STATE OF NEW MEXICO

ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT

OIL CONSERVATION DIVISION
HOBBS DISTRICT OFFICE

GOVERNOR

10/18/95

POST OFFICE BOX 1980
HOBBS, NEW MEXICO 88241-1980
(505) 393-6161

SWD-609
11/1/95

OIL CONSERVATION DIVISION
P. O. BOX 2088
SANTA FE, NEW MEXICO 87501

RE: Proposed:
MC _____
DHC _____
NSL _____
NSP _____
SWD X
WFX _____
PMX _____

Gentlemen:

I have examined the application for the:

Pogo Producing Co Red Tank 31 State #3-H 31-22S-31
Operator Lease & Well No. Unit S-T-R

and my recommendations are as follows:

OK

Yours very truly,

Jerry Sexton
Supervisor, District 1

/ed

POGO PRODUCING COMPANY

OVERNIGHT MAIL

October 10, 1995

New Mexico Oil Conservation Division
310 Old Santa Fe Trail
Santa Fe, New Mexico 87504
Attention: Mr. David R. Catanach

Re: S.E. Red Tank Prospect NM-607
Lea County, New Mexico
Application for Administrative
Approval to Inject Saltwater
into the Red Tank "30" State #3 Well
located 1980' FNL & 660' FEL
Section 30, T-22-S, R-33-E, N.M.P.M.

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.

Pursuant thereto, please find enclosed the following:

(1) Copy of Notification Letter sent to all Offset Leasehold Operators within a one-half (1/2) mile radius of the proposed injection well and to the 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.

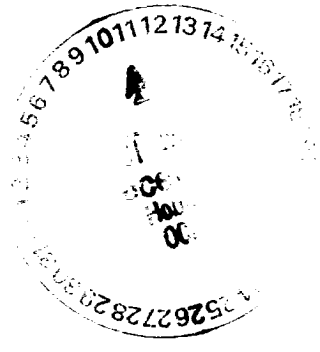
Very truly yours,

POGO PRODUCING COMPANY

Terry Gant
Senior Landman

TG:lf/c:SWD25
Enclosures

cc w/encl.: New Mexico Oil Conservation Division
District I Office
P. O. Box 1980
Hobbs, New Mexico 88240
Attention: Mr. Jerry Sexton



Affidavit of Publ tion

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

Joyce Clemens being first duly sworn on oath deposes and says that he is Adv. 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

Application For Authorization To Inject Saltwater

.....

and numbered ..... in the

..... Court, was published in a regular and entire issue of THE LOVINGTON DAILY LEADER and not in any supplement thereof, once each week on the same day of the week, for one (1) day consecutive weeks, beginning with the issue of

October 1, 19 95

and ending with the issue of

October 1, 19 95

And that the cost of publishing said notice is the sum of $ 19.10

which sum has been (Paid) (Assessed) as Court Costs

Joyce Clemens

Subscribed and sworn to before me this 2nd day of October, 19 95

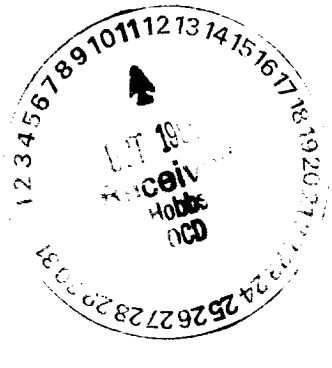
Jean Denier

Notary Public, Lea County, New Mexico

My Commission Expires Sept. 28, 19 98

LEGAL NOTICE
PUBLIC NOTICE
Application for Authorization to Inject Saltwater

Pogo Producing Company, P.O. Box 10340, Midland, Texas 79702-7340 (Contact - Richard L. Wright at 915/682-6822) has applied to the New Mexico Oil Conservation Division for Administrative Approval for Authorization to inject saltwater into its Red Tank "30" State #3 Well, located 1980' FNL and 660' FEL of Section 30, T-22-S, R-33-E, N.M.P.M., Lea County, New Mexico. The purpose of such well will be to dispose of saltwater produced from Pogo's nearby wells. The injection interval will be in the Delaware (Bell Canyon) formation between 4,946' - 4,963' beneath the surface, with an expected maximum injection rate of approximately 3,000 BOWPD with an expected maximum injection pressure of approximately 990 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 Pogo's Application.
Published in the Lovington Daily Leader October 1, 1995.


Hobbs
OCD

APPLICATION FOR AUTHORIZATI TO INJECT

Pogo Producing Company
Red Tank "30" State No. 3

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/ 682-6822

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 whi 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 litholog 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 correc to the best of my knowledge and belief.

Name: Bill F. Hartepeska Title Agent

Signature: _____ Date: 09/22/95

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. _____

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 show 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 we

(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.

IV. 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.

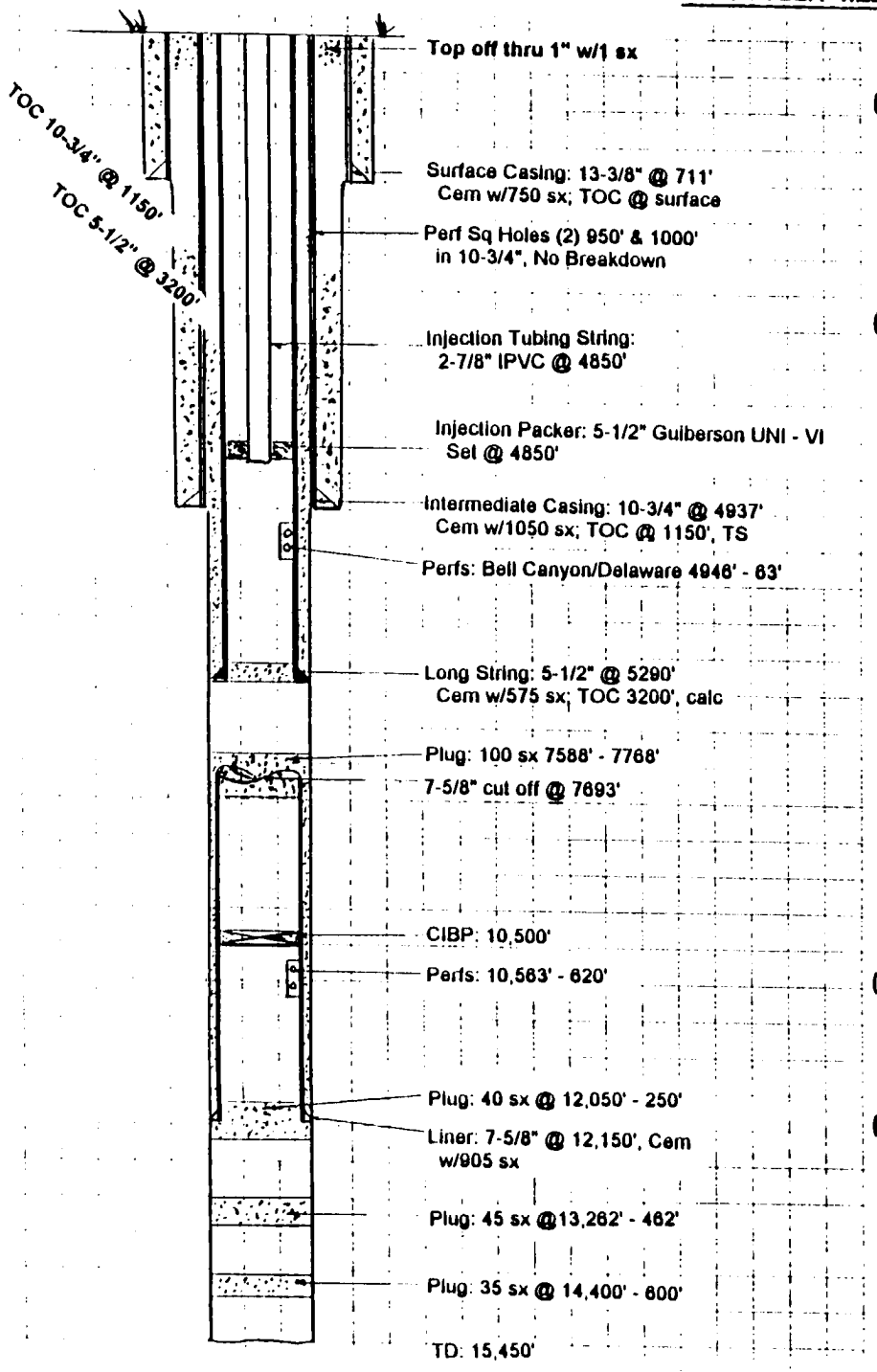
OTICE: Surface owners or offset operators must file any objections or requests for hearing of administrative applications within 15 days from the date this application was mailed to them.

