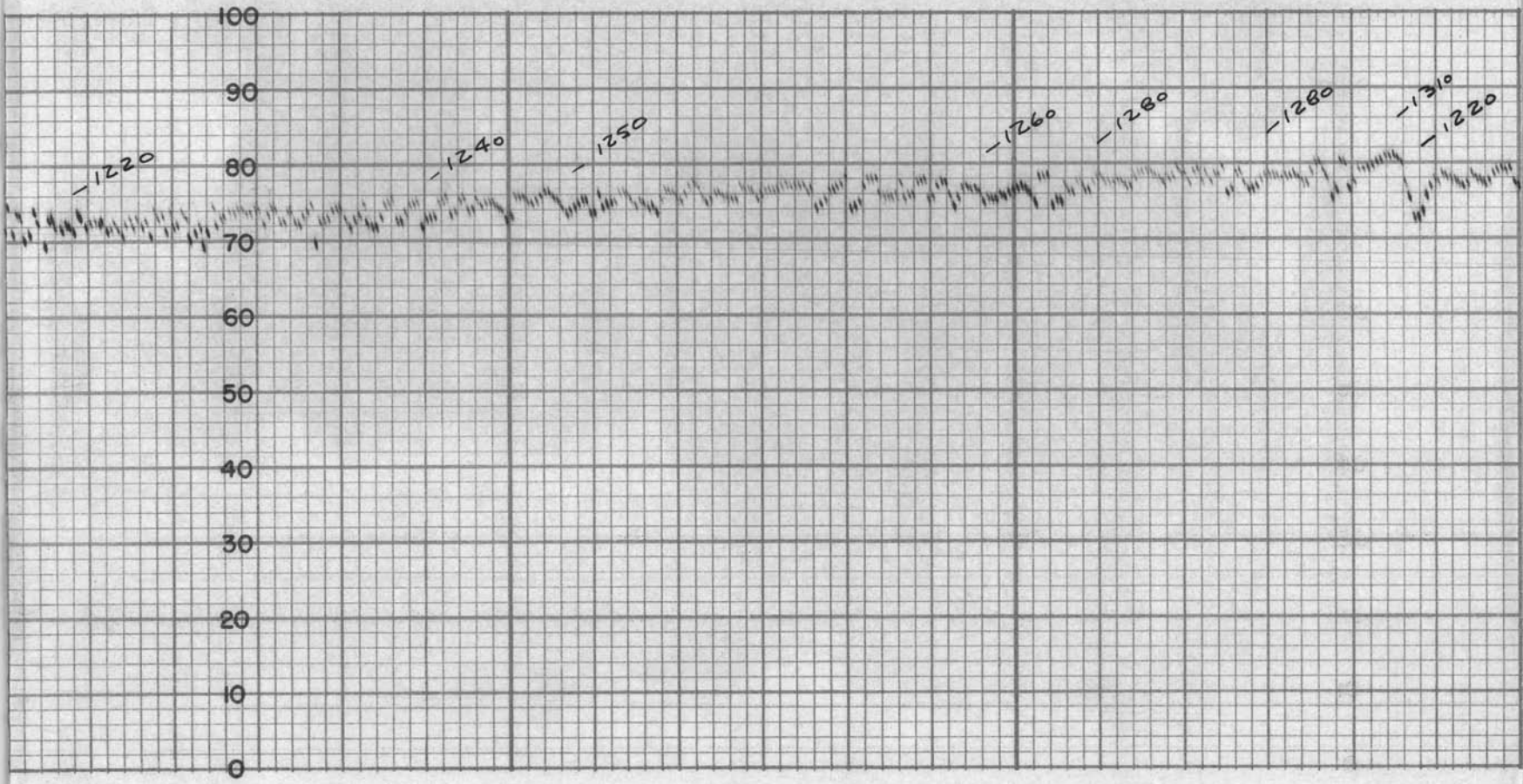

100
90
80
70
60
50
40
30
20
10
0
970
820
1020
920
1000
1100
1090
1120
ROAD JUNCTION

MADE IN U. S. A. THE ESTERLINE-ANGUS CO., INC., INDIANAPOLIS, IND., U. S. A.

