DATE IN	SUSPENSE	ENGINEER	LOGGED IN	TYPE	APP NO.
3/17/05	4/1/05			SWD 974	pMWJ0509430146

ABOVE THIS LINE FOR DIVISION USE ONLY

RECEIVED
MAR 17 2005
OIL CONSERVATION DIVISION

NEW MEXICO OIL CONSERVATION DIVISION
- Engineering Bureau -
1220 South St. Francis Drive, Santa Fe, NM 87505

ADMINISTRATIVE APPLICATION CHECKLIST

THIS CHECKLIST IS MANDATORY FOR ALL ADMINISTRATIVE APPLICATIONS FOR EXCEPTIONS TO DIVISION RULES AND REGULATIONS WHICH REQUIRE PROCESSING AT THE DIVISION LEVEL IN SANTA FE

Application Acronyms:

[NSL-Non-Standard Location] [NSP-Non-Standard Proration Unit] [SD-Simultaneous Dedication]
[DHC-Downhole Commingling] [CTB-Lease Commingling] [PLC-Pool/Lease Commingling]
[PC-Pool Commingling] [OLS - Off-Lease Storage] [OLM-Off-Lease Measurement]
[WFX-Waterflood Expansion] [PMX-Pressure Maintenance Expansion]
[SWD-Salt Water Disposal] [IPI-Injection Pressure Increase]
[EOR-Qualified Enhanced Oil Recovery Certification] [PPR-Positive Production Response]

[1] **TYPE OF APPLICATION** - Check Those Which Apply for [A]

[A] Location - Spacing Unit - Simultaneous Dedication
☐ NSL ☐ NSP ☐ SD

Check One Only for [B] or [C]

[B] Commingling - Storage - Measurement
☐ DHC ☐ CTB ☐ PLC ☐ PC ☐ OLS ☐ OLM

[C] Injection - Disposal - Pressure Increase - Enhanced Oil Recovery
☐ WFX ☐ PMX ☒ SWD ☐ IPI ☐ EOR ☐ PPR

[D] Other: Specify _____

[2] **NOTIFICATION REQUIRED TO:** - Check Those Which Apply, or Does Not Apply

[A] ☐ Working, Royalty or Overriding Royalty Interest Owners

[B] ☒ Offset Operators, Leaseholders or Surface Owner

[C] ☒ Application is One Which Requires Published Legal Notice

[D] ☒ Notification and/or Concurrent Approval by BLM or SLO
U.S. Bureau of Land Management - Commissioner of Public Lands, State Land Office

[E] ☒ For all of the above, Proof of Notification or Publication is Attached, and/or,

[F] ☐ Waivers are Attached

[3] **SUBMIT ACCURATE AND COMPLETE INFORMATION REQUIRED TO PROCESS THE TYPE OF APPLICATION INDICATED ABOVE.**

[4] **CERTIFICATION:** I hereby certify that the information submitted with this application for administrative approval is **accurate** and **complete** to the best of my knowledge. I also understand that **no action** will be taken on this application until the required information and notifications are submitted to the Division.

Note: Statement must be completed by an individual with managerial and/or supervisory capacity.

Paul Lehrman		Sr. Landman	3/7/05
Print or Type Name	Signature	Title	Date

plehrman@westerngas.com
e-mail Address

5½" ? WHY ? CIRC cement or Run CBL
Surface casing
Zero AOR wells
API = ? 30-045-32943

Jones, William V

From: Paul Lehrman [plehrman@westerngas.com]
Sent: Friday, March 18, 2005 8:07 AM
To: Jones, William V
Subject: RE: Salty Dog #6 application

Thanks for letting me know you have received it. Answers are below. Paul

-----Original Message-----
From: Jones, William V [mailto:WVJones@state.nm.us]
Sent: Thursday, March 17, 2005 1:50 PM
To: Paul Lehrman
Cc: Hayden, Steven
Subject: Salty Dog #6 application

Paul:
Got your application and have reviewed it.

Are you sure you want to drill an Entrada SWD and only use 5-1/2 inch casing? just asking...
I have talked to our Denver Eng. group and they want to do it this way. We discussed after your questions about the Salty Dog #5 and they assure me they are confident about our engineering.

Please email or write back with the intended depth of the DV tool.
DV tool @ 5000'

Do you have to locate the well 515 FNL - or can you put it at a "standard" location? just asking....
Locating @ standard would put it in the middle of some gravel operations. The location has been approved by the gravel lessee and the BLM.

Is the BLM the surface owner?
BLM is surface owner. Location has been on-sited and approved by BLM. APD has been submited to them. Certified copy of C-108 has also been sent to them.

Thanks,

William V. Jones Engineering Bureau **Oil Conservation Division** Santa Fe

STATE OF NEW MEXICO
ENERGY, MINERALS AND NATURAL
RESOURCES DEPARTMENT

Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, New Mexico 87505

FORM C-108
Revised June 10, 2003

APPLICATION FOR AUTHORIZATION TO INJECT

I. PURPOSE: ____ Secondary Recovery ____ Pressure Maintenance XX Disposal ____ Storage
Application qualifies for administrative approval? XX Yes ____ No

II. OPERATOR: Lance Oil & Gas Company, Inc.

ADDRESS: Box 70, Kirtland, NM 87417

CONTACT PARTY: Paul Lehrman PHONE: 598-5601 Ext. 57

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 XX 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 geologic data on the injection zone including appropriate lithologic detail, geologic 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 sources 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 sources 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: Paul Lehrman TITLE: Sr. Landman

SIGNATURE: ____ DATE: 3-7-05

E-MAIL ADDRESS: plehrman@westerngas.com

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

DISTRIBUTION: Original and one copy to Santa Fe with one copy to the appropriate 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 the 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, 1220 South St. Francis Dr., Santa Fe, New Mexico 87505, 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.

Side 1

INJECTION WELL DATA SHEET

OPERATOR: Lance Oil & Gas Company, Inc.

WELL NAME & NUMBER: Salty Dog #6

WELL LOCATION: 515' FNL & 1300' FWL | C | 19 | 29N | 13W

FOOTAGE LOCATION | UNIT LETTER | SECTION | TOWNSHIP | RANGE

WELLBORE SCHEMATIC

See attached

WELL CONSTRUCTION DATA

Surface Casing

Hole Size: 12 1/4" Casing Size: 8 5/8"

Cemented with: 296 sx. *or* 350 ft^3

Top of Cement: Surface Method Determined: Visual

Intermediate Casing

Hole Size: N/A Casing Size: _____

Cemented with: _____ sx. *or* _____ ft^3

Top of Cement: _____ Method Determined: _____

Production Casing

Hole Size: 7 7/8" Casing Size: 5 1/2"

Cemented with: 1123 sx. *or* 1632 ft^3

Top of Cement: Surface Method Determined: Visual

Total Depth: 7200'

Injection Interval

6780' feet to 6905'

(Perforated or Open Hole; indicate which)

INJECTION WELL DATA SHEET

Tubing Size: 2 7/8" Lining Material: Plastic

Type of Packer: Baker Full Bore Tension with On/Off Tool

Packer Setting Depth: 6700'

Other Type of Tubing/Casing Seal (if applicable): _____

Additional Data

1. Is this a new well drilled for injection? XX Yes _____ No

   If no, for what purpose was the well originally drilled? _____

2. Name of the Injection Formation: Entrada

3. Name of Field or Pool (if applicable): SWD Entrada Pool 96436

4. Has the well ever been perforated in any other zone(s)? List all such perforated intervals and give plugging detail, i.e. sacks of cement or plug(s) used. No

5. Give the name and depths of any oil or gas zones underlying or overlying the proposed injection zone in this area: Fruitland Coal 1000';Pictured Cliffs 1025'

   Cliff House/Menefee/Pt Lookout 2670'-3535'; Gallup 4756'

   Dakota 5641'

   No known production below dakota formation

FORM C-108
APPLICATION FOR AUTHORIZATION TO INJECT
CONTINUED
Lance Oil & Gas Company, Inc.
Salty Dog #6 SWD Disposal Well
515' FNL & 1300' FWL
Section 19, T29N, R13W, NMPM
San Juan County, New Mexico

III. Injection Well Data: See also attached sheet.

Salty Dog #6 SWD (Federal Lease NMSF-079065)
515' FNL & 1300' FWL
Section 19, T29N, R13W, NMPM
San Juan County, New Mexico

ESTIMATED FORMATION TOPS:

Formation	GL Depth	KB Depth	Subsea Elevation
Kirtland Shale	Surface	5,317'	+5,317'
Fruitland Fm	425'	437'	+4,892'
Fruitland Coal	1000'	1012'	+4,317'
Pictured Cliffs	1025'	1037'	+4,292'
Lewis Shale	1175'	1187'	+4,142'
Cliff House	2,670'	2,682'	+2,647'
Menefee	2,715'	2,727'	+2,602'
Point Lookout	3,535'	3,547'	+1,782'
Upper Mancos Shale	3,820'	3,832'	+1,497'
Gallup	4,756'	4,768'	+ 561'
Greenhorn	5,537'	5,549'	- 220'
Graneros	5,595'	5,607'	- 278'
Dakota	5,641'	5,753'	- 324'
Morrison	5,875'	5,887'	- 558'
Bluff	6,540'	6,552'	-1,223'
Summerville	6,655'	6,667'	-1,338'
Todlito	6,750'	6,762'	-1,433'
Entrada	6,780'	6,792'	-1,463'
Chinle	6,905'	6,972'	-1,588'
Total Depth (TD)*	7,200'	7,212'	-1,883'

*All elevations reflect the ungraded ground level of 5,317'

Formation Tops determined by correlative logs from the Aztec Oil & Gas Company Hagood 26-G well, which was a Totah Gallup completion. Location of this well is 620' FNL & 3350' FEL-Section 19-T29N-R13W, the Redfern & Herd, Inc. Airport #2, which was a Basin-Dakota completion. Location of this well is 990' FSL & 1190' FEL-Section 8-T29N-R13W, and the Lance Salty Dog #3 SWD well, which is located 850' FNL & 770' FEL-Section 28-T29N-R14W, San Juan County, NM.

CASING AND CEMENTING PROGRAM:

Hole Size	O.D.	Weight (lb/ft)	Grade	Age	GL Setting Depth
12 ¼ "	8 5/8"	24	J-55	New	420'
7 7/8"	5 1/2"	15.5	J-55	New	7200'

Surface casing will be cemented to surface with ≈350 cu.ft. (≈296 sx) Class B containing ¼#/sk cello flake + 2% CaCl. Yield = 1.18 cu. ft/sk; slurry weight = 15.6 ppg. Volume is based on 100% excess. WOC = 6hours. WOC will be per cement company recommendations, but in not event will be less than 6 hours. Pressure test surface casing to 600 psi for 30 minutes.

FORM C-108
APPLICATION FOR AUTHORIZATION TO INJECT
CONTINUED
Lance Oil & Gas Company, Inc.
Salty Dog #6 SWD Disposal Well
515' FNL & 1300' FWL
Section 19, T29N, R13W, NMPM
San Juan County, New Mexico

Production casing hole will first be cleaned by circulating at least 150% of hole volume with drilling fluid to surface. Lead with ≈449 cu.ft. (≈229 sx) Halliburton light cement 65:35 Poz with 1/4#/sk cello flake, 5#/sx Gilsonite, 12.4 ppg, yield of 1.96. Tail in with ≈1181 cu.ft. (≈894 sx) 50:50 Poz with 2% CaCl, ¼#/sk cello flake, 5#/sx Gilsonite, 13.5 ppg, yield 1.32. Total cement volume is ≈1630 cu.ft. based on 100% excess and circulating to surface. Production casing will be cemented to surface. A DV tool will be placed as necessary to ensure cement will be circulated to the surface.. A two stage cementing procedure may be utitlized.

A minimum of three centralizers on the Surface Casing. A minimum of 25 centralizers and 5 turbolizers will be ran on the production casing.

TUBING: 2 7/8" Plastic Lined (Internally Plastic Coated) Set @ 6780'.

PACKER:

Baker Full bore with On/Off Tool set @ 6700'.

INJECTION FORMATION INFORMATION:

Entrada

Injection interval, Entrada (6780-6905') will be perforated.

Approximate perforation intervals will be based on logs per well completion. The Salty Dog #6 will be open hole logged with an SP/Induction and cased hole logged prior to perforations, completion and authorization to inject. A CBL will be run to ensure adequate hydraulic isolation.

Well is being drilled specifically for injection of fluids.

There are no perforations as this is a new well.

Next highest production is from is the Dakota Formation (Basin Dakota (Oil/Gas) top which is @ approximately 5641'. Next Lower production is non-existent in the San Juan Basin.

IV. Is this an expansion of an existing project: No

V. Lease/Well Map: Attached hereto.

VI. Tabulation attached for wells which penetrate the proposed zone:

None

FORM C-108
APPLICATION FOR AUTHORIZATION TO INJECT
CONTINUED
Lance Oil & Gas Company, Inc.
Salty Dog #6 SWD Disposal Well
515' FNL & 1300' FWL
Section 19, T29N, R13W, NMPM
San Juan County, New Mexico

VII. Operating Data:

1) Average Daily volume rate is expected to be approximately 7000 bbls/day. Maximum daily volume rate is expected to be approximately 7500 bbls/day.

2) The system is closed.

3) The average injection pressure will be 1250 psi. Maximum pressure of 1356 psi will be requested with option for additional pressure increase with approved step rate test.

4) Injected water will be produced from the Pictured Cliffs (West Kutz PC) and Fruitland Coal (Basin Fruitland Coal) formations from wells drilled and completed (Navajo 21-4, Navajo 43-2, Navajo 34-1, Navajo 27-4, Navajo 22-3, Navajo 28-1) and Federal wells (WF Federal 19-4, FRPC 29-2, Ropco 18-3, and other wells in the vicinity). Lance has wells permitted and will drill approximately 20 wells in the area in 2005. All of the above wells are currently producing. The produced water will be re-injected into the Entrada formation.

An analysis of water from several of the above wells Lance Oil & Gas Company, Inc. operates is attached hereto. This water is representative of what Lance expects from the proposed wells in the West Kutz PC and Basin Fruitland Coal formations from the area.

5) Injected water is for disposal purposes. Analysis of Entrada water will obtained. Lance will swab in and take a sample of the Entrada water and test to assure compatibility with the produced water. Fruitland Coal/PC water is representative of what Lance expects from proposed future wells in the vicinity and may be injected in this well bore.

VIII. Geological Information:

Injection will be in the Entrada formation. Top of the Entrada is @ 6780' with a total thickness of approximately 125'. The Fruitland Coal/Pictured Cliffs is a source of water being @ 1000' and below but is not a source of drinking water. These formations will be located behind casing and cemented. There are no known sources of drinking water below the proposed injection formation.

IX. Stimulation Program:

If after completion, logging and well analysis, well may be acidized or fracture stimulated as deemed appropriate.

X. Logs:

This well is in the proposal stage and therefore not drilled or logged. The log from the Aztec Oil & Gas Company Hagood 26-G well, which was a Totah Gallup completion. (P & A'd), was used for correlative purposes and is attached hereto. Location of this well is 620' FNL & 3350' FEL-Section 19-T29N-R13W. The log from the Richardson (now Lance Salty Dog #3 well, which was a Entrada SWD completion (currently used for injection), was also used for correlative purposes and is attached hereto. Location of this well is 850' FSL & 770' FEL-Section 28-T30N-R14W).

FORM C-108
APPLICATION FOR AUTHORIZATION TO INJECT
CONTINUED
Lance Oil & Gas Company, Inc.
Salty Dog #6 SWD Disposal Well
515' FNL & 1300' FWL
Section 19, T29N, R13W, NMPM
San Juan County, New Mexico

The log from the Redfern & Herd, Inc. Airport #2, was used for correlative purposes and is attached hereto Location of this well is 990' FSL & 1190' FEL-Section 8-T29N-R13W.

XI. Fresh Water Analysis:

A search of the State Engineer's office in Aztec, New Mexico revealed that there are no fresh water wells within a one mile radius of the proposed disposal well.

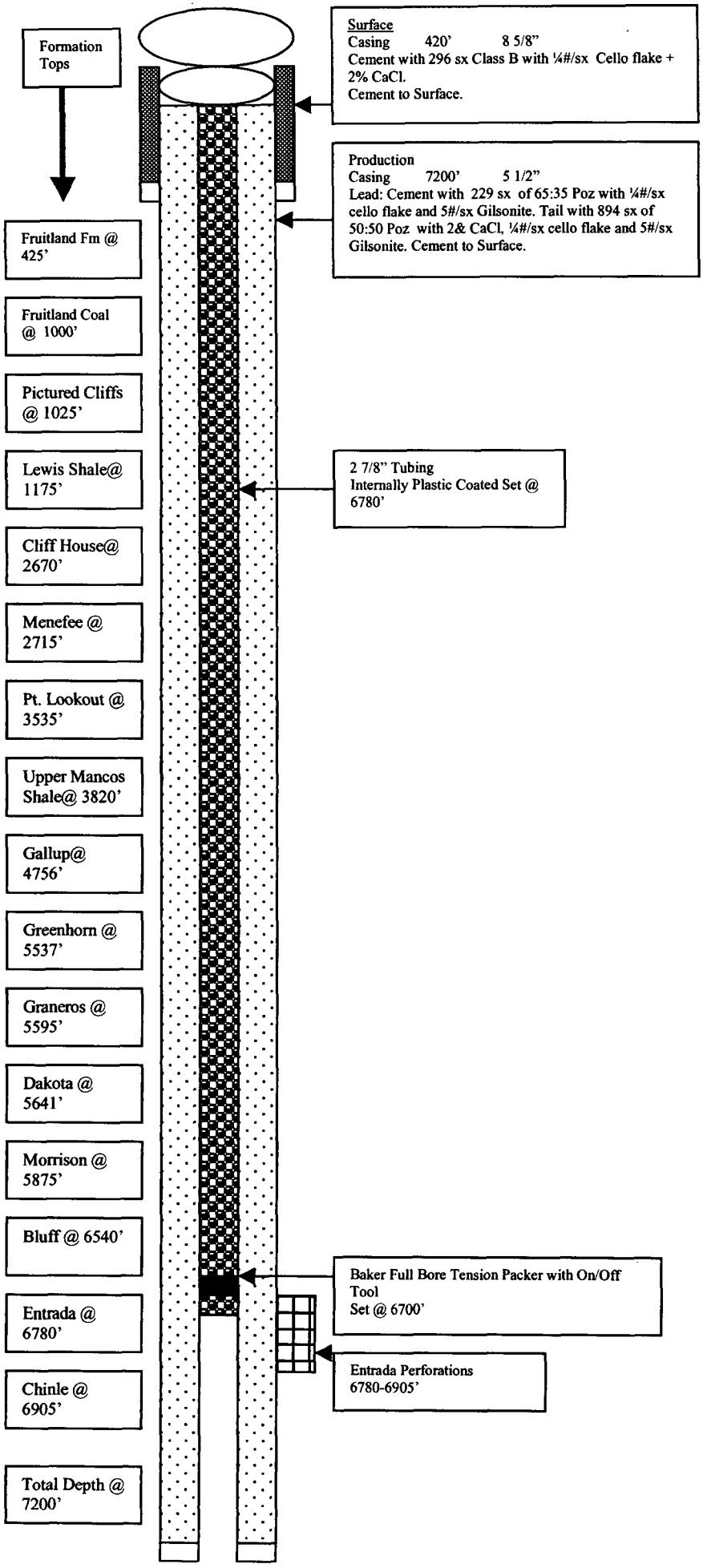
XII.