FORM C-108

ITEM III-A

Pogo Producing Company
Red Tank "30" State No. 3

INJECTION WELL DATA SHEET



TABULAR DATA

(1). LEASE: **Red Tank "30" State** WELL # 3

LOCATION: Sec. 30 TWP 22S Range 33E

County Lea County

Footage 1980' FNL & 660' FEL

(2). CASING STRINGS:

Surface Casing

Size 13-3/8" Depth 711' Cemented w/ 750 sx.

TOC surface Determined by circ 30 sx

Hole size 17-1/2"

Intermediate Casing

Size 10-3/4" Depth 4937' Cemented w/1050 sx.

TOC 1150' Determined by Temp Survey

Hole size 12-1/4"

Note: spotted 1 bbl cement @ surface thru 1"

Long String

Size 5-1/2" Depth 5290' Cemented w/ 575 sx.

TOC 3200' Determined by calculated

Hole size 9-1/2"

Injection interval, from 4946' to 4963 Ft.

(3). INJECTION TUBING STRING:

Size 2-7/8 in., coated/lined with PVC

Setting depth 4850 Ft.

(4) INJECTION PACKER:

Size 5-1/2 in.; Make/Model Guiberson UNI-VI

Setting depth 4850 Ft.


Received
HUDDS

FORM C-108

ITEM III-B

Pogo Producing Company
Red Tank "30" State No. 3

INJECTION WELL DATA

(1). Injection formation: Delaware (Bell Canyon)

Field/Pool: Red Tank West

(2). Injection interval; from 4946 Ft. to 4963 Ft.

Perforated XX Open Hole _____

(3). Original purpose well drilled -- Morrow test @ 15,000'+

(4). Other perforated intervals; XX Yes _____ No

Squeezed with _____ sx., or isolated by PB with CIBP and multiple cement plugs perforations @10,563' - 10,620'

(5). Oil or gas productive zone(s):

Next higher: none

Next lower: Lower Cherry Canyon, 6500'+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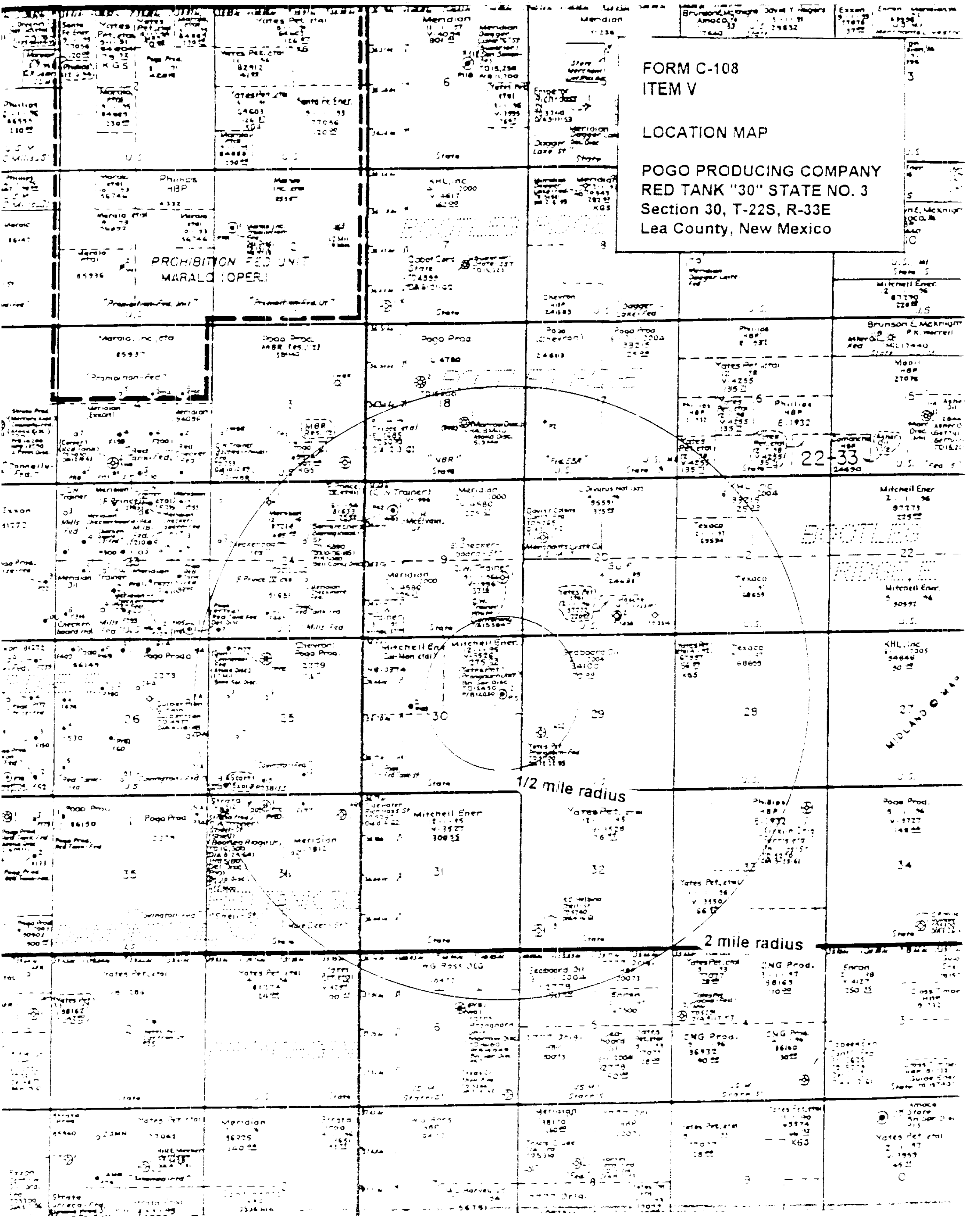
FORM C-108
ITEM V
LOCATION MAP
POGO PRODUCING COMPANY
RED TANK "30" STATE NO. 3
Section 30, T-22S, R-33E
Lea County, New Mexico
PROHIBITION FED UNIT
MARALO (OPER.)
1/2 mile radius
2 mile radius
22-33
MIDLAND MAP


OCT 1995
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FORM C-108

ITEM VI

Pogo Producing Company
Red Tank "30" State No. 3

WELL DATA - AREA OF REVIEW

(1). Location: 1980' FSL & 660' FWL, Sec 29, T-22S, R-33E, Lea County

Operator: Yates Petroleum Lease: Pronghorn Fedaeral ACZ Well # 1

Well type: Oil _____ Gas _____ D&A XX Total depth 5700 ft.