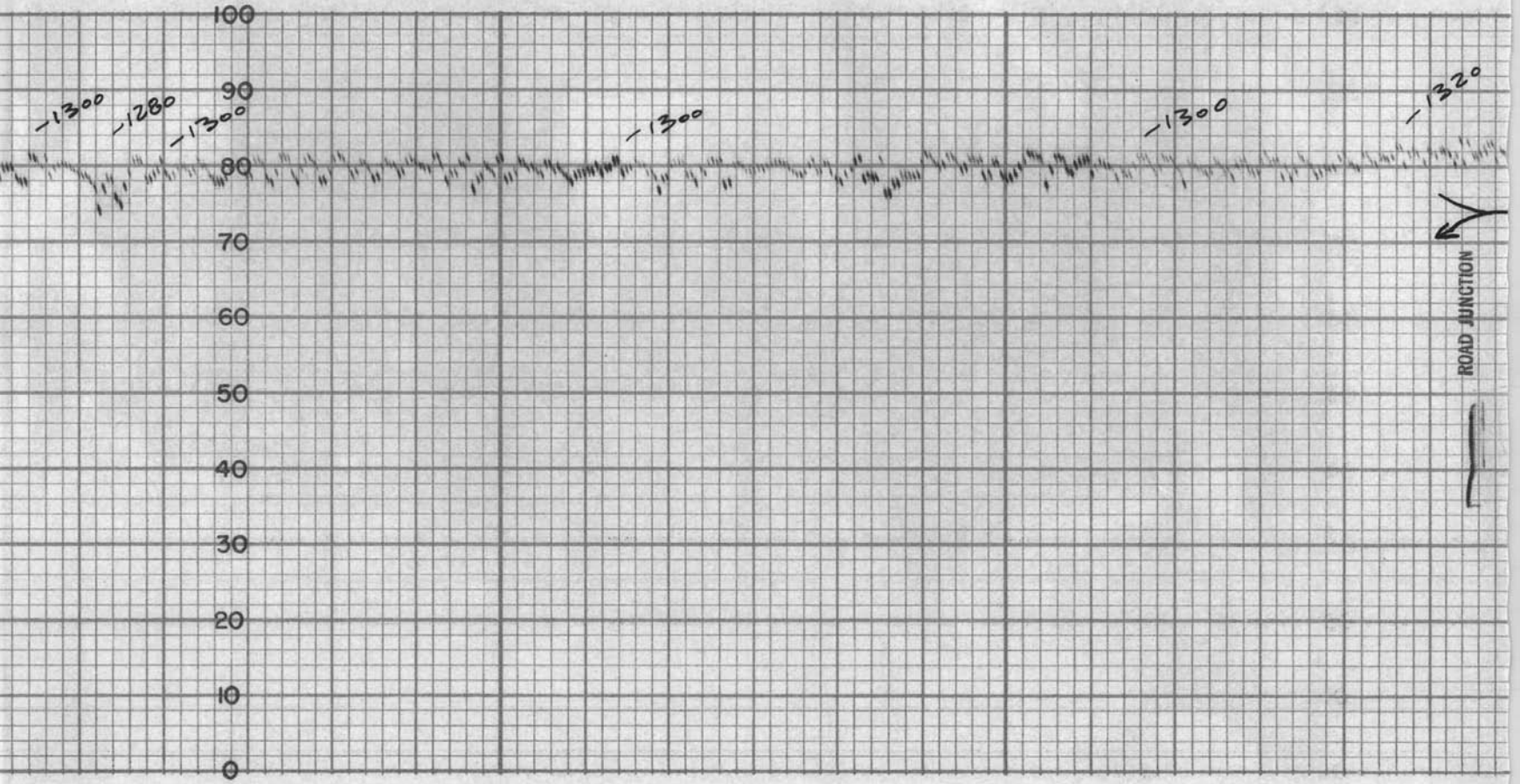


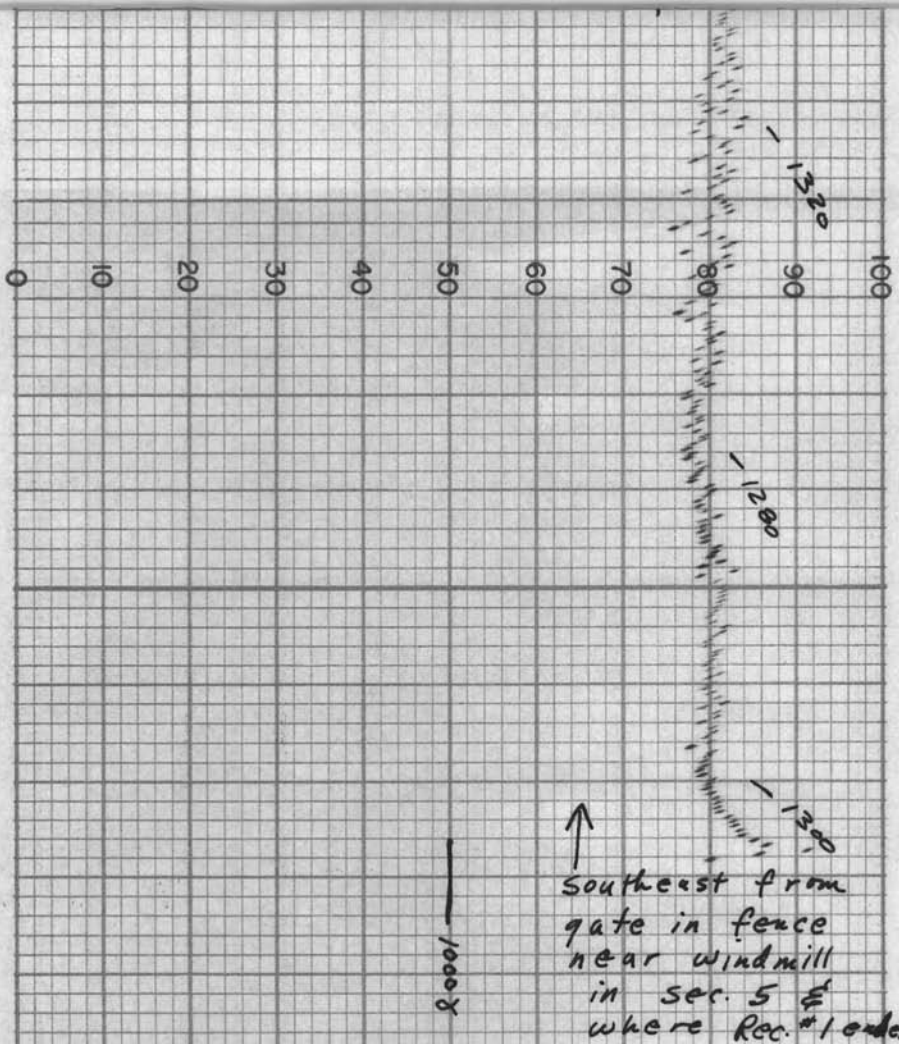

100
90
80
70
60
50
40
30
20
10
0
1020
1010
1060
980
1000
1010
1040
1100
1120


100
90
80
70
60
50
40
30
20
10
0
50
1160
1140
1160
1180
1160
1240
1190
1240
1220
1180
1220
1180
1200
1180
1200
1180
Gate in fence E-W
Windmill & tank in Sec. 4
Gate in fence N-S


100
90
80
70
60
50
40
30
20
10
0
1220
1240
1250
1260
1280
1280
1310
1220

MADE IN U. S. A. THE ESTERLINE-ANGUS CO., INC., INDIANAPOLIS, IND., U. S. A.





MOMAG TOTAL MAGNETIC INTENSITY RECORD

FOR: CYPRUS MINES CORP.

RECORD NO. 2 DATE 1-15-62

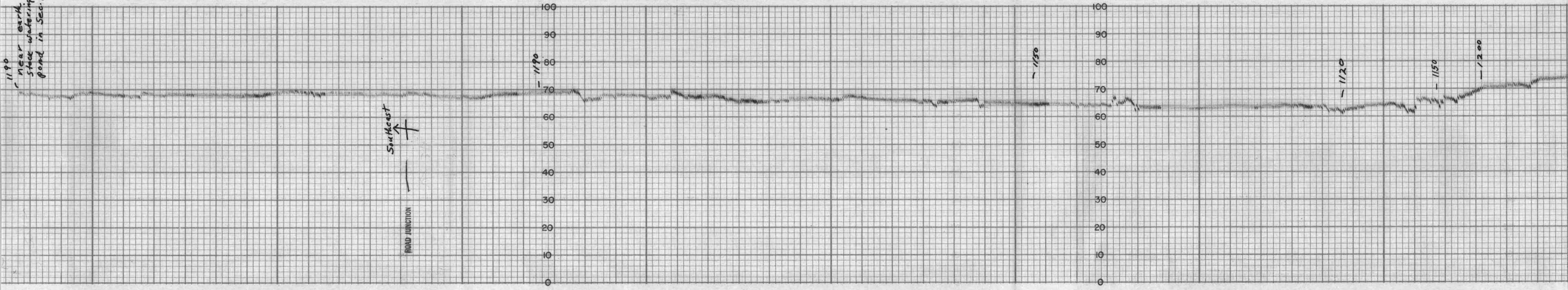
SENSITIVITY 100 GAMMAS /½ In S.D

HORIZONTAL SCALE 200 FT./In.

