SWD 1/25/01
102233968

BILL F. HALEPESKA

PETROLEUM ENGINEER
Texas #58052
P. O. Box 80064
915/694-5945

GEOLOGIST
Cert #2941
Midland, Texas 79708

January 05, 2001

New Mexico Oil Conservation Division
2040 S. Pacheco
Santa Fe, NM 87505
Attention: Mr. David R. Catanach

RE: SAND DUNES Water Disposal Project - US MI
Eddy County, New Mexico
Application for Administrative Approval to
Inject Saltwater into the Cal-Mon No. 2 Well, (30-015-25176)
Located 1980' FN & WL, Section 35, T-23S, R-31E

Gentlemen:

POGO hereby respectfully submits two (2) original Applications for Authorization to Inject (Form C-108) pertaining to the captioned well and requests that same be given Administrative Approval.

Persuant thereto, please find enclosed the following:

(1) Copy of Notification Letter sent to all Leasehold Operators within one-half (1/2) mile radius of the proposed injection well and to surface owner upon which such well is located, along with copies of proof of mailing; and

(2) Proof of Legal Publication.

If you should have any questions regarding the subject Application, please contact the undersigned or Richard L. Wright.

Very truly yours,

POGO PRODUCING COMPANY

BILL F. HALEPESKA, P.E.
Agent

STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT

OIL CONSERVATION DIVISION
POST OFFICE BOX 2088
STATE LAND OFFICE BUILDING
SANTA FE, NEW MEXICO 87501

FORM C-108
Revised 7-1-81

Pogo Producing Company
Cal-Mon No. 2

APPLICATION FOR AUTHORIZATION TO INJECT

I. Purpose: ☐ Secondary Recovery ☐ Pressure Maintenance ☒ Disposal ☐ Storage
Application qualifies for administrative approval? ☒ yes ☐ no

II. Operator: POGO PRODUCING COMPANY

Address: P. O. Box 10340, Midland, Texas 79702

Contact party: Richard L. Wright Phone: 915/685-8100

III. Well data: Complete the data required on the reverse side of this form for each well proposed for injection. Additional sheets may be attached if necessary.

IV. Is this an expansion of an existing project? ☐ yes ☒ no
If yes, give the Division order number authorizing the project _____.

V. Attach a map that identifies all wells and leases within two miles of any proposed injection well with a one-half mile radius circle drawn around each proposed injection well. This circle identifies the well's area of review.

* VI. Attach a tabulation of data on all wells of public record within the area of review which penetrate the proposed injection zone. Such data shall include a description of each well's type, construction, date drilled, location, depth, record of completion, and a schematic of any plugged well illustrating all plugging detail.

VII. Attach data on the proposed operation, including:

1. Proposed average and maximum daily rate and volume of fluids to be injected;
2. Whether the system is open or closed;
3. Proposed average and maximum injection pressure;
4. Sources and an appropriate analysis of injection fluid and compatibility with the receiving formation if other than reinjected produced water; and
5. If injection is for disposal purposes into a zone not productive of oil or gas at or within one mile of the proposed well, attach a chemical analysis of the disposal zone formation water (may be measured or inferred from existing literature, studies, nearby wells, etc.).

*VIII. Attach appropriate geological data on the injection zone including appropriate lithologic detail, geological name, thickness, and depth. Give the geologic name, and depth to bottom of all underground sources of drinking water (aquifers containing waters with total dissolved solids concentrations of 10,000 mg/l or less) overlying the proposed injection zone as well as any such source known to be immediately underlying the injection interval.

IX. Describe the proposed stimulation program, if any.

* X. Attach appropriate logging and test data on the well. (If well logs have been filed with the Division they need not be resubmitted.)

* XI. Attach a chemical analysis of fresh water from two or more fresh water wells (if available and producing) within one mile of any injection or disposal well showing location of wells and dates samples were taken.

XII. Applicants for disposal wells must make an affirmative statement that they have examined available geologic and engineering data and find no evidence of open faults or any other hydrologic connection between the disposal zone and any underground source of drinking water.

XIII. Applicants must complete the "Proof of Notice" section on the reverse side of this form.

XIV. Certification

I hereby certify that the information submitted with this application is true and correct to the best of my knowledge and belief.

Name: Bill F. Halepeska Title Agent

Signature: Bill Halepeska Date: 01-03-01

* If the information required under Sections VI, VIII, X, and XI above has been previously submitted, it need not be duplicated and resubmitted. Please show the date and circumstance of the earlier submittal.

DISTRIBUTION: Original and one copy to Santa Fe with one copy to the appropriate Division district office.

III. WELL DATA

A. The following well data must be submitted for each injection well covered by this application. The data must be both in tabular and schematic form and shall include:

(1) Lease name; Well No.; location by Section, Township, and Range; and footage location within the section.

(2) Each casing string used with its size, setting depth, sacks of cement used, hole size, top of cement, and how such top was determined.

(3) A description of the tubing to be used including its size, lining material, and setting depth.

(4) The name, model, and setting depth of the packer used or a description of any other seal system or assembly used.

Division District offices have supplies of Well Data Sheets which may be used or which may be used as models for this purpose. Applicants for several identical wells may submit a "typical data sheet" rather than submitting the data for each well.

B. The following must be submitted for each injection well covered by this application. All items must be addressed for the initial well. Responses for additional wells need be shown only when different. Information shown on schematics need not be repeated.

(1) The name of the injection formation and, if applicable, the field or pool name.

(2) The injection interval and whether it is perforated or open-hole.

(3) State if the well was drilled for injection or, if not, the original purpose of the well.

(4) Give the depths of any other perforated intervals and detail on the sacks of cement or bridge plugs used to seal off such perforations.

(5) Give the depth to and name of the next higher and next lower oil or gas zone in the area of the well, if any.

XIV. PROOF OF NOTICE

All applicants must furnish proof that a copy of the application has been furnished, by certified or registered mail, to the owner of the surface of the land on which the well is to be located and to each leasehold operator within one-half mile of the well location.

Where an application is subject to administrative approval, a proof of publication must be submitted. Such proof shall consist of a copy of the legal advertisement which was published in the county in which the well is located. The contents of such advertisement must include:

(1) The name, address, phone number, and contact party for the applicant;

(2) the intended purpose of the injection well; with the exact location of single wells or the section, township, and range location of multiple wells;

(3) the formation name and depth with expected maximum injection rates and pressures; and

(4) a notation that interested parties must file objections or requests for hearing with the Oil Conservation Division, P. O. Box 2088, Santa Fe, New Mexico 87501 within 15 days.

NO ACTION WILL BE TAKEN ON THE APPLICATION UNTIL PROPER PROOF OF NOTICE HAS BEEN SUBMITTED.

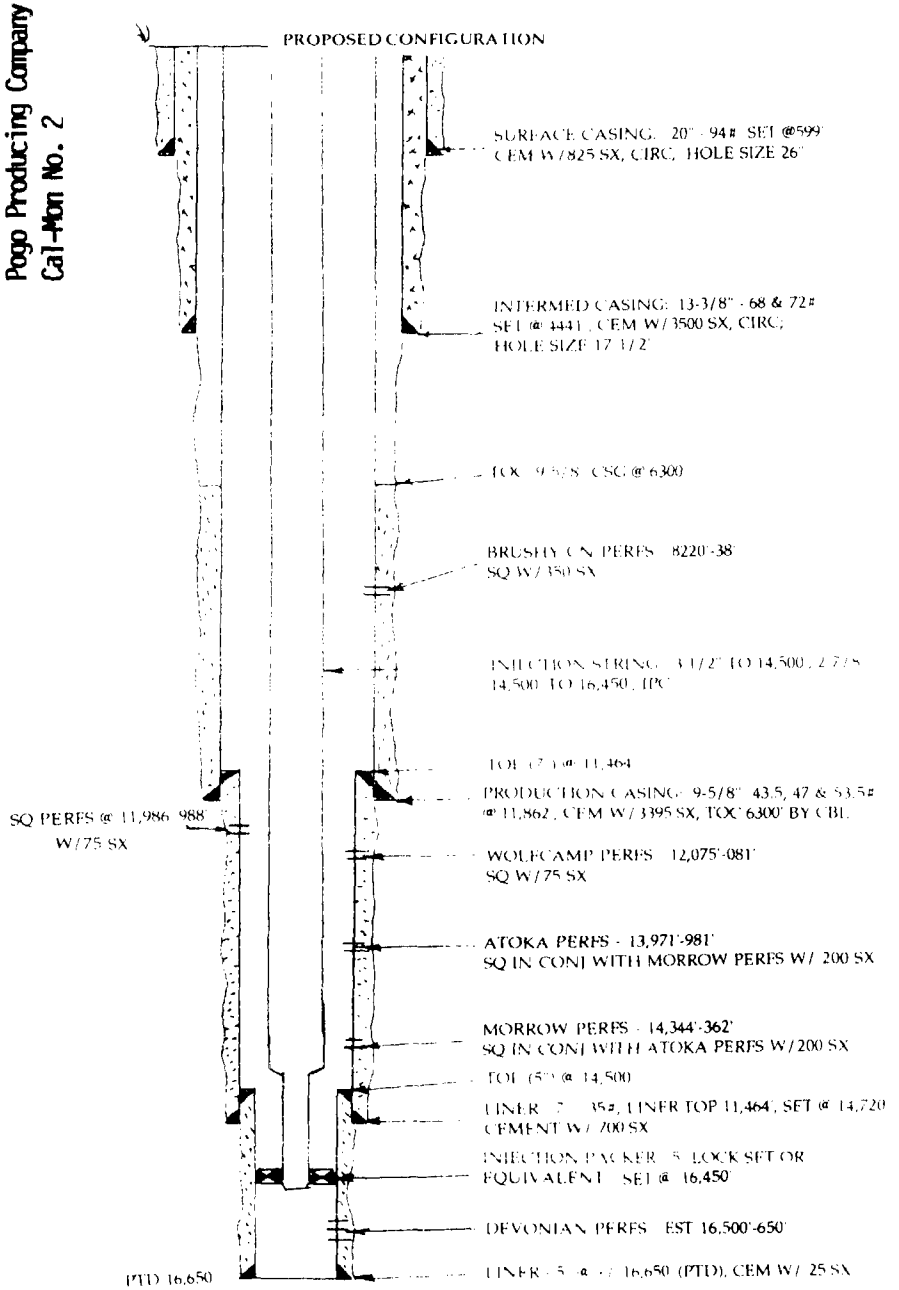
NOTICE: Surface owners or offset operators must file any objections or requests for hearing of administrative applications within 15 days from the date this application was mailed to them.