Date drilled: 12/22/85

Completion Data: ran 1 DST, Delaware Sand, 4890' - 4990'; ran 20" @ 40'; 10-3/4" @ 550' with 550 sx; D & A

Plugged XX Date: 12/22/85 (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)


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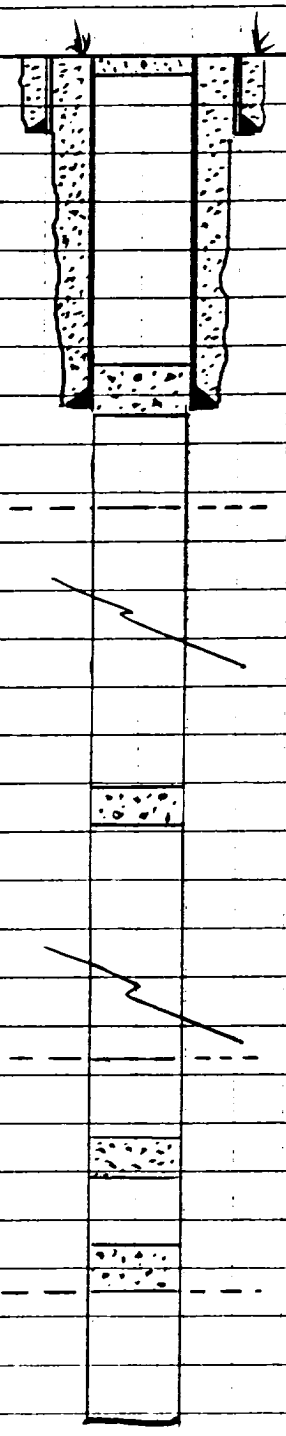
FOR C-108
ITEM VI

PLUGGING DIAGRAM
Yates Pet. - No. 1 Pronghorn "ACZ" Fed.

POGO PRODUCING COMPANY
RED TANK "30" STATE NO. 3
Section 30, T-22S, R-33E
Lea County, New Mexico



Plug: 15 sx surf to 50'

Conductor Pipe: 20" @ 40'

Surface Casing: 10-3/4" @ 800'
Cem w/550 sx

Plug: 40 sx 721' - 815'

T/Rustler - 1070'

Plug: 40 sx 2330' - 2485'

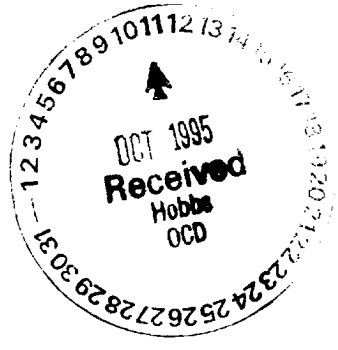
B/Salt - 4580'

Plug: 70 sx 4710' - 4935'

Plug: 70 sx 5083' - 5308'

T/Delaware Sd - 4938'

T D: 5700'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FORM C-108

ITEM VII

Pogo Producing Company
Red Tank "30" State No. 3

OPERATIONAL DATA

(1). Average expected injection rate: 1000 BWPD; maximum anticipated rate: 3000 BWPD

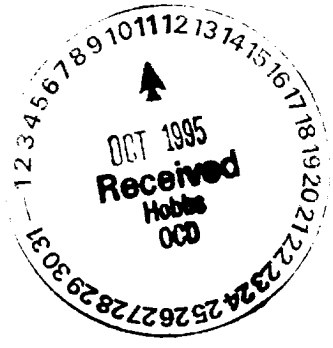
(2). Closed system

(3). Estimated average injection pressure: 750 psi.
Estimated maximum pressure: 990 psi.

(4). Source of injection water: Bone Spring and Lower Delaware Sand production from nearby Pogo operated wells

Analysis of waters attached. EXHIBITS I & II

(5). Analysis of injection zone water attached.
Data source: EXHIBIT III: test of injection zone water from subject well during Mitchell Energy Corp. test 2/26/93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FORM C-108

ITEM VIII

Pogo Producing Company
Red Tank "30" State No. 3

GEOLOGICAL DATA

INJECTION ZONE

Lithological description: sandstone, lt gray, fine to v fine gr, poorly consol, silty, poor calc cement

Geological name: Delaware, Bell Canyon

Zone thickness: 17 ft.; Depth: 4946 ft.

FRESH WATER SOURCES

Geological name: Santa Rosa

Depth to bottom of zone: +/-650 ft.

ITEM IX

STIMULATION PROGRAM (~~Proposed~~) PERFORMED

ACIDIZE:

Volume: 1500 gal Type acid: 15% NEFE HCl

Rate: 4.5 BPM; Misc. Ball Sealers

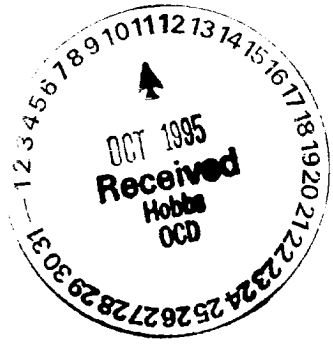
FRACTURE:

Fluid volume: 26,000 gal.; Type: XLGW

Prop type: 12/20 sand Volume (#): 79,800

Rate: 12 BPM; Conductor: 2-7/8 in.

Misc.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FORM C-108

Pogo Producing Company
Red Tank "30" State No. 3

ITEM X LOGGING PROGRAM

Logging program included: CNL/FDC, DLL/MSFL

Copy of DLL/MSFL log included in attachments

ITEM XI FRESH WATER ANALYSIS

Fresh water well within 1 mile radius; _____ Yes XX No

Chemical analysis from well(s) located: Section 14,T-22S, R-31E

Date sampled: 05/24/78; EXHIBIT IV

Chemical analysis from well(s) located: _____

Date sampled: _____

ITEM XII HYDROLOGY

Various engineering data and area well logs reveal no evidence that there might exist hydrologic connection between the intended injection zone (Bell Canyon) at 4946' and possible fresh water zone above 650' (Santa Rosa).

ITEM XIII COMMERCIAL INTENTION

Initially, only water from Pogo operated wells will be disposed of in subject well (system). Eventually, Pogo could take water from other leases in the area operated by someone else, but in which Pogo has a working interest. Only piped water will be taken into this system.


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EXHIBIT I

FORM C-108
ITEM VII(4)

ANALYSIS - BONE SPRING
PRODUCED WATER

POGO PRODUCING COMPANY
RED TANK "30" STATE NO. 3
Section 30, T-22S, R-33E
Lea County, New Mexico

Endura Products

P.O. Box 3394 Midland, Texas
Phone (915) 684-4233 * Fax (915)

WATER ANALYSIS

Date 8/22/95 [redacted] Rep TERRY SOLANSKY Code W-0262
Sampling Point/Date WELL HEAD - 8/21/95 State NEW MEXICO
Company POGO PRODUCING County EDDY
Field Lease RED TANK "30" Well STATE #1

DISSOLVED SOLIDS

CATIONS	mg/1	me/1
Sodium, Na- (Calc.)	73,692	3,204
Total Hardness as Ca—	6,120	0
Calcium, Ca—	5,680	284
Magnesium, Mg—	268	22
Barium, Ba—	0	0
Iron (Total) Fe—-	185	10

ANIONS		
Chlorides, COl-	122,500	3,451
Sulfate, SO4-	2,375	49
Carbonate, CO3-	0	0
Bicarbonate, HCO3-	1,244	20
Sulfide, S—	0	0
Total Dissolved Solids (Calc.)	205,944	

OTHER PROPERTIES

pH-	6.260
Specific Gravity, 60-/60 F	1.112
TURBIDITY	>500

SCALING INDICIES

TEMP, F	CA CO3	CASO4*2H2O	CA SO4	BA SO4
80	0.9815	0.1097	-0.1791	-29.3701
120	1.3955	0.1015	-0.0069	-29.5509
160	2.0301	0.0799	0.1541	-29.7755

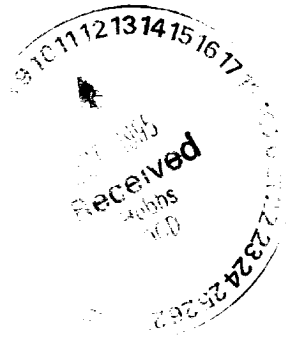
Received
Johns
M.D.