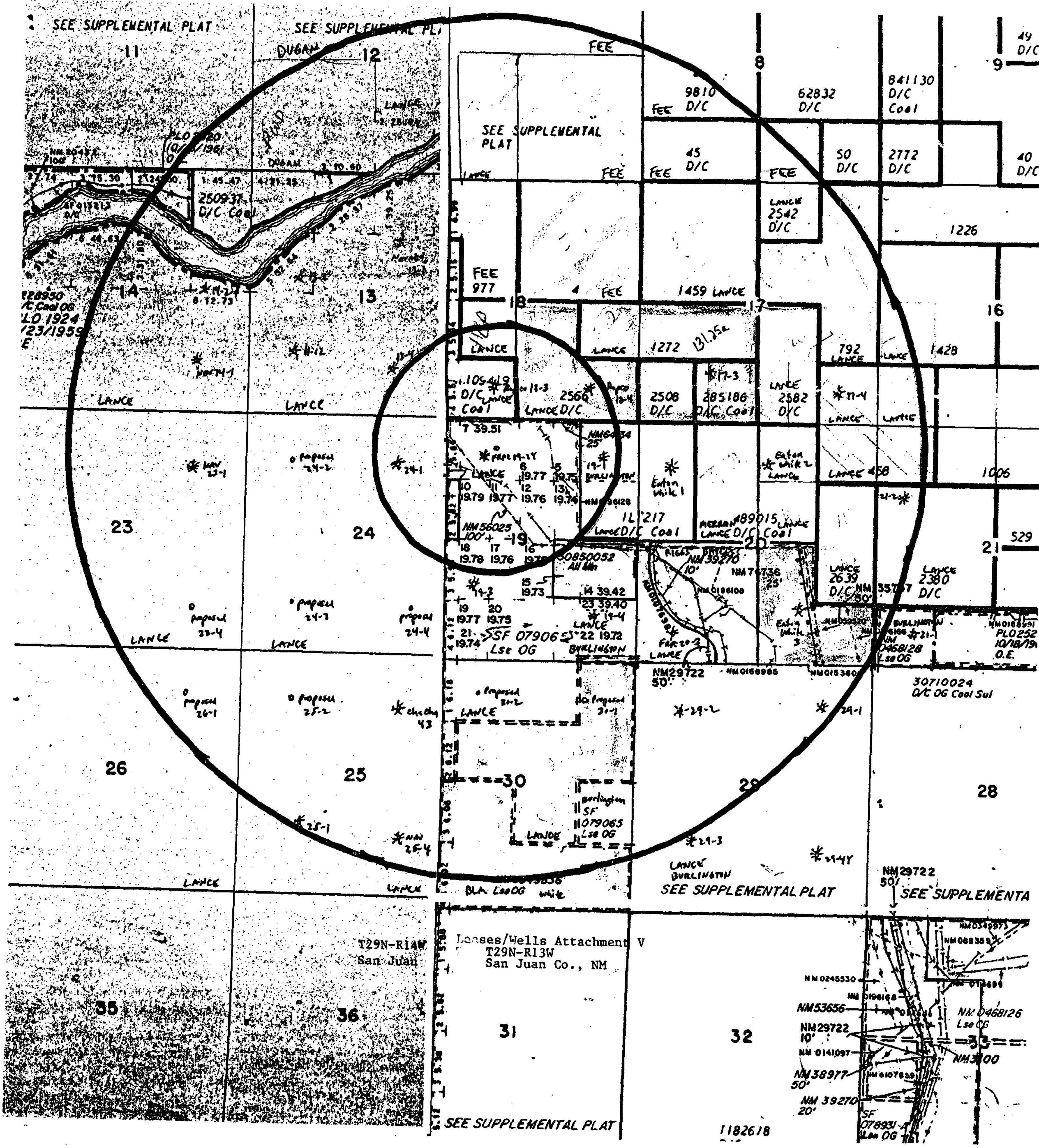
Lance Oil & Gas Company, Inc. has examined the available geologic and engineering data and finds no evidence of open faults or any other hydrologic connection between the proposed disposal well and underground sources of drinking water.

XIV. Proof of Notice:

Attached are copies of Certified Mail Receipts along with letters notifying the surface owner, offset operators and leaseholders and a copy of the proof of publication.

Attachment III Continued
Injection Well Data Sheet
Well bore Diagram
Richardson Operating Company
Salty Dog #6
515' FNL & 1300' FWL
Section 19, T29N, R13W, NMPM
San Juan County, New Mexico




SEE SUPPLEMENTAL PLAT
SEE SUPPLEMENTAL PLAT
FEE
SEE SUPPLEMENTAL PLAT
9810 D/C
62832 D/C
841130 D/C Coal
45 D/C
50 D/C
2772 D/C
40 D/C
LANCE 2542 D/C
1226
FEE 977
1459 LANCE
1272
792 LANCE
1428
2508 D/C
285186 D/C Coal
2582 D/C
250937 D/C Coal
LANCE
NM64634 25'
NM56025 100'
217 LANCE D/C Coal
489015 LANCE D/C Coal
1006
529
30850052 All Min
NM39270 10'
LANCE 2639 D/C
LANCE 2380 D/C
SF 07906 Lse OG
BURLINGTON
NM29722 50'
30710024 D/C OG Coal Sul
PLO 252
Burlington SF 079065 Lse OG
LANCE BURLINGTON
SEE SUPPLEMENTAL PLAT
NM29722 50'
SEE SUPPLEMENTA
BLA Lse OG
11
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T29N-R14W
San Juan
Leases/Wells Attachment V
T29N-R13W
San Juan Co., NM
NM53656
NM29722 10'
NM38977 50'
NM 39270 20'
SF 078931-A Lse OG
NM 0468126 Lse OG
SEE SUPPLEMENTAL PLAT
1182678

AFFIDAVIT OF PUBLICATION

Ad No. 51323

STATE OF NEW MEXICO
County of San Juan:

CONNIE PRUITT, being duly sworn says: That she is the CLASSIFIED MANAGER of THE DAILY TIMES, a daily newspaper of general circulation published in English at Farmington, said county and state, and that the hereto attached Legal Notice was published in a regular and entire issue of the said DAILY TIMES, a daily newspaper duly qualified for the purpose within the meaning of Chapter 167 of the 1937 Session Laws of the State of New Mexico for publication and appeared in the Internet at The Daily Times web site on the following day(s):

Thursday, March 10, 2005.

And the cost of the publication is $40.08.

Connie Pruitt

ON 3/10/05 CONNIE PRUITT appeared before me, whom I know personally to be the person who signed the above document.

Wynell Casey

My Commission Expires November 17, 2008.

COPY OF PUBLICATION

9B Legals

NOTICE OF INTENT DRILL SALT WATER DISPOSAL WELL AND INJECT PRODUCED WATER

Contact Party:
Lance Oil & Gas Company, Inc.
Post Office Box 70
Kirtland, New Mexico 87417
Attn: Paul Lehrman
(505) 598-5601, Ext. 57

Well Name and Legal Description:
Salty Dog #6 SWD
515' FNL & 1300' FWL
Section 19, Township 29 North,
Range 13 West, NMPM.

Lance Oil & Gas Company, Inc. is making application with the New Mexico Oil Conservation Division for Form C-108 (Authorization to Inject). Intended purpose of the Application will be to drill and complete the Salty Dog #6 as a salt water disposal well. The formation name and depth will be the Entrada (6780-6905'). Maximum injection rate will be approximately 7500 BWPD. Maximum injection pressure will be approximately 1356 PSI. Interested parties must file their objections or requests for hearing with the Oil Conservation Division, 1220 South St. Francis Drive, Santa Fe, New Mexico 87505, within 15 days.

Legal No. 51323 published in The Daily Times, Farmington, New Mexico on Thursday, March 10, 2005.

LANCE OIL & GAS COMPANY, INC.
PO Box 70 • Kirtland, New Mexico 87417

March 14, 2005

Certified Mail
Return Receipt Requested
Article No. 7002 3150 0002 0907 6266

Bureau of Land Management
1235 La Plata Highway
Farmington, NM 87401

RE: C-108 Authorization to Inject Application
Proposed Lance Salty Dog #6 SWD Well
Township 29 North, Range 13 West, NMPM
515' FNL & 1300' FWL
Section 19: NW/4
San Juan County, New Mexico

Gentlemen:

As required by New Mexico Oil Conservation Division (NMOCD) Rules, this letter will serve to notify you of the following application (C-108/Authorization to Inject) for a salt water disposal well. This letter is a notice only. No action is required on your part unless you have objections or would like to request a hearing. Any objections or hearing requests must be filed in writing within 15 days of receipt of the application by the NMOCD.

Lance Oil & Gas Company, Inc. is applying to the NMOCD for a C-108/Authorization to Inject) for its proposed Lance Oil & Gas Company, Inc.'s Salty Dog #6 SWD well in the Entrada formation.

Well Name:	Salty Dog #6
Proposed Injection Zone:	Entrada
Location:	515' FNL & 1300' FWL Section 19, T29N, R13W, NMPM, San Juan Co., NM
Applicant's Name:	Lance Oil & Gas Company, Inc.
Applicant's Address:	Box 70, Kirtland, NM 87417
Applicant's Phone No:	505/598-5601, Ext. 57

Submittal Information: Application for a C-108/Authorization to Inject) for a salt water disposal well will be filed with the NMOCD. If they determine the application complies with the regulations, it will be approved. Any questions can be submitted to the New Mexico Oil Conservation Division, whose address is 1220 South St. Francis Drive, Santa Fe, New Mexico 87505. Their phone number is 505/476-3440.

Please call me at 505/598-5601, Ext. 57 (Lance's Land Office) if you have any questions.

Sincerely,

Paul Lehrman

Enclosures

PLACE STICKER AT TOP OF ENVELOPE TO THE RIGHT OF THE RETURN ADDRESS, FOLD AT DOTTED LINE

CERTIFIED MAIL™

7002 3150 0002 0907 6266

U.S. Postal Service™

CERTIFIED MAIL™ RECEIPT

(Domestic Mail Only; No Insurance Coverage Provided)

For delivery information visit our website at www.usps.com®

OFFICIAL USE

Postage	$
Certified Fee	
Return Receipt Fee (Endorsement Required)	
Restricted Delivery Fee (Endorsement Required)	
Total Postage & Fees	$

Postmark Here

Sent To: BLM

Street, Apt. No.; or PO Box No.: 1235 La Plata Hwy

City, State, ZIP+4: Farm NM 87401

PS Form 3800, June 2002 — See Reverse for Instructions

SENDER: *COMPLETE THIS SECTION*

- Complete items 1, 2, and 3. Also complete item 4 if Restricted Delivery is desired.
- Print your name and address on the reverse so that we can return the card to you.
- Attach this card to the back of the mailpiece, or on the front if space permits.

1. Article Addressed to:

BLM
1235 La Plata Hwy
Farm, NM
87401

COMPLETE THIS SECTION ON DELIVERY

A. Signature

X ☐ Agent ☐ Addressee

B. Received by *(Printed Name)* C. Date of Delivery

D. Is delivery address different from item 1? ☐ Yes
If YES, enter delivery address below: ☐ No

3. Service Type
☑ Certified Mail ☐ Express Mail
☐ Registered ☐ Return Receipt for Merchandise
☐ Insured Mail ☐ C.O.D.

4. Restricted Delivery? *(Extra Fee)* ☐ Yes

2. Article Number *(Transfer from service label)* 7002 3150 0002 0907 6266

PS Form 3811, August 2001 Domestic Return Receipt

2ACPRI-03-Z-0985

LANCE OIL & GAS COMPANY, INC.
PO Box 70 Kirtland, New Mexico 87417

March 14, 2005

Certified Mail
Return Receipt Requested
Article No. 7002 3150 0002 0907 6266

Mr. Frank Schilling
Burlington Resources Oil & Gas Company
Box 4289
Farmington, NM 87499

RE: C-108 Authorization to Inject Application
Proposed Lance Salty Dog #6 SWD Well
Township 29 North, Range 13 West, NMPM
515' FNL & 1300' FWL
Section 19: NW/4
San Juan County, New Mexico

Dear Mr. Schilling:

As required by New Mexico Oil Conservation Division (NMOCD) Rules, this letter will serve to notify you of the following application (C-108/Authorization to Inject) for a salt water disposal well. This letter is a notice only. No action is required on your part unless you have objections or would like to request a hearing. Any objections or hearing requests must be filed in writing within 15 days of receipt of the application by the NMOCD.

Lance Oil & Gas Company, Inc. is applying to the NMOCD for a C-108/Authorization to Inject) for its proposed Lance Oil & Gas Company, Inc.'s Salty Dog #6 SWD well in the Entrada formation.

Well Name:	Salty Dog #6
Proposed Injection Zone:	Entrada
Location:	515' FNL & 1300' FWL Section 19, T29N, R13W, NMPM, San Juan Co., NM
Applicant's Name:	Lance Oil & Gas Company, Inc.
Applicant's Address:	Box 70, Kirtland, NM 87417
Applicant's Phone No:	505/598-5601, Ext. 57

Submittal Information: Application for a C-108/Authorization to Inject) for a salt water disposal well will be filed with the NMOCD. If they determine the application complies with the regulations, it will be approved. Any questions can be submitted to the New Mexico Oil Conservation Division, whose address is 1220 South St. Francis Drive, Santa Fe, New Mexico 87505. Their phone number is 505/476-3440.

Please call me at 505/598-5601, Ext. 57 (Lance's Land Office) if you have any questions.

Sincerely,

Paul Lehman

Enclosures

SENDER: *COMPLETE THIS SECTION*

- Complete items 1, 2, and 3. Also complete item 4 if Restricted Delivery is desired.
- Print your name and address on the reverse so that we can return the card to you.
- Attach this card to the back of the mailpiece, or on the front if space permits.

1. Article Addressed to:

Burlington Resources
Attn: Frank Schilling
P.O. Box 4289
Farm. NM 87499

COMPLETE THIS SECTION ON DELIVERY

A. Signature
X ☐ Agent ☐ Addressee

B. Received by *(Printed Name)* | C. Date of Delivery

D. Is delivery address different from item 1? ☐ Yes
If YES, enter delivery address below: ☐ No

3. Service Type
☑ Certified Mail ☐ Express Mail
☐ Registered ☐ Return Receipt for Merchandise
☐ Insured Mail ☐ C.O.D.

4. Restricted Delivery? *(Extra Fee)* ☐ Yes

2. Article Number
(Transfer from service label) 7002 3150 0002 0907 6280

PS Form 3811, August 2001 | Domestic Return Receipt | 2ACPRI-03-Z-0985

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Postage	$
Certified Fee	
Return Reciept Fee (Endorsement Required)	
Restricted Delivery Fee (Endorsement Required)	
Total Postage & Fees	$

Postmark Here

Sent To: Frank Schilling / Burlington Res
Street, Apt. No., or PO Box No.: Box 4289
City, State, ZIP+4: Farm. NM 87499

PS Form 3800, June 2002 | See Reverse for Instructions

LANCE OIL & GAS COMPANY, INC.
PO Box 70 Kirtland, New Mexico 87417

March 14, 2005

Certified Mail
Return Receipt Requested
Article No. 7002 3150 0002 0907 6273

Edwards Energy
1200 17th Street, Suite 2100
Denver, CO 80202

RE: C-108 Authorization to Inject Application
Proposed Lance Salty Dog #6 SWD Well
Township 29 North, Range 13 West, NMPM
515' FNL & 1300' FWL
Section 19: NW/4
San Juan County, New Mexico

Gentlemen:

As required by New Mexico Oil Conservation Division (NMOCD) Rules, this letter will serve to notify you of the following application (C-108/Authorization to Inject) for a salt water disposal well. This letter is a notice only. No action is required on your part unless you have objections or would like to request a hearing. Any objections or hearing requests must be filed in writing within 15 days of receipt of the application by the NMOCD.

Lance Oil & Gas Company, Inc. is applying to the NMOCD for a C-108/Authorization to Inject) for its proposed Lance Oil & Gas Company, Inc.'s Salty Dog #6 SWD well in the Entrada formation.

Well Name:	Salty Dog #6
Proposed Injection Zone:	Entrada
Location:	515' FNL & 1300' FWL Section 19, T29N, R13W, NMPM, San Juan Co., NM
Applicant's Name:	Lance Oil & Gas Company, Inc.
Applicant's Address:	Box 70, Kirtland, NM 87417
Applicant's Phone No:	505/598-5601, Ext. 57

Submittal Information: Application for a C-108/Authorization to Inject) for a salt water disposal well will be filed with the NMOCD. If they determine the application complies with the regulations, it will be approved. Any questions can be submitted to the New Mexico Oil Conservation Division, whose address is 1220 South St. Francis Drive, Santa Fe, New Mexico 87505. Their phone number is 505/476-3440.

