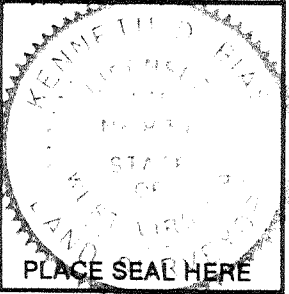


(+) DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS

FILE NO. \_\_\_\_\_  
 DRAWING NO. \_\_\_\_\_  
 SCALE 1" = 1000'  
 MINIMUM DEGREE OF ACCURACY 1:2500  
 PROVEN SOURCE OF ELEVATION U.S.G.S. BM  
 91 RHP ELEV. 1215'

I THE UNDERSIGNED, HEREBY CERTIFY THAT THIS PLAT IS CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF AND SHOWS ALL THE INFORMATION REQUIRED BY LAW AND THE REGULATIONS ISSUED AND PRESCRIBED BY THE DEPARTMENT OF ENERGY.  
 (SIGNED) Kenneth D. Bisco  
 R.P.E. \_\_\_\_\_ L.L.S. 637-SU



**STATE OF WEST VIRGINIA**  
 DEPARTMENT OF ENERGY  
 OIL AND GAS DIVISION



DATE DECEMBER 8, 19 90  
 OPERATOR'S WELL NO. MINGO-WYOMING COAL  
 API WELL NO. LAND CO. B-8  
S.N. 134611

WELL TYPE: OIL \_\_\_ GAS X LIQUID INJECTION \_\_\_ WASTE DISPOSAL \_\_\_  
 (IF "GAS,") PRODUCTION X STORAGE \_\_\_ DEEP \_\_\_ SHALLOW X  
 LOCATION: ELEVATION 1841.7' WATER SHED GILBERT CREEK OF GUYANDOTTE RIVER  
 DISTRICT STAFFORD 6 COUNTY MINGO  
 QUADRANGLE GILBERT  
 SURFACE OWNER MINGO-WYOMING COAL LAND CO. ACREAGE 2822.39  
 OIL & GAS ROYALTY OWNER MINGO-WYOMING COAL LAND CO. LEASE ACREAGE \_\_\_\_\_  
 LEASE NO. 080564

PROPOSED WORK: DRILL X CONVERT \_\_\_ DRILL DEEPER \_\_\_ REDRILL \_\_\_ FRACTURE OR  
 STIMULATE X PLUG OFF OLD FORMATION \_\_\_ PERFORATE NEW  
 FORMATION \_\_\_ OTHER PHYSICAL CHANGE IN WELL (SPECIFY) \_\_\_\_\_  
 PLUG AND ABANDON \_\_\_ CLEAN OUT AND REPLUG \_\_\_  
 TARGET FORMATION DEVONIAN SHALE ESTIMATED DEPTH 6275'  
 WELL OPERATOR ASHLAND EXPLORATION INC. 43 DESIGNATED AGENT FORREST BURKETT  
 ADDRESS P.O. BOX 391 ASHLAND, KY. 41114 ADDRESS P.O. BOX 379 BRENTON, WV. 24818

COUNTY NAME  
 PERMIT

DEEP WELL 6-6 Gilbert (271)

State of West Virginia  
DEPARTMENT OF ENERGY  
Division of Oil and Gas

Reviewed TMB  
Recorded \_\_\_\_\_

Well Operator's Report of Well Work

Farm name: MINGO WYOMING COAL LAND

Operator Well No.: B 8 S 134611

LOCATION: Elevation: 1841.70

Quadrangle: GILBERT

District: STAFFORD  
Latitude: 5250 Feet South of 37  
Longitude: 8600 Feet West of 81

County: MINGO  
Deg. 35 Min. 0 Sec.  
Deg. 50 Min. 0 Sec.

Company: ASHLAND EXPLORATION, INC.  
P. O. BOX 391, A1-6  
ASHLAND, KY 41114-0391

Agent: FORREST BURKETT

Inspector: TIM BENNETT

Permit Issued: 05/06/91  
Well work Commenced: 01/14/92  
Well work Completed: 04/07/92  
Verbal Plugging: \_\_\_\_\_  
Permission granted on: \_\_\_\_\_  
Rotary  Cable \_\_\_\_\_ Rig \_\_\_\_\_  
Total Depth (feet) 6234  
Fresh water depths (ft) \_\_\_\_\_  
Damp @ 597  
Salt water depths (ft) \_\_\_\_\_  
None noted  
Is coal being mined in area (Y/N)? N  
Coal Depths (ft): 56-59, 169-171

Casing & Tubing	Used in Drilling	Left in Well	Cement Fill Up Cu. Ft.
Size			
16"	35'	35'	17.7
8 5/8"	2400'	2400'	1049
5 1/2"	6221'	6221'	913
1.9" @ 1.9" @	6125' w/ 4211' KB	Pkr @	4240' KB

OPEN FLOW DATA

Producing formation Devonian Shale Pay zone depth (ft) 4465-6178  
Gas: Initial open flow -0- MCF/d Oil: Initial open flow -0- Bbl/d  
Final open flow \*1234 MCF/d Final open flow -0- Bbl/d  
Time of open flow between initial and final tests 3 Hours  
Static rock pressure 610# psig (surface pressure) after 72 Hours

Second producing formation Berea Pay zone depth (ft) 4196-4215  
Big Lime Pay zone depth (ft) 3351-3568  
Gas: Initial open flow 84 MCF/d Oil: Initial open flow --- Bbl/d  
Final open flow \*1671 MCF/d Final open flow --- Bbl/d  
Time of open flow between initial and final tests 3 Hours  
Static rock Pressure 580# psig (surface pressure) after 72 Hours

NOTE: ON BACK OF THIS FORM PUT THE FOLLOWING: 1. DETAILS OF PERFORATED INTERVALS, FRACTURING OF STIMULATING, PHYSICAL CHANGE, ETC. 2.) THE WELL LOG WHICH IS A SYSTEMATIC DETIALED GEOLOGICAL RECORD OF ALL FORMATIONS, INCLUDING COAL ENCOUNTERED BY THE WELLBORE.

For: ASHLAND EXPLORATION, INC.  
By: James L. Stephens James L. Stephens, Eng. Tech.  
Date: 4/23/92

<u>Formation on Rock Type</u>	<u>TOP</u>	<u>BASE</u>
Breathitt Fm.	0	909
Lee Fm.	909	2198
Pennington formation	2198	3164
U. Maxton 2534-2649		
M. Maxton 2776-2958		
L. Maxton 3090-3140		
Little Lime	3164	3276
Big Lime	3276	3604
Borden formation	3604	4164
Sunbury Shale	4164	4191
Berea	4191	4220
Devonian Shale	4220	6226
Onondaga Ls	6226	TD
DTD 6234		
LTD 6244		

8 5/8" casing cemented to surface on primary job.