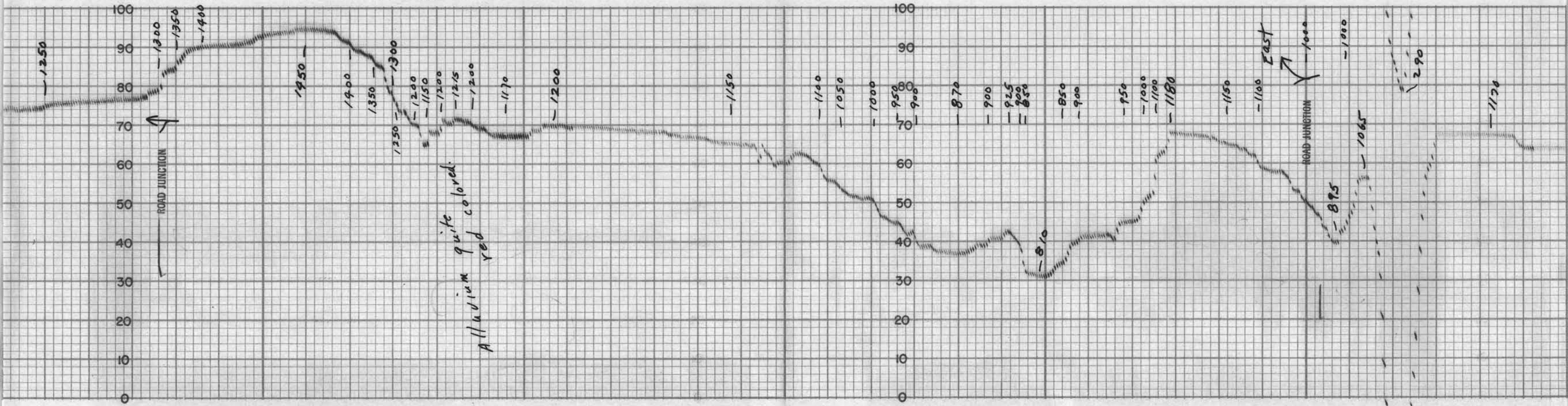
LOCATION PAT HILLS, COCHISE CO, ARIZ.

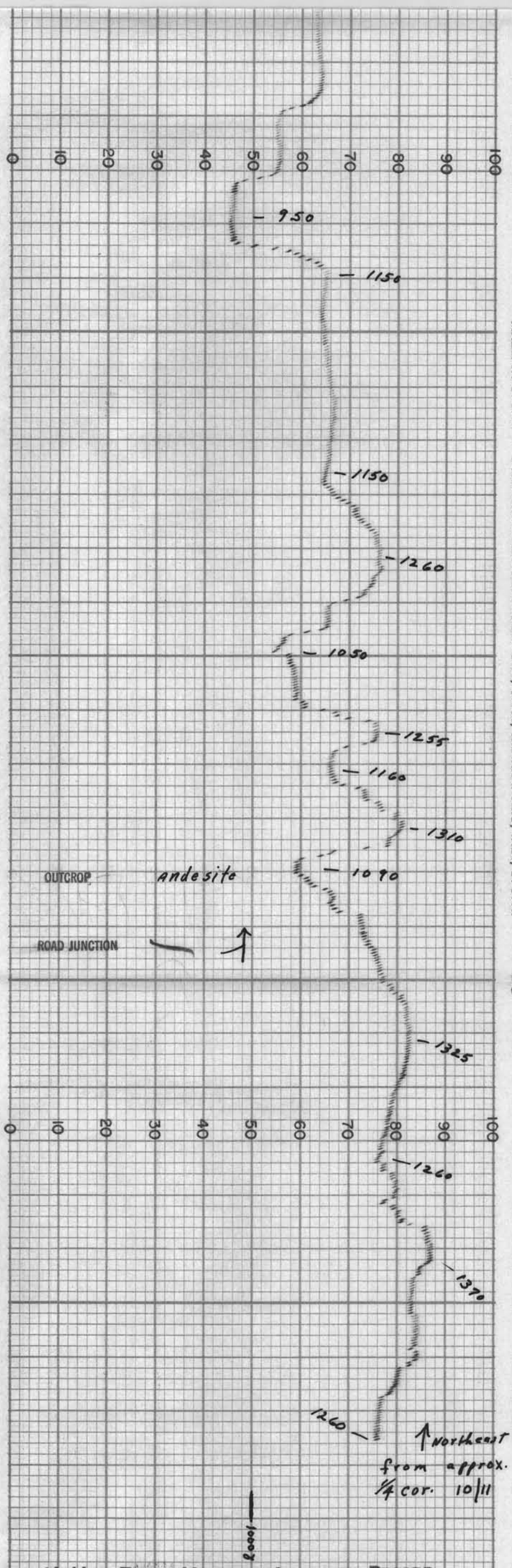
Southeast from near windmill in Sec. 5 T17S R27E to near the windmill in Sec. 13 T17S R27E

MADE IN U. S. A. THE ESTERLINE-ANGUS CO., INC., INDIANAPOLIS, IND., U. S. A. ES



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





MADE IN U.S.A. THE ESTERLINE-ANGUS CO., INC., INDIANAPOLIS, IND., U.S.A. ES

MoMag Total Magnetic Intensity Record

FOR: CYPRUS MINES CORP.

RECORD NO. 3 DATE 1-15-62

SENSITIVITY 100 GAMMAS /½ in S.D

HORIZONTAL SCALE 200 FT./In.

LOCATION PAT HILLS, COCHISE CO., ARIZ.

Northeast & East from approximate 1/4 cor. sections 10 & 11 T17S, R27E to earth stock watering pond in section 1.