Please call me at 505/598-5601, Ext. 57 (Lance's Land Office) if you have any questions.

Sincerely,

Paul Lehrman

Enclosures

SENDER: *COMPLETE THIS SECTION*

- Complete items 1, 2, and 3. Also complete item 4 if Restricted Delivery is desired.
- Print your name and address on the reverse so that we can return the card to you.
- Attach this card to the back of the mailpiece, or on the front if space permits.

1. Article Addressed to:

Edwards Energy
1200 17th St, Ste 2100
Denver, Co 80202

COMPLETE THIS SECTION ON DELIVERY

A. Signature
X ☐ Agent ☐ Addressee

B. Received by *(Printed Name)* | C. Date of Delivery

D. Is delivery address different from item 1? ☐ Yes
if YES, enter delivery address below: ☐ No

3. Service Type
☑ Certified Mail ☐ Express Mail
☐ Registered ☐ Return Receipt for Merchandise
☐ Insured Mail ☐ C.O.D.

4. Restricted Delivery? *(Extra Fee)* ☐ Yes

2. Article Number
(Transfer from service label) 7002 3150 0002 0907 6273

PS Form 3811, August 2001 Domestic Return Receipt 2ACPRI-03-Z-0985

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7002 3150 0002 0907 6273

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Postage	$
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Restricted Delivery Fee (Endorsement Required)	
Total Postage & Fees	$

Postmark Here

Sent To: Edwards Energy
Street, Apt. No.; or PO Box No.: 1200 17th St, Ste 2100
City, State, ZIP+4: Denver, Co 80202

PS Form 3800, June 2002 See Reverse for Instructions

LANCE OIL & GAS COMPANY, INC.
PO Box 70 Kirtland, New Mexico 87417

March 14, 2005

Certified Mail
Return Receipt Requested
Article No. 7002 3150 0002 0907 6228

Paramount Petroleum Corp.
Box 22763
Houston, Texas 77027

RE: C-108 Authorization to Inject Application
Proposed Lance Salty Dog #6 SWD Well
Township 29 North, Range 13 West, NMPM
515' FNL & 1300' FWL
Section 19: NW/4
San Juan County, New Mexico

Gentlemen:

As required by New Mexico Oil Conservation Division (NMOCD) Rules, this letter will serve to notify you of the following application (C-108/Authorization to Inject) for a salt water disposal well. This letter is a notice only. No action is required on your part unless you have objections or would like to request a hearing. Any objections or hearing requests must be filed in writing within 15 days of receipt of the application by the NMOCD.

Lance Oil & Gas Company, Inc. is applying to the NMOCD for a C-108/Authorization to Inject) for its proposed Lance Oil & Gas Company, Inc.'s Salty Dog #6 SWD well in the Entrada formation.

Well Name:	Salty Dog #6
Proposed Injection Zone:	Entrada
Location:	515' FNL & 1300' FWL Section 19, T29N, R13W, NMPM, San Juan Co., NM
Applicant's Name:	Lance Oil & Gas Company, Inc.
Applicant's Address:	Box 70, Kirtland, NM 87417
Applicant's Phone No:	505/598-5601, Ext. 57

Submittal Information: Application for a C-108/Authorization to Inject) for a salt water disposal well will be filed with the NMOCD. If they determine the application complies with the regulations, it will be approved. Any questions can be submitted to the New Mexico Oil Conservation Division, whose address is 1220 South St. Francis Drive, Santa Fe, New Mexico 87505. Their phone number is 505/476-3440.

Please call me at 505/598-5601, Ext. 57 (Lance's Land Office) if you have any questions.

Sincerely,

Paul Lehrman

Enclosures

SENDER: *COMPLETE THIS SECTION*

- Complete items 1, 2, and 3. Also complete item 4 if Restricted Delivery is desired.
- Print your name and address on the reverse so that we can return the card to you.
- Attach this card to the back of the mailpiece, or on the front if space permits.

1. Article Addressed to:

Paramount Petroleum Corp
Box 22763
Houston, TX 77027

COMPLETE THIS SECTION ON DELIVERY

A. Signature
X ☐ Agent ☐ Addressee

B. Received by *(Printed Name)* C. Date of Delivery

D. Is delivery address different from item 1? ☐ Yes
If YES, enter delivery address below: ☐ No

3. Service Type
☑ Certified Mail ☐ Express Mail
☐ Registered ☐ Return Receipt for Merchandise
☐ Insured Mail ☐ C.O.D.

4. Restricted Delivery? *(Extra Fee)* ☐ Yes

2. Article Number
(Transfer from service label) 7002 3150 0002 0907 6228

PS Form 3811, August 2001 Domestic Return Receipt 2ACPRI-03-Z-0985

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Certified Fee	
Return Reciept Fee (Endorsement Required)	
Restricted Delivery Fee (Endorsement Required)	
Total Postage & Fees	$

Postmark Here

Sent To Paramount Petroleum Corp
Street, Apt. No.; or PO Box No. Bx 22763
City, State, ZIP+4 Houston, TX 77027

PS Form 3800, June 2002 See Reverse for Instructions

LANCE OIL & GAS COMPANY, INC.
PO Box 70 Kirtland, New Mexico 87417

March 14, 2005

Certified Mail
Return Receipt Requested
Article No. 7002 3150 0002 0907 6235

Mr. Mike Beirne
Four Star/Chevron Texaco
11111 S. Wilcrest
Houston, Texas 77099

RE: C-108 Authorization to Inject Application
Proposed Lance Salty Dog #6 SWD Well
Township 29 North, Range 13 West, NMPM
515' FNL & 1300' FWL
Section 19: NW/4
San Juan County, New Mexico

Dear Mr. Beirne:

As required by New Mexico Oil Conservation Division (NMOCD) Rules, this letter will serve to notify you of the following application (C-108/Authorization to Inject) for a salt water disposal well. This letter is a notice only. No action is required on your part unless you have objections or would like to request a hearing. Any objections or hearing requests must be filed in writing within 15 days of receipt of the application by the NMOCD.

Lance Oil & Gas Company, Inc. is applying to the NMOCD for a C-108/Authorization to Inject) for its proposed Lance Oil & Gas Company, Inc.'s Salty Dog #6 SWD well in the Entrada formation.

Well Name:	Salty Dog #6
Proposed Injection Zone:	Entrada
Location:	515' FNL & 1300' FWL Section 19, T29N, R13W, NMPM, San Juan Co., NM
Applicant's Name:	Lance Oil & Gas Company, Inc.
Applicant's Address:	Box 70, Kirtland, NM 87417
Applicant's Phone No:	505/598-5601, Ext. 57

Submittal Information: Application for a C-108/Authorization to Inject) for a salt water disposal well will be filed with the NMOCD. If they determine the application complies with the regulations, it will be approved. Any questions can be submitted to the New Mexico Oil Conservation Division, whose address is 1220 South St. Francis Drive, Santa Fe, New Mexico 87505. Their phone number is 505/476-3440.

Please call me at 505/598-5601, Ext. 57 (Lance's Land Office) if you have any questions.

Sincerely,

Paul Lehrman

Enclosures

SENDER: COMPLETE THIS SECTION

- Complete items 1, 2, and 3. Also complete item 4 if Restricted Delivery is desired.
- Print your name and address on the reverse so that we can return the card to you.
- Attach this card to the back of the mailpiece, or on the front if space permits.

1. Article Addressed to:

Mike Beirne
Forster | Chevron Texaco
11111 S. Wilcrest
Houston, TX 77099

COMPLETE THIS SECTION ON DELIVERY

A. Signature
X ☐ Agent ☐ Addressee

B. Received by (Printed Name) C. Date of Delivery

D. Is delivery address different from item 1? ☐ Yes
If YES, enter delivery address below: ☐ No

3. Service Type
☑ Certified Mail ☐ Express Mail
☐ Registered ☐ Return Receipt for Merchandise
☐ Insured Mail ☐ C.O.D.

4. Restricted Delivery? (Extra Fee) ☐ Yes

2. Article Number (Transfer from service label) 7002 3150 0002 0907 6235

PS Form 3811, August 2001 Domestic Return Receipt 2ACPRI-03-Z-0985

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Postage	$
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Restricted Delivery Fee (Endorsement Required)	
Total Postage & Fees	$

Postmark Here

Sent To: Mike Beirne / Chevron Texaco
Street, Apt. No.; or PO Box No.: 11111 S. Wilcrest
City, State, ZIP+4: Houston, TX 77099

PS Form 3800, June 2002 See Reverse for Instructions

Water Analysis Report

25-Jan-05

Date Sampled : 22-Jan-05
Date Received : 25-Jan-05
Date Reported : 25-Jan-05

Lance Oil & Gas

Field : San Juan
Lease : State

Farmington NM

Location : Navajo 21-04

Attention : Doug Barone
cc1 : Doug Zentz

Sample Point : wellhead

Salesman : Clay Bingham

cc2 :
cc3 :

Analyst : Karen Hawkins Allen

Comments :

CATIONS

Calcium :	1,440	mg/l
Magnesium :	15	mg/l
Barium :		mg/l
Strontium :		mg/l
Iron :	36.0	mg/l
Manganese :		mg/l
Sodium :	24617	mg/l

ANIONS

Chloride :	40,200	mg/l
Carbonate :	0	mg/l
Bicarbonate :	464	mg/l
Sulfate :	108	mg/l mg/l mg/l

pH (field) :	6.60		**Specific Gravity :**	1.050	grams/ml
Temperature :	80	degrees F	**Total Dissolved Solids :**	66,880	ppm
Ionic Strength :	1.14		**CO2 in Water :**	44	mg/l
			CO2 in Gas :	0.03	mole %
Resistivity :		ohm/meters			
			H2S in Water :	1.0	mg/l
Ammonia :		ppm	**Dissolved Oxygen :**		ppm

SI calculations based on Tomson-Oddo parameters

Calcite (CaCO3) SI :	-0.40	Calcite PTB :	N/A
Calcite (CaCO3) SI @ 100 F :	-0.19	Calcite PTB @ 100 F :	N/A
Calcite (CaCO3) SI @ 120 F :	0.02	Calcite PTB @ 120 F :	4.2
Calcite (CaCO3) SI @ 140 F :	0.24	Calcite PTB @ 140 F :	58.3
Calcite (CaCO3) SI @ 160 F :	0.46	Calcite PTB @ 160 F :	102.0
Calcite (CaCO3) SI @ 180 F :	0.70	Calcite PTB @ 180 F :	140.5
Calcite (CaCO3) SI @ 200 F :	0.93	Calcite PTB @ 200 F :	168.6
Gypsum (CaSO4) SI :	-1.75	Gypsum PTB :	N/A
Barite (BaSO4) SI :	N/A	Barite PTB :	N/A
Celestite (SrSO4) SI :	N/A	Celestite PTB :	N/A

Water Analysis Report

25-Jan-05

Date Sampled : 22-Jan-05
Date Received : 25-Jan-05
Date Reported : 25-Jan-05

Lance Oil & Gas

Field : San Juan
Lease : State

Farmington NM

Location : Navajo 34-02

Attention : Doug Barone
cc1 : Doug Zentz

Sample Point : wellhead

Salesman : Clay Bingham

cc2 :
cc3 :

Analyst : Karen Hawkins Allen

Comments :

CATIONS

Calcium :	1,136	mg/l
Magnesium :	549	mg/l
Barium :		mg/l
Strontium :		mg/l
Iron :	249.0	mg/l
Manganese :		mg/l
Sodium :	22671	mg/l

ANIONS

Chloride :	38,100	mg/l
Carbonate :	0	mg/l
Bicarbonate :	671	mg/l
Sulfate :	108	mg/l mg/l mg/l

pH (field) :	6.60		**Specific Gravity :**	1.050	grams/ml
Temperature :	80	degrees F	**Total Dissolved Solids :**	63,484	ppm
Ionic Strength :	1.09		**CO2 in Water :**	62	mg/l
			CO2 in Gas :	0.03	mole %
Resistivity :		ohm/meters			
			H2S in Water :	2.0	mg/l
Ammonia :		ppm	**Dissolved Oxygen :**		ppm

SI calculations based on Tomson-Oddo parameters

Calcite (CaCO3) SI :	-0.31	Calcite PTB :	N/A
Calcite (CaCO3) SI @ 100 F :	-0.11	Calcite PTB @ 100 F :	N/A
Calcite (CaCO3) SI @ 120 F :	0.10	Calcite PTB @ 120 F :	36.1
Calcite (CaCO3) SI @ 140 F :	0.32	Calcite PTB @ 140 F :	102.4
Calcite (CaCO3) SI @ 160 F :	0.54	Calcite PTB @ 160 F :	159.6
Calcite (CaCO3) SI @ 180 F :	0.78	Calcite PTB @ 180 F :	209.3
Calcite (CaCO3) SI @ 200 F :	1.01	Calcite PTB @ 200 F :	246.9
Gypsum (CaSO4) SI :	-1.86	Gypsum PTB :	N/A
Barite (BaSO4) SI :	N/A	Barite PTB :	N/A
Celestite (SrSO4) SI :	N/A	Celestite PTB :	N/A

Water Analysis Report

25-Jan-05

Date Sampled : 22-Jan-05
Date Received : 25-Jan-05
Date Reported : 25-Jan-05

Lance Oil & Gas

Field : San Juan
Lease : State

Farmington NM

Location : Navajo 34-01

Attention : Doug Barone
cc1 : Doug Zentz

Sample Point : wellhead

Salesman : Clay Bingham

cc2 :
cc3 :

Analyst : Karen Hawkins Allen

Comments :

CATIONS

Calcium :	1,280	mg/l
Magnesium :	73	mg/l
Barium :		mg/l
Strontium :		mg/l
Iron :	65.0	mg/l
Manganese :		mg/l
Sodium :	22372	mg/l

ANIONS

Chloride :	36,640	mg/l
Carbonate :	0	mg/l
Bicarbonate :	439	mg/l
Sulfate :	108	mg/l mg/l mg/l

pH (field) :	6.60		**Specific Gravity :**	1.045	grams/ml
Temperature :	80	degrees F	**Total Dissolved Solids :**	60,977	ppm
Ionic Strength :	1.04		**CO2 in Water :**	44	mg/l
			CO2 in Gas :	0.03	mole %
Resistivity :		ohm/meters			
			H2S in Water :	2.0	mg/l
Ammonia :		ppm	**Dissolved Oxygen :**		ppm

SI calculations based on Tomson-Oddo parameters

Calcite (CaCO3) SI :	-0.47	Calcite PTB :	N/A
Calcite (CaCO3) SI @ 100 F :	-0.26	Calcite PTB @ 100 F :	N/A
Calcite (CaCO3) SI @ 120 F :	-0.05	Calcite PTB @ 120 F :	N/A
Calcite (CaCO3) SI @ 140 F :	0.17	Calcite PTB @ 140 F :	41.4
Calcite (CaCO3) SI @ 160 F :	0.39	Calcite PTB @ 160 F :	84.7
Calcite (CaCO3) SI @ 180 F :	0.62	Calcite PTB @ 180 F :	121.1
Calcite (CaCO3) SI @ 200 F :	0.86	Calcite PTB @ 200 F :	151.7
Gypsum (CaSO4) SI :	-1.78	Gypsum PTB :	N/A
Barite (BaSO4) SI :	N/A	Barite PTB :	N/A
Celestite (SrSO4) SI :	N/A	Celestite PTB :	N/A

Water Analysis Report

25-Jan-05

Date Sampled : 22-Jan-05
Date Received : 25-Jan-05
Date Reported : 25-Jan-05

Lance Oil & Gas

Field : San Juan
Lease : State

Farmington NM

Location : Navajo 27-04
Sample Point : wellhead

Attention : Doug Barone
cc1 : Doug Zentz
cc2 :
cc3 :

Salesman : Clay Bingham
Analyst : Karen Hawkins Allen

Comments :

CATIONS

Calcium :	1,328	mg/l
Magnesium :	117	mg/l
Barium :		mg/l
Strontium :		mg/l
Iron :	73.0	mg/l
Manganese :		mg/l
Sodium :	26805	mg/l

ANIONS

Chloride :	41,560	mg/l
Carbonate :	0	mg/l
Bicarbonate :	317	mg/l
Sulfate :	3,088	mg/l mg/l mg/l

pH (field) :	6.70		**Specific Gravity :**	1.040 grams/ml
Temperature :	80	degrees F	**Total Dissolved Solids :**	73,288 ppm
Ionic Strength :	1.24		**CO2 in Water :**	26 mg/l
Resistivity :		ohm/meters	**CO2 in Gas :**	0.03 mole %
			H2S in Water :	1.0 mg/l
Ammonia :		ppm	**Dissolved Oxygen :**	ppm

SI calculations based on Tomson-Oddo parameters

Calcite (CaCO3) SI :	-0.55	Calcite PTB :	N/A
Calcite (CaCO3) SI @ 100 F :	-0.35	Calcite PTB @ 100 F :	N/A
Calcite (CaCO3) SI @ 120 F :	-0.14	Calcite PTB @ 120 F :	N/A
Calcite (CaCO3) SI @ 140 F :	0.08	Calcite PTB @ 140 F :	14.2
Calcite (CaCO3) SI @ 160 F :	0.31	Calcite PTB @ 160 F :	51.2
Calcite (CaCO3) SI @ 180 F :	0.54	Calcite PTB @ 180 F :	81.1
Calcite (CaCO3) SI @ 200 F :	0.78	Calcite PTB @ 200 F :	104.5
Gypsum (CaSO4) SI :	-0.37	Gypsum PTB :	N/A
Barite (BaSO4) SI :	N/A	Barite PTB :	N/A
Celestite (SrSO4) SI :	N/A	Celestite PTB :	N/A

Water Analysis Report

25-Jan-05

Date Sampled : 22-Jan-05
Date Received : 25-Jan-05
Date Reported : 25-Jan-05

Lance Oil & Gas

Field : San Juan
Lease : State

Farmington NM

Location : Navajo 22-03

Attention : Doug Barone
cc1 : Doug Zentz

Sample Point : wellhead

Salesman : Clay Bingham

cc2 :
cc3 :

Analyst : Karen Hawkins Allen

Comments :

CATIONS

Calcium :	1,144	mg/l
Magnesium :	277	mg/l
Barium :		mg/l
Strontium :		mg/l
Iron :	69.0	mg/l
Manganese :		mg/l
Sodium :	25657	mg/l

