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 STN-50-529 Palo Verde Nuclear Station, Unit 2, Arizona Public 05000529
 STN-50-530 Palo Verde Nuclear Station, Unit 3, Arizona Public 05000530

AUTH. NAME: AUTHOR/AFFILIATION
 VAN BRUNT, E. E. Arizona Public Service Co.
 RECIP. NAME: RECIPIENT AFFILIATION
 TEDESCO, R. L. Assistant Director for Licensing

SUBJECT: Forwards updated FSAR Figures 2, 4-30, 32, 34, 35, 36, 37, 38 & 96
 per request. Figures will be incorporated in future FSAR
 amend. *8 Drawings changed letters 7/28/81*

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NOTES: Standardized Plant. 1 cy: C Grimes 05000528
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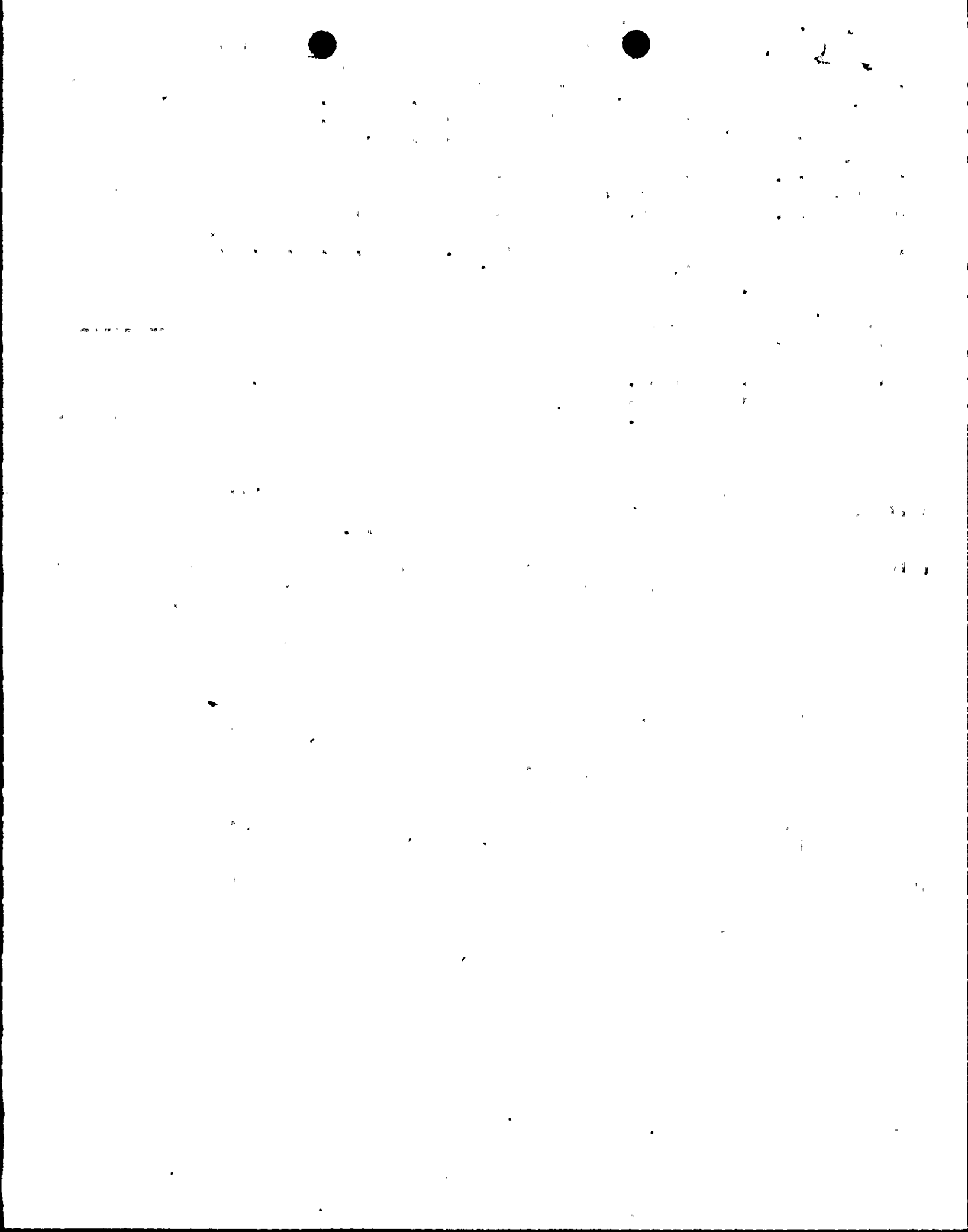
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	CHEM ENG BR 11	1	1	CONT SYS BR 09	1	1
	CORE PERF BR 10	1	1	EFF TR SYS BR12	1	1
	EMRG PRP DEV 35	1	1	EMRG PRP LIC 36	3	3
	EQUIP QUAL BR13	3	3	FEMA-REP DIV 39	1	1
	GEOSCIENCES 28	2	2	HUM FACT ENG 40	1	1
	HYD/GEO BR 30	2	2	I&C SYS BR 16	1	1
	I&E 06	3	3	LIC GUID BR 33	1	1
	LIC QUAL BR 32	1	1	MATL ENG BR 17	1	1
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	NRC PDR 02	1	1	OELD	1	0
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	PROC/TST REV 20	1	1	QA BR 21	1	1
	RAD ASSESS BR22	1	1	REAC SYS BR 23	1	1
	<u>REG FILE</u> 01	1	1	SIT ANAL BR 24	1	1
STRUCT ENG BR25	1	1				
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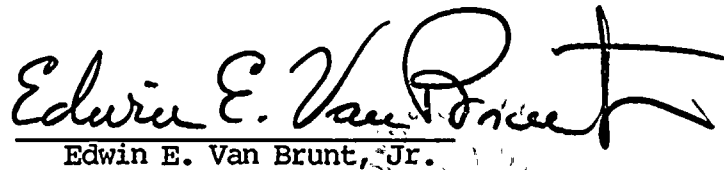
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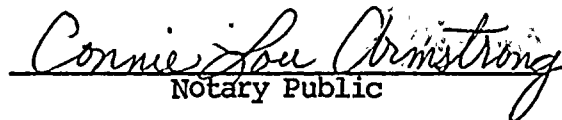
Mr. R. L. Tedesco
August 11, 1981
ANPP-18635-JMA/KWG
Page 2

STATE OF ARIZONA)
) ss.
COUNTY OF MARICOPA)

I, Edwin E. Van Brunt, Jr., represent that I am Vice President, Nuclear Projects of Arizona Public Service Company, that the foregoing document has been signed by me on behalf of Arizona Public Service Company with full authority to do so, that I have read such document and know its contents, and that to the best of my knowledge and belief, the statements made therein are true.


Edwin E. Van Brunt, Jr.

Sworn to before me this 17th day of AUGUST, 1981.


Notary Public

My Commission Expires:

June 24, 1983

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ARIZONA



PUBLIC SERVICE COMPANY

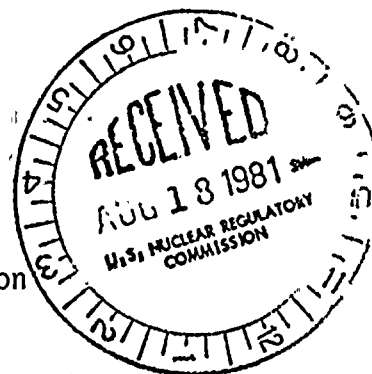
P. O. BOX 21666 • PHOENIX, ARIZONA 85036

August 11, 1981

ANPP-18635 - JMA/KWG

Mr. R. L. Tedesco
Assistant Director for Licensing
Division of Licensing
Office of Nuclear Reactor Regulation
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

Subject: Palo Verde Nuclear Generating Station
(PVNGS) Units 1, 2 and 3
Docket Nos. STN-50-528/529/530
File: 81-056-026



Dear Mr. Tedesco:

Please find attached work copies of FSAR Figures 2.4-30, 32, 34, 35, 36, 37, 38, and 96, as updated per the request of your staff. These figures will be incorporated in a future FSAR amendment.

Please contact us if you have any questions on this matter.

Very truly yours,

E. E. Van Brunt, Jr.
APS Vice President,
Nuclear Projects
ANPP Project Director

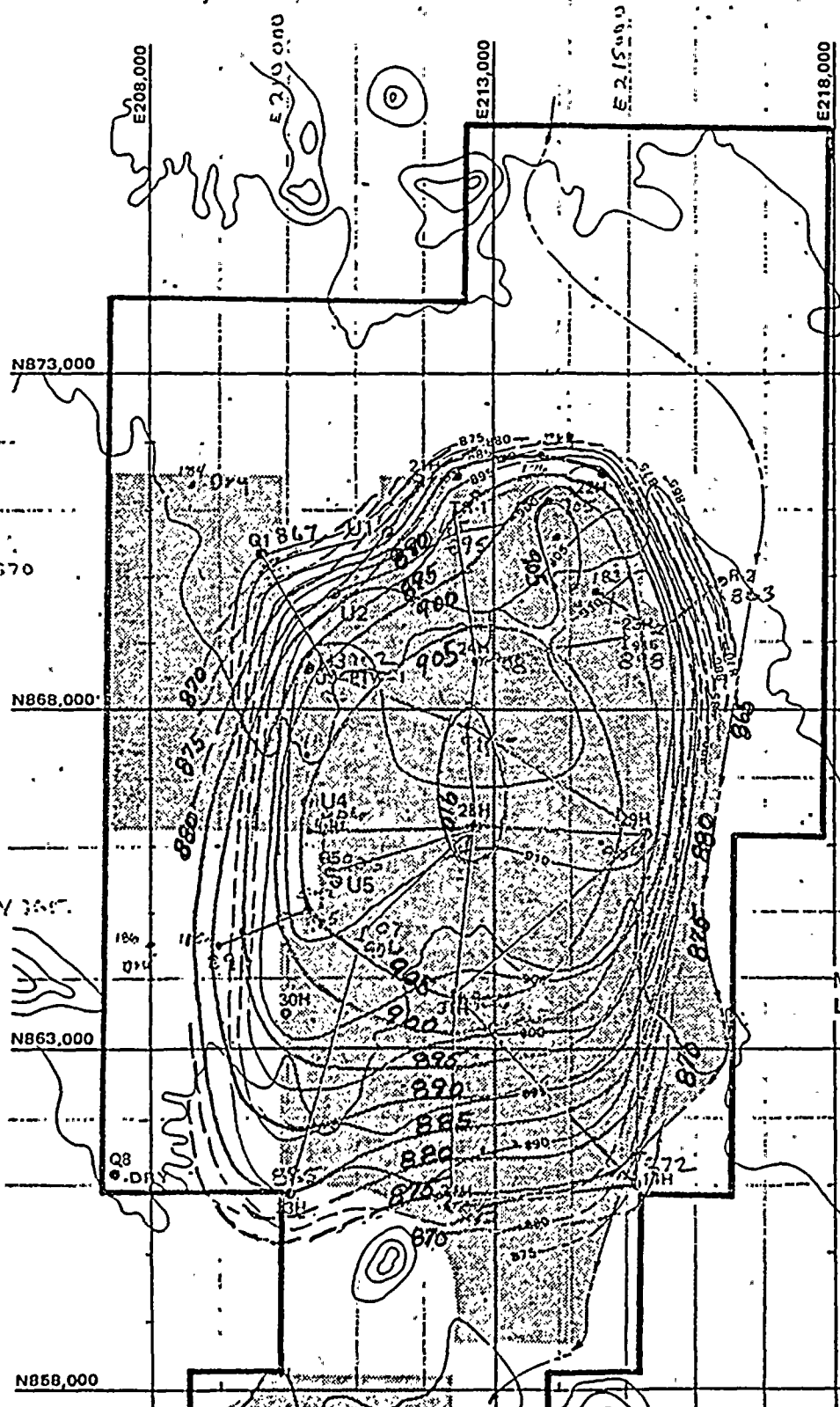
EEVBJr/KWG/av
Attachment

cc: J. Kerrigan (w/a)
P. Hourihan (w/a)
A. C. Gehr (w/a)

Boo/
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//

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K PDR






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NOTE: CONTOURS INDICATE WATER LEVELS MEASURED IN OCTOBER 1977
 July 1981

- POWER BLOCK UNIT
- U1 UNIT NUMBER
- MONITOR WELL
- Q5 BOREHOLE NUMBER
- IRRIGATED CROPLAND IN 1973

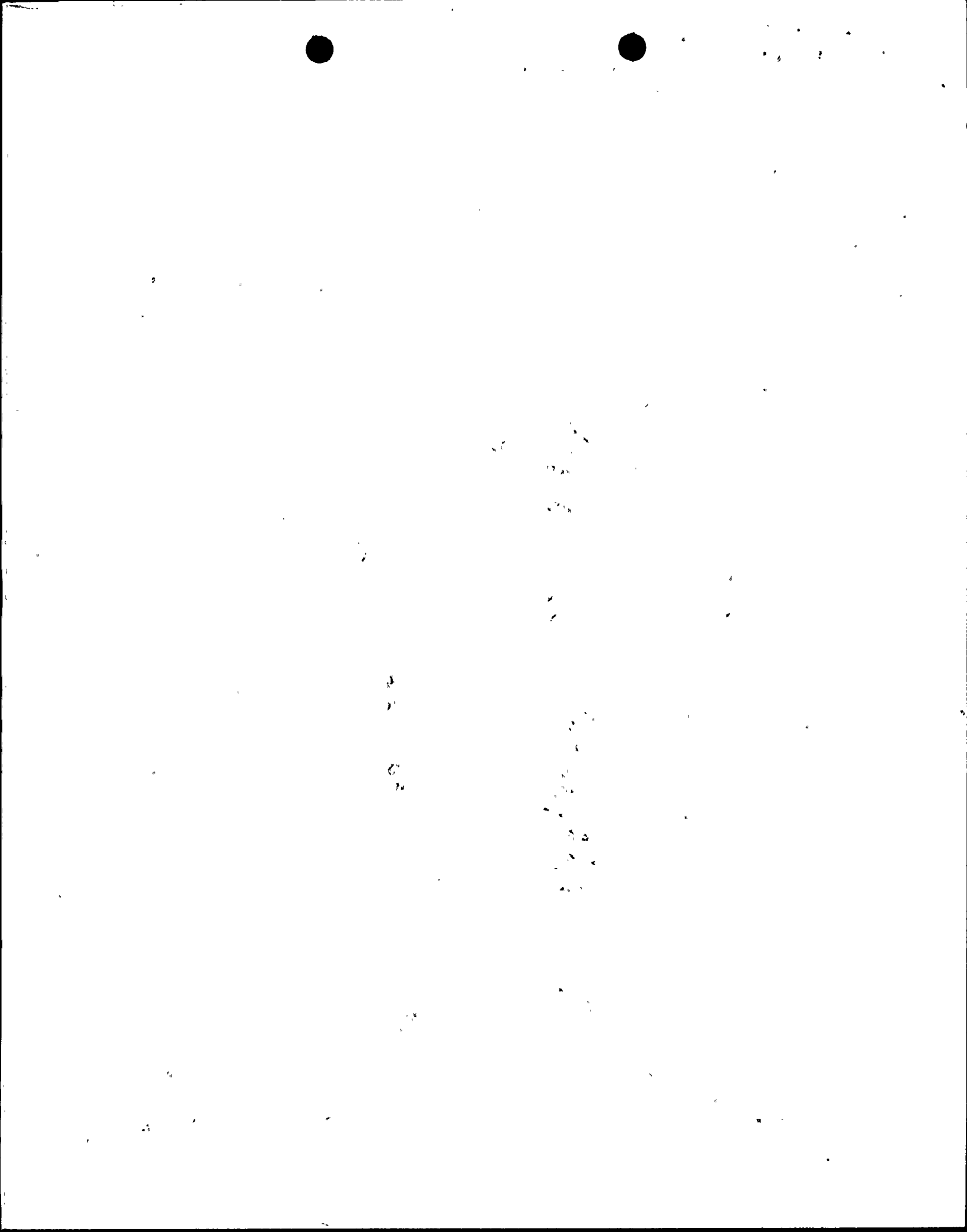
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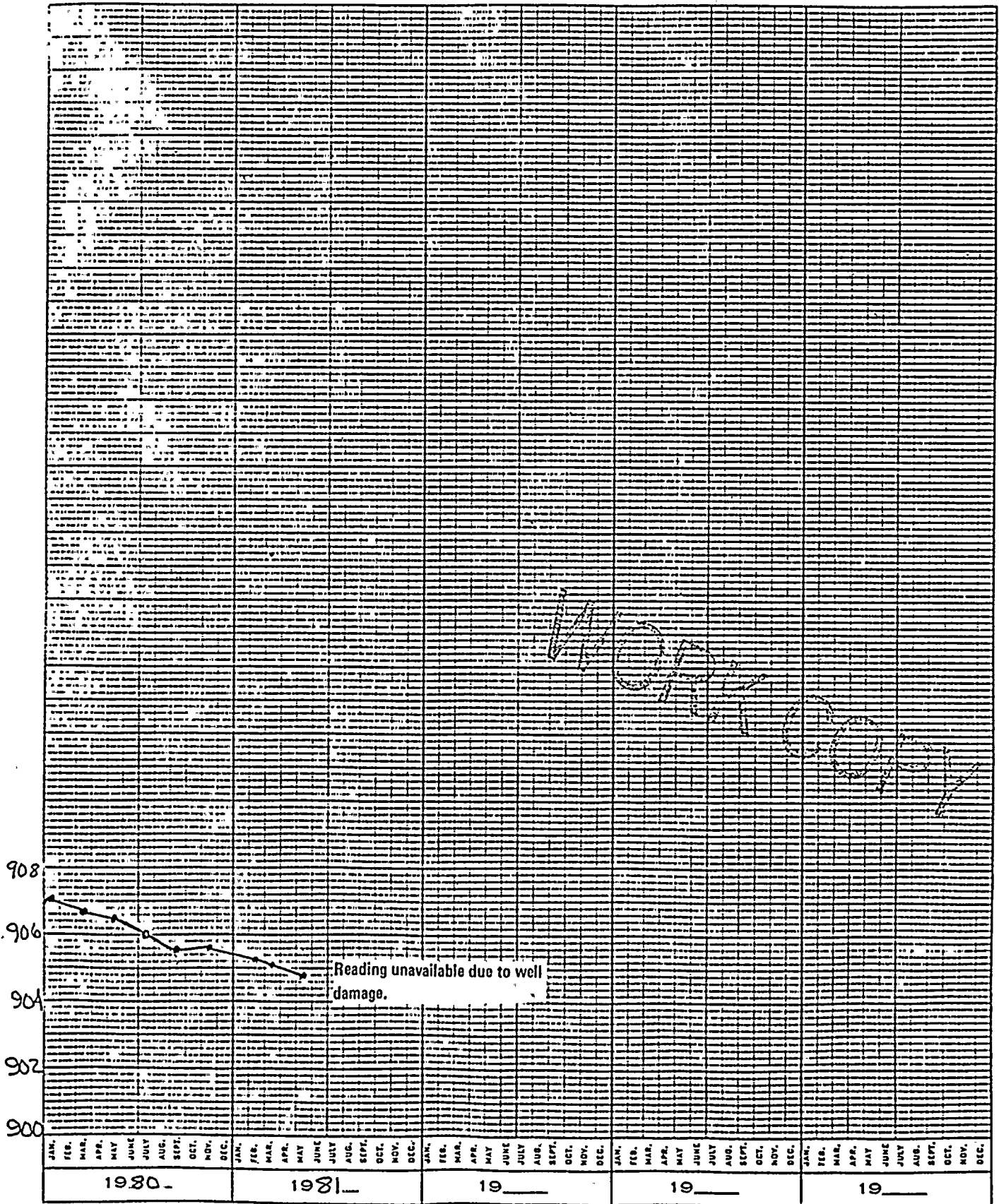
 Palo Verde Nuclear Generating Station
 FSAR