EXHIBIT II

FORM C-108
ITEM VII(4)

ANALYSIS - LOWER DELAWARE PRODUCED WATER

POGO PRODUCING COMPANY
RED TANK "30" STATE NO. 3
Section 30, T-22S, R-33E
Lea County, New Mexico

Nutro Products Cor

P.O. Box 21187 Houston, Texas 772
Phone (713) 675-3421 * Fax (713) 675

WATER ANALYSIS

Date 06/08/95 Nutro Rep TERRY SOLANSKY
Sampling Point
Company POGO PRODUCING
Field Lease COVINGTON "A" County Well 9

DISSOLVED SOLIDS

CATIONS	mg/l	me/l
Sodium, Na^{+} (Calc.)	82,156	3,572
Total Hardness as Ca^{++}	26,560	0
Calcium, Ca^{++}	20,960	1,048
Magnesium, Mg^{++}	3,415	285
Barium, Ba^{++}	2	0
Iron (Total) Fe^{+++*}	30	2
ANIONS		
Chlorides, Cl^{-}	174,000	4,901
Sulfate, $SO_4^{=}$	225	5
Carbonate, $CO_3^{=}$	0	0
Bicarbonate, HCO_3^{-}	49	1
Sulfide, $S^{=*}$	0	0
Total Dissolved Solids (Calc.)	280,837	

OTHER PROPERTIES

pH*	5.200
Specific Gravity, 60°/60 F	1.179
TURBIDITY	>500

Remarks **SAMPLE TAKEN ON 05/02/95**

SCALING INDICIES

TEMP, F	CA CO_3	$CASO_4*2H_2O$	CA SO_4	BA SO_4
80	0.1101	-0.1998	-0.5770	0.0270
120	0.6873	-0.2122	-0.4089	-0.1128
160	1.5588	-0.2267	-0.2508	-0.3171


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EXHIBIT III

FORM C-108
ITEM VII(5)

ANALYSIS - INJECTION ZONE
PRODUCED WATER

POGO PRODUCING COMPANY
RED TANK "30" STATE NO. 3
Section 30, T-22S, R-33E
Lea County, New Mexico

MARTIN WATER LABORATORIES, INC.

P.O. Box 1468 Phone 943-3234 or 563-1040
Monahans, Texas 79756

RESULT OF WATER ANALYSES

709 W. Indiana Phone 682-4521
Midland, Texas 79701

TO: Mr. Dan Tuffly
400 West Illinois, Suite 1000
Midland, TX 79701

LABORATORY NO. 3938
SAMPLE RECEIVED 3-3-93
RESULTS REPORTED 3-4-93

API WATER ANALYSIS REPORT FORM

Company		Sample No.	Date Sampled
Mitchell Energy Corporation			2/26/93
Field	**Legal Description**	**County or Parish**	**State**
Bootleg Ridge		Lea	NM
Lease or Unit	**Well**	**Depth**	**Formation**	**Water, B/D**
Big Horn "30" State	#1	4946 - 4963	Delaware	
Type of Water (Produced, Supply, etc.)	**Sampling Point**		**Sampled By**
Produced			

DISSOLVED SOLIDS

CATIONS	mg/l	me/l
Sodium, Na (calc.)	61,383	2,668.8
Calcium, Ca	20,000	1,000.0
Magnesium, Mg	2,795	230.0
Barium, Ba	0	0.0

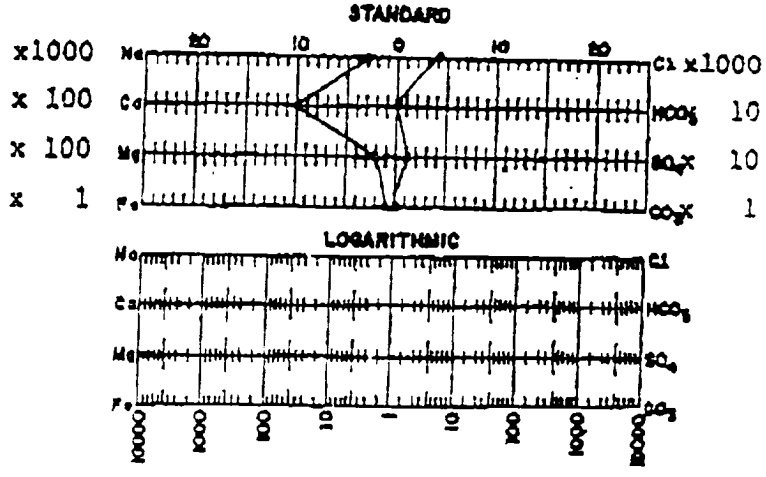
ANIONS		
Chloride, Cl	137,777	3,885.3
Sulfate, SO_4	566	11.8
Carbonate, CO_3	0	0.0
Bicarbonate, HCO_3	105	1.7

Total Dissolved Solids (calc.)	222,625
Iron, Fe (total)	18.0
Sulfide, as H_2S	0.0

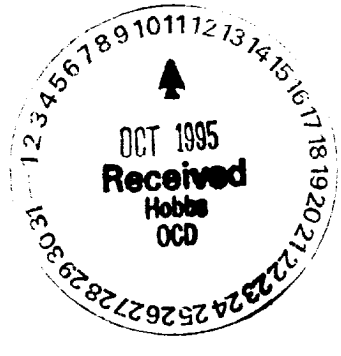
OTHER PROPERTIES

pH	5.91
Specific Gravity, 60/60 F.	1.1481
Resistivity (ohm-meters) 77° F.	0.053
Total Hardness, as $CaCO_3$	61,500

WATER PATTERNS — me/l



REMARKS & RECOMMENDATIONS: The above results show this water to have a slightly lower level of sodium chloride than our predominant records in the area and also the water from Comanche State "17" #2. However, the characteristics are still those expected from natural Delaware; therefore, it is indicated to be all, or essentially all, natural Delaware.


OCT 1995
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FORM C-108
ITEM XI

ANALYSIS - SANTA ROSA WATER

POGO PRODUCING COMPANY
RED TANK "30" STATE NO. 3
Section 30, T-22S, R-33E
Lea County, New Mexico

EXHIBIT 4

ical analyses of water from test hole H-5

nta Rosa Sandstone, sample taken 5/24/78

Alkalinity Field (mg/l as HCO3)	200
Bicarbonate FET-FLD (mg/l as HCO3)	240
Nitrogen, NO2 + NO3 Dissolved (mg/l as N)	0.36
Hardness (mg/l as CACO3)	150
Hardness, noncarbonate(mg/l as CACO3)	150
Calcium Dissolved (mg/l as CA)	56
Magnesium, Dissolved (mg/l as MG)	51
Sodium, Dissolved (mg/l as NA)	280
Potassium, Dissolved (mg/l as K)	25
Chloride, Dissolved (mg/s as CL)	120
Sulfate, Dissolved (mg/l as SO4)	530
Fluoride, Dissolved (mg/l as F)	1.2
Silica, Dissolved (mg/l as SIO2)	11.0
Boron, Dissolved (ug/l as B)	890
Solids Residue at 105 Deg C, Dissolved (mg/l)	1200


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SIMULTANEOUS DUAL LATEROLOG MICRO-SFL

COMPANY YATES PETROLEUM CORPORATION

WELL PRONGHORN UNIT #2

FIELD WILDCAT

COUNTY LEA STATE NEW MEXICO

LOCATION 1980' FNL & 660' FEL,

API SERIAL NO	SEC	TWP	RANGE
	30	22-S	33-E

Other Services:
RFT
CNL/FDC

COUNTY LEA
FIELD WILD
LOCATION PRONGHORN UNIT #2
WELL
COMPANY YATES PETRO. CORP.