ANIONS

Chloride :	40,320	mg/l
Carbonate :	0	mg/l
Bicarbonate :	464	mg/l
Sulfate :	2,445	mg/l

mg/l mg/l

pH (field) :	6.60		**Specific Gravity :**	1.045	grams/ml
Temperature :	80	degrees F	**Total Dissolved Solids :**	70,376	ppm
Ionic Strength :	1.20		**CO2 in Water :**	44	mg/l
			CO2 in Gas :	0.03	mole %
Resistivity :		ohm/meters			
			H2S in Water :	1.0	mg/l
Ammonia :		ppm	**Dissolved Oxygen :**		ppm

SI calculations based on Tomson-Oddo parameters

Calcite (CaCO3) SI :	-0.51	Calcite PTB :	N/A
Calcite (CaCO3) SI @ 100 F :	-0.30	Calcite PTB @ 100 F :	N/A
Calcite (CaCO3) SI @ 120 F :	-0.09	Calcite PTB @ 120 F :	N/A
Calcite (CaCO3) SI @ 140 F :	0.13	Calcite PTB @ 140 F :	33.3
Calcite (CaCO3) SI @ 160 F :	0.35	Calcite PTB @ 160 F :	81.2
Calcite (CaCO3) SI @ 180 F :	0.58	Calcite PTB @ 180 F :	120.8
Calcite (CaCO3) SI @ 200 F :	0.82	Calcite PTB @ 200 F :	154.1
Gypsum (CaSO4) SI :	-0.53	Gypsum PTB :	N/A
Barite (BaSO4) SI :	N/A	Barite PTB :	N/A
Celestite (SrSO4) SI :	N/A	Celestite PTB :	N/A

Water Analysis Report

25-Jan-05

Date Sampled : 22-Jan-05
Date Received : 25-Jan-05
Date Reported : 25-Jan-05

Lance Oil & Gas

Field : San Juan
Lease : State

Farmington NM

Location : Navajo 28-01

Attention : Doug Barone
cc1 : Doug Zentz

Sample Point : wellhead

Salesman : Clay Bingham

cc2 :
cc3 :

Analyst : Karen Hawkins Allen

Comments :

CATIONS

Calcium :	1,264	mg/l
Magnesium :	73	mg/l
Barium :		mg/l
Strontium :		mg/l
Iron :	18.0	mg/l
Manganese :		mg/l
Sodium :	27651	mg/l

ANIONS

Chloride :	43,920	mg/l		
Carbonate :	0	mg/l		
Bicarbonate :	451	mg/l		
Sulfate :	1,225	mg/l	mg/l	mg/l

pH (field) :	6.80		**Specific Gravity :**	1.040 grams/ml
Temperature :	80	degrees F	**Total Dissolved Solids :**	74,602 ppm
Ionic Strength :	1.27		**CO2 in Water :**	26 mg/l
			CO2 in Gas :	0.03 mole %
Resistivity :		ohm/meters		
			H2S in Water :	1.0 mg/l
Ammonia :		ppm	**Dissolved Oxygen :**	ppm

SI calculations based on Tomson-Oddo parameters

Calcite (CaCO3) SI :	-0.27	Calcite PTB :	N/A
Calcite (CaCO3) SI @ 100 F :	-0.07	Calcite PTB @ 100 F :	N/A
Calcite (CaCO3) SI @ 120 F :	0.14	Calcite PTB @ 120 F :	34.4
Calcite (CaCO3) SI @ 140 F :	0.36	Calcite PTB @ 140 F :	80.9
Calcite (CaCO3) SI @ 160 F :	0.59	Calcite PTB @ 160 F :	119.4
Calcite (CaCO3) SI @ 180 F :	0.82	Calcite PTB @ 180 F :	150.8
Calcite (CaCO3) SI @ 200 F :	1.06	Calcite PTB @ 200 F :	176.1
Gypsum (CaSO4) SI :	-0.78	Gypsum PTB :	N/A
Barite (BaSO4) SI :	N/A	Barite PTB :	N/A
Celestite (SrSO4) SI :	N/A	Celestite PTB :	N/A

Water Analysis Report

17-Jan-05

Date Sampled : 14-Jan-05
Date Received : 17-Jan-05
Date Reported : 17-Jan-05

Lance Oil & Gas

Field : San Juan
Lease : State

Farmington NM

Location : Ropco 18-04

Attention : Doug Barone
cc1 : Doug Zentz

Sample Point : wellhead

Salesman : Clay Bingham

cc2 :
cc3 :

Analyst : Karen Hawkins Allen

Comments :

CATIONS

Calcium :	1,760	mg/l
Magnesium :	146	mg/l
Barium :		mg/l
Strontium :		mg/l
Iron :	18.0	mg/l
Manganese :		mg/l
Sodium :	31837	mg/l

ANIONS

Chloride :	52,080	mg/l
Carbonate :	0	mg/l
Bicarbonate :	390	mg/l
Sulfate :	440	mg/l mg/l mg/l

pH (field) :	7.00		**Specific Gravity :**	1.050	grams/ml
Temperature :	85	degrees F	**Total Dissolved Solids :**	86,671	ppm
Ionic Strength :	1.48		**CO2 in Water :**	44	mg/l
			CO2 in Gas :	0.03	mole %
Resistivity :		ohm/meters			
			H2S in Water :	4.0	mg/l
Ammonia :		ppm	**Dissolved Oxygen :**		ppm

SI calculations based on Tomson-Oddo parameters

Calcite (CaCO3) SI :	-0.45	Calcite PTB :	N/A
Calcite (CaCO3) SI @ 100 F :	-0.30	Calcite PTB @ 100 F :	N/A
Calcite (CaCO3) SI @ 120 F :	-0.09	Calcite PTB @ 120 F :	N/A
Calcite (CaCO3) SI @ 140 F :	0.13	Calcite PTB @ 140 F :	29.7
Calcite (CaCO3) SI @ 160 F :	0.36	Calcite PTB @ 160 F :	71.7
Calcite (CaCO3) SI @ 180 F :	0.59	Calcite PTB @ 180 F :	106.7
Calcite (CaCO3) SI @ 200 F :	0.83	Calcite PTB @ 200 F :	133.9
Gypsum (CaSO4) SI :	-1.12	Gypsum PTB :	N/A
Barite (BaSO4) SI :	N/A	Barite PTB :	N/A
Celestite (SrSO4) SI :	N/A	Celestite PTB :	N/A

Water Analysis Report

04-Mar-05

Date Sampled : 01-Mar-05
Date Received : 03-Mar-05
Date Reported : 04-Mar-05

L ance Oil & Gas

Field : San Juan
Lease : State

Farmington NM

Location : FRPC 19-04

Attention : Doug Barone
cc1 : Doug Zentz

Sample Point : wellhead

Salesman : Clay Bingham

cc2 :
x7056 **cc3 :**

Analyst : Karen Hawkins Allen

Comments :

CATIONS

Calcium :	2,160	mg/l
Magnesium :	49	mg/l
ard **Barium :**		mg/l
Strontium :		mg/l
Iron :	54.0	mg/l
Manganese :		mg/l
Sodium :	1924 3	mg/l

ANIONS

Chloride :	33,400	mg/l
Carbonate :	0	mg/l
Bicarbonate :	268	mg/l
Sulfate :	108	mg/l mg/l mg/l

pH (field) :	6.80		**Specific Gravity :**	1.050 grams/ml
Temperature :	62	degrees F	**Total Dissolved Solids :**	55,282 ppm
Ionic Strength :	0.95		**CO2 in Water :**	44 mg/l
			CO2 in Gas :	0.03 mole %
Resistivity :		ohm/meters		
			H2S in Water :	3.0 mg/l
Ammonia :		ppm	**Dissolved Oxygen :**	ppm

SI calculations based on Tomson-Oddo parameters

	Calcite (CaCO3) SI :	-0.82	Calcite PTB : N/A
n	Calcite (CaCO3) SI @ 100 F :	-0.43	Calcite PTB @ 100 F : N/A
	Calcite (CaCO3) SI @ 120 F :	-0.22	Calcite PTB @ 120 F : N/A
	Calcite (CaCO3) SI @ 140 F :	0.00	Calcite PTB @ 140 F : N/A
	Calcite (CaCO3) SI @ 160 F :	0.22	Calcite PTB @ 160 F : 33.7
	Calcite (CaCO3) SI @ 180 F : ab	0.45	Calcite PTB @ 180 F : 60.7
	Calcite (CaCO3) SI @ 200 F :	0.69	Calcite PTB @ 200 F : 83.0
	Gypsum (CaSO4) SI :	-1.55	Gypsum PTB : N/A
	Barite (BaSO4) SI :	N/A	Barite PTB : N/A
	Celestite (SrSO4) SI :	N/A	Celestite PTB :

cf0N/A

Confidential
Champion Technologies, Inc.
Vernal District Technical Services

Water Analysis Report

04-Mar-05

Date Sampled : 01-Mar-05
Date Received : 03-Mar-05
Date Reported : 04-Mar-05

Lance Oil & Gas

Field : 18San Juan
Lease : State

Farmington NM

Location : FRPC 29-02

Attention : Doug Barone
cc1 : Doug Zentz

Sample Point : wellhead

Salesman : Clay Bingham

cc2 :
cc3 :

s18**Analyst :** Karen Hawkins Allen

Comments :

CATIONS

Calcium :	2,640	mg/l
Magnesium :	471	mg/l
B arium :		mg/l
Strontium :		mg/l
Iron :	95.0	mg/l
Manganese :		mg/l
Sodium :	18690	mg/l

ANIONS

Chloride :	34,600	mg/l		
Carbonate :	0	mg/l		
Bicarbonate :	317	mg/l		
Sulfate :	108	mg/l	mg/l	mg/l

tqr **pH (field) :** 6.30

Temperature :	60	degrees F	**Specific Gravity :**	1.050 grams/ml
Ionic Strength :	0.98		**Total Dissolved Solids :**	56,921 ppm
			CO2 in Water :	35 mg/l
Resistivity :		ohm/meters	**CO2 in Gas :**	0.03 mol e %
			H2S in Water :	3.0 mg/l
Ammonia :		ppm	**Dissolved Oxygen :**	ppm

SI calculations based on Tomson-Oddo parameters

Calcite (CaCO3) SI :	-0.51	Calcite PTB :	N/A
Calcite (CaCO3) SI @ 100 F :	s18-0.11	Calcite PTB @ 100 F :	N/A
Calcite (CaCO3) SI @ 120 F :	0.10	Calcite PTB @ 120 F :	19.9
Calcite (CaCO3) SI @ 140 F :	0.32	Calcite PTB @ 140 F :	54.1
Calcite (CaCO3) SI @ 160 F :	0.54	Calcite PTB @ 160 F :	82.5
Calcite (CaCO3) SI @ 180 F :	0.77	Calcite PTB @ 180 F :	105.3
Calcite (CaCO3) SI @ 200 F :	1.01	Calcite PTB @ 200 F :	123.8
Gypsum (CaSO4) SI :	-1.49	Gypsum PTB :	N/A
Barite (BaSO4) SI :	N/A	Barite PTB :	N/A
Celestite (SrSO4) SI :	N/A	Celestite PTB :	N/A

Water Analysis Report

04-Mar-05

Date Sampled : 01-Mar-05
Date Received : 03-Mar-05
Date Reported : 04-Mar-05

Lance Oil & Gas
I

Farmington NM

Attention : Doug Barone
cc1 : Doug Zentz
cc2 :
cc3 :
Comments :

Field : San Juan
Lease : State
Location : FRPC 20-03
Sample Point : wellhead
Salesman : Clay Bingham
Analyst : Karen Hawkins Allen

CATIONS

Calcium :	2,200	mg/l
Magnesium :	248	mg/l
Barium :		mg/l
in **Strontium :**		mg/l
Iron :	39.0	mg/l
Manganese :		mg/l
Sodium :	21285	mg/l

ANIONS

Chloride :	37,200	mg/l
Carbonate :	0	mg/l
Bicarbonate :	268	mg/l
Sulfate :	108	mg/l mg/l mg/l

in **pH (field) :**	6.80		**Specific Gravity :**	1.055	grams/ml
Temperature :	62	degrees F	**Total Dissolved Solids :**	61,348	ppm
Ionic Strength :	1.06		**CO2 in Water :**	44	mg/l
			CO2 in Gas :	0.03	mole %
Resistivity :		ohm/meters			
			H2S in Water :	2.0	mg/l
Ammonia :		ppm	**Dissolved Oxygen :**		ppm

SI calculations based on Tomson-Oddo parameters

Calcite (CaCO3) SI :	-0.85	Calcite PTB :	N/A
Calcite (CaCO3) SI @ 100 F :	-0.46	Calcite PTB @ 100 F :	N/A
Calcite (CaCO3) SI @ 120 F :	-0.25	Calcite PTB @ 120 F :	N/A
Calcite (CaCO3) SI @ 140 F :	-0.03	Calcite PTB @ 140 F :	N/A
Calcite (CaCO3) SI @ 160 F :	0.19	Calcite PTB @ 160 F :	28.9
Calcite (CaCO3) SI @ 180 F :	0.42	Calcite PTB @ 180 F :	57.7
plainCalcite (CaCO3) SI @ 200 F :	0.66	Calcite PTB @ 200 F :	80.6
Gypsum (CaSO4) SI :	-1.57	Gypsum PTB :	N/A
Barite (BaSO4) SI :	N/A	Barite PTB :	N/A
Celestite (SrSO4) SI :	N/A	Celestite PTB :	N/A

Water Analysis Report

04-Mar-05

Date Sampled : 01-Mar-05
Date Received : 03-Mar-05
Date Reported : 04-Mar-05

Lance Oil & Gas

Field : San Juan
Lease :

f2State

Farmington NM

Location : RPC 18-03
Sample Point : wellhead

Attention : Doug Barone
cc1 : Doug Zentz

Salesman : Clay Bingham

cc2 :
cc3 :

Analyst : Karen Hawkins Allen

abComments :

CATIONS

Calcium :	2,080	mg/l
Magnesium :	87	mg/l
Barium :		mg/l
n **Strontium :**		mg/l
Iron :	19.0	mg/l
Manganese :		mg/l
Sodium :	21314	mg/l

ANIONS

Chloride :	36,400	mg/l
Carbonate :	0	mg/l
Bicarbonate :	549	mg/l
Sulfate :	108	mg/l mg/l mg/l.

pH (field) :	7.10		**Specific Gravity :**	1.055	grams/ml
Temperature :	63	degrees F	**Total Dissolved Solids :**	60,557	ppm
Ionic Strength :	1.04		**CO2 in Water :**	44	mg/l
			CO2 in Gas :	0.03	mole %
Resistivity :		ohm/ meters	**H2S in Water :**	2.0	mg/l
Ammonia :		ppm	**Dissolved Oxygen :**		ppm

SI calculations based on Tomson-Oddo parameters

Calcite (CaCO3) SI :	-0.23	Calcite PTB :	N/A
Calcite (CaCO3) SI @ 100 F :	0.14	Calcite PTB @ 100 F :	44.3
tqr Calcite (CaCO3) SI @ 120 F :	0.35	Calcite PTB @ 120 F :	98.5
Calcite (CaCO3) SI @ 140 F :	0.57	Calcite PTB @ 140 F :	145.3
Calcite (CaCO3) SI @ 160 F :	0.80	Calcite PTB @ 160 F :	182.3
Calcite (CaCO3) SI @ 180 F :	1.03	Calcite PTB @ 180 F :	213.1
Calcite (CaCO3) SI @ 200 F :	1.27	Calcite PTB @ 200 F :	237.1
Gypsum (CaSO4) SI :	-1.58	Gypsum PTB :	N/A
Barite (BaSO4) SI :	N/A	Barite PTB :	N/A
Celestite (SrSO4) SI :	N/A	Celestite PTB :	N/A

WELEX

INDUCTION-ELECTRIC LOG

COMPANY Redfern & Herd, Inc.
WELL Airport # 2
FIELD Basin-Dakota
County San Juan
State New Mexico
File

COMPANY REDFERN & HERD, INC.
WELL AIRPORT # 2
FIELD BASIN-DAKOTA
COUNTY SAN JUAN STATE NEW MEXICO
Location 30-045-13095 16
990'FSL 1190'FEL
Sec 8 Twp 29-N Rge 13-W
Other Logs FoRxo
Elevation
KB 5367
DF 5366
GL 5355

Permanent Datum 12'Above Ground L. Elev. 5367
Log Measured From Kelly Bushing
Drilling Measured From Kelly Bushing

Run No.	- One -		
Date	8-22-61		
Total Depth Driller	5990		
Total Depth Welex	5995		
Csg. Shoe Driller	345		
Csg. Shoe Welex	334		
Survey Begins	5992		
Survey Ends	334		
Csg. Size	8-5/8"		
Bit Size	(7-7/8")		
Mud Data – Type	Chemical Gel		
Weight	9.4		
Viscosity	78		
Ph	8.6 @ 78 °F	@ °F	@ °F
Wtr. Loss cc/ 15 min.	5.8 @ 78 °F	@ °F	@ °F
Rm. @ Surface Temp	3.9 @ 78 °F	@ °F	@ °F
Rm. @ Max. Hole Temp	1.8 @ 137 °F	@ °F	@ °F
Rmf	1.2 @ 137 °F	@ °F	@ °F
Rmc	1.95 @ 137 °F	@ °F	@ °F
Source Mud Sample	Circulated		
Recorded By	F. Sloup		
Witnessed By	Mr. Jacobs		
Logging Tool No.	10057		

RECEIVED
SEP5 1961
OIL CON. COM.
DIST. 3

Resistivity Curves Recorded

Normal
Normal 18"
Lateral
Lateral
5-C-40"Induction

REMARKS: Measured: Rmf 2.1 @ 78° Truck # 4002
Rmc 2.9 @ 78° Tool not centralized

CONDUCTIVITY MILLIMHOS/M		
500	250	0

POTENTIAL MILLIVOLTS		
– →	10	← +

RESISTIVITY OHMS M^2/M		
0	18"Normal	100
0		1000
0	40"Induction	100
0		1000

8-5/8"Casing 334'.