WATER LEVEL CONTOUR MAP
 OF THE PERCHED WATER ZONE

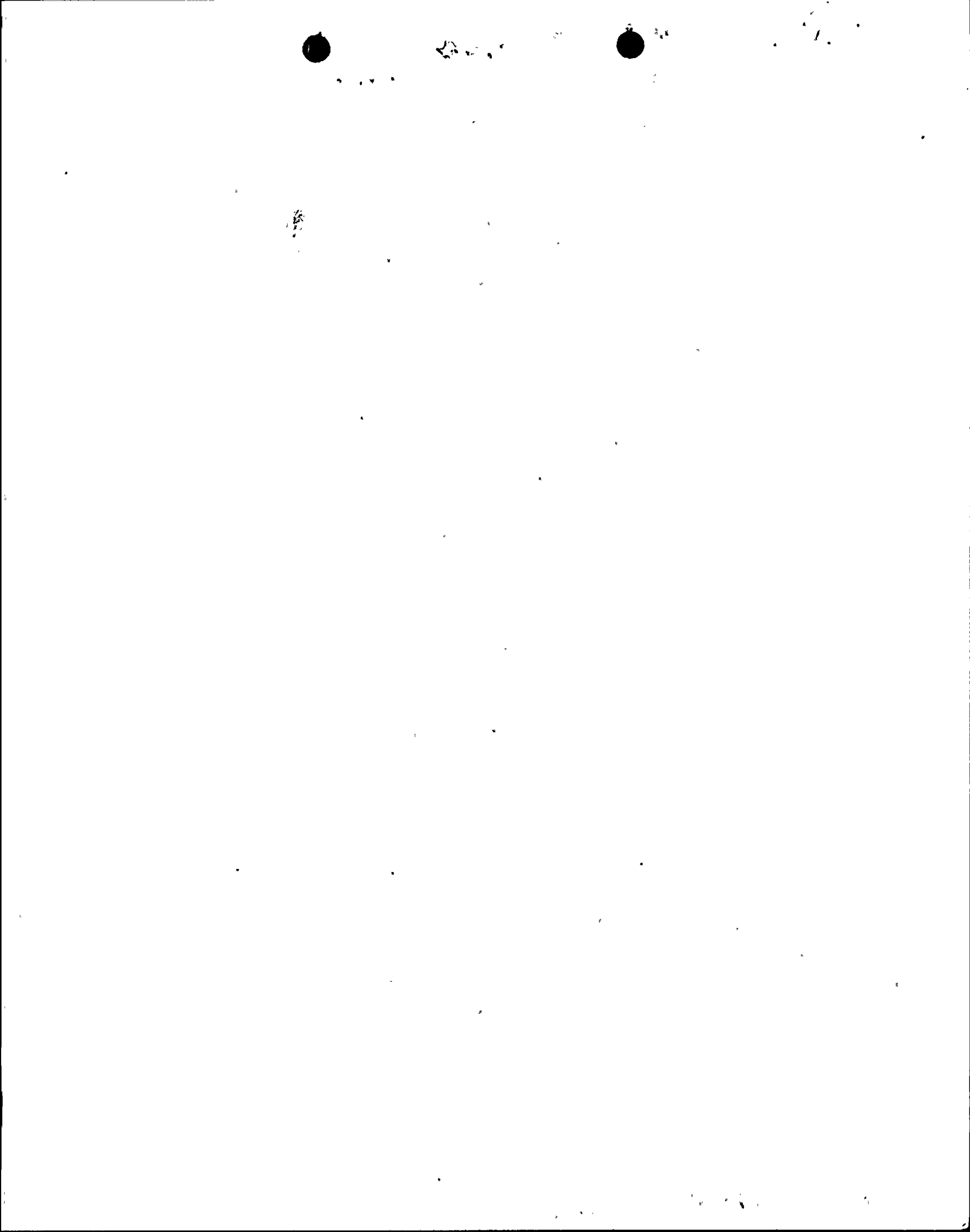
Figure 2.4- 30

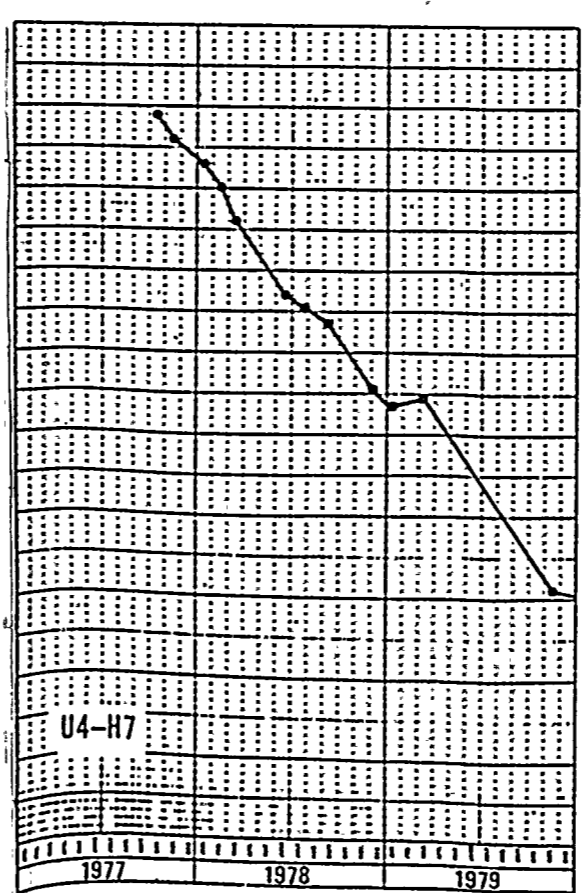
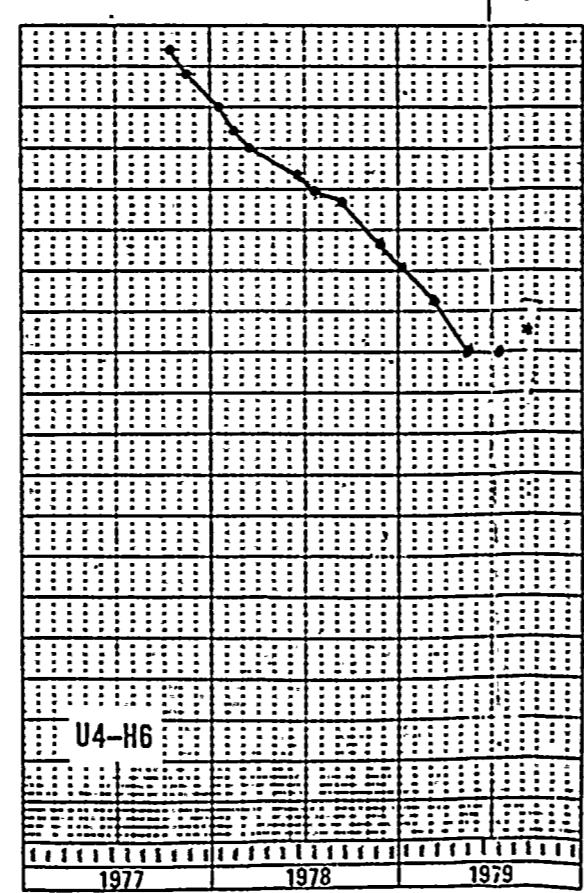
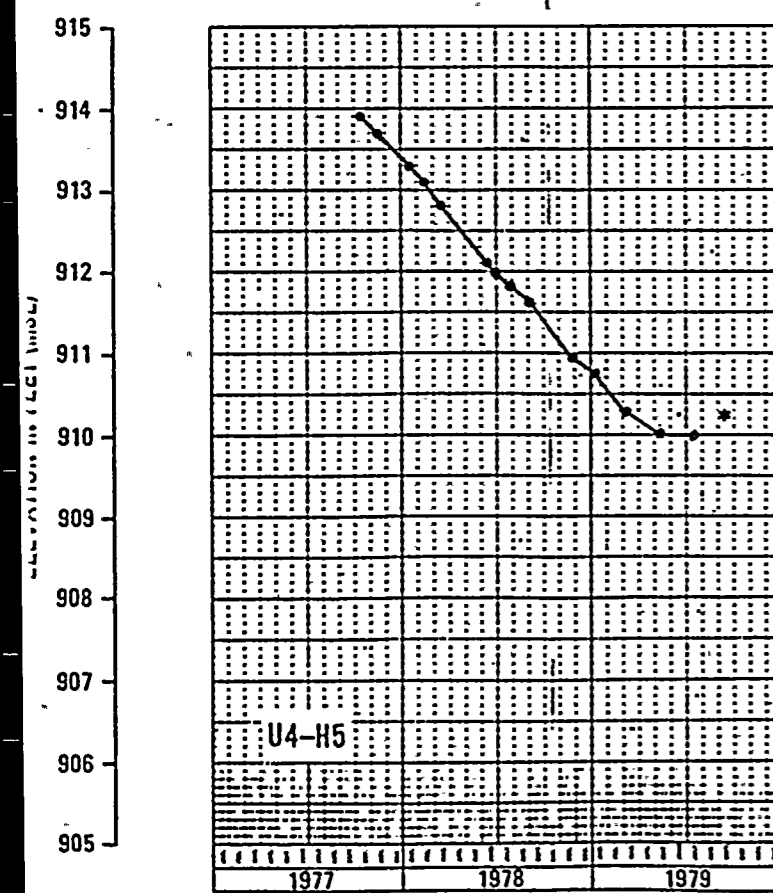
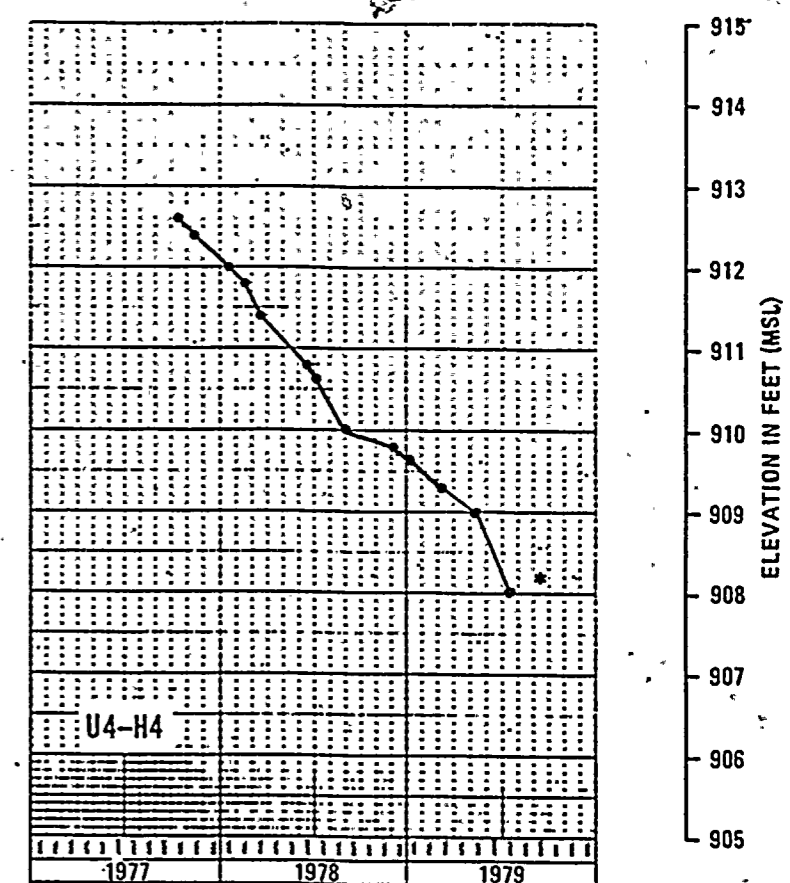
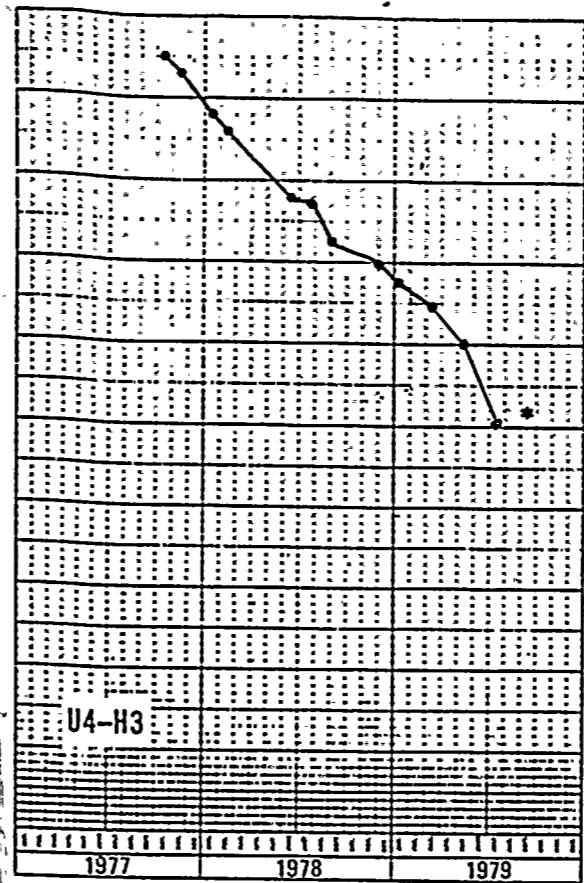
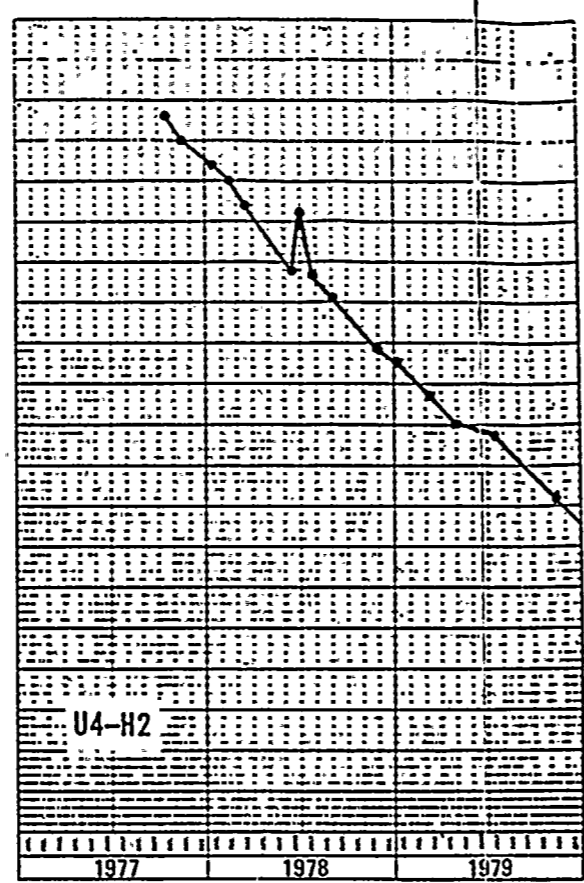
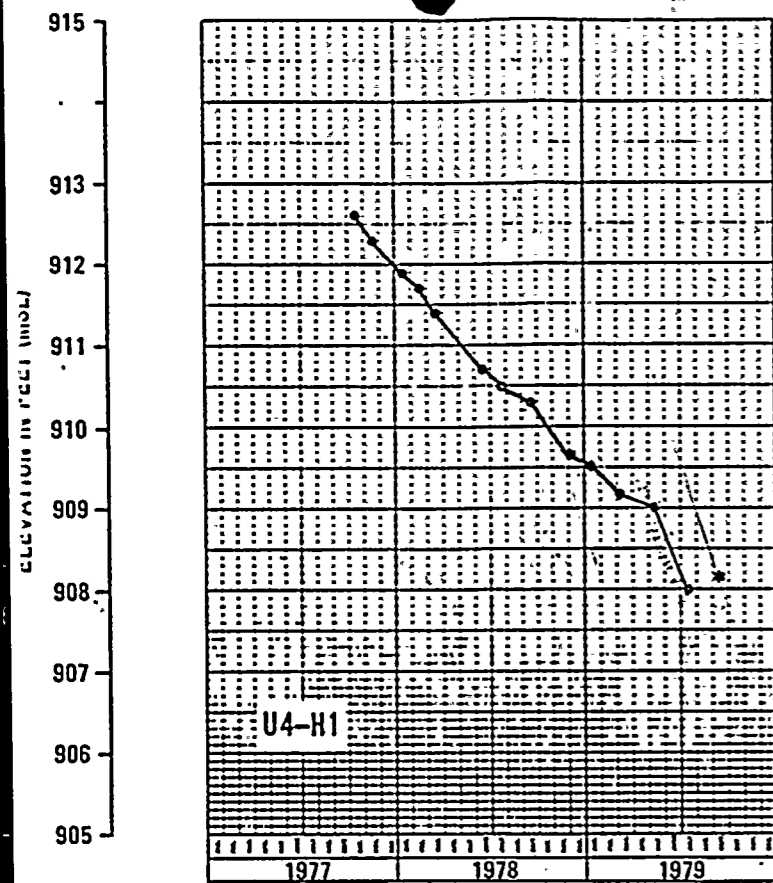
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U5-H2






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NOTES:
* MONITORING DISCONTINUED JULY 1979; WELL ON STANDBY.



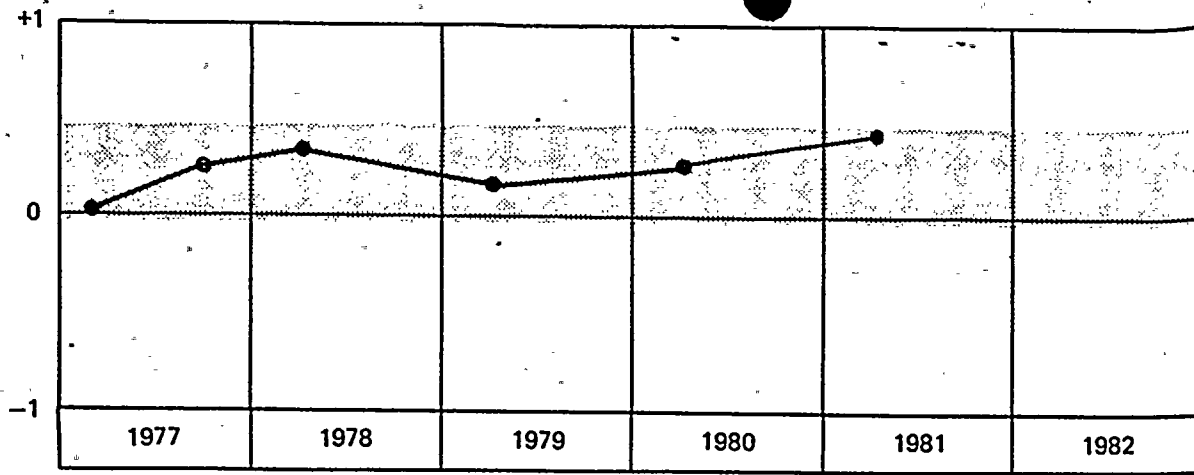
Palo Verde Nuclear Generating Station
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HYDROGRAPHS OF OBSERVATION WELLS
IN THE PERCHED WATER ZONE
(GROUP D)

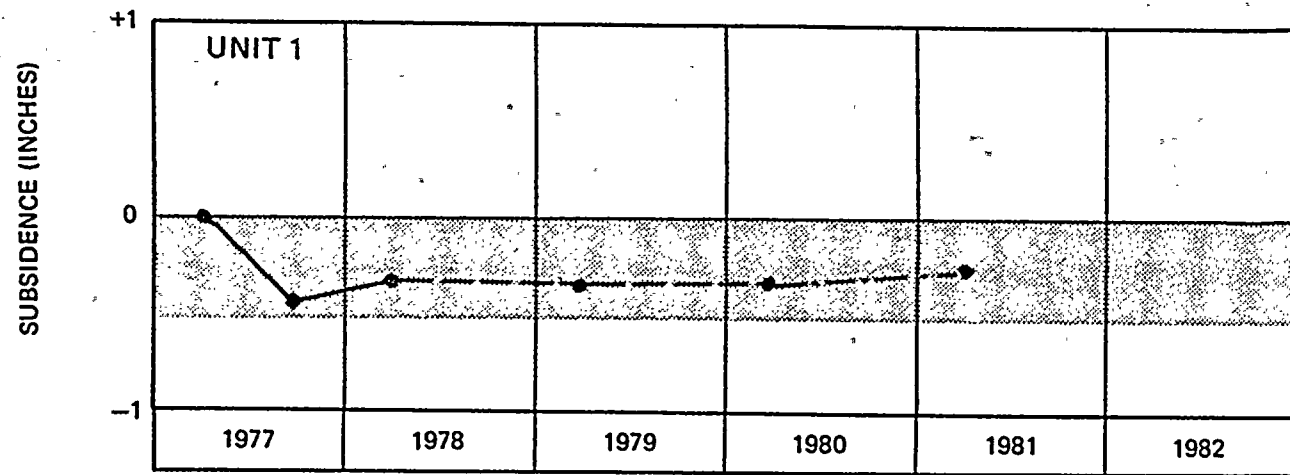
Figure 2.4-37

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MAY 10
1954

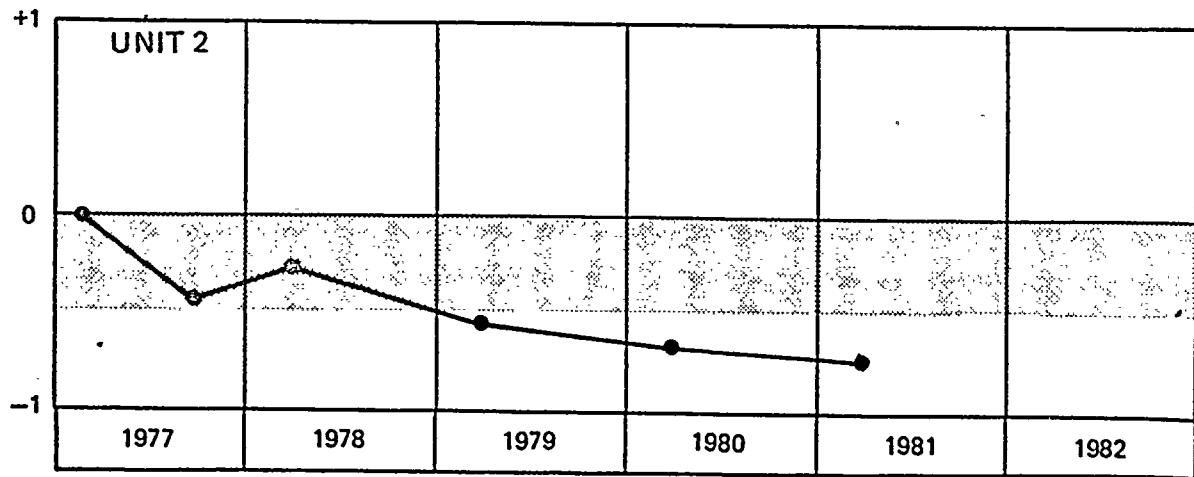
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MAY 10
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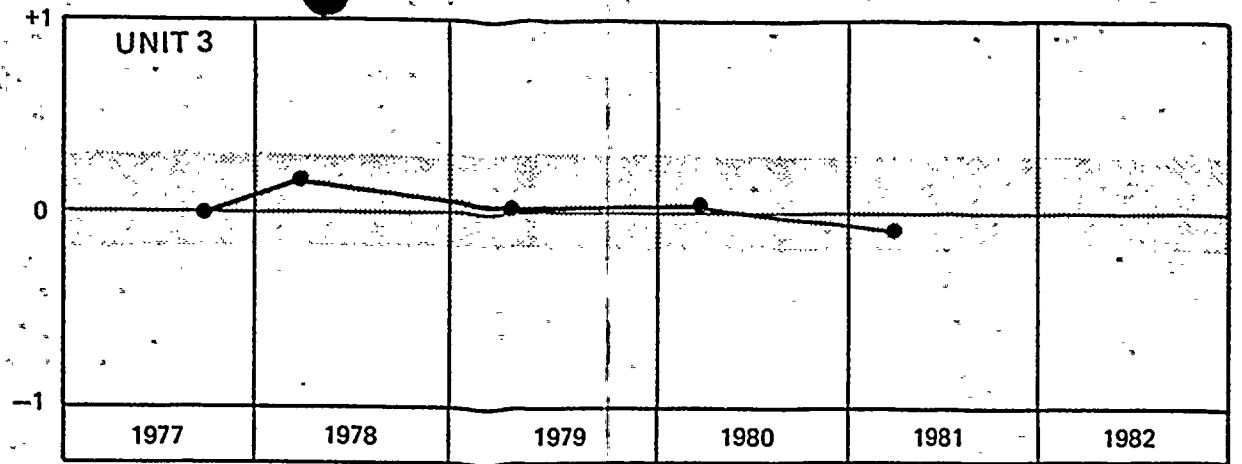
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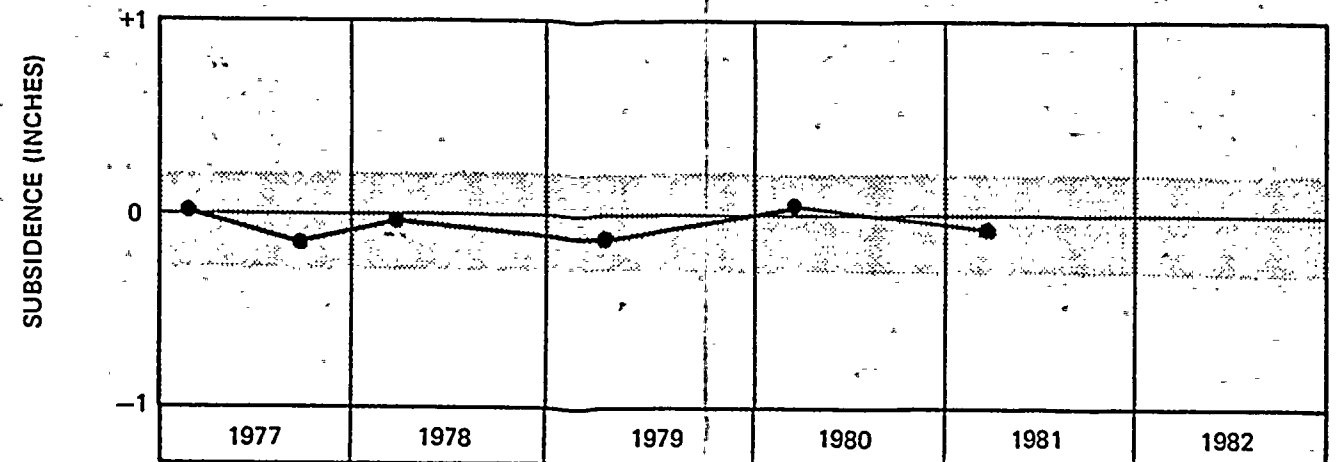
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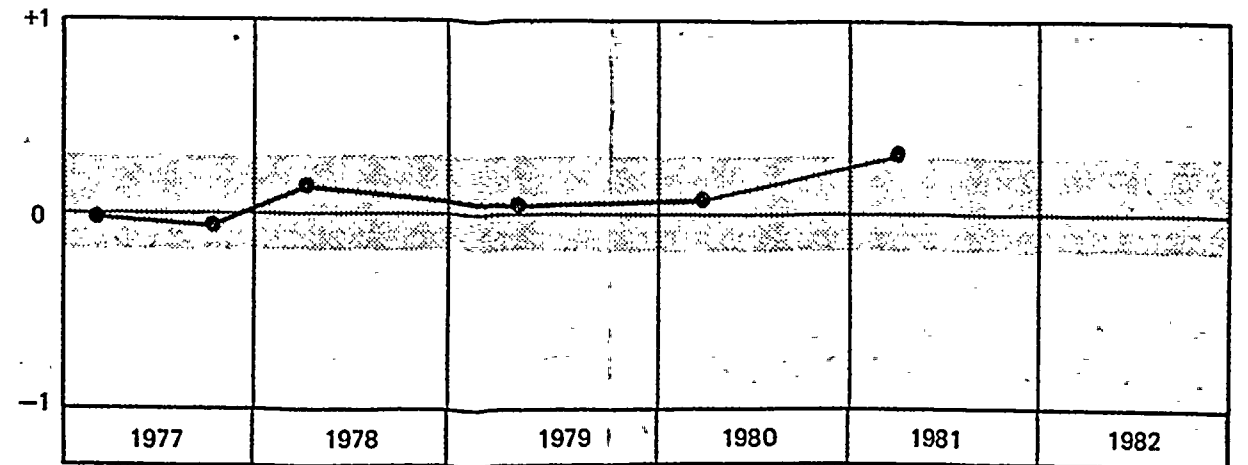
BM-2-1



BM-3-1



PV-2




PV-3

NC ES: Plots represent surveyed change in elevation with respect to BM-PV-1, located on a rock outcrop and assumed to be stable.

Shaded zone represents survey accuracy (+0.25").

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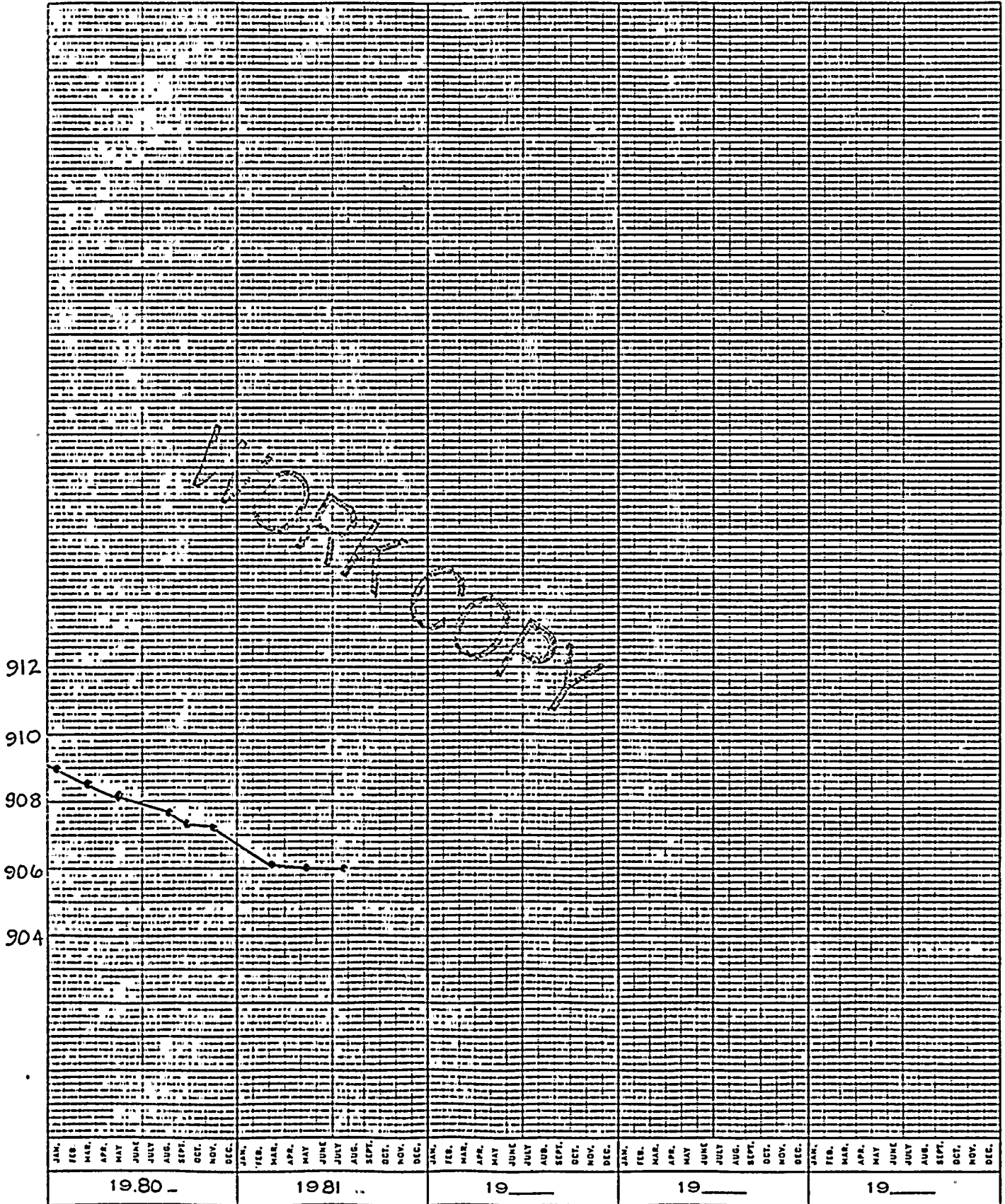
**Palo Verde Nuclear Generating Station
FSAR**

GROUND DEFLECTION RECORDS
SUBSIDENCE MONITORING NETWORK
2.4-96

CARD
MEMBER
1954

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U4-H2

FIGURE 2.4-37 2 Pgs.