ROAD JUNCTION

at sec. cor.
27|26
34|35

1150

1100

1050

1100

1150

ROAD JUNCTION 20 30 40 50 60 70 80 90 100

west

along fence
from a gate

1100

1145

1130

1160

1100

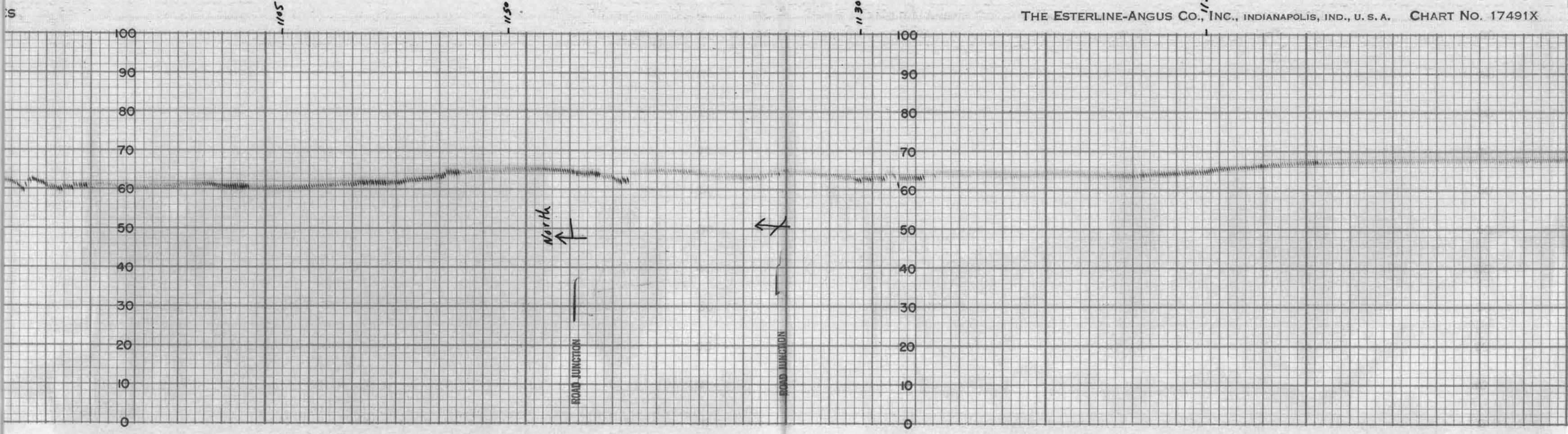
1070

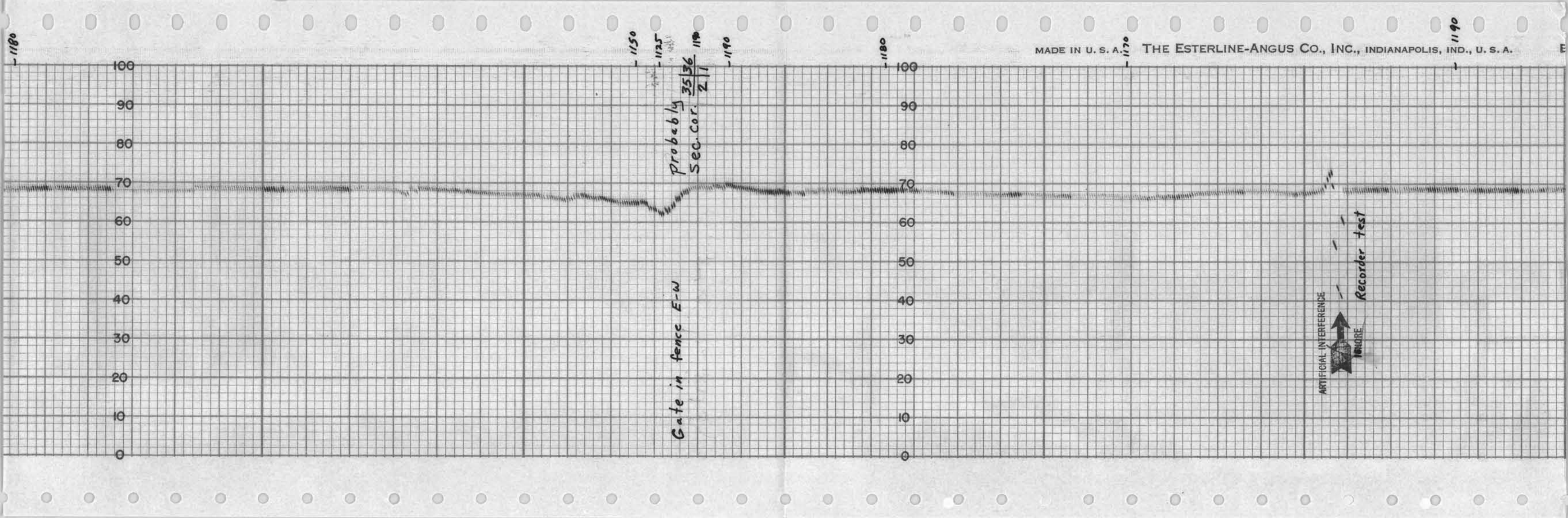
1100

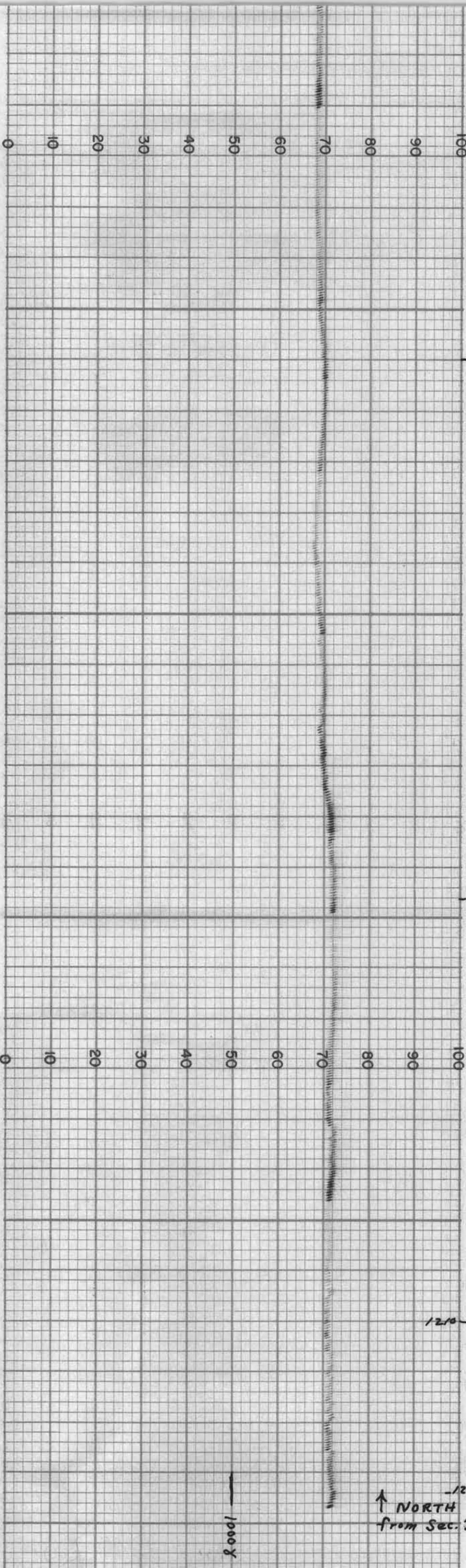
1125

MADE IN U. S. A. THE ESTERLINE-ANGUS CO., INC., INDIANAPOLIS, IND., U. S. A.