Permanent Datum: G.L. ; Elev.: 3674.
Log Measured From K.B. 22 Ft. Above Perm. Datum
Drilling Measured From K.B.

Elev.: K.B. 3696
D.F. 3695
G.L. 3674

Date	1-4-82	2-24-82		
Run No.	ONE	TWO		
Depth—Driller	12150	15450		
Depth—Logger (Schl.)	12147	15427		
Btm. Log Interval	12146	15422		
Top Log Interval	4936	12144		
Casing—Driller	10 3/4@4937	7 5/8@12150	@	@
Casing—Logger	4938	12144		
Bit	9 1/2	6 1/2		
Type Fluid in Hole	CUT BRINE	WEIGHTED BRINE POLYMER		
Dens. / Visc.	8.7 / 38	10.6 / 43		
pH / Fluid Loss	8.5 / ml	11 / 2 ml	ml	ml
Source of Sample	FLOWLINE	PIT		
Rm @ Meas. Temp.	.12 @ 68 °F	.062 @ 62 °F	@ °F	@ °F
Rmf @ Meas. Temp.	.12 @ 68 °F	.047 @ 62 °F	@ °F	@ °F
Rmc @ Meas. Temp.	@ °F	@ °F	@ °F	@ °F
Source: Rmf / Rmc	M			
Rm @ BHT	.05 @158 °F	.015 @ °F	@ °F	@ °F
TIME Circulation Stopped	2330 1-3	0030		
TIME Logger on Bottom	0830 1-4	0930		
Max. Rec. Temp.	158 °F	148 °F	°F	°F
Equip. / Location	8069 HOBBS	8069 HOBBS		
Recorded By	HOWARD	O'SULLIVAN		
Witnessed By	MASON	MASON		

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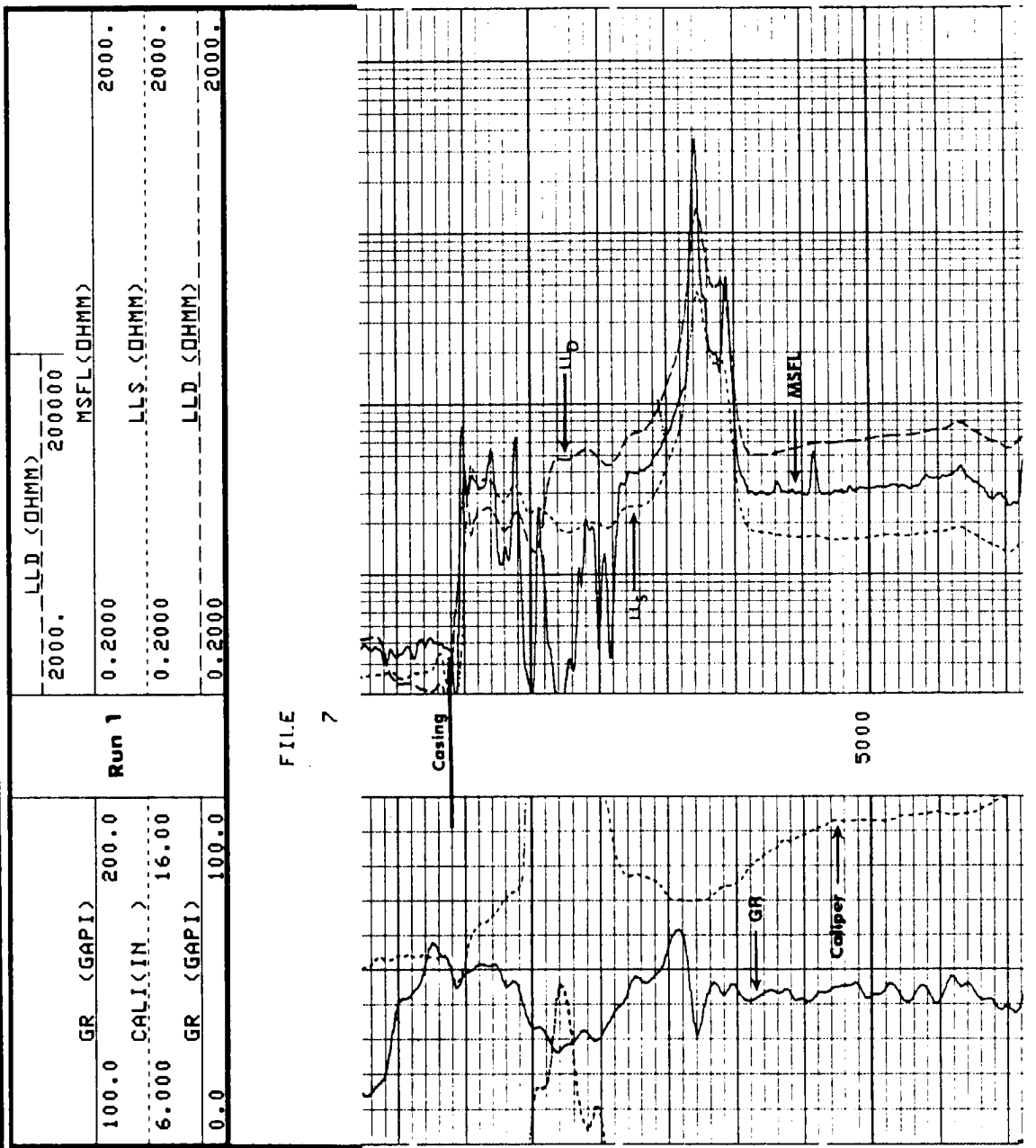
POGO PRODUCING COMPANY
600 MIDLAND TOWER
P. O. BOX 10340
MIDLAND, TEXAS 79702
(915) 682-6822