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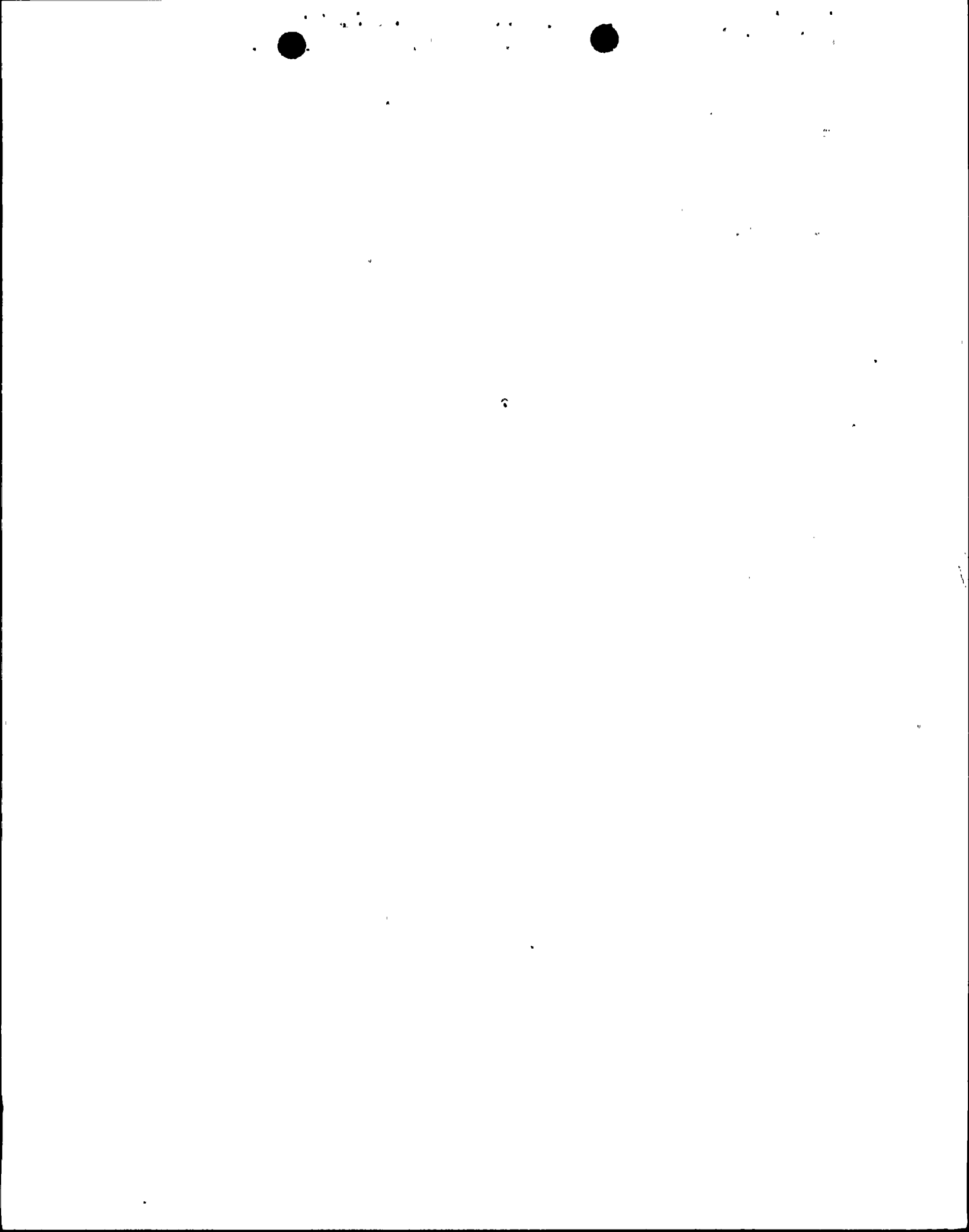
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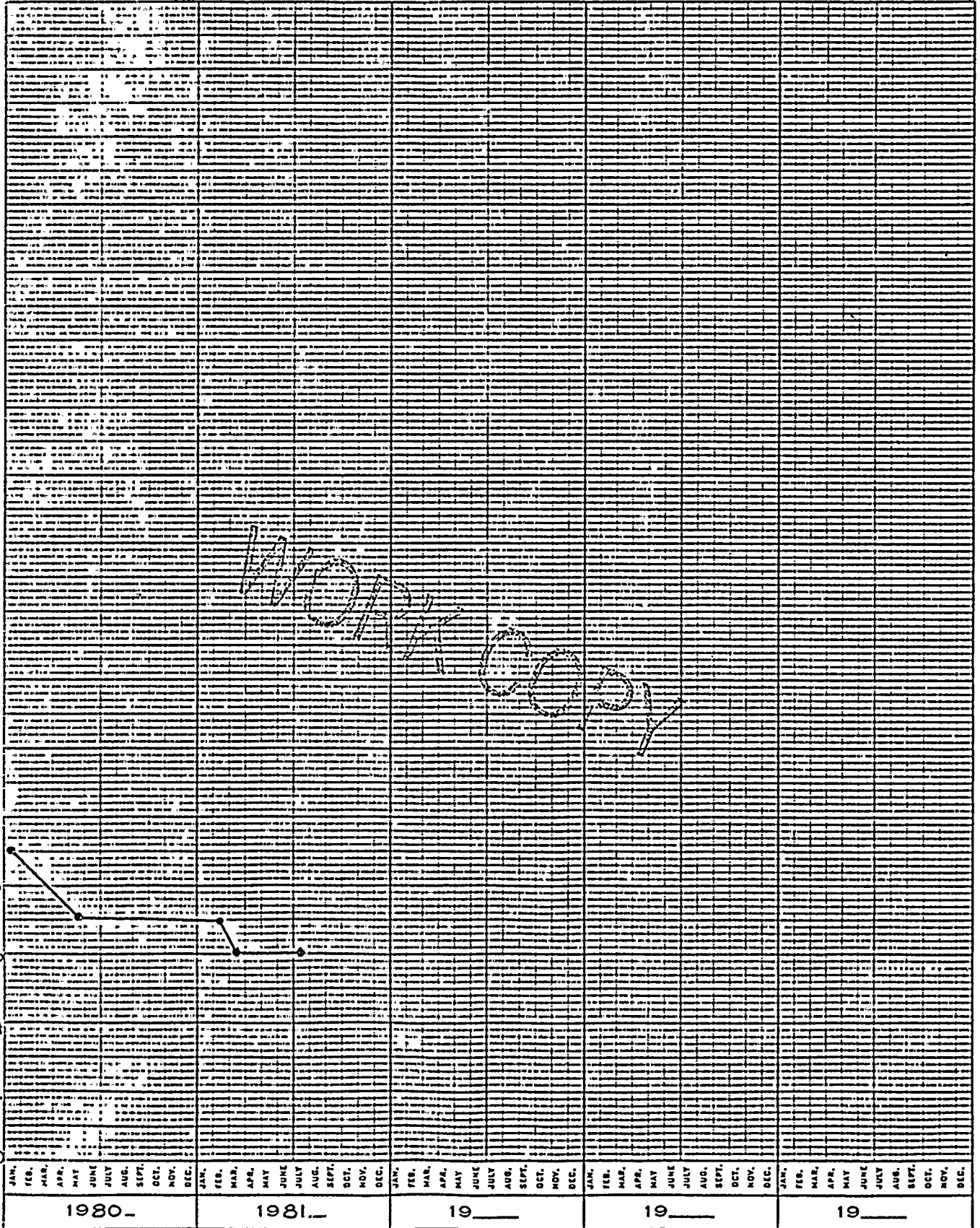
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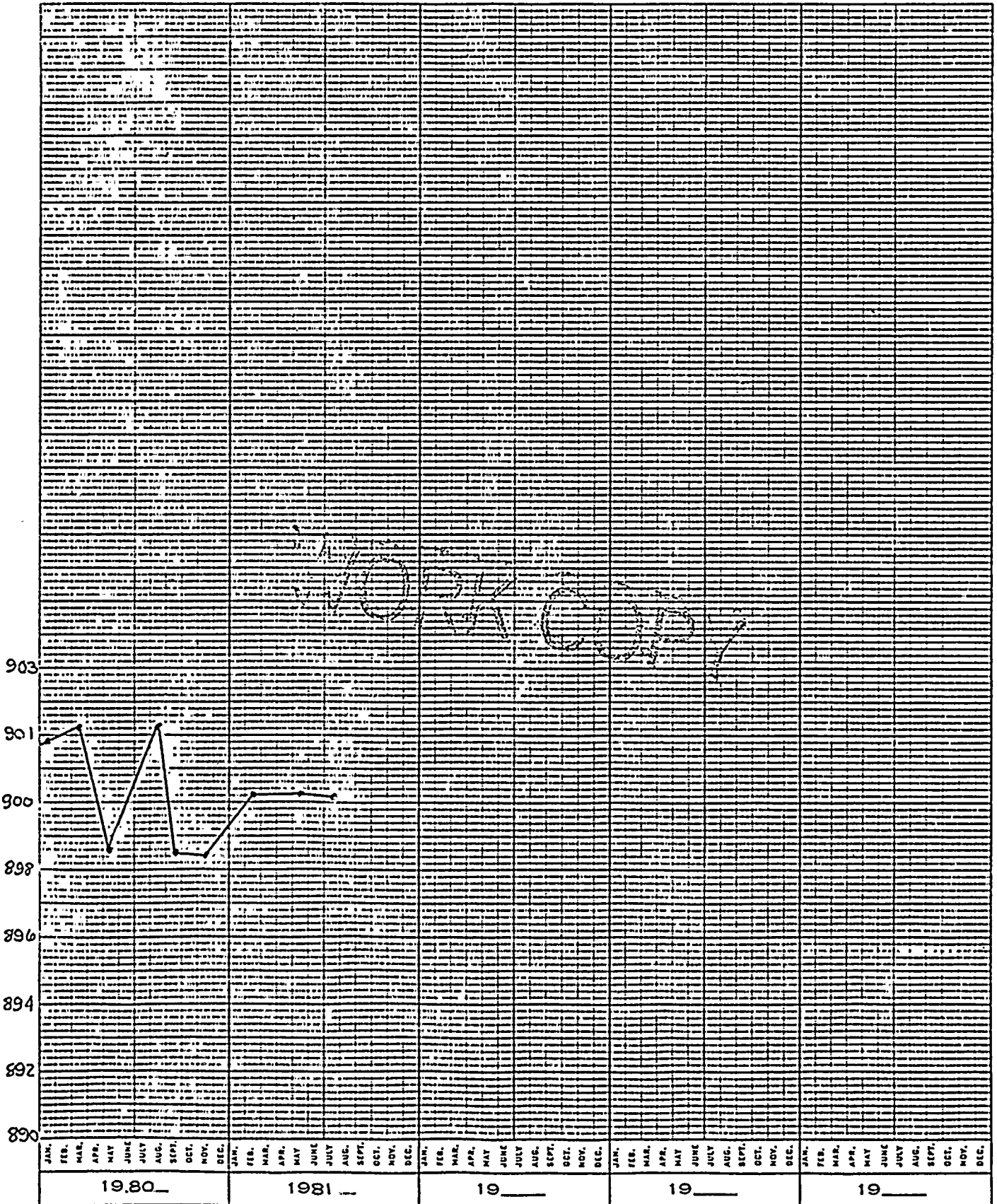
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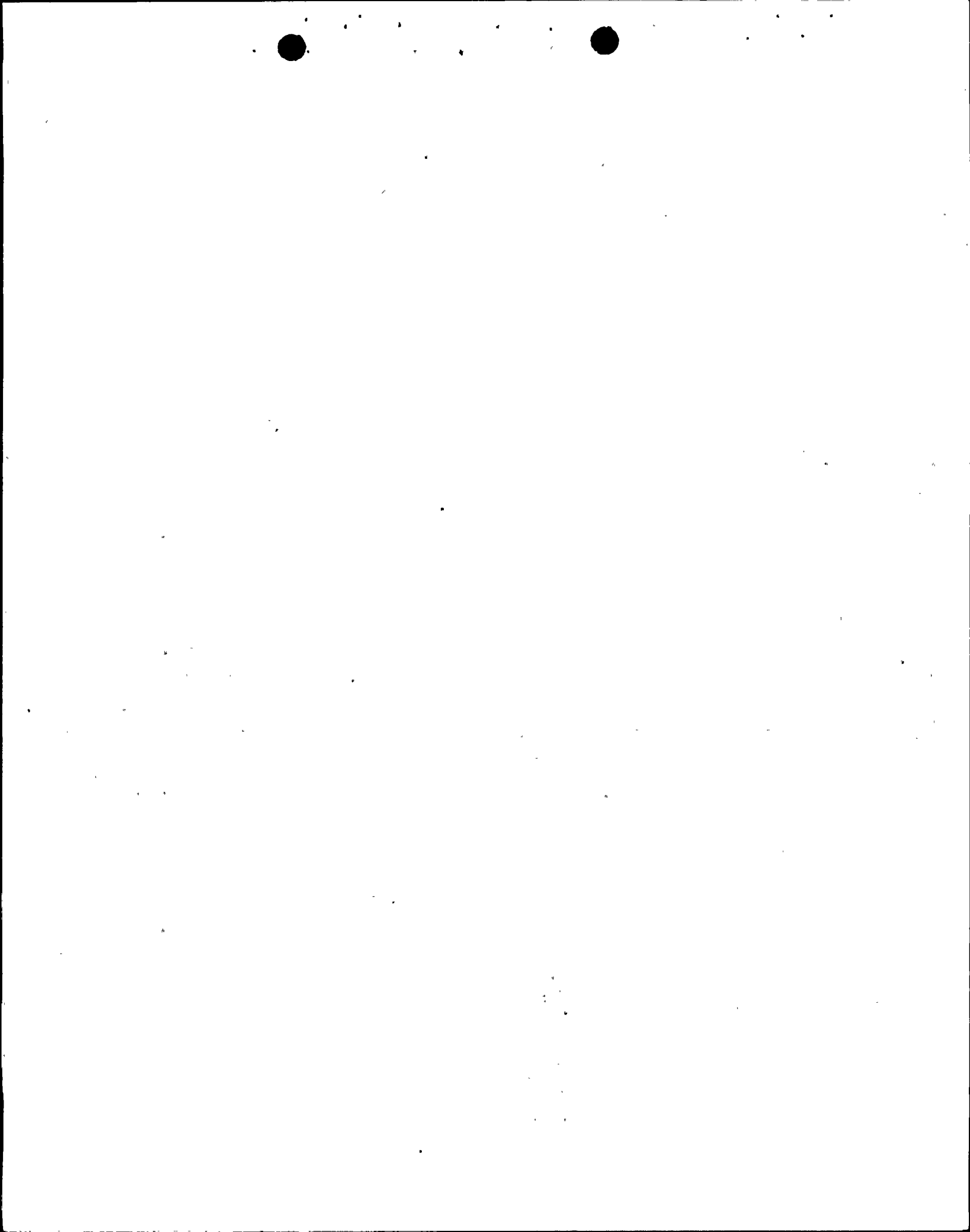
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PV-Q5



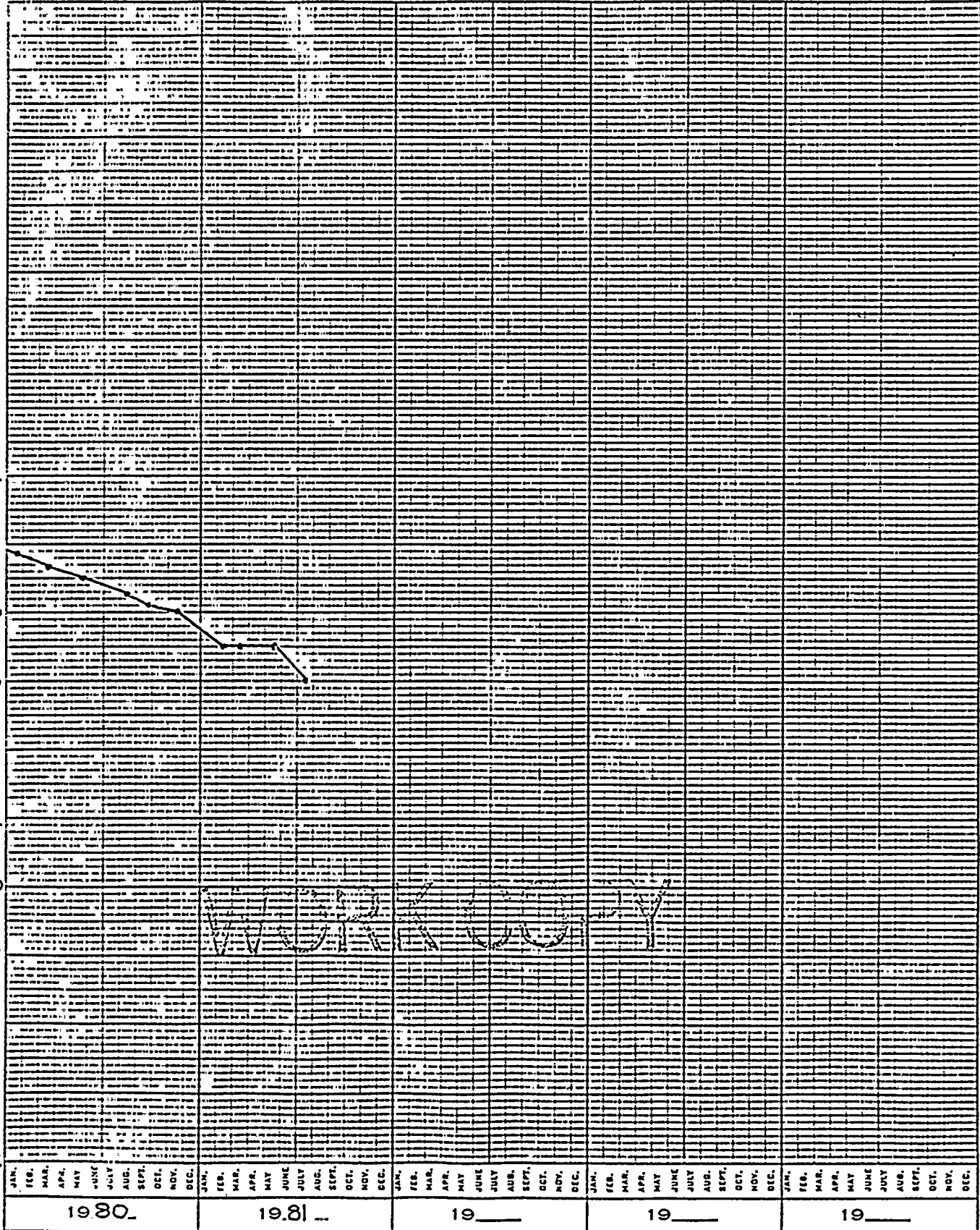
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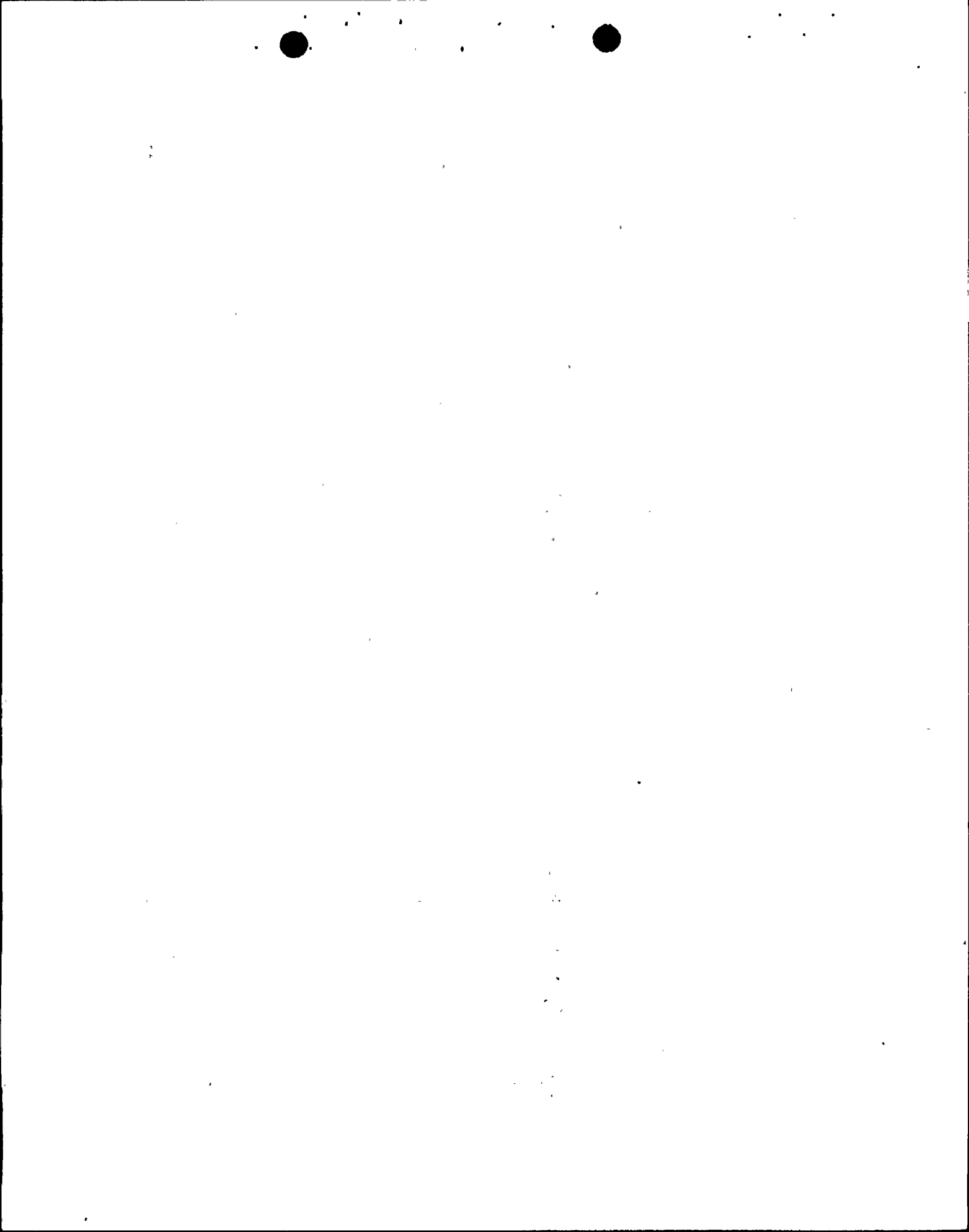
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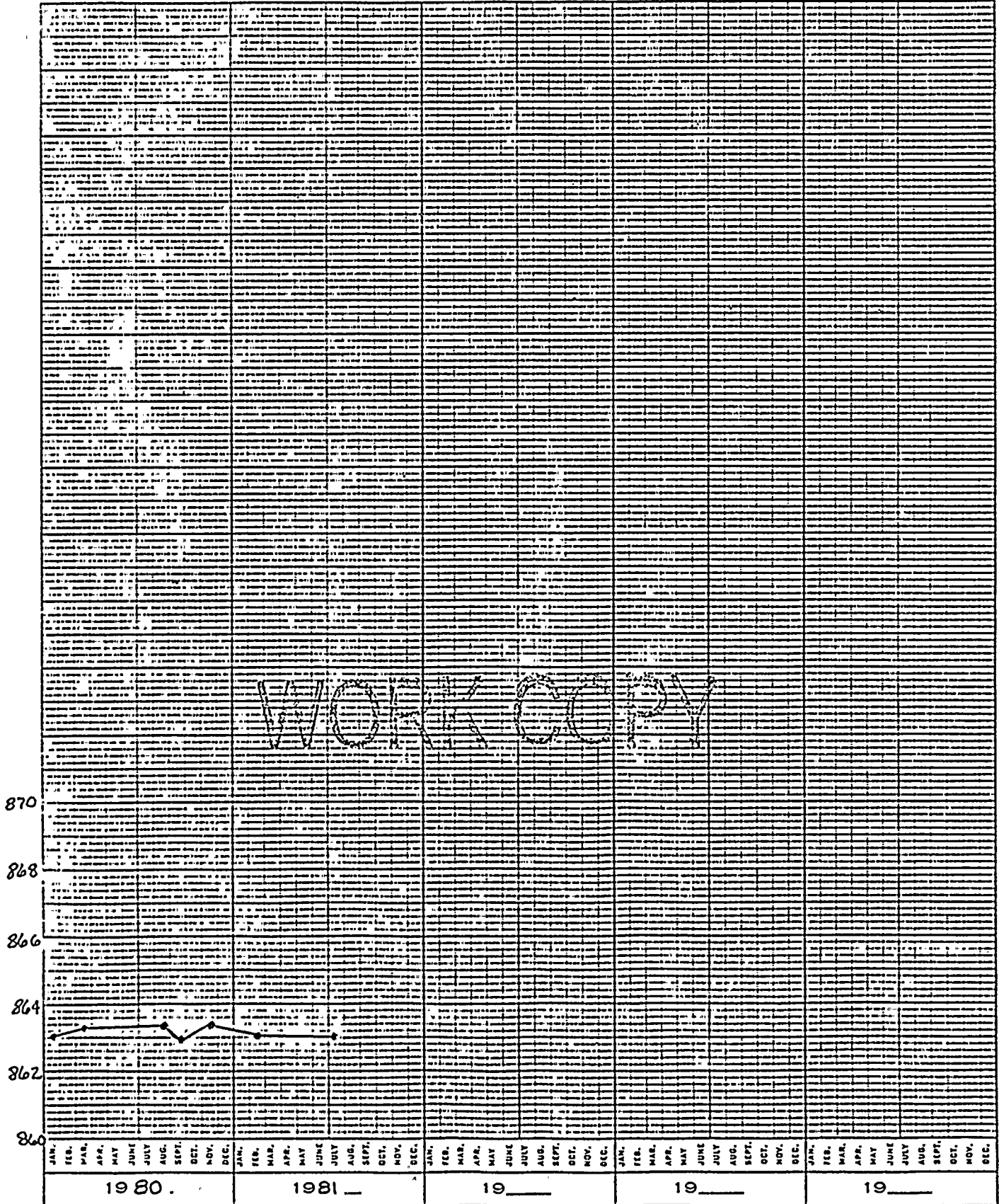
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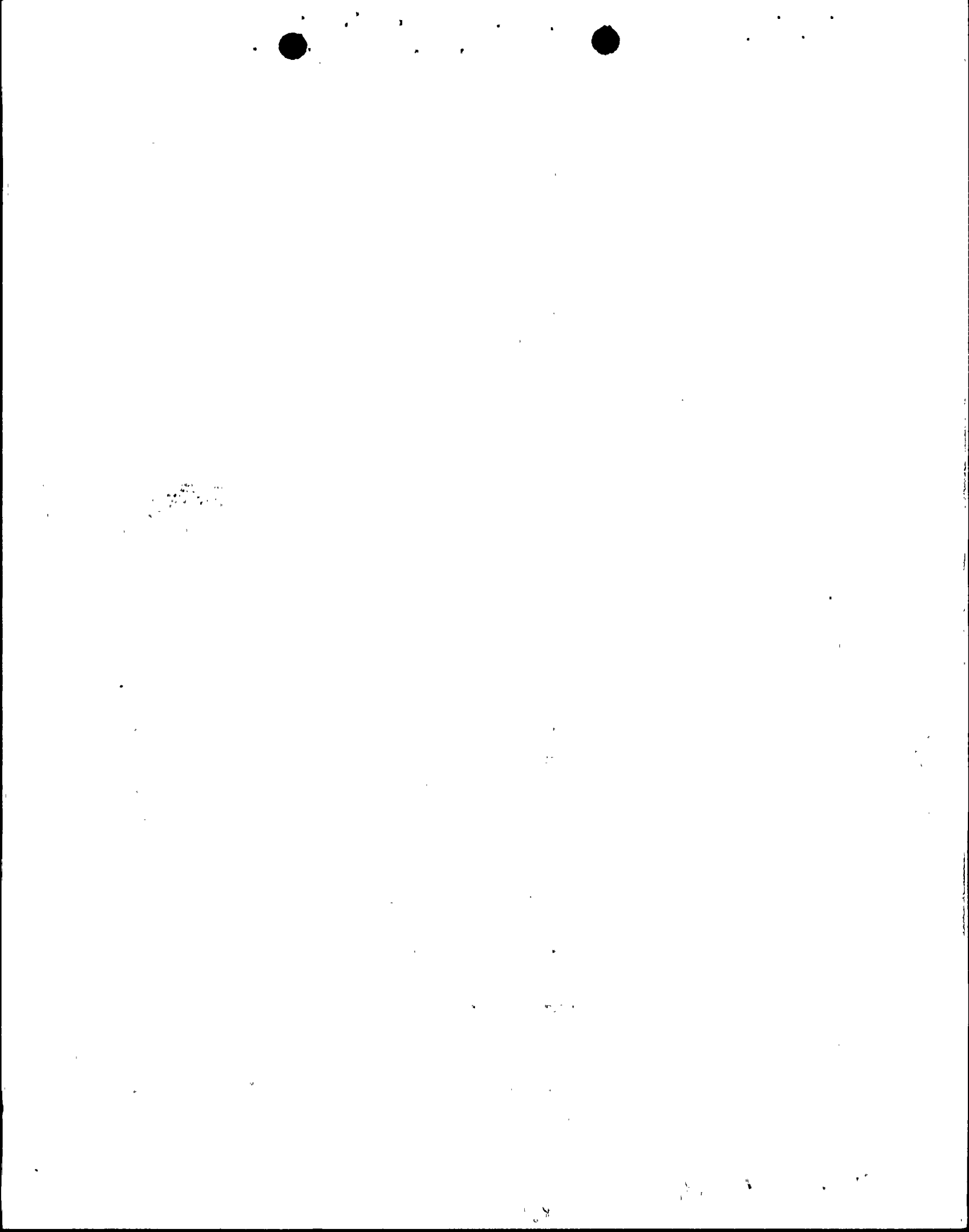
PV-Q1