#### Well Treatment

Perf Rhinestreet 18H/5941-6178. N<sub>2</sub> frac using 500 gal 7½ % inh fe acid, 805,000 scf N<sub>2</sub> @ 100,000 scf/min. BD @ 3721#, ATP 3808, MTP 3808, ISIP 2563#.

Perf Huron 23H/5203-5625. N<sub>2</sub> frac using 500 gal 7½ % inh fe acid, 806,000 scf N<sub>2</sub> @ 102,000 scf/min. BD @ 3072#, ATP 3350#, MTP 3510#, ISIP 2229#.

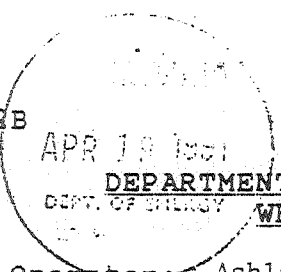
Perf Chagrin 22H/4465-4912. N<sub>2</sub> frac using 500 gal inh fe acid 7½ %, 814,000 scf N<sub>2</sub> @ 108,000 scf/min. BD @ 2921#, ATP 3184#, MTP 3461#, ISIP 1913#.

Perf Berea 25H/4196-4215. 75 quality foam frac using 250 gal 15% inh acid, 86,800# 20/40 sand and 492,000 scf N<sub>2</sub> @ 9500 scf/min. BD @ 1530#, ATP 1190# @ 20 BPM foam rate, MTP 1611#, ISIP 951 and TF 250 bbls.

Perf Big Lime 12H/3351-3568. Foam acidize using 500 gal 15% inh Fe acid, 6000 gal 28% inh fe acid w/ 170,000 scf N<sub>2</sub> @ 5000 scf/min. BD 1457#, ATP 1191# @ 5 bpm acid rate with 6 perf balls, MTP 1457# and ISIP 1323#.

059-1152  
issued 5/6/91

FORM WW-2B



STATE OF WEST VIRGINIA  
DEPARTMENT OF ENERGY, DIVISION OF OIL AND GAS  
WELL WORK PERMIT APPLICATION

Page 1 of 1

Expires 5/6/93

- 1) Well Operator: <sup>43</sup> Ashland Exploration, Inc. 2750 (4) 363  
Mingo-Wyoming Coal Land Co.
- 2) Operator's Well Number: B-8, Serial #134611
- 3) Elevation: 1841.7'
- 4) Well type: (a) Oil \_\_\_ / or Gas X /  
(b) If Gas: Production X / Underground Storage \_\_\_ /  
Deep \_\_\_ / Shallow X /
- 5) Proposed Target Formation(s): <sup>441</sup> Devonian Shale
- 6) Proposed Total Depth: 6275'KB feet
- 7) Approximate fresh water strata depths: 817'KB (Map WV-12) <sup>665'</sup>
- 8) Approximate salt water depths: 1342'KB (Map WV-12)
- 9) Approximate coal seam depths: Pond Creek Seam-Elev. 1628'-Mined Out-Pillared  
Possibly
- 10) Does land contain coal seams tributary to active mine? <sup>1851'-1854', 644'-652'</sup> Yes \_\_\_ / No X /
- 11) Proposed Well Work: Drill & Stimulate New Well
- 12)

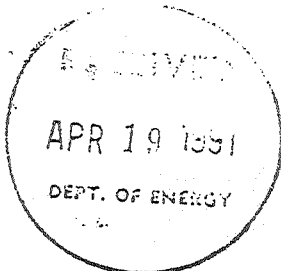
CASING AND TUBING PROGRAM

TYPE	SPECIFICATIONS		FOOTAGE INTERVALS		CEMENT
	Size	Grade	Weight per ft.	For drilling	
Conductor	16	LS	42.0	30	30 CTS
Fresh Water					4- 3800-11.5 2600-11.5
Coal	11 3/4	H40	42.0	274	274 CTS
Intermediate	8 5/8	J55	24.0 32.0	0-2000 2000-2682	0-2000 2000-2682 CTS
Production	5 1/2	J55	15.5	6275	6275 As Needed
Tubing	1.9	J55	2.76	-	6225 Siphon
Liners					

PACKERS : Kind \_\_\_\_\_  
Sizes \_\_\_\_\_  
Depths set \_\_\_\_\_

For Division of Oil and Gas Use Only

506186  
 Fee(s) paid:  Well Work Permit  Reclamation Fund  WPCP  
 Plat  WW-9  WW-2B  Bond James Blunk  Agent  
(Type)



1) Date: April 17, 1991  
2) Operator's well number  
Mingo-Wyoming Coal Land Co. #B-8, S.N. 13461  
3) API Well No: 47 - 059 - 1152  
State - County - Permit

STATE OF WEST VIRGINIA  
DEPARTMENT OF ENERGY, DIVISION OF OIL AND GAS

NOTICE AND APPLICATION FOR A WELL WORK PERMIT

- |   |   |
|---|---|
| <p>4) Surface Owner(s) to be served:<br/>         (a) Name <u>Mingo Wyoming Coal Land Co.</u><br/>         Address <u>945 4th Ave. Suite 300</u><br/> <u>Huntington, WV 25701</u><br/>         (b) Name _____<br/>         Address _____<br/>         (c) Name _____<br/>         Address _____</p> | <p>5) (a) Coal Operator:<br/>         Name <u>N/A</u><br/>         Address _____<br/>         (b) Coal Owner(s) with Declaration<br/>         Name <u>Same as No. 4(a)</u><br/>         Address _____<br/>         Name _____<br/>         Address _____<br/>         (c) Coal Lessee with Declaration<br/>         Name <u>National Mines, Inc.</u><br/>         Address <u>P.O. Box 960</u><br/> <u>Pineville, WV 24874</u></p> |
| <p>6) Inspector <u>Tim Bennett</u><br/>         Address <u>Route 2 Box 61-B</u><br/> <u>Chapmanville, WV 25508</u><br/>         Telephone (304)- <u>855-7705</u></p>  |   |

TO THE PERSON(S) NAMED ABOVE TAKE NOTICE THAT:

\_\_\_\_\_ Included is the lease or leases or other continuing contract or contracts by which I hold the right to extract oil and gas OR  
X Included is the information required by Chapter 22B, Article 1, Section 8(d) of the Code of West Virginia (see page 2)

I certify that as required under Chapter 22B of the West Virginia Code I have served copies of this notice and application, a location plat, and accompanying documents pages 1 through 2 on the above named parties, by:

- \_\_\_\_\_ Personal Service (Affidavit attached)
- X Certified Mail (Postmarked postal receipt attached)
- \_\_\_\_\_ Publication (Notice of Publication attached)

I have read and understand Chapter 22B and 38 CSR 11-18, and I agree to the terms and conditions of any permit issued under this application.