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




1180
1150
1125
1190
1180
1170
1190
100
90
80
70
60
50
40
30
20
10
0
Probably Sec. Cor. 35/36 2/1
Gate in fence E-W
ARTIFICIAL INTERFERENCE
Recorder test
MADE IN U. S. A. THE ESTERLINE-ANGUS CO., INC., INDIANAPOLIS, IND., U. S. A.



MoMag Total Magnetic Intensity Record

FOR: CYPRUS MINES CORP.

RECORD NO. 4 DATE 1-15-62

SENSITIVITY 100 GAMMAS /½ In S.D.

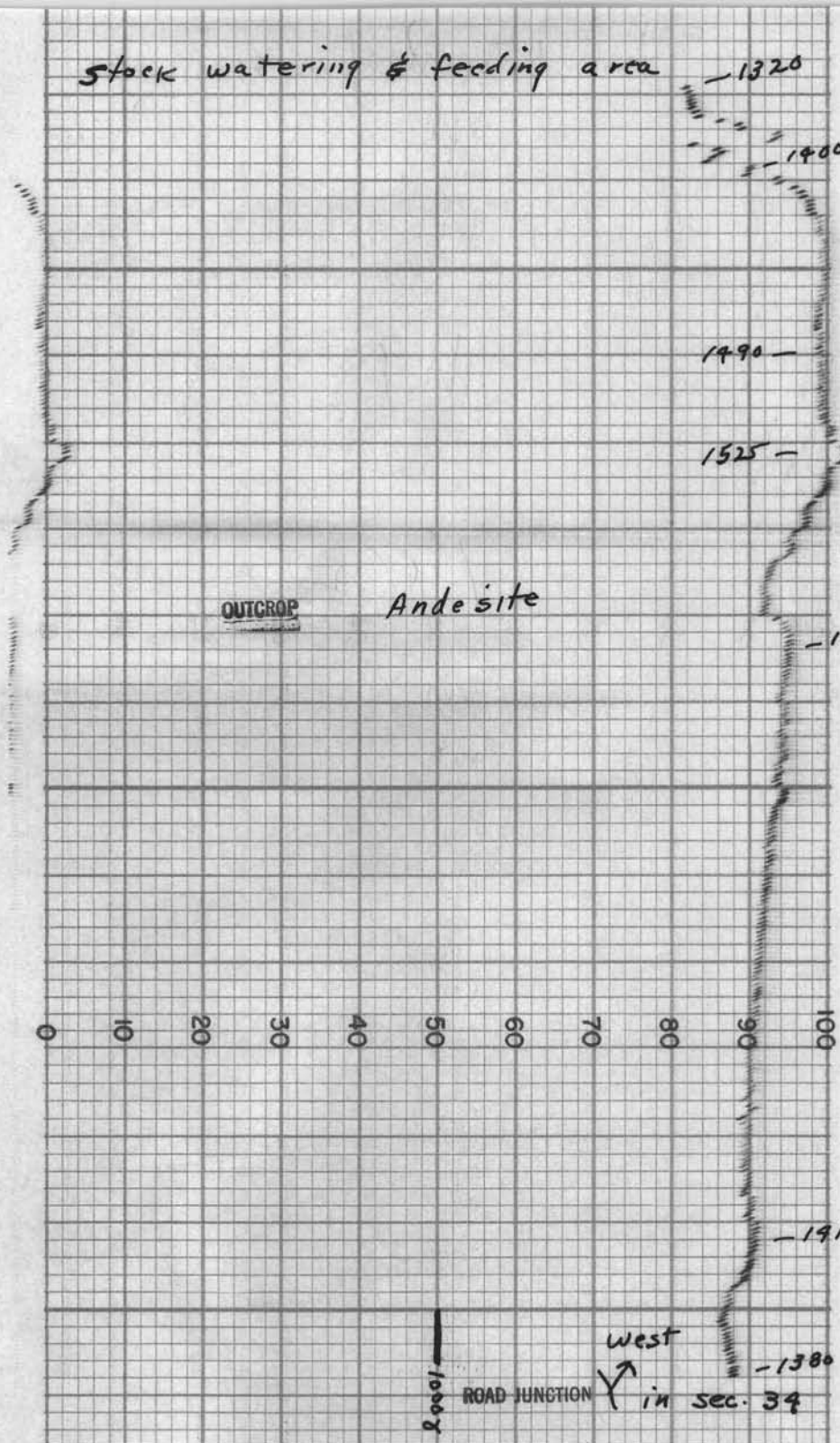
HORIZONTAL SCALE 200 FT./In.

LOCATION

PAT HILLS, COCHISE CO., ARIZ.

Northerly from road intersection about 500 feet west of stock watering pond in Sec. 1 T17S R27E to sec. cor. 27/26 33/34 T16S R27E

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



MOMAG TOTAL MAGNETIC INTENSITY RECORD

FOR: CYPRUS MINES CORP.