PV-R2

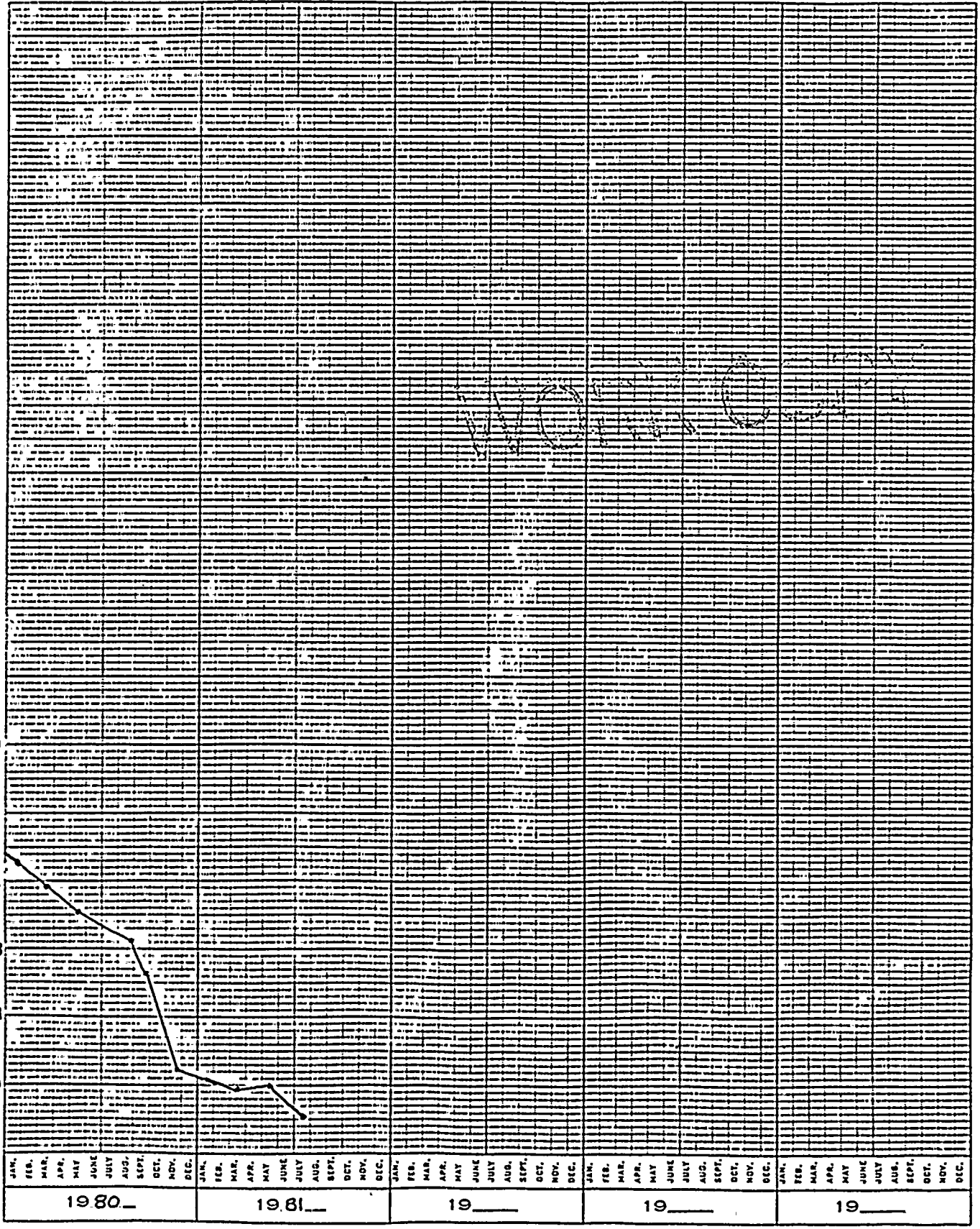
FIGURE 2.4 - 36



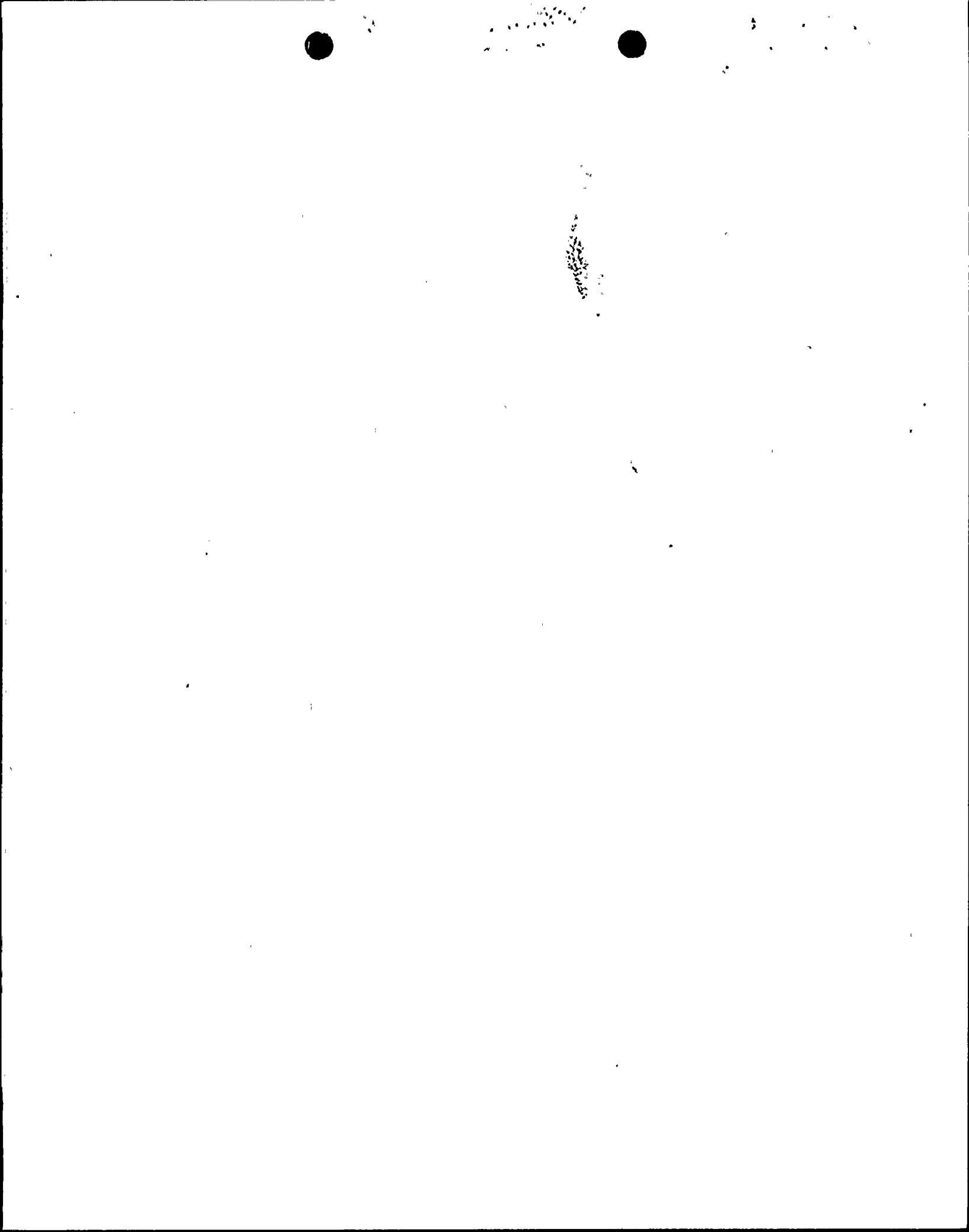
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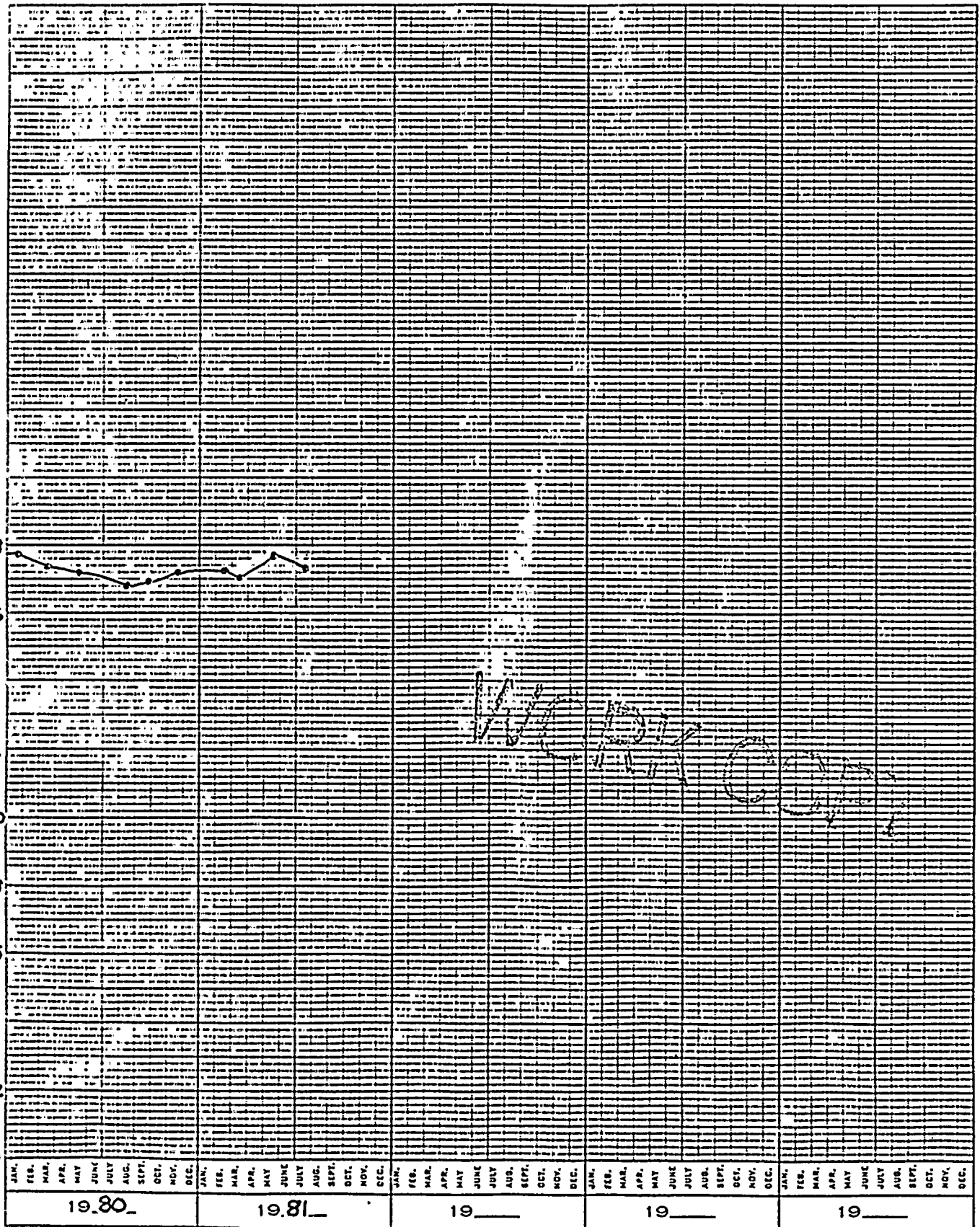
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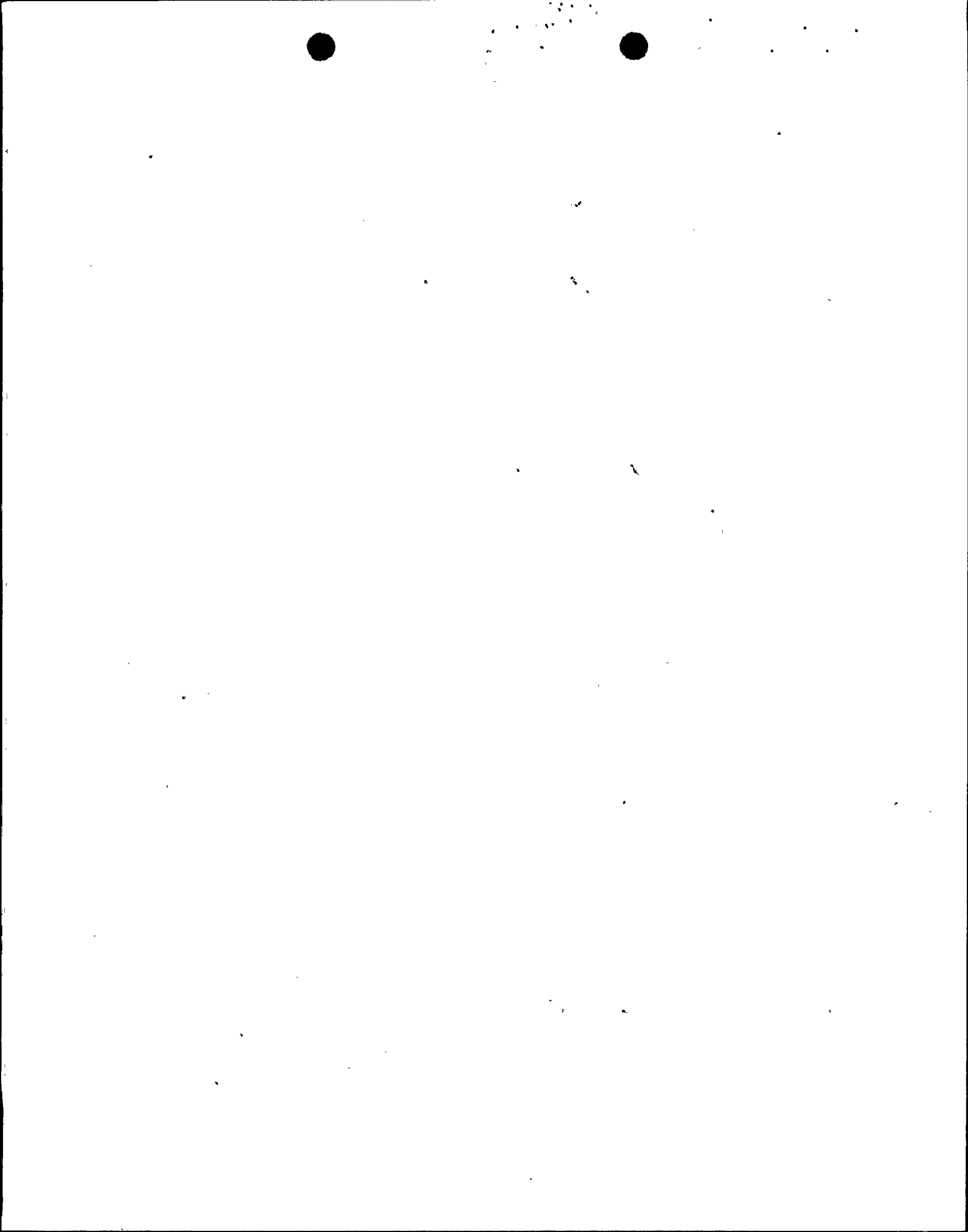
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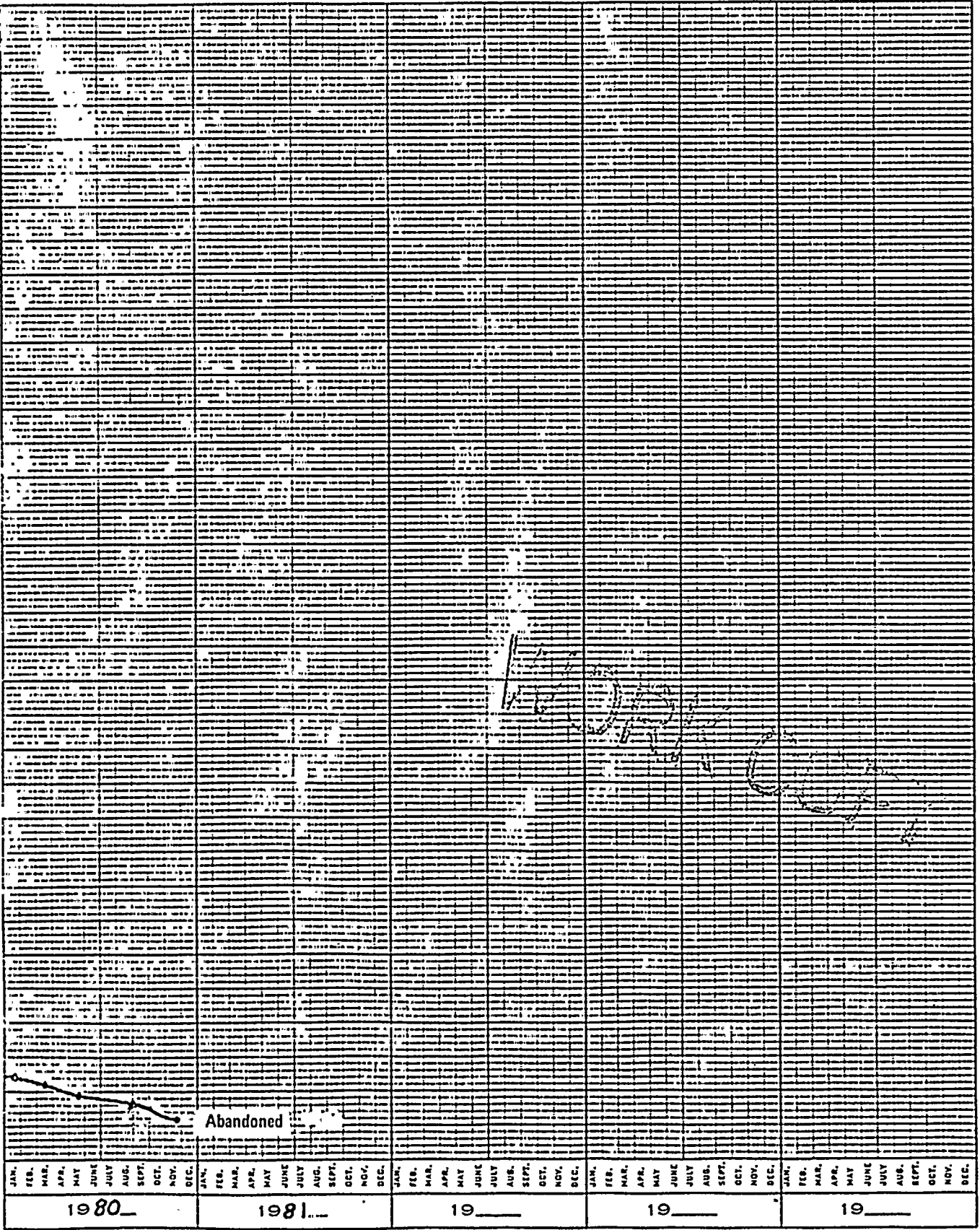
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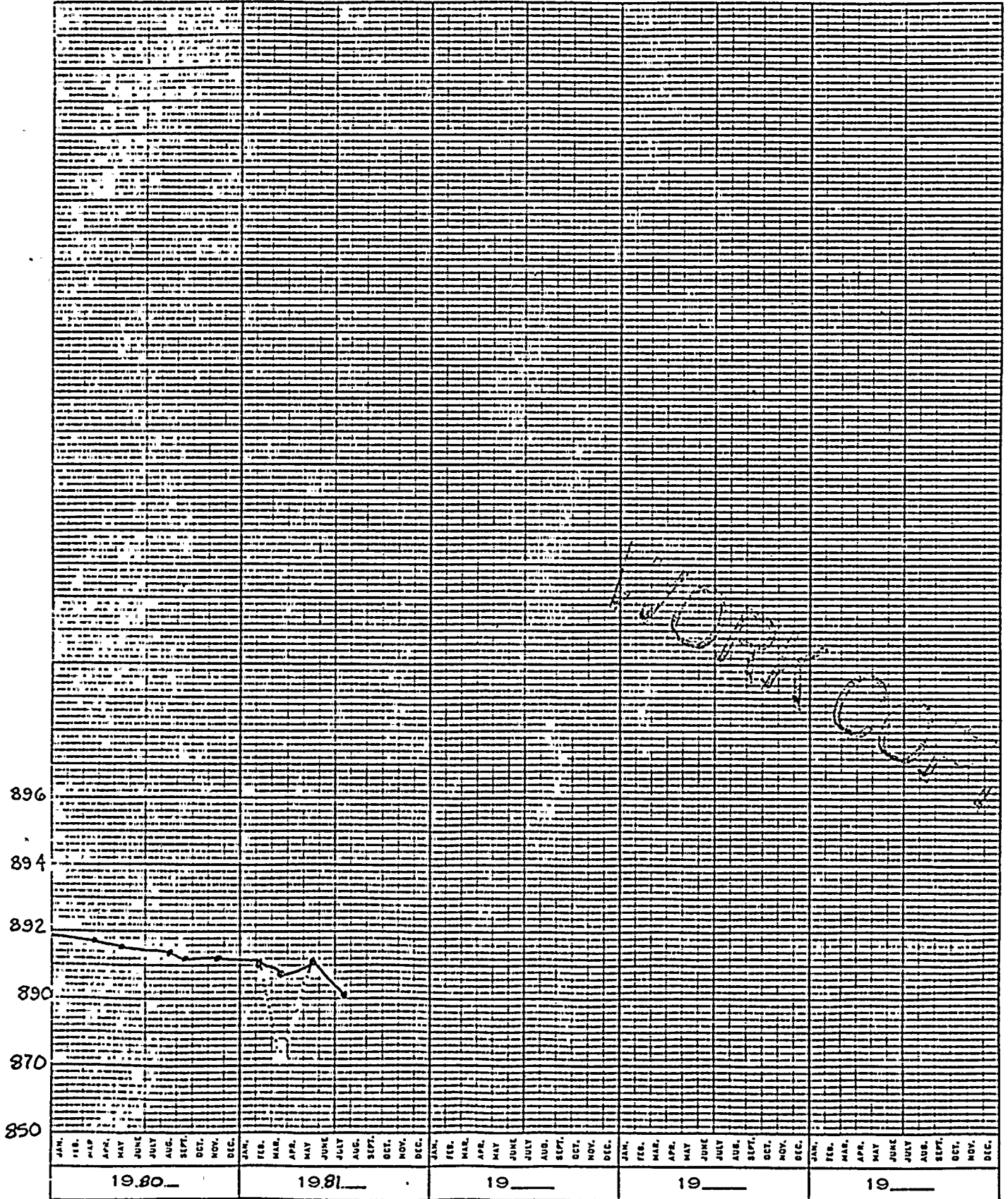
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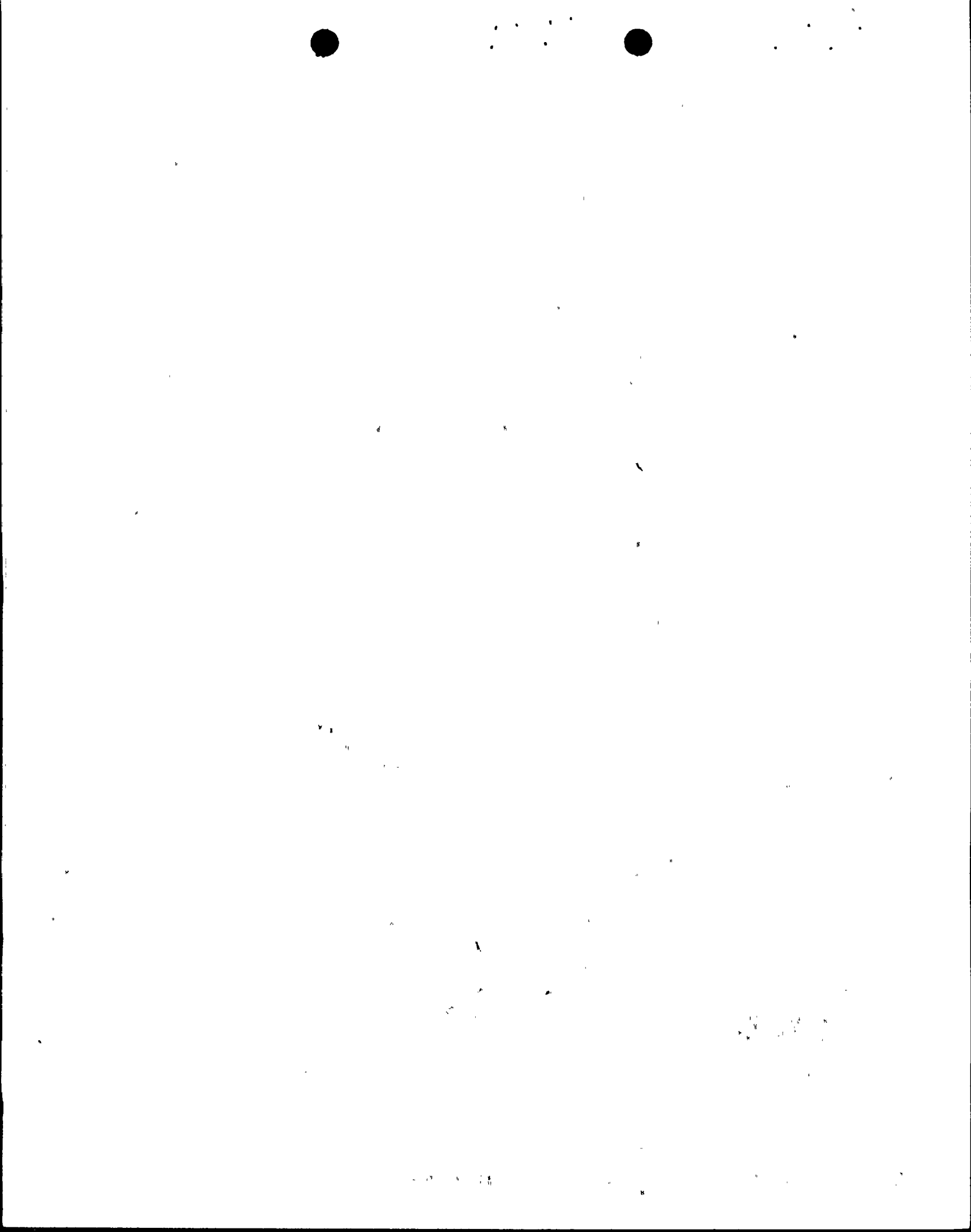


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FIGURE 2.4-34

PV-21H - PV-25H

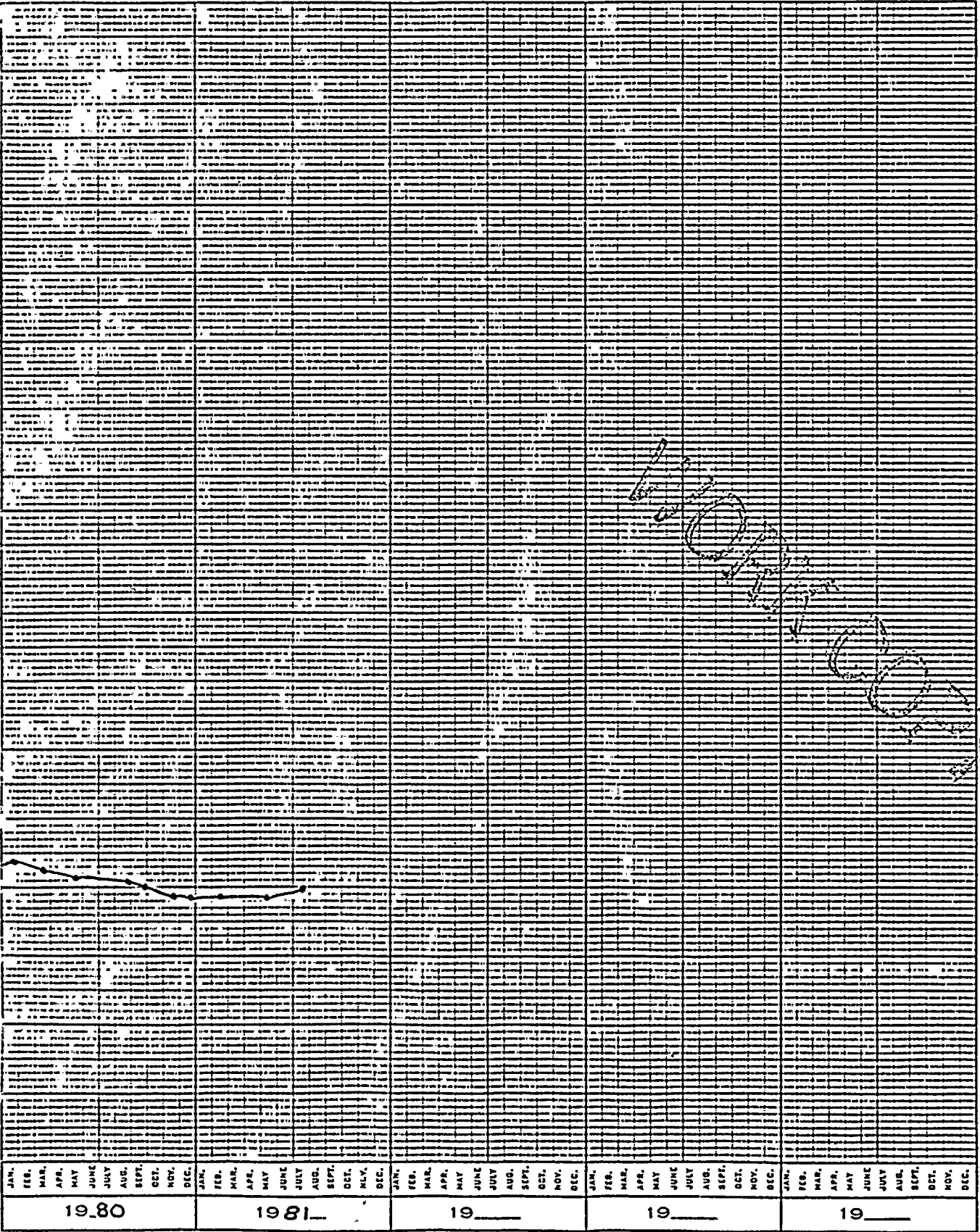
PV-21H



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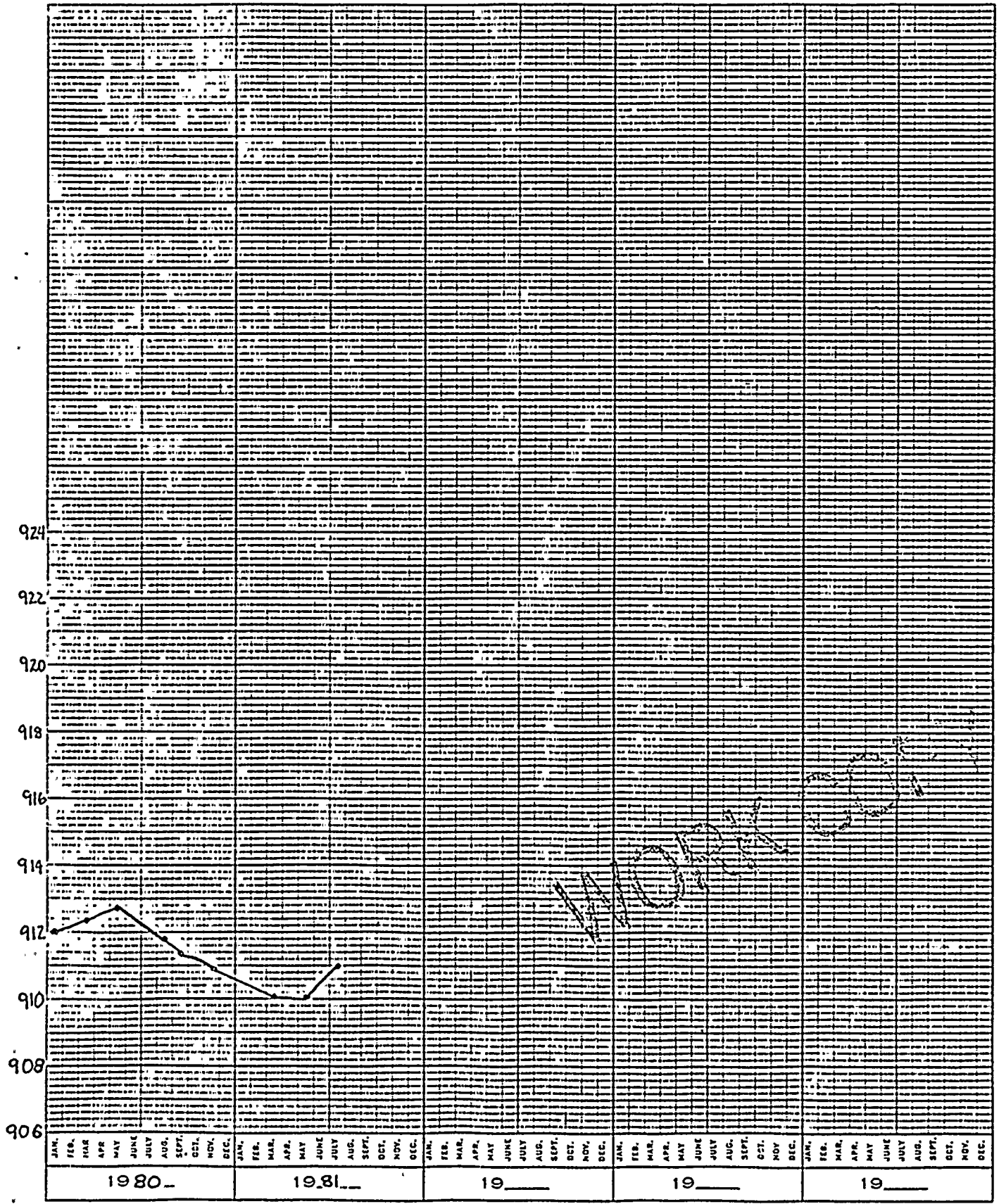