I certify under penalty of law that I have personally examined and am familiar with the information submitted on this application form and all attachments, and that based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete.

I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

Well Operator Ashland Exploration, Inc.  
By: W. Mark Parks *W. Mark Parks* WMC  
Its: Operations Manager  
Address P.O. Box 391  
Ashland, KY 41114  
Telephone 606-329-5989

Subscribed and sworn before me this 17th day of April, 1991

Timothy W. Smith  
Notary Public

My commission expires November 23, 1994

Tight formations Crualified

DS SRI marked

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BeRea

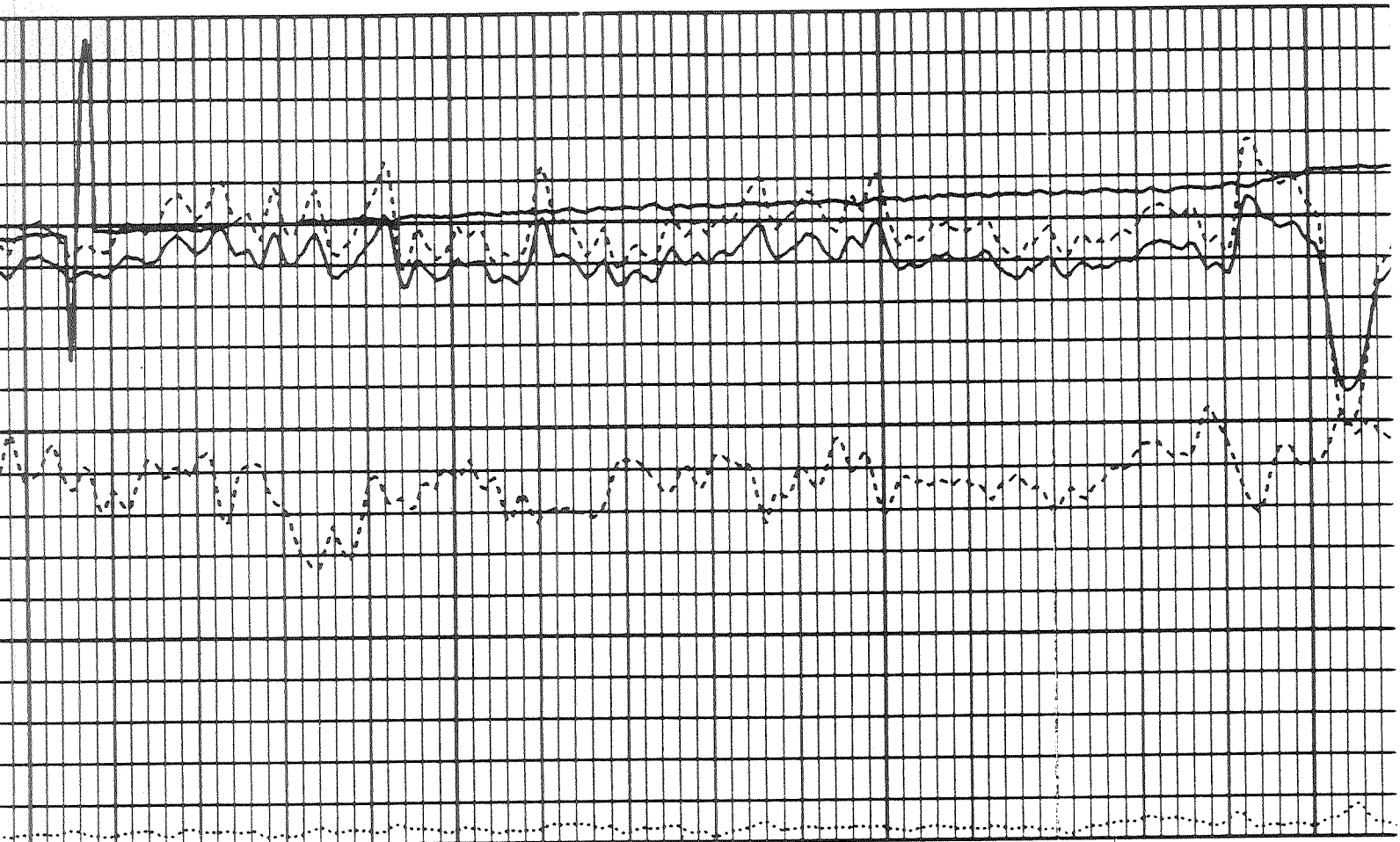


SPECTRAL DENSITY  
TEMPERATURE LOG  
GAMMA LOG

FILING NO.	COMPANY <u>ASHLAND EXPLORATION INC.</u>	
	WELL <u>MINGO-WYOMING COAL LAND NO:B-8(OXY)</u>	
	FIELD <u>N/A</u>	
	COUNTY <u>MINGO</u>	STATE <u>W. VIRGINIA</u>
Location: <u>37-35-00 X 81-50-00</u> <u>5250'S X 8600'W</u> <u>QUAD: GILBERT API NO: 47-59-1152</u>		Other Services: <u>DIL</u>