FORM C-108
ITEM III - A

INJECTION WELL DATA SHEET

Pogo Producing Company
Cal-Mon No. 2

SCHEMATIC



TABULAR DATA

(1) LEASE: Cal-Mon WELL NO. 2 (30-015-25176)
Location: Sec. 35 TWP 23S Range 31E
County Eddy, NM
Footage 1980' FN & WL

(2) CASING STRINGS:
Surface Casing Size 20" Depth 599' Cem w/ 825 sx
TOC surface Determined by circ
Hole size 26"
Intermediate Casing Size 13-3/8" Depth 4441'
Cemented w/ 3500 sx TOC surface
Determined by circ cmt Hole Size 17-1/2"
Long String Size 9-5/8" Depth 11,862' Cem w/ 3395 sx
TOC 6300' Determined by CBL
Hole size 12-1/4"
Liner Size 7" Set 11,464' to 14,720'
Cemented w/ 700 sx TOC lnr top
Determined by circ Hole size 8-1/2"
Liner Size 5" Set 14,500' to +/-16,650'
Cemented w/ 25 sx TOC lnr top
Determined by circ Hole size 5-7/8"

(3) Injection Interval +/-16,500' to 16,650'

(4) INJECTION TUBING STRING:
Size 3-1/2" to 14,500' coated w/ poly
Size 2-7/8" to 16,450' coated w/ poly

(5) INJECTION PACKER:
Size 5" ; Make/Model Lock Set or equiv.
Setting depth 16,450'

Pogo Producing Company
Cal-Mon No. 2

FORM C-108

ITEM III-B

INJECTION WELL DATA

(1). Injection formation: Devonian
Field/Pool: SAnd Dunes (Morrow)/Ingle Wells (Delaware)

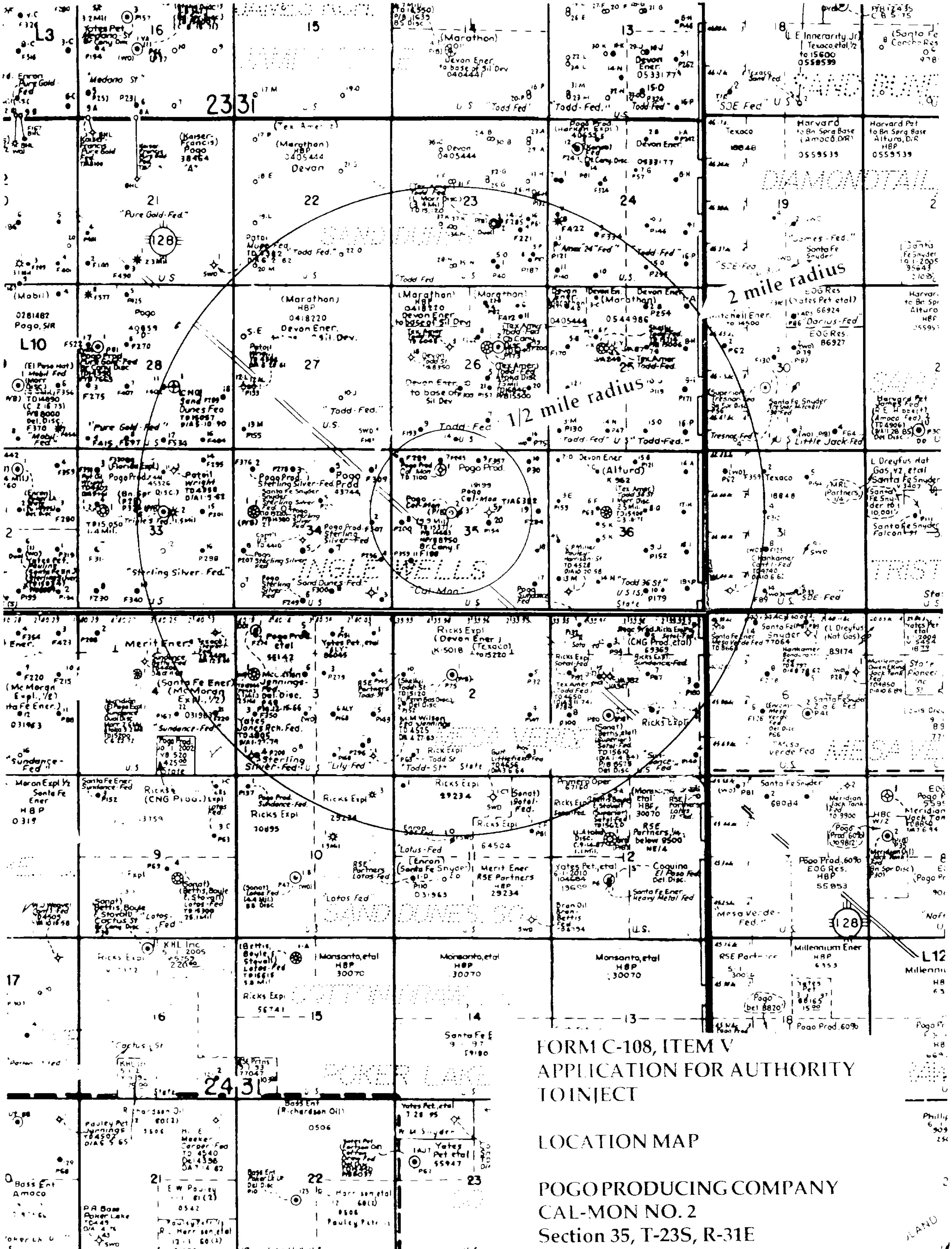
(2). Injection interval; from 16,500 ft. to 16,650 ft.
Perforated XX Open Hole _____

(3). Original purpose well drilled Morrow test/deepen for comp as SWD

(4). Other perforated intervals; XX Yes _____ No
Squeezed with _____ sx., or isolated by _____
see below

(5). Oil or gas productive zone(s):
Next higher Morrow 14,400'
Next lower none

Morrow perfs: 14,344'-362'
Atoka perfs: 13,971'-981'
squeeze together w/200 sx
Wolfcamp perfs: 12,075'-081'; sq w/75 sx
Brushy Canyon perfs: 8220'-238'; sq w/350 sx



FORM C-108, ITEM V
APPLICATION FOR AUTHORITY TO INJECT

LOCATION MAP

POGO PRODUCING COMPANY
CAL-MON NO. 2
Section 35, T-23S, R-31E
Eddy County, New Mexico

Pogo Producing Company
Cal-Mon No. 2

FORM C-108

ITEM VI

WELL DATA - AREA OF REVIEW

( ). Location: NO WELLS THIS DEPTH WITHIN 1/2 MILE

Operator: _____ Lease: _____ Well # ___

Well type: Oil _____ Gas _____ D&A _____ Total depth _____ ft.

Date drilled: _____

Completion Data: _____

_____

_____

_____

Plugged _____ Date: _____ (Schematic attached)

( ). Location: _____

Operator: _____ Lease: _____ Well # ___

Well Type: Oil ___ Gas ___ D&A ___ Total Depth: _____ ft.

Date Drilled: _____

Completion Data: _____

_____

_____

Plugged_____ Date _____ (Schematic attached)

( ). Location: _____

Operator: _____ Lease: _____ Well # ___

Well Type ; Oil_____ Gas _____ D&A ____ Total Depth: _____ ft.

Date Drilled: _____

Completion Data: _____

_____

_____

_____

Plugged_____ Date _____ (Schematic attached)

( ). Location: _____

Operator: _____ Lease: _____ Well # ___

Well type: Oil _____ Gas ____ D&A _____ Total depth _____ ft.

Date drilled: _____

Completion Data: _____

_____

_____

_____

Plugged _____ Date: _____ (Schematic attached)

FORM C-108

ITEM VII

OPERATIONAL DATA

(1). Average expected injection rate: 5000 BWPD; maximum anticipated rate: 10,000 BWPD

(2). Closed system

(3). Estimated average injection pressure: 1000 psi.
Estimated maximum pressure: 3300 psi.

(4). Source of injection water: water from Pogo operated leases in the area
Analysis of waters attached EXHIBIT I & II

(5). Analysis of injection zone water attached
Data source: NA

ITEM VIII

GEOLOGICAL DATA

INJECTION ZONE

Lithological description: limestone and dolomite

Geological name: Devonian
Zone thickness: +/-150 ft; Depth: 16,500' est. top

FRESH WATER SOURCE(S)

Geological name of aquifer: Santa Rosa

Depth to bottom of zone +/-650'

FORM C-108

ITEM IX

STIMULATION PROGRAM

ACIDIZE

Volume: 2000 gal. Type acid: 15% HCl

Rate: 5 BPM; Misc.: _____

_____

FRACTURE

Fluid volume: NA gal.; Type: _____

Prop type: _____ Volume (lb): _____

Rate: _____ BPM; Conductor: _____

Misc: _____

_____

ITEM X

LOGGING PROGRAM

Logging program included: GR/CND, DLL/MSFL, BCS

_____

Copy of GR/CND to 15,384' log(s) included with attachments

ITEM XI

FRESH WATER DATA

Fresh water well within 1 mile radius: XX Yes ____ No

Chemical analysis from well located: 23S, 31E.26.34411

Date sampled: 4-1-92 EXHIBIT III

Chemical analysis from well located: 24S, 31E.04.433422

Date sampled: 4-1-92 EXHIBIT III

ITEM XII

HYDROLOGY

Various engineering data and area well logs reveal no evidence that hydrologic connection might exist between the intended injection interval (Devonian) below 16,000' and probable fresh water zone(s) in the Santa Rosa above 650'.

ITEM XIII

COMMERCIAL INTENT

Initially, only water from Pogo operated properties will be disposed of into the subject well. However, at a later date , Pogo may wish to include water from other nearby leases operated by someone else, but in which Pogo holds an interest. All waters will be brought onto the site via pipeline only.