PU-14H



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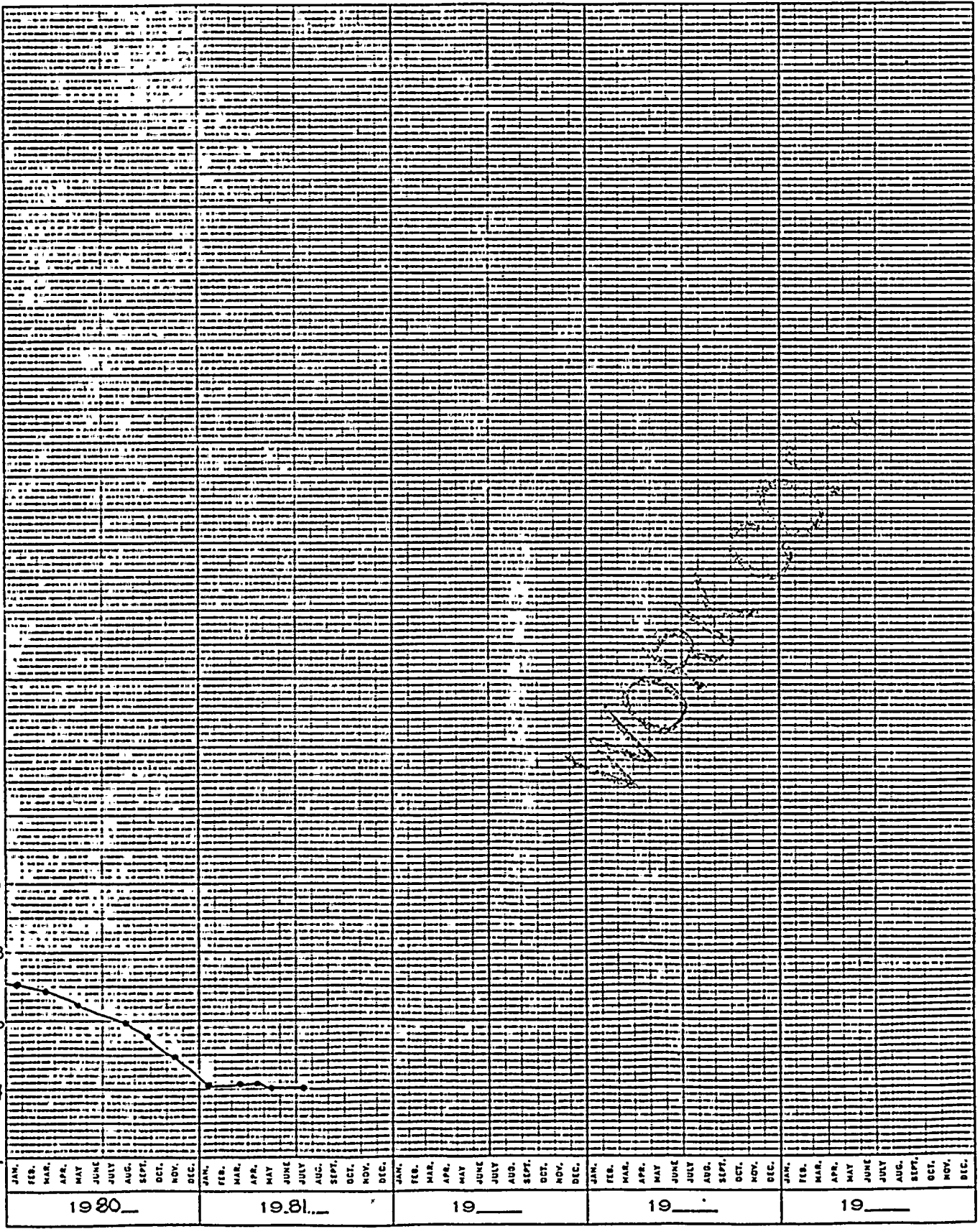
PV-28H

FIGURE 2.4-35 PV-28H - PV-34H

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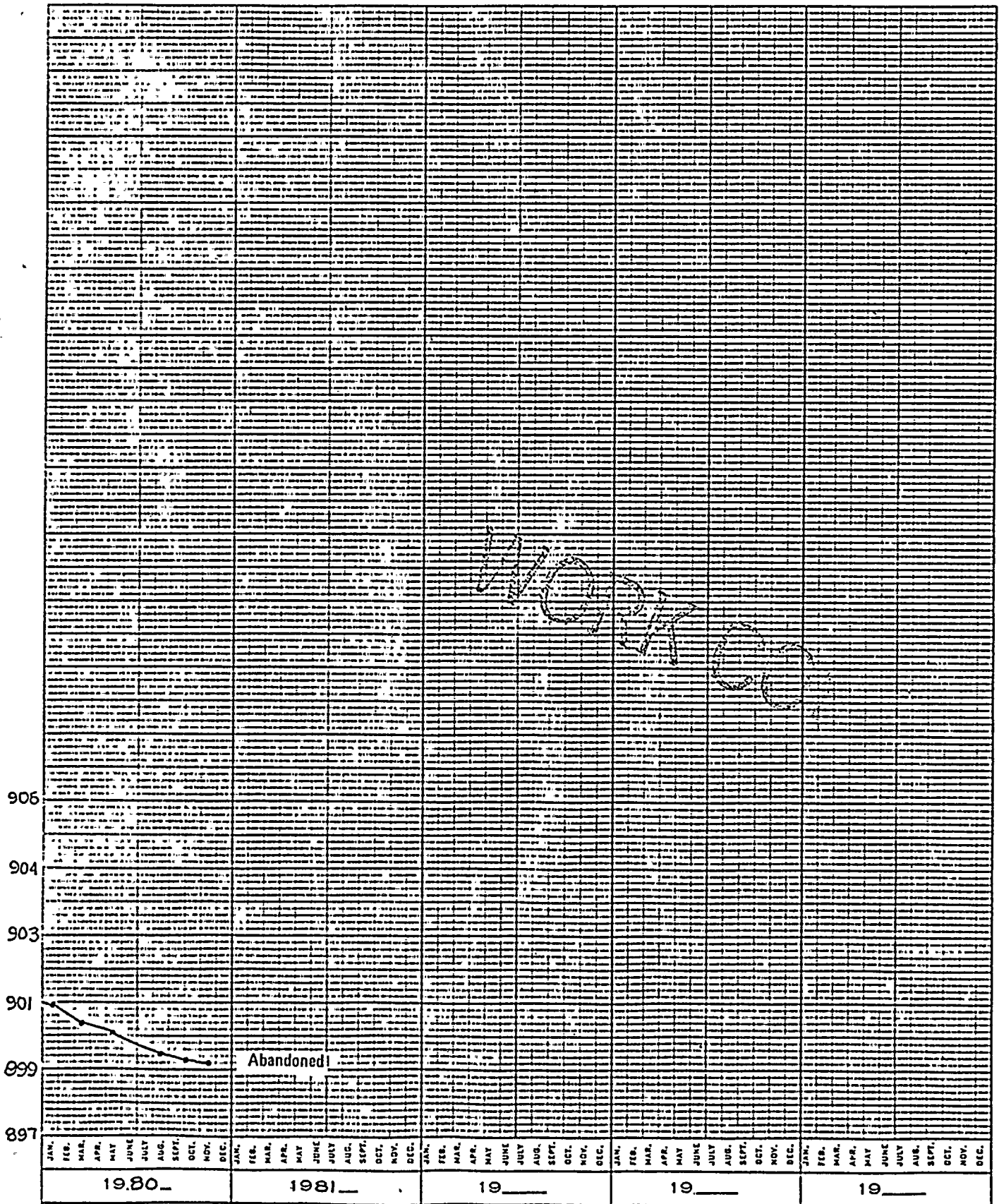
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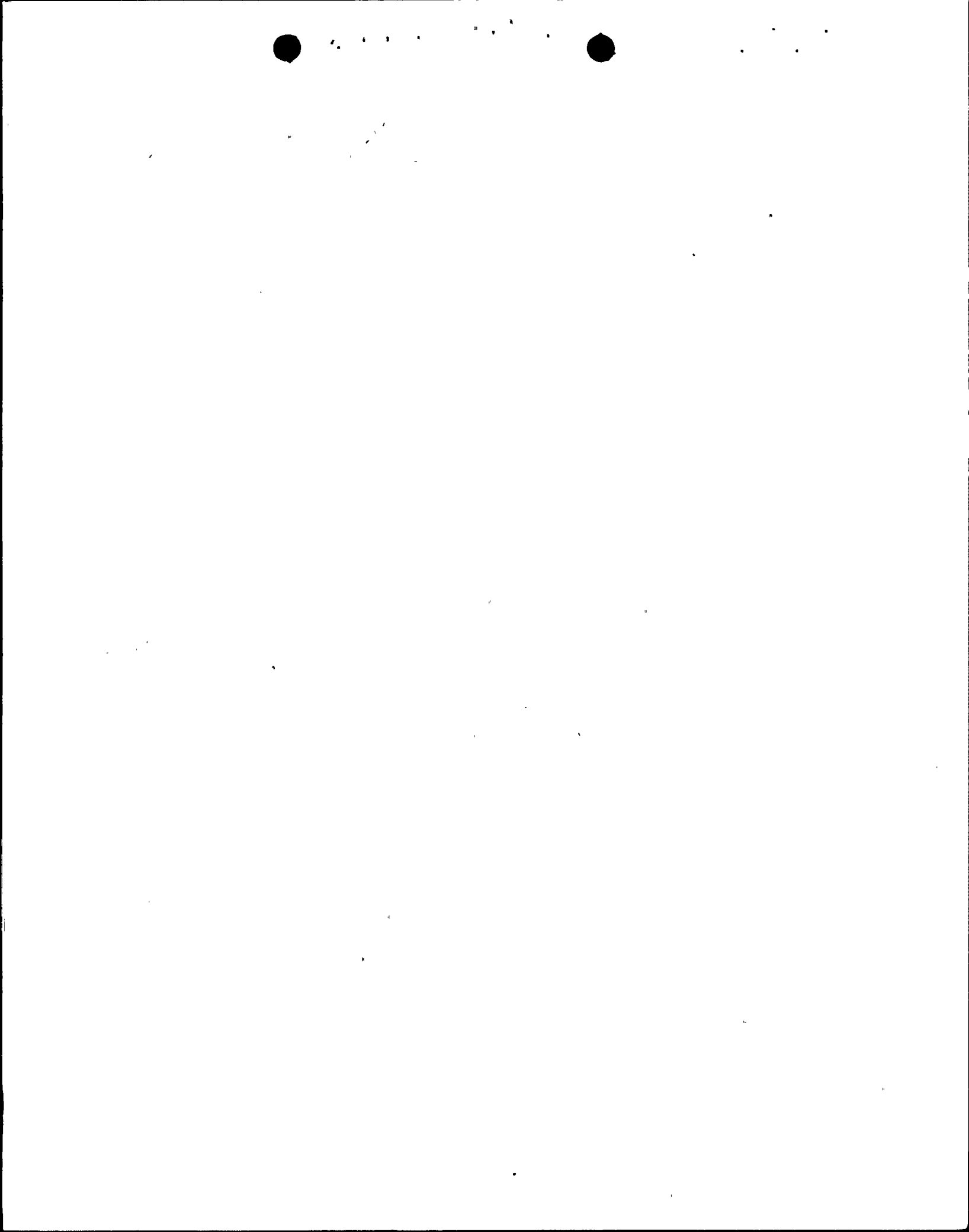
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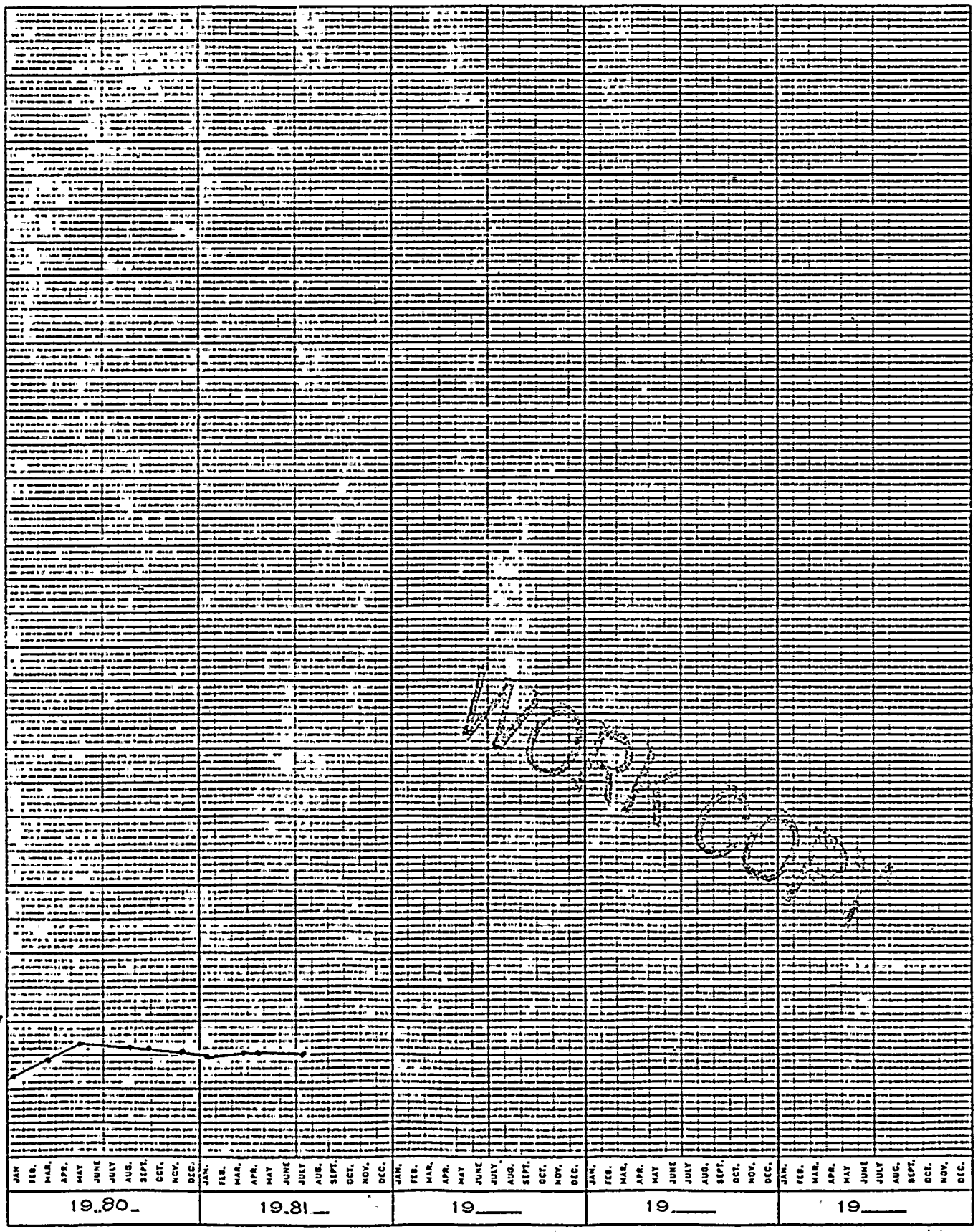
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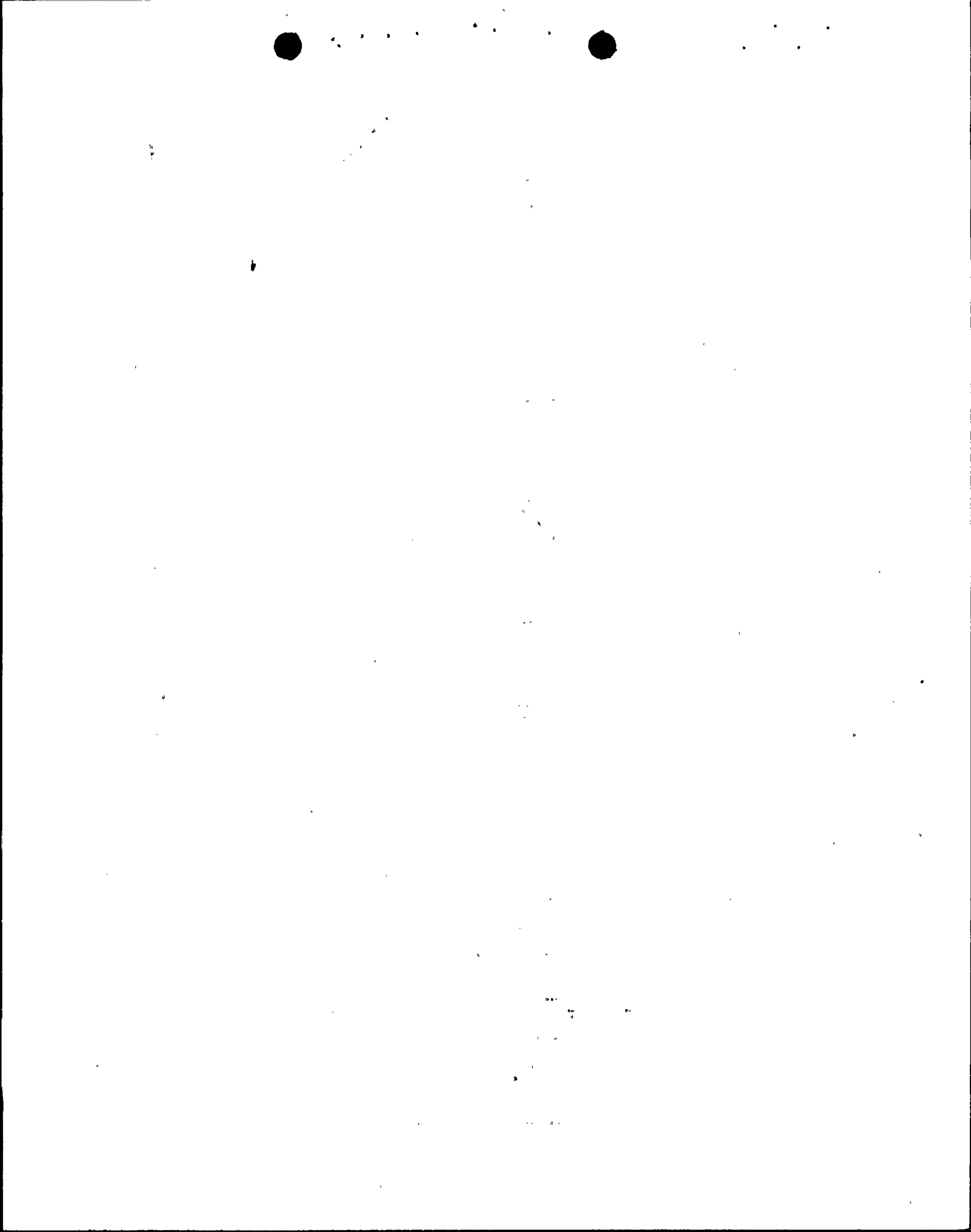
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5 YEARS BY MONTHS