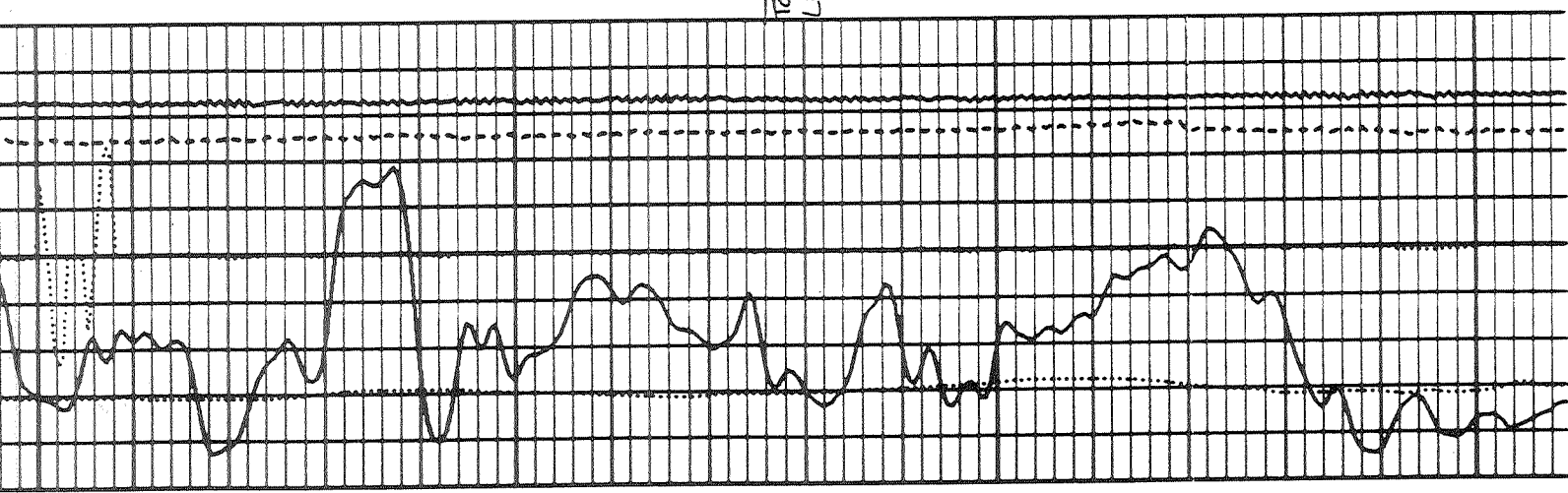
Permanent Datum: <u>GROUND LEVEL</u>	Elev. <u>1842 FT.</u>	Elev.: K.B. <u>1852 FT.</u>
Log measured from <u>KELLY BUSHING</u>	above perm. datum	D.F. <u>1850 FT.</u>
Drilling measured from <u>KELLY BUSHING</u>		G.L. <u>1842 FT.</u>

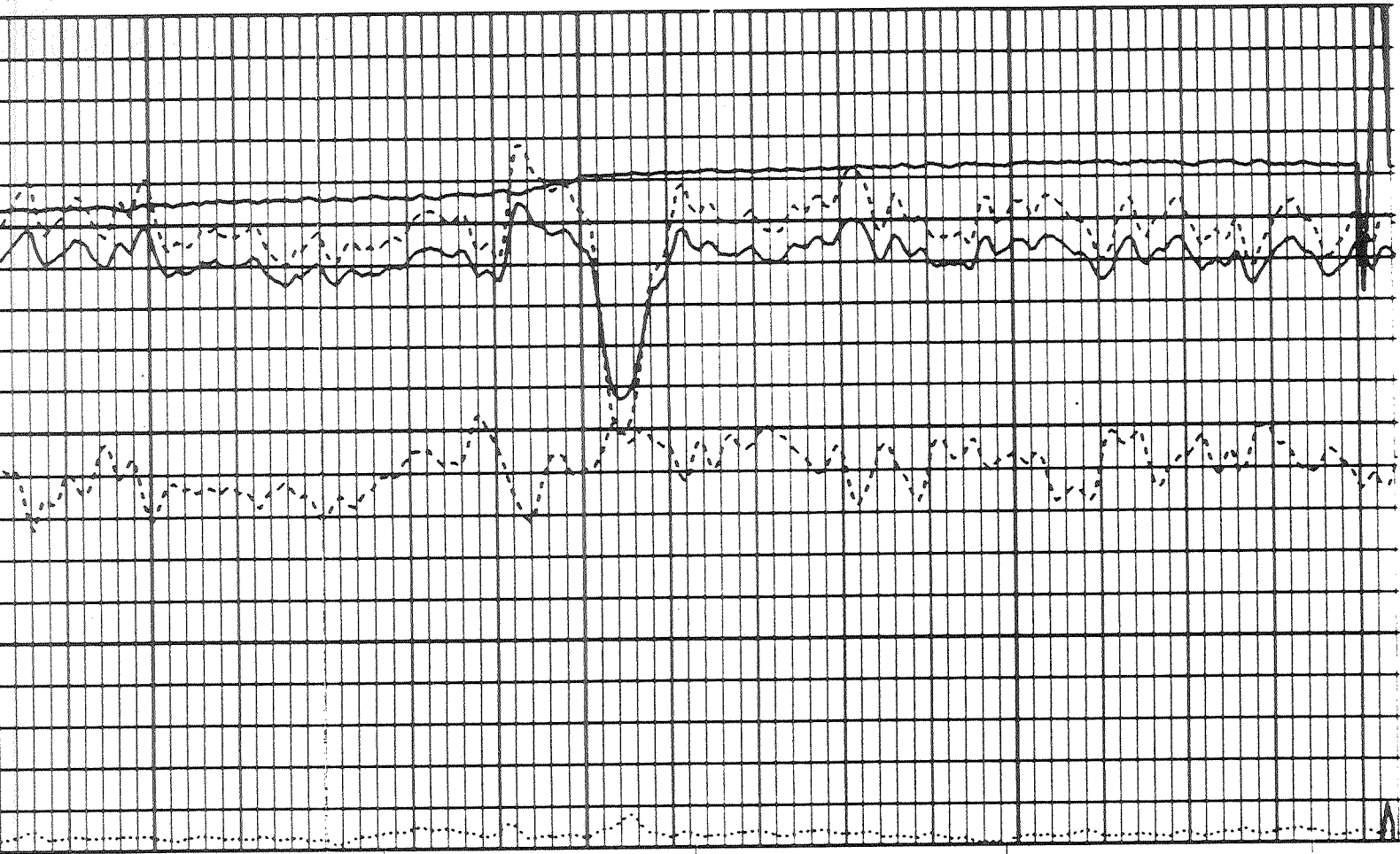
Date	<u>01-22-92</u>		
Run No.	<u>ONE</u>		
Depth - Driller	<u>6234 FT.</u>		
Depth - Logger	<u>6244 FT.</u>		
Bottom Logged Interval	<u>6241 FT.</u>		
Top Logged Interval	<u>100 FT.</u>		
Casing - Driller	<u>8 5/8" @ 2400 F</u>	<u>•</u>	<u>•</u>
Casing - Logger	<u>2401 FT.</u>		
Bit Size	<u>7 7/8"</u>		
Type fluid in hole	<u>AIR</u>		
Density	<u>N/A</u>	<u>N/A</u>	
Viscosity	<u>N/A</u>	<u>N/A</u>	
pH	<u>N/A</u>	<u>N/A</u>	
Fluid Loss	<u>N/A</u>	<u>N/A</u>	
Source of Sample	<u>N/A</u>		
Rm @ Meas. Temp.	<u>N/A @ N/A° F</u>	<u>•</u>	<u>•</u>
Rmf @ Meas. Temp.	<u>N/A @ N/A°</u>	<u>•</u>	<u>•</u>
Rmc @ Meas. Temp.	<u>N/A @ N/A°</u>	<u>•</u>	<u>•</u>
Source: Rmf Rmc	<u>N/A N/A</u>		
Rm @ BHT	<u>@ 97 °</u>	<u>•</u>	<u>•</u>
End Circulation	<u>N/A</u>		
Time	<u>Logger on bottom 16:58</u>		
Max. rec. Temp.	<u>97</u>		
Equip. No.	<u>7675</u>	<u>PBURG</u>	
Location			
Recorded by	<u>PEERMAN</u>		
Witnessed by	<u>MR. WAGGENER</u>		