FORM C-108, ITEM VII(4)
APPLICATION FOR AUTHORITY TO INJECT

EXHIBIT I

ANALYSIS - INJECTION FLUID

POGO PRODUCING COMPANY
CAL-MON NO. 2
Section 35, T-23S, R-31E
Eddy County, New Mexico

ory Services
Tasker Drive
w Mexico 88240
397-3713

R ANALYSIS

SEP 2 1 1992

MIDLAND

COMPANY Pogo Producing Co.

SAMPLE CAL MON #7
SAMPLED BY Rolland Perry

DATE TAKEN 9/15/92

REMARKS BRUSHY CANYON FORMATION (LOWER DELAWARE)

Sodium	50
Nitrate	22.44
Barium as Ba	0
Carbonate alkalinity PPM	0
Bicarbonate alkilinity PPM	82
pH At Lab	5.62
Specific Gravity @ 60 F	1.160
Magnesium as Mg	24,418
Total Hardness as CaCO3	42,100
Clorides as CL	145,436
Sulfate as SO4	475
Iron as Fe	45.5
Potassium	25.63
Hydrogen Sulfide	0
Resistivity Ohms	0.2288
Total Disolved Solids	215,250
Carbonate as CO3 G/L	7.45
Calcium as CA	17,682

Results reported as Parts Per Million Unless Stated.

Langelier Saturation Index + 0.12

Analysis By Rolland Perry
Date: 9/15/92

EXHIBIT II

FORM C-108, ITEM VII(4)
APPLICATION FOR AUTHORITY TO INJECT

Nutro Products

P.O. Box 21187 Hous
Phone (713) 675-3421

ANALYSIS - INJECTION FLUID

WATER ANA

POGO PRODUCING COMPANY
CAL-MON NO. 2
Section 35, T-23S, R-31E
Eddy County, New Mexico

Date 04/18/94 Nutro Rep TERRY SOLANS
Sampling Point
Company POGO PRODUCING County EDDY N.M.
Field Lease AMAX "24" Well 11

DISSOLVED SOLIDS

CATIONS	mg/l	me/1
Sodium, Na^{+} (Calc.)	72,634	3,158
Total Hardness as Ca^{++}	35,200	0
Calcium, Ca^{++}	12,800	640
Magnesium, Mg^{++}	13,659	1,138
Barium, Ba^{++}	5	0
Iron (Total) Fe^{+++}	60	3
ANIONS		
Chlorides, Cl^{-}	175,000	4,930
Sulfate, $SO_4^{=}$	345	7
Carbonate, $CO_3^{=}$	0	0
Bicarbonate, HCO_3^{-}	73	1
Sulfide, $S^{=}$	8	1
Total Dissolved Solids (Calc.)	274,584	
OTHER PROPERTIES		
pH	5.600	
Specific Gravity, 60°/60 F	1.078	
TURBIDITY	315	

Remarks **SAMPLE TAKEN ON 04/12/94**

SCALING INDICIES

TEMP, F	CA CO_3	$CASO_4*2H_2O$	CA SO_4	BA SO_4
80	0.6206	-0.2393	-0.6288	0.5903
120	1.2246	-0.2561	-0.4651	0.4665
160	2.1352	-0.2789	-0.3152	0.2650

EXHIBIT III

FORM C-108, ITEM XI
APPLICATION FOR AUTHORITY TO INJECT

ANALYSIS - FRESH WATER

POGO PRODUCING COMPANY
CAL-MON NO. 2
Section 35, T-23S, R-31E
Eddy County, New Mexico

STATE OF NEW

STATE ENGINEER

ROSWELL

ELUID MARTINEZ
STATE ENGINEER

Roswell, New Mexico 88201
(505) 622-6521

April 27, 1993

Bill Halepeska
P. O. Box 11117
Midland, Texas 79702

Dear Sir:

Please find enclosed information and logs requested from this office. Below please find water quality data on wells which you requested:

USE	LOCATION	CLORIDES	CONDUCTIVITY	DATE
Irr.	23S.28.05.111444	731ppm	6400	04/09/53
Irr.	23S.28.08.13111	1001	5400	07/17/53
"	" " " "	1400	6821	05/14/81
Irr.	23S.28.10.333423	1001	5300	07/16/53
"	" " " "	1310	7017	05/14/81
"	" " " "	1570	7837	08/23/85
Irr.	23S.28.15.32111	2020	8960	05/27/81
Irr.	23S.28.15.32111A	1132	7000	04/19/53
Irr.	23S.28.15.433131	1079	5900	07/16/53
Irr.	23S.28.17.33333	89	1600	03/03/53
Stk.	23S.31.26.32230	122	3455	12/19/79
Stk.	23S.31.26.34411	150	240	12/11/70
"	" " " "	134	3503	10/20/76
"	" " " "	130	3383	02/06/85
"	" " " "	124	3520	07/16/87
"	" " " "	230	3690	04/01/92
Stk.	24S.31.04.433422	246	3690	07/15/87
"	" " " "	310	3780	04/01/92

If you have any further questions, feel free to call this office.

Very truly yours,

Ramon L. Torres

Ramon Torres
Water Resource Tech II

RT/lc
encs.

BILL F. HALEPESKA

Petroleum Engineer
Texas #58852
P. O. Box 80064

Geologist
Cert. #2941
Midland, TX 79708

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

January 2, 2001

To: Offset Leasehold Operators
(See Attached List)

Re: Sand Dunes Water Disposal Project, US MI
Lea County, New Mexico
Application for Administrative Approval to Inject
Saltwater into the Cal-Mon No, 2 Well, Located
1980' FN & WL Section 35, T-23S, R-31E

Gentlemen:

Pogo Producing Company has applied to the New Mexico Oil Conservation Division for Administrative Approval to inject saltwater into the captioned well.

A copy of the Form C-108 submitted by Pogo to the Division is enclosed.

If you object to and/or request that a hearing be held pertaining to this Application, you must notify the Division within fifteen (15) days from the date of Pogo's Application.

If you have any questions, please contact the undersigned or Mr. Richard L. Wright.

Very truly yours,

Bill F. Halepeska, P.E.

Enclosure(s)

FORM C-108

Attached to Notification Letter dated January 2, 2001, regarding Pogo's Application for Administrative Approval to Inject Saltwater into the Cal-Mon No. 2 Well

Devon Energy
P. O. Box 250
Artesia, New Mexico 88211
Attention: Mr. Don Maberry

Ricks Exploration
210 Park Ave
3000 Oklahoma Tower
Oklahoma City, Oklahoma 73102
Attention: Mr. Cliff Merritt

Yates Petroleum
105 South 4th Street
Artesia, New Mexico 88210
Attention: Mr. Randy Patterson

United States Department of Interior
Bureau of Land Management
Roswell Resource Area Office
2909 W. 2nd
Roswell, New Mexico 88201-1287
Attention Mr. David Glass

U.S. Postal Service
CERTIFIED MAIL RECEIPT
(Domestic Mail Only; No Insurance Coverage Provided)

7099 3220 0005 5196 1191

Article Sent To:
DEVON ENERGY ARTESIA NM 88211

Postage	$ 0.99
Certified Fee	1.40
Return Receipt Fee (Endorsement Required)	1.25
Restricted Delivery Fee (Endorsement Required)	
Total Postage & Fees	**$ 3.64**

UNIT ID: 0708
Postmark Here
Clerk: KFTX3V
01/03/01

Name (Please Print Clearly) (To be completed by mailer)
Devon Energy
Street, Apt. No.; or PO Box No.
P. O. Box 250
City, State, ZIP+ 4
Artesia, NM 88211

PS Form 3800, July 1999 **See Reverse for Instructions**

U.S. Postal Service
CERTIFIED MAIL RECEIPT
(Domestic Mail Only; No Insurance Coverage Provided)

7099 3220 0005 5196 1184

Article Sent To:
RICKS EXPLORATION OKLAHOMA CITY, OK 73102

Postage	$ 0.99
Certified Fee	1.40
Return Receipt Fee (Endorsement Required)	1.25
Restricted Delivery Fee (Endorsement Required)	
Total Postage & Fees	**$ 3.64**

UNIT ID: 0708
MIDLAND, TX GRAVES STA.
Postmark Here
JAN 3 2001
Clerk: KFTX3V
01/03/01 USPS

Name (Please Print Clearly) (To be completed by mailer)
Ricks Exploration
Street, Apt. No.; or PO Box No.
210 Park Ave., 3000 Oklahoma Tower
City, State, ZIP+ 4
Oklahoma City, OK 73102

PS Form 3800, July 1999 **See Reverse for Instructions**

U.S. Postal Service
CERTIFIED MAIL RECEIPT
(Domestic Mail Only; No Insurance Coverage Provided)

7099 3220 0005 5196 1160

Article Sent To:
YATES PETROLEUM ARTESIA, NM 88210

Postage	$ 0.99
Certified Fee	1.40
Return Receipt Fee (Endorsement Required)	1.25
Restricted Delivery Fee (Endorsement Required)	
Total Postage & Fees	**$ 3.64**

UNIT ID: 0708
MIDLAND, TX GRAVES STA.
Postmark Here
JAN 3 2001
Clerk: KFTX3V
01/03/01 USPS

Name (Please Print Clearly) (To be completed by mailer)
YATES PETROLEUM
Street, Apt. No.; or PO Box No.
105 South 4th St.
City, State, ZIP+ 4
Artesia, NM 88210

PS Form 3800, July 1999 **See Reverse for Instructions**

U.S. Postal Service
CERTIFIED MAIL RECEIPT
(Domestic Mail Only; No Insurance Coverage Provided)

7099 3220 0005 5196 1177

Article Sent To:
UNITED STATES DEPT. OF INTERIOR/BLM ROSWELL, NM 88201

Postage	$ 0.99
Certified Fee	1.40
Return Receipt Fee (Endorsement Required)	1.25
Restricted Delivery Fee (Endorsement Required)	
Total Postage & Fees	**$ 3.64**

UNIT ID: 0708
MIDLAND, TX GRAVES STA.
Postmark Here
JAN 3 2001
Clerk: KFTX3V
01/03/01 USPS

Name (Please Print Clearly) (To be completed by mailer)
United States Dept. of Interior/BLM
Street, Apt. No.; or PO Box No.
2909 W. 2nd
City, State, ZIP+ 4
Roswell, NM 88201-1287

PS Form 3800, July 1999 **See Reverse for Instructions**

Affidavit of Publication

STATE OF NEW MEXICO)
) ss.
COUNTY OF LEA)

Joyce Clemens being first duly sworn on oath deposes and says that she is Advertisting Director of **THE LOVINGTON DAILY LEADER**, a daily newspaper of general paid circulation published in the English language at Lovington, Lea County, New Mexico; that said newspaper has been so published in such county continuously and uninterruptedly for a period in excess of Twenty-six (26) consecutive weeks next prior to the first publication of the notice hereto attached as hereinafter shown; and that said newspaper is in all things duly qualified to publish legal notices within the meaning of Chapter 167 of the 1937 Session Laws of the State of New Mexico.