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PV-31H



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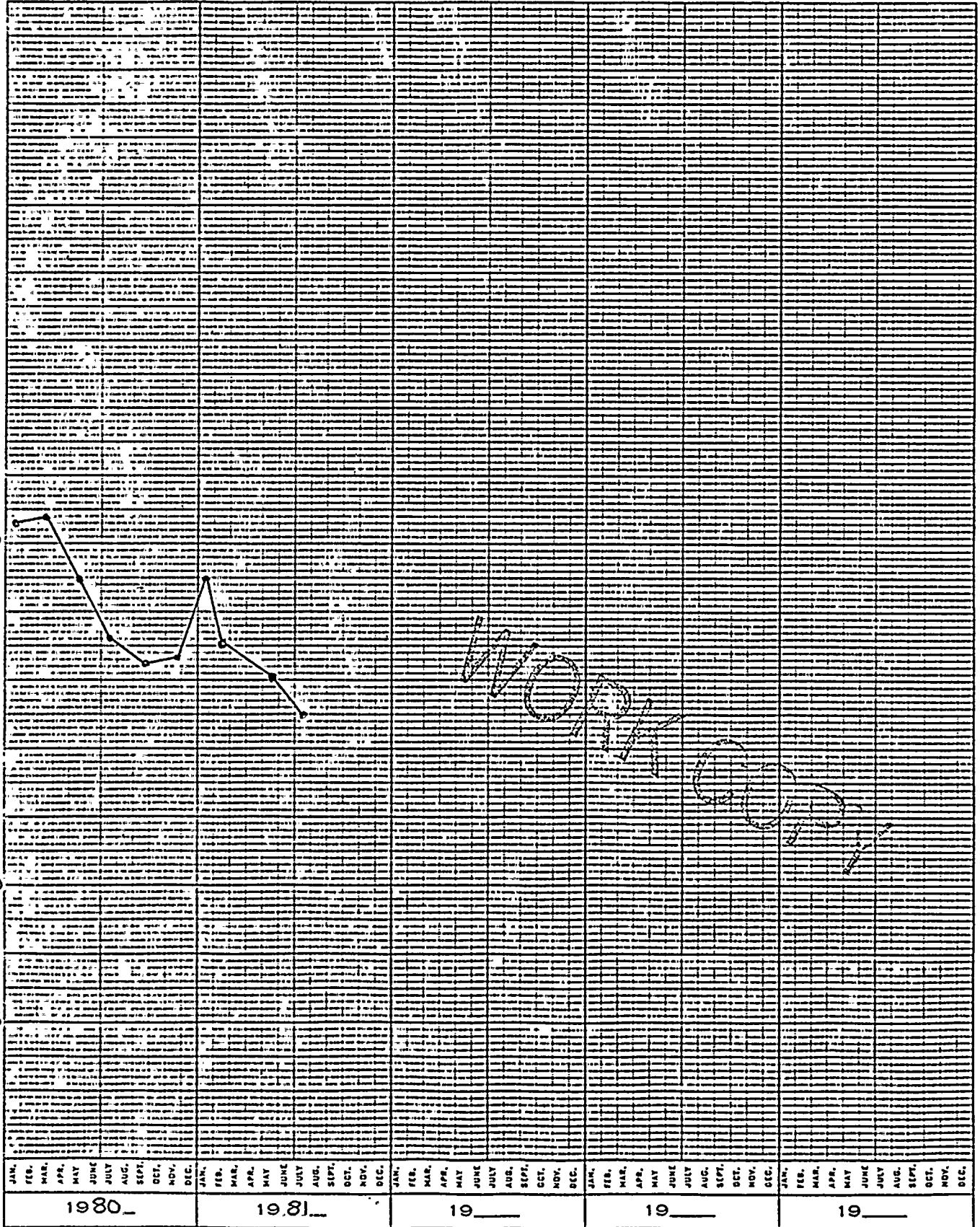
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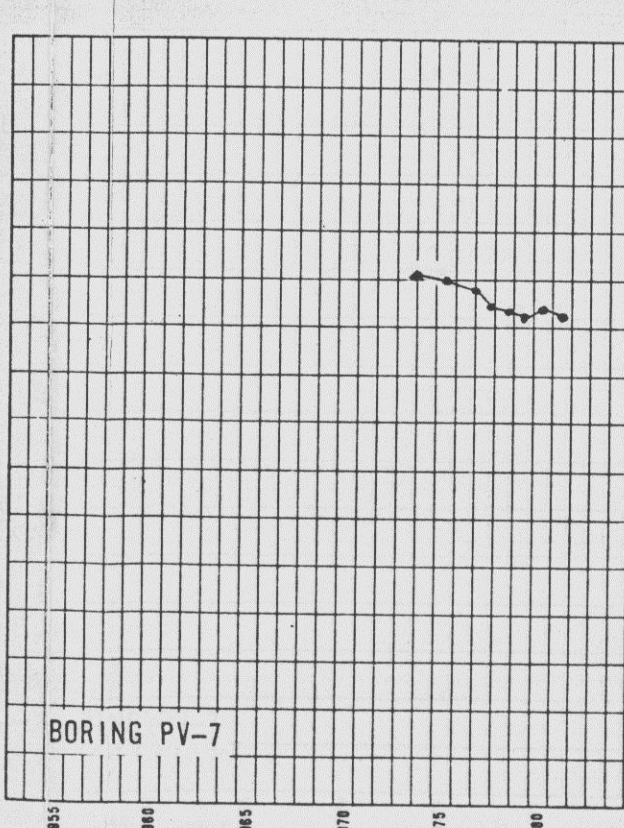
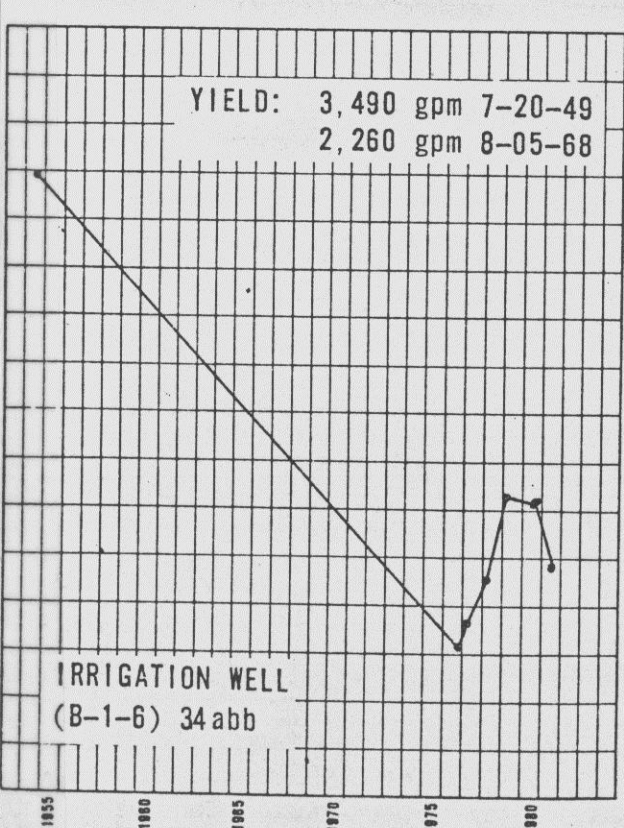
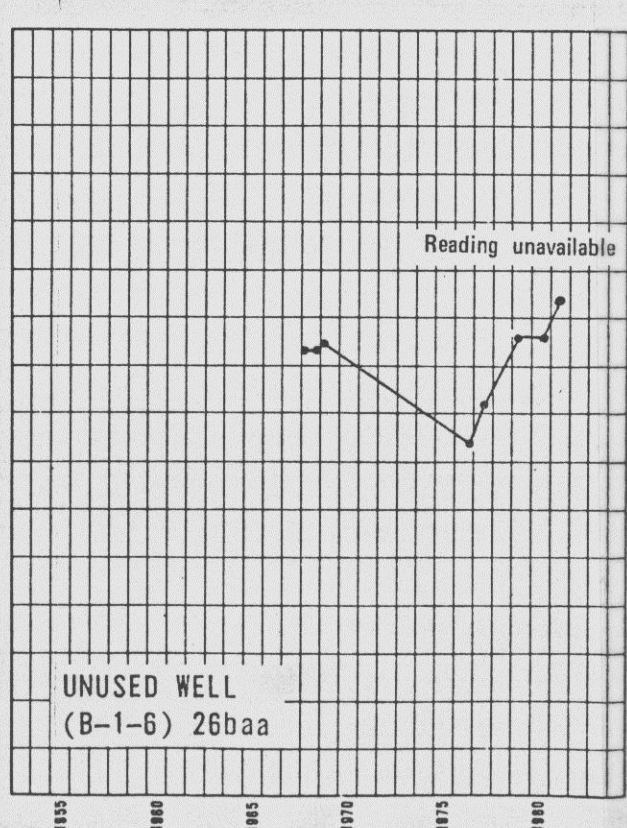
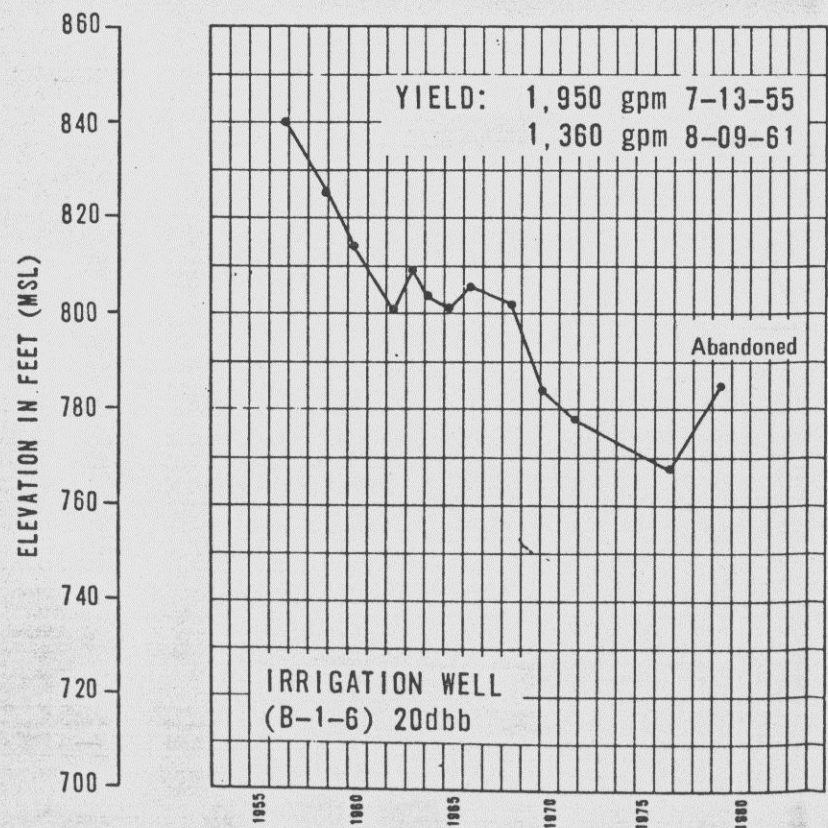
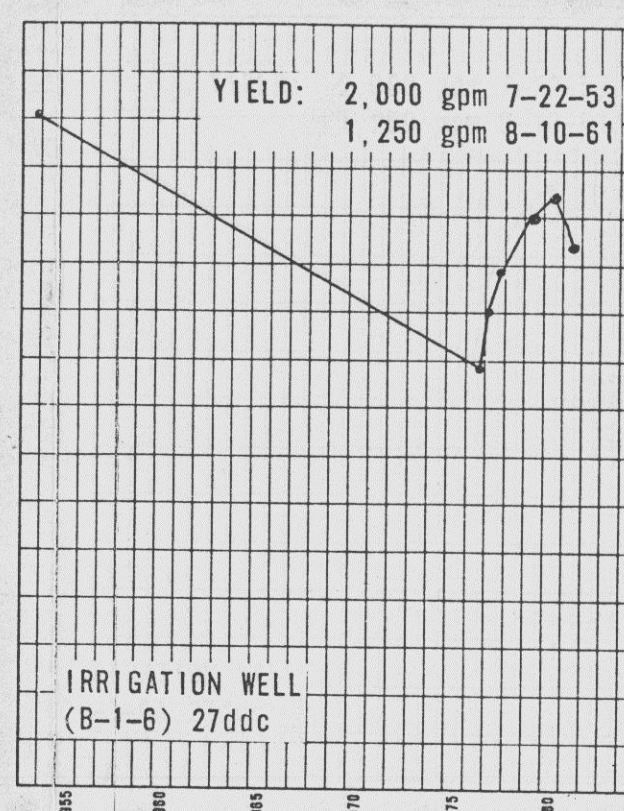
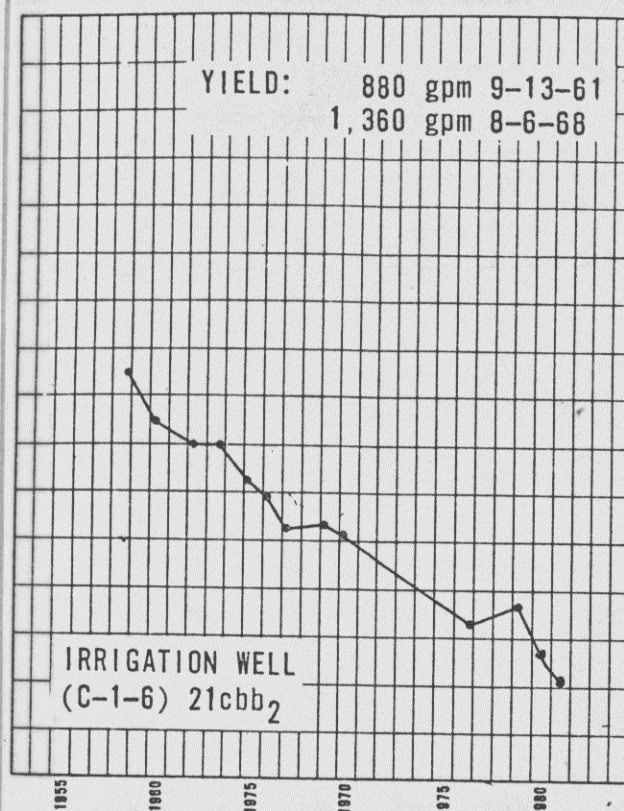
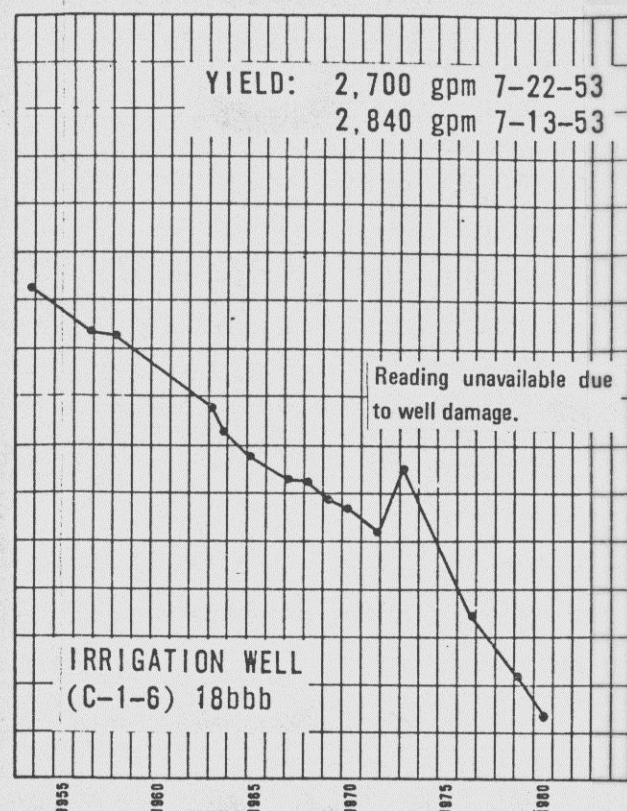
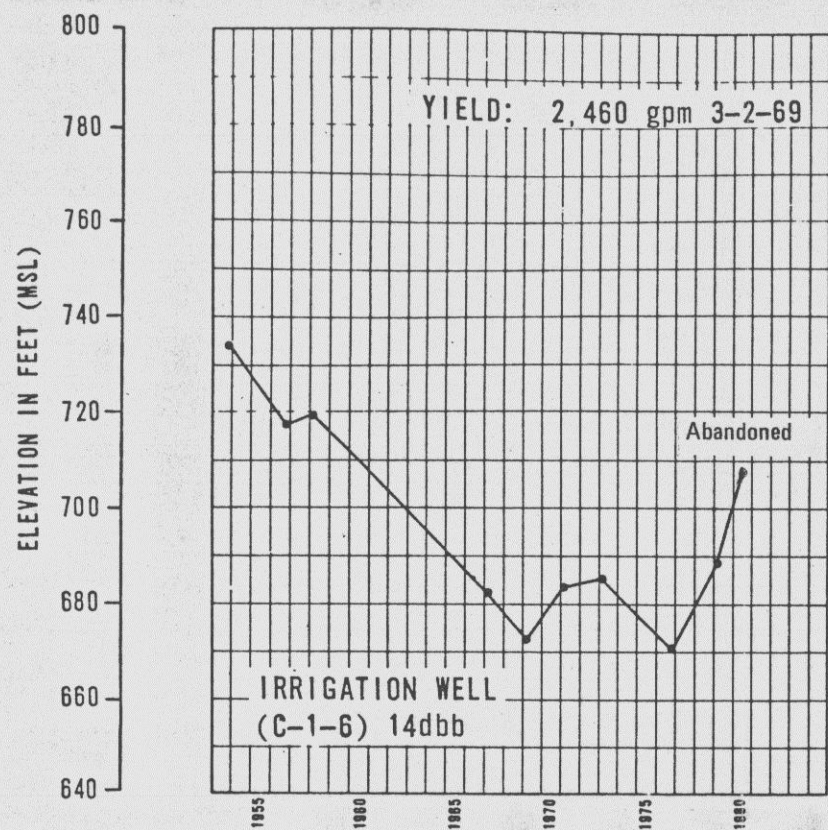
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PV-34H

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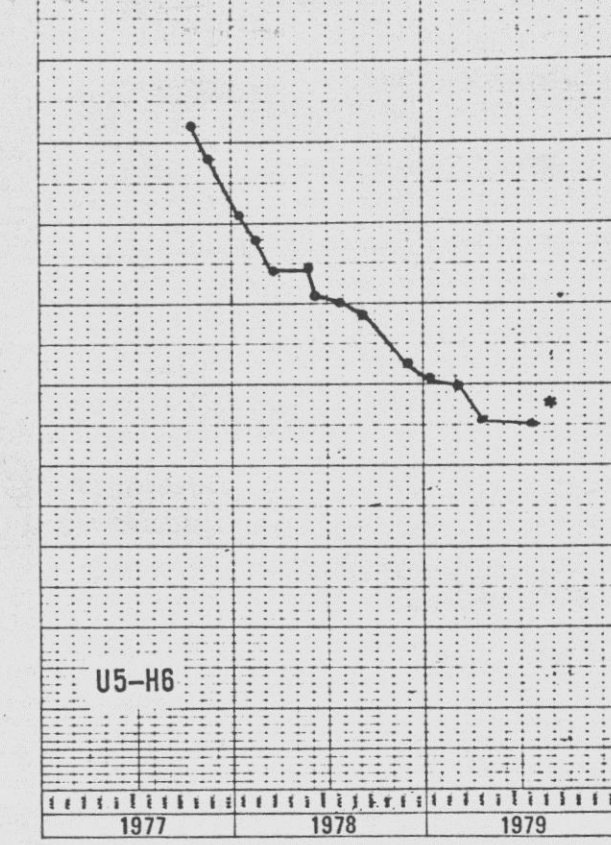
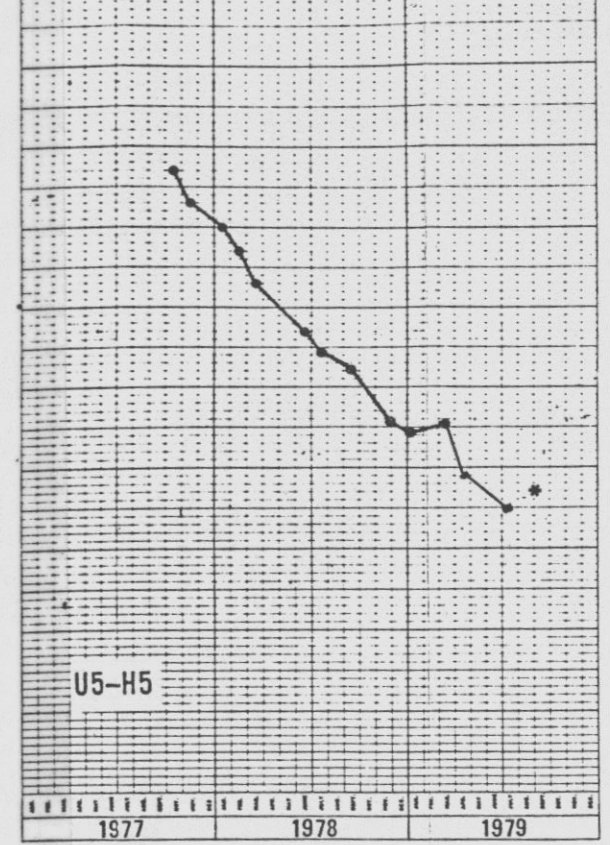
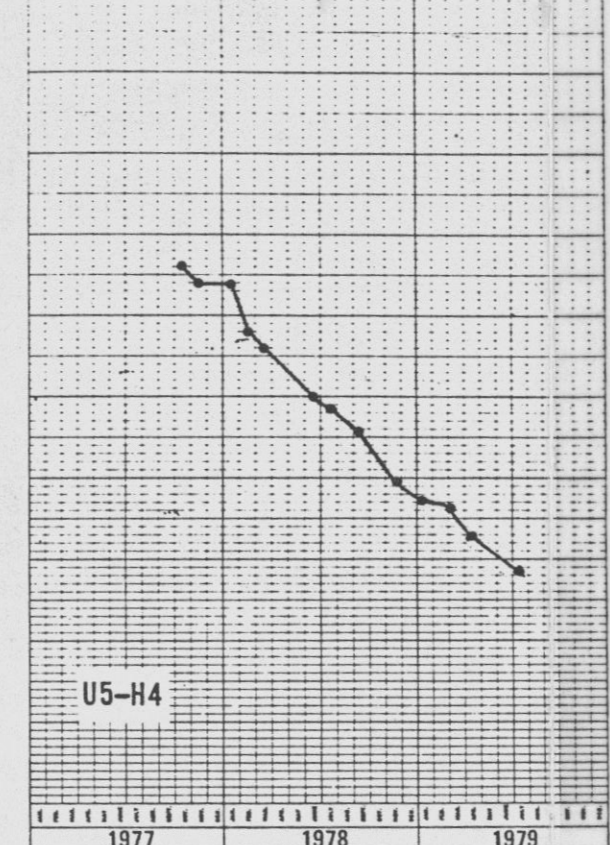
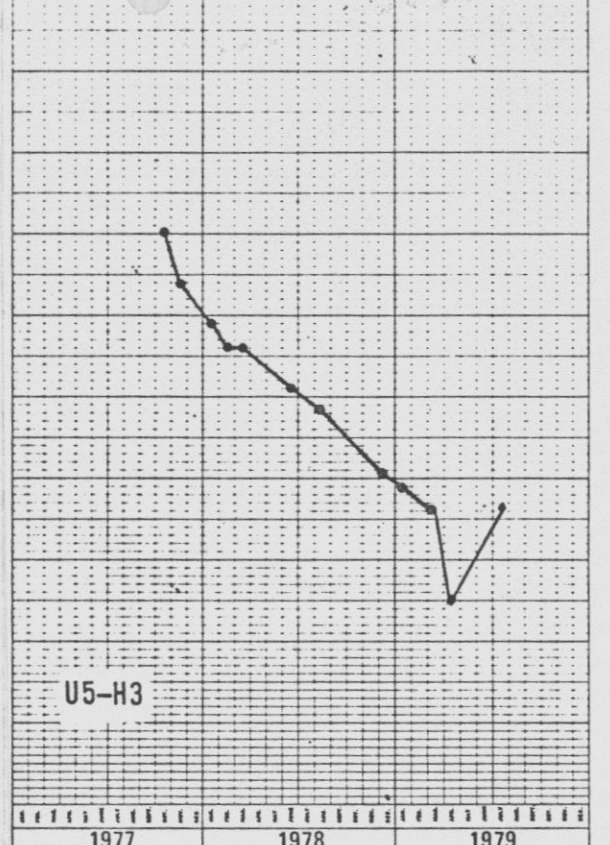
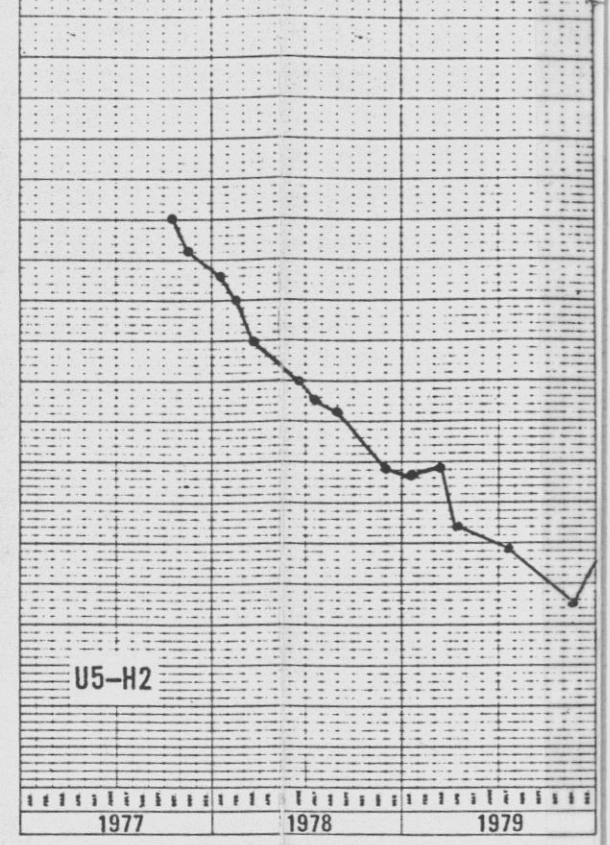
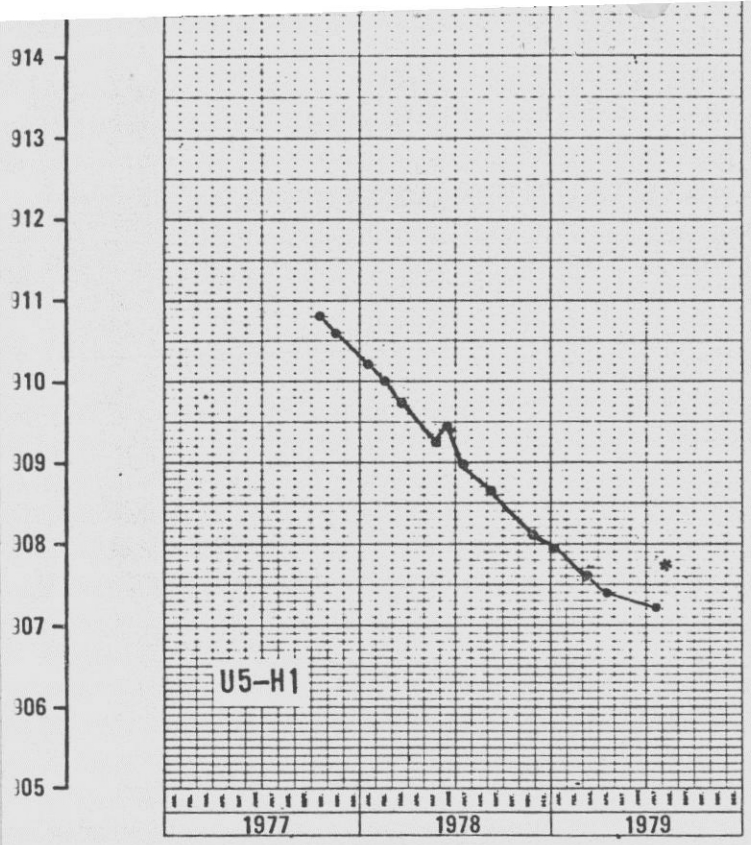


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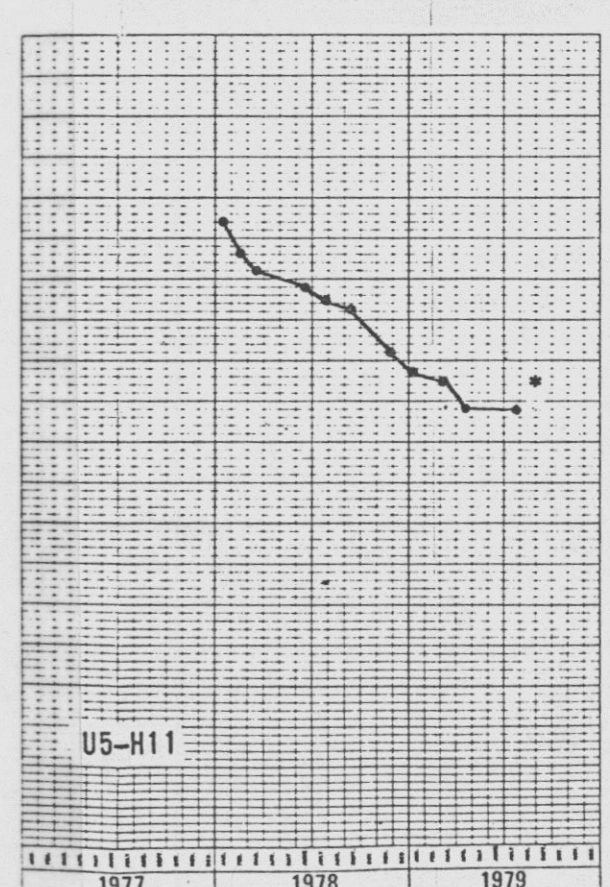
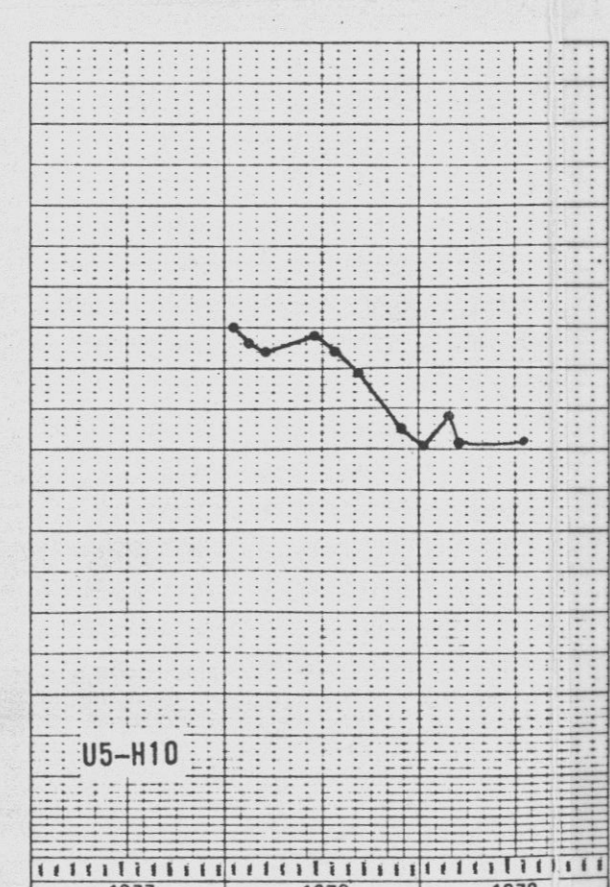
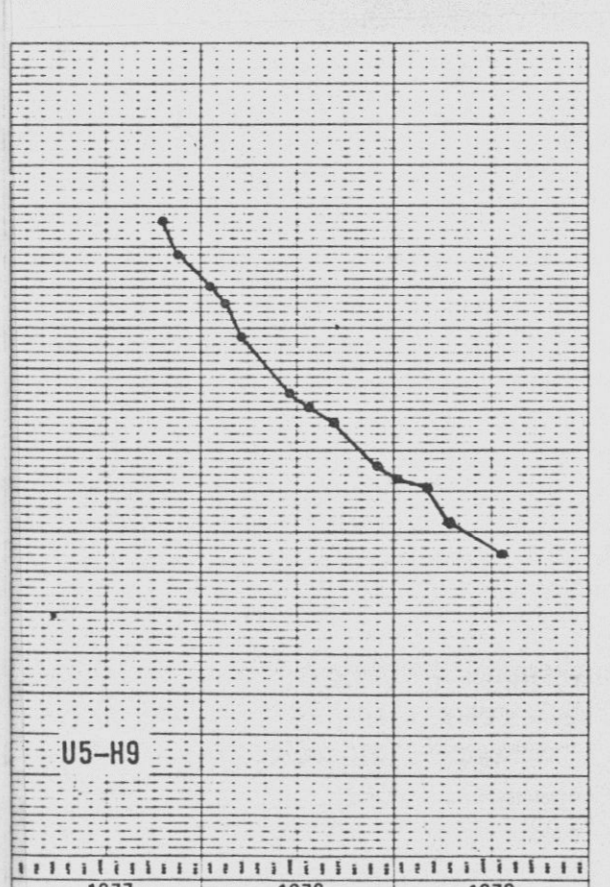
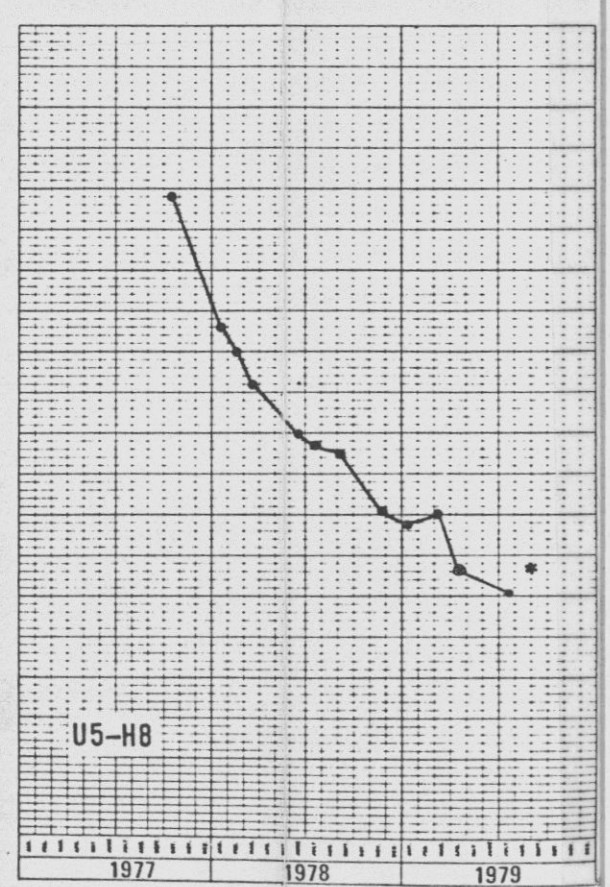
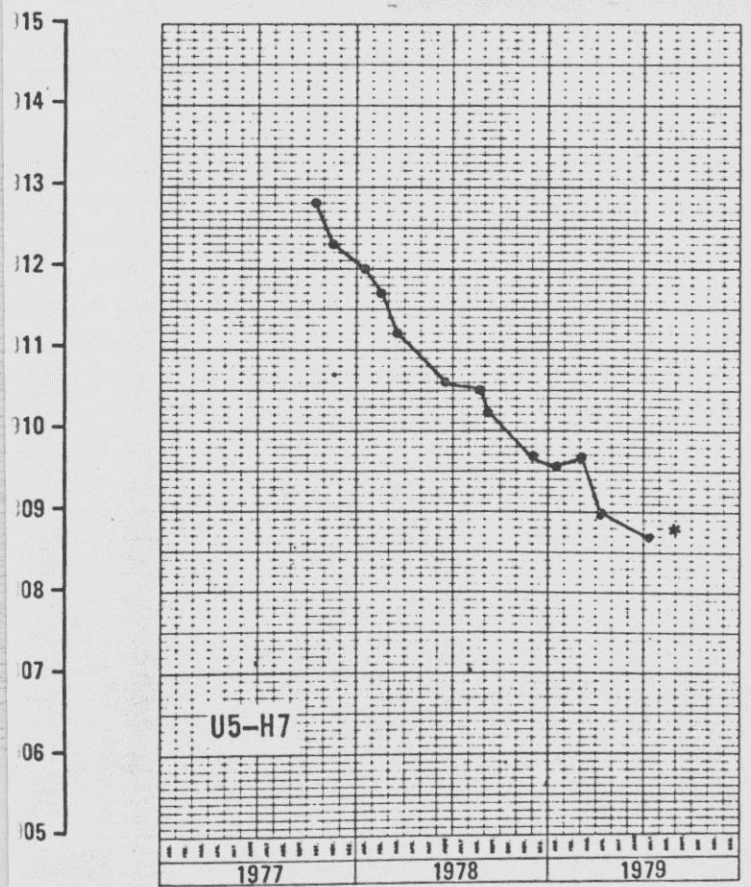
TERA APERTURE CARD

NOTES:

- ▽ WELL DATA PRIOR TO 1973 FROM STULIK, (35)



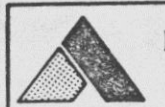
ELEVATION IN FEET (MSL)



U5-H6

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 TERA
 APERTURE
 CARD

NOTES:
 * MONITORING DISCONTINUED JULY 1979; WELL ON STANDBY.