400

500

600

700

800

SP
900
1000
1100
1200
1300
1400
1500
40" IND. CONDUCTIVITY

1600
1700
1800
1900
2000
2100

2200
2300
2400
2500
2600
2700

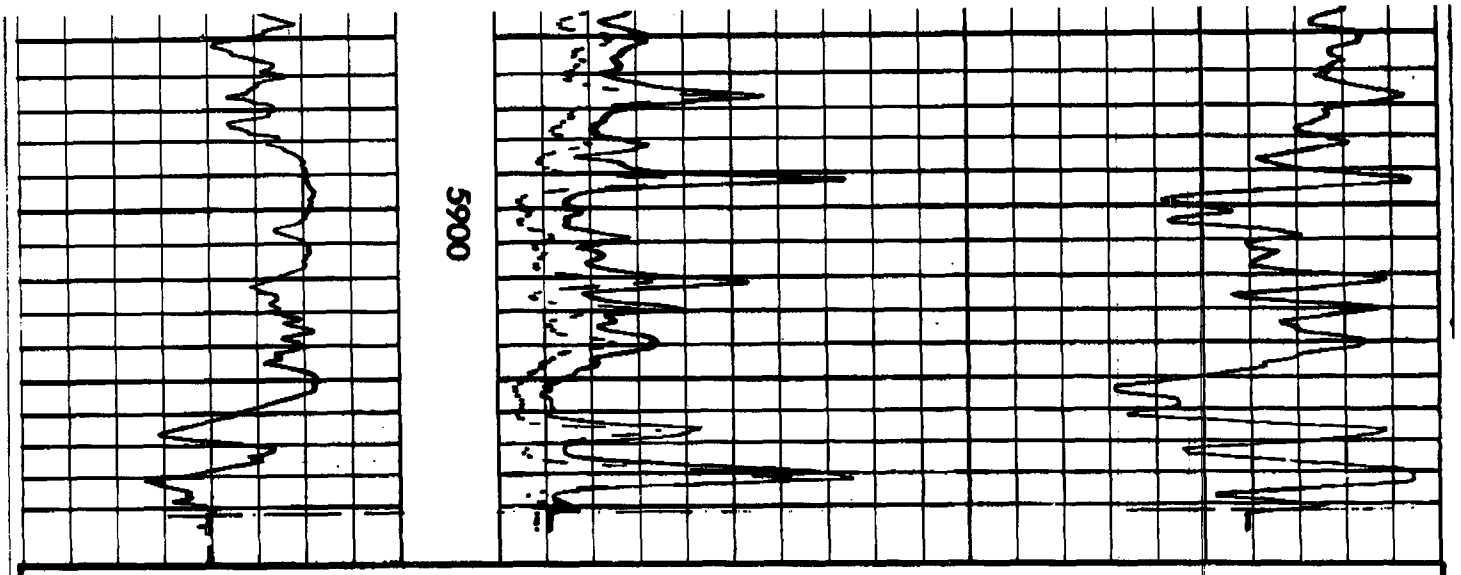
2800
2900
3000
3100
3200
3300

3400
3500
3600
3700
3800
3900

4000
4100
4200
4300
4400
4500
4600

4700
4800
4900
5000
5100
5200
40" IND. RESISTIVITY

SP
16" NORMAL
40" IND. CONDUCTIVITY
5300
5400
5500
5600
5700
5800



Redfern & Herd, Inc.
Airport # 2
Basin-Dakota Field
San Juan County, New Mexico

T.D.Logged 5992'
T.D.Driller 5990'
T.D.Reached 5995'

CONDUCTIVITY MILLIMHOS/M

500 250 0

POTENTIAL MILLIVOLTS

– → 10 ← +

Rm 1.8 at 137 °F.

RESISTIVITY OHMS M^2/M

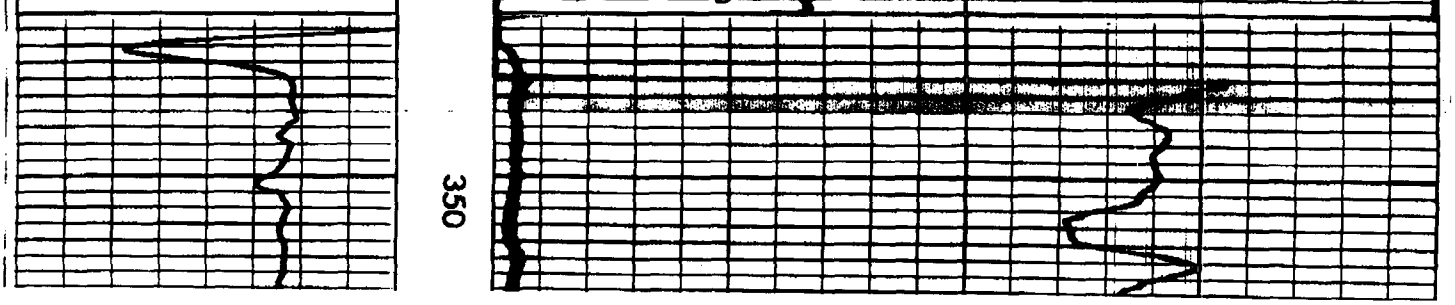
0 18"Normal 100

0 1000

0 40"Induction 100

0 1000

8-5/8"Casing 334'



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450
500
550
600

650
700
750
800
850

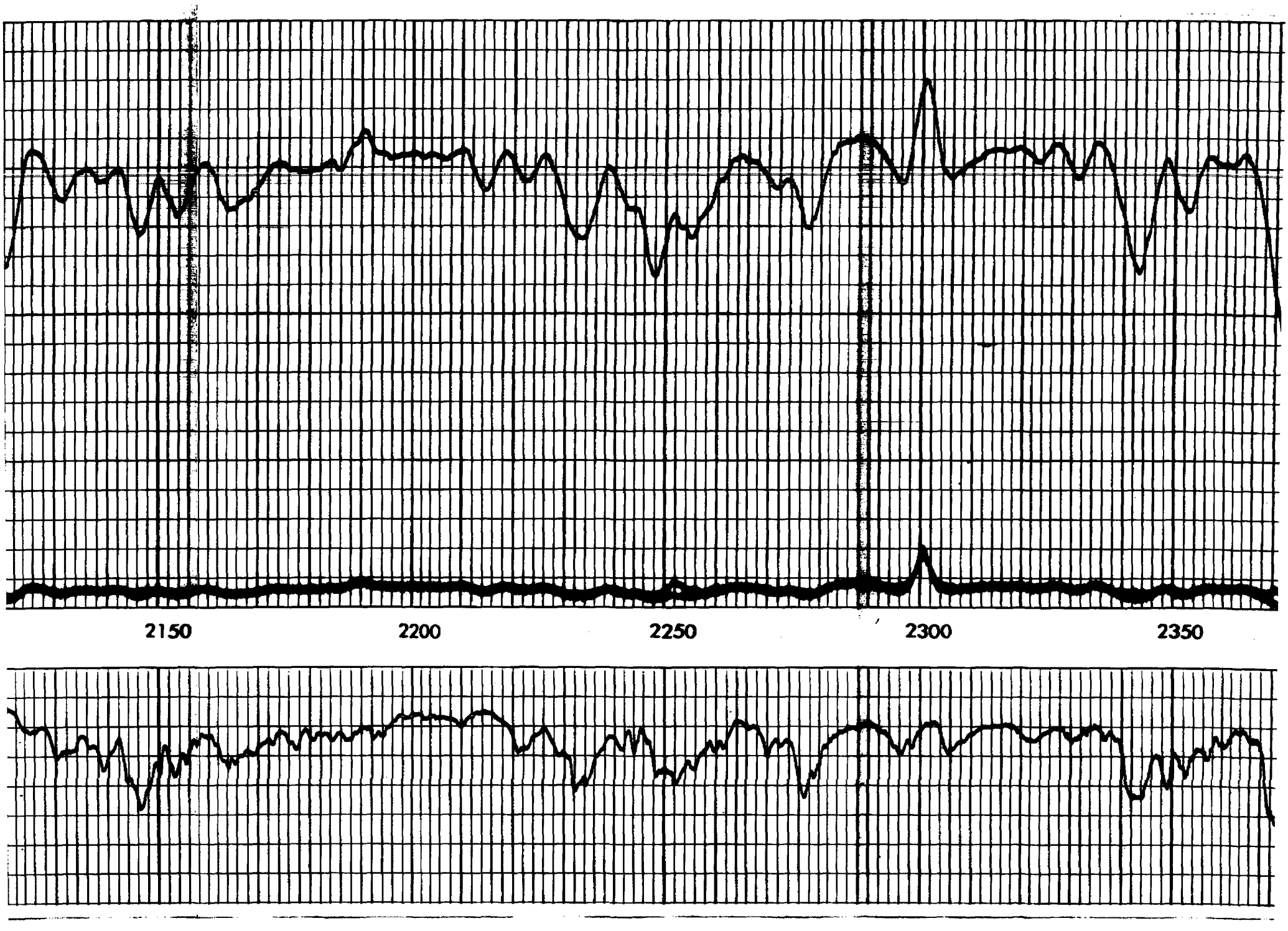
900
950
1000
1050
1100 ft
16" NORMAL
40" IND. CONDUCTIVITY

40" IND. RESISTIVITY
PC
1150
1200
1250
1300
Lewis Shale
1350

1400
1450
1500
1550
1600

1650
1700
1750
1800
1850


1900
1950
2000
2050
2100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2550
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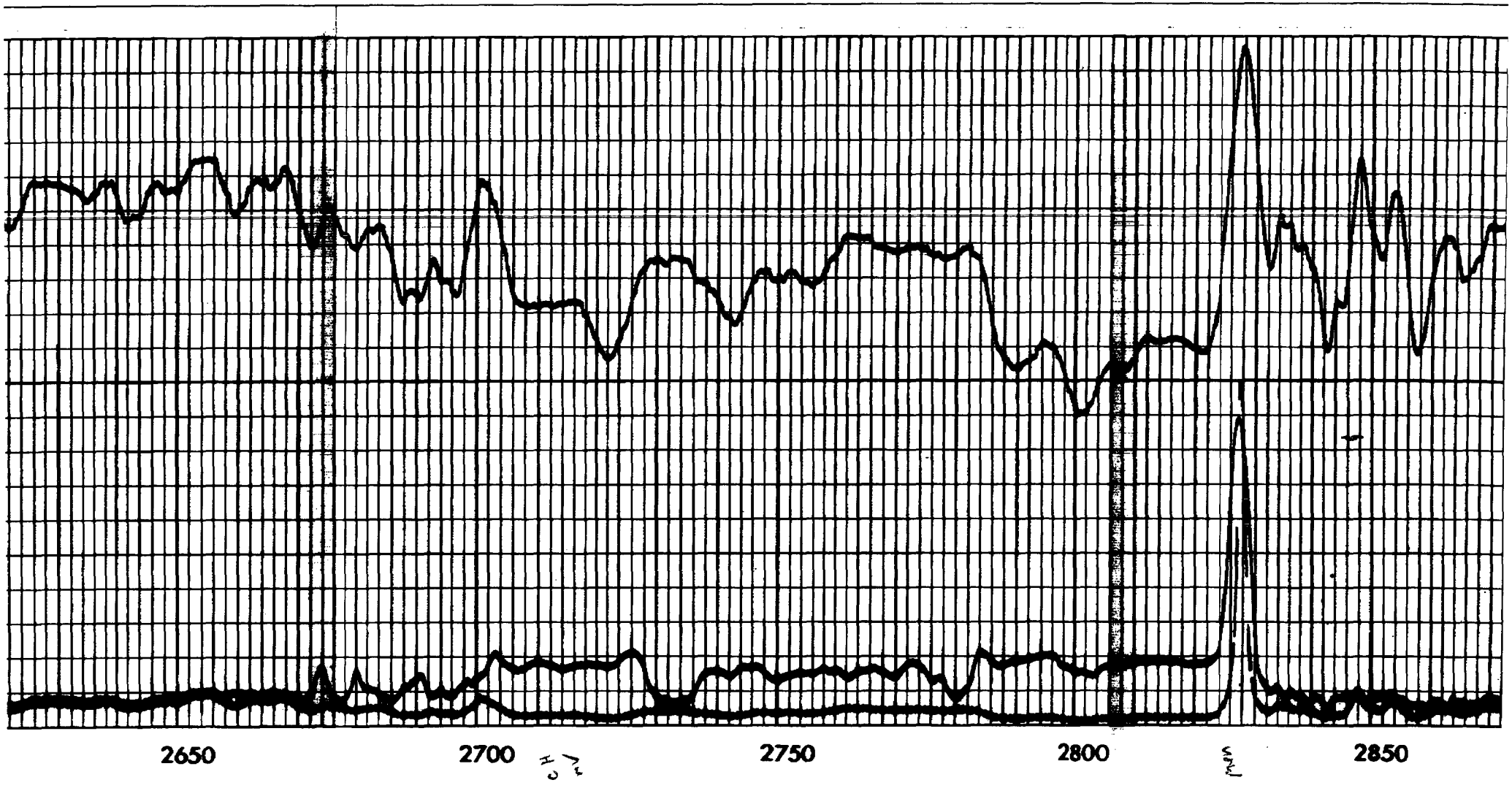
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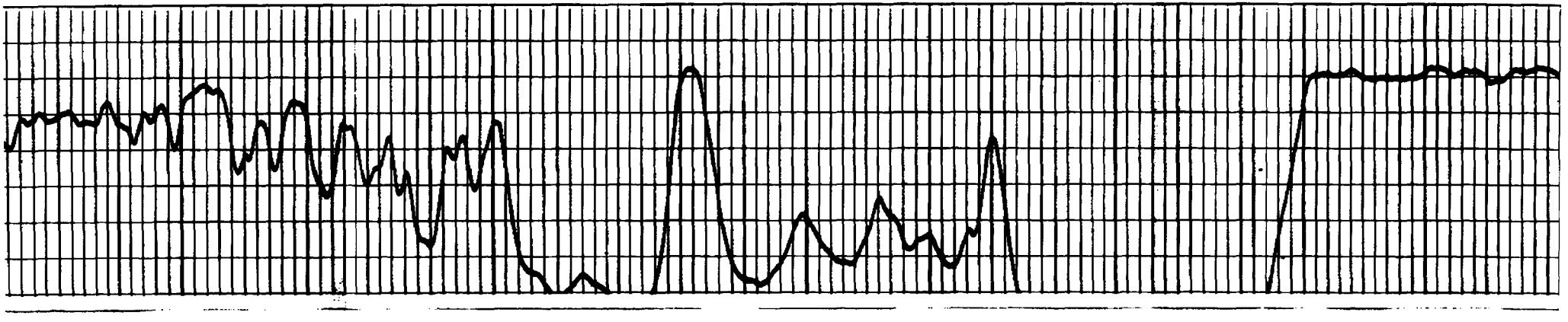

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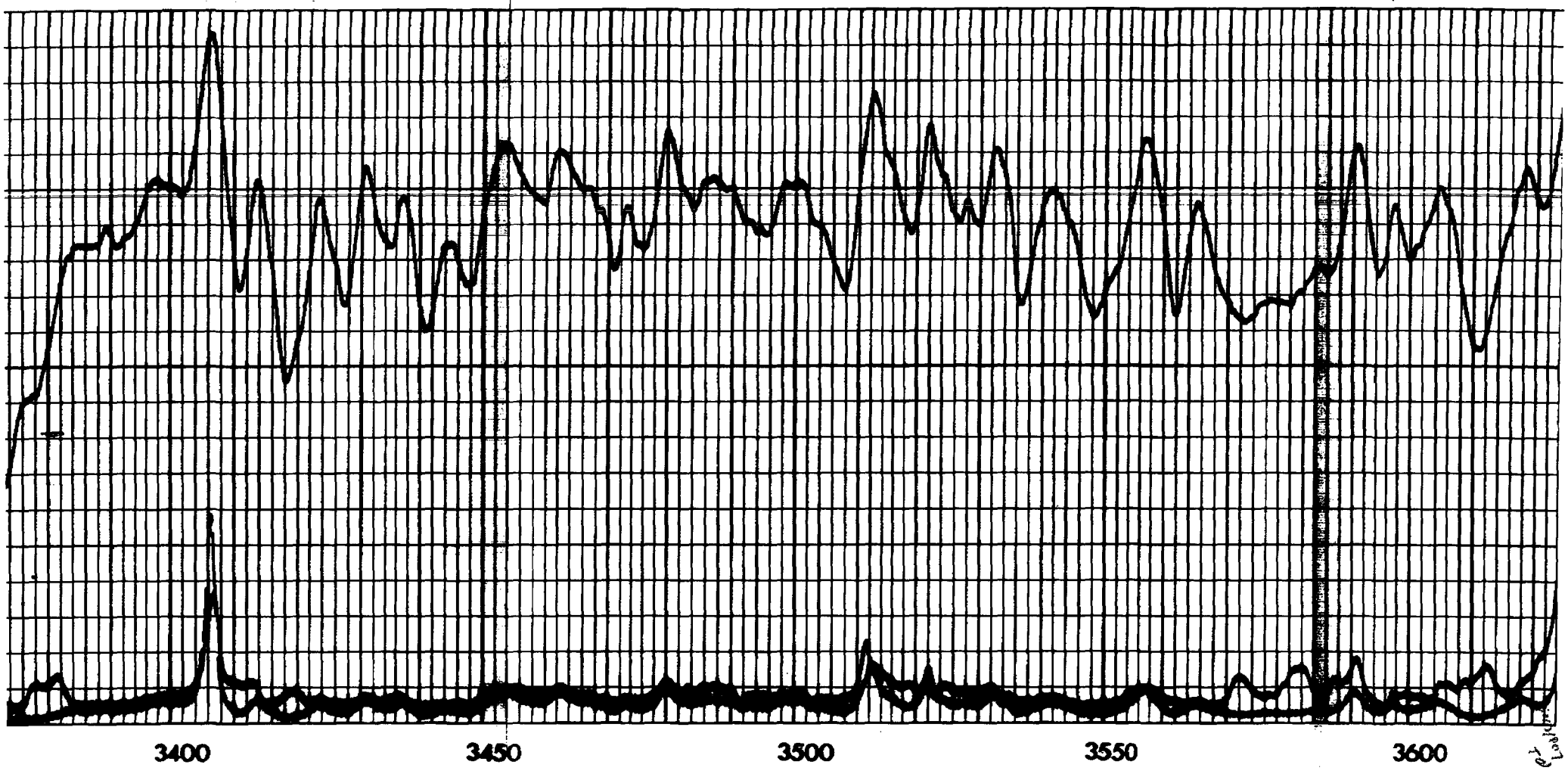
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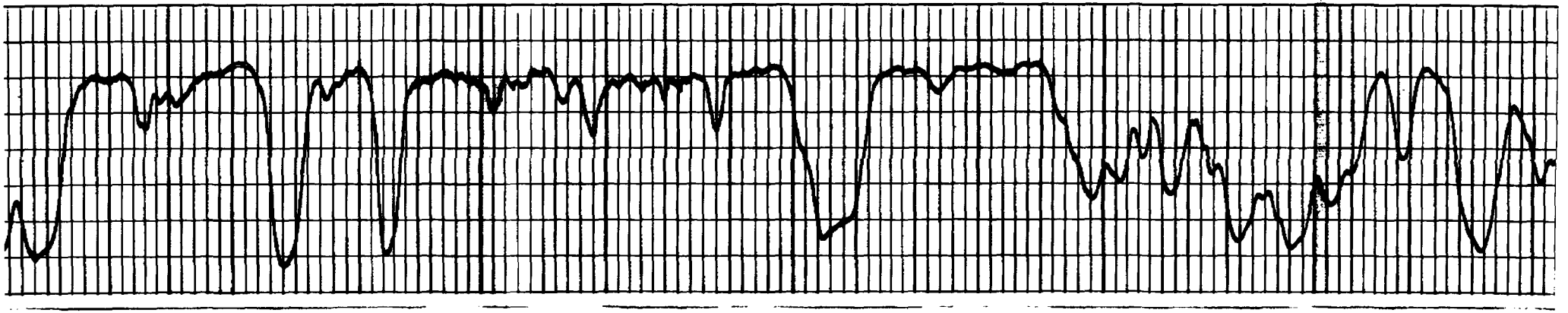