That the notice which is hereto attached, entitled

Legal Notice

was published in a regular and entire issue of **THE LOVINGTON DAILY LEADER** and not in any supplement thereof, for one (1) day, beginning with the issue of January 3, 2001, ~~2000~~ and ending with the issue of January 3, 2001, ~~2000~~.

And that the cost of publishing said notice is the sum of $ 18.21 which sum has been (Paid) as Court Costs.

Joyce Clemens

Subscribed and sworn to before me this 3rd day of January 2001.

Debbie Schilling

Debbie Schilling
Notary Public, Lea County, New Mexico
My Commission Expires June 22, 2002

LEGAL NOTICE
PUBLIC NOTICE
APPLICATION FOR
AUTHORIZATION
TO INJECT
SALTWATER

POGO PRODUCING COMPANY, P.O. Box 10340, Midland, Texas 79702 (Contact - Richard L. Wright at 915/685-8100) has applied to the New Mexico Oil Conservation Division for Administrative Approval for Authorization to dispose of saltwater into its Cal-Mon No. 2 well, located 1980' FN & WL of Section 35, T-23-S, R-31-E, Eddy County, New Mexico. The purpose of such well will be for disposal of saltwater produced from nearby Pogo operated wells. The injection interval will be in the Devonian Formation between 16,500' and 16,650' beneath the surface, with an expected maximum injection rate of 10,000 BWPD and an expected maximum injection pressure of 3300 psi.

Any interested parties must file objections or requests for a hearing with the New Mexico Oil Conservation Division, P.O. Box 2088, Santa Fe, New Mexico 87504-2088 within fifteen (15) days from the date of Arch's Application.

Published in the Lovington Daily Leader January 3 2001.

GEARHART

COMPENSATED DENSITY COMPENSATED NEUTRON LOG

FILING NO

COMPANY POGO PRODUCING COMPANY

WELL CAL-MON NO. 2

FIELD WANDERER

COUNTY EDDY STATE NEW MEXICO

LOCATION 1980' FNL & 1980' FWL

OPERATIONS DEPT.
POGO PRODUCING CO.

SEC 35 TWP 23-S RGE BLK. 31-E

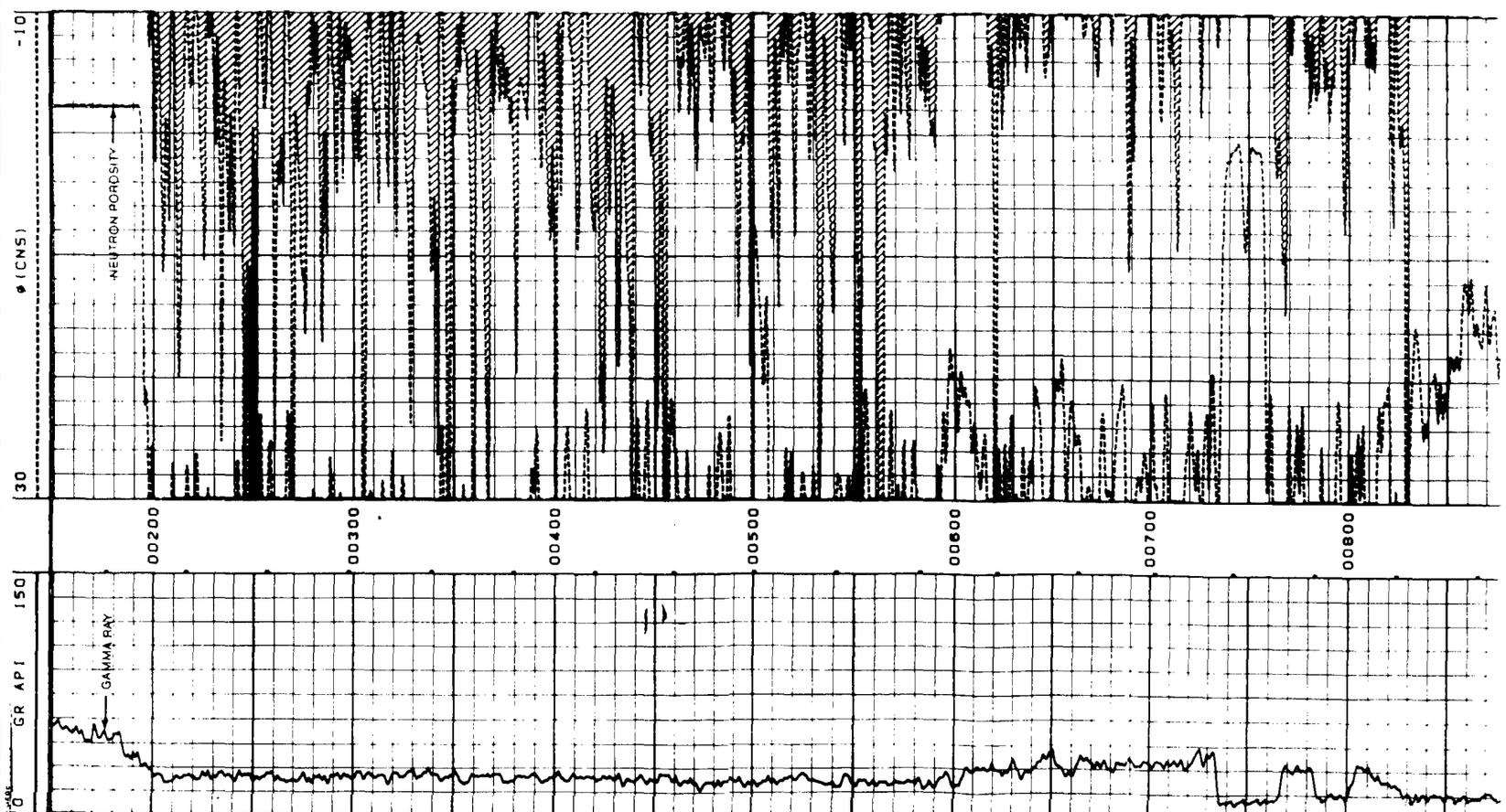
Other Services
DLL/MSFL
BCS

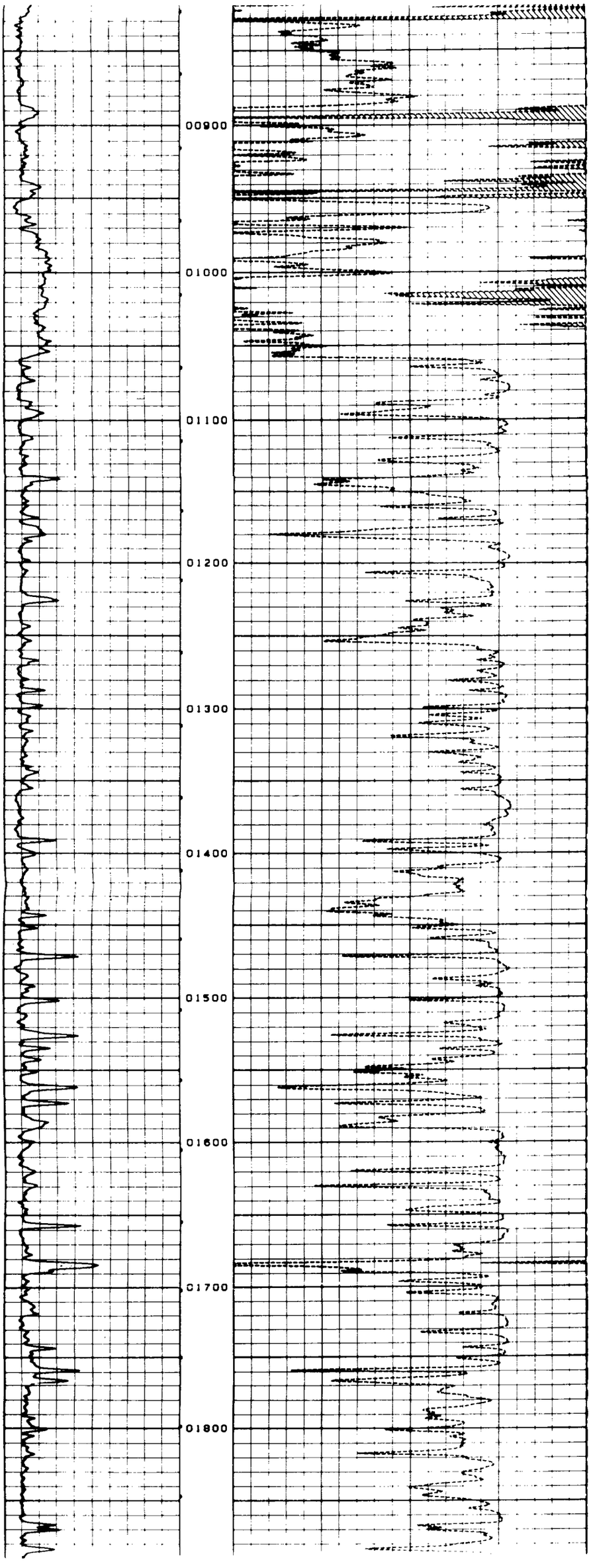
Permanent Datum GL Elev 3486.6
Log Measured from KB 22.5 Ft Above Perm Datum
Drilling Measured From KB