0023

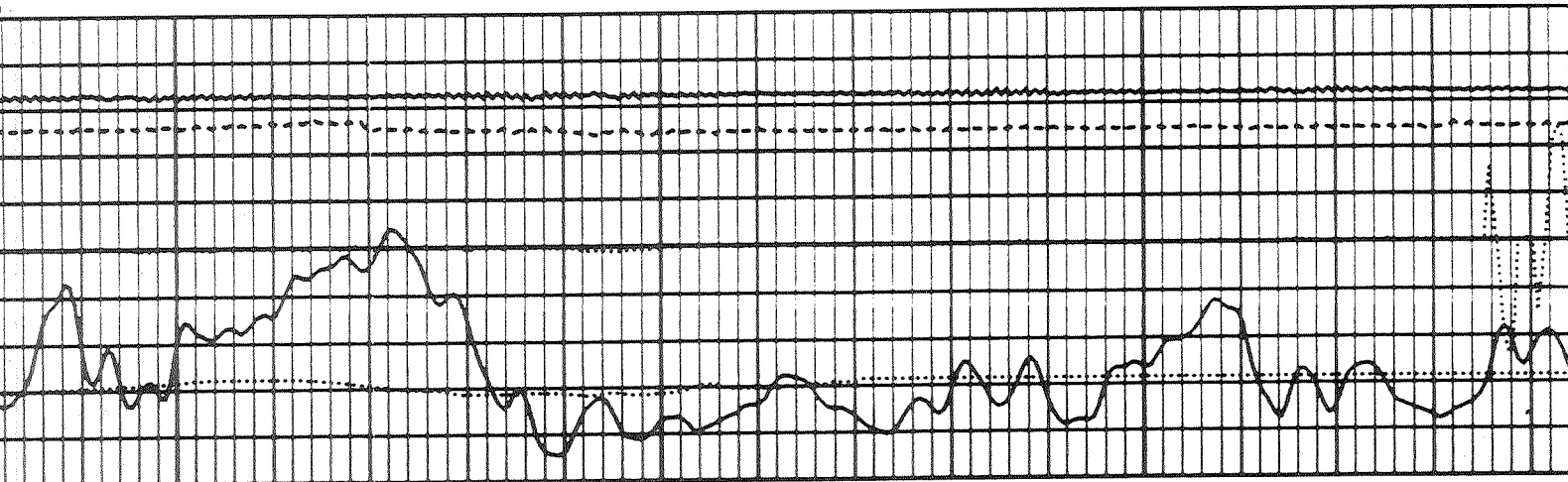
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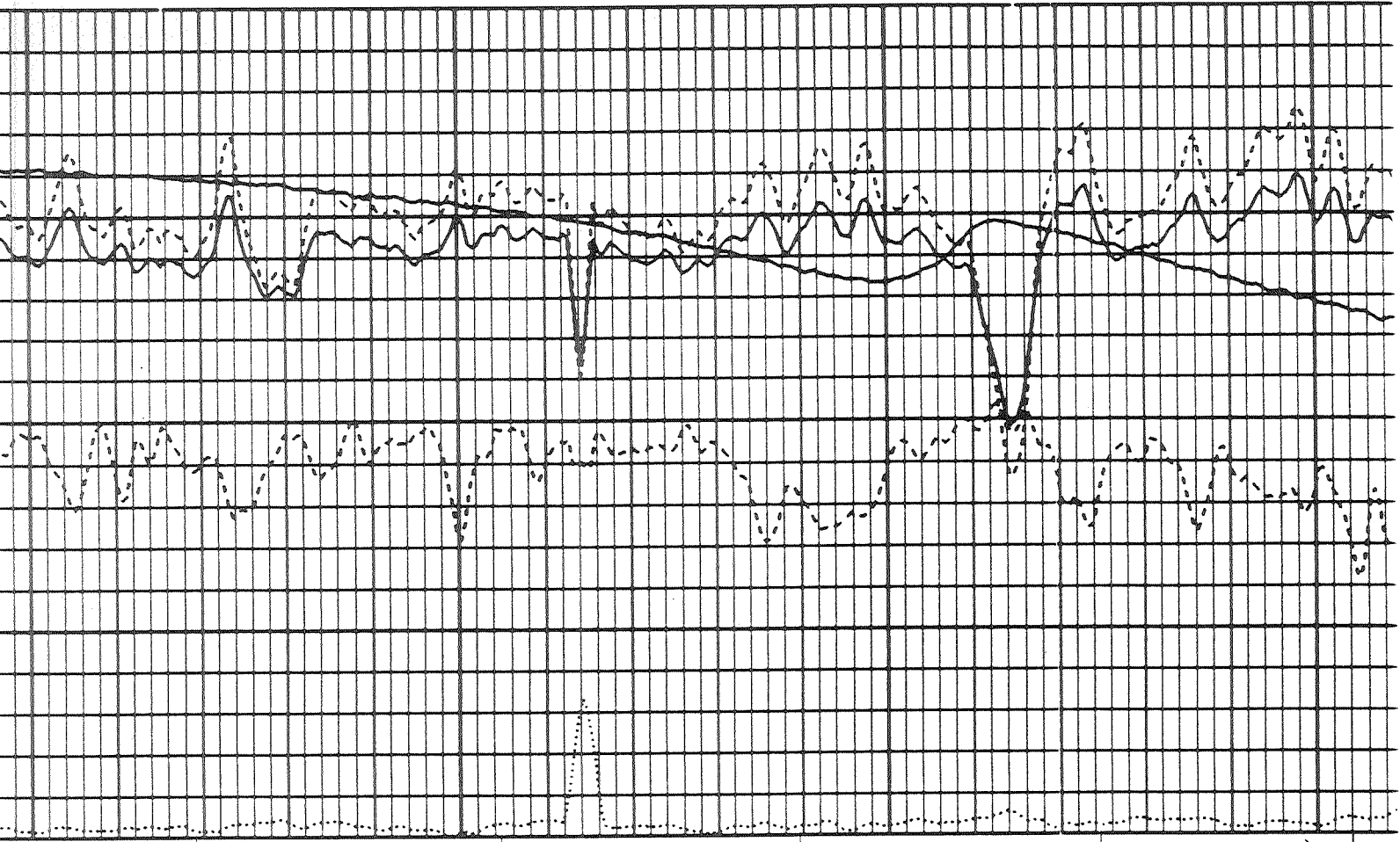