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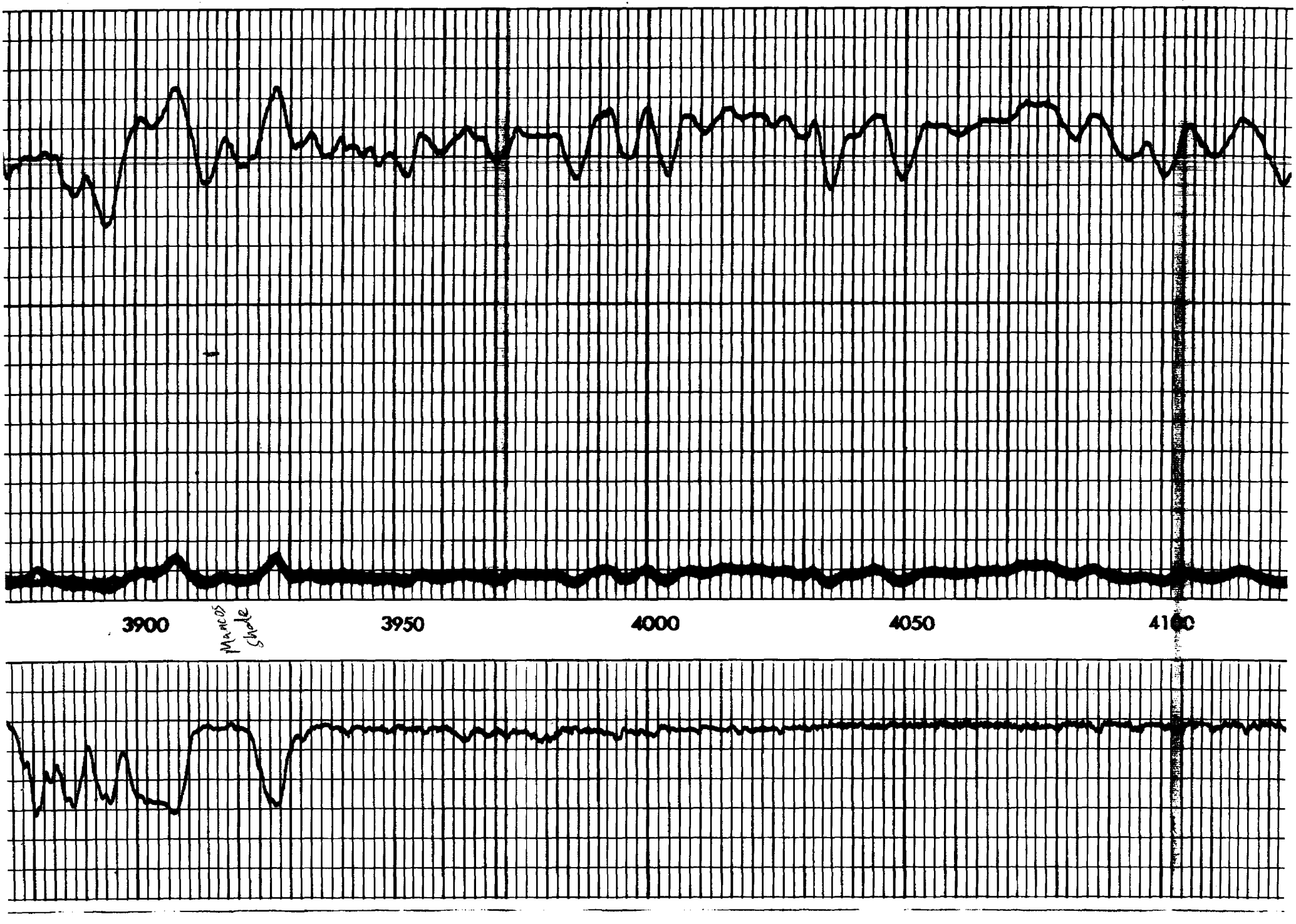
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Mineral Shale
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4000
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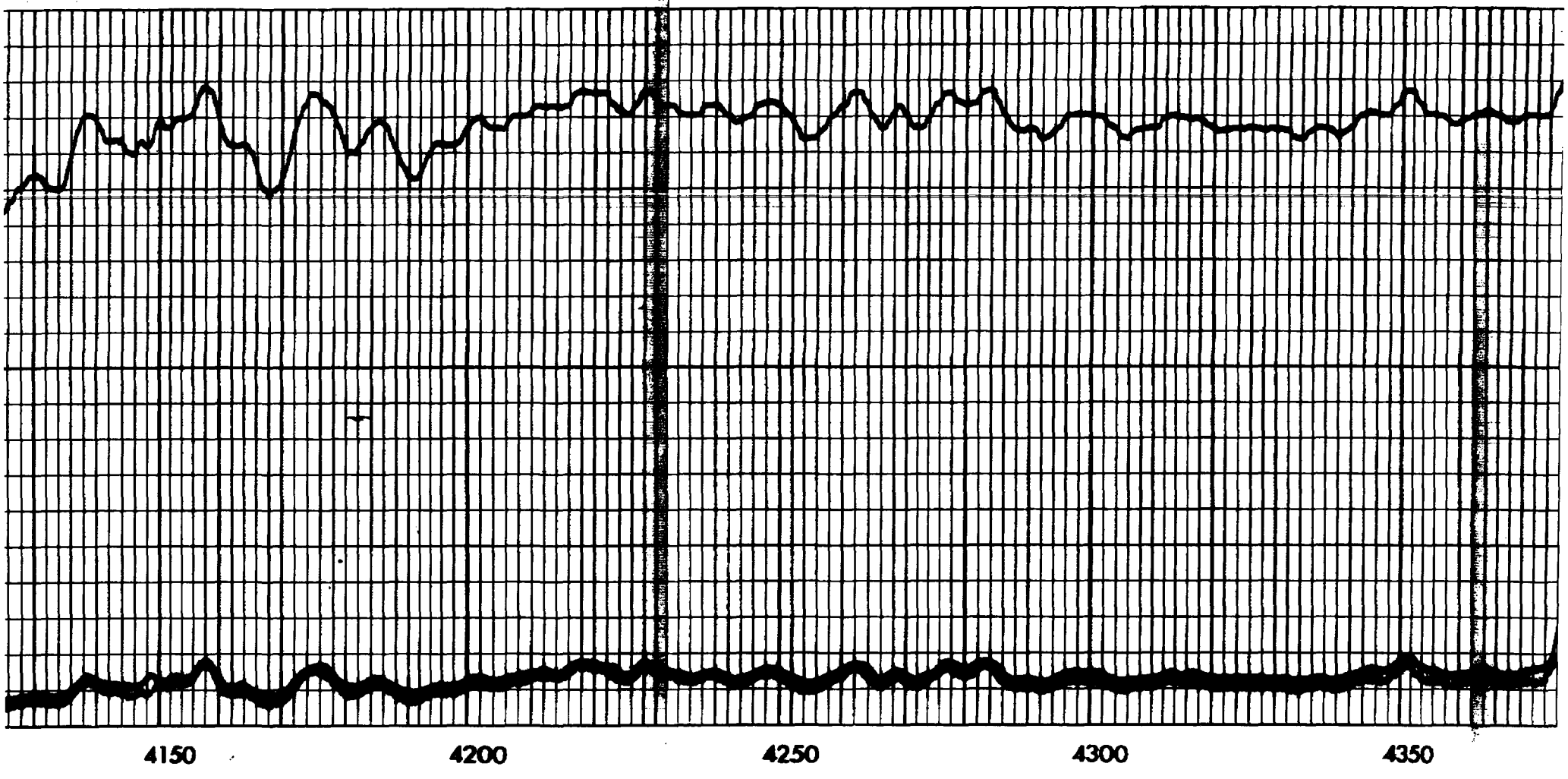
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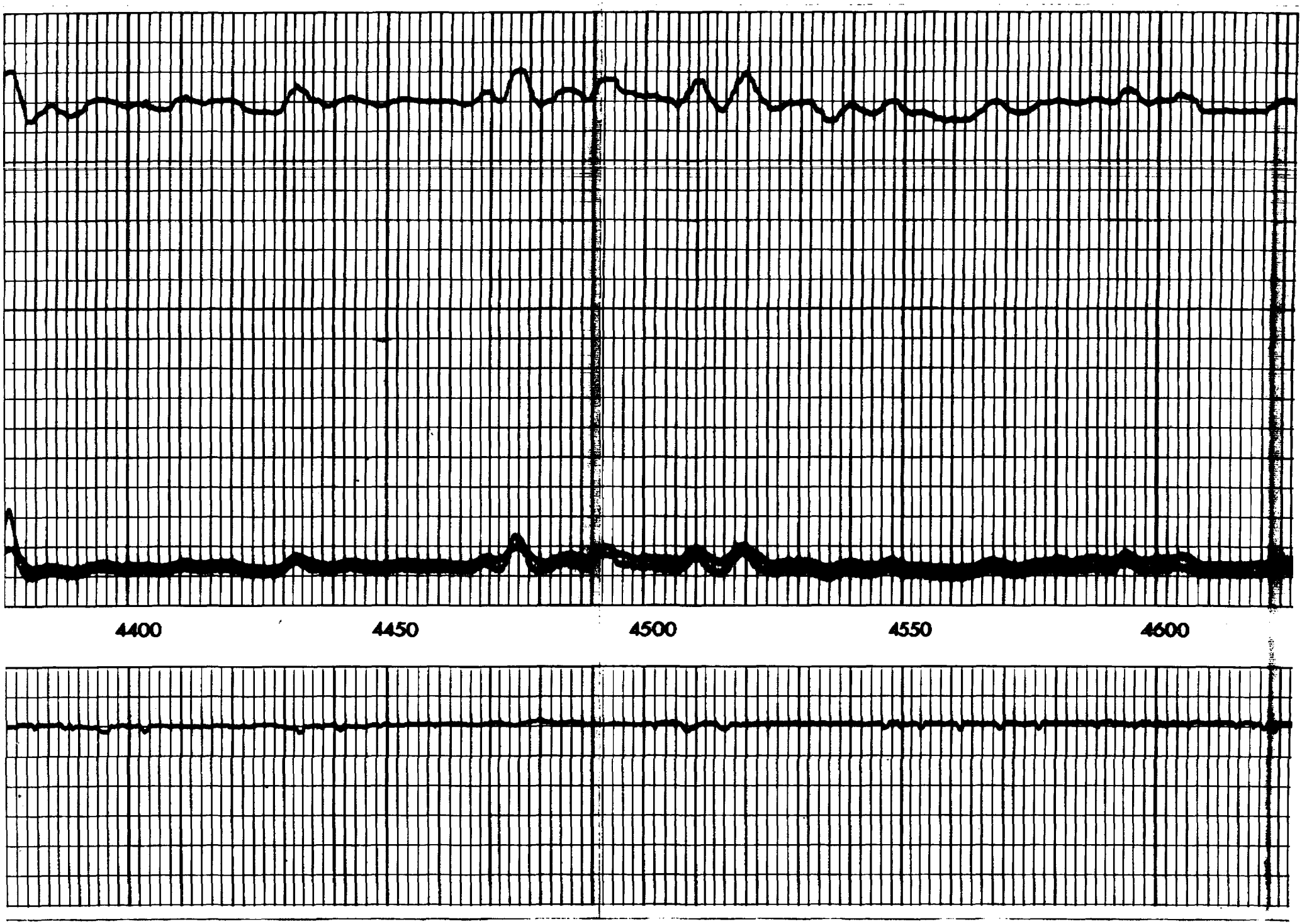
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4600


4650
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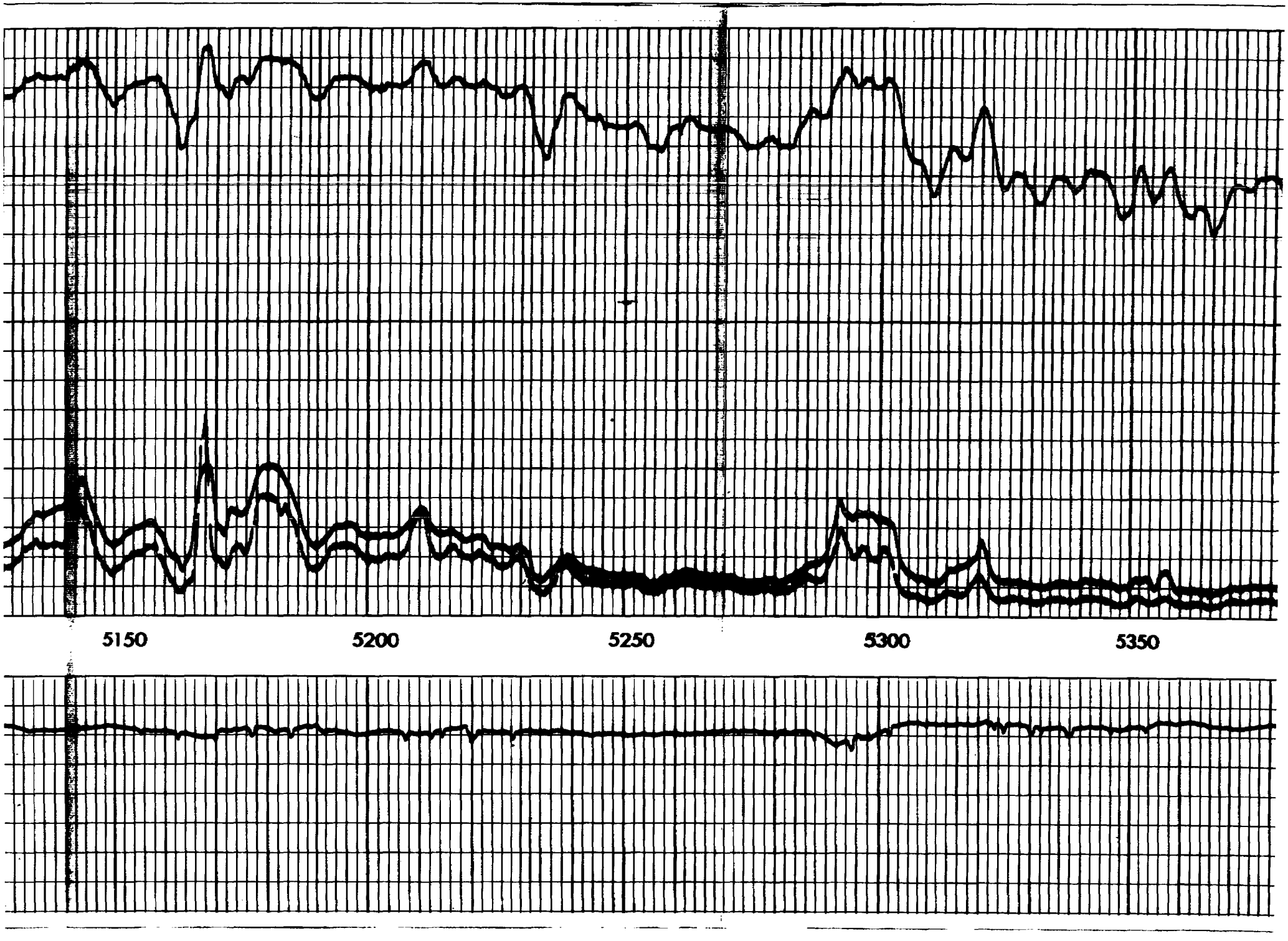
4800
4850