Elev. K.B. 3509.1
D.F. 3507.6
G.L. 3486.6

Date		4-27-85			5-29-85			6-14-85			
Run No		One			Two			Three			
Depth-Driller		11,862			14,721			15,384			
Depth-Logger		11,862			14,732			15,378			
Bottom logged interval		11,860			14,731			15,377			
Top logged interval		Surface			11,852			14,720			
Type fluid in hole		Brine			Brine			Brine/Gel			
Density	Visc	9.1	29		12.5	37		9.6	33		
pH	Fluid Loss	10.5	N/A		9	N/A		10.5	N/A		
Max rec. temp., deg F		165	°F		192	°F		205	°F		°F
Source of Samples		Pit			Mud Pit			Pit			
Rm @ Meas. Temp		0.08	@ 70 °F		0.05	@ 90 °F		0.052	@ 90 °F	@	°F
Rmf @ Meas. Temp		0.062	@ 70 °F		0.039	@ 90 °F		0.039	@ 88 °F	@	°F
Rmc @ Meas. Temp		0.15	@ 70 °F		0.08	@ 90 °F		0.08	@ 88 °F	@	°F
Source Rmf	Source Rmc	Meas.	Chart		Press	Chart		Press	Chart		
Time Since Circulation: End Circulation		1630			2030			1430			
Time Since Circulation: Logger on Bottom		0045			0530			0600			
Recorded By		O'Hara			Davidson			Davidson			
Witnessed By		Mr. Hale			Mr. Hale			Mr. Bauernfeind			

Run No.	Bore Hole Record Bit	From	To	Casing Record Size	Wgt	From	To
One	26	660	Surface	20	94	660	Surface
Two	17 1/2	4400	660	13 3/8	54.5	4400	660
Three	12 1/4	11,950	4400				