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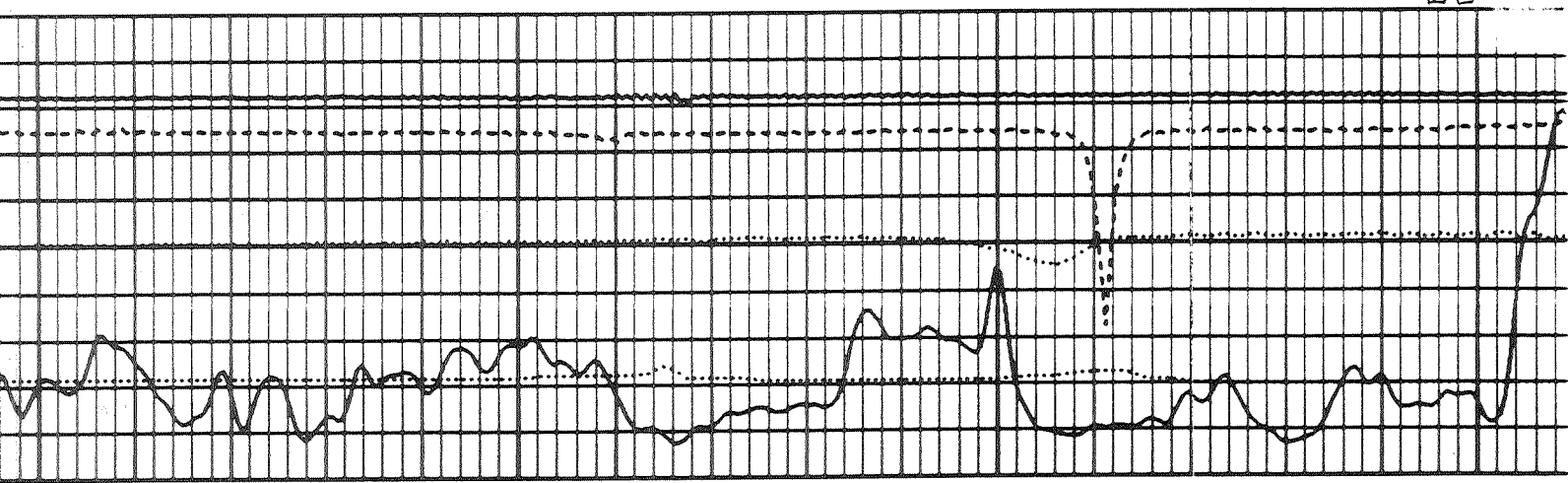