RECORD NO. 5 DATE 1-15-62

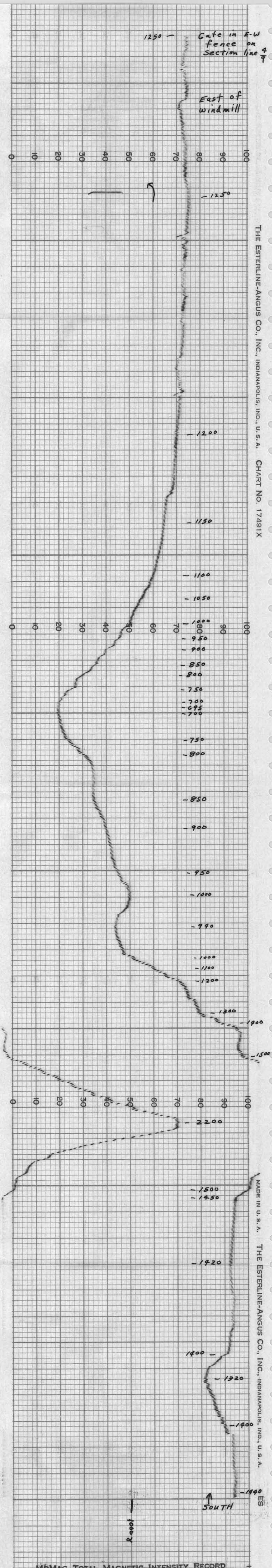
SENSITIVITY 100 GAMMAS / ½ In S.D

HORIZONTAL SCALE 200 FT./In.

LOCATION PAT HILLS, COCHISE CO., ARIZ.

short road traverse in sec. 34 T16S R27E To a stock watering pond.

THE ESTERLINE-ANGUS CO., INC., INDIANAPOLIS, IND., U. S. A.



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

MADE IN U.S.A. THE ESTERLINE-ANGUS CO., INC., INDIANAPOLIS, IND., U.S.A.

MOMAG TOTAL MAGNETIC INTENSITY RECORD

FOR: CYPRUS MINES CORP.

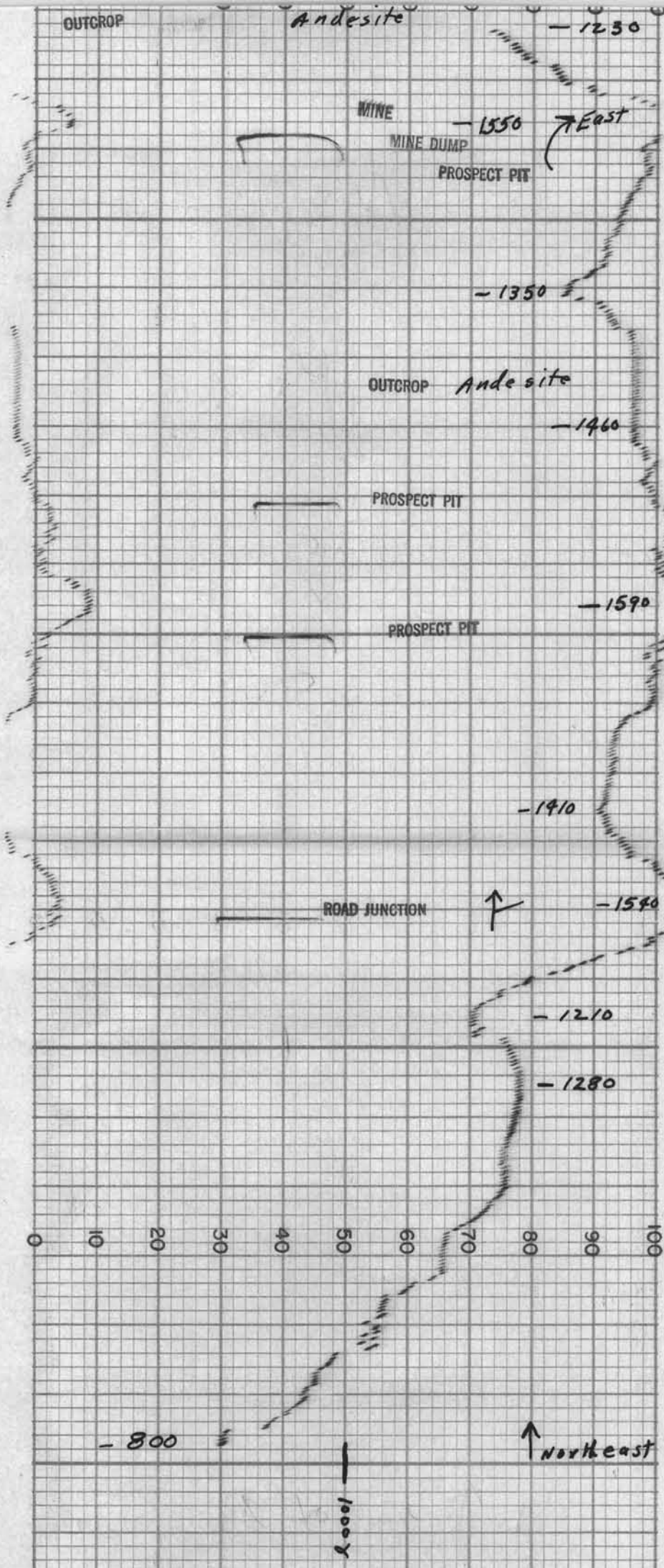
RECORD NO. 6 DATE 1-15-62

SENSITIVITY 100 GAMMAS /½ In S.D.

HORIZONTAL SCALE 200 FT./In.

LOCATION PAT HILLS, COCHISE CO., ARIZ.

South across Sec. 4, T17S R27E from near the north 1/4 cor. to the windmill in the southwest cor.



MADE IN U. S. A. THE ESTERLINE-ANGUS CO., INC., INDIANAPOLIS, IND., U. S. A.

ES

MOMAG TOTAL MAGNETIC INTENSITY RECORD

FOR: CYPRUS MINES CORP.