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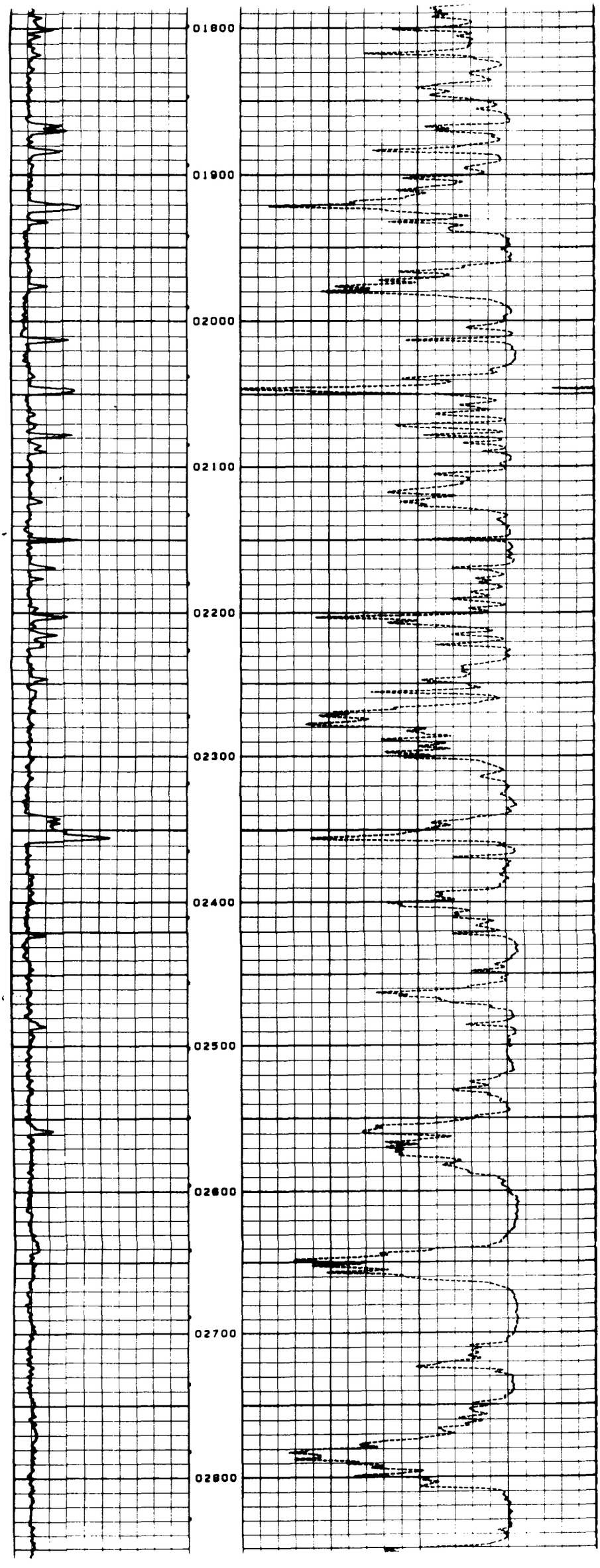
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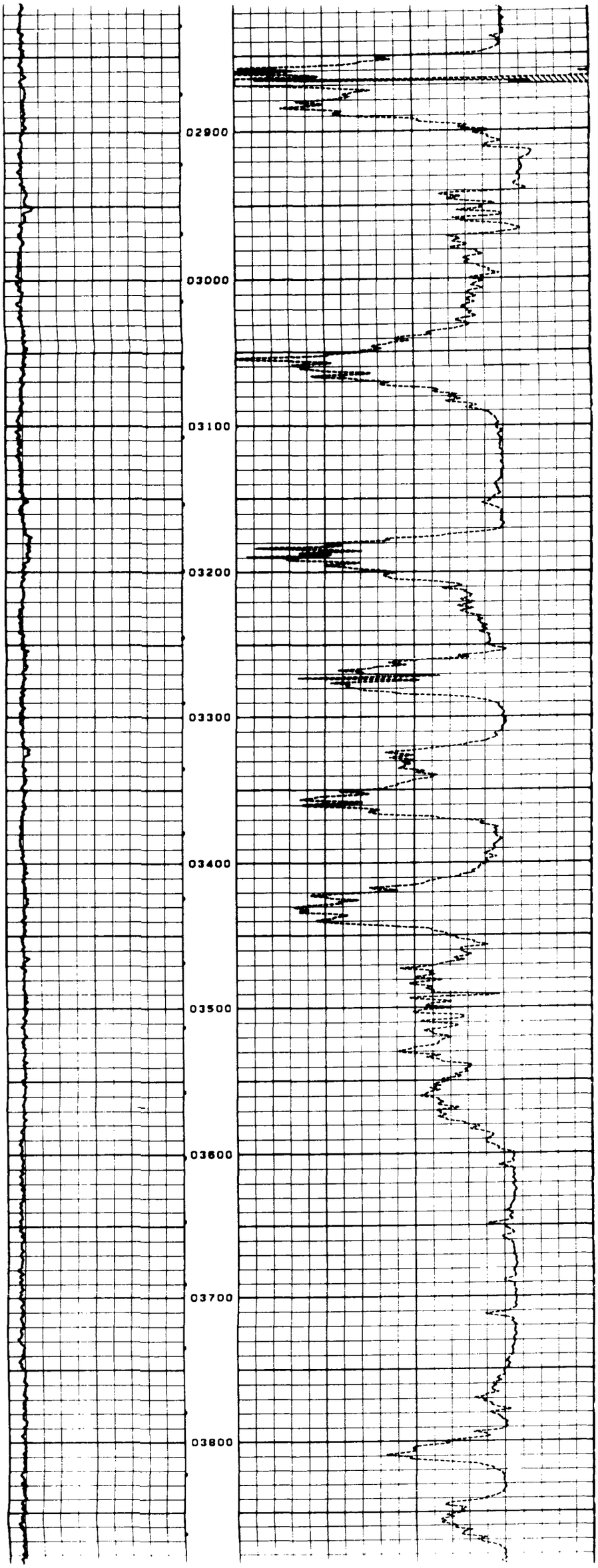
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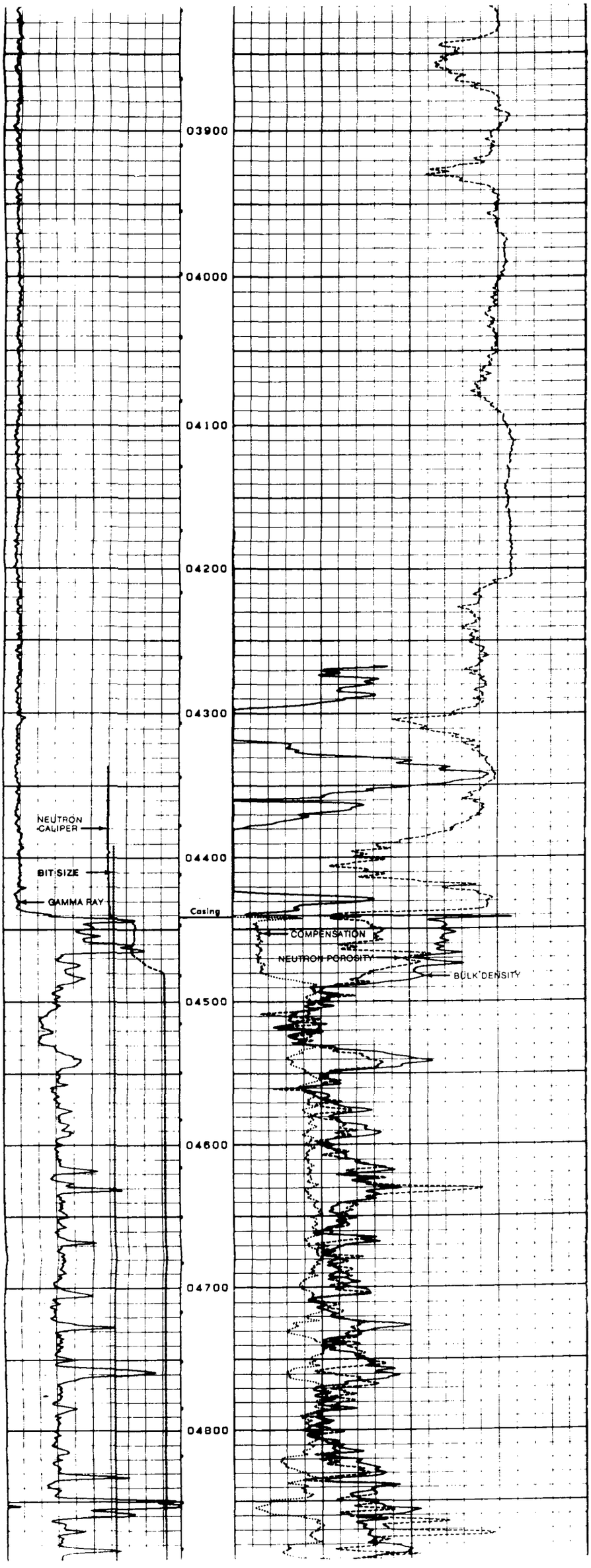
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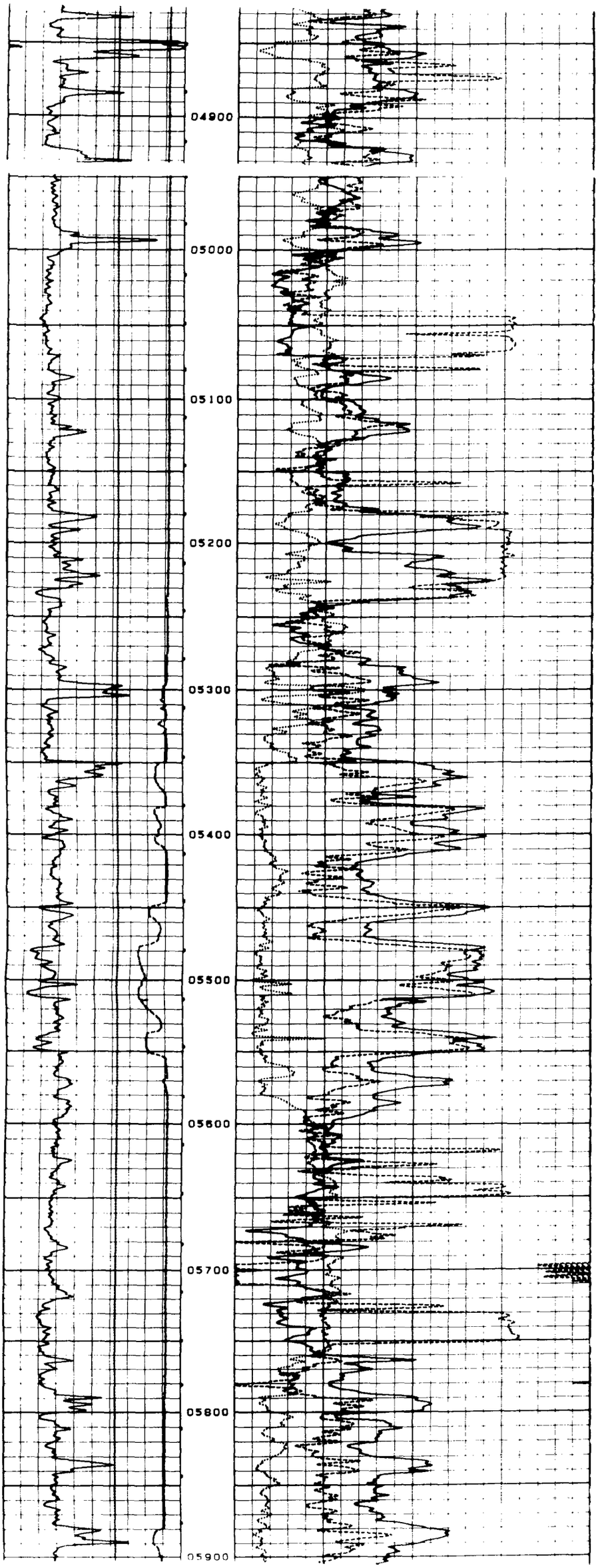
BULK DENSITY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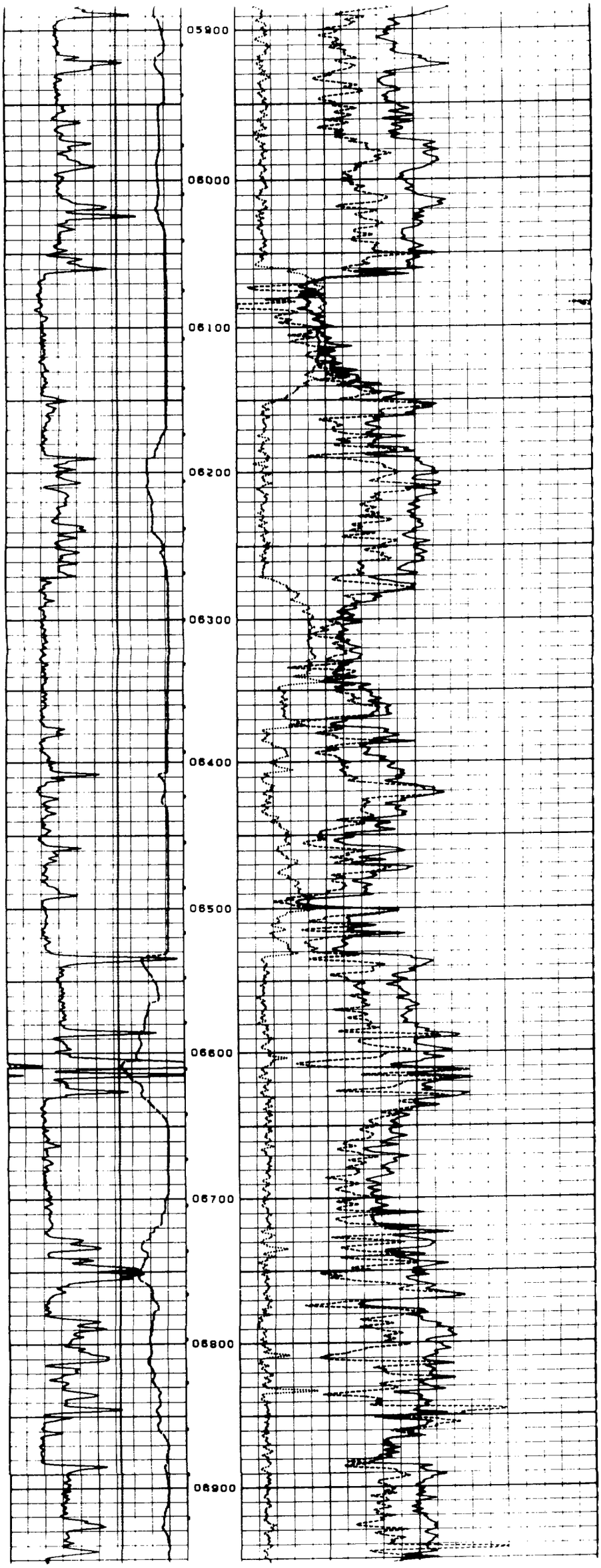
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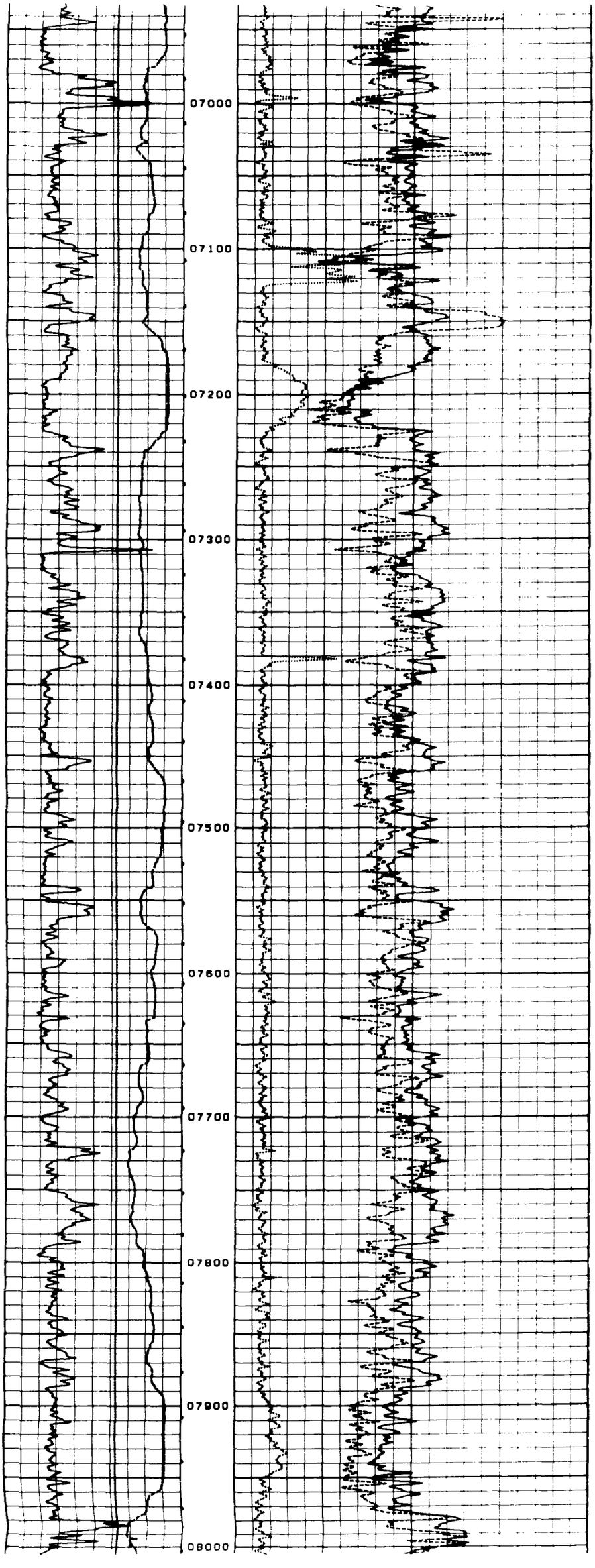