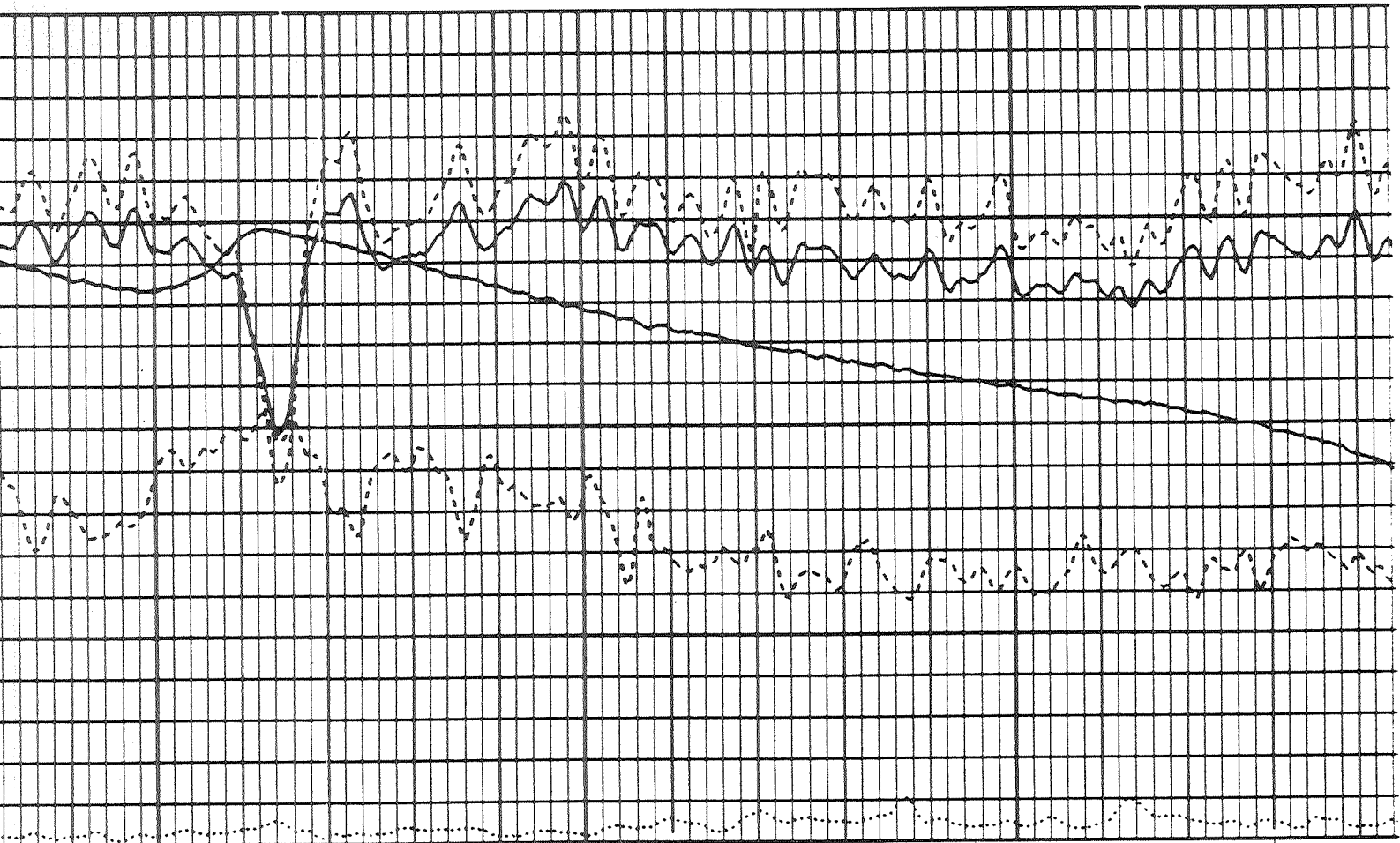




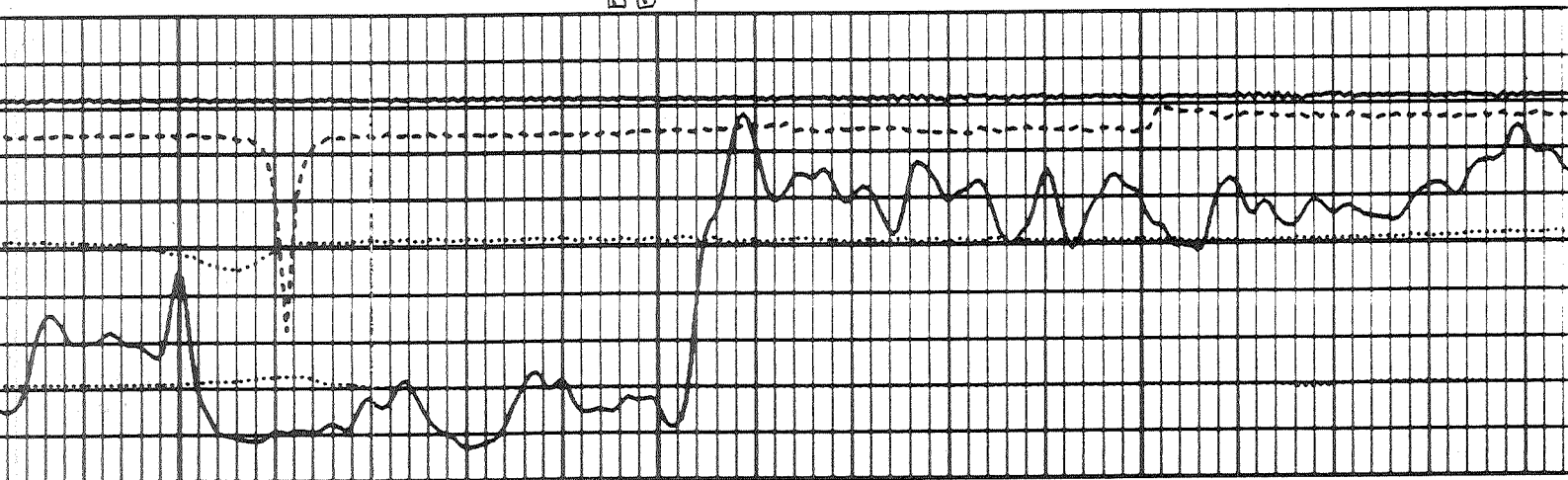
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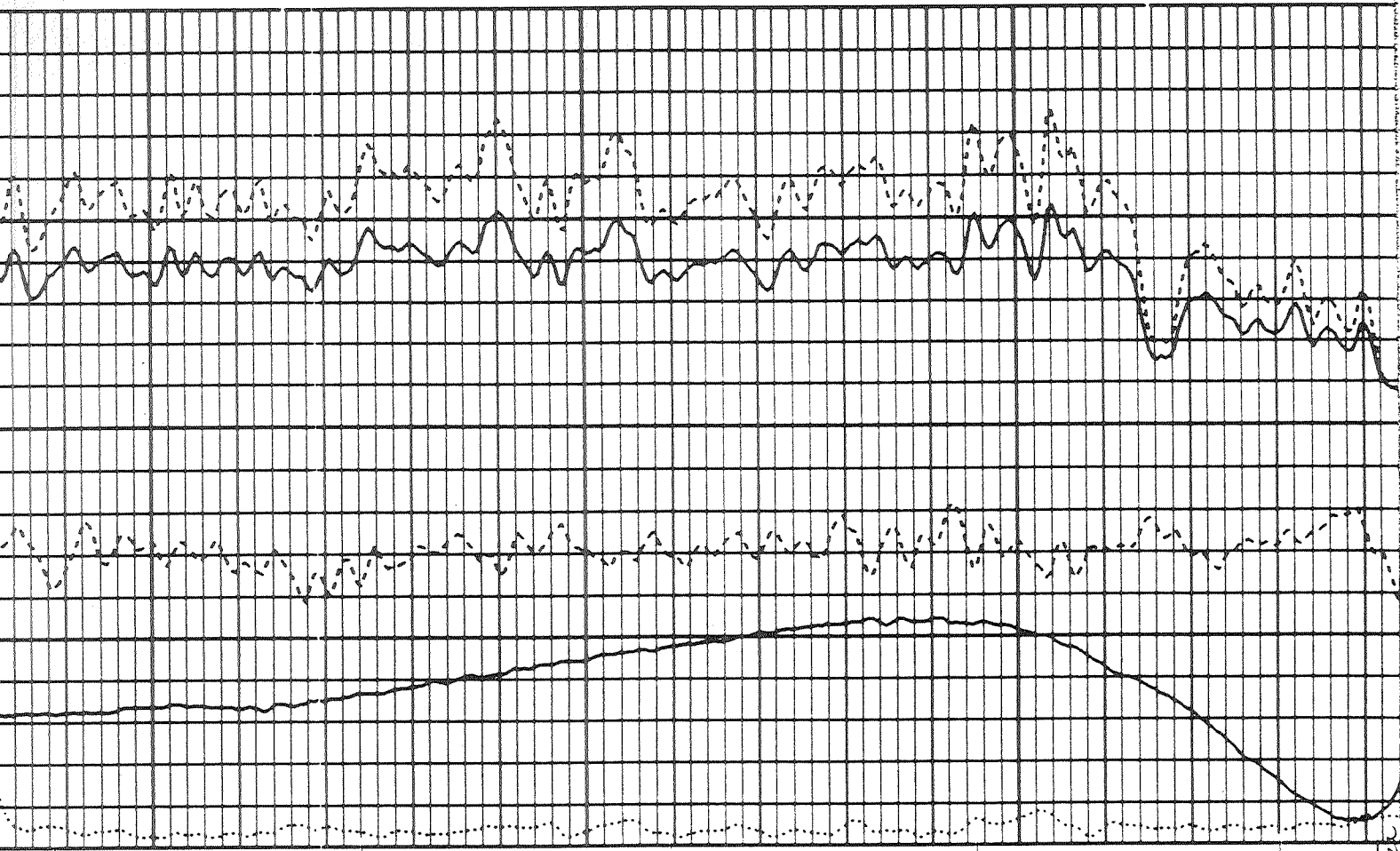
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