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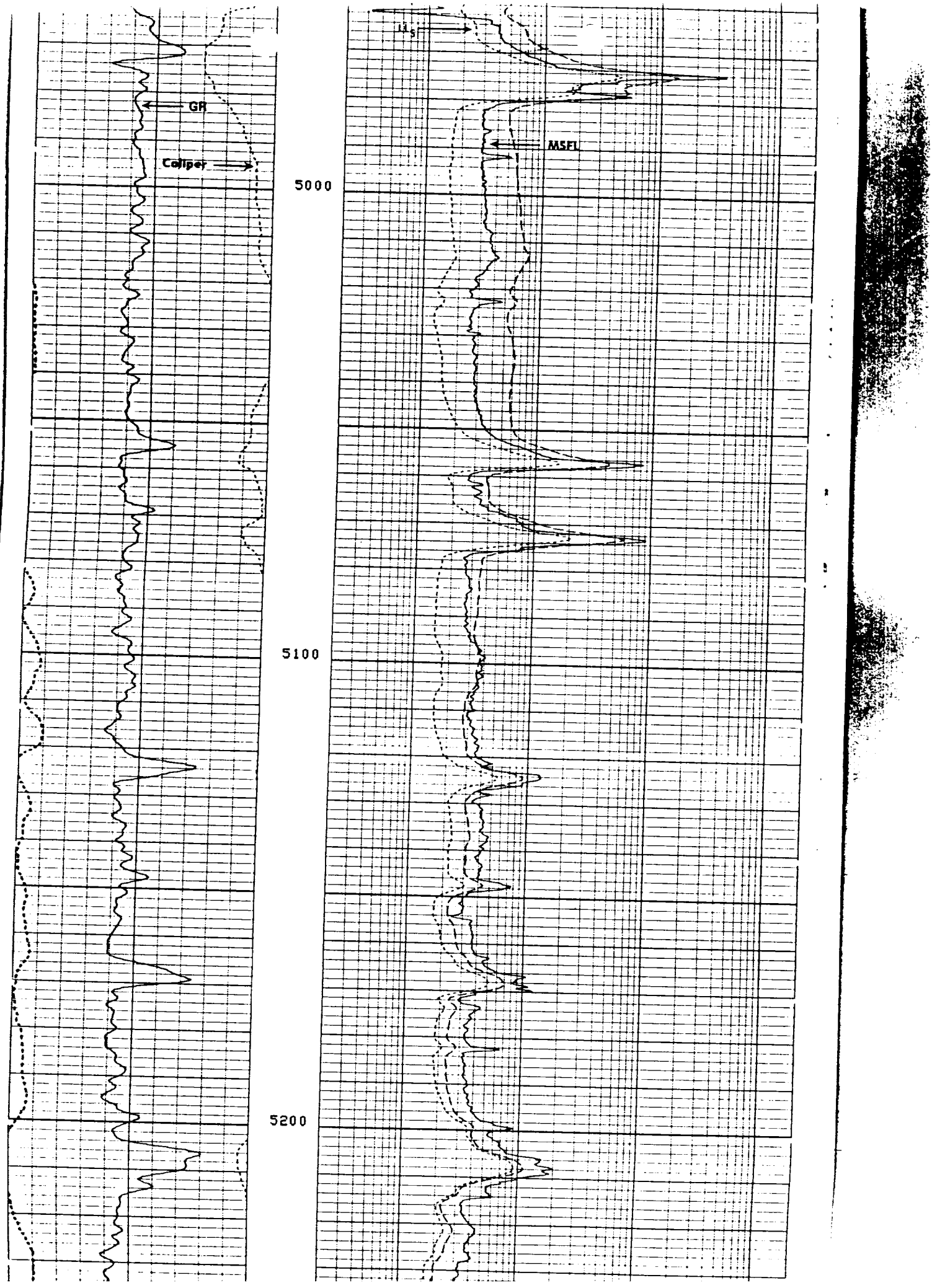
GR
Caliper
μ_s
MSFL
5000
5100
5200