RECORD NO. 7 DATE 1-15-62

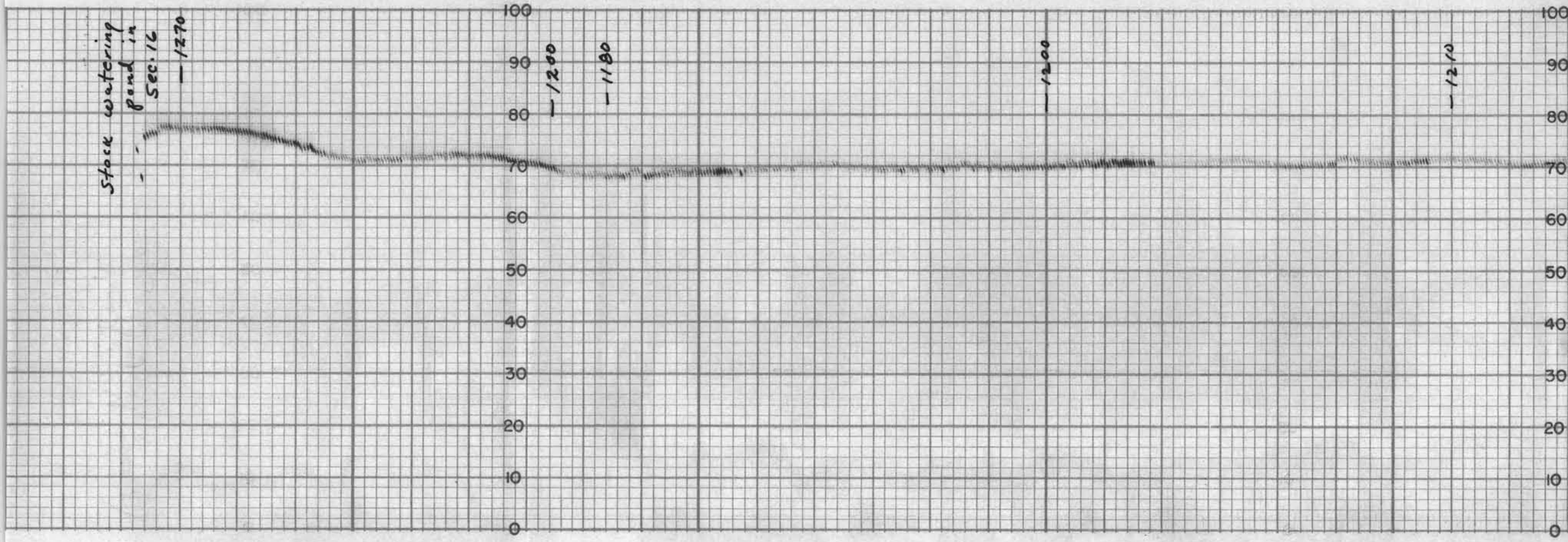
SENSITIVITY 100 GAMMAS / ½ In S.D

HORIZONTAL SCALE 200 FT./In.

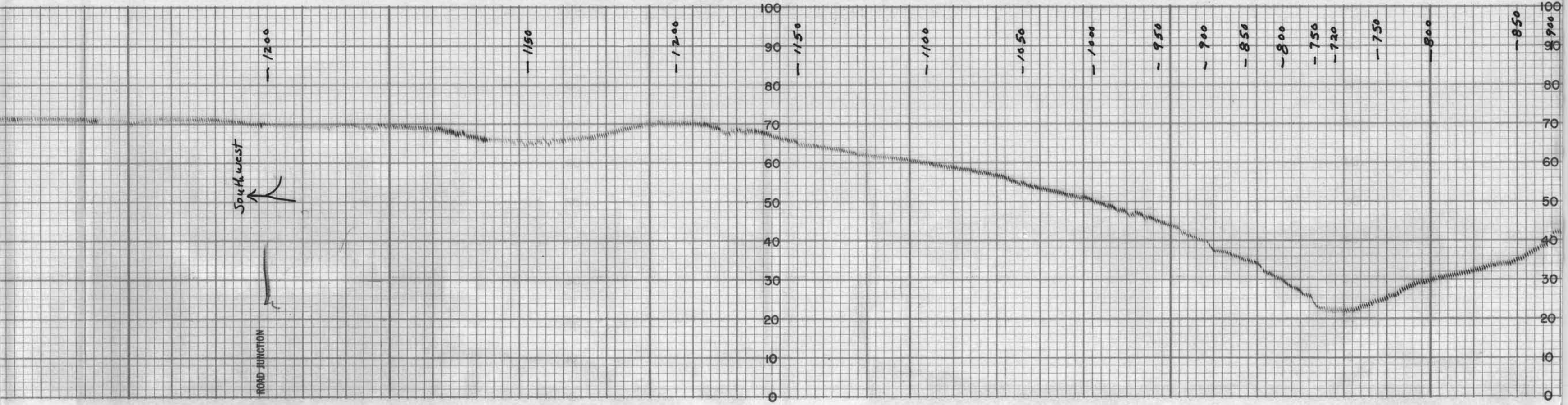
LOCATION PAT HILLS, COCHISE CO., ARIZ.

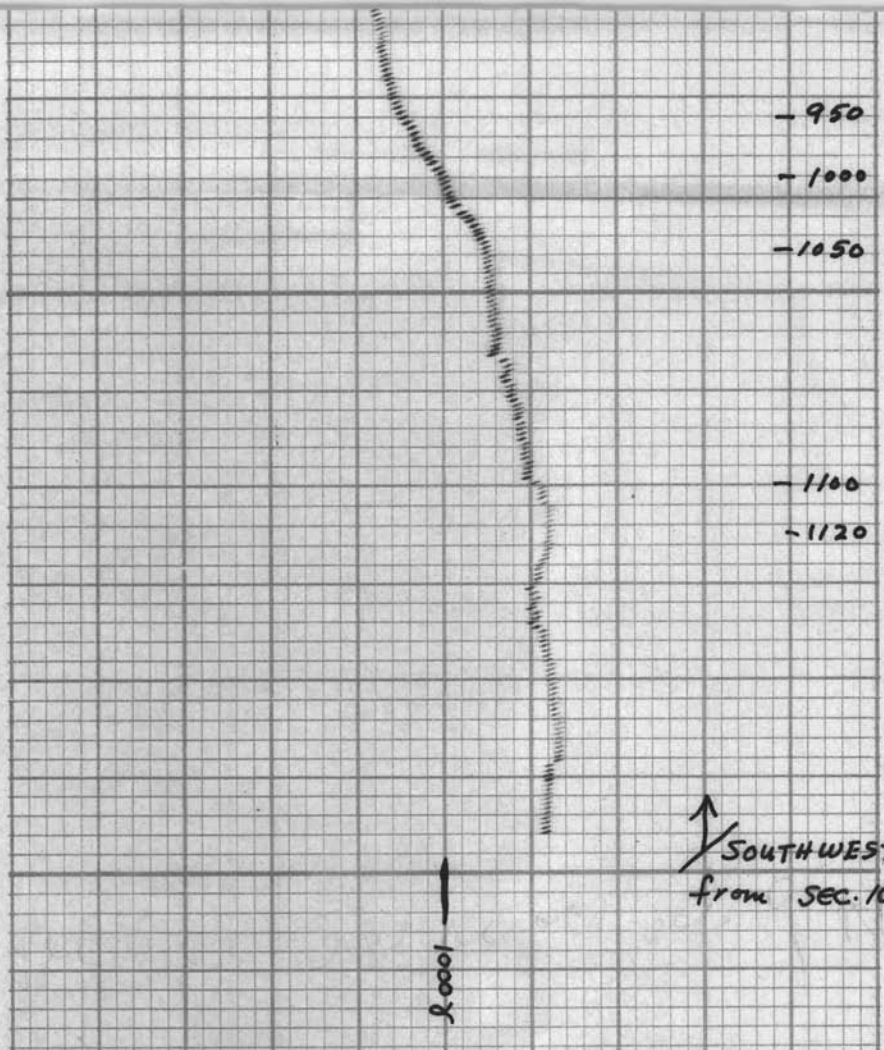
Short road traverse northeast to mine in the northeast part of sec. 10 T17S R27E.