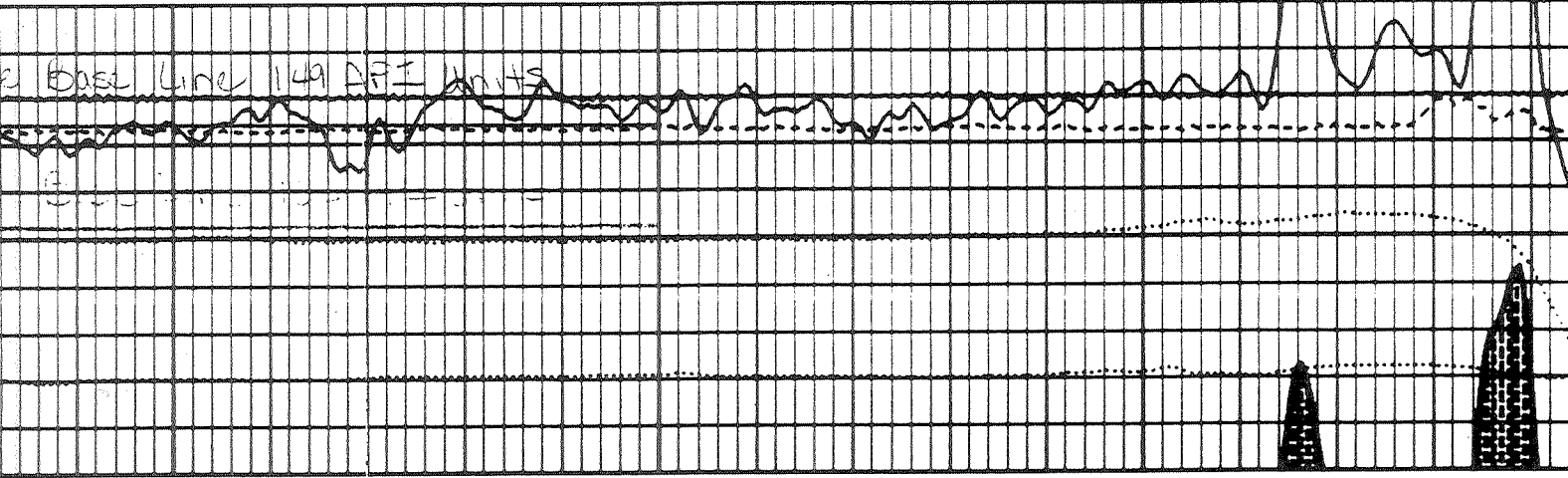
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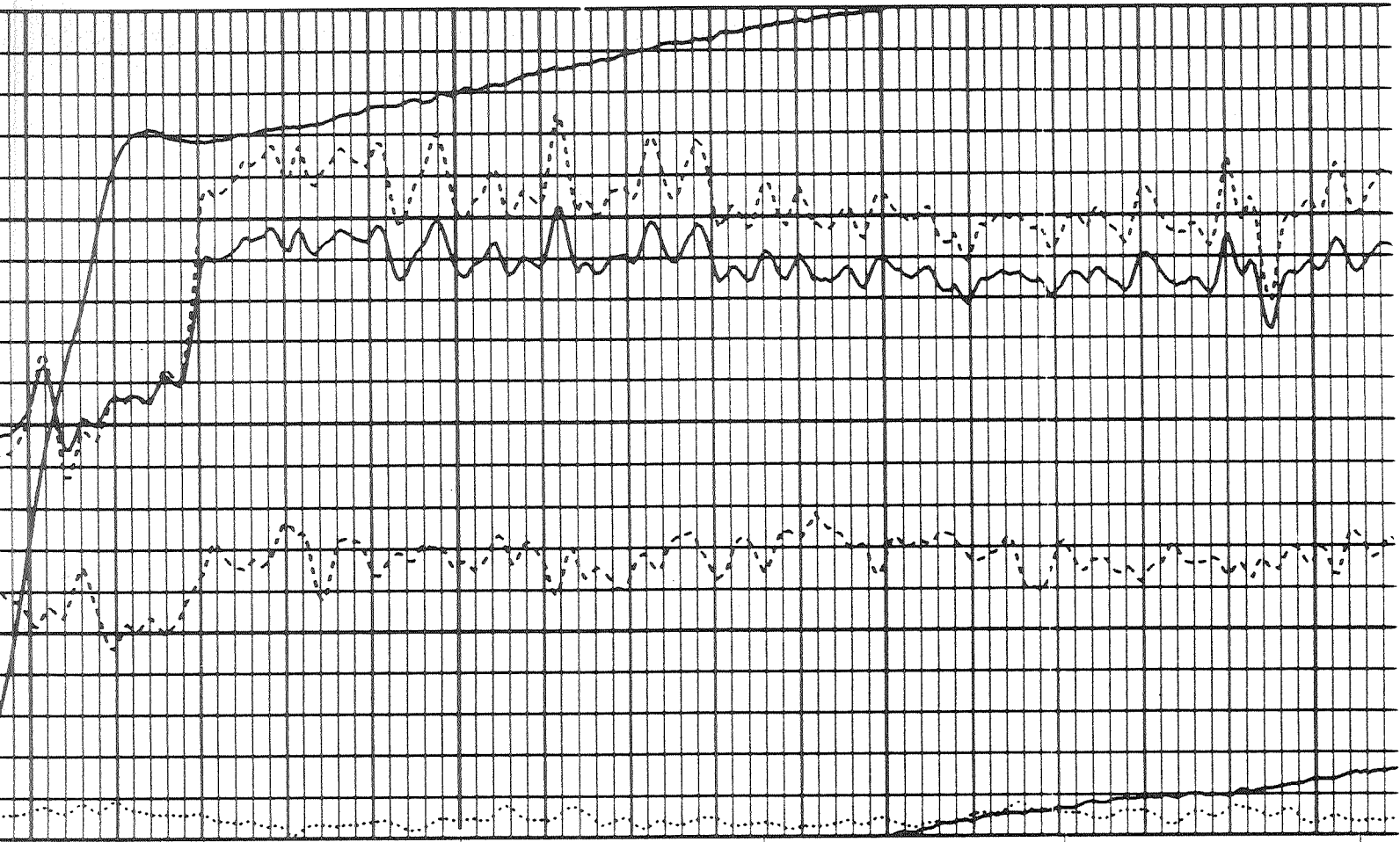




4100

Top of Base





42000

Base of  
Pera 4220  
Top of Dev  
Stale 4220

43000