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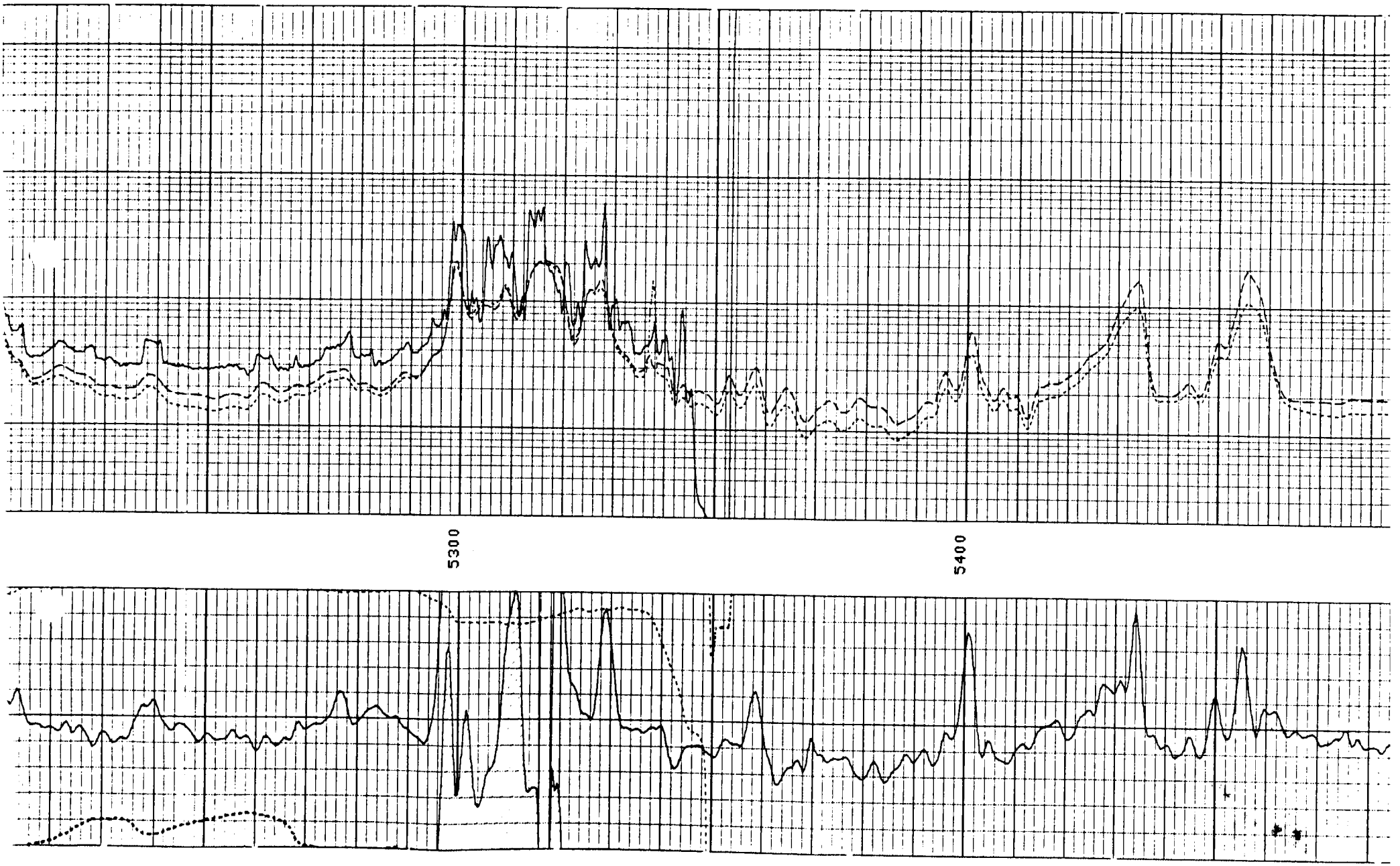
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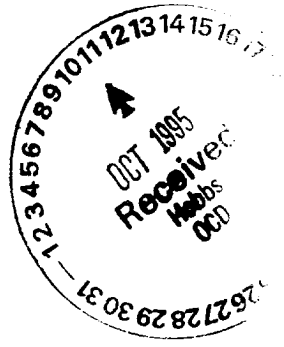
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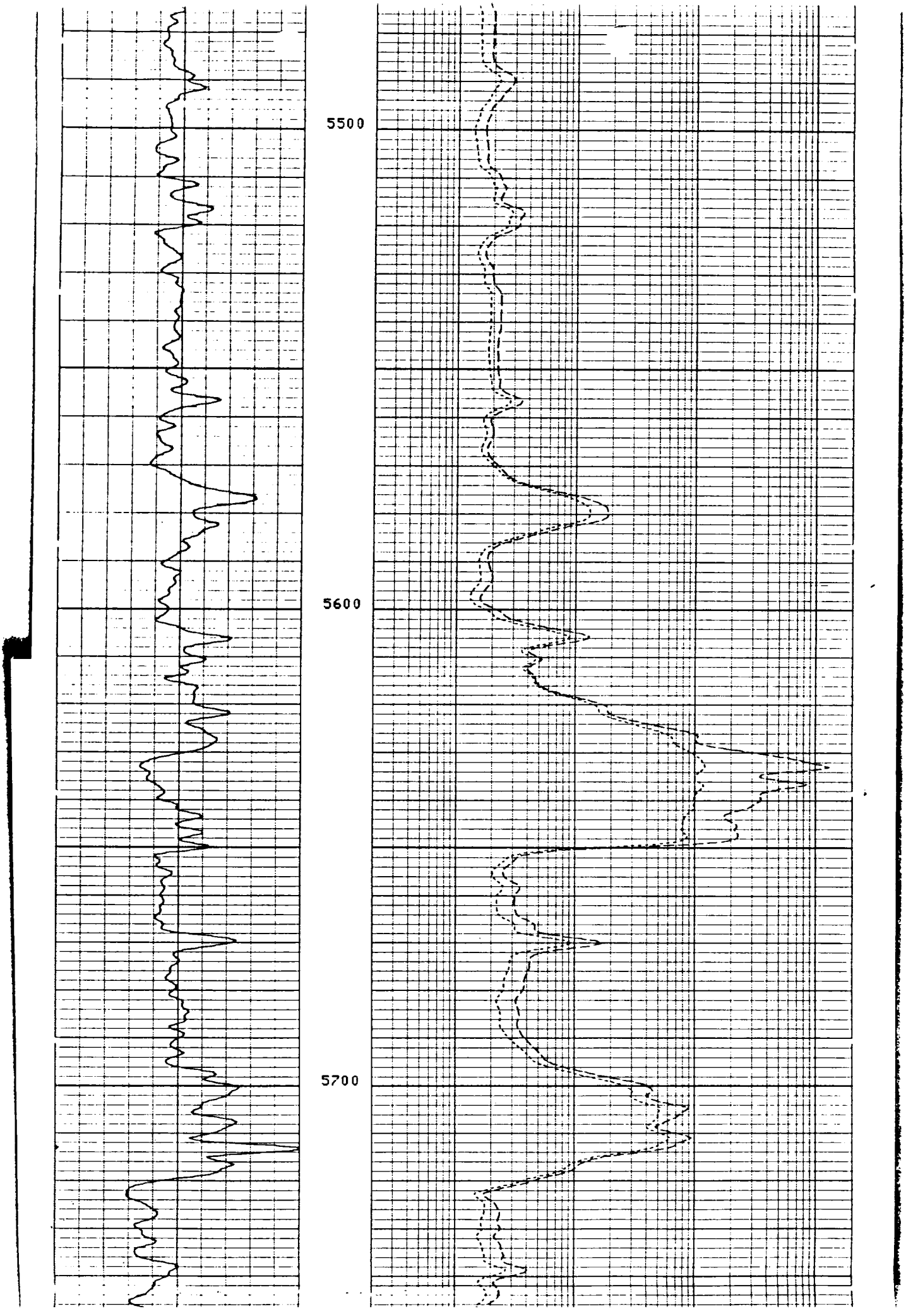
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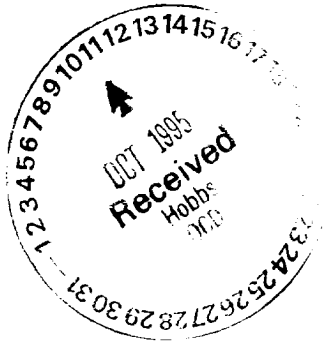