4900
4950
5000
5050
5100


5150
5200
5250
5300
5350

5400
5450
5500
5550
5600

40" IND. CONDUCTIVITY

16" NORMAL

5650

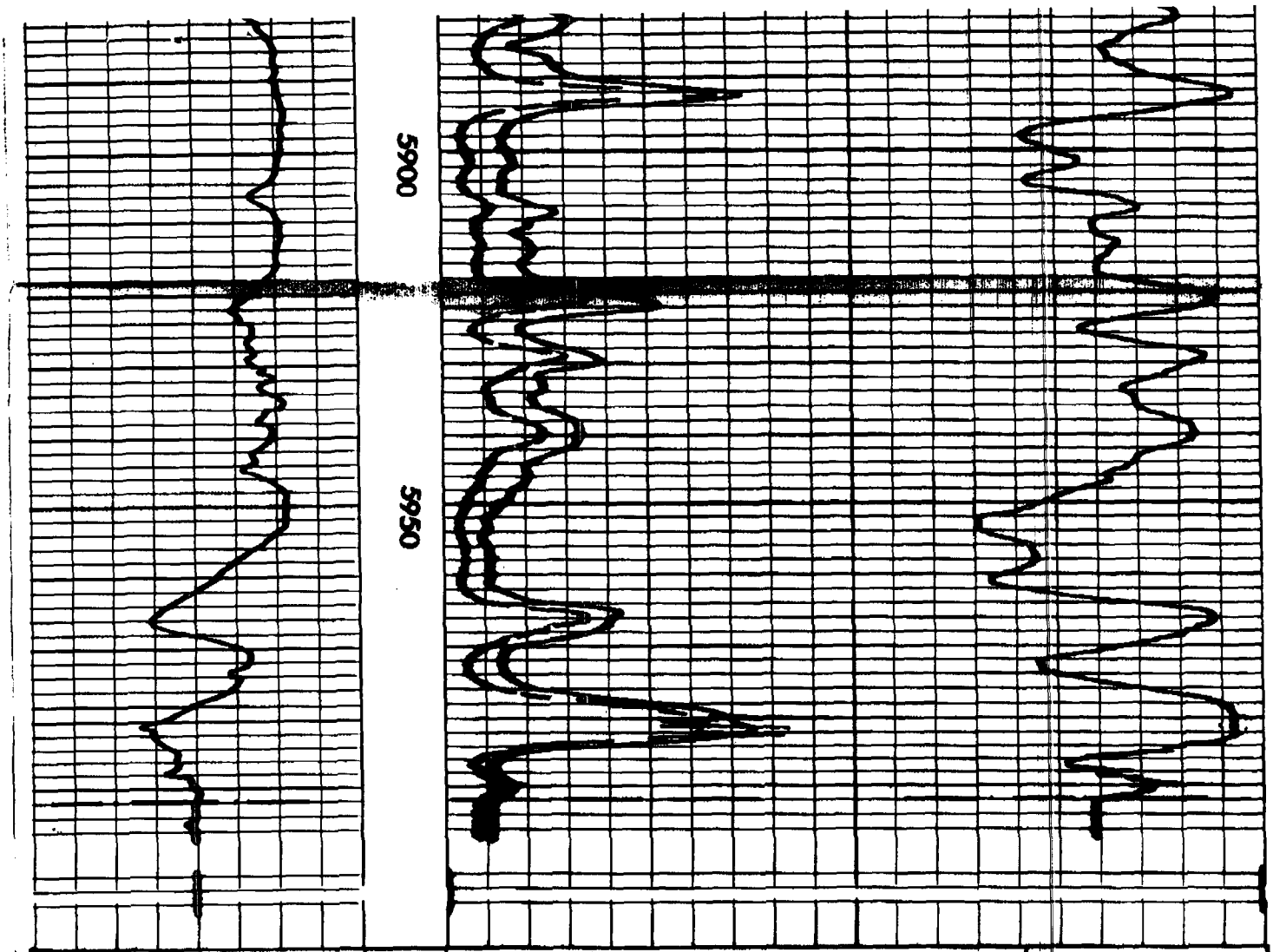
5700

5750

5800

Dakota

5850



CONDUCTIVITY MILLIMHOS/M		
500	250	0

POTENTIAL MILLIVOLTS		
− →	10	← +

RESISTIVITY OHMS M^2/M		
0	18"Normal	100
0		1000
0	40"Induction	100
0		1000

Redfern & Herd, Inc.
Airport # 2
Basin-Dakota Field
San Juan County, New Mexico

T.D.Logged 5892'
T.D.Driller 5890'
T.D.Reached 5895'

Form 967

LANE WELLS COMPANY INDUCTION *Electrolog*

A DIVISION OF DRESSER INDUSTRIES, INC

FILE NO.

COMPANY AZTEC OIL & GAS COMPANY

WELL HAGOOD 26-G

FIELD TOTAH GALLUP

COUNTY SAN JUAH STATE NEW MEXICO

LOCATION: 620' FNL & 3350' FEL

30-045-08156

SEC 19 TWP 29N RGE 13W

Other Services: M/L

Permanent Datum G. L. Elev. 5365

Log Measured from K. B. 12 Ft. Above Permanent Datum

Drilling Measured from K. B. OR 12' ABOVE G. L.

Elevations: KB 5377, DF 5376, GL 5365

Date	4-15-61			
Run No.	ONE			
Depth—Driller	5215			
Depth—Logger	5200			
Bottom Logged Interval	5197			
Top Logged Interval	196			
Casing—Driller	8 5/8 @ 180	@	@	@
Casing—Logger	196			
Bit Size	7 7/8			
Type Fluid in Hole	CHEMICAL GEL			
Density and Viscosity	9.5 | 60			
pH and Fluid Loss	7.5 | 6.8 cc	cc	cc	cc
Source of Sample	FLOW LINE			
Rm @ Meas. Temp.	3.0 @ 100 °F	@ °F	@ °F	@ °F
Rmf @ Meas. Temp.	2.8 @ 90 °F	@ °F	@ °F	@ °F
Rmc @ Meas. Temp.	5.5 @ 90 °F	@ °F	@ °F	@ °F
Source of Rmf and Rmc	MEASURED			
Rm @ BHT	2.3 @ 132 °F	@ °F	@ °F	@ °F
Time Since Circ.	2 HOURS			
Max. Rec. Temp. Deg. F.	132 °F	°F	°F	°F
Equip. No. and Location	4470 | FARM			
Recorded By	WRIGHT & FRANKLIN			
Witnessed By	MR. DONALDSON			

FOLD HERE ↓

THIS HEADING AND LOG CONFORMS TO API RECOMMENDED STANDARD PRACTICE RP-31

REMARKS TOOL FREE IN HOLE.

Changes in Mud Type or Additional Samples		
Date | Sample No.		
Depth-Driller		
Type Fluid in Hole		
Dens. | Visc.		
pH | Fluid Loss	cc	cc
Source of Sample		
Rm @ Meas. Temp.	@ °F	@ °F
Rmf @ Meas. Temp.	@ °F	@ °F
Rmc @ Meas. Temp.	@ °F	@ °F
Source Rmf | Rmc		
Rm @ BHT	@ °F	@ °F
Rmf @ BHT	@ °F	@ °F
Rmc @ BHT	@ °F	@ °F

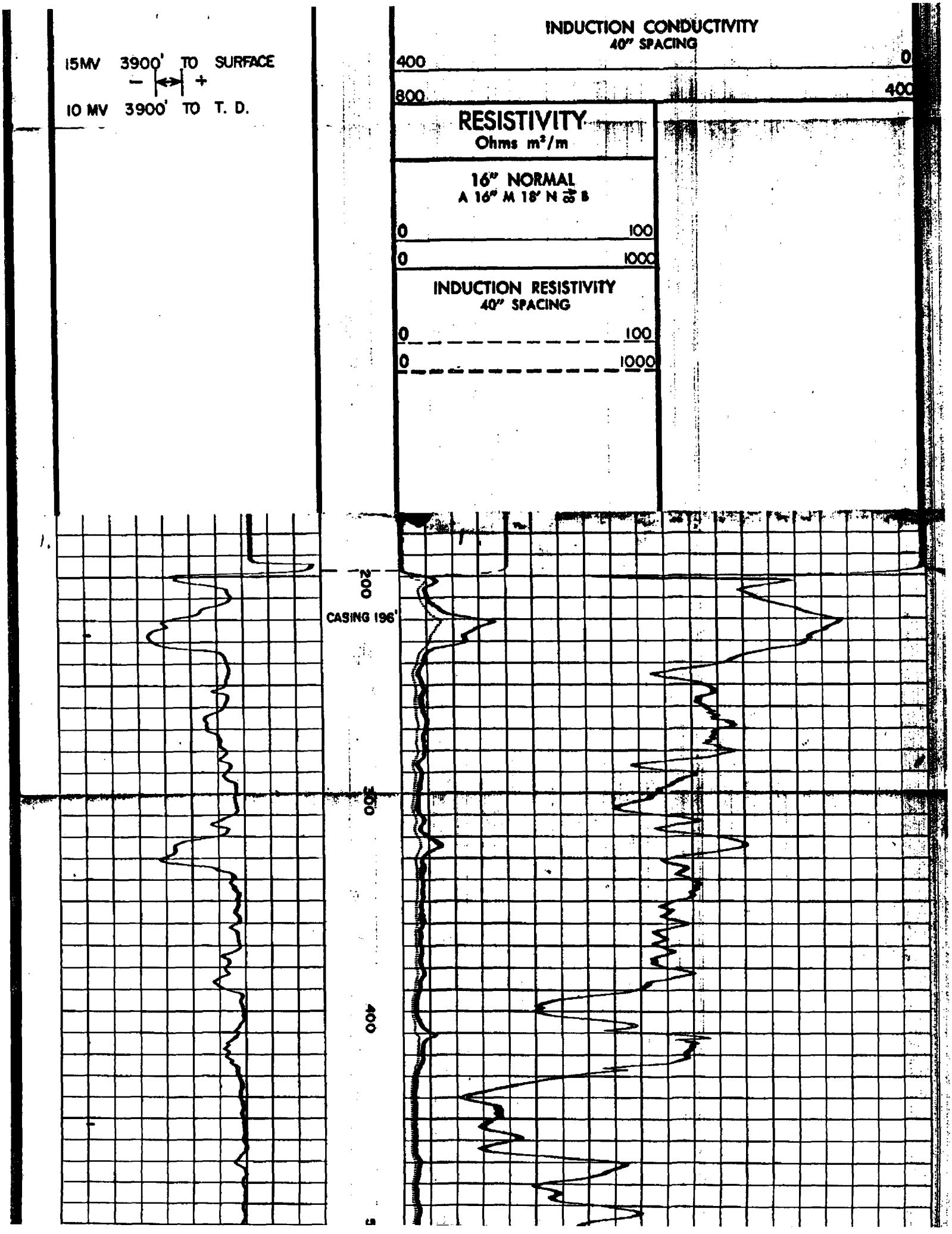
Scale Changes

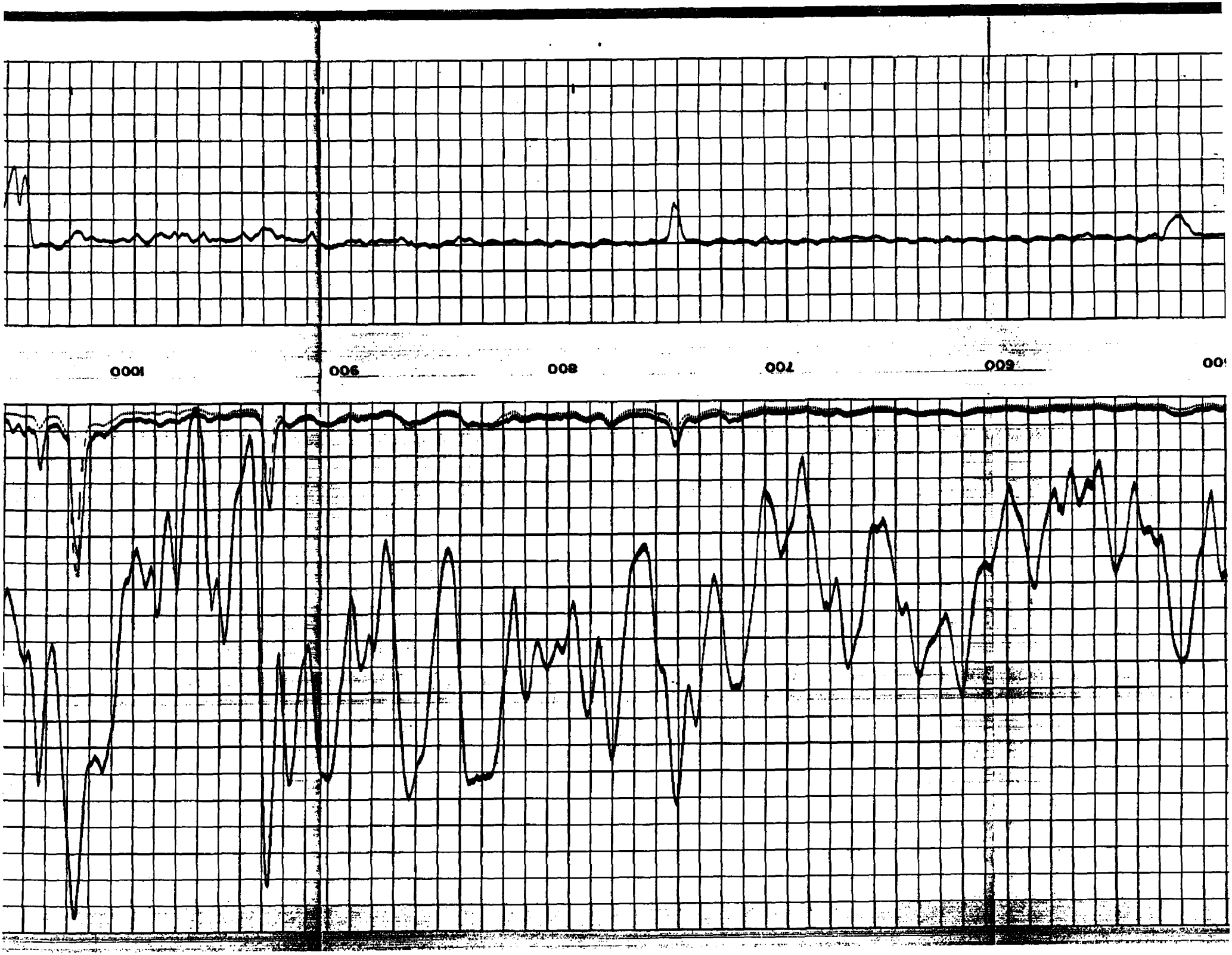
Type Log	Depth	Scale Up Hole	Scale Down Hole

Equipment Data

Run No.	Tool Type	Pad Type	Tool Position	Other

SPONTANEOUS POTENTIAL Millivolts	DEPTH	CONDUCTIVITY Millimhos/m


15MV 3900' TO SURFACE
10 MV 3900' TO T. D.
INDUCTION CONDUCTIVITY
40" SPACING
400
0
800
400
RESISTIVITY
Ohms m²/m
16" NORMAL
A 16" M 18' N ∞ B
0
100
0
1000
INDUCTION RESISTIVITY
40" SPACING
0
100
0
1000
200
CASING 196'
300
400