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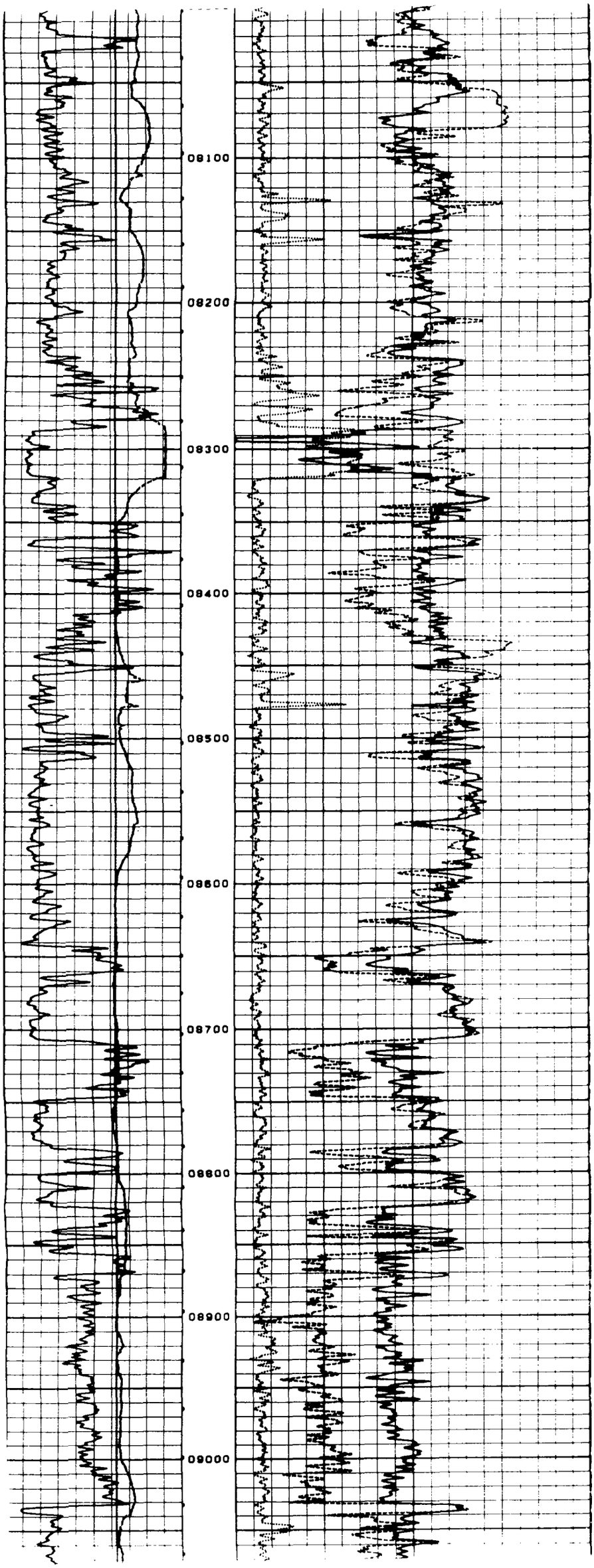
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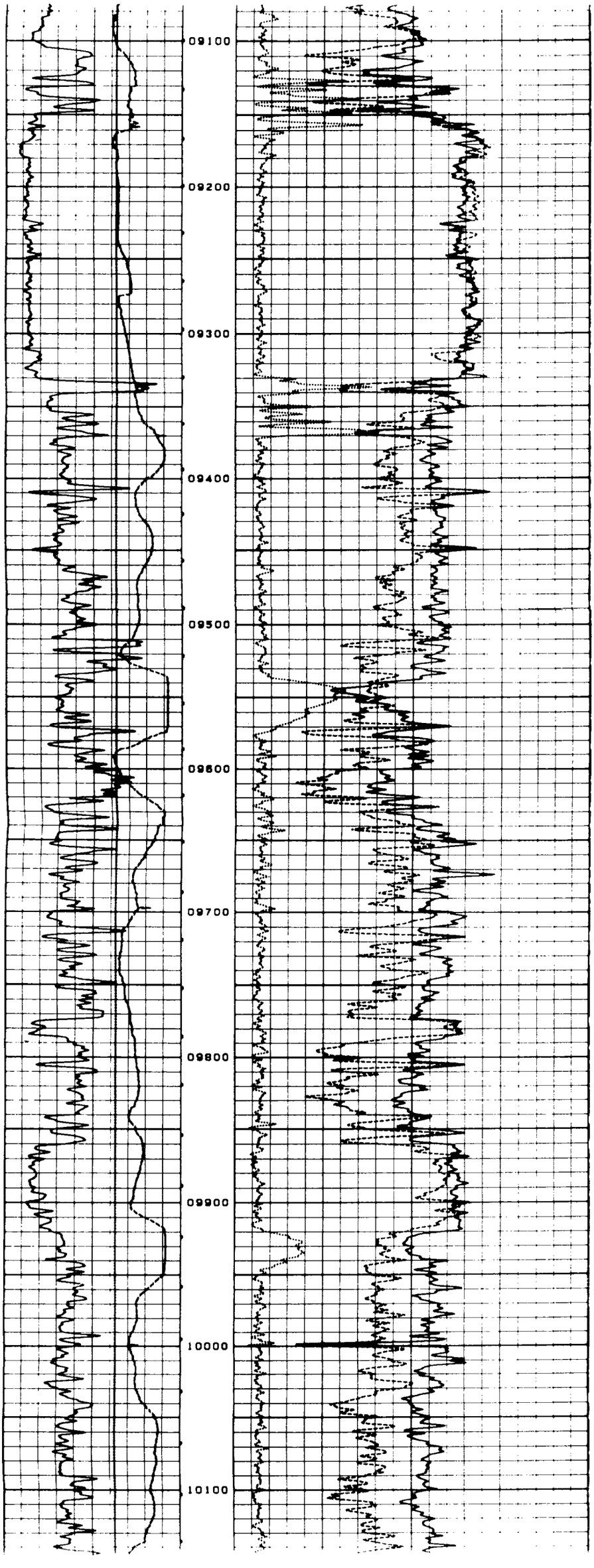
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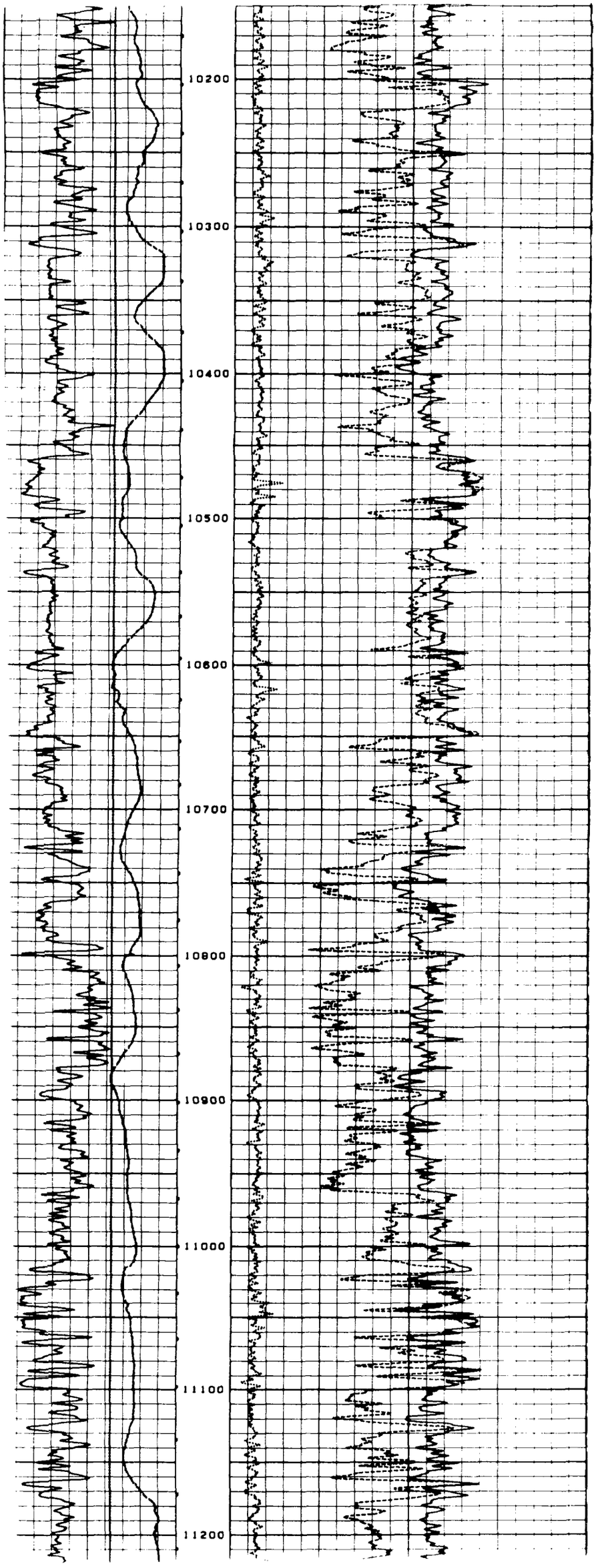
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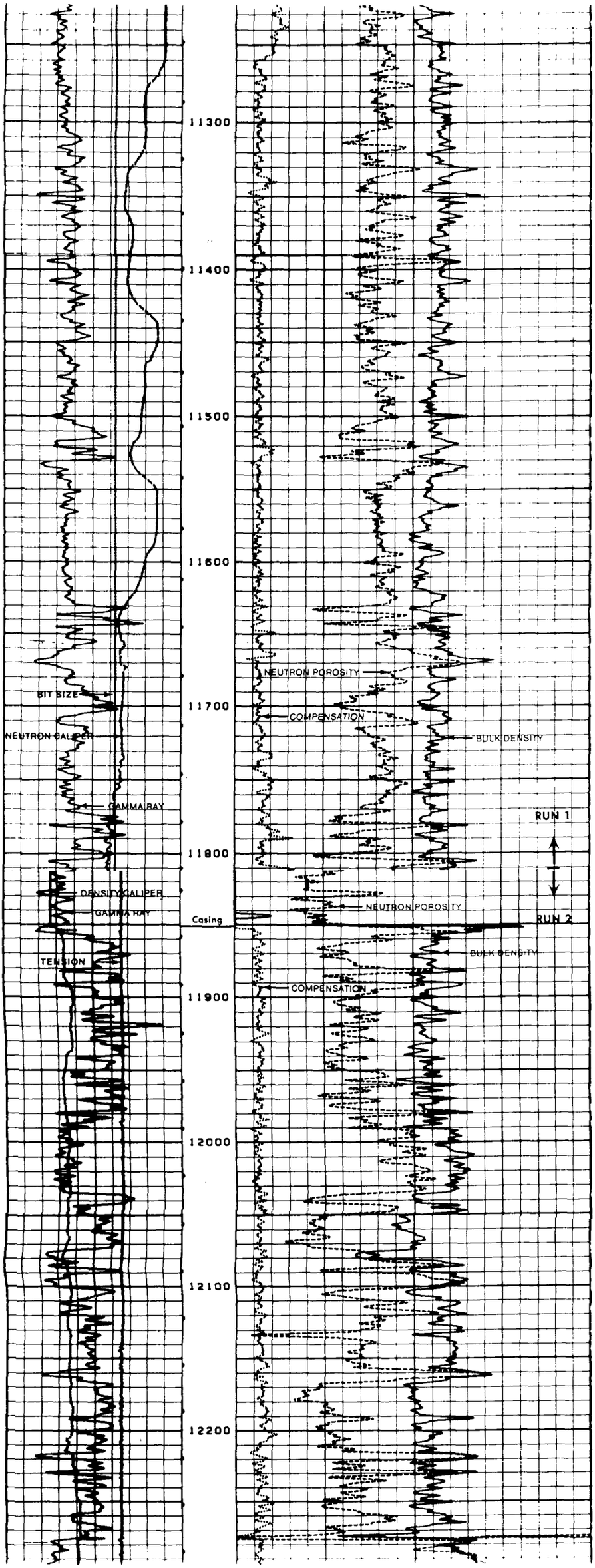
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BIT SIZE
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DENSITY CALIPER
GAMMA RAY
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RUN 1