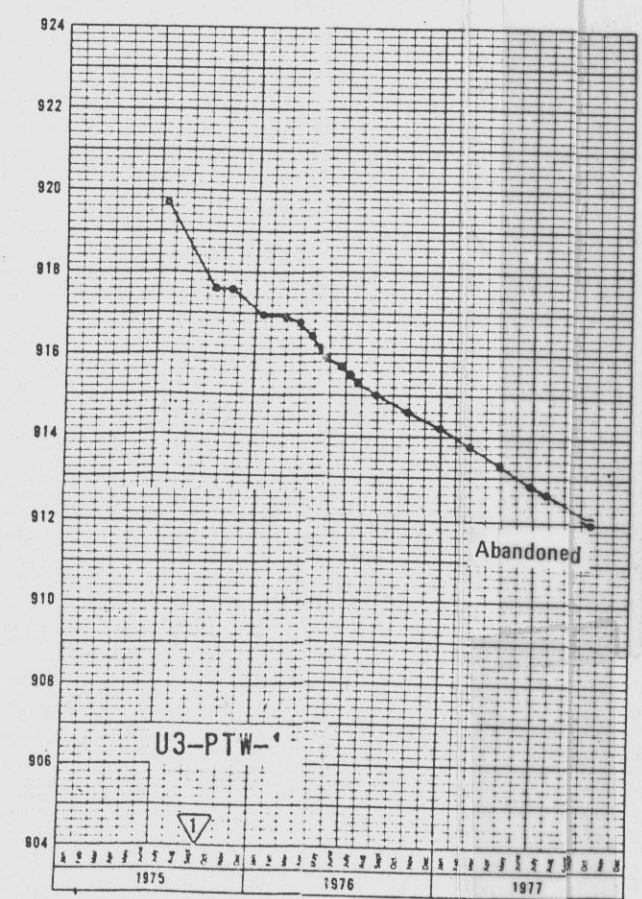
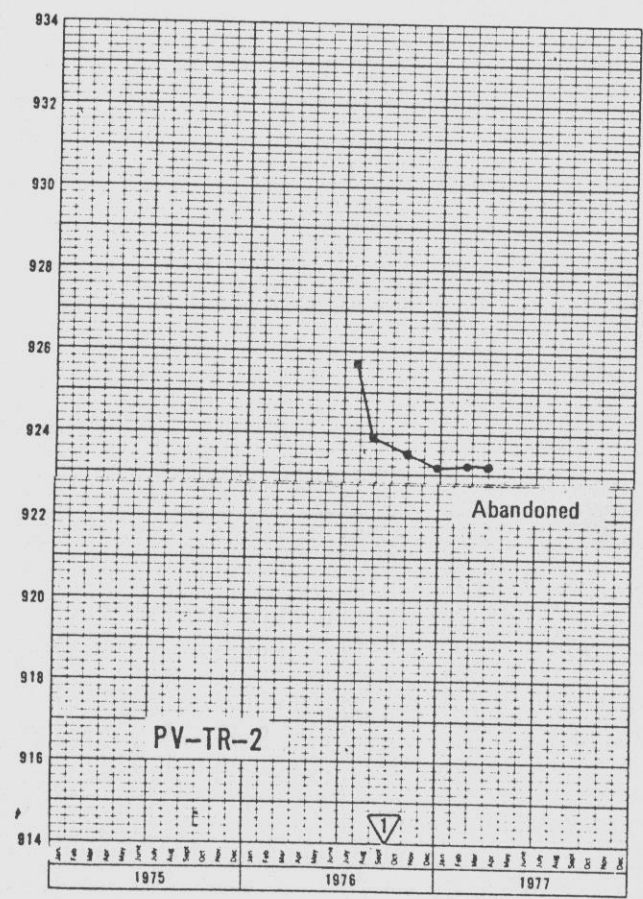
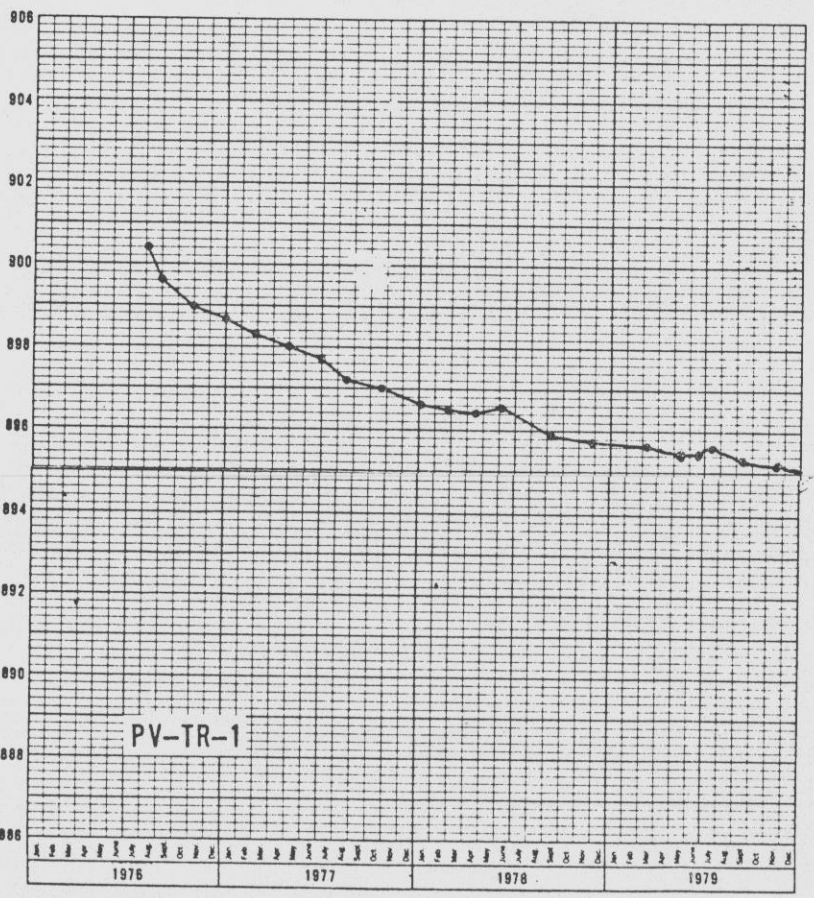
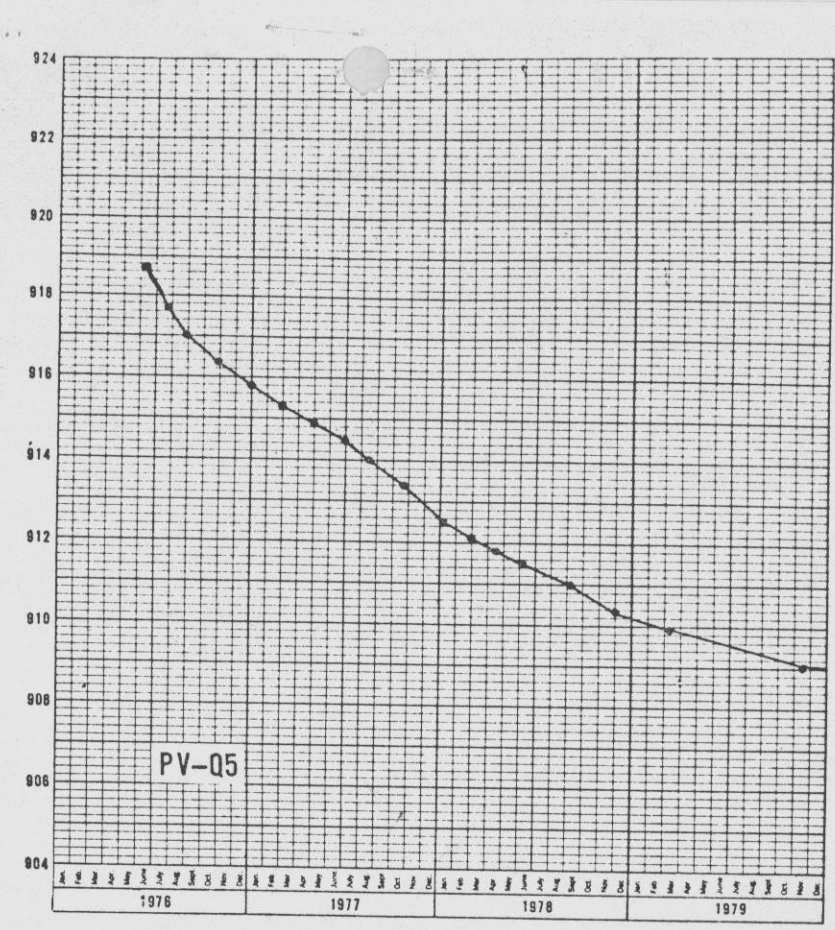
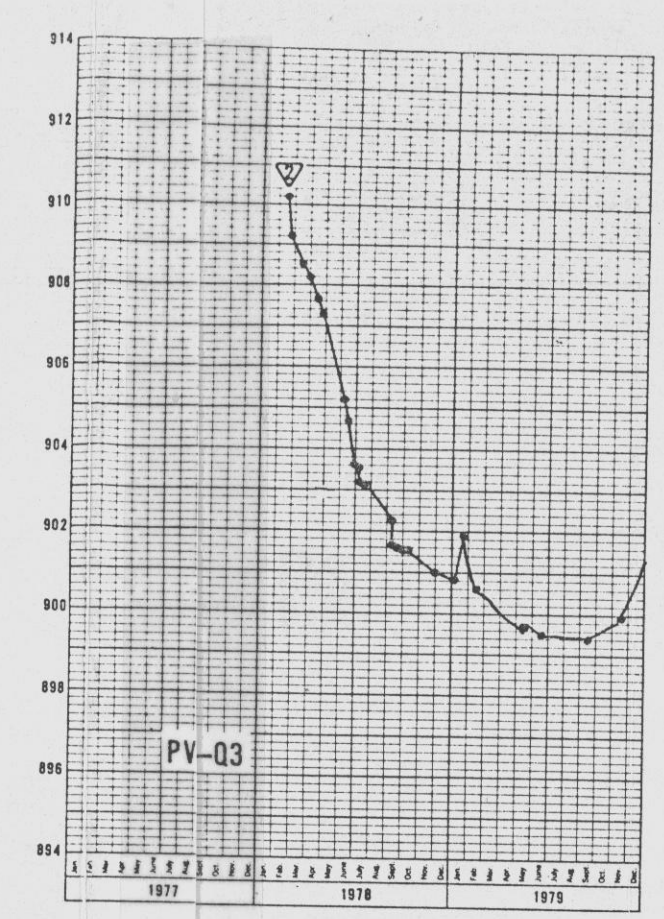
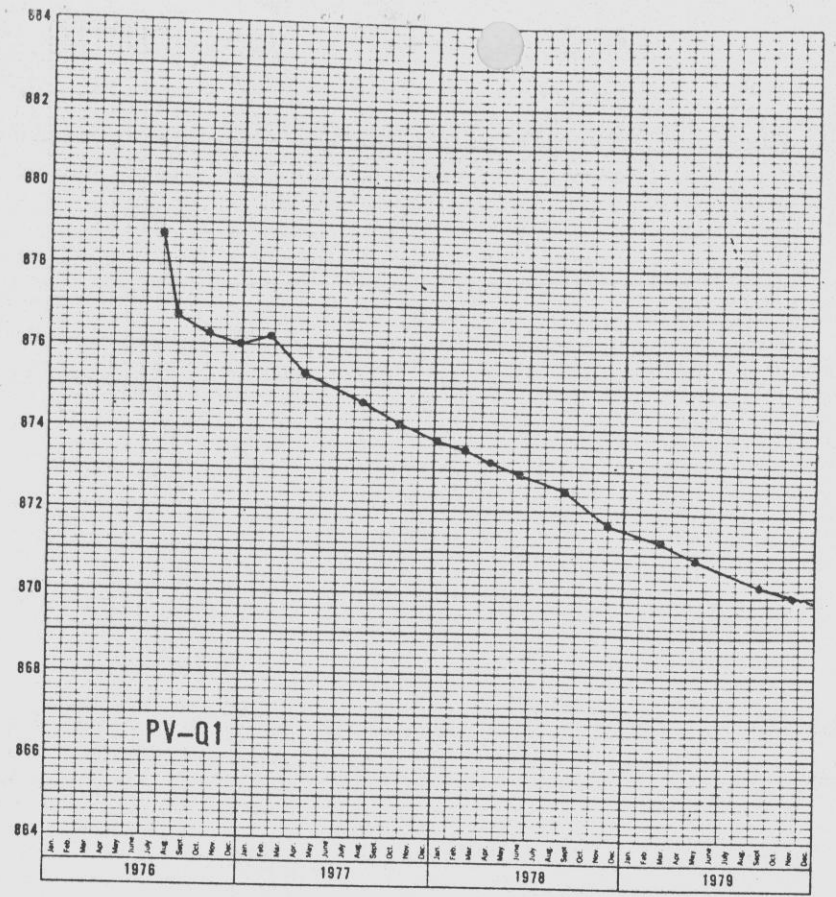
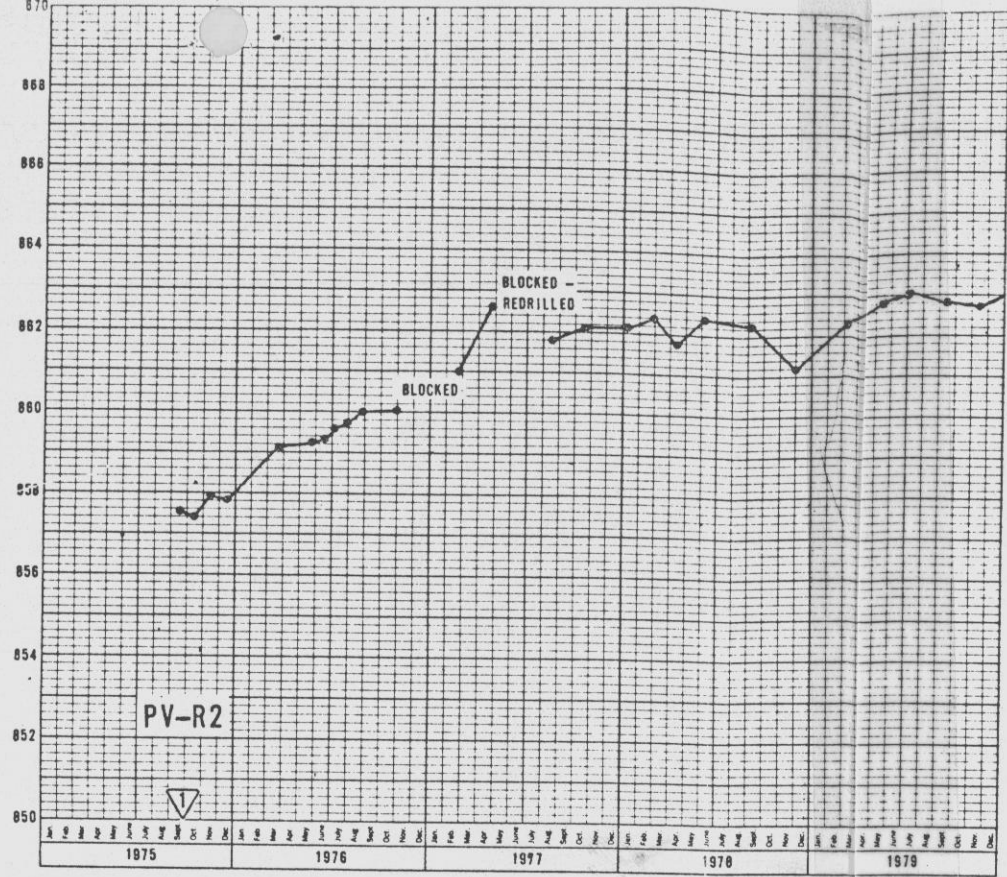
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HYDROGRAPHS OF OBSERVATION WELLS
 IN THE PERCHED WATER ZONE
 (GROUP D)

Figure 2.4-38

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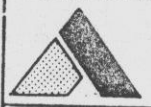
WORK COPY

NOTES:

- ▽ ON SITE IRRIGATION CEASED SEPTEMBER, 1975.
- ▽ OBSERVATION WELL U3-PTW-1, LOCATED NEAR THE CENTER OF UNIT 3, WAS ABANDONED IN OCTOBER 1977 BECAUSE OF THE POWER BLOCK EXCAVATION. MONITORING OF WATER LEVELS IN THE AREA WAS CONTINUED IN WELL PV-Q3, INSTALLED AT THE EDGE OF THE EXCAVATION IN JANUARY 1978. THE STEEP DECLINE OF WATER LEVELS OBSERVED IN PV-Q3 REFLECTS THE LOCALIZED EFFECT OF DEWATERING IN THE EXCAVATION.
- ▽ ELEVATIONS ARE IN FEET ABOVE MEAN SEA LEVEL.

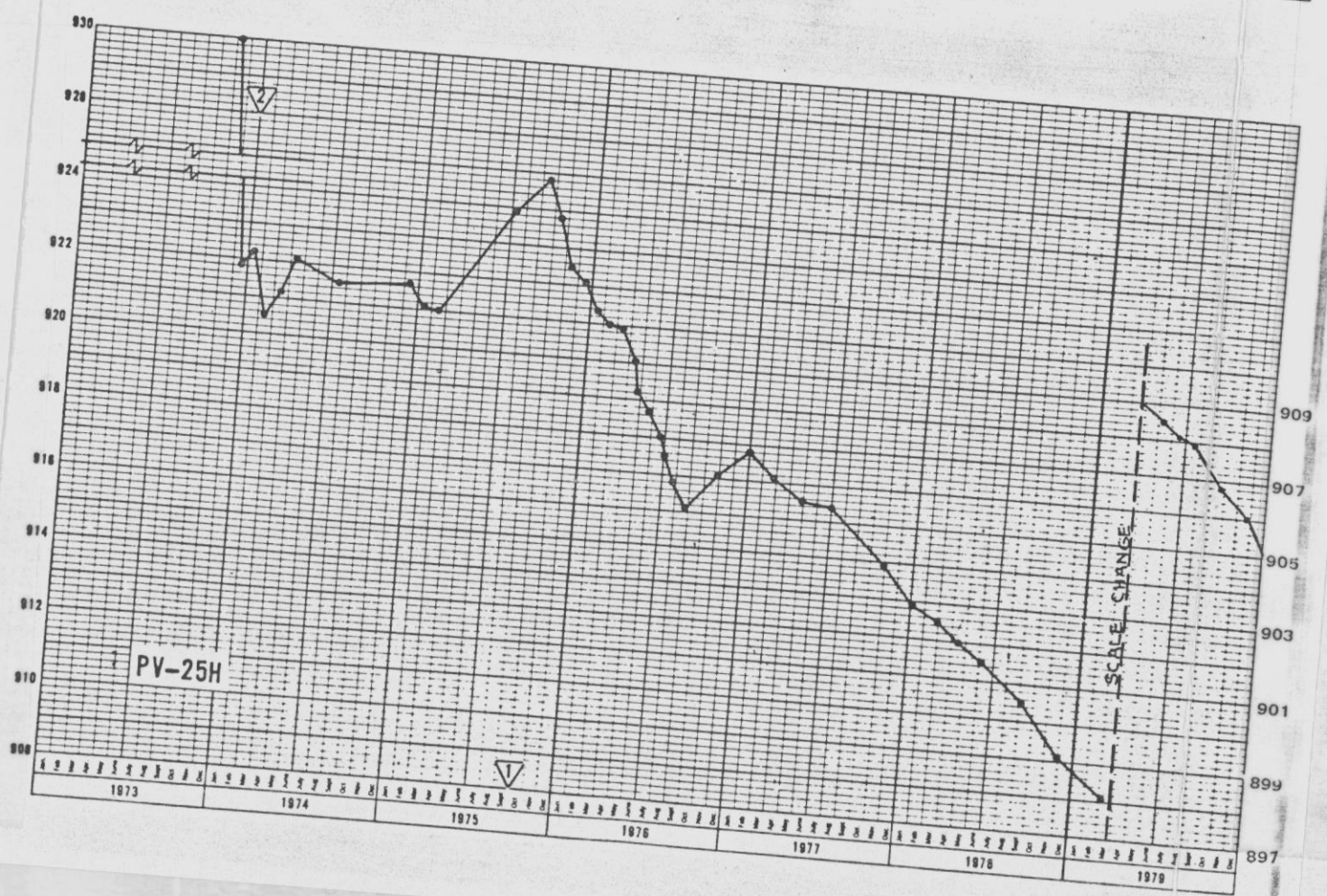
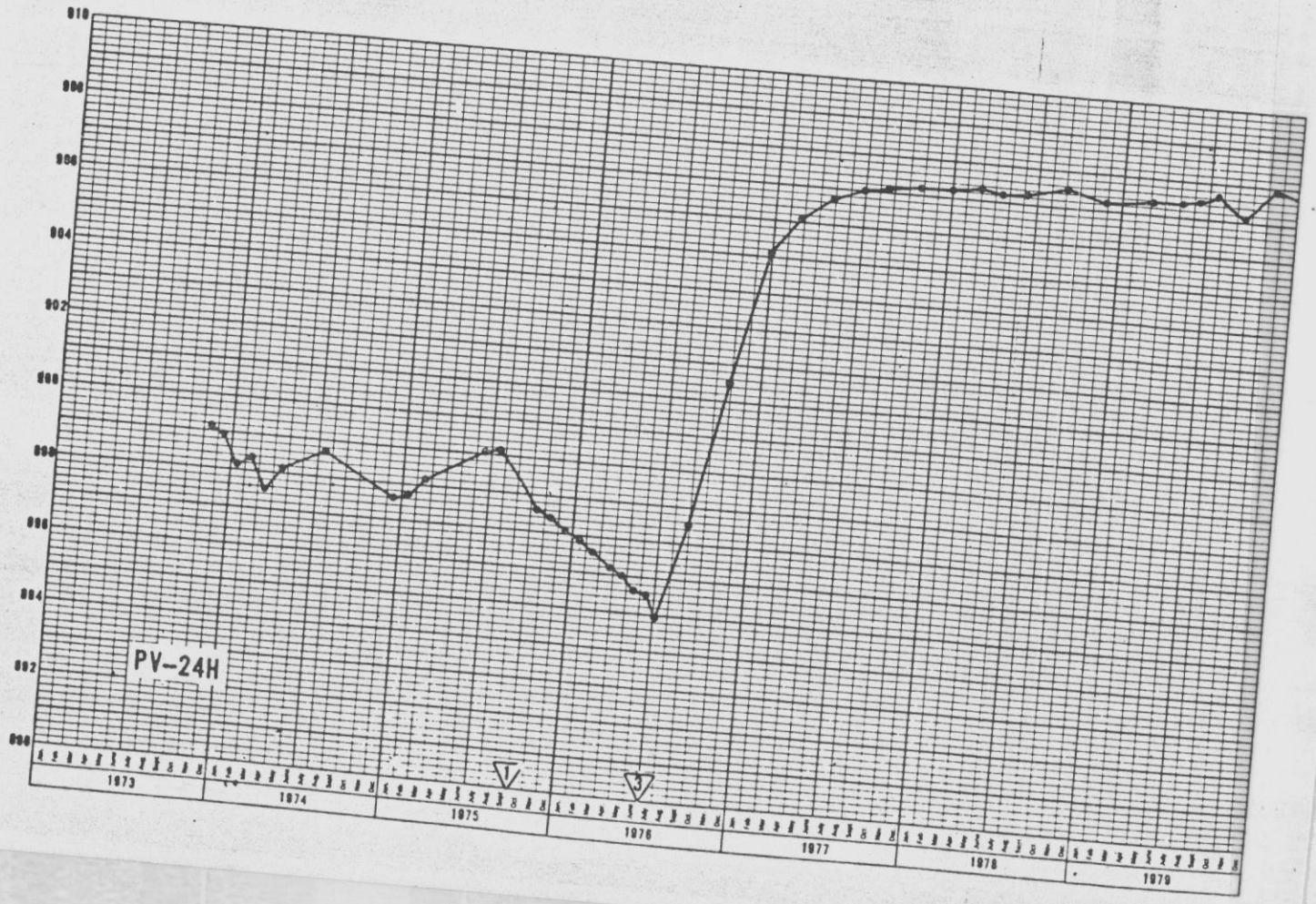
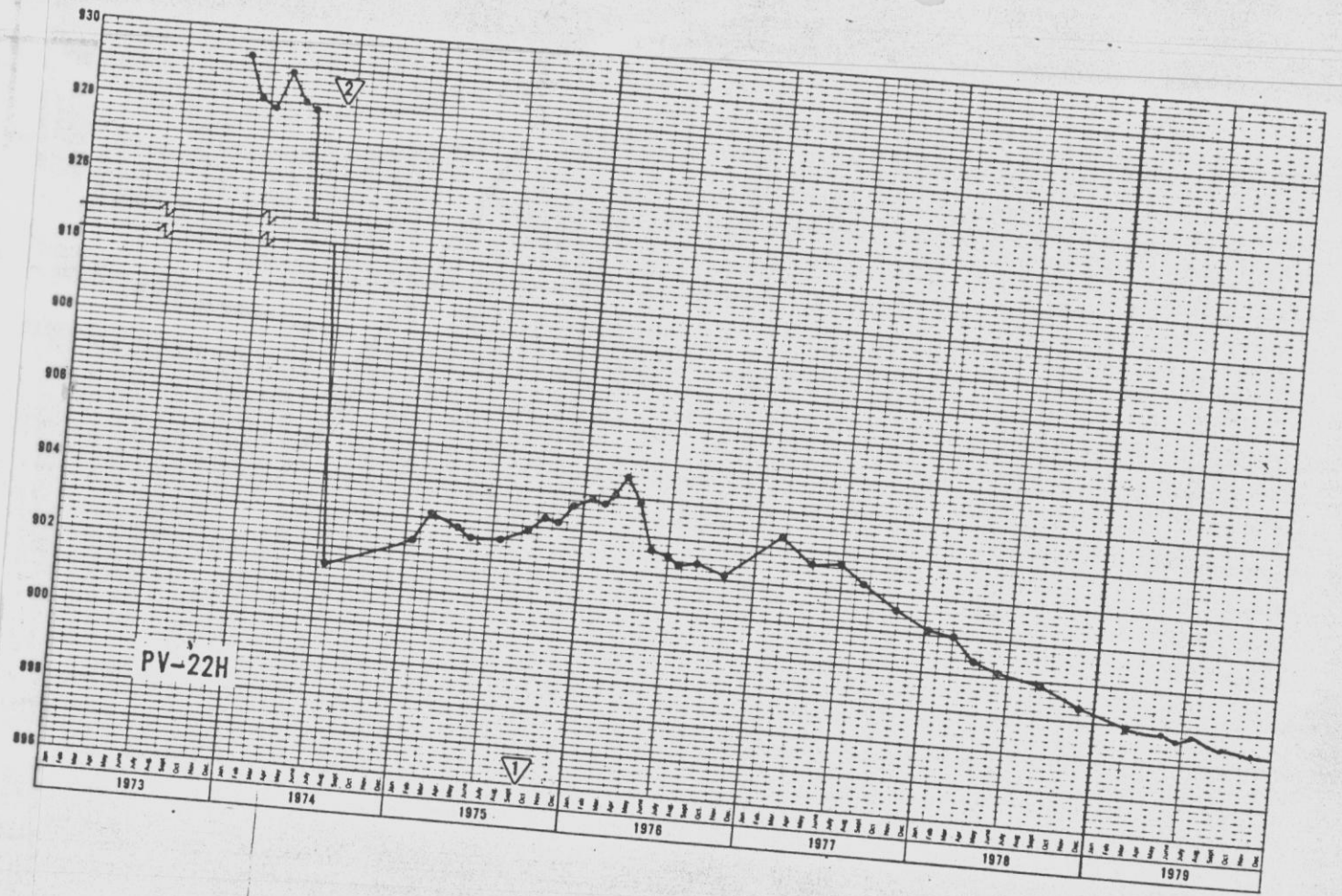
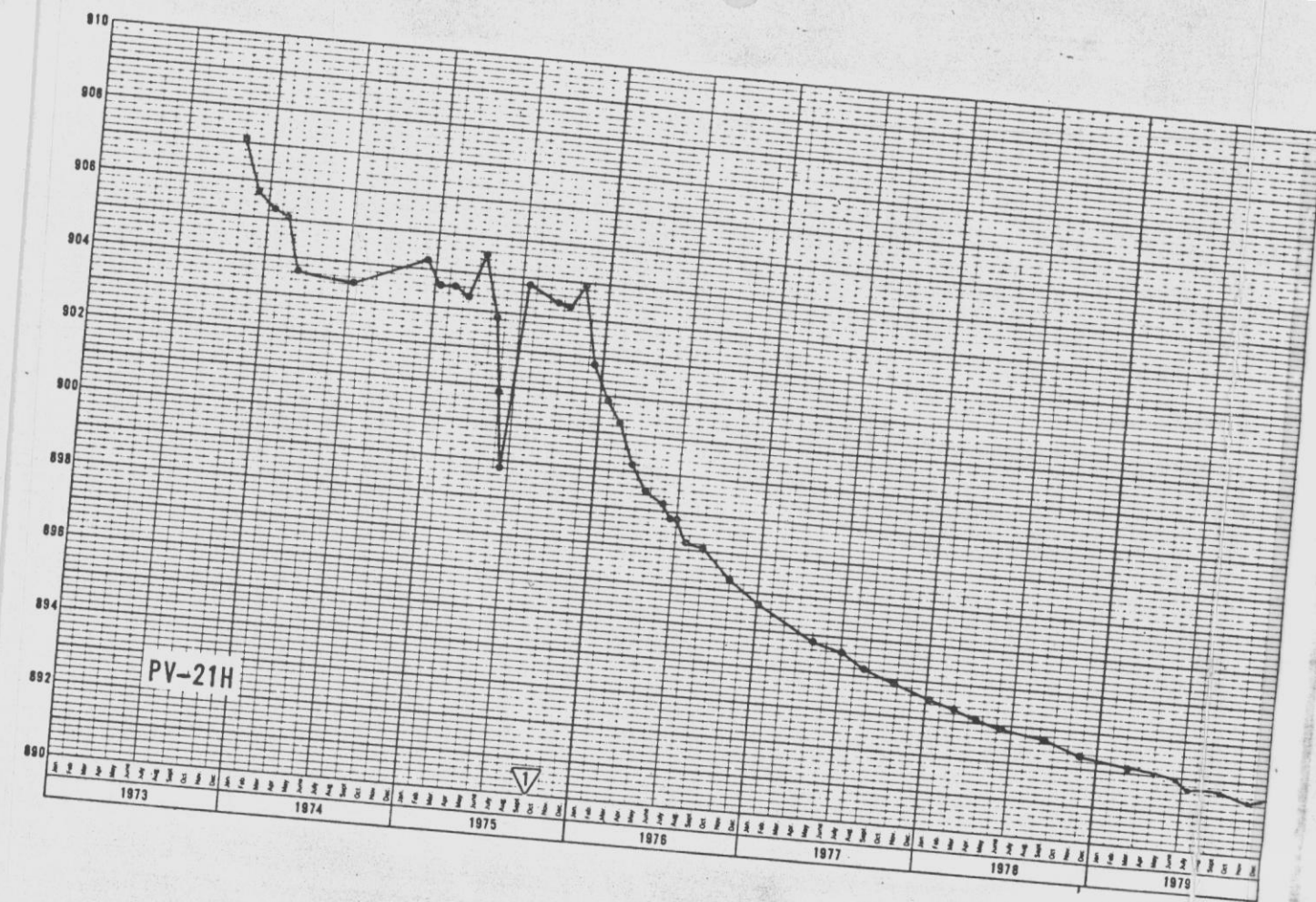
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HYDROGRAPHS OF OBSERVATION WELLS
IN THE PERCHED WATER ZONE
(GROUPS B & C)
Figure 2.4-36