1000
900
800
700
600

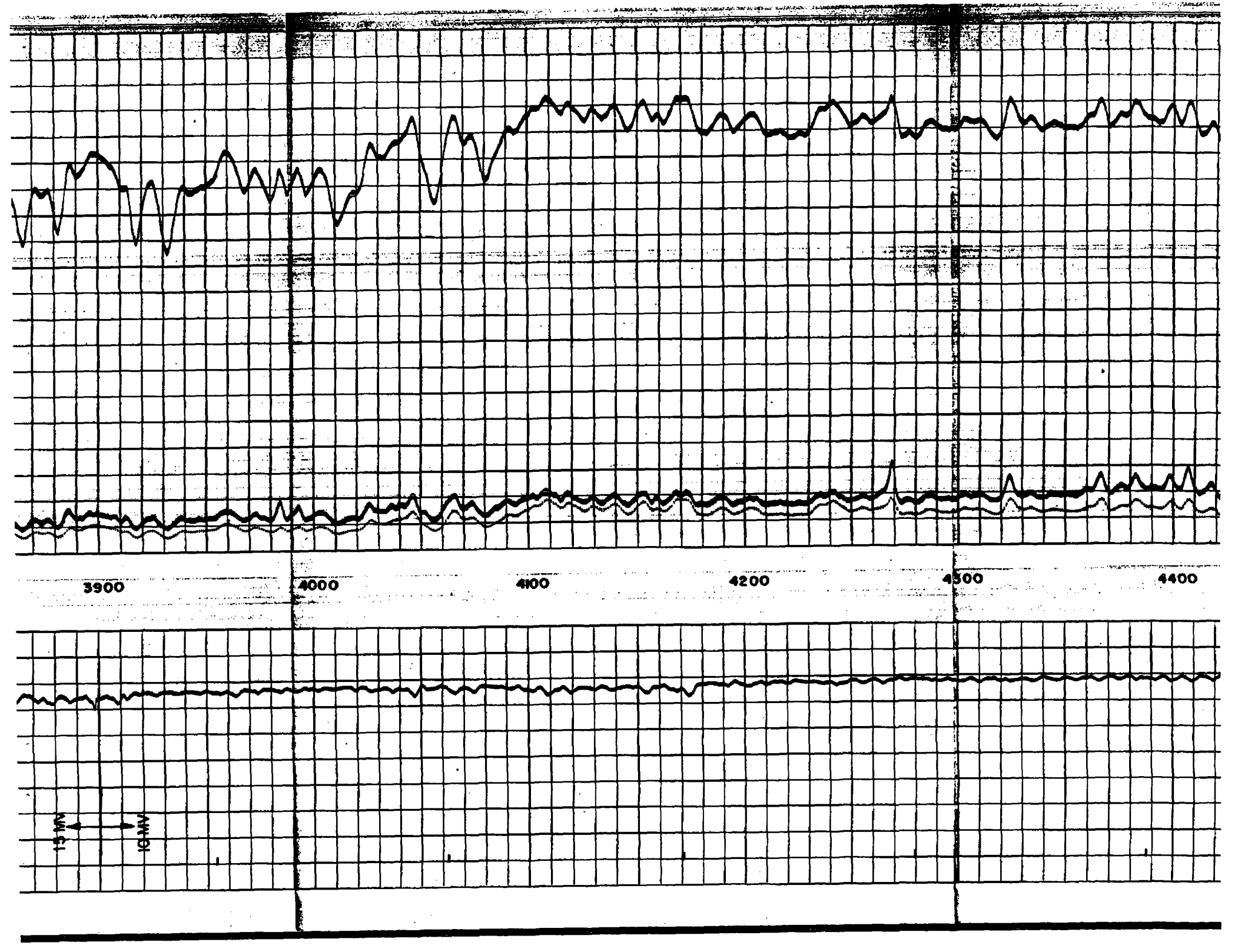
1100
1200
1300
1400
1500
1600

1700
1800
1900
2000
2100

2200
2300
2400
2500
2600
2700

2800
2900
3000
3100
3200

00
3400
3500
3600
3700
3800


3900
4000
4100
4200
4500
4400
1.5 MV
10 MV

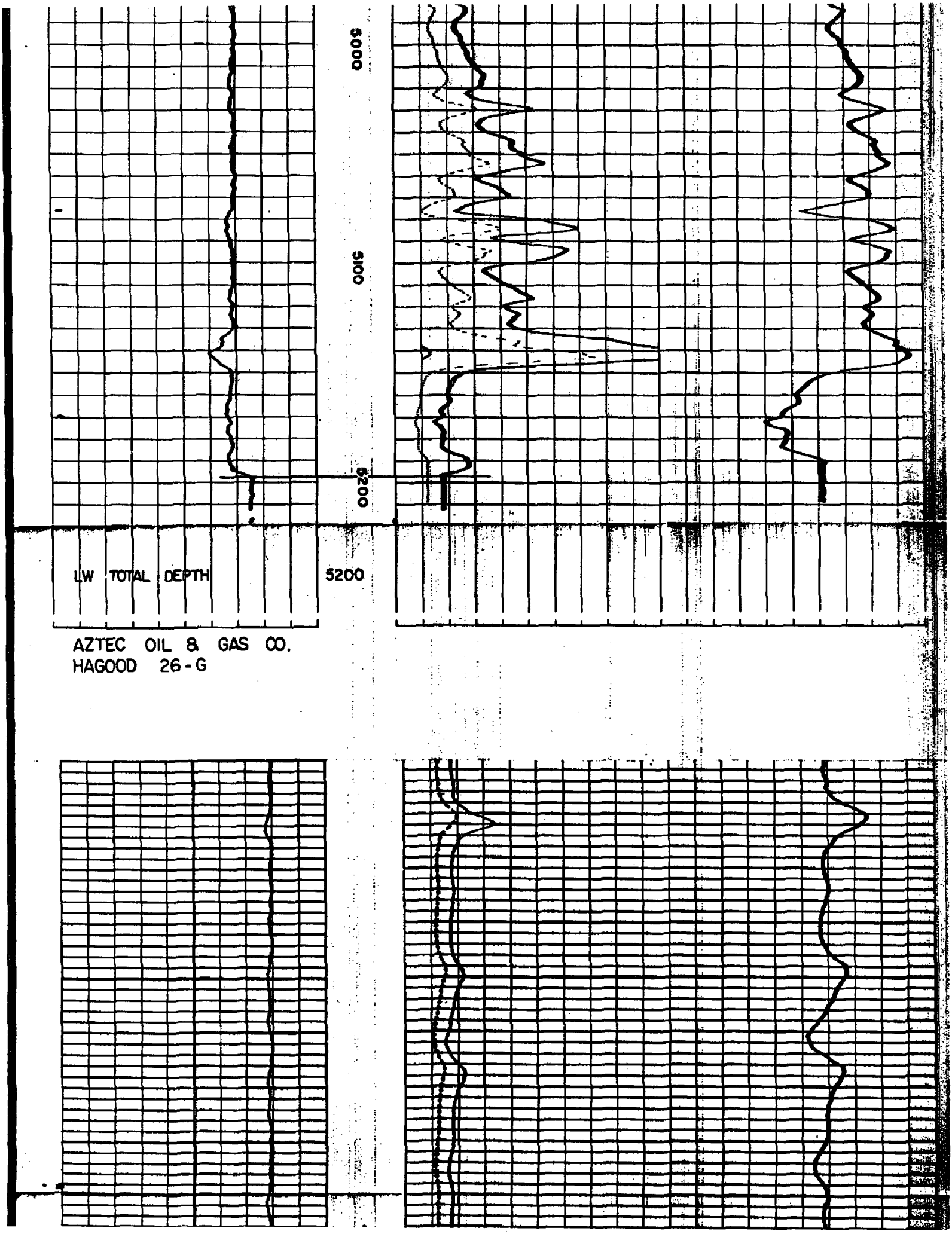
4500

4600

4700

4800

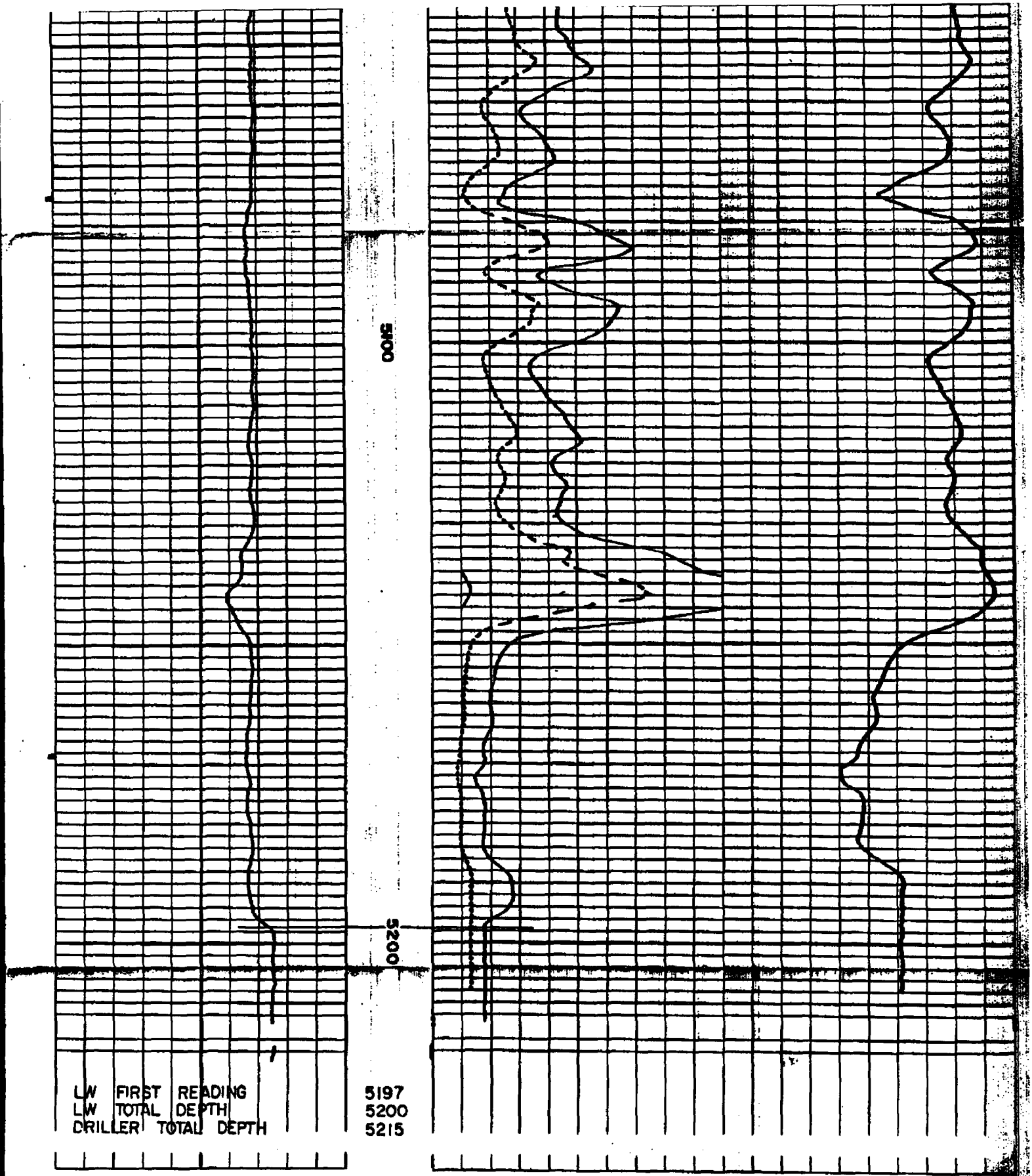
4900


5000
5100
5200
LW TOTAL DEPTH
5200
AZTEC OIL & GAS CO.
HAGOOD 26-G


4600
4700
4800

4900

5000



LW FIRST READING	5197
LW TOTAL DEPTH	5200
DRILLER TOTAL DEPTH	5215

AZTEC OIL & GAS CO.
HAGOOD 26-G
TOTAH GALLUP
SAN JUAN CO., NEW MEXICO

HALLIBURTON

EXCELL 2000

HIGH RESOLUTION INDUCTION LOG

COMPANY RICHARDSON OPERATING COMPANY
WELL SALTY DOG SWD #3-R
FIELD FRUITLAND
COUNTY SAN JUAN STATE NM

COMPANY RICHARDSON OPERATING COMPANY

WELL SALTY DOG SWD #3-R

FIELD FRUITLAND

COUNTY SAN JUAN STATE NM

API No. 300453127400
Location 0850' FSL
0770' FEL

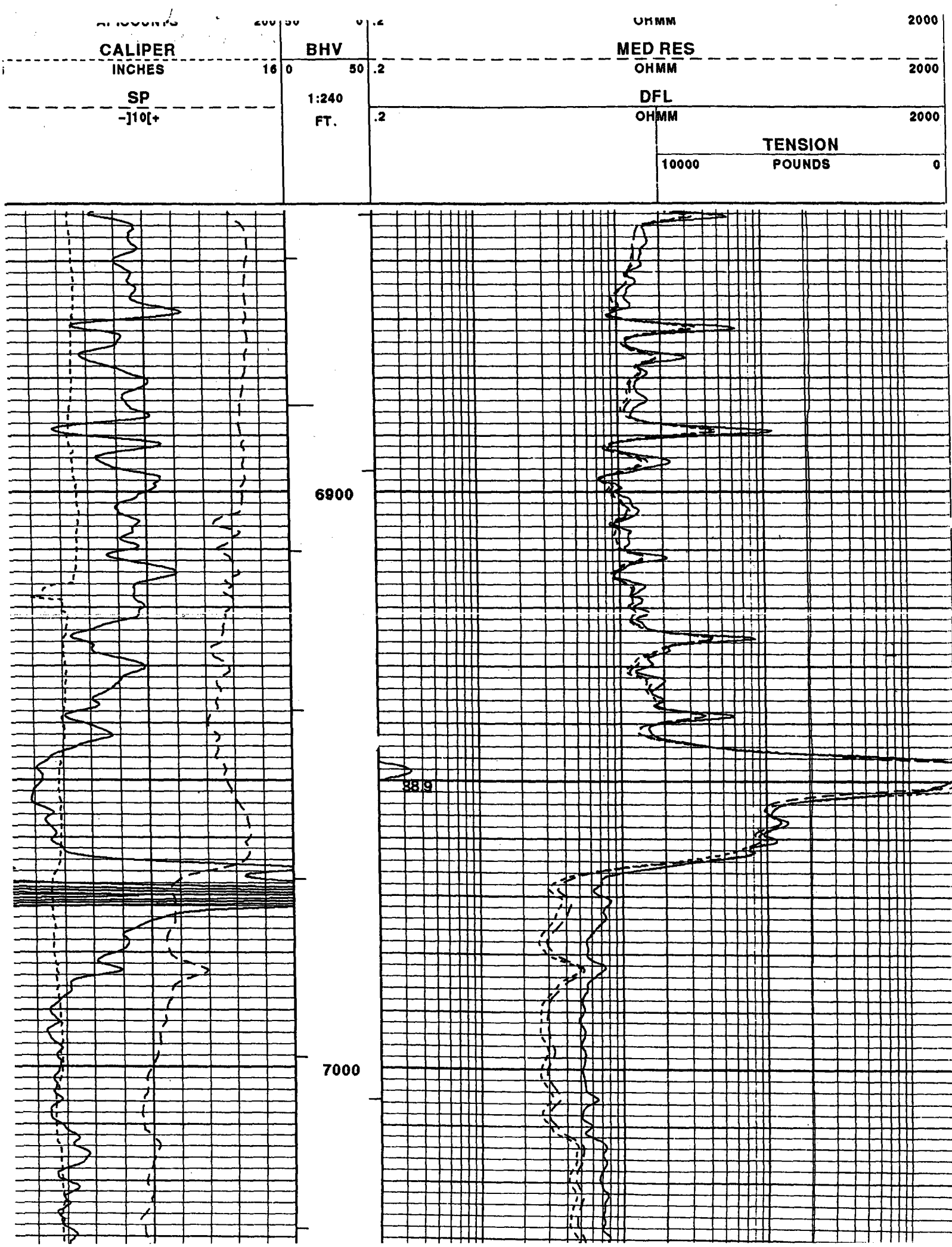
Sect 28 Twp 30N Rge 14W

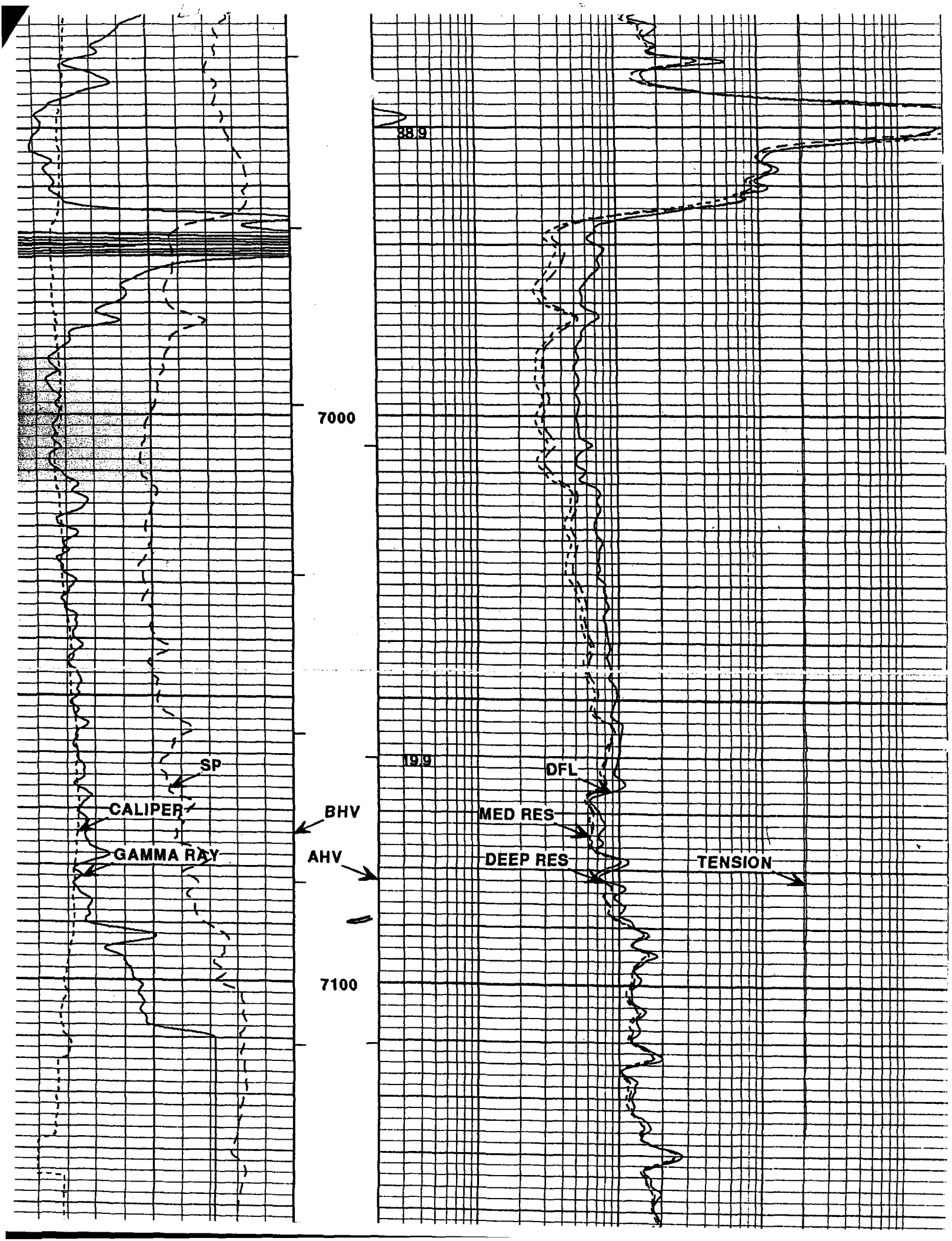
Other Services
DSN/SDL

Permanent Datum GROUND LEVEL Elev 5572'
Log measured from K.B. , 12' ft. above perm. datum
Drilling measured from KELLY BUSHING

Elev.: K.B. 5584'
D.F. 5583'
G.L. 5572'

Date	01-05-03			
Run No.	ONE			
Depth – Driller	7164'			
Depth – Logger	7165'			
Bottom – Logged Interval	7156'			
Top – Logged Interval	2250'			
Casing – Driller	8.625 @ 437'	@	@	@
Casing – Logger	432'			
Bit Size	7.875"			
Type Fluid in Hole	LSND			
Dens. | Visc.	9.2 | 90	|	|	|
Ph | Fluid Loss	9.0 | 10	|	|	|
Source of Sample	FLOWLINE			
Rm @ Meas. Temp.	3.4 @ 48 F	@	@	@
Rmf @ Meas. Temp.	3.1 @ 48 F	@	@	@
Rmc @ Meas. Temp.	3.5 @ 48 F	@	@	@
Source Rmf | Rmc	MEAS | MEAS	|	|	|
Rm @ BHT	1.446 @ 122 F	@	@	@
Time Since Circ.	01-05 0800			
Time on Bottom	01-05 1530			
Max. Rec. Temp.	122 F @ T.D.	@	@	@
Equip. | Location	15081 | G.J.	|	|	|
Recorded By	G. TWEEDIE			
Witnessed By	J. DURHAM			


CALIPER
INCHES
16
SP
-]10[+
BHV
0
50
1:240
FT.
.2
OHMM
2000
MED RES
DFL
TENSION
10000
POUNDS
0
6900
7000
88.9


38.9
7000
19.9
SP
CALIPER
GAMMA RAY
BHV
AHV
DFL
MED RES
DEEP RES
TENSION
7100