MADE IN U. S. A. THE ESTERLINE-ANGUS CO., INC., INDIANAPOLIS, IND., U. S. A. ES



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





MOMAG TOTAL MAGNETIC INTENSITY RECORD

FOR: CYPRUS MINES CORP.

RECORD NO. 8 DATE 1-15-62

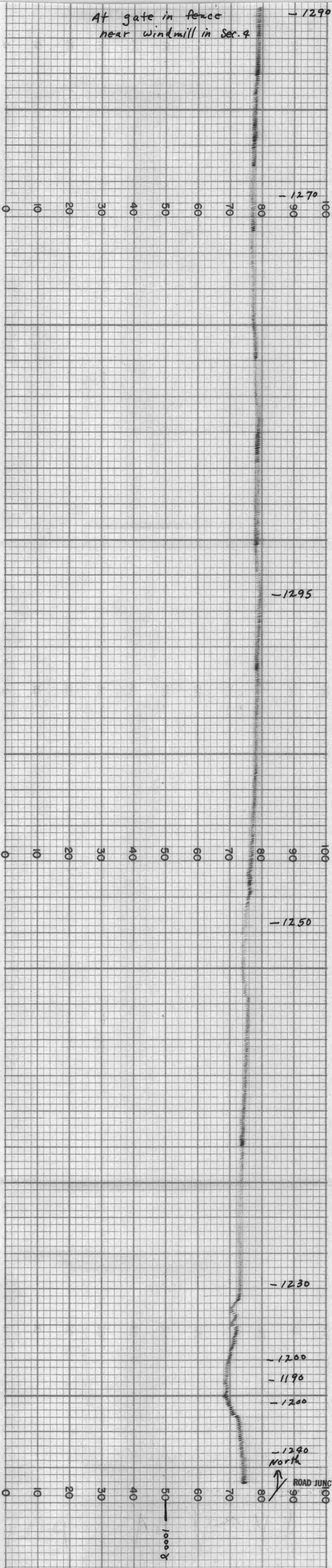
SENSITIVITY 100 GAMMAS /½ In S.D.

HORIZONTAL SCALE 200 FT./In.

LOCATION PAT HILLS, COCHISE CO., ARIZ.

South west across sec. 9, T17S R27E starting at a road junction just inside sec. 10 and ending at a stock watering pond in sec. 16

0 10 20 30 40 50 60 70 80 90 100



MOMAG TOTAL MAGNETIC INTENSITY RECORD

FOR: CYPRUS MINES CORP.

RECORD NO. 9 DATE 1-15-62

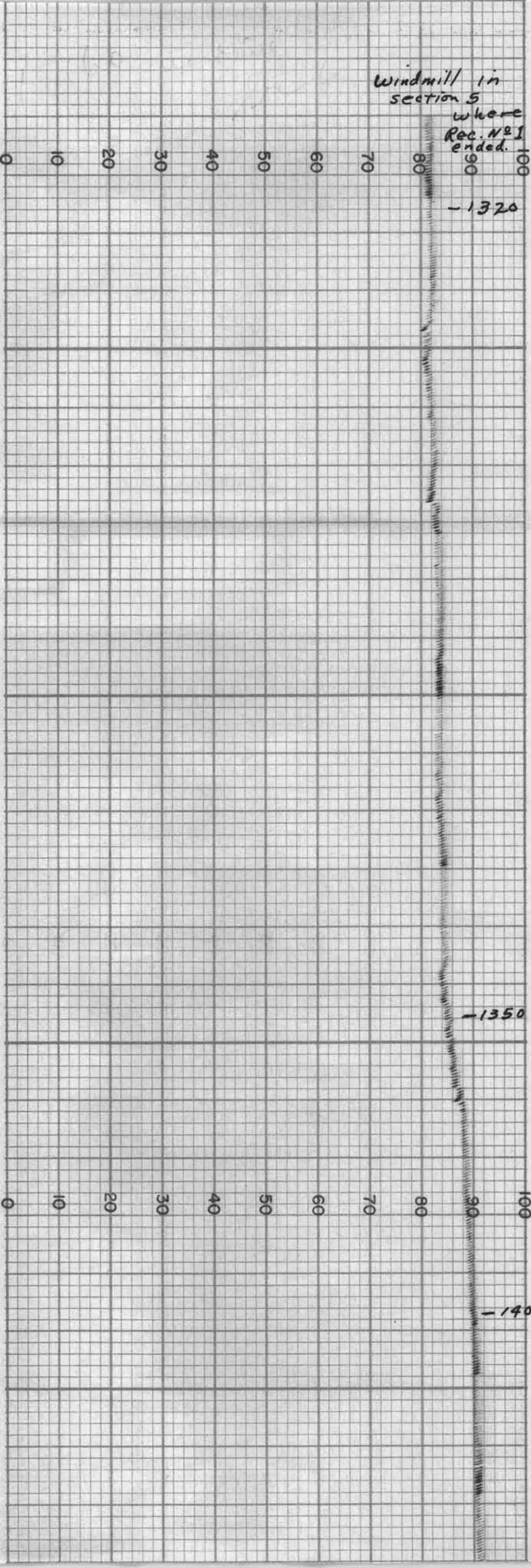
SENSITIVITY 100 GAMMAS /½ In S.D.

HORIZONTAL SCALE 200 FT./In.

LOCATION PAT HILLS, COCHISE CO. ARIZ.

North in section 9, T 17 S R 27 E from the road intersection of Rec. Nº 8 to the gate in fence by windmill in Sec. 4.

THE ESTERLINE-ANGUS CO., INC., INDIANAPOLIS, IND., U.S.A. CHART NO. 17491X ES



MADE IN U.S.A. THE

ESTERLINE-ANGUS CO., INC., INDIANAPOLIS, IND., U. S. A.

Fence. corner
possibly 1/4 cor. 32/5

1450

ES

1500

0 10 20 30 40 50 60 70 80 90 100

1540

1520