8108190179-03



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- NOTES:
- ▽ ON SITE IRRIGATION CEASED SEPTEMBER, 1975.
 - ▽ WELL RESPONSE TO FLUSHING.
 - ▽ IRRIGATION WELL B-1-6-34acc, LOCATED AT A DISTANCE OF 214' FROM PV-24H AND 1/2 MILE FROM PV-25H, WAS SEALED BY GROUTING IN JULY 1976. THE SUDDEN RISE IN THE MEASURED WATER LEVELS INDICATES THAT THESE WELLS WERE LOCATED WITHIN THE CONE OF DEPRESSION CAUSED BY PERCHED WATER CASCADING THROUGH THE IRRIGATION WELL.
 - ▽ ELEVATIONS ARE IN FEET ABOVE MEAN SEA LEVEL.

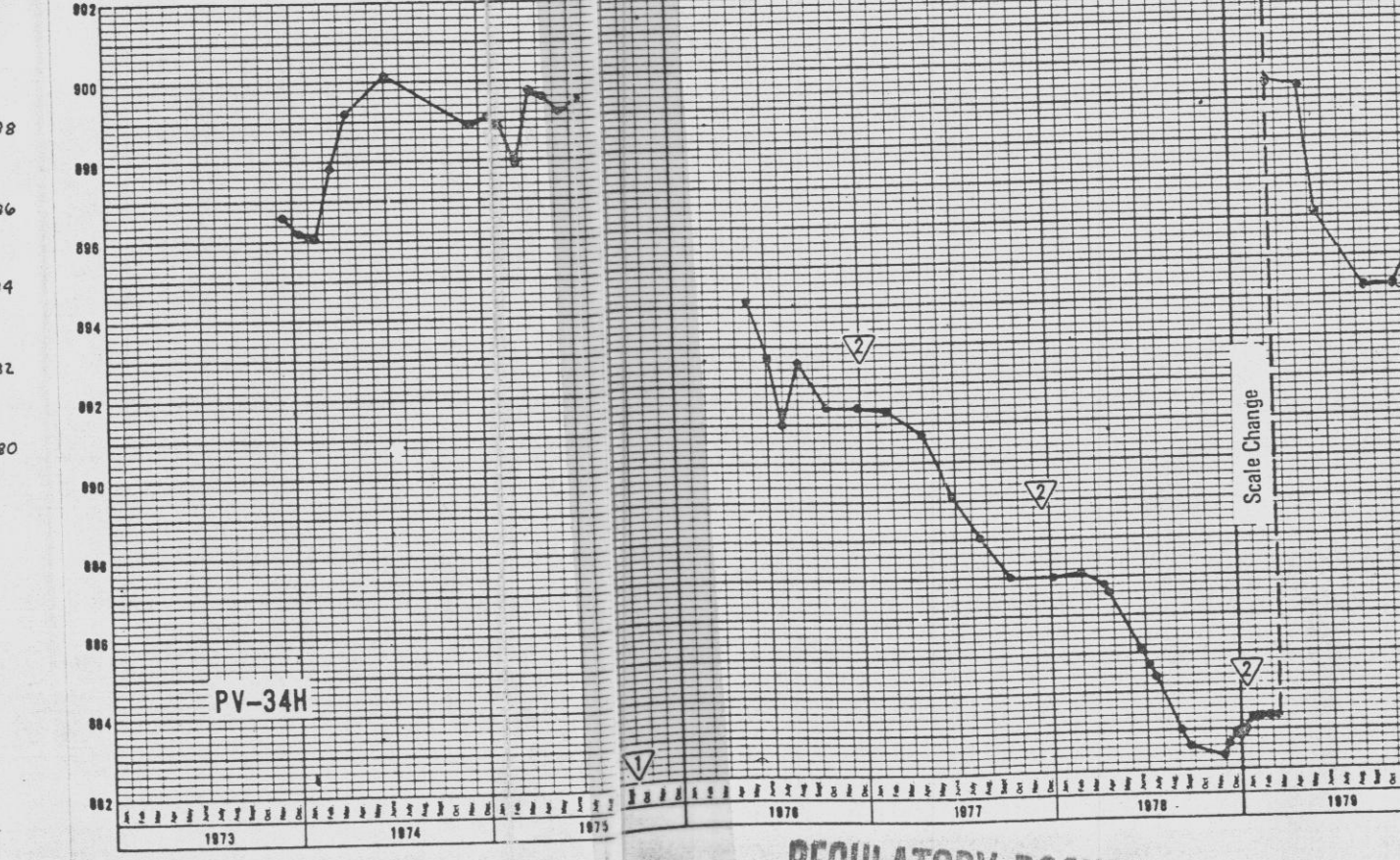
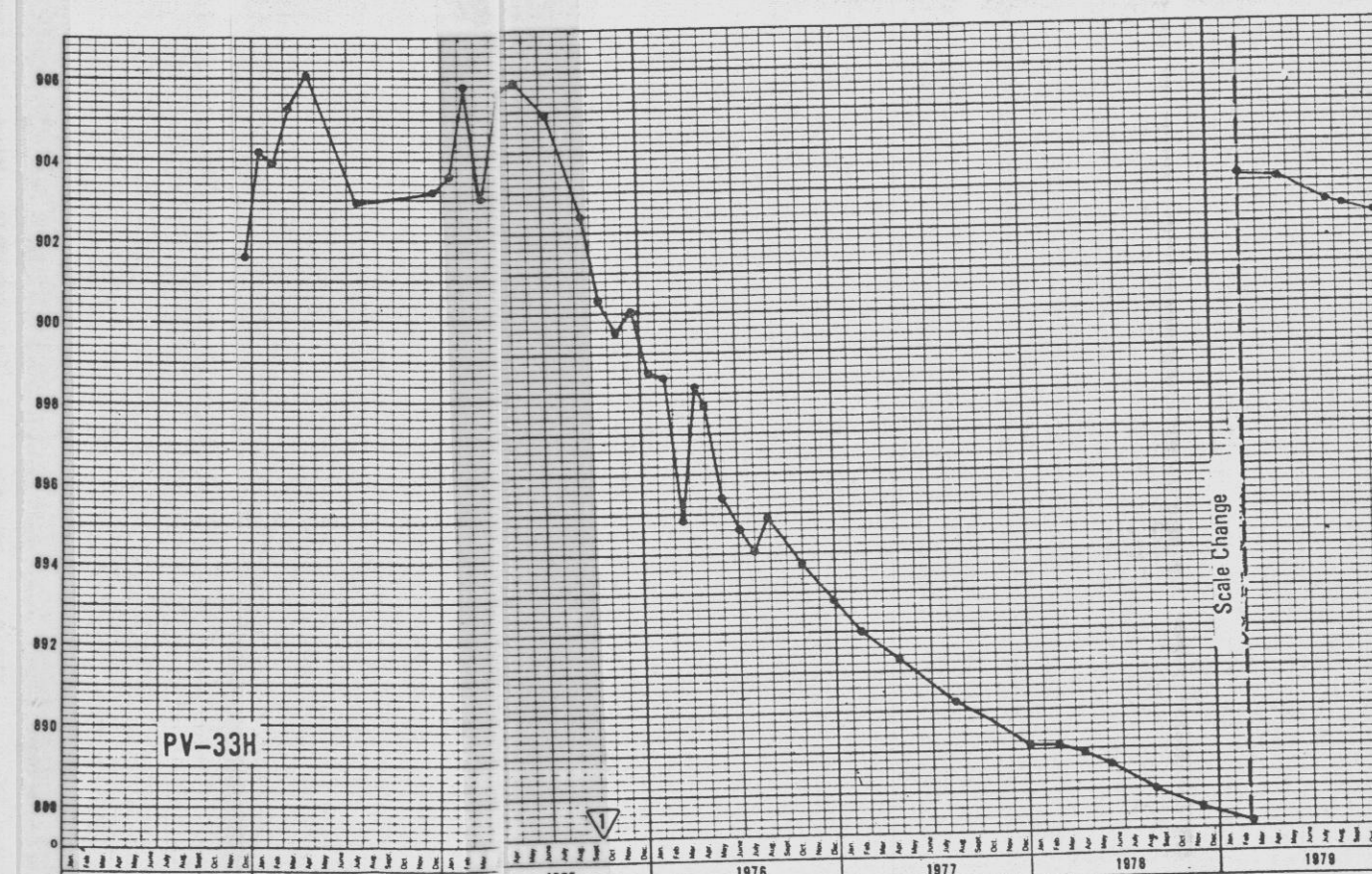
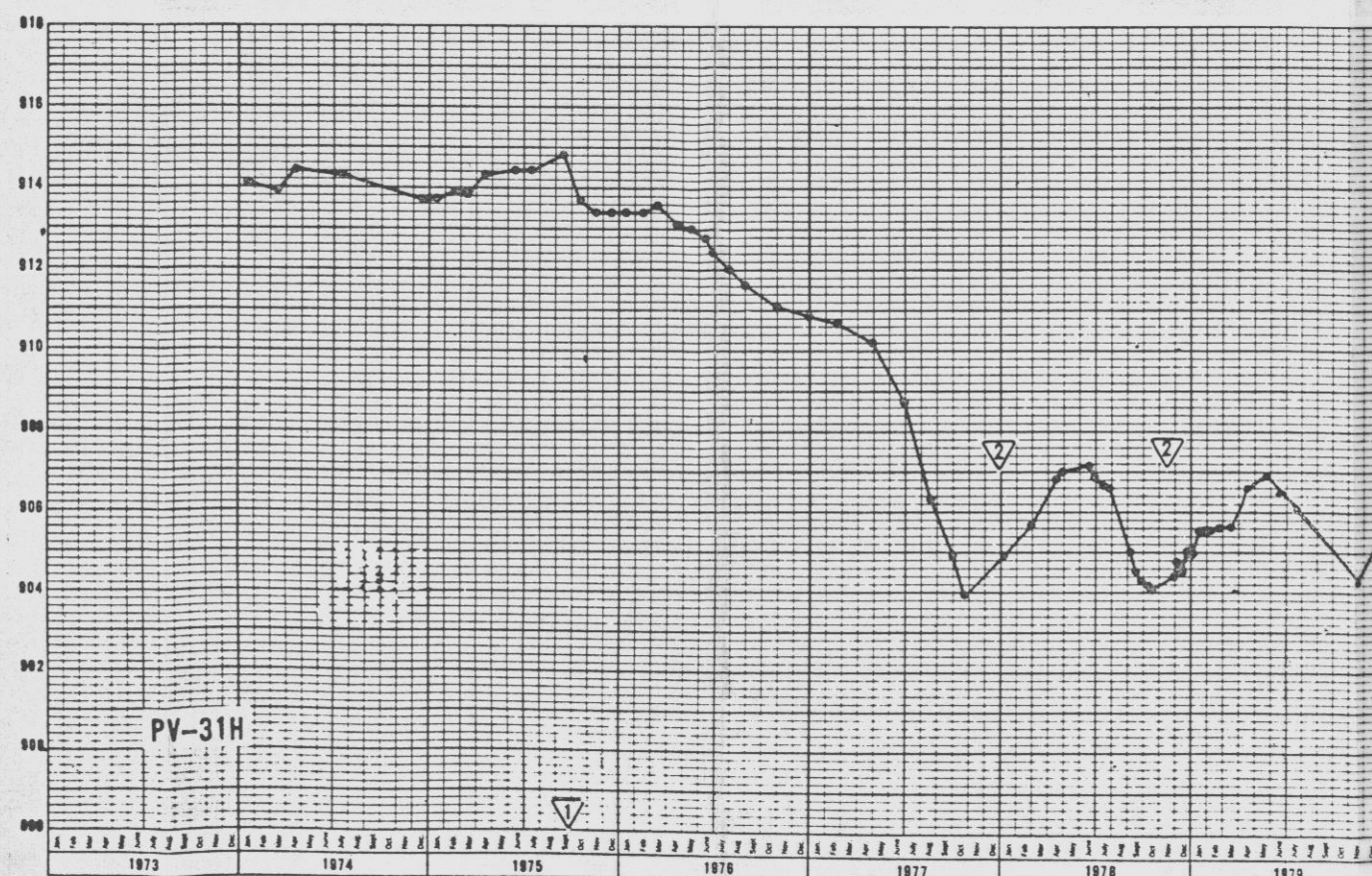
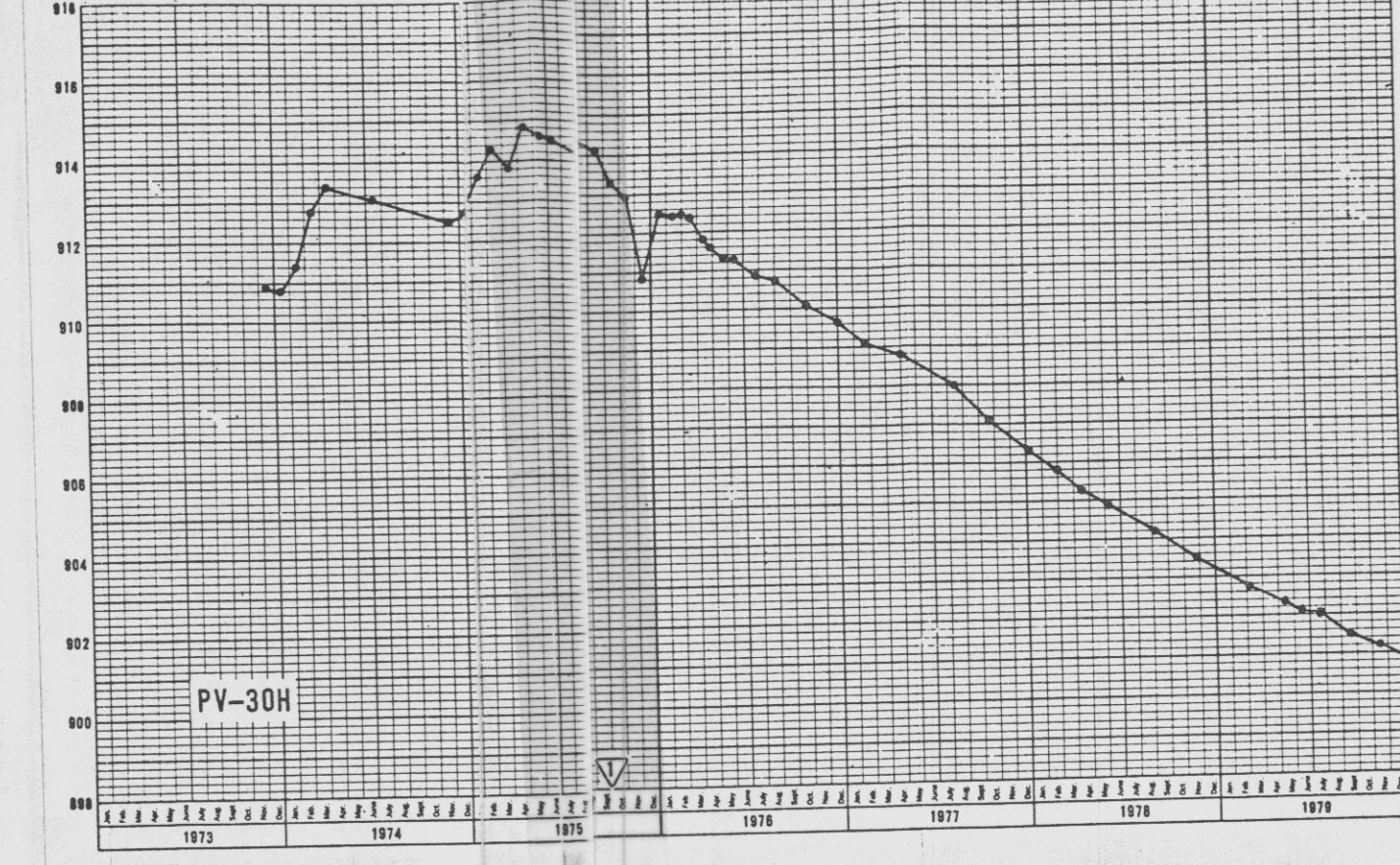
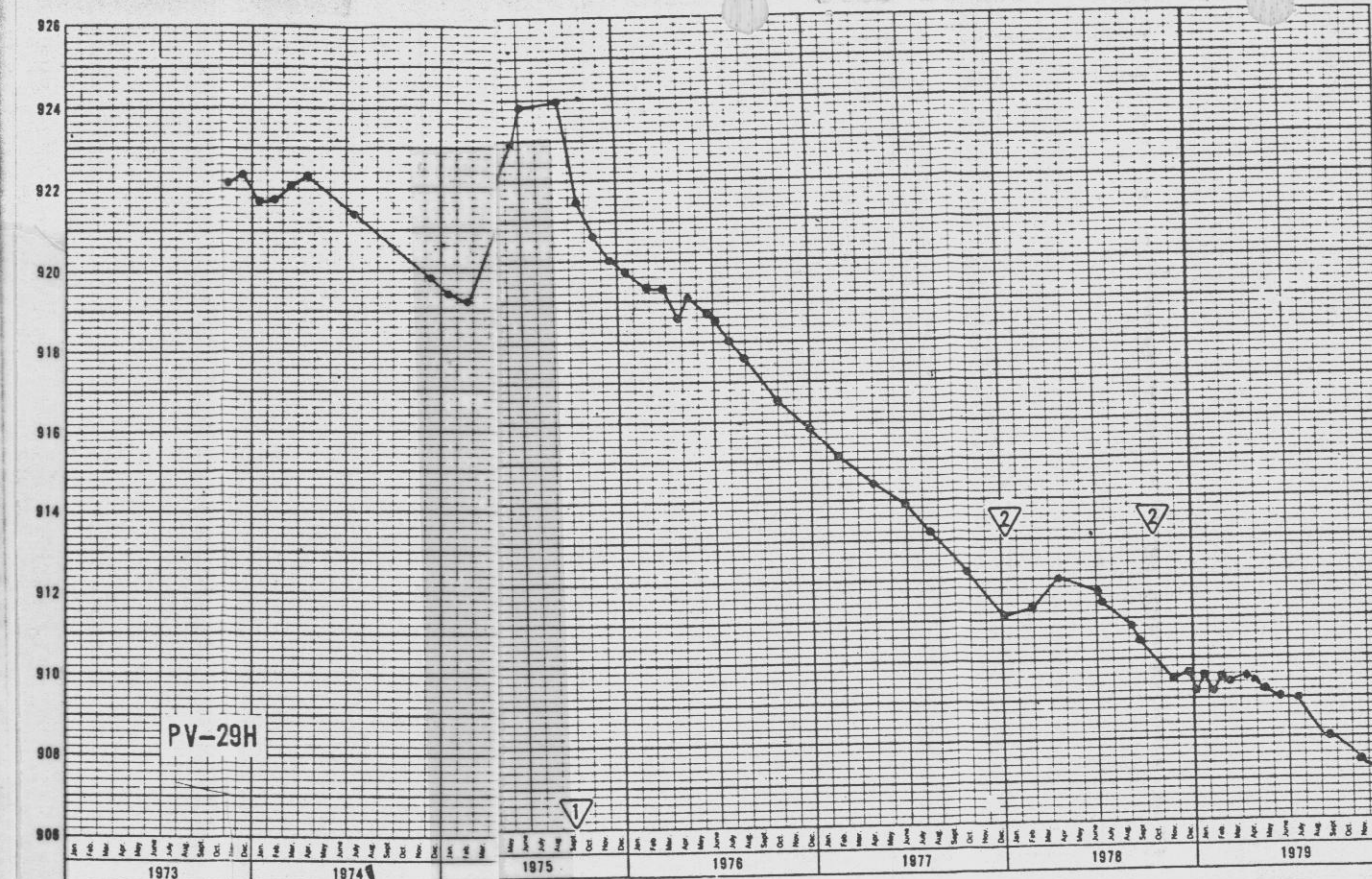
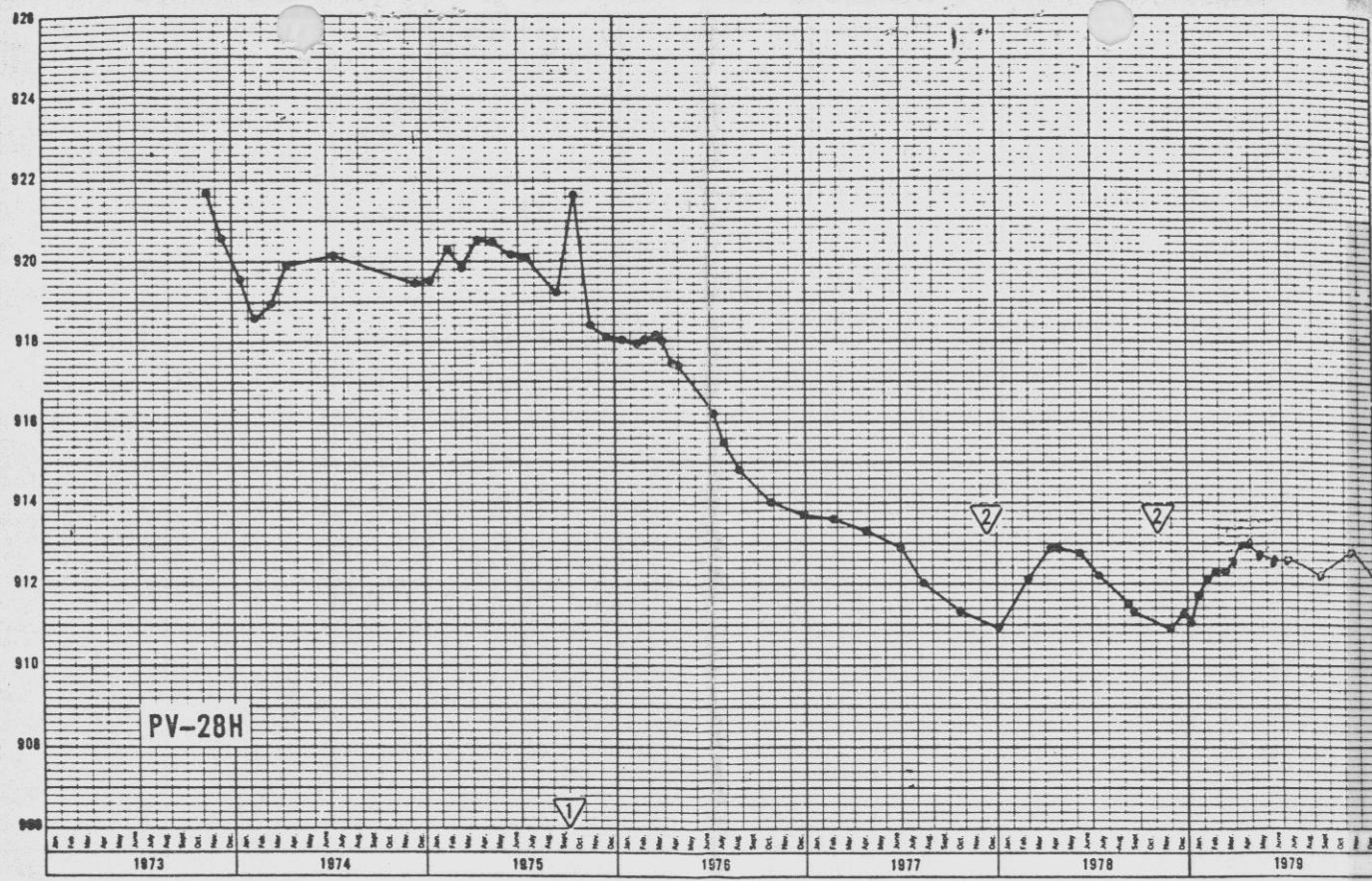
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HYDROGRAPHS OF OBSERVATION WELLS
IN THE PERCHED WATER ZONE
(GROUP A - NORTHERN HALF)
Figure 2.4-34

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CARD

- NOTES:
- ▽ ON SITE IRRIGATION CEASED SEPTEMBER, 1975.
 - ▽ CYCLIC SEASONAL VARIATIONS REFLECT RECHARGE FROM SEDIMENTATION BASIN LOCATED NEAR THE CENTER OF THE SITE. SURFACE RUNOFF WITHIN THE NORTHERN HALF OF THE SITE IS COLLECTED IN THE SEDIMENTATION BASIN.
 - ▽ ELEVATIONS ARE IN FEET ABOVE MEAN SEA LEVEL.

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 HYDROGRAPHS OF OBSERVATION WELLS
 IN THE PERCHED WATER ZONE
 (GROUP A - SOUTHERN HALF)
 Figure 2.4-35

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