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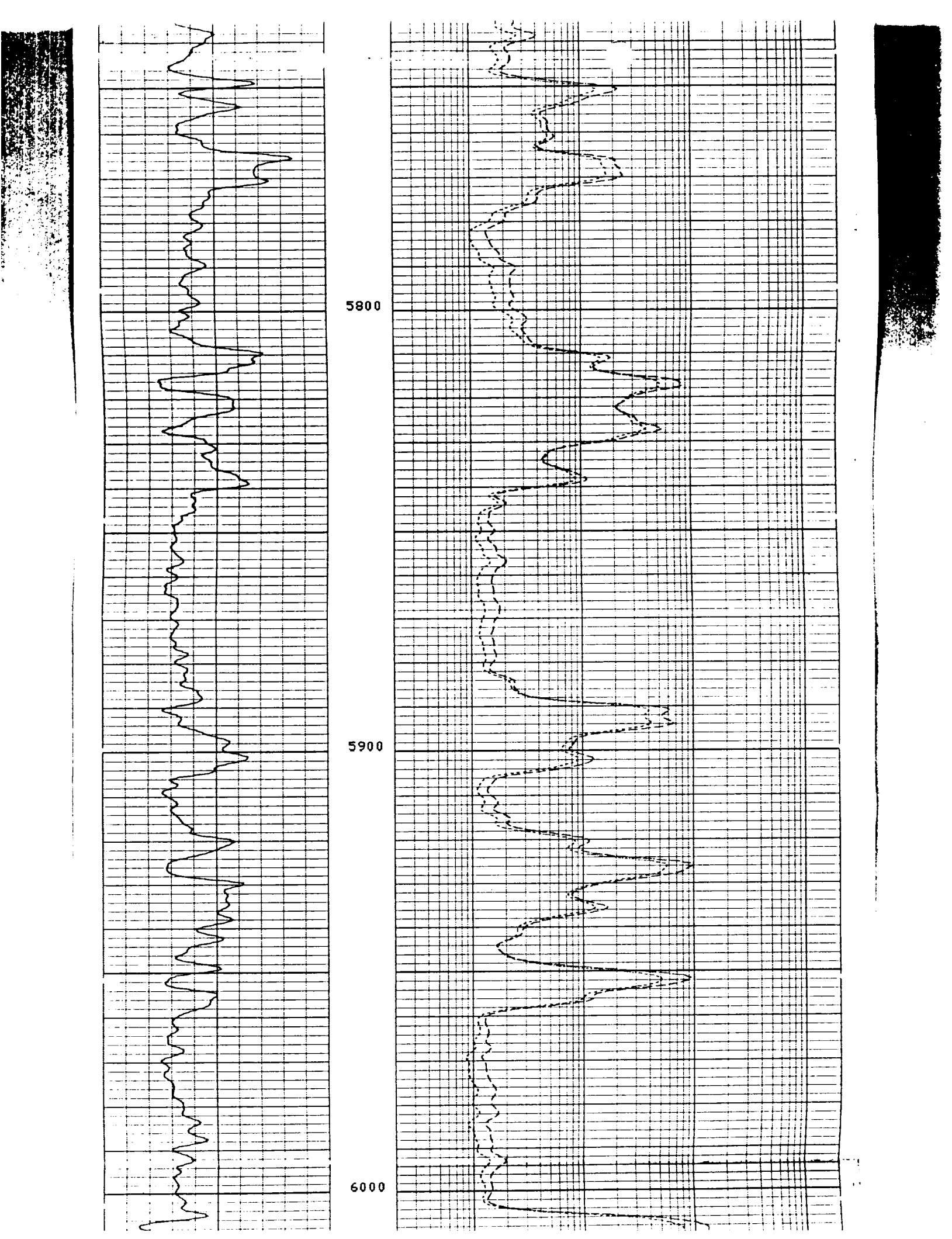
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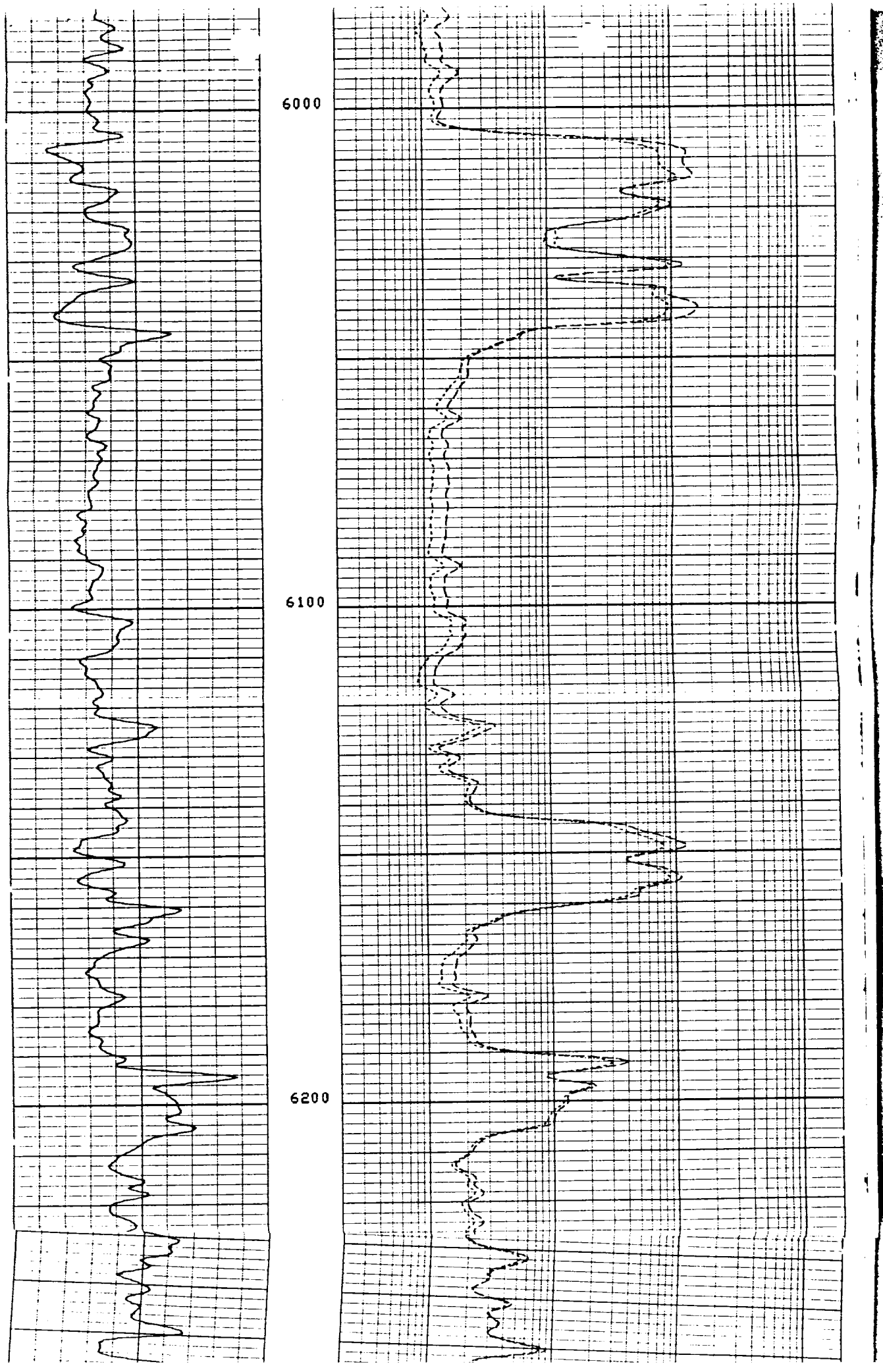
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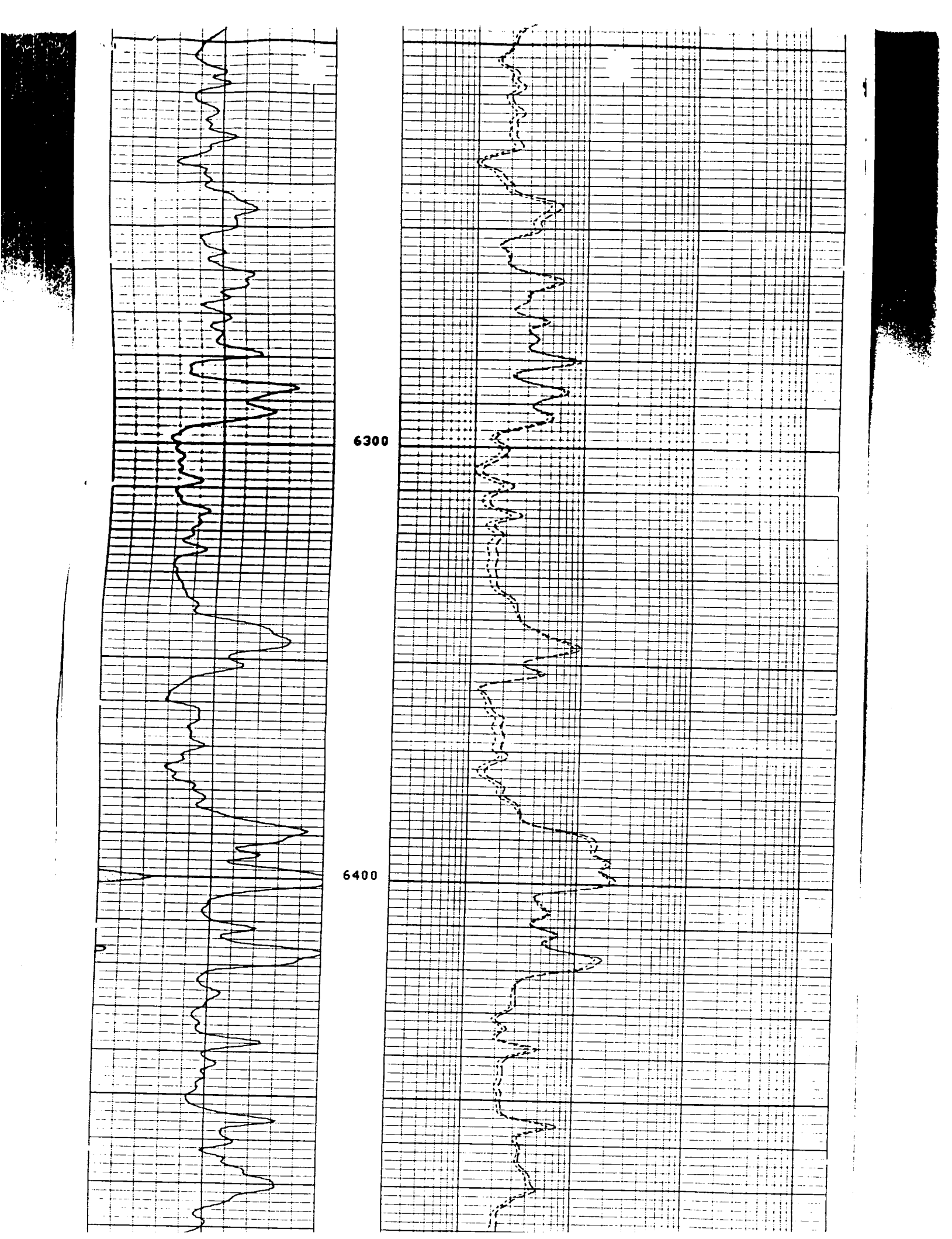
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