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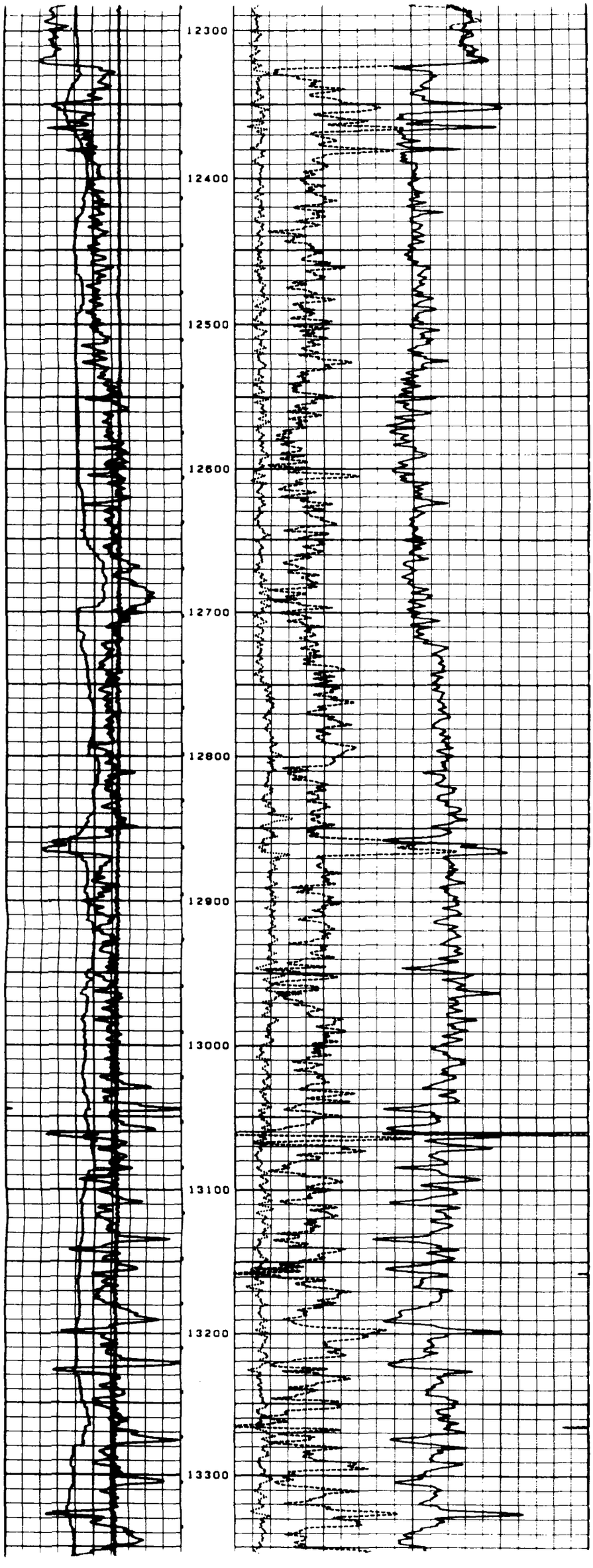
Casing
RUN 2
BULK DENSITY
COMPENSATION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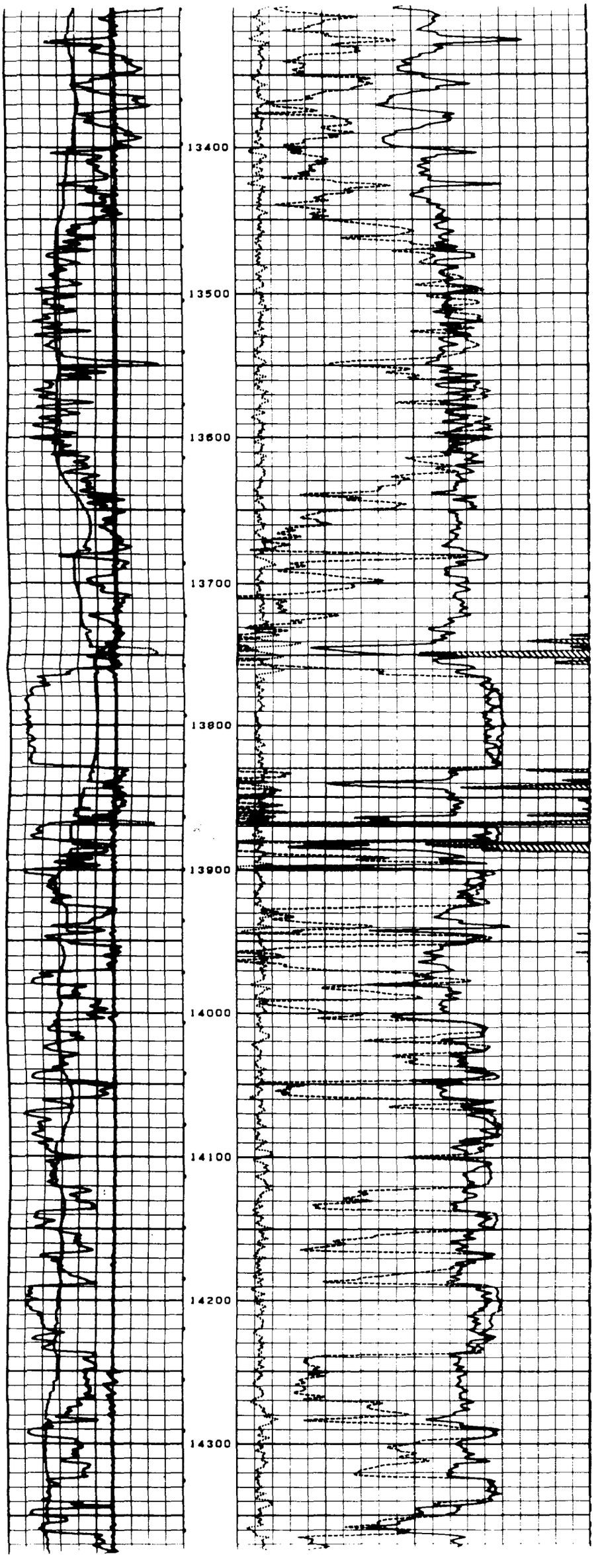
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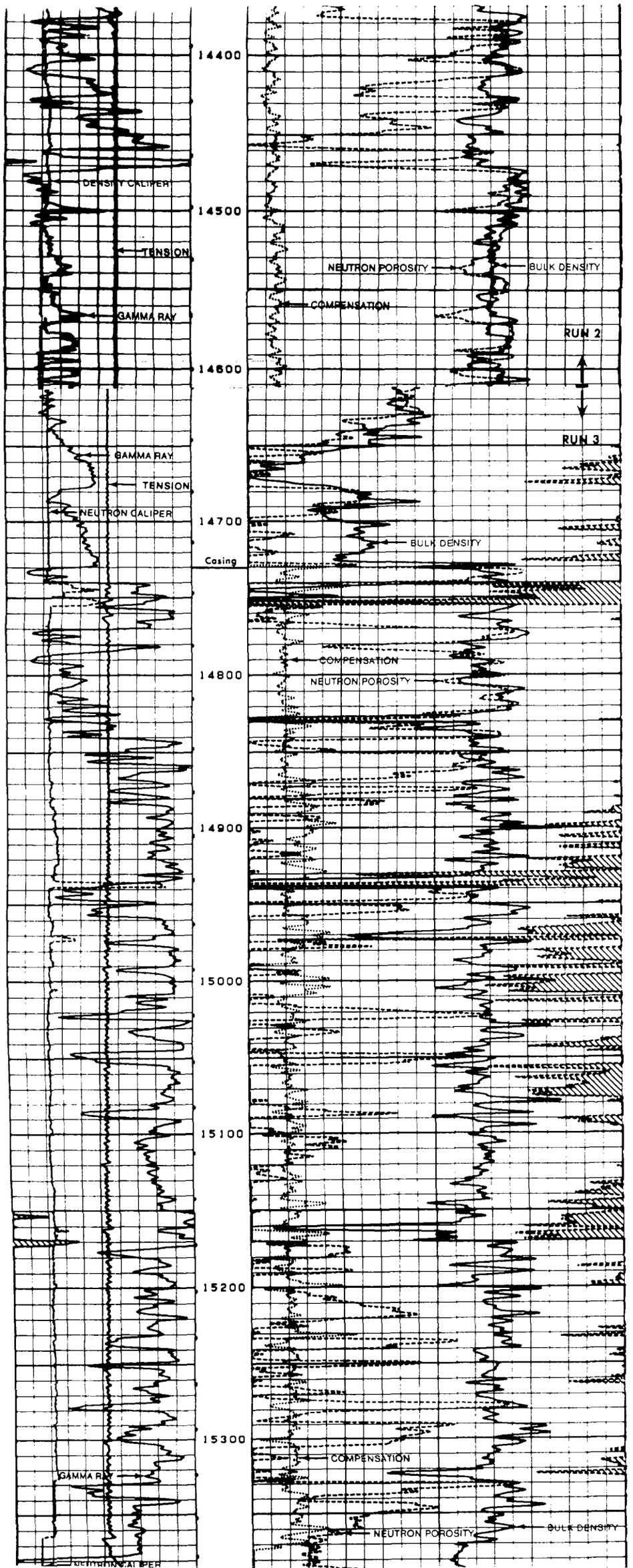
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DENSITY CALIPER
TENSION
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NEUTRON POROSITY
BULK DENSITY
COMPENSATION
RUN 2
RUN 3
GAMMA RAY
TENSION
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